wsib ONTARIO

Occupational Disease Policy Framework Consultation

Stakeholder Submissions

November 30, 2021 to February 28, 2022

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Association canadienne
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February 28, 2022

Ms. Angela Powell
Vice President, Policy & Consultation Services
Workplace Safety and Insurance Board
200 Front Street W
Toronto, ON M5V 3J1

Subject: Occupational Disease Policy Framework Consultation – CVMA Comments

Dear Ms. Powell:

The Canadian Vehicle Manufacturers' Association (CVMA) representing Ford Motor Company of Canada, Limited, General Motors of Canada Company, and Stellantis (FCA Canada Inc.) appreciates the opportunity to provide input on the draft Occupational Disease Policy Framework. Our comments on the draft document follow.

Overall, the draft Framework describes the WSIB's approach to the development and updating of occupational disease regulation and policy clearly and is easy to understand. It provides a good overview of the hierarchy of policy options, namely Schedule 4, Schedule 3, and operational policy and how specific occupational diseases would be considered for each option.

However, we share the concerns outlined by Ontario Business Coalition (OBC) regarding the proposed consultation process and we support their submission which is attached. As noted by the OBC, the approach of a targeted consultation with a specific group of employers or workers, or individuals or bodies with relevant expertise or specialized knowledge lacks transparency. We support the OBC's recommendations for ensuring a transparent process that provides certainty for stakeholders.

We trust that our feedback will be considered and look forward to understanding how the WSIB will be addressing the concerns identified. Should you wish to discuss our input, please do not hesitate to contact me directly at 416-560-0167.

Yours sincerely,

Karen Hou
Director, Vehicle and Workplace Safety

cc: M. Archer, WSIB
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Attachment

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ONTARIO BUSINESS COALITION (OBC)

February 28, 2022

WSIB Consultation Secretariat
200 Front Street West
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Sent Via Email: Consultation_Secretariat@wsib.on.ca

The Ontario Business Coalition (OBC) appreciates the opportunity to respond to the Workplace Safety & Insurance Board's *Occupational Disease Policy Framework* Consultation (the "O. D. Framework").

By way of some background information, OBC was established 16 years ago with a mandate to advocate for an Ontario workplace safety and insurance system that is sustainable, that serves the needs of the employers and workers that participate in the system, and that contributes to the province's competitiveness. We are mandated to work with senior officials at the WSIB, and in government, to make sure Ontario's workplace compensation system meets the needs of the province's employers, and compensates injured workers in a fair and efficient manner. OBC has a diverse membership base with employer organizations focused exclusively on workplace compensation issues. Our members represent employers in the manufacturing, auto assembly, construction, fuels and temporary staffing services industries.

In January 2022, the Workplace Safety & Insurance Board (WSIB) released its O. D. Framework Document for consultation and input. It is positive that the WSIB has shared the draft O. D. Framework which is the foundation for Occupational Disease policy development at the WSIB and guides the WSIB in identifying Occupational Diseases and recognizing them within regulation and policy. We see that the O. D. Framework is intended to reflect the WSIB's commitment to an Occupational Disease policy development process, now and into the future, that is systematic, transparent, and informed by scientific evidence. We note that the WSIB is also proposing that there will be circumstances where it may determine consultation is not necessary because, for example, an amendment is made to the *Workplace Safety & Insurance Act* (*WSIA*), or a related regulation by the government, requires policy updating.

The OBC's long held view is that the WSIB, like other public institutions, should engage with all stakeholders in an open, fair and transparent manner in carrying out its legislative obligations of administering the *WSIA*. We recommend that the WSIB utilize the consultation process previously used for the Rate Framework and Return to Work consultations, in reviewing and developing Occupational Disease policies as that approach was inclusive, thorough and transparent.

Occupational Diseases arising from workplace processes have been compensated since the inception of the workers' compensation system in 1914. This continues to be a strongly held principle for employers, who support that workers should be compensated where an Occupational Disease has been determined to be work related.

Therefore, OBC strongly recommends that the WSIB's O. D. Framework must include consultation with all interested stakeholders, including employers, when consulting and developing Occupational Disease policies. More importantly, the consultation should engage stakeholders throughout the process, or at the multiple phases of the process, and the outcomes and path forwards need to be shared with all.

We are concerned that the O. D. Framework proposes that the consultation on Occupational Disease policy issues will generally be targeted to seek feedback and input from a specific group of employers or workers, or individuals or bodies with relevant expertise or specialized knowledge due to the complexity of the issues. This approach in our view lacks transparency and needs reconsideration.

To ensure a transparent process that provides stakeholders certainty, OBC recommends the following:

1.The WSIB should be sharing more information on the Occupational Disease policy development process so that it is more open and transparent.

2. For any changes in Occupational Disease processes or policies, the **Board should inform and consult with all stakeholders,** and not limit consultation to focused groups selected by the WSIB. The consultation model used for the Rate Framework is an excellent example of an inclusive consultation process. The implementation of the new Rate Framework had significant implications for the entire system, and the consultation approach used recognized this important fact. Occupational Disease policy also has huge implications for the entire system, and specifically for the employers who are the sole funders of the workplace safety and insurance program in the province, and as such should be subject to the same broad consultation approach.

3. The WSIB should continue to strengthen the linkages between its WSIB Occupational Disease work and the Ministry of Labour, Training, Skills Development activities to ensure that any changes being considered address regulatory/legislative initiatives.

4. If the WSIB believes that adjudicative guidelines are required in order to adjudicate Occupational Disease claims, they should be incorporated into policy.

In closing, OBC looks forward to having further discussions on the issue of its development of its Occupational Disease Framework.

Regards,

Yours truly,

Chair
Ontario Business Coalition

Construction Employers Coalition
(for WSIB and Health & Safety and Prevention)

Submitted to: **Consultation_Secretariat@wsib.on.ca**.

February 9, 2022

Ms. Angela Powell, Vice President Policy and Consultation Services
Workplace Safety & Insurance Board
200 Front Street West
Toronto ON M5V 3J1

Dear Ms. Powell:

Re: Occupational Disease Policy Framework Consultation

Thank you for convening the meeting which took place on January 19, 2022 to discuss the WSIB **Draft Occupational Disease Policy Framework** ("**Draft Framework**"). Please consider this letter as our written submissions.

At the January 19, 2022 meeting, the Board confirmed that the **Draft Framework** does not include new information and has been prepared to promote issue momentum to update occupational disease policies, bring focus to the issue, provide transparency and assess and implement scientific research.

As it is clear that no new approaches are being set out in the **Draft Framework**, it is our position that the most significant and still viable document setting out a new direction for the administration of occupational disease in Ontario is the **Final Report of the Chair of the Occupational Disease Advisory Panel**, February 2005 ("**ODAP Report**"). The **ODAP Report** sets out a series of comprehensive **recommendations** which remain relevant to this day.

While there was some renewed and sincere WSIB focus in the immediate wake of the **ODAP Report** (we can share those with the Board if desired), within a very short time, the Board's renewed engagement in occupational disease waned. The interest in ODAP and occupational disease simply was not sustained and was displaced by other emerging issues. An internal assessment and analysis by the Board of its corporate response to ODAP, we sincerely suggest, may be instructive for this and other issues, and we would encourage the Board to conduct such a review.

While we view the Board's renewed interest as important and necessary, in effect this as a continuation of what the **ODAP Report** commenced almost twenty (20) years ago. The new **Draft Framework** should simply be viewed as **ODAP 2.0.** We are guided more by the **ODAP Report** and the process which preceded that report.

We draw your attention to the **ODAP Report Executive Summary**, and in particular to the following recommendations which were added as a result of the public review completed in 2004 and which are discussed in the document entitled "***Chair's Response to ODAP 2004 Public Consultation***":

1. **Monitoring of occupational disease costs should be a priority of the WSIB. If these costs continue to escalate as they have during the past two years, the Board should consider alternative strategies to cope with them.**

2. **The Board should look at directing the WSIB to prepare a paper on the issue of alternative funding formulas for the Board's consideration. The paper could also be circulated for public comment.**

Time has shown that the Board did not prudently follow through with those core and important recommendations. We encourage the Board to pick-up where it dropped the ball, follow through with these recommendations of the **ODAP Report**, and commence that important element of public consultation as suggested by the ODAP Chair.

Please reach out at any time, as we welcome discussion on this topic.

David Frame, CEC Chair

INJURED WORKERS
COMMUNITY LEGAL CLINIC

REPRESENTING INJURED WORKERS
FREE OF CHARGE SINCE 1969
A community directed not for profit legal aid clinic

February 28, 2022

SENT VIA EMAIL: consultation@wsib.on.ca

WSIB Consultation Secretariat
200 Front Street West
Toronto, ON
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Draft WSIB Occupational Disease Policy Framework

Injured Workers Community Legal Clinic is pleased to respond to the above draft policy framework. We are a community legal clinic that has provided assistance to injured and ill workers since 1969. In this submission, we will draw on some of our experience working with victims of occupational disease as well as previous inquiries into this important aspect of workers' compensation.

Ontario WSIB is falling way behind in recognizing occupational diseases

Our WSIB and the employer lobby are very attentive to competition with respect to other jurisdictions when it comes to certain issues, like average premium rates. However, not much attention or concern seems to be paid to another kind of "competition" (or comparison), that is: how well the Ontario WSIB recognizes occupational disease.

The Paul A. Demers report of January 9, 2020 showed that Ontario is falling embarrassingly behind. Figure 3 on page 9 of the report is telling. It shows Ontario to be significantly behind Germany, France, Denmark, Italy and Belgium with respect to the accepted claims rate. Germany, at the top, is at 15.1% per 100,000 insured workers. Ontario is at 2.9%. Imagine if Ontario had a premium rate significantly above other jurisdictions? Would the WSIB and employers not call it a "crisis"? We ask why the meagre acceptance of occupational diseases isn't considered a crisis.

We urge the Policy framework to raise the bar for occupational disease acceptance, in order to bring some reparation and justice to victims of occupational disease in Ontario. We are now outpaced by progress made in other jurisdictions and we view this as a blot on our compensation system.

Important background setting

We appreciate that the draft policy framework gives a historical context to the issue and links coverage and compensation of occupational disease to the very founding of our compensation system going back to Justice William Meredith and the Meredith principles:

"The Meredith Report is known for proposing that the workers' compensation system be established on the principles of no fault compensation, collective liability, security of payment, exclusive jurisdiction, and an independent board. Less widely known, the Meredith Report also recommended that a workers' compensation system should provide equal access to benefits for physical injuries and industrial diseases (now occupational diseases").

In our submission, we will be reflecting on the issue of "equal access to benefits to physical and occupational injuries as well as reflecting on the Meredith principle of the independence of the board.

Reflecting on Meredith's concept of "equal access" or "same footing"

Chief Justice Meredith's final report said:

"By my draft bill, following in this respect the British act, industrial diseases are put on the same footing as to the right of compensation as accidents. The (Canadian Manufacturers Association's') bill applies only to accidents…It would, in my opinion, be a blot on the act if a workman who suffers from an industrial disease contracted in the course of his employment is not to be entitled to compensation. The risk of contracting disease is inherent in the occupation he follows and he is practically powerless to guard against it. A workman may to some extend guard against accidents, and it would seem not only illogical but unreasonable to compensate him in the one case and to deny him the right to compensation in the other." (The Meredith Report, October 31, 1913).

It's important to note that Justice Meredith overcame the resistance of the then most powerful employer lobby. His position was based on a principle of parity of all work-related conditions and also based on justice, a word he used repeatedly but which today seems almost retired from official vocabulary. He did not "compromise" and water down his report for a superficial principle of "balance". Indeed, in his final paragraph, he urged to legislature "not to be deterred from passing a law designed to do full justice owing to groundless fears that disaster to the industries of the Province would follow from the enactment of it."

The WSIB's reference to its founding father should not be superficial. Rather, it should strengthen its own understanding that it is an independent Board, and as such is the steward of the interest of injured and ill workers.

What does "equal access" or "equal footing" mean to the consultation?

The prevailing test to adjudicate the work-relatedness of any kind of injury or disease is one of "significant contribution." This means that if a worker's employment or activities related to their employment are shown to be a significant contributing factor in their injury or disease, then the worker will get WSIB benefits. This doesn't mean that a workplace accident or injury has to be the only cause of a worker's condition or disease. So long as the workplace accident is found to have "considerable effect or importance,"[1] entitlement may be established, even if other non-compensable factors exist. The Workplace Safety and Insurance Tribunal (WSIAT) case law applies the principle that "it is enough to show that the work-related factors contributed significantly regardless of the existence of other non-compensable factors which might also have contributed significantly."[2]

We note with concern that the draft paper seemingly contemplates introducing a higher adjudicative bar with respect to recognition of occupational diseases. Specifically, it states that "when there is *strong and consistent scientific evidence* that an occupational risk factor is linked to a disease, it enables the WSIB to recognize the occupational disease in regulation or policy, which streamlines and simplifies determinations of work-relatedness."[3] While we don't take issue with the emphasis on medical evidence as a basis to make entitlement decisions, we caution against importing a much more stringent standard of proof from the scientific/medical world. The Supreme Court of Canada considered a British Columbia case involving a cluster of breast cancer cases in a group of hospital workers.[4] The expert reports before the Tribunal were unequivocal: the available evidence could not establish any causal relationship between the workers' employment as laboratory technicians and the development of their breast cancer. However, the Supreme Court of Canada pointed out that the inability of the reports to reach scientific conclusions to support a causal connection between employment and the workers' breast cancers did not speak to the standard of proof required under the workers compensation legislation to determine causation.[5] The judges noted the standard of proof is that where the evidence is evenly weighed on causation, that issue must be resolved in the workers' favour. [6]This standard of proof contrasts sharply with the scientific standards employed by the medical experts. The Supreme Court decided that the majority of the provincial workers compensation Tribunal was right to consider that the scientific experts imposed a too stringent standard of proof that did not align with what was contemplated in the workers compensation legislation.[7]

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[1] *Decision No. 280* (1987), W.C.A.T.R. 27
[2] *Decision No. 1742/12*
[3] Workplace Safety and Insurance Board Draft Occupational Disease Policy Framework
[4] *British Columbia (Workers' Compensation Appeal Tribunal) v Fraser Health Authority*, 2016 SCC 25
[5] *Ibid.*
[6] *Ibid*.
[7] *Ibid*.

The significant contribution test should be affirmed as the standard approach to determining the work-relatedness of a particular occupational disease, as for all injuries. There shouldn't be a different evidentiary standard applied between how a physical injury is assessed for benefit entitlements by the board versus an occupational disease claim. We submit that each claim should be evaluated and adjudicated based on the specific circumstances of the injured worker, along with all applicable medical evidence and opinions from treating health practitioners.

Applying different evidentiary standards to occupational diseases is problematic and will only serve to stigmatize certain injured workers, and will likely make it even more difficult to access critical benefits. The Supreme Court of Canada has held that it can be discriminatory and contrary to the *Charter of Rights and Freedoms* to exclude workers from benefit programs on the basis of the type of injury they experience. In reference to the denial of entitlement to benefits for workers with chronic pain in Nova Scotia, the court said that their exclusion from benefits under the compensation scheme sent "a clear message that chronic pain sufferers are not equally valued and deserving of respect as members of Canadian society."[8] The court's decision stands for the principle of parity when it comes to how injuries should be treated by workers compensation systems. This principle must illuminate how all claims, including occupational disease claims, are adjudicated by the board.

Reflecting on the principle that the WSIB is an INDEPENDENT board

Our organization has been supportive of the newly formed Occupational Disease Reform Alliance (ODRA) since its inception. We fully endorse their submission to this consultation. The ODRA includes victims and survivors of occupational disease as well as deeply knowledgeable experts in the compensation of occupational disease. The group believes that key to addressing the issue of occupational disease in Ontario is to have legislation to meet its four demands: 1) compensate occupational disease claims when workplace patterns exceed levels in the surrounding community; 2) expand the list of compensable diseases presumed to be work-related; 3) use the proper legal standard, not scientific certainty; 4) accept that multiple exposures combine to cause disease.

If the WSIB were a "dependent" board, it would automatically respond that this issue is in the purview of the government, since government is in charge of legislation. However, the WSIB should reflect on its "independent" status going back to its foundational principles. Why does the Act confer on the board the power to suggest legislative change to government under Section 159? Is it not because the WSIB is in effect "closest" to injured worker issues than the more distant government apparatus? Is it not because the WSIB is independent and as such a welcomed voice for the concerns of injured and ill workers?

[8] *Nova Scotia (Workers' Compensation Board) v. Martin; Nova Scotia (Workers' Compensation Board) v. Laseur* [2003] 2 SCR 504 at para 101.

We urge the WSIB to suggest the legislative initiatives recommended by the ODRA.

We oppose the proposal that policy development will be "consistent with the WSIB strategic direction"

This is precisely a main reason why Ontario is embarrassingly behind other industrialized jurisdictions in accepting occupational disease claims. It is well known that the WSIB has contradictory internal functions. It is tasked with providing fair decisions for workers but is responsible for managing the money paid out to workers and has a goal of achieving low premium rates for employers. Quite plainly, achieving more justice for victims of occupational disease can and will be resisted if the WSIB has a goal of reducing employer premiums (which are now "proudly" announced to be at $1.30 per $100 of payroll, down from $3.20 in the early 90's). The strategic goal of eliminating the unfunded liability while reducing employer premiums has also been detrimental to justice. Money speaks clearly: if the goal is to achieve and increase the WSIB fund and reduce premiums to historic levels, justice for injured and ill workers will *de facto* be sidelined.

We oppose the proposal that "policy guidance will be fiscally responsible and ensure the long-term sustainability of the system"

The concept of "fiscal responsibility" is open to interpretation that could and has been used to negatively affect benefits and entitlements to injured and ill workers. We are not advocating that workers and survivors be paid on demand, or in fiscally irresponsible ways. However the WSIB should make decisions based on justice, not on cost. The proposed wording puts an artificial restraint, or a fetter, on fair decision making.

The concept of "ensuring the long-term sustainability" of the system has been used as a code-word over the years to mean elimination of the unfunded liability (UFL). Having an UFL wold be relevant if the WSIB went bankrupt, which did not happen in the last century despite two world wars and the Great Depression. But now there is no UFL anymore. This has now been achieved and exceeded, to no small extent due to the reduction of benefits to injured and ill workers. From 2010 to 2017, as an example, benefits to injured and ill workers decreased from $4.8 billion to 2.3 billion. All while the employer premium contribution to the fund has decreased dramatically, four times in recent years, as the WSIB is proud to say.

To talk about ensuring the long term sustainability of the system today is strange, since the WSIB's assets are about $40 billion. There has been so much surplus money that the government has passed legislation to allow it to be given back to employers. This surplus redistribution is occurring as we speak.

Injured and ill workers have a legitimate question: why is the board linking occupational disease policy to fiscal responsibility, while the multiple reduction of employer premiums were not subject to any such policy consideration?

It appears hypocritical to ask policy development addressing victims of occupational disease to be fettered by financial concerns while the WSIB is not sharing the same concerns with respect to redistribution to employers. Since the proposal can potentially restrict fair compensation, we recommend this term be deleted.

Integration with other WSIB policies (e.g. psycho-traumatic policy)

The draft policy framework is looking at policy for occupational diseases in isolation from other policies. For example, there should be direction that victims of occupational diseases that progressively lead to death be **also assisted** by the psycho-traumatic policy both in terms of compensation and treatment.

This was a recommendation of the 1984 Royal Commission on Asbestos that while shelved for decades, is important to revive today in the interest of those affected by terminal occupational diseases and their families. Here are some relevant quotes from Volume 3 of the Report of the Royal Commission on matters of Health and Safety Arising from the Use of Asbestos in Ontario:

"The authorities we have cited satisfy us that as a matter of general medical fact, psychological impairment can be expected to result from learning one suffers from an irreversible, normally progressive disease. We can then find stronger and more specific reason for inferring that psychological impairment arises as a matter of medical fact if, in the circumstances just outlined, experienced practitioners of clinical medicine have recognized its reality in the patients they treat. On this score we cite the following evidence from our transcript of sworn testimony, wherein Mr. Nick McCombie, representing the Injured Workers' Consultants, was cross examining Dr. Vingilis, member of the ACODC:

"Q. …do you know if anyone has done any studies on the psychological impact of asbestos, insofar as a worker all of a sudden discovering that they do have and asbestos-related disease, and…the effect that that may or may not have on the individual?"

"A. You notice this very much by examining those people. Yes"

"Q. You notice it, but do you know if there are any studies that are done by the Ministry or anyone else?"

"A. I don't' think there was psychological studies done, but that was a fact I felt very strongly about – many people been disturbed, and disturbed to depression and anxiety, and so on."

"We conclude that psychological impairment in asbestos sufferers can be taken to be a matter of medical fact." (page 745).

"…we find a simple rationale grounded in common sense for recognizing the permanent psychological impairment of victims of irreversible and normally progressive disease as a matter of Board policy. In all but the most exceptional cases, the accident victim suffers his maximum

loss at the time of the event. The worst that could happened has happened, and his condition is likely to be stabilized or even improved following rehabilitation. The victim of irreversible and progressive disease, for his part, must live with the notion that the worst has yet to happen: the likelihood of progressive physical impairment, of a shortened lifespan, and indeed of death from the disease or a related cause are his unsettling prospects. In our judgment these prospects, if anything, make the grounds for recognizing psychological impairment in victims of chronic, irreversible lifespan-shortening disease more compelling than those that obtain in the realm of accidents. They also suggest that a policy of permanent compensation for such diseases victims need not, of itself, dictate a change in the Board's psychotraumatic guideline that involves temporary compensation in individual cases that arise in the realm of accidents." (pages 747-748).

We strongly recommend that Board policy development moving forward recognize the needs of the most vulnerable and affected victims of occupational disease: those with irreversible progressive disease. The recognition of the disease itself, without recognizing the inevitable effect on the victim's emotions is only a half measure. The recommendations of the Royal Commission of Asbestos are old, were ignored for a long time, but the more so should be implemented today without delay.

All of which is respectfully submitted this 28th day of February 2022.

Injured Workers Community Legal Clinic
815 Danforth Avenue, Suite 411
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Orlando Buonastella and Tebasum Durrani

L. A. Liversidge, LL.B.
Barrister & Solicitor, Professional Corporation

A Response to the WSIB Consultation Paper Occupational Disease Policy Framework

Presented:
February 24, 2022

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A Response to the WSIB Consultation Paper Occupational Disease Policy Framework

A. An expression of frustration decades in the making

1. To begin, let me express that I do not at all doubt, for one moment, the earnestness and sincerity or professional dedication behind the Board's most recent effort to address the continuing conundrum of compensating occupational disease in Ontario as expressed in the draft "***Occupational disease policy framework.***"

2. Indeed, I am earnestly rooting for the Board to be to be able to loudly declare the equivalent of **Archimedes' cry of "*Eureka*!"** as bold new legal and scientific methods are discovered.

3. My enthusiasm though, I am afraid I must confess, is damped by a pragmatic and historically proven understanding of the peripheries of the present legal workers' compensation paradigm rendering such a jubilant proclamation, to put it candidly, unlikely. I sincerely hope that I am proved wrong. Unfortunately, the past 42 years,[1] if nothing else, bolsters my forecast.

4. In this response I will assess three core questions:

   - The compensation of occupational disease is an issue that has received an unprecedented amount of attention and focus for 42 years. Why is the WSIB still promising the same nascent solutions as were begun four decades ago, and which have so far eluded success?

   - What does the "***Occupational disease policy framework***" offer that is different from the innumerable past similar propositions?

   - Why has the Board not publicly assessed the efficacy and failings of past similar efforts to better contextually assess how best to address the unremitting conundrum that is compensation for occupational disease?

[1] Since Professor Weiler's first report in November, 1980 – more on Weiler later

5. The frustration inferred in these opening comments is not reflective of any frustration caused by a lack of effort periodically but sincerely surfacing within the WSIB. As mentioned, the Board's policy authors and administrators have always conducted themselves with utmost professionalism, as I know they will this time.

6. However, unleashing the very same tools and efforts every decade or so and expecting a different result simply proves that occupational disease remains the elusive ***Holy Grail*** of Ontario workers' compensation.

7. *What is the stumbling block?* The primary theme of this response is simply this - the Board is trying to unlock the door with the wrong key. No matter how many attempts, that door will never open. A new key is needed.

B. A brief but essential history

1. The "***Occupational disease policy framework***" of course, is not the first effort to address the occupational disease ("OD") conundrum.

2. There have been several inquiries and reports addressing the very issue, and I will introduce five of those:

   - Paul C. Weiler: *Reshaping Workers' Compensation for Ontario*: November 1980 ("Weiler I");
   - Paul C. Weiler: *Protecting the Worker from Disability: Challenges for the Eighties*: April, 1983 ("Weiler II");
   - Terence G. Ison: *Compensation for Industrial Disease Under the Workers' Compensation Act of Ontario*: September, 1989 ("the 1989 Ison Report");
   - *Minister of Labour: Report of the Occupational Disease Task Force*: March, 1993 ("the 1993 Task Force Report)".
   - *Final Report of the Chair of the Occupational Disease Advisory Panel*: February, 2005 ("ODAP Report").

Weiler I - 1980

3. Forty-one years ago, in Weiler I, Prof. Weiler correctly predicted that "*occupational disease bids fair to be the major battleground of the next decade*," but notes that workers' compensation was designed to deal with traumatic injuries. He states the obvious that workers disabled by accident and disease have the same financial needs, and asks "*What social aim is served by trying to decide (causation)*"? Weiler, in addressing the structural impossibility to establish employment causation, concludes his first report with the observation that the time may have come to dispense with the issue of work-relatedness – "*therein lies the fundamental dilemma*."

Weiler II - 1983

4. In 1983 in "Weiler II," Prof. Weiler thoroughly canvassed the question of compensation of disease. Weiler asked whether the system should rely on case-by-case adjudication or general standards, statutory schedules or policy guidelines, and analyzed the problem of evaluating claims which do not meet a guideline. His over-arching conclusion though is a damning indictment of the (still) existing legal regime: "***We should be under no illusion, though, that OD will ever be anything but a conundrum as long as we try and fit it within a program which requires a judgment about the cause of the disease***" (Weiler II, pp.32-36).

5. No matter how "generous" the system, so long as the system focuses only on workplace injuries, Weiler opined that "*workers' compensation law will always fall short in the identification of industrial disease*" (Weiler II, p. 53). After giving the question of compensation of OD likely its most thoughtful consideration up to that point in time, Weiler returned to his original conclusion: "*We can tinker . . . but we should be under no illusion that we can solve this dilemma in the absence of major scientific breakthroughs . . .*" (Weiler II, p. 55). Weiler's strong recommendation was for a new social contract for OD compensation: "***The only way to guarantee . . . all OD cases get compensation is by compensating all diseases***" (Weiler II, p.73).

The 1989 Ison Report

6. On the recommendation of Prof. Weiler (in Weiler I), an "**Industrial Disease Standards Panel**" ("IDSP") was created in 1985 (later named the "**Occupational Disease Standards Panel**" and later still, disbanded, and later again effectively reinstated). In 1989, the IDSP requested that Prof. Terence Ison discuss similar issues (1989 Ison Report, p. 3). Prof. Ison concluded his analysis in a paragraph aptly entitled "**The Eternal Dilemma**" (at p. 38):

> "A major difficulty in the context in which the Panel (the IDSP) must work is that workers' compensation rests, and always has rested, on a false assumption. In relation to disease, the system assumes the feasibility of determining the etiology of disease, not just in general, but case by case."
>
> "***No system of compensation will ever work with efficiency, justice and consistency if the eligibility for benefits depends on establishing the etiology of each disablement***."

7. Like Weiler, Ison concluded that the system itself must be changed (at p. 38).

The 1993 Task Force Report

8. The 1993 Ministry of Labour Task Force again covered the very same ground as Weiler and Ison before it. The Task Force's mandate was to examine the principles underlying the adjudication of occupational disease claims.

9. The Task Force concluded, ". . . *if the system is still unmanageable after the recommended changes are made, either the whole system has to be changed and new sources of funding found or the Act has to be amended*." "*The means of funding the system must be considered*" (p. 116) and noted that, "*The system cannot be changed by changing the interpretation of the Act without changing the Act*" (p. 118).

2005 ODAP Report

10. The ODAP Report was an extensive exercise and report, all of the parts of which can be found here on the WSIB website.

Guide to Documents and Summary of Changes to Draft Report (PDF)
Document A - Background Memorandum on Occupational Disease Issues (PDF)
Document B - History of the Occupational Disease Advisory Panel (PDF)
Document C - Chair's Response to 2004 Public Consultation (PDF)
Document D - Final Report of the Chair (PDF)
Document E - Final Report of the Chair: Executive Summary (PDF)
A Protocol for Occupational Disease Policy Development and Claims Adjudication (Draft)

11. At the time, I presented a comprehensive overview of the ODAP Report. See the **June 29, 2004 issue of The Liversidge *e*-Letter, "*Occupational Disease Advisory Panel Report, An Executive Overview*," (Attachment 1)** and the September 28, 2004 issue of **The Liversidge *e*-Letter, "*Occupational Disease Advisory Panel Report, A Recommended Course of Action: Occupational Disease Requires Legislative Reform*" (Attachment 2)**. I repeat those comments and incorporate them into this submission.

12. I appeared before Mr. Brock Smith, the Chair of the ODAP, on September 28, 2004. The entire transcript of the presentation and the Q&A is at **Attachment 3**. I encourage a full read of the transcript, which I adopt and incorporate into this submission. Relevant excerpts follow.

> **Bold change is needed**
>
> My basic message is one of change. Change is needed. Bold change, in my respectful view, is needed. Having said that, I begin with a cautionary comment that the Workplace Safety and Insurance Board should not tinker with occupational disease adjudication policy. The goal you are seeking will elude you. **Fairness to workers and to employers can only be achieved if the law itself is changed.** Let me begin with a very clear statement.
>
> Compensating occupational disease is not a debate about creating cost. The costs exist.
>
> **Compensating occupational disease is a debate about who absorbs those costs, the employers directly or collectively, workers directly or collectively or society at large.**
>
> . . . . .
>
> **Weiler**
>
> Weiler's report is remarkable in both its thoroughness and its simplicity. Complex issues which had plagued the system literally for decades and which appear to be without resolution were distilled into workable policy concepts capable of swift implementation. He addressed every leading issue facing the system at that time, including the then, and now, perpetual dilemma of compensation for occupational disease.

Weiler readily recognized however why an occupational disease policy solution eluded the system. He observed that the Ontario workers' compensation system was essentially established for compensation arising from traumatic injury, for which the requirement to establish an employment causal connection was consistent with the funding arrangements. A 100% funded system funded by employers for injury arising out of the employment made sense, was internally consistent, and workable.

In the case of occupational disease however, where the cause of the disease was, in most instances, at best uncertain, the system no longer maintained the same internal consistency. **The need to establish an employment causal link, essential in a 100% employer funded regime, was recognized by Weiler to be an impossible task.**

In light of the potential non-occupational links to disease, or more precisely in the absence of evidence showing a clear occupational connection, Weiler recognized in his very first report that the policy problem centred on the need to establish causality – the very issues the ODAP continues to address. In his second report, three years later and now more than twenty years ago, Weiler addressed the very issues the ODAP was recently asked to investigate. In fact, the core policy questions have not changed at all over the last twenty-five years.

Fair adjudication of OD claims is impossible as long as causality is the issue

The reason for this remains abundantly clear, and clearer as time goes forward. **The fair adjudication of occupational disease cases will remain an impossible task so long as causality is an issue.** ***That simple reality remains ever present today.***

Ten years after his second report, which I will call "Weiler II," the irresolvable dilemma of occupational disease continued. The Minister of Labour struck a tripartite task force with essentially the identical mandate as that of the ODAP. The same theme in that Task Force report as we saw in Weiler's reports persisted. **Fairness cannot be achieved without changing the law.**

The issue is ultimately one of funding, not the absence of an adjudication test for entitlement. The **1993 Task Force Report** concluded that the system cannot be changed by changing the interpretation of the Act without, changing the Act. These words, more than ten years later, still ring loud and true.

If all that was needed to crack the occupational disease nut was a better legal test, surely such a test would have emerged with Weiler I, with Weiler II, with the 1989 Ison Report or the 1993 Task Force Report or during the legislative debates, committee hearings and submissions throughout the 1980s and the 1990s. It didn't.

C. Does the draft "*Occupational disease policy framework*" offer anything new?

1. It does not. That is not simply my opinion, that is the express declaration of the WSIB authors of the document themselves.

2. The Construction Employers Coalition (for WSIB and Health & Safety and Prevention) ("CEC") responded to the Board's paper on February 9, 2022 (**see Attachment 4).** I adopt the position of the CEC which I repeat here:

L. A. Liversidge, LL.B.
Barrister & Solicitor, Professional Corporation

Construction Employers Coalition
(for WSIB and Health & Safety and Prevention)

February 9, 2022

Ms. Angela Powell, Vice President Policy and Consultation Services
Workplace Safety & Insurance Board
200 Front Street West
Toronto ON M5V 3J1

Dear Ms. Powell:

Re: Occupational Disease Policy Framework Consultation

Thank you for convening the meeting which took place on January 19, 2022 to discuss the WSIB Draft Occupational Disease Policy Framework ("**Draft Framework**"). Please consider this letter as our written submissions.

At the January 19, 2022 meeting, the Board confirmed that the **Draft Framework** does not include new information and has been prepared to promote issue momentum to update occupational disease policies, bring focus to the issue, provide transparency and assess and implement scientific research.

As it is clear that no new approaches are being set out in the **Draft Framework**, it is our position that the most significant and still viable document setting out a new direction for the administration of occupational disease in Ontario is the Final Report of the Chair of the Occupational Disease Advisory Panel, February 2005 ("**ODAP Report**"). The **ODAP Report** sets out a series of comprehensive recommendations which remain relevant to this day.

While there was some renewed and sincere WSIB focus in the immediate wake of the **ODAP Report** (we can share those with the Board if desired), within a very short time, the Board's renewed engagement in occupational disease waned. The interest in ODAP and occupational disease simply was not sustained and was displaced by other emerging issues. An internal assessment and analysis by the Board of its corporate response to ODAP, we sincerely suggest, may be instructive for this and other issues, and we would encourage the Board to conduct such a review.

While we view the Board's renewed interest as important and necessary, in effect this as a continuation of what the **ODAP Report** commenced almost twenty (20) years ago. The new **Draft Framework** should simply be viewed as **ODAP 2.0.** We are guided more by the **ODAP Report** and the process which preceded that report.

We draw your attention to the ODAP Report Executive Summary, and in particular to the following recommendations which were added as a result of the public review completed in 2004 and which are discussed in the document entitled "***Chair's Response to ODAP 2004 Public Consultation***":

1. **Monitoring of occupational disease costs should be a priority of the WSIB. If these costs continue to escalate as they have during the past two years, the Board should consider alternative strategies to cope with them.**

2. **The Board should look at directing the WSIB to prepare a paper on the issue of alternative funding formulas for the Board's consideration. The paper could also be circulated for public comment.**

Time has shown that the Board did not prudently follow through with those core and important recommendations. We encourage the Board to pick-up where it dropped the ball, follow through with these recommendations of the **ODAP Report**, and commence that important element of public consultation as suggested by the ODAP Chair. Please reach out at any time, as we welcome discussion on this topic.

David Frame, CEC Chair

3. I concur that:

> . . . the **Draft Framework** does not include new information and has been prepared to promote issue momentum to update occupational disease policies, bring focus to the issue, provide transparency and assess and implement scientific research.

4. It is the **2005 ODAP Chair's Report** that remains the leading and most current in-depth analysis and discussion on OD compensation. If anything, the **"*Occupational disease policy framework,*"** as succinctly opined by the CEC "*should simply be viewed as ODAP 2.0.*" I agree.

D. The 2005 ODAP Report: What did the WSIB do?

1. What did the WSIB do in the immediate wake of the ODAP Report, and why did those efforts come to an end?

2. Initially, the Board took the **ODAP Report** seriously. Immediately after the release of the **ODAP Report**, the Board undertook massive policy reform and structured a series of stakeholder discussions, with the first being May 19, 2005. For the entire presentation, see **Attachment 5**. Even a cursory review of the presentation shows the depth and scope of the Board's engagement, summarized by the main themes below:

- A summary review of ODAP (Slides 6 – 14);
- Development of Draft Protocol for Policy Development and Adjudication (Slides 15 – 25) (Note: This focus is almost identical to the **"*Occupational disease policy framework*"** paper).
- Draft Protocol Legal Principles & Scientific Evidence in Adjudication of Occupational Disease (Slides 26 – 43).
- Funding Occupational Disease in the Future (Slides 44 – 52);
- Ontario Occupational Health Services Network (Slides 54 – 68).

3. In June 2008, an almost identical presentation was arranged. See the slide deck at **Attachment 6** entitled "**Occupational Disease Information Session**" and **Attachment 7**, "**Occupational Disease Cost Review and Projection Model**."

4. What is striking about the 2008 presentations is that three years after ODAP, three years after the plan as set out in May 2005, the Board essentially repeated the same plan. The Board seemed stalled in neutral.

5. The WSIB released a "***Report on Occupational Disease Cost Study,***" **Actuarial Services Division (August 2007) (see Attachment 8)**. The report notes:

- In 1990, OD claims represented 1.13% of total claims, with this ratio increasing to 2.55% by 2005 **(pp 2 and 11)**, but accounted for 8% of total claims costs **(p.4)**.

- The report concluded, "*The results of this study will be used as input to project future OD cost trends . . .*" implying the report was to become an annual or regular feature. My research has been unable to locate additional similar reports published since.

6. After that, pretty much radio silence, until the KPMG review of 2019, the Demers study of 2020 and the current policy framework document of 2021.

7. The CEC addressed this question in this manner:

> While there was some renewed and sincere WSIB focus in the immediate wake of the **ODAP Report** (we can share those with the Board if desired), ***within a very short time, the Board's renewed engagement in occupational disease waned***. ***The interest in ODAP and occupational disease simply was not sustained and was displaced by other emerging issues. An internal assessment and analysis by the Board of its corporate response to ODAP, we sincerely suggest, may be instructive for this and other issues, and we would encourage the Board to conduct such a review.***

8. I agree with the CEC's thoughtful assessment that the Board of 2022 should seek out why the Board of 2006-2008 stalled on the very issues being raised today with essentially identical plans, identical processes and identical expectations.

9. I do not promote the view that administrative neglect caused this issue atrophy. I posit that the Board did not stall because its commitment waned. Better results were not delivered because better results were impossible.

10. The Board's key, which is the only key it currently has, simply cannot unlock the door. A new key, a new legal paradigm, is needed.

11. I return to the two most significant instructions from the "**Chair's Response to ODAP 2004 Public Consultation**."

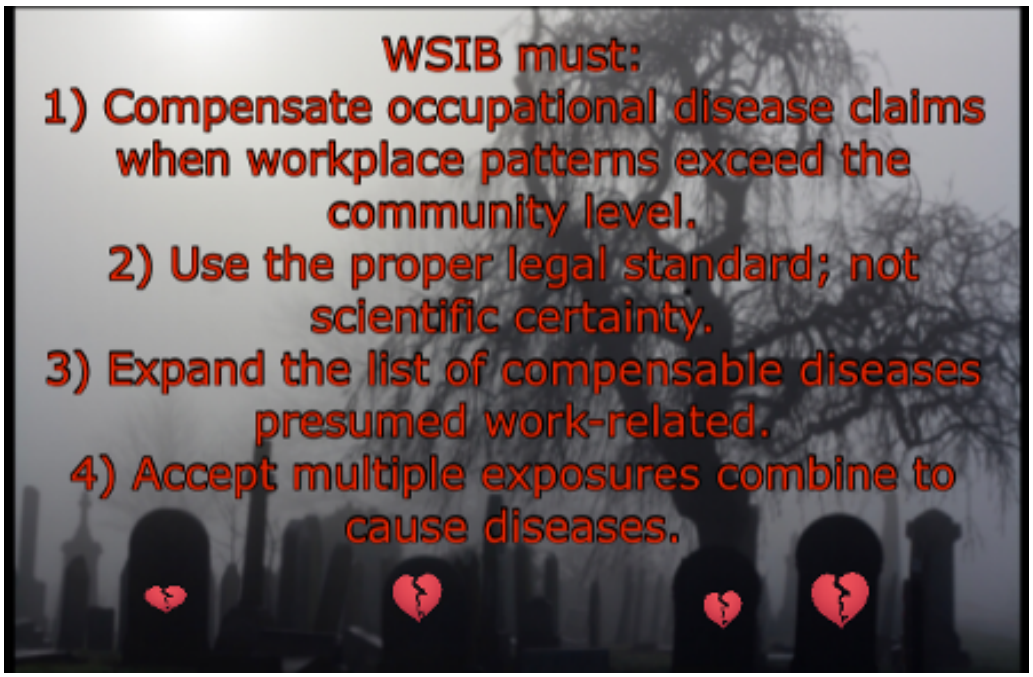
- Monitoring of occupational disease costs should be a priority of the WSIB. If these costs continue to escalate as they have during the past two years, the Board should consider alternative strategies to cope with them.
- The Board should look at directing the WSIB to prepare a paper on the issue of alternative funding formulas for the Board's consideration. The paper could also be circulated for public comment.

12. Neither of these were facilitated. They should be now. If not, a decade from now, the quandary will survive, and a new search will commence. It is time for bold thinking and bold action.

Presented by L.A. Liversidge, February 24, 2022

Link to the Attachments referenced:

Attachment #1	**June 29, 2004** issue of **The Liversidge *e*-Letter, "*Occupational Disease Advisory Panel Report, An Executive Overview*"**
Attachment #2	**September 28, 2004** issue of **The Liversidge *e*-Letter, "*Occupational Disease Advisory Panel Report, A Recommended Course of Action: Occupational Disease Requires Legislative Reform"***
Attachment #3	**September 28, 2004** transcript of **LAL presentation and the Q&A to Mr. Brock Smith, the Chair of the ODAP**
Attachment #4	The **Construction Employers Coalition (for WSIB and Health & Safety and Prevention) February 9, 2022** response to the Board's paper
Attachment #5	**May 19, 2005** WSIB presentation, following the release of the ODAP Report
Attachment #6	**June 2008** WSIB presentation slide deck entitled "***Occupational Disease Information Session***"
Attachment #7	**June 2008** WSIB presentation slide deck entitled "***Occupational Disease Cost Review and Projection Model***"
Attachment #8	**August 2007** report of the Board's Actuarial Services Division entitled "***Report on Occupational Disease Cost Study"***



OCCUPATIONAL DISEASE REFORM ALLIANCE (ODRA) SUBMISSION

Regarding WSIB's Occupational Disease Policy Framework Consultation

ABSTRACT

There have been several clusters of occupational diseases in workplaces across this province. Representatives from these cluster groups have come together to form an alliance and to call for change. We are the Occupational Disease Reform Alliance (ODRA).

Sue James
ODRA Chair

OCCUPATIONAL DISEASE REFORM ALLIANCE (ODRA) SUBMISSION

Introductory remarks:

We are a group of people with various backgrounds from across the province who have come together for a common goal, to demand justice for victims of occupational disease. Our group name is the Occupational Disease Reform Alliance (ODRA), and it includes members who are; victims of occupational disease (workers, retirees, and family members including far too many widows), advocates (Union and Community alike), and allies (injured worker groups, injured worker representatives, and others who believe in this cause). Members in this group are from Peterborough, Sarnia, Ottawa, Kitchener, Waterloo, Hamilton, Niagara, Toronto, St. Catharines, Sudbury, Elliot Lake, Sault Ste. Marie, Thunder Bay, and Dryden. We have witnessed the injustices to the workers and families who filed occupational disease claims related to their work at GE, Ventra, Neelon Castings, Algoma Steel, Uniroyal, Firefighters and in other industries or mining, especially those who were forced to inhale McIntyre Powder. A common goal of fighting for justice for the victims of occupational disease has united us, and we are calling on the government and the WSIB to implement necessary changes.

Background:

A consultation regarding an occupational disease policy framework was announced by the WSIB in December of 2021 with a due date for comments of January 31, 2022, initially provided and later an extension until February 28, 2022, was granted. It was noted by the WSIB in their FAQS for this announcement that it would be limited to policy framework, and not include any adjudication issues. The announcement invited feedback stating that it is valuable and will be carefully considered to ensure that the WSIB is developing tools with our needs in mind. It is with this intent that we offer our feedback/comments with the hope that not only is it valued and considered but that it is also reflected in the final version as well as the actions of the WSIB.

ODRA's goal is to reform the workers' compensation system in Ontario, and we believe that our four proposed amendments to the Workplace Safety and Insurance Act (WSIA) will provide justice for victims of occupational disease. While there may be many issues, concerns, or questions that others have regarding this consultation, we will be focusing this submission to the areas that align with our proposed legislative amendments. Therefore, we will only comment on the sections from the consultation paper that involve an issue related to one of ODRA's proposed legislative changes (using text boxes or green font to denote that the information is from the consultation paper when quotes aren't utilized).

We will leave it to other organizations to provide a more thorough commentary and simply state that while ODRA is focused on the four proposed legislative changes, we also support our allies in the labour and injured worker movements.

Issues specific to the consultation paper:

1. Introduction:

WSIB uses the word "transparent" frequently in this consultation paper and ODRA believes in being transparent as well. We have been upfront about our focus and purpose regarding the legislative changes we believe are necessary. Attempting to be transparent is admirable, but achieving it requires hard work and dedication. While we appreciate the WSIB's stated intent to be transparent, we feel that more work is needed by the Board to achieve that goal.

For example, the footer of the consultation paper states that it's from "Fall 2021" but there was no announcement or invitation to participate in this process until December 2021 which is Winter. With the original deadline for comments being January 31, 2022, then it is clearly a Winter 2022 consultation. Providing the wrong season for this consultation doesn't provide transparency and the WSIB needs to work on achieving that stated goal by at least being accurate.

We would also state that even with the extended deadline to provide comments that the short time provided, combined with limited detail on certain topics in the paper, doesn't support the goal of being transparent. There is also the fact that the FAQs were published at the same time as the announcement, so those would more accurately be named anticipated questions. It was only because of a meeting arranged by the OFL through the WSIB Chair's Labour Injured Worker Advisory Committee that an extension was granted for comments and it provided the first opportunity for questions which are not reflected in the FAQs. Clearly, more work is needed to achieve the goal of being transparent in this consultation process.

It is our position that the WSIB could achieve the transparency and consistency, as well as the values stated in their strategic direction document by endorsing ODRA's four demands. Section 159(2)(b) provides the Board with the power to recommend amendments or revisions to the Act and exercising that power to endorse ODRA's proposed legislative amendments would be consistent with the values listed in the WSIB's Strategic Plan.

While the quality of science is an aspect to consider, relevancy should also be a primary concern and it isn't included in the consultation paper or the reference to being "informed by high-quality scientific evidence" (last sentence in the first paragraph on page 3). This raises the question of who would decide what constitutes high quality science and how would that determination be made? Entitlement to benefits under the WSIA is a question of law and while science might be informative on certain issues, it can't be determinative in answering that legal question of whether or not, on a balance of probabilities, the workplace exposures were a significant contributing factor in the onset of the worker's condition or disease. The description used regarding the scientific information doesn't really support the WSIB's position that they don't rely on scientific certainty. It isn't

sufficient to use the words of the proper legal standard, the reasoning must also indicate that the proper test has been applied.

1.1 Background:

We note the use of the term "work-related" (last sentence in the 3rd paragraph of that section on page 3) which implies a higher standard than significant contributing factor. This was discussed in WSIB's own protocol document at page 38 (it is a continuation of the topic "the standard of proof" starting on page 37)[1] explaining that it suggests the concept of a "predominant cause". While we understand that this wasn't likely the WSIB's intent considering their footnote regarding 'significant contributing factor', it is a point that could have been avoided if the proper legal test was part of the WSIA.

There is also mention of long-latency diseases in this section (second last paragraph on page 3), but it misses the opportunity to talk about relevant science. Such as claims dealing with asbestos exposures from the 1970s then the recent studies that use the lower exposures found in most workplaces now wouldn't be relevant. Using irrelevant science to deny a claim isn't using the proper legal standard to adjudicate entitlement under the WSIA.

Several references to the test of "strong and consistent scientific evidence" for recognition of an occupational disease to be reflected in legislation/regulation or policy (page 4 last paragraph just above the footnotes for one) are made in the consultation paper. This may serve some purpose for entry into Schedule 4 or as a way to quickly allow a claim but there needs to be more information regarding the lack of strong or consistent scientific evidence in a case-by-case process where there is no applicable entry in the Schedules or relevant policy because entitlement is a question of law, not science. Worker's suffering from occupational disease don't enter the system relying on policy or regulation for entitlement; they expect their claim to be adjudicated using the proper legal standard and it should be part of the WSIA.

Even if there is a relevant policy or applicable entry in Schedule 3 but the case doesn't fit those criteria that shouldn't mean that a claim is denied, previously recognized by the WSIB in their protocol document on page 36 under the sub-heading of "Common sense" (see link provided footnote 1). The test for causation is significant contributing factor as recognized in the first footnote of the consultation document, and since policy is used to determine causation, therefore entitlement, then the use of "strong and consistent scientific evidence" is holding the claim to a higher standard. This is where the rationale provided in a decision must demonstrate that the proper legal test was applied instead of just using the proper phrases in the wrong context.

[1] Taking ODAP into the future, A protocol for occupational disease policy development and claims adjudication https://www.wsib.ca/sites/default/files/2019-03/protocoldraft05.pdf

2.1. Legislation:

While we take no issues with this section itself, we assert that the reference to section 161 (footnote 7 in the consultation paper) provides support that "strong and consistent scientific evidence" isn't required because it only requires that there be "generally accepted advances".

"Duty to monitor

161(3) The Board shall monitor developments in the understanding of the relationship between workplace insurance and injury and occupational disease,

(a) so that ***generally accepted*** advances in health sciences and related disciplines are reflected in benefits, services, programs and policies in a way that is consistent with the purposes of this Act; and

(b) in order to improve the efficiency and effectiveness of the insurance plan. 2011, c. 11, s. 24 (2)." [emphasis added to the phrase generally accepted]

Although s. 161(3) doesn't state that generally accepted advances meet the requirements for entry into the Schedules, it does clearly state that it is sufficient for WSIB policy. Therefore, the proposed standard of strong and consistent scientific evidence is a higher standard than required by the WSIA.

Employing the higher standard proposed in this consultation paper would amount to not using the proper legal standard to adjudicate claims, and that's why it is important for the WSIB to endorse ODRA's proposed legislative amendments.

2.2. Regulation: presumptions and schedules:

Our position regarding presumptions and expanding the Schedules was clearly stated in our previous submission titled *A call for justice for the victims of occupational disease* (reproduced and attached as Addendum #1 for ease of reference, see pages 32 – 34).

2.3. Operational policy:

The same issues with "strong and consistent scientific evidence" (used in the 1st sentence of the 3rd paragraph in that section on page 6) are present and noted above; rather than listing it for every section that uses that phrase, we'll simply say that it applies to every reference. Applying the proper legal standard to entitlement decisions instead of holding out for a high degree of scientific certainty is what's required by the WSIA and should be

expected from the WSIB. Other issues with policy were noted in ODRA's submission and can be found in Addendum #1.

2.4. Recognition of occupational disease:

This whole section seems to be an oversimplification of the adjudicative process, as well as the application of section 15 of the WSIA and while it is appreciated that a claim for a disease or condition could fall within the disablement portion of the definition of accident that doesn't mean that all occupational diseases need to be listed in the Schedules or Policy. Occupational diseases should be recognized by applying the proper legal standard to every claim.

3. Occupational disease policy development:

The frequent use of the words "transparent" and "consistent" continues in this section, but it seems to lack transparency which could have been easily avoided by applying the proper legal standard instead of what is proposed in the consultation paper. For example, there is nothing transparent about having policy influenced by the WSIB's strategic direction, because there is absolutely no consultation held regarding their strategic direction (bullet 2) and it has nothing to do with the proper legal standard. Stating that policy will provide clear direction while avoiding including adjudicative issues in this consultation isn't transparent either (bullet 3) and the issue of applying the proper legal standard should be the primary focus.

Claiming the discretionary authority to decide when expert and/or stakeholder input is needed also lacks transparency in that process (bullet 4). Policy is about benefit entitlement, while long-term sustainability and being fiscally responsible are premium setting issues. These two things shouldn't be tied to each other. The purpose clause of the WSIA calls for being financially responsible and accountable, but that doesn't mean that entitlement to benefits hinges on the WSIB being financially responsible (bullet 6). Benefit entitlement should only hinge on the application of the proper legal standard.

3.1. Issue identification:

In the second sentence of the first paragraph on page 9 of the consultation paper, there is a somewhat vague reference to s. 161(3) by mentioning monitoring of scientific literature. This has been a duty of the Board for a long time and was part of the 1990 Worker's Compensation Act in s. 65(3.1) with the decimal point suggesting that it was an amendment after the initial writing of the 1990 WCA. The WSIB's history of not performing that duty speaks for itself.

Our issues with the bullet points in this section are as follows:

- Relevant WSIAT Decisions or court decisions – which WSIAT Decisions aren't relevant? Clearly the WSIB doesn't think that the WSIAT Decisions applying Policy 16-02-11 *Gastro-Intestinal Cancer-Asbestos Exposure* allowing claims isn't relevant because they continue to ignore that policy. The WSIB also has a poor track record regarding court decisions as demonstrated by the years that they continued COPD apportionment despite *Athey v. Leonati*; instead, the WSIB paid for a scientific study to answer a question of law before ending their practice that violated s. 47(2) of the WSIA which includes s. 18 of O. Reg. 175/98. Applying the proper legal standard and complying with the relevant sections of the WSIA would have avoided this issue entirely.

- Scans of the scientific literature – not all of it would be relevant to the claims but the WSIB has a habit of including all even when exposures aren't comparable. This fails to apply the proper legal standard by holding the claim to a higher standard than required by the WSIA.

- Next two bullets have the same issue; trends in surveillance data (e.g., Occupational Disease Surveillance System reports) & trends in WSIB claims data – WSIB ignores this data and opts to search for scientific literature which lead to ODRA's demands re. proper legal standard and recognizing the workplace relationship when the patterns exceed the community level.

- Identification of a cohort of claims with a single employer or within an industry – describes the clusters that are members of ODRA but the evidence from those clusters shows that the WSIB tries to contain the costs associated with those claims by denying so many.

- Research from reputable agencies, such as IARC, NIOSH, NAM – this would be something new because it's never had an influence before, but we will give WSIB credit for developing Policy 16-02-09 *Lung Cancer-Coke Oven Emissions Exposure* and allowing those claims before the policy was written or IARC even classified COE as a carcinogen.

3.2. Prioritization and agenda setting:

Several bullets in this section share the same issues as the bullets in section 3.1 because they are practically the same.

- Organizational strategic direction and priorities – the WSIB's strategic direction nor their priorities should have any bearing on the prioritization and agenda setting since the system is supposed to be about providing compensation and not about what the

WSIB thinks is best. Providing compensation should always be based on the application of the proper legal standard.

- WSIAT Decisions and court rulings – same as above without the qualifier 'relevant'.

- External stakeholder input and feedback – past consultations have proven that feedback is heard but not factored into what the WSIB will do, and input goes ignored. We hope that the WSIB will change this practice and use their powers granted by s. 159 of the WSIA to endorse ODRA's proposed legislative amendments.

- The burden of disease in Ontario (i.e., incidence and prevalence) – another way of phrasing trends and cohorts as above.

- The number of WSIB claims related to the disease – how's that different from the burden?

- Administrative or operational considerations – not much different from strategic direction and priorities and definitely shouldn't be a consideration as the primary consideration should be does the claim meet the requirements of the proper legal standard.

- A known change in the state of scientific evidence on the association between the disease and occupational risk factor – WSIB has been failing to do this except when it benefits them as with the asbestos GI cancer claims (and that science uses current level of exposures to discount the relationship whereas past claims involved higher exposures from the past) or when they are pressured like with McIntyre Powder. Setting a precedence that pressure works and that the WSIB doesn't do reviews of this nature of their own accord doesn't build trust and it only serves to repeat the injustice suffered that could be avoided by applying the proper legal standard.

3.3. Research and analysis:

This section has three subheadings, and all have issues or raise questions.

Gathering scientific evidence

In the second paragraph there is a reference to finding "an occupational risk factor" in the second last sentence. This would be a welcome change from the current practice of reviewing mortality studies because the risk of developing a disease can differ greatly from the risk of dying from that disease. Prostate cancer has a very low mortality rate as compared to many other cancers so does kidney cancer, but the WSIB reviews for those cancers focused on mortality rates. Focusing on mortality rates fails to answer the proper

legal question regarding the contribution of the workplace to the development of the disease, which could be avoided by applying the proper legal standard in the decision-making process.

The last paragraph on page 11 discusses a well-accepted method to grade the quality of studies, but this seems to ignore the relevance. Systemic reviews or meta-analysis take money to conduct whereas anecdotal evidence or observational studies don't require that level of funding. The anecdotal and/or observational evidence could be specific to the workplace and a meta-analysis would look at more than one workplace which could obscure the risk at a particular worksite. This is why ODRA submitted that scientific conclusions cannot be a substitute for a legal determination. It also demonstrates the importance of adjudicative issues or advice on those matters that isn't part of this consultation.

Workers are the evidence in many ways because they have lived the experience of being exposed to their workplace environment. They see their coworkers at the doctor's office, the hospital, and the cancer clinics. Patterns are first noticed by the workers and/or retirees based on their observations. For many workplaces, cancer investigations conducted by the workers, retirees, and/or union is the only direct evidence available. There are very few workplaces that are the subject of epidemiological studies, and workers need compensation not additional studies. Workers should have faith that their claim was adjudicated based on what they were exposed to and not denied based on studies from foreign countries that don't have comparable exposures. They shouldn't have their claims denied based on the totality of the available evidence that lacks relevance to their lived experience. Workers as the evidence should be considered the best available evidence and it should be reflected in the decision-making process as well as policy.

Gathering other policy information

There are five bullets providing examples of other information considered in policy development, and all but the first one of them raise concerns.

- Existing internal and external feedback – the WSIB regularly receives external feedback whether it's through a consultation or correspondence and history has shown that it doesn't get the attention it deserves. We would like to see that pattern change by having the WSIB endorse ODRA's proposed legislative changes.

- Approaches taken by other workers' compensation systems on the same or a similar issue and the basis for that approach – this could be viewed as importing criteria and seems like the WSIB wants to choose what information they will consider. Ontario led the way in establishing a compensation system here in Canada and it should continue to lead the way rather than lag behind and see what the other provinces are doing. The correct approach would be to apply the proper legal standard to claims adjudication.

- Current practices and experience in adjudicating WSIB claims on the disease – this could easily conflict with the approaches taken bullet above as well as the first bullet regarding appeal trends. If the current practice is to deny a claim say for kidney cancer in electrical workers but those claims are being allowed at appeals, then this should negate the current practice rather than having it considered.

- Ontario's economic and industrial history to identify past workplace exposures relevant to the outcome and to understand the workplaces at risk for this outcome and the anticipated numbers of claims resulting from the exposures in those workplaces – given the WSIB's history with the clusters it seems that they have been failing at this when there was nothing to stop them. Exposure information submitted by employers is accepted without question and without looking at the economic or industry history to ensure that those exposures were representative of normal operations, instead of the result of a reduction in production leading to lower exposures for example. Scientific certainty isn't required, and all exposure information should be considered.

Analysis

The third paragraph under this heading on page 12 mentions contradictory or inconclusive evidence in the last sentence and given that there aren't new definitions provided for grading the evidence it would seem that the WSIB is relying on those currently employed by the ODPRB and as submitted by ODRA those definitions are looking for scientific certainty which isn't required by the WSIA. This type of certainty may have a use determining an entry into Schedule 4 since it provides an irrebuttable presumption but shouldn't be the standard for entitlement in other disease claims or even in policy development. The current practice of the WSIB is to deny claims where the scientific information is contradictory and especially when it's graded as inconclusive, which is the reason that ODRA stated that scientific conclusions shouldn't be directly applied as legal determinations for entitlement under the WSIA.

In that same sentence there is acknowledgement that results of the analysis could be based on exposures that are not comparable with Ontario workplaces. This could easily be avoided if relevance was considered in the systematic review before any analysis is conducted. However, currently the WSIB has been using scientific information of this nature in their reviews and coming to the conclusion that the science is inconclusive and then denying claims on that basis so it would be great if the WSIB not only stopped doing that but also reviewed all those claims based on flawed results from a systematic review. That review should involve applying the proper legal standard with strict avoidance of seeking scientific certainty.

The second last paragraph also mentions "strength and consistency" which was previously discussed and will be expanded upon in section 3.4.

3.4. Recognizing an occupational disease: scheduling and policy:

It is acknowledged by the WSIB that the hierarchy of policy options and Schedule entries is from the Final ODAP Report but doesn't admit that their interpretation and application of that hierarchy likely won't resemble the work of the IDSP/ODAP. In IDSP Report 14A from November of 1997 it was recommended that silicosis be moved to Schedule 4 and that new entries be made to Schedule 3 for leukemia and pre-leukemia relating to benzene (even noting that BC provides a presumption of a similar nature) or that these diseases could be included in the current entry in Schedule 3 for poisoning and its sequalae by benzene.

We are not aware of any claims for leukemia being granted by the WSIB under the current entry in Schedule 3. The scientific evidence for that causal association between benzene and leukemia has only strengthened, and yet still no entry to the Schedule. Silicosis remains in Schedule 3 likely in large part due to s. 15(5) of the WSIA providing the two-year restriction which could easily be repealed to allow moving the disease to Schedule 4 or remain there considering it is the stated position of the WSIB that s. 15(6) applies to asbestosis which is a Schedule 4 disease. Our proposed amendment to s. 161 would keep the Schedules updated and expand them as recommended by Dr. Demers. Endorsing ODRA's proposed legislative changes could have a positive impact on any future reviews of the Ontario workers' compensation system.

Adjudicative advice

This section is severely lacking detail, and it is a very important topic deserving of more than one sentence in the consultation paper. Adjudicative advice is used to allow COPD claims and was previously used to apportion NEL benefits in those claims. The interpretation memo for GI cancer relating to asbestos is another form of adjudicative advice, and it's being used in place of policy despite the WSIB Draft Protocol document stating that adjudicative advice isn't to be used in place of policy. All adjudicative advice should include the proper legal standard noting that scientific certainty isn't required, and it should consider all evidence regarding disease incidence as well as the worker's complete exposure profile.

3.5. Drafting:

This would have been the perfect opportunity to demonstrate how this framework would be put into action, but sadly no examples of policy based on it were provided. While this was a missed opportunity, it is also a perfect time to point out that a policy concerning the test for causation (i.e., significant contributing factor) could be challenged at the Tribunal under s. 126 because it's not specified in the WSIA. That challenge might not

succeed, but it would be best to have the proper legal standard specified in the legislation. Therefore, we are asking that the WSIB endorse ODRA's proposed legislative changes.

3.6. Implementation:

Implementing the Final ODAP report wasn't successful, but ODRA's proposed legislative changes could have a real impact on occupational disease adjudication that hasn't been previously accomplished. Therefore, we once again request that the WSIB utilize their power under s. 159 of the WSIA to endorse those proposed legislative changes.

3.7. Monitoring of evidence and updating policy guidance:

This section is very non-specific despite the fact that the WSIB has announced its policy agenda for 2022 noting that research grants were awarded to support policy reviews on three topics:

- Asbestos and gastrointestinal cancers
- Chronic obstructive pulmonary disease
- Asbestos and lung cancer.

There isn't a policy for COPD and the closest thing resembling one is an outdated policy for chronic obstructive lung disease in smelters, Policy 16-02-14 *Chronic Obstructive Lung Disease, Sulphur Dioxide and Particulates Exposure (Smelter Workers)*. It is outdated in the sense that it refers to benefits under the pre-1990 and 1990 versions of the Act as well as referring to the disease as COLD rather than COPD. The other two asbestos issues have policies that have been in place for a long time and are based on IDSP reports that actually recommended adding those diseases to Schedule 3.

Given the WSIB's statements noted in the KPMG report, and their practice of ignoring the policy for asbestos related GI cancer claims, along with the Policy Agenda it seems clear that the WSIB is trying to legitimize their past actions. However, validating actions that precede any potential real justification isn't an honest or transparent thing to do. What would be honest and transparent is a review of all those claims denied based on the interpretation memo by abandoning its recommendations and applying the policy properly as well as the proper legal standard to allow most, if not all, of those previously denied claims.

It is also worth noting again, that information relied on by the WSIB in the interpretation memo made statements to the effect that the evidence suggests that at current exposure limits for asbestos there is no increased risk of cancer. The claims being adjudicated don't deal with current exposure limits so the suggestion that current levels aren't enough (which is only suggestive and not sufficient to refute past studies since there is

a difference in exposure levels) to cause colon cancer isn't applicable to claims involving higher exposure levels from past decades. However, the proper legal standard for adjudication is applicable to all claims.

4. Consultation:

We take issue with the paragraphs that discuss identifying who the relevant stakeholders are for consultation according to WSIB. While we can understand that not everyone would be familiar with the complexities of occupational disease claims, but that doesn't mean that the WSIB should be determining who can participate in a consultation. There is nothing transparent about this proposed process and consultations should remain open to anyone wishing to take the time to participate.

Consultations regarding legislative and/or regulatory changes are usually held by the government instead of the WSIB, where those consultations are a result of the WSIB making recommendations to the government that should be clearly communicated to all as a matter of transparency.

Issues with consultation FAQS:

As previously submitted, the fact that the FAQS were prepared at the time of the announcement, they would more accurately be best described as anticipated questions. It also states that it applies to all occupational diseases, and not just occupational cancer, but there is nothing in this consultation paper about COVID-19 which is the most prevalent occupational disease according to the WSIB's own statistics. The proper legal standard should apply to all claims, including COVID-19 so it should have been part of this consultation.

The only question and answer that we will comment on is found at question 4 reproduced below.

4. Does the WSIB require or wait for scientific certainty before it will determine that a person's disease is work-related?

No. The WSIB does not require or wait for scientific certainty before determining if a person's disease is work-related. When adjudicating individual claims, the WSIB takes into account all of the available evidence, including existing scientific evidence, to determine whether, subject to the benefit of the doubt, it is more likely than not that the person's employment was a significant contributing factor in the development of their disease.

When the WSIB has recognized an occupational disease in policy or regulation (e.g. presumptive legislation), this recognition avoids the repeated effort of analyzing the scientific evidence for a causal link in each individual claim, and streamlines the adjudicative process to simplify the determination of whether the employment was a significant contributing factor in the development of the person's disease.

This answer to question 4 ignores the WSIB's practice of using a memo in place of a policy, that is also noted in Addendum #1. Stating that policy was designed to avoid the repeated effort of analyzing the scientific evidence would mean the Tribunal's continuation of employing Policy 16-02-11for GI cancers related to asbestos is correct. The WSIB's answer to the question above ignores the fact that the WSIB's definitions for grading scientific evidence relies on scientific certainty and when adjudicators apply that scientific conclusion directly to a claim then the WSIB is in fact requiring scientific certainty (as noted in Addendum #1).

Related issues:

Dr. Demers report[2] noted that three are approximately 3 000 occupational cancers diagnosed per year in Ontario. Information provided to him by the WSIB showed that only 4 044 cancer claims were registered with them between 2009 and 2018, which is a fraction of the 27 000 that should be expected (3 000 per year for 9 years). That is roughly 15% of occupational cancers being reported to the WSIB, and of those only 1 678 were allowed (these numbers do not include firefighter presumptive claims). Dr. Demers estimated that based on the information provided by the WSIB that approximately 400 cancer claims per year were submitted between 2009 and 2018 with 170 allowed. The majority of the claims allowed were for asbestos related cancers of the lung and mesothelioma, and only 19% of all other cancer claims were allowed.

We believe that this denial rate is a deterrent that results in fewer claims filed. As noted above, workers talk to each other and when they hear that their co-worker's claim was denied that tells them they don't have a chance either. It is our position that this scenario would be drastically improved if the four proposed legislative amendments we made were implemented and the WSIB's endorsement would demonstrate a real commitment to improving occupational disease adjudication.

Since there weren't any sample or draft policies provided with this consultation paper, but it is the same policy department at the WSIB that deals with injuries as well as occupational disease, then the only examples of their work we have are current or past

[2] Dr. Demers, Using scientific evidence and principles to help determine the work-relatedness of cancer https://www.ontario.ca/document/using-scientific-evidence-and-principles-help-determine-work-relatedness-cancer/part-2-occupational-cancer-ontario

policies. Issues of that nature will be discussed below, but they should also be viewed in the context of the four values listed in the WSIB's Strategic Plan.

Those four values listed in WSIB's 2019 – 2021 Strategic Plan are:

1. Be compassionate
2. Work with integrity
3. Always be helpful
4. Earn people's trust.

Given that this is a policy framework consultation then we will focus on the two values that apply to this process – integrity and trust. Working with integrity and earning people's trust requires not only transparency but acknowledgment of past mistakes with the lessons learned. The WSIB hasn't acknowledged past mistakes or stated what lessons were learned relating to:

- Policy 16-01-10 *Occupational Aluminum Exposure, Dementia, Alzheimer's Disease and Other Neurologic Effects* that was not only rescinded, it also amounted to nothing more than an exercise in fettering discretion, and has finally now has been replaced by a new entry to Schedule 3,

- COPD apportionment that violated s. 47(2) of the WSIA and s. 18 of O. Reg. 175/98 as well as not being consistent with a Supreme Court of Canada Decision (*Athey v. Leonati*) and wasted money on a scientific review for a legal issue as well as employing an arbitrary date to correct this past error in law,

- Abandoned occupational disease policy consultation from 2008 without explanation,

- Failing to successfully implement the ODAP Chair's final report, but expecting trust that they can do better this time,

- Ignoring Policy 16-02-11 *Gastro-Intestinal Cancer – Asbestos Exposure* and the requirement to use that applicable policy as stated in Policy 11-01-03 *Merits and Justice* for all asbestos related GI cancer claims,

- The uncompassionate, unhelpful, and quite frankly lacking in integrity statements made to KPMG about undue political interference in McIntyre Powder and GE cluster claims as noted in Addendum #1 on pages 30 – 32,

- Failing to respond to the last six of the IDSP/ODAP reports despite the legislative requirement to do so,

- And the list goes on…

To earn peoples' trust and to claim any sort of integrity the WSIB must acknowledge their past mistakes, state what lessons have been learned, and promise to do better. They must

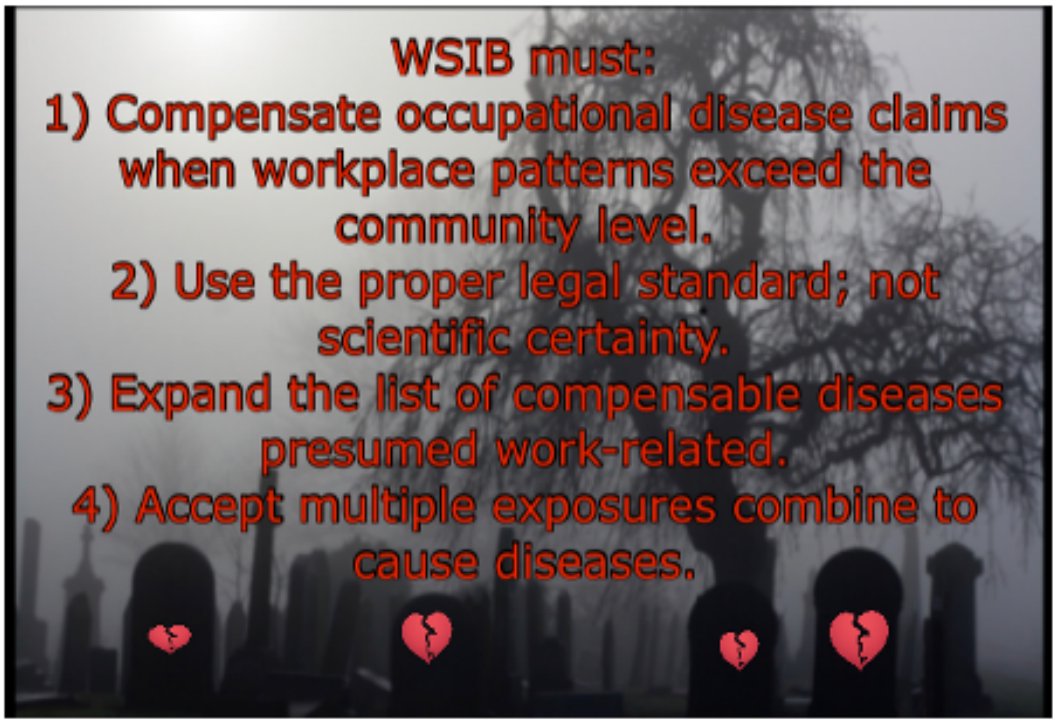
also right their past wrongs with respect to claims or benefits unlawfully denied or withheld as noted above. The WSIB should stop trying to protect the reputation that they think they have and focus on repairing the one that really have. Endorsing ODRA's proposed legislative amendments (reproduced and attached as Addendum #2) would be a step in the right direction.

ODRA would welcome the opportunity to answer any questions or provide additional information in a virtual meeting if required or requested.

Respectfully submitted on behalf of ODRA on February 28, 2022, by,

Sue James
ODRA Chair

Addendum #1



A CALL FOR JUSTICE FOR THE VICTIMS OF OCCUPATIONAL DISEASE

Making a Case for Change in WSIB Occupational Disease Adjudication Principles

ABSTRACT

There have been several clusters of occupational diseases in workplaces across this province. Representatives from these cluster groups have come together to form an alliance and to call for change. We are the Occupational Disease Reform Alliance (ODRA).

Who we are:

We are a group of people with various backgrounds from across the province who have come together for a common goal, to demand justice for victims of occupational disease. Our group name is the Occupational Disease Reform Alliance (ODRA), and it includes members who are; victims of occupational disease (workers, retirees, and family members including far too many widows), advocates (Union and Community alike), and allies (injured worker groups, injured worker representatives, and others who believe in this cause). Members in this group are from Peterborough, Sarnia, Kitchener, Waterloo, Hamilton, Niagara, Toronto, Sudbury, Elliot Lake, Sault Ste. Marie, Thunder Bay, and Dryden. We have witnessed the injustices to the workers and families who filed occupational disease claims related to their work at GE, Ventra, Neelon Castings, Algoma Steel, Uniroyal, and in other industries or mining, especially those who were forced to inhale McIntyre Powder. A common goal of fighting for justice for the victims of occupational disease has united us, and we are calling on the government and the WSIB to implement necessary changes.

Background:

Occupational disease has been observed and documented as early as the 1700s by Bernardino Ramazzini and Percivall Pott. Pott[3] observed an increased incidence rate of scrotal cancers in chimney sweeps and made the link to the soot as the cause of their squamous cell carcinomas which were later referred to as chimney sweeps' carcinoma. Ramazzini has been called the father of occupational medicine[4] for being the first to catalogue diseases of workers in his work titled *De Morbis Artificum Diatriba*. We believe it is worth noting that not all diseases catalogued by Ramazzini resulted from exposures; some were from physical agents much like bursitis that is listed as an occupational disease in Schedule 3, essentially, he recognized injuries and diseases that are currently defined in the WISA. It is clear that observing diseases in groups of workers isn't new, and that epidemiological studies aren't necessary to determine a causal link to the workplace.

Providing compensation for occupational diseases (previously called industrial diseases) has been part of the history of Ontario's workers' compensation system from its inception. In fact, Sir William Ralph Meredith stated that,

> "It would, in my opinion, be a blot on the act if a workman who suffers from an industrial disease contracted in the course of employment is not entitled to compensation[5]" (page XV, second full paragraph, fourth sentence).

[3] Sir Percivall Pott, English Surgeon, Britannica https://www.britannica.com/biography/Percivall-Pott
[4] Bernardino Ramazzini: The Father of Occupational Medicine https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446786/
[5] Sir William Ralph Meredith, *Final Report on Laws Relating to the Liability of Employers* https://archive.org/details/finalreportonlia00onta/page/n17/mode/2up

At that time there was only Schedule 3 and it started with six diseases listed, which likely created issues when seeking compensation for an occupational disease not in the schedule. However, it is clear that the intent of the Act was to provide compensation for occupational diseases and that remains a primary objective in the current version of the legislation (see section 1(4) of the WSIA).

The current version of the Act lists 30 occupational diseases in Schedule 3 that are afforded a rebuttable presumption regarding work-relatedness; with an additional 4 diseases in Schedule 4 that have an irrebuttable presumption. Section 15(1) and 15(2) as well as the definition of 'occupational disease' found in section 1 of the WSIA provide a mechanism to compensate for diseases that aren't listed in the schedules. Despite the evolution of the legislation, the fight for compensation for occupational diseases remains a difficult task.

WSIB has Administrative Practice Documents (formerly referred to as Adjudicative Advice Documents) that can be used to assist in understanding issues that are common to occupational disease and injury claims (e.g., loss of earnings, maximum medical recovery, weighing of medical evidence, etc.). They also have some that are specific to certain claims such as traumatic mental stress, but there isn't one single document of that nature to specifically address occupational disease. The overall message in the Adjudicative Advice Document *Initial Entitlement (Disablement)*[6] seems to call for a liberal interpretation of the worker's report and advises against adjudicating these claims in an "unnecessary restrictive" manner. Applying this type of adjudicative principle to occupational disease claims (which usually result in a disablement) would be justified and is in fact consistent with section 15(1) of the WSIA. It shouldn't be so difficult to get justice for the many victims of occupational disease.

Recommendations:

ODRA members have observed many issues with occupational disease adjudication and have 4 recommendations that we believe would help resolve a lot of issues. Overall, we are calling for recognition of occupational disease that is more reflective of the disease burden noted in reviews such as the Ontario Cancer Research Centre's *Burden of Occupational Cancer Project*.

1. We are calling on the WSIB to grant entitlement for occupational diseases when they exceed the level out in the community.

2. To accomplish this, the WSIB must not wait for scientific certainty. Canada's Supreme Court has confirmed that this is not what the law requires for workers' compensation. Instead, the WSIB must use the evidence at hand, including evidence

[6] WSIB Adjudicative Advice: Initial Entitlement (Disablement) https://www.wsib.ca/sites/default/files/2019-03/advice_initialentitlement.pdf

gathered by workers and communities about occupational disease in the workplace. WSIB must not leave workers and families in poverty until the body count has mounted up over decades.

3. Additionally, the WSIB must implement presumptions of work-relatedness for cancers listed in categories 1 and 2 by the International Agency for Research on Cancer (IARC). Irrebuttable presumptions for those with the most significant occupational contribution and a rebuttable presumption for the others.

4. WSIB must also recognize diseases resulting from exposures to multiple carcinogens/irritants (i.e., cancers, COPD, etc.) as recommended by the Demers Report, rather than focusing on single separate exposures.

These recommendations are specific to occupational disease, and address issues regarding initial entitlement. They are not the only issues with the compensation system, and once victims of occupational disease are granted entitlement, they become part of a system that needs to change the way it treats injured workers. Therefore, in addition to these specific recommendations we support the Ontario Network of Injured Workers Groups (ONIWG) in their call for change in the workers' compensation system regarding issues such as deeming, return to work issue, reliance on external medical consultants in place of the treating physician, adjudication delays, etc.

Some recommendations required a more detailed explanation than the others, but the length of that explanation shouldn't be viewed as an indication of preferring one recommendation over another. We will be referencing the recent reviews of the WSIB where relevant to the issue, but that shouldn't be taken as an endorsement of the recommendations contained therein unless specified. Cited works will be included in the footnotes and any additional materials considered (such as the OCRC project mentioned above) will be in Appendix A. Given that there have been two government commissioned reviews of the WSIB, and one value for money audit that will be referenced, we want to be clear that we are not calling for any further reviews and that it is our position that the time for action is overdue.

Making the Case for Change:

Each of our four recommendations have come from our experience that includes a combined total of hundreds (if not thousands) of occupational disease claims registered with the WSIB. We also recognize that there are likely just as many, if not more, occupational diseases that were never reported to the WSIB. Some of that lack of reporting comes from a place of unfamiliarity with the reporting requirements of the WSIB, and others come from workers who made the decision not to take on the added fight of filing a claim. Far too many workers have died from occupational diseases without being provided compensation, and others never see their claim successfully resolved. All workers deserve a compensation system that is fair and just; that is the driving force behind our recommendations.

Recommendation #1: Compensate occupational disease claims when workplace patterns exceed the community level.

Recognizing diseases in workers that are more prevalent than in the surrounding community and/or general population is a large part of the reason why some people may have heard of Ramazzini and Pott. This type of observation has also led to other important discoveries, such as the origins of diseases (e.g., Typhoid Mary, mad hatters' disease, etc.). Observed increased incidences are a reliable indicator that something is wrong, and while the exact cause might not be known it isn't required to determine that there is a causal relationship present. Knowing the work history of those affected by disease could lead to the conclusion that there is something in that workplace that is a significant contributing factor in the onset of the observed disease. Accurate work history information also prevents counting the work observations as community incidence which would skew any comparison if counting one case in both categories wasn't avoided. Implementing recommendation 1 not only allows for compensation to be provided, but it also identifies a workplace risk that can be used to hopefully prevent future cases.

In response to the Occupational Disease Advisory Panel's Final Report commissioned by the WSIB, a draft protocol document was created by the Board. This document will be referenced as part of rationale for all four recommendations, and it demonstrates that these recommendations aren't foreign concepts at the WSIB. For the purpose of recommendation 1, we want to draw your attention to page 20 where it states that,

> "In general, the WSIB does not use the public health approach of "doubling" the risk as the baseline to define an "increased" risk" (first bullet under the heading 'Strength of association')[7].

It is our position that recommendation 1 aligns with the WSIB's protocol document and that it should already be part of occupational disease claims adjudication process.

Scientific and/or medical evidence doesn't exist in every case; the absence of such evidence should never be viewed as an absence of a causal connection. The draft protocol document provides a reason for scarce or absent evidence of this nature on page 24 under the heading 'Funding of research'. It takes a fair sum of money to conduct epidemiological studies and that is disadvantageous to workers who can't afford to fund a study. Industries have the money to pay for research, and that money provides the freedom to choose the researcher who will serve their needs best. The use of scientific and/or medical evidence in the proper legal context will be discussed below.

[7] *Taking ODAP into the future, A protocol for occupational disease policy development and claims adjudication* https://www.wsib.ca/sites/default/files/2019-03/protocoldraft05.pdf

The WISB would already have the information required for most of the groups that we represent to look at the difference between the workplace incidence compared to the community or general population. Statistics for disease incidence from reliable sources such as the Canadian Cancer Society are readily available on the internet. It is noted in the protocol document that the WSIB has an Occupational Disease Information and Surveillance System to provide information on disease and fatal claims submitted to the WSIB (page 4, first bullet, footnote 4). Given this information, we see no obstacles that would prevent the implementation of recommendation 1.

We have several examples that can be provided to show where the WSIB has denied claims for workers when the incidence rate exceeded that of the surrounding community and/or general population. Should the WSIB wish to confirm this is the case they need only look at the past breast cancer claims from Bell or Ventra Plastics, glioblastoma multiforme claims for coke oven workers at Algoma, or the lung cancer claims at Ventra Plastics, among others to verify our point. While we recognize that a cluster of breast cancer claims at Bell was denied by the Tribunal, our point is that those claims should have never had to be appealed. The test to recognize these claims as work-related includes implementing recommendation 2.

Recommendation #2: Use the proper legal standard; not scientific certainty.

The documentation establishing the proper legal standard to be employed includes numerous Supreme Court of Canada Decisions, Tribunal decisions, reviews of the compensation system, and the WSIB draft protocol document. We recognize that section 119(1) of the WSIA stipulates that the Board is not bound by legal precedent, and documentation that we're referencing is intended to be instructive on the issue. Not being bound is different from not having to consider that information, and nowhere in the Act does it stipulate those legal precedents are to be completely ignored. In fact, the requirement to base the decision on the merits and justice requires consideration of all relevant information as stated in WSIB Policy 11-01-03 *Merits and Justice*.

In the previously mentioned *Final Report of the Chair of the Occupational Disease Advisory Panel*[8] (ODAP) the legal standard was described in four sections that combine to set the proper legal standard (see pages 7 – 11). Those sections are:

- The causation test to determine the relationship between the condition and work,
- Burden of proof clarifying who is responsible for proving the case,
- The standard of proof describing the degree of certainty required, and
- Applying the benefit of doubt as prescribed by section 119(2) of the WSIA.

[8] *Final Report of the Chair of the Occupational Disease Advisory Panel*
https://www.wsib.ca/sites/default/files/2019-03/docd_chairfinalreport2005.pdf

It is noted on the WSIB website that the ODAP Final Report was approved by the Board of Directors on June 9, 2005, for implementation[9]. Most of the information in the report is reflected in the Board's protocol document, but we are not seeing this reflected in the decisions of the WSIB adjudicators.

Rather than duplicate all the information provided in the ODAP Final Report and the WSIB draft protocol document, we will simply state where we have observed the Board's adjudicators departing from the proper legal standard. For the examples given regarding our position, we would be happy to provide specific claim examples but feel that there are so many it shouldn't be difficult to verify our position. We will also stipulate why we disagree with the limitation placed on the use of the benefit of doubt, and why the Board should not place such a limit in the decision-making process.

Burden of proof:

The burden of proof in the compensation context is very different from the courts. Neither the employer nor the injured worker is required to prove their case, and an adjudicator cannot refuse to provide a decision based on insufficient evidence. Workers' compensation is an inquiry system, not an adversarial like the courts. However, we recognize that the adjudicator isn't responsible for making the case for either party and they need only gather the information that they feel necessary to render a decision. Workers and employers are required to provide the WSIB with information they request, and it is also open to the parties to provide additional information that they feel is relevant to the case. This information is captured in Policy 11-01-02 *Decision-Making* under the heading 'Principles' which reads,

> "As an inquiry system (rather than an adversarial system), the WSIB gathers the relevant information, weighs evidence, and makes decisions."

Causation test:

Significant contribution has been equated with material contribution (the term used by the courts) and accepted as the test for causation as stated in both the ODAP Final Report and the WSIB draft protocol document. It is curious that the only WSIB Policy that even mentions significant contribution is Policy 15-02-03 *Pre-existing Conditions*. This is the well accepted established test for causation, and it isn't even found anywhere in the suite of "Decision Making" policies.

Adjudicators use the phrase "significant contributing factor" in multifactorial claims that are adjudicated on a case-by-case basis, but we believe that the concept isn't fully understood as demonstrated in numerous decision letters. Far too often an occupational disease claim is denied because the adjudicator determines that the workplace wasn't a

[9] Chair's final report https://www.wsib.ca/en/chairs-final-report

significant contributing factor in the onset of the disease, but we are of the position that it falls short of considering the standard of proof. The causation test is only one part of determining entitlement under the WSIA and it isn't a stand-alone test as it must be used in conjunction with the standard of proof applying the benefit of doubt where necessary (e.g., when the evidence on the issue is approximately equal).

Standard of proof:

In the criminal justice system, a high bar is required to be sure that the decision to punish someone for a crime is correct, so they employ the standard of "beyond a reasonable doubt" to attain the required certainty. A lesser standard is used in civil proceedings, and that lesser standard has been accepted as the standard under the WSIA which is the balance of probabilities. The protocol document provides an eloquent explanation on pages 37 and 38 stating that,

> "The analysis of the balance of probabilities should be evident in any claim where the significant contribution test is applicable.
>
> There is a difference between balance of probabilities and work-relatedness. For example, a worker smoked four packs of cigarettes a day and was also exposed to agent X. The question is whether it is more likely than not that his or her employment significantly contributed to the development of the disease. The adjudicator does not consider whether it is more likely than not that the disease is work-related. Considering work-relatedness suggests the concept of a "predominant cause", which is a higher standard of proof than envisioned by the WSIA.
>
> Using the balance of probabilities as the standard of proof also reminds us that adjudicators can make decisions without having scientific or other certainties."

It is our position that making a determination regarding whether it is more likely than not that a worker's employment significantly contributed to the development of the disease using the balance of probabilities requires examination of the evidence on both sides. We believe that this is where the WSIB stops short and will discuss it further after explaining our issue with the limitation place on the benefit of doubt because it is our contention that they are all connected.

Benefit of doubt:

Both the ODAP Final Report and the WSIB draft protocol document state that the benefit of doubt doesn't apply to the final decision, but no such exclusion is found in the WSIA or WSIB Policy 11-01-13 *Benefit of Doubt*. The wording in the ODAP report could be taken to mean that the benefit of doubt shouldn't be reserved until the final decision and should be applied during the entire process whenever the evidence is approximately equal in

weight. However, the WSIB draft protocol document clearly, and incorrectly, states that the benefit of doubt only applies to specific issues "not the final decision" (page 38, first bullet, footnote 4). No document, report, memo, or anything of that nature can supersede the WSIA or WSIB Policy.

Policy 11-01-02 *Decision-Making* stipulates that,

> "The WSIB's decisions and practices must be consistent with the provisions of the Act and the rules of natural justice."

By extension of that statement, and consistent with the spirit and intent of section 126(4) of the WSIA, WSIB Policies must be consistent with the provisions of the Act. As noted above, Policy 11-01-13 *Benefit of Doubt*[10] is consistent with the Act (specifically section 119(2)) but deviating from the direction provided in the WSIA is a breach of the WSIB's legislative duty.

There are rare and unusual circumstances where an adjudicator can depart from applicable WSIB Policy described in Policy 11-01-03 *Merits and Justice*. However, the Policy clearly states that,

> "If there are specific directions within the Act that are relevant to the facts and circumstances of the case, decision-makers are legally bound to follow them with no exceptions."

The only time that section 119(2) isn't relevant to a worker's case is when the evidence isn't approximately equal in weight. Therefore, section 119(2) must be applied to all issues being decided, including the final decision, whenever the evidence is approximately equal in weight.

It was suggested by the ODAP Chair that there should be a discussion and/or a definition of the term "issue", but that seems to ignore past and current practice and rules that would eliminate any need to further define the word issue. One very common "issue" in dispute or issue decided by the WSIB is initial entitlement, which would be the final decision of that adjudicator. This past and present practice of using the word issue in this manner (i.e., something that requires a decision) supports our position that the final decision is an "issue" within the accepted definition of that word.

The plain and ordinary meaning rule of interpretation and the Legislation Act, 2006, would also be applicable and lead to the conclusion that the final decision is an issue. The word isn't part of the definitions clause and absent a specified definition in the WSIA then the plain and ordinary meaning rule would direct us to the dictionary to find the meaning of issue. Merriam-Webster[11] defines an issue as:

[10] WSIB Policy 11-01-13 *Benefit of Doubt* https://www.wsib.ca/en/operational-policy-manual/benefit-doubt
[11] Merriam-Webster definition for issue https://www.merriam-webster.com/dictionary/issue

- A vital or unsettled matter,
- A matter that is in dispute between two or more parties,
- The point at which an unsettled matter is ready for a decision, etc.

The plain and ordinary meaning rule would lead to the conclusion that the final decision is an issue that is subject to section 119(2) when the evidence is approximately equal in weight.

Section 64 of the Legislation Act, 2006, prescribes the rule of liberal interpretation stating that,

> "An Act shall be interpreted as being remedial and shall be given such fair, large and liberal interpretation as best ensures the attainment of its objects.[12]"

One objective, or object, is to provide compensation as stated in the purpose clause (see section 1(4) of the WSIA). Section 118 of the WSIA prescribes the Board's authority to decide all matters and questions arising under the Act and section 131(4) requires that those decisions be provided in writing demonstrating that decisions are an object of the legislation. It should be noted as well that section 119(2) applies to providing a decision on an issue since it specifically states,

> "If, in connection with a claim for benefits under the insurance plan, it is not practicable to **decide an issue** because the evidence for or against it is approximately equal in weight, the issue shall be resolved in favour of the person claiming benefits" [emphasis added].

The requirement for the issue to be in connection with a claim for benefits means that section 119(2) doesn't apply to other issues decided by the Board (e.g., employer classification or other employer account matters). However, the final decision on entitlement is an issue that is connected to a claim for benefits and where the evidence is approximately equal in weight then section 119(2) must be applied.

Not only is this interpretation of the benefit of doubt provision of the WSIA consistent with interpretation rules, regulations, and WSIB Policies, but it is also consistent with WSIAT jurisprudence (see for examples WSIAT Decision Nos. 97/01[13], 1672/04[14],

[12] Legislation Act, 2006 https://www.ontario.ca/laws/statute/06l21#BK74
[13] WSIAT Decision No. 97/01
https://www.canlii.org/en/on/onwsiat/doc/2001/2001onwsiat148/2001onwsiat148.html?autocompleteStr=Decision%20No.%2097%2F01&autocompletePos=1
[14] WSIAT Decision No. 1672/04
https://www.canlii.org/en/on/onwsiat/doc/2009/2009onwsiat150/2009onwsiat150.html?autocompleteStr=Decision%20No.%201672%2F04&autocompletePos=1

1780/04[15], & 2018/17[16]) and potentially consistent with WSIB decisions. We are not asking for a retraction of the statements made in error about the application of the benefit of doubt, only that the Board use the proper application of this provision. The method described herein is the way that the benefit of doubt must be applied (when the evidence is approximately equal in weight) in the application of the proper legal standard despite the statements made in the ODAP Final Report or the WSIB draft protocol document in that regard.

Application of the proper legal standard:

We will stipulate that the WSIB uses the phrases 'balance of probabilities' and 'significant contributing factor' in their decision letters but contend that they don't properly apply the legal test even when those phrases are utilized. This has been frequently demonstrated in claims where the WSIB's Occupational Disease Policy and Research Branch (ODPRB) have conducted scientific literature reviews on a topic, and our contention on this issue is easily verifiable. It is especially true when the ODPRB has graded the evidence in their review as lower than having a positive association (i.e., "limited evidence" or "inconclusive evidence" gradings).

Since there is a thinly veiled reference to the fact that the WSIB ignores Policy 16-02-11 *Gastro-Intestinal Cancer-Asbestos Exposure* on a regular basis in the KPMG Value for Money Audit[17], we would be derelict in fighting for change in the compensation system if we failed to address it. If issues of this nature were corrected by the WSIB, then they could proclaim that they are applying the proper legal standard. Currently, the WSIB is holding claims to a much higher standard than required by the WSIA and have failed in far too many claims to properly apply the benefit of doubt provision.

<u>Use of scientific information:</u>

Both the ODAP Final Report and the WSIB draft protocol document discuss the various types of scientific evidence and their weaknesses, with the overall message being that such information is only part of the evidence to be considered by the adjudicator. While such evidence can be persuasive on an issue, it shouldn't be considered determinative, and all information must be considered in the proper legal context applying the benefit of doubt when the evidence is approximately equal in weight. Unfortunately,

[15] WSIAT Decision No. 1780/04
https://www.canlii.org/en/on/onwsiat/doc/2005/2005onwsiat179/2005onwsiat179.html?autocompleteStr=Decision%20No.%201780%2F04&autocompletePos=1
[16] WSIAT Decision No. 2018/17
https://www.canlii.org/en/on/onwsiat/doc/2018/2018onwsiat32/2018onwsiat32.html?autocompleteStr=Decision%20No.%202018&autocompletePos=1
[17] February 7, 2019 KPMG Value for Money Audit Report; Occupational Disease and Survivor Benefit Program
https://www.wsib.ca/sites/default/files/2019-05/wsib_occupational_disease_and_survivor_benefits_program_vfma_report.pdf

WSIB adjudicators adopt scientific conclusions of the ODPRB as a legal determination on the issue of entitlement and deny claims when the evidence is graded as 'limited' or 'inconclusive'.

The definitions for the terms used in grading the evidence are on pages 17 & 18 of the WSIB's draft protocol document (footnote 4), and there is also a discussion about the type of evidence required for adding to Schedule 4 on page 26 indicating that when the evidence is graded as "Positive evidence" that such a disease association can be included. Schedule 4 is afforded an irrebuttable presumption and most other claims only required that the workplace be more likely than not a significant contributing factor in the onset of the disease. Requiring evidence to be at the same level for initial entitlement as for adding to Schedule 4 is holding the claim to a higher standard than required by the WSIA.

'Limited evidence' is defined as,

> "The evidence is considered limited if a preponderance of scientific evidence or suggestive evidence supports a causal association, but inconsistent results and methodological weaknesses ***preclude a definitive conclusion***." [emphasis added].

Since there is no requirement for scientific, medical, or other certainties then you would expect this grading of the evidence to be viewed as supporting a causal relationship, but the WSIB denies claims when the evidence is graded as 'limited'. The balance of probabilities doesn't require that the evidence supporting a claim consist of a preponderance of evidence. Having a preponderance of evidence supporting one side of the issue would render the benefit of doubt inapplicable. Requiring a definitive conclusion may be reasonable in the field of science or even medicine, but it is a standard that is much higher than the balance of probabilities which is the proper legal standard of proof.

The 30 conditions listed in Schedule 3 are afforded the rebuttable presumption prescribed by section 15(3) of the WSIA. Having a rebuttable presumption implies that there is a level of uncertainty regarding the work-relatedness of those conditions and allows for the opportunity to show that a claim for one of those conditions might not be due to the worker's employment. It shifts the onus from proving a claim to disproving the work-relatedness of that condition, but claims are allowed that include a degree of uncertainty. Therefore, it is submitted that denying claims based on evidence graded as limited by the ODPRB holds claims to a much higher standard than required by the WSIA.

'Inconclusive evidence' is defined by the ODPRB as,

> "The scientific evidence is considered inconclusive if it is neither consistent nor strong. Both positive and negative findings may result from a variety of study weaknesses. ***A causal association can neither be identified nor ruled out.***" [emphasis added].

Adjudicators are advised to use the benefit of doubt provision when the scientific evidence about the possible causal connection to the worker's condition (see page 38, footnote 4), but they tend to simply deny claims based on the evidence being graded as 'inconclusive'.

There is also direction stating that the adjudicator must still compare the circumstances of the claim before them with the information reported in the literature (see page 54), and that the grading of the evidence as 'inconclusive' doesn't negate the responsibility to apply the proper legal standard (see pages 28 & 29). Scientific conclusions are not legal determinations, and they don't use the proper standard to decide issues arising under the WSIA. It is therefore submitted that the WSIB might use the proper terminology, but they are failing to apply the proper legal standard in far too many claims.

Adopting a scientific conclusion doesn't just hold the claim to a higher standard it also amounts to abdicating the authority of the Board prescribed by section 118 of the WSIA. The ODPRB papers are only one piece of the evidence to be considered, and in that consideration the proper legal standard must be applied. There must be an examination of that evidence to determine the relevance in order to assign the appropriate weight to be afforded that piece of evidence. When the evidence is approximately equal in weight then the adjudicator must apply the benefit of doubt provision. WSIB has been failing to deliver this justice to injured workers despite being the agency that has been legislated to provide it.

An example of the WSIB's failure to properly evaluate an ODPRB paper that graded the evidence as 'inconclusive' can be found in WSIAT Decision No. 2863/17[18]. That case didn't require the application of the benefit of doubt but did require a careful review of the scientific information provided by the ODPRB. The ODPRB used mortality ratios in their review for kidney cancer which are unreliable to determine the risk posed for a cancer with a low mortality rate as stated by the WSIAT Medical Assessor in paragraph 17 of the decision. It was also noted by the Medical Assessor that the ODPRB used studies that weren't relevant to the worker. These points were made to the WSIB by the advocate prior to the appeal progressing to the Tribunal, and the appeal could have been avoided had the WSIB adjudicator applied the proper legal standard instead of abdicating their decision-making authority to the ODPRB.

Standard for consideration of non-occupational factors:

There is nothing in the WSIA, or anywhere else for that matter, that would support using a different standard when considering any non-occupational risk factors in the decision-making process. It is stipulated in the WSIB's draft protocol document that the benefit of doubt provision applies to the worker's medical history and the scientific information regarding non-occupational risks (see page 38, last two bullets, footnote 4). Therefore, it is implicit that non-occupational risks be determined to be significant contributing factors in the onset of the medical condition to support a decision that the worker isn't entitled to benefits.

To be clear, we are not suggesting that the WSIB needs to determine the exact cause, only that the balance of probabilities requires consideration of both sides of the issue to

[18] WSIAT Decision No. 2863/17
https://www.canlii.org/en/on/onwsiat/doc/2019/2019onwsiat2178/2019onwsiat2178.html?autocompleteStr=Decision%20No.%202863%2F17&autocompletePos=2

determine which is more likely. The requirement of examining both sides of the evidence is also necessary to determine if the benefit of doubt is applicable (e.g., is the evidence approximately equal in weight?). In reviewing the non-occupational risk factors the same legal standard must be applied as a matter of fairness and impartiality.

For example, the Canadian Cancer Society lists the risk factors for kidney cancer[19] as: smoking tobacco; overweight and obesity; high blood pressure; certain genetic conditions; end-stage kidney disease and dialysis; family history of kidney cancer; contact with trichloroethylene (TCE) at work; and tall adult height. Some risks could be significant contributing factors like heavy tobacco use, while others are simply correlational risks that aren't significant contributing factors like being tall, and these types of determinations are necessary to know which cause is more likely (occupational or non-occupational) or if the evidence is approximately equal in weight to trigger the application of the benefit of doubt. It would be an injustice to victims of occupational disease to deny their claim based on a separate standard used to determine the non-occupational risks for their condition.

Gastro-intestinal cancer-asbestos policy:

It is noted in the KPMG report that,

> "the WSIB currently uses Adjudicative Support Documents (ASD) in place of outdated policies" (see page 14, footnote 13).

The report goes on to state that WSIAT is bound by WSIB policy (as per section 126 of the WSIA) and not ASDs, but that statement overlooks the fact that the WSIB is bound by policy too. Since the KPMG report is specific to occupational disease, and that there is a memo dated May 27, 2009, regarding the adjudication of gastro-intestinal cancers for asbestos exposures (not an ASD), then it becomes obvious that this is the issue being referenced.

As stated above, Policy 11-01-03 *Merits and Justice* allows adjudicators to depart from a relevant policy in,

> "rare cases where the application of a relevant policy would lead to an absurd or unfair result that the WSIB never intended."

The WSIB's draft protocol document further clarifies the use of this exception to applying all relevant policies stating that,

> "adjudicators do not use the "merits and justice" argument to avoid the intended result of a policy simply because they do not like that result." (page 42, third bullet, footnote 4).

[19] Canadian Cancer Society, Risk factors for kidney cancer https://www.cancer.ca/en/cancer-information/cancer-type/kidney/risks/?region=on

With respect to using adjudicative advice documents, or ASDs, the WSIB's draft protocol specifies that such materials

- do not direct the adjudicator in deciding a claim
- do not offer fixed criteria
- do not set guidelines to be applied in decision-making
- **do not replace policy**, and
- **must work with existing policies**. [emphasis added, see page 31].

The unchallenged statement found in the KPMG report is demonstrating the WSIB's disregard for policy, transparency, fairness, and justice.

Using an unpublished memo in place of policy is not fair, transparent, or just and such a practice should have never been initiated by the very agency responsible for administering the WSIA and developing policy. There is some indication that the WSIB knows that this course of action isn't appropriate because there is no mention of it in the report from Dr. Paul Demers *Using scientific evidence and principles to help determine the work-relatedness of cancer*[20] released in 2019 or in the 2020 review conducted by Sean Speer and Linda Regner-Dykeman (Speer/Dykeman report) *Workplace Safety and Insurance Board operational review report*[21]. The WSIB must stop this practice and re-adjudicate past claims that were wrongfully denied on that basis.

The fact that WSIAT refuses to apply the WSIB memo in place of Policy 16-02-11 should also reaffirm that this practice isn't consistent with law and policy. WSIAT Decision No. 1429/11[22] noted that the memo wasn't policy and didn't work with an existing policy, and WSIAT Decision No. 25/13[23] provided an interpretation of the policy as well as noting that the memo wasn't an appropriate substitute for policy. There are at least a dozen WSIAT Decisions that have cited and followed the reasoning of Decision No. 25/13 (e.g., Decision Nos. 124/20, 3588/17, 1064/20, 503/19, etc.). Workers and/or their survivors shouldn't be forced to endure years of waiting for an appeal decision to provide justice when a published policy should have been applied to their first decision from the Board and the claim should have been allowed at that level.

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[20] *Using scientific evidence and principles to help determine the work-relatedness of cancer*, Dr. Paul Demers https://www.ontario.ca/document/using-scientific-evidence-and-principles-help-determine-work-relatedness-cancer

[21] *Workplace Safety and Insurance Board operational review report*, Sean Speer and Linda Regner-Dykeman https://www.ontario.ca/document/workplace-safety-and-insurance-board-operational-review-report

[22] WSIAT Decision No. 1429/11 https://www.canlii.org/en/on/onwsiat/doc/2012/2012onwsiat1404/2012onwsiat1404.html?autocompleteStr=Decision%20No.%201429%2F11&autocompletePos=1

[23] WSIAT Decision No. 25/13 https://www.canlii.org/en/on/onwsiat/doc/2013/2013onwsiat437/2013onwsiat437.html?autocompleteStr=Decision%20No.%2025&autocompletePos=1

Putting it all together:

There was a comment in the KPMG report about undue political interference in cluster case management giving the examples of General Electric (GE) and McIntyre Powder (see page 15, footnote 13). We take exception to that statement and believe that it is a gross mischaracterization. It is our position that neither of those clusters were an example of undue political interference, but rather a reflection of the WSIB's inconsistency in the application of the proper legal standard.

For McIntyre Powder the WSIB had a Policy that was nothing more than an exercise in fettering discretion and it was only recently revoked. When the policy was in place there was a rigid adherence to its direction that claims relating to aluminum powder for neurological conditions weren't occupational diseases. This precluded the consideration of entitlement for a claim which meant that the proper legal standard wasn't applied. Clearly, the WSIB only has itself to blame for the negative attention it attracted as a result of their mishandling of those claims that some would argue was an abuse of power.

In the case of the GE claims there were several well written news articles that shouldn't need to be cited here to establish the events. Again, it was issues with WSIB's handling of those claims that drew the negative attention. This negative attention, and the negative consequences suffered by the victims of occupational disease, could have been avoided if the proper legal standard had been applied.

The low acceptance rate and low reporting rate of occupational diseases was noted in Dr. Demers' report (see pages 4 & 5, footnote 16). He also noted that the denied claims only made up a fraction of the gap between the estimated number of occupational cancers and allowed cancer claims (see page 14). One way to improve the underreporting of occupational disease claims is to increase the number of accepted claims because these workers know each other and talk about their experiences which could discourage others from filing. As noted above, there have been news stories covering the issues with occupational disease claims adjudication that could also discourage victims of occupational disease from filing WSIB claims. Applying the proper legal standard to claims would increase the acceptance rate and likely have a positive impact on the reporting of occupational diseases as well as improving the WSIB's reputation.

Recommendation #3: Expand the list of compensable diseases presumed work-related.

There are two recent reports that have recommended the WSIB expand the list of diseases and/or conditions in Schedules 3 & 4 (see footnotes 13 &16). Both the ODAP Final Report and the WSIB draft protocol document provided a framework for adding to the Schedules, which would indicate that expanding the lists was their recommendation as well. Schedule 3 has expanded from just 6 diseases to now including 30 diseases and/or conditions, but there haven't been any additions made to it since the early 1990s. Schedule 4 (introduced in 1986) hasn't existed as long as Schedule 3 has, and nothing has been added

to it since the 1990s (it was an empty Schedule until that time). Expanding the list of compensable diseases presumed work-related isn't a novel concept and it should be part of the ongoing work to provide justice for victims of occupational disease.

We prefer the wording of the recommendation in Dr. Demers' report (footnote 16) that states,

> "the WSIB should update and greatly expand the list of presumptions regarding cancer in Schedules 3 and 4" (page 6 under the heading 'Recommendations to update presumptive list and cancer-relevant policies').

KPMG's report is the only one cited that includes a response from the WSIB to their recommendations, and the response regarding Schedule 3 & 4 is disappointing. The WSIB's response on page 17 (footnote 13) under the heading 'Response to Recommendation 3' was that,

> "The WSIB will do a preliminary review of the current state of the science, against Schedules 3 and 4 over the course of 2019 and explore with the Ministry of Labour whether there is an opportunity to update."

From that statement it appears that the WSIB is only interested in determining if there is an opportunity to eliminate diseases or conditions from the Schedules and not exploring opportunities to expand them. Instead, the WSIB should be looking to greatly expand the Schedules as recommended in the report from Dr. Demers.

In any review of current scientific information, the WSIB needs to be mindful of the fact that this current information could be a reflection of reduced exposures compared to past practices. Occupational disease claims are generally a result of past exposures, and the older studies likely reflect the experience of those workers. This approach would be consistent with the merits and justice provision of the WSIA as well as WSIB Policy requirement to consider all relevant facts and circumstances.

Another issue regarding the Schedules that needs to be addressed is the rebutting of the presumption of section 15(3) of the WSIA. In some of the Tribunal decisions referenced regarding the application of the benefit of doubt, there is a reference to the Supreme Court of Canada (SCC) Decision *F. H. v. McDougall, 2008 SCC 53*[24] which clarified that the only standard of proof in civil law is the balance of probabilities. Our issue isn't with the SCC's decision, or even that WSIAT Decisions that were cited referencing the SCC decision, it's with the application of that determination in the compensation system which wasn't part of the SCC decision.

[24] F.H. v. McDougall, 2008 SCC 53 (CanLII), [2008] 3 SCR 41, https://www.canlii.org/en/ca/scc/doc/2008/2008scc53/2008scc53.html

There is a notable distinction between the WSIA and civil litigation which is that the WSIA provides presumptions whereas none are afforded to the parties in civil litigation. As noted above, there is a presumption in criminal law that an accused person is considered innocent until proven guilty beyond a reasonable doubt. It is not clear from the Tribunal decisions that referenced the SCC decision that sufficient consideration was given to this notable distinction between civil litigation and workers' compensation. In a system without any presumptions, it makes sense to only have one standard of proof, but in the worker's compensation system there are presumptions which change the onus from proving a claim to disproving it if possible. Claims without a presumption are established based on the standard of proof of the balance of probabilities and to rebut the presumption the same standard would essentially nullify the presumption.

Clearly the legislature intended for the claims that are afforded a presumption to require a higher standard of proof to rebut the presumption, in fact there isn't even an opportunity to rebut the presumption of section 15(4) of the WSIA. The wording of the presumption demonstrates that the Legislature intended for workers to be entitled to compensation, even when there are alternative theories of causation, unless the contrary is shown. Suggesting that there are other theories of causation doesn't show that claim wasn't work-related, and it wouldn't be proper to weigh various theories of causation on a balance of probabilities to rebut the presumption. It is our position that rebutting the presumption requires clear and convincing evidence to establish that the contrary has been shown.

We propose that addressing the recommendations regarding the Schedules needs to include transparency regarding the standard required to rebut the presumption of section 15(3) of the WSIA.

Recommendation #4: Accept multiple exposures combine to cause disease.

It was noted in the ODAP Final Report that,

> "A single exposure rarely results in a disease outcome. However, exposure of a given individual to several causal agents may increase his/her risk of disease in a synergistic, additive or antagonistic manner. Equally, different individuals may respond differently to specific exposures depending on their individual susceptibilities, on the promotional effects of the exposures, or on other contributory factors.
>
> Given the many combinations and permutations of occupational exposures, it is not uncommon for the WSIB decision-maker to be faced with adjudicating a claim for which there is no specific relevant scientific evidence. In other circumstances, the scientific evidence may be weak or contradictory" (last paragraph on page 20 and first paragraph on page 21).

This issue has been a challenge for the WSIB and noted in other reviews as well, with the exception of the Speer/Dykeman report. Recommendations from some of those reviews

include additional training for WSIB decision-makers and policy development to address this complex issue.

Dr. Demer's report contains a section titled 'The combined impact of multiple causes' noting that such a combination can range from additive to multiplicative. It was also noted that most epidemiological studies don't address the issue of multiple exposures combining to cause diseases, and in the absence of evidence to show that a combined effect is multiplicative that the exposures should at least be presumed to have an additive effect. A practical example of such consideration in a claim can be found at paragraph 10 in WSIAT Decision No. 2863/17 (footnote 14). That type of explanation regarding the consideration of the effects of multiple exposures from the workplace hasn't been consistently part of the decision letters of the WSIB.

Workers aren't lab rats that are being subjected to one substance to observe its effects, they are fathers, mothers, sons, and daughters working to provide for themselves and/or their families. That work far too often involves exposures to multiple carcinogens, toxins, irritants, chemicals, etc. in various forms (gas, liquid, solid, etc.) with different exposure routes (skin contact, inhalation, ingestion, etc.). The cause of their disease(s) would likely be multifactorial and there needs to be full consideration of all potential factors, including their interaction(s) with each other.

Conclusions:

ONIWG and the various reviews referenced herein have made several important recommendations, but there hasn't been any action taken. We recognize that two of the referenced reports were commissioned by the government and that the WSIB might take the position that the follow-up for those reports is the government's responsibility. However, the impact from the lack of action (dating back to before the ODAP report) has been borne by the victims of occupational disease.

While we have representatives in this group from most of the occupational disease clusters in this province, we recognize that we are not the voice for all victims of occupational disease. We are confident that all concerned would like to see improvements in the compensation system and many would like the opportunity to have their voices heard. COVID-19 has dominated the news lately, but it hasn't stopped the government from having consultations, including health, safety, and workers' compensation issues. Therefore, we are calling on the government as well as the WSIB to hold the necessary consultations to implement our recommendations and to hear the voices of all injured workers regarding the recommendations of the recent WSIB reviews.

We look forward to your response to this call for change and we also look forward to participating in the consultations required to implement recommendations in the very near future.

Appendix A:

Additional materials mentioned and web link.

- Workplace Safety and Insurance Act https://www.ontario.ca/laws/statute/97w16
- Schedule 3 of the WSIA https://www.ontario.ca/laws/regulation/980175#BK13
- Schedule 4 of the WSIA https://www.ontario.ca/laws/regulation/980175#BK14
- WSIB Administrative Practice/Adjudicative Advice Documents https://www.wsib.ca/en/businesses/claims/administrative-practice-documents
- Ontario Cancer Research Centre *Burden of Occupational Cancer Project* https://www.occupationalcancer.ca/burden/
- International Agency for Research on Cancer (IARC) https://www.iarc.who.int/
- Ontario Network of Injured Workers Groups (ONIWG) https://injuredworkersonline.org/injured-workers-community/ontario-network-of-injured-workers-groups-oniwg/
- Canadian Cancer Society https://www.cancer.ca/en/get-involved/events-and-participation/home-march/?region=on
- Supreme Court of Canada Decisions https://www.canlii.org/en/ca/scc/
- Workplace Safety and Insurance Appeals Tribunal Decisions https://www.canlii.org/en/on/onwsiat/
- Workplace Safety & Insurance Board Policies https://www.wsib.ca/en/policy/operational-policy-manual

Justice for victims of occupational disease

An Act to amend the Workplace Safety and Insurance Act

Explanatory note:

This explanatory note does not form part of the Bill proposing amendments to the Workplace Safety and Insurance Act (WSIA); it is written to provide context for the proposed amendments.

The Occupational Disease Reform Alliance has provided a submission to the Government requesting that four amendments be made to the WSIA that were based on generally accepted adjudicative and scientific principles. These four demands are reflected in the amendments written below and include:

1. Granting entitlement for occupational diseases when the workplace incidence exceeds the community level,
2. Applying the proper legal test for causation (i.e., significant contributing factor),
3. Expanding the list of presumptive diseases contained in Schedules 3 & 4 of O. Reg. 175/98, and
4. Recognizing the effects of multiple exposures.

The basis for implementing these amendments to the WSIA is briefly explained herein.

Significant contributing factor test has been utilized by the Workplace Safety and Insurance Appeals Tribunal as well as the WSIB and codifying this adjudicative principle is long overdue. In doing so, it was necessary to provide definitions for the terms "balance of probabilities" and "significant contributing factor" to ensure the consistent application and interpretation thereof. The addition of the test for causation to the WSIA is meant to ensure fair adjudication for all claimants and will be added to section 15 of the Act.

Dr. Paul Demers report, *Using scientific evidence and principles to help determine the work-relatedness of cancer*, was commissioned by the Ministry of Labour, Training and Skills Development (MLTSD) and information regarding the combined exposures effect was part of the mandate provided. Part 3 of that report discusses the role of multiple exposures noting that assuming an additive effect unless there is evidence of synergism (i.e., a multiplicative effect) is used by the American Conference of Governmental Industrial Hygienists, WorkSafeBC, and the MLTSD in O. Reg. 833. Given that this is a generally accepted scientific principle and workers are exposed to multiple substance that can work together to cause an occupational disease, then adopting that scientific principle into legislation is the next logical step and is included in the amendments to section 15 of the WSIA.

Expanding the list of presumptive diseases was also a recommendation in the report from Dr. Demers specifically stating that, "*The WSIB should update and greatly expand the list of presumptions regarding cancer in Schedules 3 and 4 to reflect the current state of scientific*

knowledge". Dr. Demers also recommended using the International Agency for Research on Cancer (IARC) information for inclusion in the Schedules. This recommendation is reflected in the amendment to section 161 of the Act.

Additionally, the report from Dr. Demers discussed clusters and the need to recognize claims from new or emerging hazards (see Part 4, Challenge 4) which can be reflected by the increase incidence of disease at a workplace compared to the community. This type of observational science has been employed for centuries and used to determine causal relationships with cancers experienced by chimney sweeps by Percivall Pott in 1775, for example. Compensating for these types of cases, or any claims for that matter, shouldn't be dependent on scientific studies; a robust and pragmatic approach is required to determine causation as noted by the Supreme Court of Canada in *Snell v. Farrell*. Amending section 15 of the WSIA to reflect this adjudicative and scientific principle eliminates any confusion as to how evidence of this nature should be interpreted by decision-makers.

Amendments to the WSIA:

Section 2 is amended by adding the following definitions:

"balance of probabilities" in the context of entitlement under this Act means that it is more likely than not that the injury, disease, or condition has a workplace causal connection.

"significant contributing factor" is equivalent to the material contribution test used by the courts and while the precise contribution cannot be numerically quantified as that would simply be arbitrary, it must fall outside the *de minimus* (trifling) range which means that it is more than a trifling or speculative factor.

Section 15 is amended by adding the following subclauses:

Test for causation
15(2)(a) Work need not be the sole, primary, or even the predominant cause to grant entitlement. Causation is to be determined using the balance of probabilities, applying section 119(2) where appropriate, to determine that work is a significant contributing factor in the onset of the worker's disease or condition. Decisions of this nature can be informed by science, but scientific conclusions must not be substituted for the legal determinations made under this Act.

Effect of multiple exposures
15(2)(b) All exposures must be considered, and their interaction will be assumed to be additive unless there is evidence of a synergistic effect.

Workplace disease rate

15(2)(c) When the rate of a particular disease in the workplace exceeds that of the surrounding community, this will be considered persuasive evidence of a workplace causal connection for the purpose of granting entitlement in a claim.

Section 161 is amended by adding the following subclause:

161(3)(c) to ensure that Schedules 3 and 4 in O. Reg. 175/98 are up to date by annually reviewing the International Agency for Research on Cancer (IARC) information for substances classified by them as Group 1 (known carcinogen) and 2A (probable carcinogen) to make the appropriate additions to the list of scheduled diseases in the regulation. Where IARC notes that there is *sufficient evidence* (Group 1) and lists target organs those substances should be considered for Schedule 4 and at the very least included in Schedule 3. Probable carcinogenic substances (Group 2A) and their target organs should be included in Schedule 3 or at the very least have a policy developed to address that substance and the associated diseases.

WSIB Consultation on the Occupational Disease Policy Framework

SUBMISSIONS OF THE OFFICE OF THE WORKER ADVISER

February 28, 2022

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WSIB Consultation on the
Occupational Disease Policy Framework

SUBMISSIONS OF THE
OFFICE OF THE WORKER ADVISER

1. INTRODUCTION

These submissions are in response to the Workplace Safety and Insurance Board's consultation on its draft Occupational Disease Policy Framework document ("Framework"), which was released in December 2021.[1]

We appreciate the WSIB providing an opportunity for stakeholders to comment on, and provide input into, this document. As this Framework is a foundational piece of the WSIB's Occupational Disease Strategy, we value the WSIB taking the time to review and incorporate feedback from the worker and employer communities.

We note that the Framework focuses solely on how the WSIB will determine whether to recognize a particular occupational disease within a schedule or policy. It limits its scope to diseases that are linked to a particular work exposure, industry/trade or workplace, and can be captured by a single policy or schedule entry.

While we agree that this content is important and that it is essential for the WSIB to increase its use of these entitlement presumptions, it is our view that the Framework itself is too narrow in scope as it fails to address a number of areas essential for adjudication and policy-making in occupational disease.

Our submissions are divided into two broad areas:

- In the first section of this submission, we provide our overarching concerns and general feedback.

- In the second section, we provide detailed comments about specific sections of the draft Framework.

[1] Ontario, Workplace Safety and Insurance Board, Policy and Consultation Services Division, *Occupational Disease Policy Framework,* draft for consultation purposes (Toronto: Workplace Safety and Insurance Board, Fall 2021) [Framework].

2. OVERARCHING COMMENTS

a. Framework format is suitable and appropriate

The OWA supports the WSIB's decision to use a framework document to detail its approach for placing specific occupational diseases into either a schedule or policy.

This type of document is the proper place for these concepts to be addressed. We agree they should not be included directly within the WSIB's *Operational Policy Manual,* as had previously been considered in 2008.

b. Importance of clear process for creation of new presumptions

The OWA supports the WSIB's decision to strive for greater openness and clarity around its development of occupational disease policy.

We agree with the WSIB VFMA's comment[2] that transparency and clarity around occupational disease policy governance is necessary for the WSIB to build trust and confidence with its occupational disease stakeholders.

By placing this information in the Framework and a publicly available format, it appears the WSIB is aiming to provide stakeholders with a better understanding of the process it will follow for the creation of presumptions, as well as the thresholds that will be required for a particular occupational disease to be considered for placement in a schedule or policy.

Overall, the OWA agrees there is a need for greater transparency and clarity for stakeholders on these important topics and supports the WSIB's decision to place this material into a publicly available format.

c. Framework fails to address how the required legal principles will be captured within Operational Policy

In 2008, the WSIB prepared and consulted upon a draft policy entitled "Principles in Occupational Disease Claims Adjudication".[3]

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[2] KPMG, *Value for Money Audit Report: Occupational Disease and Survivor Benefit Program* (Toronto: Workplace Safety and Insurance Board, 7 February 2019) <https://www.wsib.ca/sites/default/files/2019-05/wsib_occupational_disease_and_survivor_benefits_program_vfma_report.pdf> [VMFA Report] at 7.
[3] Ontario, Workplace Safety and Insurance Board, *Principles in Occupational Disease Claims Adjudication,* draft policy released for consultation (Toronto: Workplace Safety and Insurance Board, June 2008).

That draft policy set out a number of general legal principles and explained how they were to be applied in occupational disease claims. The OWA strongly supported the WSIB recognizing and requiring their staff to apply the following principles:

- Significant contribution as the appropriate causation test and its equivalence to the material contribution test
- Balance of probabilities as the correct standard of proof
- The inquisitorial nature of the workers' compensation system and lack of burden of proof upon the parties
- Application of the benefit of the doubt on an issue-by-issue basis

As we noted at the time, the recognition of these principles within occupational disease policy would ensure the WSIB's adjudication in this area is in line with the statute and common law. For this reason, the inclusion of these principles is a necessary and important step forward.

In contrast, we note that the draft Framework only briefly addresses a number of legal principles in a footnote in its Background section.[4] In addition to those principles described above, the Framework states that the WSIB does not require scientific certainty on causation to determine that a worker's disease is work-related. The Framework does not discuss how these principles will be incorporated into current or future occupational disease policies.

The OWA strongly recommends that the Framework confirm how the required legal principles will be addressed in policy.

As WSIB decision-makers are not required to apply the Framework during adjudication, the OWA recommends that the key legal principles listed above regarding occupational disease adjudication be included in their own operational policy as was proposed in 2008.

[4] Framework, note 1 at 5.

d. Framework fails to effectively address claims adjudication and case-by-case analysis

In 2008, the WSIB also prepared and consulted on a draft policy entitled "Occupational Disease Claims Adjudication".[5]

That draft policy addressed the steps and approach decision-makers should take when adjudicating occupational disease claims. It dealt with gathering and analyzing evidence as well as how to adjudicate claims under the various "adjudicative channels": i.e., Schedules 3 and 4, Board policy and case-by-case adjudication. The *Occupational Disease Advisory Panel (ODAP) Chair's Final Report*[6] by Brock Smith also specifically spoke to these same four routes of adjudication.

The draft Framework clearly addresses the first three adjudicative channels (i.e., Schedule 4, Schedule 3, and occupational disease policy) at different points in the document. A review of the fourth adjudicative channel, case-by-case adjudication under section 15 of the *WSIA*, is notably absent from the document.

There is a brief mention regarding the preparation of adjudicative advice documents (which are used in adjudication) following a scientific review.[7] Other than this passing reference, it appears that the requirement to adjudicate each occupational disease claim under section 15 of the *WSIA* based on the merits and justice of the case is missing completely from this Framework.

Case-by-case adjudication is an important aspect of occupational disease adjudication. In our submission, the failure of the Framework to address case-by-case adjudication is a significant oversight. The OWA recommends that the Framework clearly set out how the required four channels of adjudication will be addressed within policy.

As WSIB decision-makers are not required to apply this Framework, it is our position that the steps and approach that must be taken when adjudicating occupational disease claims should be included in a separate operational policy as was proposed in 2008.

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[5] Ontario, Workplace Safety and Insurance Board, *Occupational Disease Claims Adjudication,* draft policy released for consultation (Toronto: Workplace Safety and Insurance Board, June 2008).
[6] Ontario, Workplace Safety and Insurance Board, *Final Report of the Chair of the Occupational Disease Advisory Panel,* by Brock Smith (Toronto: Workplace Safety and Insurance Board, February 2005).
[7] Framework at 14.

e. **Framework does not address multiple exposures**

In our experience, many occupational disease claims involve workers who were exposed to several workplace carcinogens or other disease-causing agents, often in multiple workplaces or industries. As such, it is common for more than one policy to apply to a claim, or for a claim to include some exposures or workplaces covered by Board policy and some that are not.

Occupational disease policies do not currently allow for—let alone require—consideration of how exposures or processes covered by one policy interact with exposures or processes covered by another policy or which are not covered by any policy.

As a result, multiple exposures tend to be adjudicated in isolation from one another, rather than by looking at their combined effect based on the totality of the evidence. Workers are treated as if they have multiple, unrelated claims even though they have a single claim for a single disease with multiple related (or potentially related) causes. In occupational disease, where synergistic and additive effects are crucial elements to be considered, we see the failure of Board policy to address the interaction of multiple causes to be a serious deficiency.

It is our position that operational policy regarding occupational disease must expressly address situations where more than one policy applies or where a policy applies to some of the worker's exposures and not others.

This substantial gap in policy was explicitly identified by Dr. Paul Demers on page 38 of his recent report regarding determining the work-relatedness of occupational cancer.[8] The Demers report specifically recommended that the WSIB develop a new policy that explains how exposure to multiple carcinogens will be handled. It also recommended that this policy reflect the current state of scientific knowledge regarding the impact of multiple exposures (i.e., the effects of exposure carcinogens impacting the same cancer site should be considered additive, unless there is evidence to the contrary)

The OWA recommends that the Framework describe how the above-noted issues around multiple exposures will be addressed in policy.

[8] Paul A. Demers, Using Scientific Evidence and Principles to Help Determine the Work-Relatedness of Cancer, (Toronto: Ministry of Labour, Training and Skills Development (Ontario), 9 January 2020). [Demers Report].

f. Framework does not address how current scientific principles will be incorporated into operational policy

The Demers Report also reviewed a number of well-established scientific theories and principles that are relevant to the process of determining causation in the context of workers' compensation.[9] Part Three of the Demers Report specifically reviewed the important concepts of:

- Multi-stage theory of carcinogenesis[10]
- Latency and induction[11]
- Role of multiple exposures[12]
- Combined impact of multiple causes[13]
- Statistical distribution of effects[14]

In addition to recommending a new operational policy regarding exposure to multiple carcinogens, Dr. Demers recommended that the WSIB:

- Update and expand all of the policies relevant to adjudication of cancer claims to reflect the current state of scientific knowledge.[15]
- Develop a new policy that states clearly how non-occupational exposures, particularly cigarette smoking, are weighted relative to occupational exposures. As with multiple occupational exposures, the relationship should be considered additive unless there is evidence for a synergistic effect.[16]

[9] Demers Report, Part 3, at 13-19.
[10] Demers Report, at 13-14. The Demers Report explains that the multi-stage theory of how cancer is caused was first developed in 1954 and the basic theory has been widely accepted. The report states that the models "have contributed to our understanding that a cancer in an individual does not have a single cause but is the result of a complex series of events that occur at different stages, from the initiation of disease (mutation) at an early stage through promotion and progression at later stages." In addition, the report notes that "carcinogens (chemicals, radiation or viruses) can have an impact through various mechanisms at any or multiple stages, from the earliest stages continuing even after the clinical disease has developed". See also Demers Report, page 17. The report also notes that the multistage model "predicts that the interaction between two carcinogens acting at different stages can range from purely additive to many times more than multiplicative depending on the sequence and interval between the two exposures".
[11] Demers Report, at 15.
[12] Demers Report, at 16.
[13] Demers Report, at 16-18. In addition, the Demers Report reviews the approach that has been taken for over 30 years by the American Conference of Governmental Industrial Hygienists (ACGIH®) when looking at the likely effect of multiple exposures, which is to assume that the exposures are additive unless there is contrary evidence.
[14] Demers Report, at 19.
[15] Demers Report, at 38.
[16] Demers Report, at 38.

It is our position that the WSIB's adjudication of occupational disease claims must be guided by the appropriate legal principles, in addition to being informed by an understanding of the relevant scientific principles cited in the Demers Report.

In our view, it is important that the WSIB show its stakeholders, through operational policy, that it will ensure its approach to adjudication is firmly rooted in the applicable legal test **and** informed by the current state of scientific knowledge on the topics noted by Dr. Demers. Without doing so, there is a real risk that entitlement decisions will continue to be made (or appear to be made) based upon invalid assumptions about causal interactions between occupational exposures, or based upon an incorrect understanding of the science around the interaction between exposure to carcinogens and smoking.

For these reasons, the OWA recommends that the Framework include an explanation of how the scientific theories and principles raised in the Demers Report will be addressed in operational policy. This must be done in a manner that ensures that the ultimate question of causation is determined in accordance with the correct legal test.

g. Framework does not address clusters or emerging issues

The Framework does not mention how the WSIB will address occupational disease clusters, emerging diseases or other novel trends that come to light within the occupational disease area. In our view, there is a need for the WSIB to set out the process that will be followed to respond to these issues, especially in light of the following:

- The number of clusters that continue to be brought to the WSIB's attention by the worker and medical community
- The changing nature of work in Ontario
- The years that it takes for "strong and consistent scientific evidence" to be developed, and
- The ongoing COVID-19 pandemic (a clear emerging occupational disease)

As written, the Framework document takes a static approach, providing no indication of how the WSIB will address these important topics as they occur and develop.

Moreover, we note that the need to address these emerging issues was identified in the VFMA Report on occupational disease. Specifically, Recommendation 4 states in part that:

> The framework should also address the process to identify emerging diseases, trends and workplace latency risks (cluster management)[17]

It is our view that these topics should be addressed within the WSIB's Occupational Disease Framework. Although WSIB staff have indicated that the Framework is designed as a "forward looking document", it is missing these key components or any acknowledgement of the process they will use to address these types of issues as they arise.

h. Content of the Framework is inconsistent with its title and stated purpose

It is the OWA's position that the scope of the draft Occupational Disease Policy Framework is too narrow and it fails to address significant issues and areas that should be included as part of the WSIB's occupational disease policies.

In its current draft form, the Framework document cannot accurately be described as an "occupational disease policy framework" in the generally understood sense of those terms. Rather, it is simply an outline of the process the WSIB plans to use to determine if they will recognize particular occupational diseases by way of schedule or policy.

The incomplete nature of the draft Framework is particularly troubling because the WSIB's Occupational Disease Strategy describes the Framework as a "foundational piece of work to support the overall strategy".[18] The Framework document repeats this description of its role in occupational disease policy-making, noting that it is "the foundation for occupational disease policy development at the WSIB."[19]

There is no indication that any of the pressing and important issues discussed above will be addressed as part of the WSIB's broader Occupational Disease (OD) Strategy or in any of the other foundational elements that are currently proposed or being

[17] VFMA Report, at 7.
[18] WSIB description of its Occupational Disease Strategy, WSIB Occupational Disease: Moving forward <https://www.wsib.ca/en/wsib-occupational-disease-moving-forward>
[19] Framework, at 3.

developed.[20] Instead, the draft Framework and the WSIB's Occupational Disease Strategy give the appearance that there is no plan to address these topics.

Lastly, we note that the draft Framework is inconsistent with the overall themes of the fourth recommendation of the VFMA Report on Occupational Disease.[21] The VFMA Report specifically recommended the WSIB develop an OD policy governance framework based on the principles for quality OD care and fair adjudicative decisions, and that it reinforce principles in OD claims adjudication, emphasize the role of scientific evidence in decision-making and determine the requirements for an overarching and principles-based OD policy. The current draft does not achieve the recommended objectives.

For these reasons, the OWA strongly recommends that the Framework be expanded to include the more comprehensive range of topics we have identified above and to explain how they will be addressed. These include:

- How the required legal and adjudication principles will be used
- The scientific principles identified in the Demers report
- The intersection of multiple policies, exposures and/or employers, and
- Clusters and emerging issues

These are critical issues for proper adjudication of occupational disease claims and, in our view, the Framework cannot serve its stated purpose as a "foundational" document unless it addresses them.

i. Framework entrenches a causation standard of scientific certainty, which is more onerous than the required legal test for causation

The Framework states that the WSIB will require "strong and consistent scientific evidence of a causal link" in order to consider placing an occupational disease into Schedule 4, Schedule 3, or operational policy.[22] The Framework further explains that scientific evidence will be gathered using a "high quality systematic review" and that statistical methods such as meta-analyses will be used, where possible, to analyze and summarize the results of the included studies.[23]

[20] WSIB description of its Occupational Disease Strategy, WSIB Occupational Disease: Moving forward https://www.wsib.ca/en/wsib-occupational-disease-moving-forward
[21] VMFA Report at 7, Recommendation 4.
[22] Framework, section 3.4 at 13.
[23] Framework, sections 3.3 and 3.4 at 11-14.

Although the Framework does not include a definition of "strong and consistent evidence", it is apparent from the text that the WSIB will effectively require scientific certainty regarding a causal link to consider placing an occupational disease into a schedule or policy. This is because "strong and consistent evidence" will only be found through a systematic review where a particular exposure/industry/occupation has been studied extensively and there are numerous scientific studies that agree there is a likely or strong causal link.

While we acknowledge that this standard was recommended in the *Occupational Disease Advisory Panel (ODAP) Chair's Final Report*[24], the OWA continues to disagree with this approach. As we wrote at the time,

> The OWA supports the position of the worker members that a disease/process should be added to Schedule 3 when the best available general evidence shows that the process is potentially significant in the development of the disease. Adjudicative advice should be developed to assist decision-makers in determining whether the presumption has been rebutted.

Overall, the OWA disagrees with requiring this level of scientific certainty for an occupational disease to be considered for Schedule 3 or operational policy. While a high level of scientific certainty may be reasonable for placement within Schedule 4, which creates an irrebuttable presumption, the threshold for placement into schedule 3 or operational policy should match the legal test for causation. Scientific certainty should therefore not be required.

By requiring "strong and consistent evidence" to be found through a systematic review, it will be virtually impossible for many, if not most, occupational disease issues, clusters and emerging diseases to ever be addressed under a schedule or policy. This is because, as noted above, substantial amounts of research are needed in order for this type of scientific evidence to be available.

It is unreasonable and unrealistic to expect this amount of scientific research to be carried out for a particular workplace or cluster with a unique mix of exposures prior to the WSIB considering one of these adjudicative tools. Even in the unlikely circumstance that two or three cohort studies were funded and conducted on a particular workplace, the evidence available would still not be able to meet this high standard. It is, of course, likely that most situations would not have even this level of research available.

[24] Ontario, Workplace Safety and Insurance Board, *Final Report of the Chair of the Occupational Disease Advisory Panel,* by Brock Smith (Toronto: Workplace Safety and Insurance Board, February 2005).

Similarly, as noted in the Demers report, there are too few studies of multiple exposures to quantify the relationship between many common workplace exposures.[25] Under the approach to evidence required by the Framework, guidance for adjudicators on situations involving multiple exposures could never be captured in a policy or other adjudicative tool.

Should the WSIB continue to insist that scientific certainty is required for a specific occupational disease to be placed in a schedule or policy, we recommend that the Framework also require the applicable policies to explicitly state that:

- The requirements of the policy are based on this scientific standard
- The policy is not a threshold test for entitlement, and
- The requirements of the policy are not equivalent to the legal test

Under this approach, policies based on scientific certainty must only be used to identify claims in which the evidence supports a finding of causation. Where the terms of the policy are satisfied, then entitlement is granted. In other words, they would provide a means of granting a quick "yes" and never a quick "no".

A similar analysis may be found in the Demers report regarding the use of latency periods. Demers notes that, while minimum latency periods are a useful tool for facilitating adjudication for the majority of cases, they should not be used as an absolute barrier because some cases can fall outside this range.[26]

If the strict requirements of a policy are not met, a detailed assessment using case-by-case adjudication under s. 15 of the *WSIA* should be done. Decision-makers should consider the evidence as a whole, including the interaction of all of the worker's various exposures, and determine whether causation has been proven by applying the significant contribution test and other appropriate legal principles. As the requirements of the policy are based on a higher standard than required, cases should regularly be allowed and not only in exceptional or rare circumstances.

In our view, this aspect of the Framework is critically important. The approach to policy-making outlined in the draft Framework will effectively abandon the correct legal test in favour of a more onerous scientific test that is not authorized by the legislation or the common law. Without clearly articulating that the correct legal test of significant contribution continues to apply and expressly directing decision-makers to use it, the process described in the Framework will effectively turn over adjudicative decision-

[25] Demers Report, at 18.
[26] Demers Report, at 36.

making to scientific experts and the Advisory Table. New policies developed under such an approach would establish further bars to entitlement for occupational disease for many workers and survivors.

j. Framework does not address the chronic under-compensation of occupational disease under the *WSIA*

There continues to be a substantial gap between the number of cancers diagnosed each year in Ontario that are due to occupational exposures and the number of accepted claims.

As reviewed in detail in the Demers report[27], the OCRC Burden of Occupational Cancer Project found a total of 2,900 cancer cases each year in Ontario are due to occupational exposure to 16 carcinogens commonly found in the workplace.[28] In contrast, over the past 10 years, an average of 170 cancer claims were accepted per year (excluding claims related to the firefighter presumptions). The difference between the number of cancers (2,900) and those that are compensated (170) is substantial.

A gap in compensation remains even for cancers caused by asbestos exposure, which is currently the most well compensated category. According to the Demers Report, it is estimated that occupational asbestos exposure caused 630 lung cancers, 140 mesotheliomas and smaller numbers of larynx, ovary, colorectal and stomach cancers in Ontario, based on the reference year of 2011.[29] On average, approximately 130 cases of cancer due to asbestos exposure are compensated in Ontario, with approximately 80 of them for mesothelioma.[30]

We recognize that the Demers report identified a number of factors that impact occupational disease compensation. This can be seen in the broad range of recommendations provided, including updating and greatly expanding the use of presumptions, enhancing scientific capacity, increasing access to exposure data and improving recognition through medical education.[31] The Demers report is clearly, however, a call for change.

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[27] Demers Report, Park 2, Occupational cancer in Ontario, at 4-8.
[28] Demers Report, at 7-8.
[29] Demers Report, at 7.
[30] Demers Report, at 7-8. We acknowledge that the Demers Report fairly pointed out, however, that only a fraction of this overall gap is explained by rejection of claims, given that only 400 claims are filed per year and many of these are for associations not on the IARC list.
[31] Demers Report, at 36-41.

Many worker representatives and advocacy groups, including the recently formed Occupational Disease Reform Alliance (ODRA)[32], have been calling upon the Ministry of Labour, Training and Skills Development (MLTSD) to improve the recognition of occupational disease in Ontario and to make changes to how these cases are adjudicated at the WSIB.

The MLTSD recently included this area as one of the priorities for the newly appointed Chair and CEO of the WSIB. In its news release announcing the new WSIB appointees, the MLTSD emphasized one of the important initiatives they would be implementing as "using best practices and scientific evidence to help identify and recognize occupational disease".[33]

Further, in an article in the *Toronto Star,* the Minister of Labour, Training and Skills Development was also quoted as stating that the newly appointed Chair and CEO would be pushing toward better recognition of occupational disease.[34] The Minister stated that, "Anyone in Ontario who falls ill because of their job should have the confidence that they and their loved ones will be taken care of, and I mean that."

In our view, the draft Framework does not adequately respond to the resounding calls for change in this area. There is nothing in this document that will result in a noticeable improvement in how the WSIB creates occupational disease policy or adjudicates these appeals. It is difficult to see how this will lead to an improvement in the level of compensation for occupational disease or to help close the gap between the number of cases and the number of allowed claims. Instead, as we have indicated elsewhere in these submissions, it may make it more difficult for workers with occupational diseases to obtain compensation.

To address the pressing issue of under-recognition and compensation in occupational disease, we recommend that the Framework be used to update and greatly expand the number of presumptions in schedules 3 and 4, as was recommended in the Demers report.[35]

As an agency with extensive experience in occupational disease claims, we have seen how the use of presumptions in schedules can greatly increase the speed of adjudication. Where schedules allow entitlement to be granted quickly based upon

[32] https://www.cbc.ca/news/canada/sudbury/occupational-disease-reform-alliance-creation-1.6311049
[33] Ontario Nominates New WSIB Chair and President | Ontario Newsroom https://news.ontario.ca/en/release/1001453/ontario-nominates-new-wsib-chair-and-president
[34]WSIB leadership gets an overhaul | The Star, Friday January 21, 2022. https://www.thestar.com/business/2022/01/21/wsib-leadership-gets-an-overhaul.html.
[35] Demers Report, at 38.

clear principles that match the appropriate legal test, the presumptions let adjudicators, representatives and the system focus energy upon the other cases involving more complicated circumstances. Injured workers and their families are spared the delay, stress and uncertainty of complex litigation—a core objective of the workers' compensation system. Greater numbers of these tools can allow decision-makers to move to quickly allow meritorious claims—a "quick yes"—and that is to the benefit of everyone.

We have also seen how including an occupational disease in a schedule can increase awareness of the link between the work exposure and the health condition. When an occupational disease is placed into a schedule it ensures greater certainty for the parties in the system and can help increase the number of workers who come forward to establish a claim on diagnosis.

As it is currently drafted, the Framework is not certain to lead to greater use of the schedules in adjudicating occupational disease. We would like to see to clear recognition within the Framework of an intent to do so. Furthermore, as described elsewhere in this submission, we would like to see the Framework embody a policy-making approach that allows for a "quick yes" to be granted where appropriate so the system and workplace parties can focus their resources on more challenging claims.

3. SPECIFIC COMMENTS

a. Section 2.4 – Text is confusing and appears to use the term "occupational disease" in a manner that is inconsistent with the *WSIA*

This section of the Framework is unclear and difficult to understand. In particular, it makes numerous references to "occupational disease" but does not appear to be applying a consistent definition to the term. Instead, the term "occupational disease" appears to have several different intended meanings within the section.

The term "occupational disease" in defined broadly in s. 2 of the *WSIA.* This definition includes diseases mentioned in the schedules, but also includes much more. In particular, the statutory definition includes diseases that "result from exposure to a substance" or are "peculiar to or characteristic of" a particular process, trade or occupation, or even medical conditions that are precursors to an occupational disease. The full text of the definition states:

> "occupational disease" includes,

> (a) a disease resulting from exposure to a substance relating to a particular process, trade or occupation in an industry,
>
> (b) a disease peculiar to or characteristic of a particular industrial process, trade or occupation,
>
> (c) a medical condition that in the opinion of the Board requires a worker to be removed either temporarily or permanently from exposure to a substance because the condition may be a precursor to an occupational disease,
>
> (d) a disease mentioned in Schedule 3 or 4, or
>
> (e) a disease prescribed under clause 15.1 (8) (d); ("maladie professionnelle")

Unfortunately, section 2.4 of the Framework does not clearly and consistently refer to this statutory definition of "occupational disease". It appears to overlook this five-part definition from the Act.

As currently drafted, section 2.4 of the Framework describes a two-step process for determining entitlement for an occupational disease under the *WSIA*. It indicates the first step is to determine whether an injury or disease is an "occupational disease" for the purposes of the *WSIA*. This, it states, is done by determining whether the WSIB has recognized the disease within policy or a schedule and then considering that policy guidance when reviewing the claim.

The second step, according to the Framework, is to determine whether the worker suffers from, and is impaired by, an occupational disease that occurs due the nature of their employment. In describing this step, the text does <u>not</u> explain how a decision-maker should approach an occupational disease.

Instead, it talks about a disease that is not an occupational disease under the *WSIA,* which seems to be referring back to the question of whether it falls under a policy or schedule. It then discusses a disease not meeting the definition of occupational disease. The term "occupational disease" is not defined but appears to have a different meaning here than it does in the first reference.

In the first step described in section 2.4, the term "occupational disease" is sometimes placed in quotation marks and, in the second step, the term is regularly used without them.

This confusing approach does not provide a clear explanation of the principles involved. It does not provide clarity regarding the WSIB's approach to occupational disease policy or recognition of occupational disease.

The OWA recommends that section 2.4 of the Framework be re-written using less confusing language. Section 2.4 should also be amended to include a clear reference to the definition of "occupational disease" in section 2 of the *WSIA* when it discusses entitlement for an occupational disease under the *Act*

Where the WSIB intends to discuss a different concept (i.e. not based on the definition of occupational disease in section 2 of the *WSIA*), we recommend that alternative language and terms be used within the Framework. All terms used should be given a single, consistent and well-defined meaning throughout the document.

b. Section 2.4 – Occupational diseases that are not yet placed in a policy or schedule should be adjudicated under s. 15 of the *WSIA*, not s.13

Section 2.4 of the Framework also appears to be limiting the definition of "occupational disease" in a way that is inconsistent with the *WSIA*. As currently drafted, this section appears to be stating that only those conditions recognized by the WSIB in a schedule or policy are truly "occupational diseases" under section 15 the *WSIA*. Where an injury or disease has not been placed into policy or a schedule, it indicates that it will not be adjudicated as an occupational disease under s. 15, but instead will be looked at as a disablement under s. 13.

The OWA strongly disagrees with any attempt to end case-by-case adjudication of occupational disease claims under section 15 of the *WSIA*. Such an approach would be inconsistent with the *WSIA.* It is our position that the term "occupational disease" must continue to be defined by section 2 of the WSIA. That definition does not require the WSIB to have placed the occupational disease into policy or a schedule. The adjudicative approach suggested by the Framework would only be possible through legislative change and cannot be declared through WSIB policy. The OWA would oppose such a change.

The term "occupational disease" should also continue to capture the range of health problems caused by exposure to a workplace health hazard.[36] For example, where a

[36] The WSIB's own definition on its website (https://www.wsib.ca/en/occupationaldisease) is:

worker develops COPD following years of extensive exposure to workplace dust, they should be compensated for their condition as an occupational disease. It should not matter that the WSIB has not yet placed this disease and exposure combination into a policy. Similarly, where a worker develops a cancer that is linked by IARC and/or a medical expert to exposure to one or more carcinogenic agents, they should be compensated for their occupational disease condition.

In contrast, a disablement is not defined within the *Act*. Instead, OPM Document No. 15-02-01 defines a disablement as including:

- a condition that emerges gradually over time
- an unexpected result of working duties.

We submit that many occupational diseases do not fit within this definition of disablement. If, for example, scientific research and IARC have linked a carcinogenic agent to development of cancer, how can that be accurately described as an "unexpected result of working duties"? Similarly, if a worker's disease is linked to their work location and to a cancerous agent in their environment, it not obvious that this would be considered a disablement since it is not from their "working duties". Instead, we submit that these conditions and circumstances continue to fit directly within the definition of "occupational disease" under the Act.

The Framework cites a number of WSIAT decisions in support of its approach to use section 13 instead of section 15.[37] We note that the decisions cited in the Framework have primarily been written by a single Tribunal Vice-Chair, and the language she has used is not widely repeated or accepted broadly by the Tribunal.[38] Moreover, we have been unable to locate any situations in which the Vice-Chair's interpretation has been the subject of submissions by the parties or a reconsideration. For this reason, it is our view that this not a clear trend or a point of settled law, and these decisions should not be used to override the wording of the legislation. It is our position that this approach is not legally correct or supported by the *WSIA*.

An occupational disease is a health problem caused by exposure to a workplace health hazard, for example:

- Cancer
- Asthma
- Asbestosis and silicosis
- Inhalation of substances and fumes
- Noise-induced hearing loss

[37] Framework, footnote 12 at 7.

[38] The majority of the decisions have been drafted by Vice-Chair J. Smith. They include *Decision Nos. 20/21, 496/20, 2163/08, 1200/05, 2658/17, 542/17,* and *69/19*.

In contrast, we submit that *Decision No. 1480/98* , which was written by J. Bigras, does not actually follow the approach that is described in this part of the Framework. Instead, Vice-Chair Bigras first looked at the evidence to determine if there was an increase in the prevalence of the health condition in the worker's particular occupation/industry. Once he determined that there was no evidence of an increase in the rare skin cancer in the population of mail delivery carriers, he found it was not an industrial disease as it didn't fit the legislative definition. It was only then that he considered entitlement under a disablement analysis. This is quite different from the approach noted by Vice-Chair J. Smith and cited in the Framework.

Overall, the OWA recommends that this section of the Framework be amended substantially to align with the language of the *WSIA* (specifically the definition of occupational disease in section 2), as well as the requirement of the WSIB to adjudicate occupational diseases under section 15 of the *Act*.

Furthermore, we submit this proposed approach would do little to assist with the problem of chronic under-compensation of occupational diseases. It is difficult to see how classifying these conditions as "disablements" will help with visualizing the problems of occupational disease or showing any progress made in addressing the gap.

It is not clear to us what the underlying policy goal of this proposed approach might be. The Framework does not provide any explanation. If the WSIB believes such a significant change is required, we submit that it is incumbent upon it to clearly articulate its justification and provide stakeholders with an opportunity to comment. If some other policy consideration is driving this approach, such as relieving costs on individual employers, we suggest they can be addressed by more direct means tailored to the specific issues.

c. Section 4: Workplace stakeholders should be consulted during the occupational disease policy development process

Section 4 of the Framework details the WSIB's approach to consultation for occupational disease policy development. The Framework states that the WSIB "may engage in stakeholder consultation"[39], that "consultation may occur at various stages"[40] and that "in some circumstances, the WSIB may determine consultation is not necessary".[41]

[39] Framework, at 15-16.
[40] Framework, occupational disease policy development process at 9.
[41] Framework, at 16.

The permissive language of the text sends a clear message to stakeholders that consultation is solely at the WSIB's discretion and is not a vital pilar of its occupational disease policy development process. Although the WSIB states that it "recognizes and values the benefits"[42] of consultation, the language of the Framework does not ensure that consultation with worker and employer stakeholders will be included in the process on a regular basis.

We encourage the WSIB to recognize the importance of consultation by enshrining consultation with workplace stakeholders in the Framework as a mandatory step in its policy development and roll-out. While we acknowledge that some policies must be developed quickly due to government regulation/amendments, this does not mean that consultation and input are not possible, nor that it cannot be achieved in most cases.

We acknowledge that the process for including an occupational disease into a schedule involves legislative action and collaboration with the government. As such, there are limits on the WSIB's ability to include stakeholder consultation as a mandatory step in that process. As currently drafted, the consultation section of the Framework does not consider how consultation can be approached depending on the type of "policy guidance" being developed.

The OWA recommends that the Framework be amended to separate the approach to consultation for a schedule amendment from the approach for operational policy changes. This would allow the WSIB to recognize and emphasize the importance of stakeholder consultation and ensure it is preserved as a step, at minimum, for operational policy changes.

We are also very concerned about the inclusion of scientific experts in the list of "relevant stakeholders" the Framework states the WSIB "may engage" during occupational disease policy development.[43] The list includes the WSIB's Scientific Advisory Table on Occupational Disease, as well as other individuals or bodies with relevant expertise or specialized knowledge. We note that this approach was also taken on page 10 of the Framework when "subject matter experts" were included in the list of "external stakeholders" with which the WSIB may consult.

The OWA disagrees with classifying any scientific experts as "relevant stakeholders" and encourages the WSIB to amend the language in the Framework to clearly distinguish between "stakeholders" and "experts". It is our position that consultation

[42] Framework, at 16.
[43] Framework, at 16.

with “stakeholders” is correctly done with those who are part of the system, who are part of the historical compromise, and who are directly impacted by the WSIB’s proposed approach. Workers, survivors, employers and their representatives have unique and important perspectives that are not replaced by, or even be addressed in, a discussion with a scientific expert.

As active participants in the system, workplace stakeholders can identify points in a draft policy that require further clarity, can highlight unintended impacts, and even help prevent problems in adjudication before they occur. As the process for amending and updating policy is time consuming, it is in everyone’s interest for there to be meaningful and timely consultation with the direct workplace stakeholders.

Moreover, the workplace insurance system is a legal regime. It defines legal entitlements and adjudicates them in accordance with legal principles. Scientific experts are not trained in the law, and their expertise does not cover the legal effects of adjudication or policy-making. They certainly have a role to play as experts within their fields, but to treat them as formal stakeholders will only further enshrine scientific principles in adjudication to the exclusion of legal ones.

While discussions with the Scientific Advisory Table and relevant experts are also important for policy development, those interactions are not truly “stakeholder consultation” and should not be classified as such. The OWA therefore strongly recommends the WSIB amend the Framework to clearly separate when it will consult with “experts” and distinguish that process from its consultation with “stakeholders”.

4. CONCLUSION

We would like to thank the WSIB for considering our submissions and recommendations regarding its draft Occupational Disease Policy Framework.

Should you require any further information or clarification regarding our comments, we would be happy to provide it.

We look forward to seeing the results of this consultation.

OBA Submission on Workplace Safety and Insurance Board's Draft Occupational Disease Policy Framework

Submitted to: Workplace Safety and Insurance Board

Submitted by: Ontario Bar Association

Date: February 2, 2022

ONTARIO BAR ASSOCIATION
A Branch of the Canadian Bar Association

L'ASSOCIATION DU BARREAU DE L'ONTARIO
Une division de l'Association du Barreau canadien

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Introduction

The Ontario Bar Association (the "**OBA**") appreciates the opportunity to make this submission to the Workplace Safety and Insurance Board ("**WSIB**") in respect of the draft occupational disease policy framework ("the **draft Policy**").

The Ontario Bar Association (OBA)

The OBA is the largest and most diverse volunteer lawyer association in Ontario, with over 16,000 members who practice on the frontlines of the justice system, providing services to people and businesses in virtually every area of law in every part of the province. Each year, through the work of our 40 practice sections, the OBA provides advice to assist legislators and other key decision-makers in the interests of both the profession and the public, and delivers over 325 in-person and online professional development programs to an audience of over 12,000 lawyers, judges, students and professors.

This submission was prepared by the Workers' Compensation Section of the OBA. The Workers' Compensation Section includes counsel for employers; counsel for injured workers, both in a unionized and nonunionized environment; and neutral lawyers who work at the WSIB and the Workplace Safety and Insurance Appeals Tribunal ("**WSIAT**"). Our members represent injured workers and employers at the WSIB, before the WSIAT and with private insurance claims and this submission has been developed with input and consensus from both employer and worker counsel.[1]

Overview

We commend the WSIB for their important work on setting out the objectives and framing of the draft Policy.

We recommend that the draft Policy address in more detail WSIB's proposed approach to key areas in the processing and adjudication of occupational disease claims. More specifically, we recommend

[1] Our neutral members do not get involved in policy development within the workplace insurance system.

two fundamental improvements to the draft Policy: (1) to increase transparency, the WSIB should articulate and consult with stakeholders on the level of evidence necessary to schedule a disease or create an operational policy; and (2) in terms of research and analysis, the WSIB should recognize a more important role for different types of evidence.

For the purposes of the public consultation, this submission focuses on the proposed sections in the Draft Policy and we have provided commentary where we see further development and consultation on the framework to assist in achieving the identified objectives.

Comments

The draft Policy addresses one of the most important elements of Ontario's workers' compensation system, which has a major human and financial impact for workers and employers. We strongly agree that a transparent and meaningful policy framework is needed for the guidance of the stakeholders and WSIB itself, as stated in the third bullet under the framework.[2] This is vital for the WSIB to carry out its statutory mandate.

We are also in agreement on the overall importance of basing policy on research findings within the context of the legal test for causation. This is subject to the right of both workplace parties to provide additional evidence from other sources, which we address later in this submission.

i. Legal Framework for Recognition of Occupational Disease

For both employers and workers, the legal framework is at the heart of the draft Policy. This is because the *Workplace Safety and Insurance Act* ("the **Act**") has provided significant direction and guidance to WSIB in addressing occupational disease. The Act establishes several categories within which occupational diseases may be addressed. These range from an irrebuttable presumption of work-relatedness in Schedule 4, to a rebuttable presumption in Schedule 3, to diseases adjudicated pursuant to WSIB policies and finally to adjudication on a case-by-case basis ("the **Categories**"). The

[2] Draft Occupational Disease Policy Framework – Consultation Paper, "Introduction", which states "The framework: …facilitates the creation of clear and updated policy guidance to support timely and consistent decision-making, and to help the WSIB fulfill its legislative obligations to workers, and to survivors of deceased workers who experience an occupational disease due to the nature of their employment".

way in which the WSIB allocates a specific health condition into one of the four Categories is of course a vital matter to employers and workers in Ontario.

We agree with how the WSIB has framed these Categories in the draft Policy. In particular, we believe the Categories reflect the scientific evidence relevant to each type of case while allowing for adjudicative flexibility in cases where evidence may be non-specific or not clearly defined.

The key issue that we do not see addressed in the draft Policy is what specific approaches the WSIB will be taking to determine whether a health condition goes into Schedule 4 versus Schedule 3 versus a policy or disablement. For example, are there specific excess risk ratios in epidemiological studies which might provide guidance?

The OBA recommends that the WSIB provide a clearer approach on how it intends to determine whether a health condition goes into Schedule 4, Schedule 3, a policy or disablement. Worker and employer advocates and organizations will not necessarily agree on the specifics, but without any guidance, we are left with no indication as to what result will come from WSIB's reviews of various health conditions.

ii. Occupational Disease Policy Development

Both the worker and employer advocates in our Section welcome the articulation by WSIB of guiding principles for policy development. This is important for transparency.

However, we do not agree with proposed Principle 2 (policy development will be consistent with the WSIB's strategic direction). Policy development must be fundamentally based on the legal principles in the Act and the best available evidence, not on whether the approach is consistent with the strategic direction of the WSIB.

The OBA recommends that the draft Policy be amended to remove Principle 2.

iii. Occupational Disease Policy Issue Identification Sources

The relationship between a disease, or group of diseases, and an occupational risk factor(s) are identified a number of ways. When identified issues are targeted for further investigation, they stem from a number of sources, which have been set out in the draft Policy.

The employer and worker members of our section agree on the main sources of issue identification as proposed in the draft Policy. Of particular importance is the identification of a cohort of claims with a single employer or within an industry. This tends to be the main way that both employers and workers discover that there may be a problem.

iv. Research and Analysis

In the research and analysis stage, the draft Policy places a high value on systematic literature reviews. Generally speaking, these reviews tend to relate to specific exposures, e.g., risk ratios for various levels of exposure to radon, asbestos, benzene, etc. While such reviews are valuable, both the worker and employer members of our section would like the WSIB to recognize a more important role for workplace-based research and multiple/combined exposures, which are not well addressed by systematic reviews.

We recommend that both workplace parties reserve the right to bring forward evidence from frontline situation in various workplaces and sectors.

v. Monitoring of Evidence and Updating Policy Guidance

The draft Policy states that WSIB will continually monitor developments within the scientific evidence that may be relevant to understanding the relationship between occupational risk factors and disease outcomes.

While the OBA agrees with requiring WSIB to continually monitor the development of the science, we recommend that it should also include the monitoring of other key information, especially emerging trends in disease among workers with occupational exposures.

vi. Consultation

The OBA supports the need for consultation on proposed policy changes. With the benefit of stakeholder consultation, clear and updated policy guidance will be of benefit to all interested parties.

Conclusion

We appreciate the opportunity to provide this submission in response to WSIB's Draft Occupational Disease Policy Framework. The OBA looks forward to opportunities to continue to engage with WSIB and to provide the insights from both workers and employer representatives.

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ONTARIO BUSINESS COALITION (OBC)

February 28, 2022

WSIB Consultation Secretariat
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Sent Via Email: Consultation_Secretariat@wsib.on.ca

The Ontario Business Coalition (OBC) appreciates the opportunity to respond to the Workplace Safety & Insurance Board's *Occupational Disease Policy Framework* Consultation (the "O. D. Framework").

By way of some background information, OBC was established 16 years ago with a mandate to advocate for an Ontario workplace safety and insurance system that is sustainable, that serves the needs of the employers and workers that participate in the system, and that contributes to the province's competitiveness. We are mandated to work with senior officials at the WSIB, and in government, to make sure Ontario's workplace compensation system meets the needs of the province's employers, and compensates injured workers in a fair and efficient manner. OBC has a diverse membership base with employer organizations focused exclusively on workplace compensation issues. Our members represent employers in the manufacturing, auto assembly, construction, fuels and temporary staffing services industries.

In January 2022, the Workplace Safety & Insurance Board (WSIB) released its O. D. Framework Document for consultation and input. It is positive that the WSIB has shared the draft O. D. Framework which is the foundation for Occupational Disease policy development at the WSIB and guides the WSIB in identifying Occupational Diseases and recognizing them within regulation and policy. We see that the O. D. Framework is intended to reflect the WSIB's commitment to an Occupational Disease policy development process, now and into the future, that is systematic, transparent, and informed by scientific evidence. We note that the WSIB is also proposing that there will be circumstances where it may determine consultation is not necessary because, for example, an amendment is made to the *Workplace Safety & Insurance Act* (*WSIA*), or a related regulation by the government, requires policy updating.

The OBC's long held view is that the WSIB, like other public institutions, should engage with all stakeholders in an open, fair and transparent manner in carrying out its legislative obligations of administering the *WSIA*. We recommend that the WSIB utilize the consultation process previously used for the Rate Framework and Return to Work consultations, in reviewing and developing Occupational Disease policies as that approach was inclusive, thorough and transparent.

Occupational Diseases arising from workplace processes have been compensated since the inception of the workers' compensation system in 1914. This continues to be a strongly held principle for employers, who support that workers should be compensated where an Occupational Disease has been determined to be work related.

Therefore, OBC strongly recommends that the WSIB's O. D. Framework must include consultation with all interested stakeholders, including employers, when consulting and developing Occupational Disease policies. More importantly, the consultation should engage stakeholders throughout the process, or at the multiple phases of the process, and the outcomes and path forwards need to be shared with all.

We are concerned that the O. D. Framework proposes that the consultation on Occupational Disease policy issues will generally be targeted to seek feedback and input from a specific group of employers or workers, or individuals or bodies with relevant expertise or specialized knowledge due to the complexity of the issues. This approach in our view lacks transparency and needs reconsideration.

To ensure a transparent process that provides stakeholders certainty, OBC recommends the following:

1.The WSIB should be sharing more information on the Occupational Disease policy development process so that it is more open and transparent.

2. For any changes in Occupational Disease processes or policies, the **Board should inform and consult with all stakeholders,** and not limit consultation to focused groups selected by the WSIB. The consultation model used for the Rate Framework is an excellent example of an inclusive consultation process. The implementation of the new Rate Framework had significant implications for the entire system, and the consultation approach used recognized this important fact. Occupational Disease policy also has huge implications for the entire system, and specifically for the employers who are the sole funders of the workplace safety and insurance program in the province, and as such should be subject to the same broad consultation approach.

3. The WSIB should continue to strengthen the linkages between its WSIB Occupational Disease work and the Ministry of Labour, Training, Skills Development activities to ensure that any changes being considered address regulatory/legislative initiatives.

4. If the WSIB believes that adjudicative guidelines are required in order to adjudicate Occupational Disease claims, they should be incorporated into policy.

In closing, OBC looks forward to having further discussions on the issue of its development of its Occupational Disease Framework.

Regards,

Yours truly,

Chair
Ontario Business Coalition

Occupational Disease Policy Framework Consultation Submission

Workplace Safety and Insurance Board

Ontario Federation of Labour Submission

February 2022

Introduction

The Ontario Federation of Labour (OFL) is the central labour organization in the province of Ontario. The OFL represents 54 unions and speaks for more than a million workers from all regions of the province in the struggle for better working and living conditions.

With most unions in Ontario affiliated, membership includes nearly every job category and occupation. The OFL is Canada's largest provincial labour federation. The strength of the labour movement is built on solidarity and respect among workers.

We commit ourselves to the goals of worker democracy, social justice, equality, and peace. We are dedicated to making the lives of all workers and their families safe, secure, and healthy. We believe that every worker is entitled, without discrimination, to a job with decent wages and working conditions, union representation, free collective bargaining, a safe and healthy workplace, and the right to strike.

Organized labour, as the voice of working people, promotes their interests in the community and at national and international forums. We speak out forcefully for our affiliates and their members to employers, governments, and the public to ensure the rights of all workers are protected and expanded.

The OFL is responding to the opportunity to provide feedback on the Draft Occupational Disease Policy Framework.

Handling of "Evidence"

A primary concern of ours is how evidence is chosen and considered by the Workplace Safety and Insurance Board (WSIB).

The policy framework document references the test of "strong and consistent scientific evidence" [S. 1.1] to include an occupational disease in legislation/regulation or policy. While this evidence may serve a purpose for Schedule 4 additions, or to quickly allow a claim, there needs to be more information regarding the case-by-case process where there is little science and no applicable Schedule or policy – because entitlement is a question of law, not science. Also, even if there is a relevant policy or applicable entry in Schedule 3, but the case does not fit those criteria, that should not mean a claim is automatically denied (recognized on page 36 of the WSIB protocol document).

While the policy document states "the WSIB does not require scientific certainty" [footnote 1], there is no clarity on where the WSIB falls on how "uncertain" the science can be, and on the other hand, how "strong" the evidence must be. In any case, requiring "strong" evidence is not in keeping with the balance of probabilities standard.

The document states that the process be "transparent, and informed by high-quality scientific evidence" [S.1]. The question is who determines what high-quality scientific evidence is? And how will the WSIB ensure transparency in the science that it considers? In our experience, the burden to provide scientific evidence is on the worker and their representative, and claims are often denied by the Board, using other science that is not disclosed to the claimant or their representative. In other words, we provide absolute transparency in our bids for compensation, while the WSIB does not provide transparency on their reasons for denials.

The test for causation is 'significant contributing factor' and given the gaps in WSIB Schedules, many of these claims are on a case-by-case basis. Since policy is used to determine causation (and therefore entitlement), the use of "strong and consistent scientific evidence" is unfairly holding the claim to a higher standard. In fact, Section 2.1 of the framework provides support for this statement, as it references S. 161(3) of the *WSIA* in footnote 7 – where the law only requires that there be "generally accepted advances in health sciences and related disciplines are reflected in benefits, services, programs and policies in a way that is consistent with the purposes of this *Act*."

We also question if and how the framework will consider claims when scientific evidence is updated? The current framework does not appear to have that mechanism and we believe it should be contemplated by this current occupational disease framework.

We insist that the term "scientist" be defined. We have seen the WSIB use so-called evidence presented by company scientists to adjudicate and deny claims – and while too many were not peer-reviewed, even if they were to be, we would assume many of those peers would be within the same company. The WSIB must put in stop gaps to prevent from such junk science to ever be considered for the claims of occupational disease, or any claims.

The section on "gathering scientific evidence" mentions finding an occupational risk factor. This would be a welcomed change from the current practice of reviewing mortality studies because the risk of developing a disease can differ greatly from the risk of dying from that same disease. For example, prostate and kidney cancer have low mortality rates compared to other cancers, but the WSIB bases their reviews of those cancers on mortality rates.

All of these potential pitfalls have submerged workers' claims in our experience, and we hope to see them addressed in another draft of the WSIB's occupational disease policy framework.

Strategic Direction on WSIB Policies

We have significant concern over the unilateral policies created by the WSIB over time, and how different strategic directions may influence them. Without consultation on these policies by key stakeholders, many policies have been neither consistent nor fair to claimants and that pattern will remain until genuine consultation happens. We think back to the abandoned occupational disease policy consultation of 2008. Also, strategic direction should not govern how claims are adjudicated – the facts and merits of a case should always be the driving force in providing compensation, and neither of those words are mentioned in this framework.

We question when the WSIB decides to uphold certain policies, or WSIAT decisions. The framework mentions "Relevant WSIAT Decisions or court decisions" [S. 3.1] as a guiding factor. However, we have seen a pattern of the WSIB ignoring WSIAT decisions that apply Policy 16-02-11 *Gastro-Intestinal Cancer-Asbestos Exposure.* We would also insist that the WSIB accept a line of reasoning established by the Tribunal to limit repetitive and unequal adjudication. It will make for a fairer and swifter compensation process for all parties involved.

One of the factors that we are in full support of is "Research from reputable agencies such as IARC, NIOSH, NAM". Such a shift in the caliber of evidence reviewed by the Board would be a welcomed change.

Section 2.3 of the framework mentions that WSIB policies are binding on WSIAT, with a reference to *WSIA* Section 126 in footnote 10. The statement is accurate but overlooks WSIB's duty to apply all relevant policies in Policy 11-01-3, Merits and Justice. Moreover, the WSIB informed KPMG that they use "Adjudicative Support Documents in place of outdated policies" (see paragraph 2, page 14). We do not believe this exhibits transparency as the adjudicative support documents are not published publicly – especially in place of an existing policy – and violates Policy 11-01-3.

We also take issue with the occupational disease policy development principle that "policy guidance will be fiscally responsible and ensure the long-term sustainability of the system." Policy considerations should not be guided by fiscal responsibility but rather, moral and legal responsibility to benefit entitlement. The *WSIA* purpose clause calls for financial responsibility and accountability, but that does not mean that entitlement to benefits hinges on the WSIB being financially responsible. For example, we have seen that containment of cost associated with occupational disease clusters (claims with a single employer or within an industry) is the precipitant for denials.

We urge that the WSIB stop doling out billions of dollars to employers through rebates and other mechanisms before it provides due compensation to ill workers and their families – especially given that COVID-19 is the most prevalent occupational disease according to the WSIB's statistics. If the WSIB wants to consider its financial liability, it must look to the widows and workers already owed due compensation.

We would also argue that when it comes to prioritization and agenda setting, poor media exposure is a main factor as to how the WSIB handles their policy agenda. While necessary in how the WSIB currently operates, we are hopeful for a future where the Board operates in a manner that upholds the *WSIA* and does not force widows or ill workers to spend years pressing their political representatives and local media to lobby and pressure the Board to act according to the Meredith Principles. After all, government agencies are meant to be arm's length from the government of the day.

Expanding Schedules

We were extremely glad to see the inclusion of McIntyre Powder and neurological disease included in Schedule 3 – and we are extremely hopeful that this is a signal that positive and long-standing change is in order. To go from a discriminatory policy to being incorporated into the Schedules is a feat that is owed to the McIntyre Powder Project, led by Janice Martell. It was a heavy and time-consuming burden that no ill worker, or their family should bear.

That being said, the document does not speak to Schedule 3 adjudication. The WSIB must confirm that it will not look at all Schedule 3 claims to look for reasons to deny as doing so invalidates its existence. In the interest of transparency and a thorough review of the framework, the WSIB should outline its approach to Schedule 3 adjudication.

With the impressive line-up of representatives on the new Scientific Advisory Panel, we would also like to see even more exposures and illnesses added to Schedules 3 and 4 as they are decades overdue. One example is the scientific evidence for the causal association between Benzene and Leukemia. An IDSP Report 14A from November, 1997 recommended silicosis be moved to Schedule 4 and Leukemia and pre-Leukemia relating to benzene be added to Schedule 3. The scientific evidence for that causal association has only strengthened in the last 25 years, and we are hopeful that a review of the Schedules will address both issues as well as many others. The Demers report mentions that Schedule 3 should be greatly expanded, and we believe that acknowledgement and direction should be incorporated into this policy framework.

Other Key Considerations

Although we have laid out our responses to policies and Schedules, a claim for occupational disease involves much more than the application or review of either. Adjudication issues are such an important part of the process, and they are also important as to how the scientific information will be used to determine entitlement. The framework has very little information about adjudicative advice other than acknowledging that it exists, and further urges the need for genuine and ongoing consultation around occupational disease so that these elements and others can be incorporated into the framework.

We thank you for this opportunity to give feedback on the Occupational Disease Policy Framework draft. We hope you will take these critiques into consideration and come up with another draft for stakeholder consultation.

Respectfully submitted.

sy/COPE343

February 28, 2022

Mr. Grant B. Walsh
Chair, Workplace Safety & Insurance Board (WSIB)
Office of the Chair
200 Front Street West
Toronto, Ontario M5V 3J1
Submitted by email to: Consultation_Secretariat@wsib.on.ca

Dear Mr. Walsh,

Re: Ontario Mining Association comments on WSIB Occupational Disease Policy Framework Consultation, draft issued November 20, 2021

The following submission offers comments on the WSIB's draft Occupational Disease Policy Framework, summarizing the views of the **Ontario Mining Association's member companies** (see the complete list) which represent the range of mining operations in Ontario. The mining industry creates 26,000 direct jobs and approximately another 46,000 indirect jobs in mineral processing and mining supply and services in Ontario.

The Ontario Mining Association was established in 1920 to represent the mining industry of the province and is one of the longest serving trade organizations in Canada. We have a long history of working constructively with the WSIB, with the provincial government and with communities of interest to build consensus on issues that matter to our industry and to the people of Ontario.

The OMA appreciates the WSIB's development of a framework to "anchor future policy development activities to a transparent set of policy principles and guide the use of scientific evidence in the scheduling of diseases and development and updating of occupational disease policies". The framework provides an overview of the policy development process, including:

1. An outline of the legislative and policy scheme for occupational disease under the *Workplace Safety and Insurance Act* (WSIA);
2. The process for identifying and prioritizing occupational disease policy issues;
3. The approach to gathering scientific evidence and other policy information to support the research and analysis phase of policy development;
4. A description of the thresholds used to determine whether an occupational disease is best treated as a schedule entry or policy; and,
5. An overview of the consultation approach.

The framework notes "the WSIB's commitment to an occupational disease policy process that is systematic, transparent, and informed by high-quality scientific evidence".

The OMA supports these objectives and offers the following feedback:

OMA comments and recommendations

- The draft document is well organized and provides a good summary of the WSIB's decision-making process.

- **Scientific evidence:** Members expressed concern about the quality of the scientific evidence on which the WSIB relies for its decisions around occupational diseases. There is also concern that the WSIB may be attempting to "off load" the investigation of causation. A question that was raised: Will there be a minimum exposure requirement that aligns with scientific findings?

Schedules 3 and 4:

- The current framework draft does not mention a minimum period of employment, referring only to a minimum latency between exposure and diagnosis. This mirrors the current state of Schedules 3 and 4. Criteria for a minimum employment / exposure period should be added for Schedule 3 and 4 diseases.

- On Regulation 253/07 – Firefighters: will this regulation continue to stand alone, or, will the WSIB attempt to incorporate this regulation into Schedules 3 and 4?

Adjudicative advice and the policy framework

- Our members have asked questions regarding the manner in which adjudicators use the adjudicative advice document (binder) when considering entitlement in chronic obstructive pulmonary disease (COPD) cases. Advice / guidance documents are typically used internally and not shared with stakeholders and so the WSIB should explicitly state in the **Occupational Disease Policy Framework** that the policy framework supersedes any guidance document.

COVID-19 and the Workplace Injury and Summary Report (WISR)

- The Workplace Injury and Summary Report (WISR) includes all of an employer's COVID-19 claims. The WISR report does not currently offer employers the ability to filter out COVID-19 claims from the report; by contrast, the WSIB's Compass system does allow this option. Not having the ability to filter COVID-19 claims from one's WISR report is problematic for Ontario-based employers that are bidding on contracts because non-Ontario employers may be submitting reports to a prospective client that do not include COVID-19 claims. In effect, without the ability to filter COVID-19 claims, the WISR report is creating a competitive disadvantage for

Ontario-based firms. We recommend that, as soon as possible, the ability to filter out COVID-19 claims be included as a feature of the Workplace Injury and Summary Report.

Stakeholder Consultation and WSIB policy

- The WSIB approach to stakeholder consultation is outlined at Section 4. The approach described in the draft requires some attention and improvement. Our association recommends that the WSIB periodically engage employers in **operational-level consultations** in order to better understand the effect of current and proposed policies. We have previously raised concerns with respect to the WSIB's Noise Induced Hearing Loss claims policy. COVID-19 offers another example, specifically through the WSIB's FAQs about claims and COVID-19 page, which was updated **January 14, 2022**:

Question 2: Is a diagnosis/positive test for COVID-19 required to file a WSIB claim? And, if so, are rapid test results accepted?

WSIB answer: "Because of limited availability of COVID-19 testing, a positive test result is not required to file a claim. This is only one piece of information we may use to confirm the diagnosis of COVID-19. If someone is eligible for a PCR test based on the **government's list of eligibility for testing**, a positive test result should be provided. If ineligible for a PCR test, other information (e.g., rapid antigen test result or an opinion from a health professional) can be provided."

Impact of the WSIB policy:

- While the WSIB's January 14 posting acknowledges that "With the rapid spread of the Omicron variant, multiple potential sources of COVID-19 now exist in the community, at home and outside of work, creating challenges in establishing work-relatedness when adjudicating claims" and that "Currently, the risk to the public is high for contracting COVID-19 in the community", the WSIB's announcement has had the effect of contributing to an **exponential growth in workplace COVID-19 claims in many sectors**, including mining, to the point where, as of February 18, 2022, there were more than 9000 claims pending**.**

- In mining, there would typically be fewer than five claims pending (quite often zero) in the WSIB's weekly report; now, with 186 total claims allowed from March 2020 through February 2022 there are **330 claims pending**. In one week alone, from February 11 to 18, 2022, the number grew by 32.

- The WSIB's policy change runs counter to the draft framework's emphasis on "high-quality scientific evidence". The Board should have foreseen the effect of its policy and communications before it became an issue that impacts employee / employer relations and administrative costs, whether borne directly by employers or indirectly through WSIB premiums. Adherence to its policy principles and improved WSIB consultations can help to identify and address these issues in advance.

We wish to thank the WSIB for the opportunity to comment on its draft Occupational Disease Policy Framework.

Submitted by the Ontario Mining Association

Enquiries and responses regarding this submission may be addressed to:

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ONTARIO NURSES' ASSOCIATION

SUBMISSION

ON

WSIB's Occupational Disease Framework Policy

February 17, 2022

ONTARIO NURSES' ASSOCIATION
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The Ontario Nurses' Association (ONA) is the union representing 68,000 front-line registered nurses and health-care professionals, and more than 18,000 nursing student affiliates. Our members provide care in Ontario hospitals, long-term care facilities, public health, the community, clinics, and industry.

Executive Summary

ONA appreciates the opportunity to provide stakeholder considerations on the Workplace Safety and Insurance Board's (WSIB) Occupational Disease Framework Policy.

ONA proposes that WSIB create a rebuttable presumption for infectious diseases contracted by high-risk workers, inclusive of all health-care workers, so they are afforded adequate protections for present and future pandemics. During this pandemic, ONA members and other high-risk workers continue to be exposed to a high degree of risk and many have succumbed to illness from a virus about which very little is known, including its long-term effects. A rebuttable presumption for infectious diseases would assure high-risk workers that their rights will be protected should they be infected on the job.

Background

The purpose of our submission is to propose that the WSIB's current approach to recognizing occupational diseases should be more flexible and inclusive of quickly emerging and immediate threats, especially in light of the ongoing COVID-19 pandemic. According to Section 2.4 of the WSIB's Occupational Disease Framework Policy, part of the process to recognize an occupational disease requires "strong and consistent scientific evidence that a disease is causally linked to a particular occupational risk factor…."[1] While this seems straightforward, it does not help in situations such as the COVID-19 pandemic which quickly turned into an emergency. There was little time to prepare or understand the nature of a new infectious disease and study its effects on specific occupational groups.

WSIB COVID-19 Claim Stats

The WSIB's own COVID-19 claim statistics demonstrate that Ontario's health-care workers have been significantly exposed to COVID-19 infections at much greater levels than workers from other industries.[2] Three of the top seven industries reported in the data as of February 4, 2022 were health-care sectors, including nursing and residential care facilities, hospitals and ambulatory health-care. While we recognize there is community spread of COVID-19, there has also been a very high Covid-19 claims approval rating of approximately 94% in these three health-care sectors. This confirms the WSIB has repeatedly accepted work exposure as the cause of infection. Based on these numbers,

[1] https://www.wsib.ca/en/draft-occupational-disease-policy-framework-consultation-purposes#2.4
[2] https://www.wsib.ca/en/covid-19-related-claims-statistics

we believe it would be beneficial for the WSIB to create a rebuttable presumption that infectious diseases like COVID-19 are work-related for workers in higher-risk settings.

Statistics Canada COVID-19 Risk Index

In addition to the WSIB's claim statistics, Statistics Canada has also produced figures that confirm the health-care sector is the most at-risk sector in the country.[3] The health care and social assistance sector received the highest score of 60 on this index. The following is noted in the referenced source from StatsCan:

> "Different sectors of the economy present different levels of risk of exposure to the coronavirus. Information about this risk may be important for evidence-based decision-making about how and when to impose or ease restrictions on businesses. To respond to this need, a network of academic researchers across Canada (Baylis et al. 2020) developed a new tool to measure the risk of COVID-19 exposure by occupation, and the importance of different sectors to the economy. The tool has been available to the public since spring 2020 through an app hosted by the University of British Columbia and Centre interuniversitaire de recherche en analyse des organisations (CIRANO)."

Therefore, this is additional scientific evidence produced by a network of academic professionals that is consistent with the WSIB's own COVID-19 claim statistics. The WSIB's data and this information from StatsCan both confirm health-care workers are most at risk. As noted by StatsCan, the purpose of this information was to assist government with evidence-based decision-making in terms of restrictions, but we also believe this information can help lead evidence-based decision-making in terms of protecting the most at-risk workers in Ontario.

British Columbia (BC) Example

The province of BC has already taken proactive measures in response to the COVID-19 pandemic by including infectious diseases in their Occupational Disease Schedule.[4]

We recommend that Ontario workers be given similar rights. This is important not only now with COVID-19, but it will also help in the likely event of future public health emergencies where health-care workers would once again be most at risk on the front lines. If a rebuttable presumption is created similar to what BC workers have, then high-risk workers in Ontario can continue to do their important work while confronting risk and have some degree of mental comfort knowing their rights will be better protected in the

[3] https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021004/article/00006-eng.htm
[4] https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/workers-compensation-act/schedules

event they are infected while on the job. For example, a nurse who has been working on the front lines and is infected during a newly identified public health emergency should not have to worry that their claim may be denied while scientific evidence and studies are being conducted to better understand a new disease.

We believe that the WSIB's occupational disease framework should be more flexible and allow for Ontario workers to have similar protections that BC workers have been provided. In a future global pandemic, as it stands, Ontario high-risk workers would have to undergo a more rigorous claims process than BC workers. At a time when industries such as the nursing industry are facing serious staffing issues, giving high-risk workers additional protections that are extremely relevant to their occupational risks is a good idea for the workers and the public at large.

Proposal – Operational Policy vs. Schedule 3

We propose that the WSIB's framework should be more flexible and give consideration to the unique experiences of high-risk workers during public health emergencies. Our recommendation is to have a rebuttable presumption for infectious diseases, such as COVID-19, to be included in Schedule 3 of the *Workplace Safety and Insurance Act (WSIA).* The threshold for entry in Schedule 3, as cited in Section 3.4 of the WSIB's Occupational Disease Policy Framework, supports our recommendation to have infectious diseases included in the schedule:

> "Threshold for entry in Schedule 3:
> Diseases may be considered for entry in Schedule 3 when there is strong and consistent scientific evidence supporting a multicausal association with the disease, with one or more causes being an occupational risk factor. Entry in Schedule 3 will be appropriate when the scientific evidence shows the risk of disease is increased in certain occupational processes (i.e., high-risk subgroups) and the processes can be clearly articulated. However, if work-relatedness in individual claims is often rebutted because the disease is common in the general population and often attributable to non-occupational risk factors, operational policy may be the more appropriate tool to use."[5]

The WSIB's claim statistics are again relevant here. While we know COVID-19 has been transmitted via many sources including community spread, the fact that such high percentages of claims have been approved demonstrate the work-relatedness of claims has not been rebutted often. In other words, when high-risk workers like nurses have been filing WSIB claims for COVID-19, the evidence has demonstrated the infection was work-related in most cases. This evidence supports a presumption, and in accordance

[5] https://www.wsib.ca/en/draft-occupational-disease-policy-framework-consultation-purposes#sched3

with the WSIB's own framework, this would suggest it is more appropriate to include infectious diseases like COVID-19 into Schedule 3 instead of operational policy.

Conclusion

In summary, we believe the statistics referenced from the WSIB and Statistics Canada already confirm certain occupational groups, including nurses and health-care workers, are at a much greater risk during pandemics caused by infectious diseases such as COVID-19. However, it is our recommendation that the WSIB consider providing more flexibility within their current occupational disease framework. Infectious diseases like SARS and COVID-19 develop rapidly, spread quickly and put certain occupational groups at immense and immediate risk without the time to study their effects.

As noted in Section 1.1 of the Occupational Disease Framework Policy, the existing approach is "WSIB relies on scientific evidence, generally drawn from peer-reviewed published research…" and "well-conducted epidemiological studies."[6] While we agree such scientific evidence is helpful, it is simply not possible to wait for this when a fast-moving and deadly infectious disease is sprung upon Ontario's health-care workers. Imagine waiting for peer-reviewed research and epidemiological studies during the first few months of the COVID-19 pandemic in early 2020.

Therefore, we propose Ontario follow the lead of BC and create a rebuttable presumption for infectious diseases contracted by high-risk workers, so they are afforded adequate protections for present and future pandemics. Infectious diseases like COVID-19 are a unique category of diseases and should be treated as such with more flexibility outside of the WSIB's traditional approach.

[6] https://www.wsib.ca/en/draft-occupational-disease-policy-framework-consultation-purposes#1.1

Unifor Submission on WSIB's Occupational Disease Policy Framework

WSIB Consultation Secretariat

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February 28, 2022

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Unifor welcomes the opportunity to provide feedback on the proposed changes to the Workplace Safety and Insurance Board (WSIB's) Occupational Disease Policy Framework.

We represent over 315,000 workers across Canada and over 157,000 in Ontario. Our members work in all the economic sectors of the province, the majority covered under the Workplace Safety and Insurance Act (the Act).

Introduction

Justice Meredith proposed a workers' compensation system in which administration and adjudication would be by a government board. But his report never used the word "inquisitorial", probably because of the reputation that an inquisitorial system had among lawyers.

This could explain why the inquisitorial system that he recommended became known as "the enquiry system". As a reminder, Justice Meredith principles were as follows:

1. **NO FAULT COMPENSATION:** workers are paid benefits regardless of how the injury occurred. THE WORKER AND EMPLOYER WAIVED THE RIGHT TO SUE. There is no argument over responsibility or liability for an injury.

2. **SECURITY OF BENEFITS**: a fund established to guarantee funds exist to pay benefits to workers.

3. **COLLECTIVE LIABILITY:** which means that covered employers, on the whole, share liability for workplace injury insurance. The total cost of the compensation system is shared by all employers. All employers contribute to a common fund. Financial liability becomes their collective responsibility.

4. **INDEPENDENT ADMINISTRATION:** the organization who administer worker's compensation insurance are separate from government.

5. **EXCLUSIVE JURISDICTION:** only workers' compensation organizations provide workers' compensation insurance. All compensation claims are directed solely to the compensation board. The board is the decision-maker and final authority for all claims.

These principles are a historic compromise in which employers fund the workers' compensation system, and injured workers in turn surrender their right to sue their employer for their injury.

They are the foundation upon which the majority of Canadian workers' compensation legislation is built.

Cancer and other long-latency occupational diseases are challenging for workers' compensation systems. In today's world, our knowledge of the chronic health effects of workplace exposures has increased, compensation for workplace cancer has become a major important issue for workers employed in hazardous industries, as well as the unions that represent them and their employers.

In the last several years, massive occupational disease clusters have emerged in Northern Ontario, Peterborough, Kitchener, and beyond.

In each case, hundreds or thousands of claims filed with the WSIB were ignored and/or rejected outright by the WSIB.

In each case, little or nothing was done about the massive occupational disease clusters until sick workers, along with the families of deceased workers, made significant waves in the media.

Comments

Policies are, and must be, the roadmaps that guide the application and implementation of the Act as well as maintain Justice Meredith Principles.

The Consultation document outlines how an occupational disease claim will be adjudicated.

There are many references to consistent scientific data and the causal relationship to the workplace.

Scientific data is an extremely fluid terminology and changes rapidly as new research identifies downside risk factors of workplace hazardous substances. We remain skeptical with these terms; the onus is still on the injured worker to prove a relationship with their medical condition and their workplace exposures.

Unlike sudden onset injuries, occupational diseases do not usually present in only one worker. Many workers suffer and die before there is sufficient evidence to not only conduct an epidemiological study but also to find an effect which has a statistically significant result.

Some examples:

- Cancer — Primary cancer of the nasal cavities or of paranasal sinuses, Concentrating, smelting or refining in the nickel producing industry
- Addition of trichloroethylene to the Group 1 in the IARC Monographs

Many Unifor workers' claims for kidney cancers at GE Peterborough were denied, and later to their credit, the WSIB reviewed the denied claims.

This would not have happened had Unifor not been re-opening claims. Somewhere there needs to be recognition that occupational diseases may be emerging in a workplace; that would mean WSIB needs to recognize and place weight on anecdotal evidence such as other similar cases in a workplace.

For too long, job-related illnesses have been ignored as workers struggle to prove workplace exposure, often years or decades after initial contact. Under the current system, compensation benefits from registered claims are extremely difficult to obtain and maintain. The long latency periods frequently experienced with occupational sickness, the poor to non-existing exposure documentation and the fact that lifestyle factors are often used to cloud the issue and detract from workplace exposure.

Three general principles govern how causation is evaluated and entitlement to benefits is determined:

1. Employment does not have to be the predominant or primary cause.
2. Absolute certainty is not required.
3. The worker is afforded the benefit of the doubt.

The Draft policy speaks to adding Causation to Schedule 3, and under adjudicative advice it states

Causation:

- Multicausal (multiple causes including occupational and non-occupational)
- Strong causal association
- High rate of disease in defined group of workers

It is our strong opinion and experience that unfortunately, this has not been followed when dealing with the multicausal occupational and non-occupational claims. Any IARC Group 1 carcinogen that can be associated with a work process in Ontario should be added to Schedule 3.

A review of IARC Group 1 carcinogens should be conducted and diseases such as kidney cancer from exposure to tricholorethylene degreasers added. Very few additions to either the Schedules (3 and 4) or policies have occurred historically. More effort into this type of research and additions to Schedules and policies needs to happen.

“Strong causal association” is only an individual opinion not a scientific terminology and adds unnecessary obstacles for injured workers who already are affected by an occupational illness.

Operational Policy

Scientific evidence:

- High quality systematic review supports a strong a consistent finding of a causal link

Causation:

- Single or multicausal
- Strong causal association but may not be able to identify defined group of workers or process

How does the policy approach streamline decisions?

- A causal link is accepted but there is no presumption of work-relatedness
- Additional information on exposure, latency and other criteria including occupation, industry or process is provided by the policy to support decision-making on work-relatedness

Again, when causation is defined and not applied correctly, this results in delays and continued denials which are unacceptable. Often the decision makers do not use the “di minimus” requirement but require certainty and disregard other than IARC as scientific proof. We have been told that the Collaborative Health and Environment Toxicant and Disease Database was not given any weight because it states that it cannot determine an individual’s risk of illness. Almost all scientific evidence is based on epidemiology which is by definition population based.

3.5 Drafting

This process must occur more frequently. The world of work evolves along with the work processes, chemicals and health conditions. Unfortunately, when reliant on studies and outside organizations to provide evidence, time is not on workers’ side. Occupational physicians and other medical expertise are not readily available causing delays and anxiety.

It is necessary to maintain the integrity and the intent of the Act, specifically Section 13.(1) and (2) that states:

"A worker who sustains a personal injury by accident arising out of and in the course of his or her employment is entitled to benefits under the insurance plan.)."

Section 13. (2) states:

"If the accident arises out of the worker's employment, **it is presumed** to have occurred in the course of the employment unless the contrary is shown. If it occurs in the course of the worker's employment, it is presumed to have arisen out of the employment unless the contrary is shown."

Further, the significant contributing factor test has been utilized by the Workplace Safety and Insurance Appeals Tribunal (WSIAT) as well as the WSIB.

It is necessary to provide definitions for the terms “balance of probabilities” and “significant contributing factor” to ensure the consistent application and interpretation thereof and the addition of the test for causation.

Dr. Paul Demers report, *Using Scientific Evidence and Principles to Help Determine the Work-Relatedness of Cancer*, was commissioned by the Ministry of Labour, Training and Skills Development (MLTSD) and information regarding the combined exposures effect was part of the mandate provided. Part 3 of that report discusses the role of multiple exposures noting that assuming an additive effect unless there is evidence of synergism (i.e., a multiplicative effect) is used by the American Conference of Governmental Industrial Hygienists, WorkSafeBC, and the MLTSD in O. Reg. 833. If scientific evidence shows that multiple chemicals affect the same or similar organs or organ systems, then the minimum in the adjudicative process should be an additive effect to determine causal relationship.

Conclusion

We appreciate the opportunity to provide input into the development of the WSIB’s Occupational Disease Policy Framework. The spirit of the Meredith principles must not be forgotten as the world of work evolves along with the sources of occupational exposures.

Yours Truly,

Naureen Rizvi
Unifor Ontario Regional Director

Submissions from the

UNITED FOOD AND COMMERCIAL WOREKRS

(UFCW) LOCALS 175 & 633

to the Workplace Safety and Insurance Board (WSIB)

Consultation Secretariat

Regarding:

WSIB Occupational Disease Framework

Consultation

February 28, 2022

INTRODUCTION

UFCW Locals 175 & 633, (the Union) believes in a fair system of workers compensation that puts the worker first and foremost in consideration of coverage. This is paramount when we consider the workers and their families suffering from occupational diseases. We appreciate the Workplace Safety and Insurance Board (WSIB) providing us the opportunity to put forward our feedback.

The Union is a major stakeholder, representing more than 70,000 workers across the province of Ontario in a majority of workplace sectors, notably retail, industrial, healthcare, hospitality. The Union operates a department dedicated to providing highly qualified representation to the membership who are dealing with compensation claims.

Based on our experiences in the system – the delay in claims, inconsistent adjudication and the level of compensation applied to workers in need – we regularly see issues with the language of Operational Policies.

OCCUPATIONAL DISEASES – Current adjudicative issues

Many injured and ill workers, in addition to their representatives, continue to meet numerous barriers when seeking compensation and entitlement to occupational diseases. As often happens with WSIB Operational Policy, the language is too vague, and therefore creates an environment open to interpretation. This is why in the last decade we have seen a burgeoning in appeals to the WSIAT. If all parties, continuously, interpret and infer meaning into a policy, then it is poorly written and obstructing injured workers' access to justice.

When we look at occupational disease adjudication, there is a clear issue with balancing the focus on science versus the question of law. In addition to this divided focus, the burden of scientific proof could ostensibly be deemed to be too high resulting in similar claims being denied unnecessarily.

The issue with causation and proof relying heavily on science has a two-fold problem:

1. When occupational claims are registered and adjudicators need to seek research and medical evidence to determine causation, this results in delayed justice before denied justice.
2. To maintain reliable and current medical research surrounding occupational cancers and diseases, financial and database sources need to be put in place.

To the latter point, if the WSIB continues to seek scientific certainty for adjudication then they must invest in scientific research to investigate links to exposure, cancers and diseases. This would avoid situations where adjudicators are stating that the medical and scientific evidence in a claim is lacking. This may not equate to a lack of causal connection, more so to the lack of research.

This lack of scientific evidence and certainty has a direct hinderance on when claims need to be reviewed by balancing occupational and non-occupational exposures. Cumulative effects of multi-exposures are to occupational disease claims as underlying pre-existing conditions are to physical injuries. If we continue to either put too much or not enough weight on cumulative effects and the totality of an injured workers work and life history then the policies will continue to fail workers and their families.

RECOMMENDATIONS

In January 2019, the Ontario Ministry of Labour, Training and Skills Development (MLTSD) requested an independent review by Dr. Paul Demers to answer three key questions:

1. How can scientific evidence best be used in determining work-relatedness in an occupational cancer claim, particularly in cases with multiple exposures?
2. Are there any best practices in other jurisdictions that Ontario should consider adopting?
3. What scientific principles should inform the development of occupational disease policy?

The report reviews scientific theories and principles regarding cancer causation, the major challenges faced by workers' compensation systems and relevant practices in other jurisdictions. It makes 11 recommendations that we believe, if implemented, would increase recognition of occupational cancer, improve adjudication of occupational cancer claims and contribute to improved prevention of occupational cancers.

Priority has been given to assembling the Scientific Advisory Table, which is a much needed first step; however, the remaining recommendations need to be implemented. If looking to prioritize the remaining recommendations, we support:

- Drastically expanding the list of presumptions regarding cancer in Schedules 3 and 4 to reflect current state of scientific knowledge.
- Update and expand all policies relevant to adjudication of cancer claims
- Provincial capacity needs to be developed to investigate cancer clusters and other emerging issues
- Adjudication should be improved by better access to electronic exposure data

It should not go unmentioned that the WSIA regulation 175/98 was recently amended to add exposure to McIntyre Powder in the mining industry to Schedule 3, finally acknowledging its direct association to neurological diseases, specifically, Parkinson's disease. This is milestone for injured workers advocates, and should be seen as the beginning to vast improvements needed to expand the presumption lists.

In October 2021, the Occupational Disease Reform Alliance (ODRA) was launched comprising of many cohorts, including McIntyre Powder, as well as other prominent clusters such as the Chemical Valley (Sarnia), GE Peterborough, Paper Mill (RB4) Dryden, Ontario Rubber Workers

Project, Pebra/Ventra Plastics Peterborough, Neelon Casting and steel workers in Sault Ste. Marie, all directly affected by occupational disease. They have four clear demands that need to be considered in this Framework consultation:

- Compensate occupational disease claims when workplace patterns exceed levels in the surrounding community
- Expand the list of compensable diseases presumed to be work-related
- Use the proper legal standard; not scientific certainty
- Accept the multiple exposures combined to cause disease

It is clear to see the overlap in recommendations from the Demer's report and the injured workers community. What is unclear, is, after requesting and completing this report in 2020, that the WSIB and MLTSD have delayed in implementing the recommendations. These concepts, plans and recommendations have been presented and ignored. What remains to be seen, is if this consultation will result in direct action or further dismissal of the qualified and lived experience of Dr. Demers and the ODRA.

CONCLUSION

The Union offers this submission under the principal that the needs of Ontario's workers, especially those who have suffered a workplace injury or illness, should be paramount. Given the historic high level of claims and low level of compensation provided to workers, it is objectively clear to the Union that the current Occupational Disease Framework is flawed and inconsistent.

Respectfully submitted by:

The United Food and Commercial Workers (UFCW) Locals 175 & 633

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WSIB Occupational Disease Policy Framework Consultation Submission

Sylvia Boyce, USW D6 Health, Safety and Environment Coordinator &
Andy LaDouceur USW Local 2251 WSIB Committee

Introductory remarks:

The United Steelworkers (USW) is the largest private sector union in both Canada and North America, representing approximately 1.2 million active and retired workers. USW District 6 is the largest of United Steelworkers' 13 districts with over 74, 000 members and approximately 50, 000 retirees located in Ontario, New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island. Our union represents workers in every sector the Canadian economy.

We appreciate the opportunity to participate in this longstanding tradition of WSIB stakeholder consultations. The USW has a proud history of providing WSIB representation for our members and that history includes fighting for improvements in legislation as well as policy. There are several occupational disease clusters associated with workplaces that employ/employed our members such as: steel mills in Sault Ste. Marie, Hamilton & Fort Erie; mines in Northern Ontario that forced workers to inhale McIntyre Powder; Rubber workers; Neelon Castings; Vale (formerly Inco.); etc. Occupational disease has impacted many of our members and this consultation has the ability to have a major impact on those affected.

Background:

A consultation regarding an occupational disease policy framework was announced by the WSIB in December of 2021 with a due date for comments of January 31, 2022, initially provided and later an extension until February 28, 2022, was granted. It was noted by the WSIB in their FAQS for this announcement that it would be limited to policy framework, and specified that it did not include any adjudication issues. The announcement invited feedback stating that it is valuable and will be carefully considered to ensure that the WSIB is developing tools with our needs in mind. It is with this intent that we offer our feedback/comments with the hope that not only is it valued and considered but that it is also reflected in the final version as well as the actions of the WSIB.

Comments regarding the consultation paper:

There are 5 sections with several subsections and headings for which we will provide comments in a corresponding nature. In addition to comments regarding the consultation paper itself, we have some concerns and/or issues with the FAQS and related issues not specified in the document. Our submission will provide comments for all three, with text boxes and green font signifying that it's information taken directly from the consultation paper when quotes aren't utilized.

Section 1 (Introduction):

WSIB's introduction section uses the phrase "transparent and informed by high-quality scientific evidence" (last sentence in the first paragraph on page 3). Considering the lack of information and the short time to provide a submission, including the extension that was granted, we feel comfortable saying that this consultation lacks transparency. We will highlight the areas that lack information, and therefore transparency in the body of this submission.

As for the reference to the quality of the science, who decides what is high quality scientific evidence and why isn't relevance even mentioned? The issue of relevance is part of the consultation paper, but it seems to be more of an afterthought instead of the focus. Our reasons for preferring that relevance be a primary consideration is also explained herein.

It should be noted that the ODAP Chair's Final Report was approved by WSIB's Board of Directors on June 9, 2005, for implementation. There was extensive consultation, and even some collaboration, regarding the Chair's Final Report which provided a framework for occupational disease policy development. No justification has been provided for abandoning that report in favour of the proposed framework in the consultation document, and this lacks transparency.

Section 1.1 (Background):

The term "work-related" (last sentence in the 3rd paragraph of that section on page 3) implies a higher standard than significant contributing factor, as noted by the WSIB in their document titled *Taking ODAP into the future, A protocol for occupational disease policy development and claims adjudication*[1]. Work-relatedness is discussed at page 38 (it is a continuation of the topic "the standard of proof" starting on page 37) explaining that it suggests the concept of a "predominant cause". Given the reference to significant contributing factor and the footnote providing an explanation for this test, then the reference to work-related likely wasn't intended to provide a higher test but considering the fact that the WSIB uses predominant cause for chronic stress claims we felt it was worth making the distinction.

This section also speaks to long-latency diseases (second last paragraph on page 3) but misses the opportunity to talk about relevant science. For example, if we're dealing with asbestos exposures from the 1970s then the recent studies that use the lower exposures found in most workplaces now wouldn't be relevant to that claim. Relevance should be the key consideration when viewing scientific information to avoid the old cliché of comparing apples to oranges.

[1] Taking ODAP into the future https://www.wsib.ca/sites/default/files/2019-03/protocoldraft05.pdf

There are references to a requirement for "strong and consistent scientific evidence" to recognize an occupational disease as an addition in legislation/regulation or policy (page 4 last paragraph just above the footnotes is the first of several such references), which provides an indication that the WSIB does use scientific certainty despite their statements to the contrary. While this level of evidence may serve some purpose for an entry into Schedule 4 or as a way to quickly allow a claim, there needs to be more information regarding the lack of strong or consistent scientific evidence in a case-by-case process where there is no applicable entry in the Schedules or relevant policy because entitlement is a question of law, not science. Adjudicative issues play a major role in the claims process and should not have been left out of this consultation.

Even if there is a relevant policy or applicable entry in Schedule 3 but the case doesn't fit those criteria that shouldn't mean that a claim is denied, as previously recognized by the WSIB in their protocol document on page 36 under the sub-heading of "Common sense" (see link provided above). The proper test for causation is significant contributing factor as recognized in the first footnote of this consultation document, and since policy is used to determine causation, and therefore entitlement, then the use of "strong and consistent scientific evidence" is holding the claim to a higher standard. Again, a high standard for entry into either Schedules 3 or 4 given the presumptions associated with the regulations could be considered necessary but this is not the standard for entitlement for all claims.

WSIB's Protocol document addressed issues of this nature, and in fact it also noted on page 59 that,

> "This protocol guides operational staff now and will continue to do so in the future. In addition, policy will be developed on the basic legal and other principles of adjudication. The protocol will also be integrated into the training materials for staff in the occupational disease areas."

Abandoning this document in favour of the current proposed framework without explanation lacks transparency.

Section 2.1 (Legislation):

We take no issue with the section itself but the reference to section 161 (footnote 7) provides support that "strong and consistent scientific evidence" isn't required because it only requires that there be "generally accepted advances"

> "**Duty to monitor**
>
> 161(3) The Board shall monitor developments in the understanding of the relationship between workplace insurance and injury and occupational disease,

(a) so that *generally accepted advances* in health sciences and related disciplines are reflected in benefits, services, programs and policies in a way that is consistent with the purposes of this Act; and

(b) in order to improve the efficiency and effectiveness of the insurance plan. 2011, c. 11, s. 24 (2)." [emphasis added to the phrase generally accepted advances]

This section doesn't state that generally accepted advances meet the requirements for entry into the Schedules, but it does clearly state that it is sufficient for WSIB policy. Therefore, the evidence required to develop policy stated in the consultation paper appears to be a higher standard than required by the WSIA.

Section 2.2 (Regulation: presumptions and schedules):

"The WSIB relies on its regulation making authority to recognize occupational diseases in Schedules 4 and 3 of the General Regulation (O. Reg. 175/98)." (first sentence on page 6). This statement seems rather disingenuous as the WSIB didn't always have regulation making authority, but they have had the duty to apply the Schedules to the claims that are described therein for decades. Additionally, it wasn't until recently that the WSIB actually used that authority to add Parkinson's relating to McIntyre Powder exposures in Schedule 3. This is a welcomed addition to Schedule 3 but falls short of substantiating the statement that the WSIB relies on its regulation making authority.

WSIAT doesn't have, or require, regulation making authority to apply the Schedules, and this further substantiates our opinion that an administrative justice agency doesn't require that type of authority. The history of applying the Schedules without regulation making authority for WSIAT and a similar history for the Board prior to such authority existing for the WSIB demonstrates that such authority isn't necessary to adjudicate claims. Making such a bold statement with absolutely nothing to substantiate it isn't transparent and doesn't earn trust (the WSIB keeps referencing transparency in this consultation paper and the reference to its strategic direction would include the values that lists earning trust).

We submit that having regulation making authority and not using it for decades shows that the WSIB has never relied on it. Schedule 4 was introduced in 1985 and sat empty until 1992 when mesothelioma and asbestosis were the first two diseases added; nasal cancer was added in 1994 for two Inco sinter plants (Copper Cliff and Port Colborne). Apart from Parkinson's disease relating to McIntyre Powder exposures, nothing was added to either schedule since 1994 despite the Board having the authority to add to Schedule 3 &4 prescribed by s. 183(3) & 183(4) of the WSIA. Clearly the Board hasn't relied on its regulation making authority despite the statement in the consultation paper to the contrary.

A Schedule 3 discussion is the found in last paragraph of that section and while the explanation seems reasonable, it is missing the fact that when the presumption is rebutted that the claim isn't automatically denied because the individual merits and justice must be considered. While we recognize that this consultation is limited to policy framework and adjudicative issues have intentionally been left out (for the most part), a simple reference to the requirement to consider the individual merit and justice should the presumption be rebutted ought to have been included to be clear on this issue. Providing complete information would be consistent with the values listed in the WSIB's strategic plan since it would certainly be *helpful*, which would contribute to earning people's *trust* and qualify as working with *integrity*[2].

Additionally, this provided an opportunity to describe a rebuttal matrix of sorts or at least to stipulate the bar to meet in order to rebut the presumption. Given that the requirements for entry into the Schedules is higher than the standard for case-by-case adjudication, and that the presumption of s. 15(3) of the WSIA changes the focus to from proving a causal connection to showing the contrary as a rebuttal to the established workplace connection, then the standard for showing the contrary should be greater than significant contributing factor. A presumption which only covers claims that meet a higher threshold to be entered in Schedule 3, but is rebutted based on the same standard applied to all claims, isn't really a presumption at all.

Clearly the legislature intended for the claims that are afforded a presumption to require a higher standard of proof to rebut the presumption, in fact there isn't even an opportunity to rebut the presumption of section 15(4) of the WSIA. The wording of the presumption demonstrates that the Legislature intended for workers to be entitled to compensation, even when there are alternative theories of causation, unless the contrary is shown. Suggesting that there are other theories of causation doesn't show that claim wasn't work-related, and it wouldn't be proper to weigh various theories of causation on a balance of probabilities to rebut the presumption. It is our position that rebutting the presumption requires clear and convincing evidence to establish that the contrary has been shown.

We propose that this consultation should have addressed this issue to be transparent regarding the standard required to rebut the presumption of section 15(3) of the WSIA.

Section 2.3 (Operational policy):

The same issues with "strong and consistent scientific evidence" (used in the 1st sentence of the 3rd paragraph in that section on page 6) as noted above remains and rather than listing it for every section that uses that phrase, we'll simply just say that it applies to every reference. As stipulated above, that issue of requiring "strong and consistent scientific evidence" isn't required by the WSIA. Holding a claim to a higher standard than one

[2] WSIB's Strategic Plan 2019 – 2021 https://www.wsib.ca/en/strategic-plan-2019-2021

expressly stated in the Act doesn't earn trust and certainly doesn't suggest that there's integrity in such action.

Section 126 of the WSIA is referenced in footnote 10 with a reference to WSIB Policies being binding on WSIAT (first sentence of page 7). While that statement is technically accurate, it overlooks WSIB's duty to apply all relevant policies which thereby binds the WSIB by Policy) in Policy 11-01-03 *Merits and Justice*[3]. This isn't limited to an oversight in the consultation paper, and not accepting that the WSIB is bound by Policy in claims for GI cancer related to asbestos has become standard practice at the WSIB. This practice doesn't earn trust, isn't exactly honest or helpful, and it lacks transparency.

WSIB informed KPMG that they use "Adjudicative Support Documents (ASD) in place of outdated policies"[4] (see the second full paragraph on page 14 of the Value for Money Audit Report: Occupational Disease and Survivor Benefits Program). WSIB also informs KPMG that 26 out of 48 Occupational Disease Policies require a systematic scientific review (page 13 and 14 in Observation 3). This clearly shows that the WSIB disregards Policy 11-01-03 and it also indicates that the WSIB would like to do so with respect to a number of other occupational disease policies.

There is nothing transparent about using an unpublished document in place of an existing policy and it violates Policy 11-01-03. The fact that the very agency in charge of administering the Act, that has the authority to develop policies to assist in that duty, is violating a Policy and ignoring another in favour of an unpublished document doesn't earn people's trust, lacks integrity, and certainly doesn't seem to be honest. This is compounded by the fact that the WSIB's Protocol document is publicly available, and it stipulates that adjudicative advice does not replace policy and must work with existing policies (among other criteria listed on page 31, see footnote 1 above) which the GI cancer policy interpretation memo violates. All claims previously denied based on this memo should be reviewed and the policy should be properly applied in every case to regain any integrity, trust, and to restore honesty as well as transparency in the system.

Additionally, the WSIB should issue a public apology for the remarks noted in the KPMG report regarding the departure from Policy; they should also include their remarks about undue political interference in the GE and McIntyre Powder clusters in that apology. It was the WSIB's mishandling of those clusters as documented in the news for GE and as it related to a rescinded policy that was an exercise in fettering discretion (arguably an abuse of power) for McIntyre Powder which the WSIB needs to take ownership of rather than deflecting from their failures. A public apology of this nature will help to earn people's trust, as well as show that there is some integrity and honesty at the WSIB.

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[3] WSIB Policy 11-01-03 *Merits and Justice* https://www.wsib.ca/en/operational-policy-manual/merits-and-justice

[4] February 7, 2019 KPMG Value for Money Audit Report: Occupational Disease and Survivor Benefits Program https://www.wsib.ca/sites/default/files/2019-05/wsib_occupational_disease_and_survivor_benefits_program_vfma_report.pdf

Section 2.4 (Recognition of occupational disease):

This whole section seems to be an oversimplification of the adjudicative process, as well as the application of section 15 of the WSIA. It seems odd that the WSIB would specify that this consultation paper doesn't address adjudicative issues but then delve into an oversimplified adjudicative process that could create issues with adjudication of a claim for occupational disease if adopted. The definition for occupational disease provided in s. 2 of the WSIA is an inclusive list, as opposed to an exhaustive list, that goes well beyond what is listed in the Schedules or recognized by WSIB Policy.

While it is appreciated that a claim for a disease or condition could fall within the disablement portion of the definition of accident that doesn't mean that all occupational diseases need to be listed in the Schedules or Policy. In fact, the example provided of skin cancer from sun exposure would still be an occupational disease even using the Workers' Compensation Act (WCA) definition for occupational disease or applying s. 134(1). Skin cancer could easily be accepted as "a disease resulting from exposure to a substance relating to a particular process, trade or occupation in an industry" as listed in part (a) of the definition for occupational disease provided in the WSIA and the WCA. The disease would be skin cancer and the substance would be UV radiation from the sun which would be part of the process of delivering mail for the worker in WSIAT Decision No. 1480/98[5].

Despite differences in wording between s. 15(1) of the WSIA and s. 134(1) of the WCA, the intent to provide compensation for occupational diseases remains the same. Both have reference to suffering from and being impaired by an occupational disease that is due to the nature of the employment (including more than one job or employer), which would also be applicable to skin cancer from sun exposure for workers so exposed during their employment. The Tribunal found an alternate way to allow the claim in WSIAT Decision No. 1480/98, but that doesn't mean it was the only way to allow a claim for skin cancer relating to sun exposure.

The rule of liberal interpretation isn't mentioned in the consultation paper and considering the fact that the WSIA is remedial legislation making it subject to the Legislation Act, 2006[6], it ought to have been recognized. Section 64 of the Legislation Act prescribes the rule of liberal interpretation and states that it applies to the Act as well as its regulations which would mean that it applies to the WSIA and Schedules 3 & 4. Since WSIB Policy must be authorized by the WSIA or its regulations, then it would also be logical to apply the rule of liberal interpretation to those policies. Applying the rule of liberal interpretation would have eliminated the need to delve into adjudicative issues regarding the interpretation of an occupational disease.

[5] WSIAT Decision No. 1480/98
https://www.canlii.org/en/on/onwsiat/doc/2002/2002onwsiat2247/2002onwsiat2247.pdf
[6] Legislation Act, 2006, S.O. 2006, c. 21, Sched. F https://www.ontario.ca/laws/statute/06l21

Policy 11-01-03 *Merits and Justice* (see footnote 3 above) stipulates under the heading 'Role of policy' that,

> "The WSIB develops policies when the Act is silent or ambiguous, or when it permits a number of possible interpretations."

S. 159(2)(a.1) of the WSIA provides the WSIB with the authority to make policies concerning the interpretation of the Act. Given these statements in legislation and policy there isn't a justification for not applying the rule of liberal interpretation to WSIB Policy since it is in fact an interpretation of the Act which is subject to the Legislation Act.

WSIAT Decision No. 69/19[7] is included in footnote 12 on page 7 and it applied Policy 16-02-11 *Gastro-Intestinal Cancer-Asbestos Exposure*; therefore, this decision isn't an example of allowing a disease claim as a disablement. Further, it applied a policy that WSIB says is outdated and they use an ASD in its place without specifically referencing that memo. However, WSIAT Decision No. 69/19 did reference two other decisions that rejected the Board's GI cancer policy interpretation memo (see paragraph [37] referencing WSIAT Decision Nos. 25/13[8] & 3588/17[9]). It seems contradictory to take issue with WSIAT Decisions of that nature and then cite one in the discussion paper that frequently references consistency.

Section 3 (Occupational disease policy development):

This consultation document frequently uses the words "transparent" and "consistent", but it seems that the WSIB has a different meaning for those words. Merriam-Webster defines transparent[10] as being free from pretense or deceit and readily understood characterized by visibility or accessibility of information especially concerning business practices. Which is another way of saying that being transparent means being open and honest without secrets. Their definition for consistent[11] as being marked by harmony, regularity, or steady continuity, free from variation or contradiction. It has been demonstrated that there are contradictions in this consultation paper which would mean that it isn't consistent, and the lack of information or confusion created by this consultation would mean that it isn't transparent either.

[7] WSIAT Decision No. 69/19
https://www.canlii.org/en/on/onwsiat/doc/2019/2019onwsiat1004/2019onwsiat1004.pdf
[8] WSIAT Decision No. 25/13
https://www.canlii.org/en/on/onwsiat/doc/2013/2013onwsiat437/2013onwsiat437.pdf
[9] WSIAT Decision No. 3588/17
https://www.canlii.org/en/on/onwsiat/doc/2017/2017onwsiat3612/2017onwsiat3612.pdf
[10] Merriam-Webster dictionary definition for transparent https://www.merriam-webster.com/dictionary/transparent
[11] Merriam-Webster dictionary definition for consistent https://www.merriam-webster.com/dictionary/consistent

Examples of a lack of transparency or consistency in this section are as follows. There is nothing transparent about having policy influenced by the WSIB's strategic direction, because there is absolutely no consultation held regarding their strategic direction (bullet 2). While the strategic plan is published and available, the decision about the direction is made behind closed doors at the WSIB which is somewhat secretive. The strategic plan is a corporate plan that shouldn't be used to direct policy. It should also be noted that there wasn't a link or a footnote clarifying that the reference to the WSIB's strategic direction was in fact a reference to the Strategic Plan. We appreciate the values stated in the most recent strategic plan, but we have no input regarding the content of any future strategic plans.

Stating that policy will provide clear direction while avoiding including adjudicative issues in this consultation isn't exactly transparent either (bullet 3). Direction provided in policy is an adjudicative issue and clear direction limits the scope or application of a policy as opposed to more general guidance on an issue. Using terms of this nature (clear direction or others) without providing details isn't open communication but is to be expected in a consultation process that seeks to deal with only one aspect of occupational disease claims.

Claiming the discretionary authority to decide when expert and/or stakeholder input is needed also lacks transparency in that process (bullet 4). Even when the additional information provided regarding there being an exception when changes are in response to legislative/regulatory amendments or additions, this exception for input still lacks transparency. The decision regarding consultation should be left to the stakeholders, in other words there should be consultations held for any new policies or substantive changes to a policy and stakeholders decide whether or not they participate. This method would ensure consistency, whereas the WSIB's proposed method would involve an arbitrary and discretionary practice that wouldn't likely provide the consistency sought in the consultation paper.

Occupational disease Policy is about benefit entitlement, whereas long-term sustainability and being fiscally responsible are premium setting issues. These two things shouldn't be tied to each other (bullet 6). The purpose clause of the WSIA calls for being financially responsible and accountable, but that doesn't mean that entitlement to benefits hinges on the WSIB being financially responsible. Once benefits are provided then the financially responsible and accountable way to provide those benefits is to ensure that the employer's premium rates are sufficient to cover that expense. Entitlement to benefits should be reflected in the premium rates, but the funding should never be a consideration for benefit entitlement.

Setting a goal of transparency and not achieving it provides a certain consistency, but this likely isn't the consistency sought by the WSIB. However, it does demonstrate that something can be consistently inconsistent, consistently wrong, or consistently bad and so consistency shouldn't be set as a goal without defining how it will be measured. That standard of measuring the consistency of the WSIB should be to consistently meet the purpose of the WSIA in a fair and impartial manner.

Section 3.1 (Issue identification):

The second sentence in the first paragraph on page 9 provides a somewhat vague reference to s. 161(3) by mentioning the Board's duty regarding monitoring of scientific literature. This has been a duty of the Board for a long time as it was part of the 1990 Worker's Compensation Act in s. 65(3.1) with the decimal point suggesting that it was an amendment after the initial writing of the 1990 WCA. The WSIB's history of not performing that duty speaks for itself.

We have concerns and/or issues with bullet points that are as follows:

- Relevant WSIAT Decisions or court decisions – which WSIAT Decisions aren't relevant? Clearly the WSIB doesn't think that the WSIAT Decisions applying Policy 16-02-11 *Gastro-Intestinal Cancer-Asbestos Exposure* allowing claims is relevant because they continue to ignore that policy. Exercising some undefined discretionary authority to determine relevance of a decision from WSIAT isn't transparent and it doesn't earn trust, nor does it help those with similar claims which all suggests that this course of action lacks integrity. The WSIB also has a poor track record regarding court decisions as demonstrated by the years that they continued COPD apportionment despite *Athey v. Leonati*; instead, the WSIB paid for a scientific study to answer a question of law before ending their practice that violated s. 47(2) of the WSIA which includes s. 18 of O. Reg. 175/98.

- Scans of the scientific literature – not all of it would be relevant to the claims but the WSIB has a habit of including all even when exposures aren't comparable (see for examples WSIAT Decision Nos. 866/18 at paragraph 7[12] and 2863/17 at paragraph 17[13]). The WSIAT Decisions referenced also provide support that the WSIB shouldn't be determining relevance of those decisions and should have changed their methods for reviewing their internal scientific papers.

- The next two bullets have the same issue; trends in surveillance data (e.g., Occupational Disease Surveillance System reports) & trends in WSIB claims data – WSIB ignores this data and opts to search for scientific literature which led to ODRA's demands regarding the use of the proper legal standard and recognizing the workplace relationship when the patterns exceed the community level. Several of the WSIB's scientific reviews start with the phrase (with one example provided in Addendum #1),

[12] WSIAT Decision No. 866/18
https://www.canlii.org/en/on/onwsiat/doc/2019/2019onwsiat1338/2019onwsiat1338.pdf
[13] WSIAT Decision No. 2863/17
https://www.canlii.org/en/on/onwsiat/doc/2019/2019onwsiat2178/2019onwsiat2178.pdf

> "This review and scientific opinion is in response to multiple claims with the steel manufacturing industry in Ontario – primarily Algoma and Dofasco."

Rather than using the data the WSIB already has about trends in steel manufacturing they opt for an internal review of the science that includes literature not relevant, and especially not specific, to the claims registered from those two employers.

- Identification of a cohort of claims with a single employer or within an industry – describes the clusters that are members of ODRA but the evidence from those clusters shows that the WSIB tries to contain the costs associated with those claims by denying so many. Additionally, the issue with trends in claims or surveillance would apply to this bullet.

- Research from reputable agencies, such as IARC, NIOSH, NAM – this would be something new because it's never had an influence before but will give WSIB credit for developing Policy 16-02-09 *Lung Cancer-Coke Oven Emissions Exposure* and allowing those claims before the policy was written or IARC even classified COE as a carcinogen. Had the WSIB actually updated their internal scientific papers then the worker from WSIAT Decision No. 2863/17 likely would have avoided an appeal because IARC had updated their grading of the evidence for trichloroethylene.

Section 3.2 (Prioritization and agenda setting):

Several bullets in this section share the same issues as the bullets in section 3.1 because they are practically the same.

- Organizational strategic direction and priorities – the WSIB's strategic direction nor their priorities should have any bearing on the prioritization and agenda setting since the system is supposed to be about providing compensation and not about what the WSIB thinks is best

- WSIAT Decisions and court rulings – same as above without the qualifier 'relevant'.

- External stakeholder input and feedback – past consultations have proven that feedback is heard but not factored into what the WSIB will do, and input goes ignored.

- The burden of disease in Ontario (i.e., incidence and prevalence) – another way of phrasing trends and cohorts as above.

- The number of WSIB claims related to the disease – how's that different from the burden?

- Administrative or operational considerations – this is not much different from strategic direction and priorities and definitely shouldn't be a consideration.

- A known change in the state of scientific evidence on the association between the disease and occupational risk factor – WSIB has been failing to do this except when it benefits them as with the asbestos GI cancer claims (and that science uses current level of exposures to discount the relationship whereas past claims involved higher exposures from the past) or when they are pressured like with McIntyre Powder.

There's a reference to the Chair's Advisory Committee and our USW LIWAC member (and likely others) will confirm that WSIB always asks for case examples, then fixes those individual claims while largely ignoring the systemic issue represented by said claims.

Section 3.3 (Research and analysis):

This section has three subheadings, and all have issues or raise questions that will be addressed under their heading.

Gathering scientific evidence

The second paragraph under this subheading on page 11 speaks to synthesizing the evidence to assess the workplace association, but this ignores problems stated by the WSIB's own "scientist" (the quotes are due to the fact that the qualifications of the WSIB's people doing these reviews are never made public unlike any other scientific review from outside sources). Several WSIB reviews synthesize studies by calculating summary risk estimates (SREs) but only one that we know of contains the following caution that is also missing from the consultation paper

> "It is possible that the studies are measuring different risks so that combining the results may obscure any underlying risk." (second last sentence in the first paragraph under the heading 'Summary for coke oven workers' of the Occupational Disease Policy and Research Branch *Assessment of Prostate Cancer Risk in Steel, Foundry and Coke Oven Workers*, attached as Addendum 1 – see page 44).

Obscuring a risk isn't serving the best interest of science or those filing a claim for benefits and doesn't fulfill the values of the WSIB's Strategic Plan.

Also in that paragraph, there is the reference to finding "an occupational risk factor" in the second last sentence. This would be a welcome change from the current practice of reviewing mortality studies because the risk of developing a disease can differ greatly from the risk of dying from that disease (see footnote 13). Prostate cancer has a very low mortality rate in comparison to many other cancers as does kidney cancer, but the WSIB

reviews for those cancers focused on mortality rates. An occupational risk factor should be viewed as the risk of developing a disease based on occupational exposures and the risk of dying from the disease shouldn't be used to determine entitlement.

Another issue in the second paragraph is found in the last sentence which states in part that the scientific reviews are "vetted through peer review" and considering the WSIB "scientist" qualifications aren't defined, who would be their peers? Would that peer review be conducted internally by others of unknown qualifications? How would anyone know if it is in fact a peer review without knowing the qualifications of the WSIB "scientist"? For example, we are aware that one former WSIB "scientist" who wrote reviews was an occupational hygienist and his peers would be other occupational hygienists, so would they be reviewing a document that involves epidemiology, toxicology, and other medical specialties? The lack of information provided by the WSIB regarding their so-called "scientists" creates issues that are not addressed in the consultation paper. This is not helpful, lacks transparency, fails to earn trust, and is also lacking in integrity.

In the last paragraph on page 11, it discusses a well-accepted method to grade the quality of studies but this seems to ignore the relevance. Systemic reviews or meta-analysis take money to conduct whereas anecdotal evidence or observational studies don't require that level of funding. The anecdotal and/or observational evidence could be specific to the workplace and a meta-analysis would look at more than one workplace which could obscure the risk at a particular worksite. This is one of the reasons behind ODRA submitting that scientific conclusions cannot be a substitute for a legal determination (ODRA's submission is attached as Addendum #2). It also demonstrates the importance of adjudicative issues or advice on those matters that isn't part of this consultation.

Workers are the evidence in many ways because they have lived the experience of being exposed to their workplace environment. They see their coworkers at the doctor's office, the hospital, and the cancer clinics. Patterns are first noticed by the workers and/or retirees based on their observations. For many workplaces, cancer investigations conducted by the workers, retirees, and/or union is the only direct evidence available. There are very few workplaces that are the subject of epidemiological studies, and workers need compensation not additional studies. Workers should have faith that their claim was adjudicated based on what they were exposed to and not denied based on studies from foreign countries that don't have comparable exposures. They shouldn't have their claims denied based on the totality of the available evidence that lacks relevance to their lived experience. Workers as the evidence should be considered the best available evidence and it should be reflected in the decision-making process as well as policy.

Gathering other policy information

There are five bullets providing examples of other information considered in policy development, and all but the first one of them raise concerns.

- Existing internal and external feedback – the WSIB regularly receives external feedback whether it's through a consultation or correspondence and history has shown that it doesn't get the attention it deserves.

- Approaches taken by other workers' compensation systems on the same or a similar issue and the basis for that approach – this could be viewed as importing criteria and seems like the WSIB wants to choose what information they will consider. Ontario led the way in establishing a compensation system here in Canada and it should continue to lead the way rather than lag behind and see what the other provinces are doing.

- Current practices and experience in adjudicating WSIB claims on the disease – this could easily conflict with the approaches taken bullet above as well as the first bullet regarding appeal trends. If the current practice is to deny a claim say for kidney cancer in electrical workers but those claims are being allowed at appeals, then this should negate the current practice rather than having it considered.

- Ontario's economic and industrial history to identify past workplace exposures relevant to the outcome and to understand the workplaces at risk for this outcome and the anticipated numbers of claims resulting from the exposures in those workplaces – given the WSIB's history with the clusters it seems that they have been failing at this when there was nothing to stop them. Exposure information submitted by employers is accepted without question and without looking at the economic or industry history to ensure that those exposures were representative of normal operations, instead of the result of a reduction in production leading to lower exposures (e.g., an employer sent coke oven emissions information that was taken during a partial temporary shutdown, and it was used as being representative of the workers normal exposures). Additionally, we've seen the WSIB's occupational hygienist average all exposure information provided by the employer without any regard for relevance to the worker (e.g., a worker never held the position of day supervisor but the exposure information for that position is used in calculating the average exposures).

Analysis

The third paragraph under this heading on page 12 mentions contradictory or inconclusive evidence in the last sentence and given that there aren't new definitions provided for grading the evidence it would seem that the WSIB is relying on those currently employed by the ODPRB, as submitted by ODRA those definitions are looking for scientific certainty which isn't required by the WSIA. This type of certainty may have a use determining an entry into Schedule 4 since it provides an irrebuttable presumption but shouldn't be the standard for entitlement in other disease claims or even in policy development. The current practice of the WSIB is to deny claims where the scientific information is contradictory and especially when it's graded as inconclusive – which is the

reason that ODRA stated that scientific conclusions shouldn't be directly applied as legal determinations for entitlement under the WSIA, as submitted above. While the WSIB asserts that it doesn't look for scientific certainty, there's plenty of evidence to prove otherwise.

In that same sentence there is acknowledgement that results of the analysis could be based on exposures that are not comparable with Ontario workplaces. This could easily be avoided if relevance was considered in the systematic review before any analysis is conducted. Addendum #1 provides an example of including a study from Norway where the workers were provided with airstream helmets, but there's no evidence to show that coke oven workers in Ontario have the same personal protective equipment, and the exposures are measured quite differently using a unit of measure that would be a tiny fraction of the unit of measure employed here in Ontario. Currently the WSIB has been using scientific information of this nature in their reviews and coming to the conclusion that the science is inconclusive and then denying claims on that basis, so it would be great if the WSIB not only stopped doing that but also reviewed all those claims based on flawed results from a systematic review.

The second last paragraph also mentions "strength and consistency" which was previously discussed and will be expanded upon in section 3.4.

Section 3.4 (Recognizing an occupational disease: scheduling and policy):

The WSIB acknowledges that the hierarchy of policy options and Schedule entries is from the Final ODAP Report but doesn't admit that their interpretation and application of that hierarchy likely won't resemble the work of the IDSP/ODAP. In IDSP Report 14A from November of 1997 it was recommended that silicosis be moved to Schedule 4 and that new entries be made to Schedule 3 for leukemia and pre-leukemia relating to benzene (even noting that BC provides a presumption of a similar nature) or that these diseases could be included in the current entry in Schedule 3 for poisoning and its sequalae by benzene.

We are not aware of any claims for leukemia being granted by the WSIB under the current entry in Schedule 3. The scientific evidence for that causal association between benzene and leukemia has only strengthened, and yet still no entry to the Schedule. Silicosis remains in Schedule 3 likely in large part due to s. 15(5) of the WSIA providing the two-year restriction which could easily be repealed to allow moving the disease to Schedule 4 or remain there considering it is the stated position of the WSIB that s. 15(6) applies to asbestosis which is a Schedule 4 disease.

ODAP's implementation of the standards for entry into the Schedules as demonstrated in Report 14A should be used as a guide by the WSIB. The reports from the IDSP/ODAP should be housed on the WSIB's website for comparison and as a resource to

stakeholders. This information will help the WSIB as well as interested parties when consulting on policy or Schedule entries.

Adjudicative advice

This section is severely lacking detail, and it is a very important topic deserving of more than one sentence in the consultation paper. Adjudicative advice is used to allow COPD claims and was previously used to apportion NEL benefits in those claims. The interpretation memo for GI cancer relating to asbestos is another form of adjudicative advice, and it's being used in place of policy despite the WSIB Draft Protocol document stating that adjudicative advice isn't to be used in place of policy.

There seems to be two kinds of adjudicative advice; one is published on the WSIB's website currently listed as administrative practice documents (previously referenced as adjudicative advice), and the second is the unpublished adjudicative advice like the GI Policy interpretation memo. The unpublished type certainly lacks transparency and isn't helpful to workers seeking the evidence used to deny their claim. Keeping something somewhat secret doesn't build trust either. We recommend that the WSIB stop using any unpublished adjudicative advice, and that there be open consultations regarding all adjudicative advice documents.

Additionally, there needs to be a certain structure to how adjudicative advice is written and used as there is in the Protocol document on page 31. The limitations listed there should be used in all adjudicative advice to make sure that:

- it doesn't direct the adjudicator as to how to decide a claim,
- doesn't provide fixed criteria,
- doesn't set guidelines to be applied in decision-making (similar to not directing the decision),
- does not and cannot replace policy or the WSIA, and
- it must work with existing policies and the WSIA.

Clearly the WSIB doesn't have much regard for its publicly available documents like the Protocol document, or even Policy 16-02-11, and this doesn't inspire confidence that this proposed framework (even if the issues identified are corrected) would make any difference in that attitude.

Section 3.5 (Drafting):

This was a missed opportunity for the WSIB to provide a draft policy for consultation to demonstrate how the framework would be implemented and reflected in drafting of policy. Without an example the words could be taking on an unintended

meaning to the stakeholders. This is another example of how this consultation is very limited.

Section 3.6 (Implementation):

Implementing the Final ODAP report or the WSIB Protocol document wasn't successful, but we are supposed to trust that the WSIB can get it right this time? A framework isn't the answer to the issues in occupational disease adjudication at the WSIB. The answer to the issues is a change in culture that can hopefully be accomplished with the new leadership.

Section 3.7 (Monitoring of evidence and updating policy guidance):

This section is very non-specific despite the fact that the WSIB has announced its policy agenda for 2022 noting that research grants were awarded to support policy reviews on three topics:

1. Asbestos and gastrointestinal cancers
2. Chronic obstructive pulmonary disease
3. Asbestos and lung cancer.

There isn't a policy for COPD and the closest thing resembling one is an outdated policy for chronic obstructive lung disease in smelters, Policy 16-02-14 *Chronic Obstructive Lung Disease, Sulphur Dioxide and Particulates Exposure (Smelter Workers)*. It is outdated in the sense that it refers to benefits under the pre-1990 and 1990 versions of the Act as well as referring to the disease as COLD rather than COPD. The other two asbestos issues have policies that have been in place for a long time and are based on IDSP reports that actually recommended adding those diseases to Schedule 3.

Given the WSIB's statements noted in the KPMG report, and their practice of ignoring the policy for asbestos related GI cancer claims, along with the Policy Agenda it seems clear that the WSIB is trying to legitimize their past actions. However, validating actions that precede any potential real justification isn't an honest or transparent thing to do. What would be honest and transparent is a review of all those claims denied based on the interpretation memo thereby abandoning its recommendations and applying the policy properly to allow most, if not all, of those previously denied claims.

It is also worth noting that information relied on by the WSIB in the interpretation memo made statements to the effect that the evidence suggests that at current exposure limits for asbestos there is no increased risk of cancer (examples can be found in Addendum #3 containing a copy of that memo on page 86 in the last sentence of the first paragraph

under the heading 'Summary of Recent Scientific Literature', and page 90 first sentence in the last paragraph that's just above the heading 'IOM 2006'). The claims being adjudicated don't deal with current exposure limits so the suggestion that current levels aren't enough (which is only suggestive and not sufficient to refute past studies since there is a difference in exposure levels) to cause colon cancer isn't applicable to claims involving higher exposure levels from past decades.

Section 4 (Consultation):

The first paragraph on page 16 mentions that stakeholder input should view the evidence used in policy as legitimate and this would be a welcome change from the current practice. In order to view something as legitimate the qualifications of the reviewer are important in making that determination. As previously stated, we have learned that one of the WSIB's former scientists in the ODPRB who conducted systematic reviews was an occupational hygienist and we would submit that the type of work performed exceeded his expertise. Also, the information contained in the GI cancer policy interpretation memo relied on an industry paid scientist (Gamble) who was viewed as not meeting the requirements to be part of the IARC working group that reviewed asbestos in the most recent monograph (Volume 100C) and only allowed to be an observer. Another piece of so-called scientific information was the IOM review requested by the US Senate as part of a review for the asbestos trust litigation, and the Bill providing the authority for that review never passed. We view this as the WSIB trying to control costs by denying claims that they can't recover costs for in the US courts, and it is wrong.

It is worth noting that a member of the IOM committee reviewing selected cancers relating to asbestos was then later a member of the IARC working group for Monograph Vol. 100C (Dr. Demers). These two groups differed in their composition, methods for review, and conclusions demonstrating that such details are important to the outcome even if some of the scientists are the same people. This (i.e., methods for review) is something that hasn't been adequately addressed in the consultation paper or any announcement regarding the WSIB's Scientific Advisory Table on Occupational Disease.

The remaining paragraphs discuss identifying who the relevant stakeholders are for consultation according to WSIB. We can understand that not everyone would be familiar with the complexities of occupational disease claims, but that doesn't mean that the WSIB should be determining who can participate in a consultation. There is nothing transparent about this proposed process and consultations should remain open to anyone wishing to take the time to participate.

While consultations regarding legislative and/or regulatory changes are usually held by the government instead of the WSIB, where those consultations are a result of the WSIB making recommendations to the government that should be clearly communicated to all.

This type of communication would be an example of transparency, honesty, and working with integrity.

Issues with consultation FAQS:

Considering the fact that the FAQS were prepared at the time of the announcement, they would more accurately be best described as anticipated questions.

1. Does the Occupational Disease Policy Framework align with the Demers report - Using scientific evidence and principles to help determine the work-relatedness of cancer - released in July 2020?

Yes. The framework aligns with the Demers report's recommendations regarding the use of Schedules 3 and 4, and occupational disease policy. However, it has an even broader application because it applies to all occupational diseases, not just occupational cancer. In particular, the framework will facilitate the identification and prioritization of occupational disease issues and the development of new and renewal of existing schedule entries and occupational disease policies, using the most current high-quality scientific evidence.

The above answer seems to have a different definition of align, given that the Demers report stated that Schedule 3 should be greatly expanded and there is nothing about that in the consultation paper. Since the time of that report, only one disease has been added to Schedule 3 and while it's a welcome change there is clearly a lot more to be done to align with the Demers report. Aside from that one addition, the WSIB has effectively reduced the types of claims that Schedule 3 should apply to, such as melanoma being an epitheliomatous or as suggested in IDSP Report 14A a claim for leukemia under poisoning and its sequalae.

Dr. Demers' report[14] also had a discussion about the interaction of multiple exposures noting that there should be the assumption that they are additive unless there is proof of a synergistic effect. It was in his second recommendation that the stated that the WSIB should develop a policy to address this issue. There is nothing in the consultation paper that addresses this issue.

[14] Dr. Demers, Using scientific evidence and principles to help determine the work-relatedness of cancer https://www.ontario.ca/document/using-scientific-evidence-and-principles-help-determine-work-relatedness-cancer

We believe that it is also worth noting that the second recommendation in the Demers' report stated that the WSIB should not only update their current occupational disease policies, but they should also be greatly expanded. Updating doesn't mean that claims for past exposure should be adjudicated based on current exposure levels. It seems that the WSIB is more interested in reducing the claims covered by policy instead of greatly expanding them.

It also states that it applies to all occupational diseases, and not just occupational cancer, but there is nothing in this consultation paper about COVID-19 which is the most prevalent occupational disease according to the WSIB's own statistics[15].

2. Does the Occupational Disease Policy Framework consider the role of the Scientific Advisory Table on Occupational Disease?

Yes. Consistent with the Demers report, the WSIB is establishing a **Scientific Advisory Table on Occupational Disease** to provide expert scientific advice to the WSIB to support policy development and scheduling. The framework specifies that the WSIB may seek input from the Advisory Table to help it identify and refine the research questions that will ultimately drive the gathering of scientific evidence during the occupational disease policy development process. The framework also clearly specifies that the Advisory Table is a stakeholder that the WSIB may engage with at any phase, or at multiple phases, of the occupational disease policy development process.

The establishment of the Scientific Advisory Table on Occupational Disease is not consistent with the Demers report as he suggested that there be recommendations from labour and employers which was not done. This does align with or is consistent with the KPMG report.

3. Does the Occupational Disease Policy Framework address adjudication issues (e.g. managing occupational disease cohorts/adjudicating individual claims) or direct

[15] WSIB By the Numbers: Schedule 1 – Injuries and occupational disease – Occupational diseases https://www.wsib.ca/en/bythenumbers/schedule-1-injuries-and-occupational-disease-occupational-diseases

specific future policy development activities (e.g. updating the entirety of schedule 3)?

No. The framework is an overarching process document that will help steer the WSIB in determining future policy development activities that relate to occupational disease. It does not address adjudication issues or direct what specific policy work the WSIB will undertake in the future.

A claim for occupational disease involves more than the application of a policy or reviewing the Schedules to see if the disease is listed. Adjudication issues are such an important part of the process, and they are also important as to how the scientific information will be used to determine entitlement. The consultation paper has very little information about adjudicative advice other than acknowledging that it exists, and this is another issue with avoiding a more fulsome consultation regarding occupational disease.

4. Does the WSIB require or wait for scientific certainty before it will determine that a person's disease is work-related?

No. The WSIB does not require or wait for scientific certainty before determining if a person's disease is work-related. When adjudicating individual claims, the WSIB takes into account all of the available evidence, including existing scientific evidence, to determine whether, subject to the benefit of the doubt, it is more likely than not that the person's employment was a significant contributing factor in the development of their disease. When the WSIB has recognized an occupational disease in policy or regulation (e.g. presumptive legislation), this recognition avoids the repeated effort of analyzing the scientific evidence for a causal link in each individual claim, and streamlines the adjudicative process to simplify the determination of whether the employment was a significant contributing factor in the development of the person's disease.

This answer to question 4 ignores the WSIB's practice of using a memo in place of a policy that as stated above, policy was designed to avoid the repeated effort of analyzing the scientific evidence and one such policy that the Tribunal continues to employ is Policy 16-02-11 for GI cancers related to asbestos. It ignores the fact that the WSIB's definitions for grading scientific evidence relies on scientific certainty and when adjudicators apply that scientific conclusion directly to a claim then the WSIB is in fact requiring scientific certainty.

For evidence of this all that is needed is to review all claims where the ODPRB graded the evidence as limited or inconclusive and you will see claims denied because they lacked that scientific certainty. The WSIB should also review all claims denied by the now rescinded aluminum exposure policy (Policy 16-01-10 *Occupational Aluminum Exposure, Dementia, Alzheimer's and Other Neurological Effects*) to make sure that no claim continues to be unjustly denied.

5. Do other workers' compensation boards in Canada have a framework in place for occupational disease policy development?

The WSIB will be the only workers' compensation board in Canada with a dedicated framework for occupational disease policy development. WorkSafeBC has public-facing policy that pertains to the ways in which occupational diseases are designated or recognized. Like the WSIB, other boards rely on scientific evidence, including systematic reviews, to support policy development activities related to occupational disease.

The WSIB already had a framework for occupational disease policy development that was passed by the Board of Directors on June 9, 2005. There has been no reason provided for abandoning that framework in place of this current proposed framework that ignores or erodes many of the principles stated in the ODAP Chair's final report.

Related issues:

Since there weren't any sample or draft policies provided with this consultation report, but it is the same policy department at the WSIB that deals with injuries as well as occupational disease, then the only examples of their work we have are current or past policies. Issues with current policies have been identified and communicated to upper management at the WSIB's policy branch. This includes Policy 11-01-01 *Adjudicative Process* that essentially provides an additional level of appeal and influence in the decision-making process to employers by stating that,

> "If all necessary information is received, the facts of the claim are very straightforward, ***and the employer is not disputing the allowance of the claim***, the claim can be allowed and paid immediately." [emphasis added].

That section of the policy remains part of it and quite frankly it indicates there is a bias favouring employers, despite any explanation that was provided by the current Vice-President, Policy and Consultation Services in a letter dated May 5, 2016 (a copy of all correspondence on this issue can be submitted if requested).

Policy 19-02-07 *RTW Overview and Key Concepts* allows for the discretionary use of FAFs, or a form developed by the workplace parties, and while it notes that a separate consent is required for an alternate form it doesn't state that the worker is not required to consent to using any form other than the FAF. This policy also ignores the direction of the WSIA found in s. 37(3) stating that treating health professional are to use the prescribed form for functional abilities information and O. Reg. 456/97 stipulates that the prescribed form is the FAF for planning ESRTW on the WSIB's website dated July 2006. There is no requirement for a health care provider to use an alternate form and the WSIB policy shouldn't be creating issues in a claim or attempting to allow legislation to be ignored. This issue was discussed with the Vice-President of Policy and Consultation Services on September 29, 2020, and no action was taken to correct the error.

These are just two examples of longstanding issues ignored by the WSIB's policy branch and there are more reasons to be skeptical about the proposed framework as well as future policy development. Other issues are mentioned above, and for some we will provide more detail below. The WSIB shouldn't be ignoring policy, or violating the WSIA, and they shouldn't have hidden adjudicative advice documents if they really want to earn people's trust, be honest, work with integrity, or be helpful.

One less obvious example of the WSIB ignoring certain directions of the WSIA deals with Canada Pension Plan (CPP) or the Quebec Pension Plan (QPP) benefits when viewed in conjunction with s. 95.1 of the WSIA. Section 95.1(1) of the WSIA stipulates that,

> "No employer shall,
>
> (a) directly or indirectly deduct from a worker's wages an amount that the employer is, or may become, liable to pay to the worker under the insurance plan; or
>
> (b) require or permit a worker to contribute in any way toward indemnifying the employer against any liability that the employer has incurred or may incur under the insurance plan. 2000, c. 26, Sched. I, s. 1 (13)."

While it doesn't stipulate that the WSIB shouldn't allow any direct or indirect contribution form a worker, it should be understood that this scenario wasn't likely contemplated by the legislature.

The WSIA prescribes that the employer pays premiums and doesn't provide for any mechanism to have workers contribute to the fund. It directs the WSIB to have regard for the CPP or QPP benefits received by surviving spouses, or injured workers as the case may be, and it would seem that the premise for this offset is to avoid having the employer pay

twice for the same injury or disease. However, it doesn't provide an exception to the rule of no worker contribution.

WISB has Policy 20-03-03 *Calculating CPP/QPP Offsets from Survivors' Benefits* that stipulates 100% of that benefit is deducted from the monthly WSIB survivors' benefits. Workers pay 50% of their CPP and by deducting 100% of the CPP surviving spouse benefit the WSIB is having the deceased worker contribute indirectly to the accident fund by indemnifying the employer of that amount. We should expect better from the very agency assigned to administer the Act, but clearly, they need better direction from the government to avoid this injustice and insult to deceased workers as well as their survivors.

A similar issue can be found for injured workers, or workers who haven't died as a result of their occupational disease, in Policy 18-01-13 *Calculating CPP/QPP Offsets from FEL/LOE Benefits*. The WSIB offsets or deducts 100% of the benefits that relate to the workplace injury or disease and provides examples where the CPP entitlement might only be 50% related to the workplace condition and the rest to nonoccupational disability. In a case like that the WSIB only deducts 50%, but it should only be 25% because the worker pays half of the CPP contributions. Workers should not be indemnifying their employer of any amounts through this type of indirect contribution to the accident fund and the WSIB needs to rectify this situation immediately.

USW Local 2251 has had the unfortunate experience of having a WSIB medical consultant change the diagnosis of a victim of occupational disease without reason and had been informed that the claim would be denied on that basis. The worker was diagnosed with COPD by a specialist in respirology who conducted the appropriate lung function tests and reviewed the results to provide that diagnosis. A WSIB medical consultant whose specialty was internal medicine stated that it was adult-onset asthma without providing any reason for disagreeing with a doctor who was more qualified to provide the COPD diagnosis. It was explained to the WSIB that the representative felt he had no alternative other than to advise his client to pursue a complaint with the College of Physicians and Surgeons against the WSIB doctor, and the Assistant Director at the time requested a short delay before that occurred. Later that day the Assistant Director of the OD&SBP advised that a WSIB medical consultant specializing in respirology reviewed the file and found no reason to change the diagnosis, so the claim was allowed. Proof of this can be provided or found by the WSIB by simply looking at the last COPD claim from USW Local 2251 that was reviewed by a doctor who was an internal medicine specialist.

There is nothing in the WSIA that provides authority for a WSIB medical consultant to change a confirmed diagnosis, let alone one made by a qualified specialist. The adjudicator should have done their job properly and reviewed the qualifications of the competing doctors, as well as considered the fact that only one doctor examined the worker. There is no excuse for this type of behaviour, and we can only imagine how many times something of a similar nature has occurred without the claimant or their representative knowing how to rectify such a situation.

Scientific evidence or medical opinion should be used to inform the decision-maker, but it shouldn't be used as a tool to deny claims. The ODPRB grades scientific literature looking for certainty not required by the WSIA, and their analysis shouldn't be directly transferred to the decision since it is a question of law and not one of medicine or science. An example of a doctor agreeing with the ODPRB that scientific certainty wasn't achieved, but that doctor still opining that the workplace was a significant contributing factor in the onset of the disease can be found at paragraph 19 of WSIAT Decision No. 866/18 (see footnote 12 above). The example above regarding a WSIB medical consultant changing the diagnosis indicates that this type of opinion is used to deny claims instead of just approving medical treatment. It is only the WSIB that refuses to acknowledge they misuse science and medicine to control claim costs, and they need to start by admitting these mistakes then rectifying them followed by eliminating this issue from all future claims.

Melanoma being included in Schedule 3 under Epitheliomatous was mentioned in the section regarding issues with the FAQs, and evidence showing that this was in fact the position of the WSIB is attached in Addendum #4. The two-page letter in Addendum #4 was the WSIB's response to a question from the IDSP/ODAP arising during the investigations that produced their Report No. 13. This letter was on file at the WSIB when claims for melanoma were being denied without the application of the presumption when workers had exposure listed in Column 2 of Schedule 3. Since the worker had the exposures, and melanoma is an epitheliomatous then the only way those claims should have been denied was through the presumption being rebutted. WSIB has ignored evidence and failed to apply the relevant presumption afforded by the WSIA in those claims, which should never happen and definitely shouldn't allow those decisions to stand.

As mentioned above, the WSIB has had the legislative responsibility to have generally accepted advancements in health sciences and related disciplines reflected in policy for decades. Prior to that there was nothing stopping them from implementing a policy or allowing a claim on that basis, as was noted with respect to lung cancers in coke oven workers. The historical information from the WSIB that was used prior to Policy 16-02-09 *Lung Cancer-Coke Oven Emissions Exposure* is attached at Addendum #5 and shows that kidney and bladder cancer among coke oven workers was generally accepted as an occupational disease at that time based on the incidence rate as well as scientific knowledge about causation. Claims for coke oven workers don't reflect that generally accepted knowledge, and with respect to a claim for kidney cancer a WSIAT Medical Assessor recently stated that the relationship is still generally accepted at paragraph 19 of WSIAT Decision No. 2863/17 (see footnote 13 above). There is nothing refuting the generally accepted relationship between being a coke oven worker and developing bladder cancer but claims among coke oven workers don't reflect that information. Failing to uphold their legislative duty doesn't earn trust for the WSIB.

Another legislative duty that the WSIB has failed to uphold is with respect to their obligation to the reports of the IDSP/ODAP. This obligation only existed from the time that the Panel was established until it was disbanded in 1998, but that doesn't excuse the

failure of the WSIB to fulfill their legislative obligation. Section 95 of 1990 WCA regarding IDSP/ODAP reports stipulated that,

> "(15) Where the Board accepts or rejects the findings of the Panel, notice of the Board's acceptance or rejection, with reasons therefor, shall be published in *The Ontario Gazette*."

This was previously required by s. 86p(14) of the Pre-1990 Act which covers the entire existence of the Panel. WSIB has failed to fulfill this duty for six of the reports, and it is another example of the very agency charged with administering the Act failing to fulfill their duties.

More recently the WSIB has provided information regarding their test for causation for COVID-19[16]. This test specifies that,

> "evidence must show that the person's risk of contracting the disease through their employment is greater than the risk to which the public at large is exposed and that work significantly contributed to the person's illness."

A similar test has been used for other communicable diseases prevalent in the general population like the common cold or influenza. While these diseases are different, the test for causation for all of them should be the same. The WSIB stipulated that significant contributing factor was the test for all occupational disease claims, and communicable diseases contracted in the workplace are occupational diseases, so there shouldn't be the extra requirement of showing that the worker's risk was greater at work than that experienced by the public.

WSIAT Decisions of this nature for cold or influenza have consistently held that the standard used for COVID-19 when it was used for those claims wasn't the proper legal standard to apply. Examples of this type of decision can be found in WSIAT Decision Nos. 1365/14[17], 58/17[18], 844/17[19], and 648/14[20] which the WSIB would be aware of yet they still try to use the wrong test for causation. This consultation paper speaks to the influence of WSIAT Decisions, and that should have always been present in the compensation system, yet this information demonstrates that it has been ignored. The only reason to ignore this

[16] WSIB's FAQs about claims and COVID-19, January 14, 2022, https://www.wsib.ca/en/faqs-about-claims-and-covid-19
[17] WSIAT Decision No. 1365/14
https://www.canlii.org/en/on/onwsiat/doc/2014/2014onwsiat1767/2014onwsiat1767.pdf
[18] WSIAT Decision No. 58/17
https://www.canlii.org/en/on/onwsiat/doc/2017/2017onwsiat160/2017onwsiat160.pdf
[19] WSIAT Decision No. 844/17
https://www.canlii.org/en/on/onwsiat/doc/2017/2017onwsiat1024/2017onwsiat1024.pdf
[20] WSIAT Decision No. 648/14
https://www.canlii.org/en/on/onwsiat/doc/2014/2014onwsiat805/2014onwsiat805.pdf

information is to try to control the costs associated with COVID-19. This type of action lacks transparency, integrity, and fails to earn people's trust.

We believe that it is worth noting there is a reference to an adjudicative support document *Work-Related Communicable Illness* mentioned in paragraph 13 of WSIAT Decision No. 58/17 (see footnote 18 below). This document is not published on the WSIB's website, so it is another example of hidden information used to decide claims. Holding a claim to a higher standard than required by the WSIA simply because of the type of injury, disease or disability it causes is a failure to properly administer the Act. This failure lacks honesty, integrity, it isn't helpful (at least not to affected workers), and it doesn't earn people's trust.

There is no mention of the Human Rights Code or the Canadian Charter of Rights and Freedoms in the consultation paper. While failing to mention those pieces of legislation doesn't negate their application, the Human Right Code should have been noted given the WSIB's history of violating it. In past decades the WSIB would cut-off survivor benefits if the recipient remarried which was discrimination based on marital/family status. The rewriting of the return-to-work policies was a result of the WSIB not considering nonoccupational disabilities or limitations, and that was a discrimination based on disability. Discriminating based on the origin of a disability isn't any different than discriminating based on the type of disability because neither are permitted by the Ontario Human Rights Code. Yet the WSIB continues to discriminate based on the type of disability whether it be for COVID-19 or chronic stress, there shouldn't be a different test for causation and all claims that are not afforded a presumption should be adjudicated based on the significant contributing factor test.

An obvious reason for the WSIB implementing different standards can be found in sections 159(2)(a.1), (a.2), and (2.1), but that doesn't negate the Human Rights Code violation and those sections could be overturned on a Charter or Code challenge. A challenge of that nature shouldn't have to occur, and the WSIB should relinquish those powers by recommending that they be stricken from the Act as per their authority provided in s. 159(2)(b). Having an authority that amounts to a violation of either or both the Charter and Code doesn't earn trust and lacks a certain amount of integrity.

It would seem that the only one lobbying the government for the power mentioned above would be the WSIB and this wouldn't be the first time that they sought additional powers to be prescribed by legislation. Binding the Tribunal to WSIB policies was sought by the Board[21] and fits with their theme of attaining consistency. However, given the policy issues identified herein, and those not identified, this only serves to protect the WSIB's consistency in decision-making and isn't helpful for claimants. Coveting power and seeking consistency for the sake of consistency itself certainly isn't helpful, lacks honesty and integrity, and fails to earn people's trust.

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[21] Garth Dee, Osgoode Hall Law School, Journal of Law and Social Policy, 1999, *Dealing with the Aftermath of Workplace Safety and Insurance Act, 1997,* https://digitalcommons.osgoode.yorku.ca/cgi/viewcontent.cgi?article=1072&context=jlsp

Dr. Demers report noted that three are approximately 3 000 occupational cancers diagnosed per year in Ontario (see footnote 14 above). Information provided to him by the WSIB showed that only 4 044 cancer claims were registered with them between 2009 and 2018, which is a fraction of the 27 000 that should be expected (3 000 per year for 9 years). That is roughly 15% of occupational cancers being reported to the WSIB, and of those only 1 678 were allowed (these numbers do not include firefighter presumptive claims). Dr. Demers estimated that based on the information provided by the WSIB that approximately 400 cancer claims per year were submitted between 2009 and 2018 with 170 allowed. The majority of the claims allowed were for asbestos related cancers of the lung and mesothelioma, and only 19% of all other cancer claims were allowed.

We believe that this denial rate is a deterrent that results in fewer claims filed. As noted above, workers talk to each other and when they hear that their co-worker's claim was denied that tells them they don't have a chance either. It is our position that this scenario would be drastically improved if the four proposed legislative amendments we made were implemented and the WSIB's endorsement would demonstrate a real commitment to improving occupational disease adjudication.

WSIB's 2019 – 2021 Strategic Plan which was referenced in the consultation paper and is available on their website lists four values for the WSIB that have been cited in this submission:

1. Be compassionate
2. Work with integrity
3. Always be helpful
4. Earn people's trust.

Since this is a policy framework consultation then we will focus more on the two values that apply to this process, integrity and trust. Working with integrity and earning people's trust requires not only transparency but acknowledgment of past mistakes with the lessons learned. The WSIB hasn't acknowledged past mistakes or stated what lessons were learned relating to:

- Policy 16-01-10 *Occupational Aluminum Exposure, Dementia, Alzheimer's Disease and Other Neurologic* Effects that was not only rescinded, but it also amounted to nothing more than an exercise in fettering discretion, and finally now has been replaced by a new entry to Schedule,

- COPD apportionment that violated s. 47(2) of the WSIA and s. 18 of O. Reg. 175/98 as well as not being consistent with a Supreme Court of Canada Decision (*Athey v. Leonati*) and wasted money on a scientific review for a legal issue as well as employing an arbitrary date to correct this past error in law,

- Abandoned occupational disease policy consultation from 2008 without explanation,

- Failing to successfully implement the ODAP Chair's final report, but expecting trust that they can do better this time,

- Ignoring Policy 16-02-11 *Gastro-Intestinal Cancer – Asbestos Exposure* and the requirement to use that applicable policy as stated in Policy 11-01-03 *Merits and Justice* for all asbestos related GI cancer claims,

- The uncompassionate, unhelpful, and quite frankly lacking in integrity statements made to KPMG about undue political interference in McIntyre Powder and GE cluster claims noted in Addendum #2 on pages 76 - 78,

- Failing to respond to the last six of the IDSP/ODAP reports despite the legislative requirement to do so,

- And the list goes on…

To earn peoples' trust and to claim any sort of integrity the WSIB must acknowledge their past mistakes, state what lessons have been learned, and promise to do better. Past wrongs must be made right and shouldn't be subject to an arbitrary date like that of the COPD NEL benefit apportionment. There are many people who will say that WSIB stands for Why Should I Bother, and that sentiment is based on their experience or that of their coworkers. It is also worth noting that there hasn't been one commissioned report or review of the WSIB that didn't find significant issues or gaps in the system. Therefore, it is imperative that the WSIB stop trying to protect the reputation that they believe they deserve and that they start repairing the damage done through past and current actions.

Summary:

The following is a summary of our recommendations:

- Generally accepted advances as prescribed by s. 161(3)(a) of the WSIA should be used for policy development, not strong and consistent scientific evidence.

- An administrative justice agency doesn't require the authority granted to the WSIB by sections 159 and 183; WSIB should recommend that sections 159(2)(a.1), (a.2), (2.1), 183(3), and 183(4) be rescinded.

- It should be stipulated that if the presumption of s. 15(3) is rebutted that the claim isn't automatically denied because the individual merits and justice must be considered.

- Rebutting the presumption of s. 15(3) should require clear and convincing evidence to establish that the contrary has been shown.

- Claims denied based on the GI asbestos cancer policy interpretation should be reviewed with the policy properly applied and the memo abandoned.

- The WSIB should issue a public apology for the remarks they made in the KPMG audit regarding McIntyre Powder, GE, and departing from policy.

- Policy should be subject to the rule of liberal interpretation.

- Open consultations should be held by the WSIB for all new policies or substantive changes.

- Consistency at the WSIB should only be in regard to meeting the purpose of the WSIA in a fair and impartial manner.

- WSIB needs to stop relying on flawed internal scientific documents or unsubstantiated opinions from their medical consultants and review all claims negatively impacted by this.

- Reports from the IDSP/ODAP should be housed on the WSIB's website.

- The use of unpublished adjudicative advice needs to cease.

- There should be open consultations for any adjudicative advice document.

- Any legislative or regulatory changes requested by the WSIB should be openly communicated to all.

- All claims denied by Policy 16-01-10 should be reviewed to insure that no claim continues to be unjustly denied.

- Policy regarding CPP/QPP offset needs to be fixed to avoid indirect contributions from workers.

- WSIB must admit their past mistakes, state the lessons learned, and implement a plan to avoid any future issues of that nature.

No justification has been provided for abandoning the ODAP Chair's Final Report of the WSIB Protocol document in favour of this proposed occupational disease policy framework. This consultation is missing vital information and being limited to only one aspect of occupational disease claims results in it being fragmented. Having a framework

won't resolve the issues with occupational disease adjudication; that would require a change in culture at the WSIB that hopefully can be accomplished by its new leadership.

USW would welcome the opportunity to answer any questions or provide additional information should the WSIB so desire.

Respectfully submitted on behalf of USW District 6 on February 28, 2022, by

Sylvia Boyce and *Andy LaDouceur*

Addendum #1

Assessment of Prostate Cancer Risk in Steel, Foundry and Coke Oven Workers

Introduction and Scope

This review and scientific opinion is in response to multiple claims within the steel manufacturing industry in Ontario – primarily Algoma and Dofasco. These claims involve exposures encountered by coke oven workers, foundry workers, and general steelworkers. A variety of cancers have been attributed to these exposures.

This report is a review of epidemiologic studies on the risk of prostate cancer in the steel manufacturing industry. In addition to an assessment of findings for general steelworkers, separate assessment are conducted for coke oven workers and foundry workers. Findings for foundry workers are updated relative to an earlier ODPR assessment of prostate cancer risk.1

Cohort studies are a strong design for describing cancer risks in these particular occupations, but surveillance and case-control studies have also been considered in these analyses. Weaknesses of surveillance studies include: the potential for elevated or decreased risks reported due to chance, the possibility that elevated risk may be due to confounders, the possibility that a lack of significantly increased risk may represent the selection of healthy workers for particular occupations and industries, or the possibility that a high rate of death for another disease may depress the measured disease risk due to a proportional mortality analysis. However, surveillance studies have been included in the analyses due to the limited number of cohort and case-control results, and due to their relatively large size which tends to mitigate some of these concerns. Although case-control studies often lack specificity for the occupations of interest, they can be a powerful tool for measuring risk for cancers and to control for important confounders such as age and family history.

Before embarking on an assessment of occupational risk factors, some background information on prostate cancer is provided, as well as a description of important non-occupational risk factors. This is followed by a description of the processes and exposures present in the steel-making industry.
Following a brief description of the methodology used in this report, study details and summary risk estimates are provided in tables for coke oven, foundry and steelworker sections. This tabular summary is intended to simplify the description of results for those wishing to evaluate this scientific assessment. The summary sections for each occupational group, and the final summary at the end of this report, provide a more high-level overview and interpretation of these findings. These can be found on page 10 for coke oven, page 16 for foundry, page 22 for steelmaking, and page 24 for a final listing of conclusions.

Prostate Cancer

GENERAL CONDITION

Prostate cancer is the most frequently diagnosed cancer for men in Canada and within the province of Ontario.2,3 The incidence and mortality rates for prostate cancer rose steadily during the 1970's and 1980's. There was a sharp increase in incidence rates in the early 1990's, which is largely attributed to the early detection of prostate cancers through prostate-specific antigen (PSA) screening.4,5 Canadian age-standardized prostate cancer incidence rates have continued to rise since 1992, whereas age-standardized mortality rates have steadily declined.6 There has been a great increase in five-year survival rates from 68% between 1974-1976 to 98% between 1992-1998.7 This may be due to diagnosis at an earlier stage with a better prognosis or improved treatment for men diagnosed with the disease. The ratio of mortality to incidence is less than 3 deaths per 10 cases.

Prostate Cancer and Non-Occupational Risk Factors

Age

The number of men diagnosed with prostate cancer increases greatly after 50 years of age, with the mean age of diagnosis between the ages 72 and 74 years.8 The majority of patients (85%) are diagnosed after 65 years of age, however a greater proportion of younger men (<60 years of age) are being diagnosed at earlier prostate cancer stages,6 most likely due to PSA screening.4 5 7

Family History

There is an increased risk of prostate cancer for men who have a positive family history for this cancer.8 Men with at least one family member with prostate cancer have a greater than two-fold statistically significant increased risk of prostate cancer.9-14 There was at least a four-fold statistically significant increased risk for men who had more than one affected relative.10 12 14

Other Non-Occupational Risk Factors

Besides increased age and positive family history of prostate cancer, other non-occupational factors have been studied as factors in the development of prostate cancer. These include diabetes mellitus, dietary factors, anthropometric factors, physical activity levels, alcohol use and smoking history. However, none of these other factors have been firmly established as risk factors for prostate cancer. More detailed information on non-occupational risk factors for prostate cancer can be found in the Adjudicative Support Material Binder15 and the 2006 Occupational Disease and Policy Research Branch (ODPR) review on prostate cancer and occupation.1

General Steel Production Overview

Steel production involves the use of coke to heat iron ore in a blast furnace to produce pig iron. Steel is made in basic oxygen or electric arc furnaces charged with pig iron and other ingredients. Steel products are shaped in moulding or milling processes, and further processed to produce finished products. These are dirty processes that can generate a number of hazardous agents. More detail on exposures is provided below.

COKE PLANT [16]

Coke is the residue from the destructive distillation of coal in the absence of oxygen. It is used as both a fuel and reducing agent in smelting iron ore. A typical coke oven produces 80% coke, 12% coke oven gas and 3% coal tar. The coke plant can be subdivided into three distinct areas: a) the coal handling area; b) the coke oven battery which consists of a series of vertical slot ovens, with equipment for charging and discharging the ovens and the quenching of coke; and c) the by-product plant for recovery of gas and chemical products.

Therefore, coke oven plant workers include coal preparation workers, oven workers and by-products workers. Coal preparation workers have potential for exposure to coal dust. Oven workers, also referred to as battery workers, have potential for exposure to coke oven emissions. Coke oven emissions are complex mixtures of coal and coke particles, various vapors, gases, and tars. The emissions include carbon monoxide, benzene, ammonia, sulfur, and various polycyclic aromatic hydrocarbons (PAHs) including benzo (a) pyrene (BaP), and naphthalene. The airborne PAH levels are usually measured as the total “benzene-soluble material” (BSM) in the air. Topside oven workers (working at the top of a coke oven) have higher exposures to coke oven emissions, which include PAHs, compared to side oven workers (workers employed to the side of the coke oven). Coal/coke dust and combustion gases are primarily released at the top of the oven as coal is fed in. Topside oven workers include the larry car operator, lidsman, luterman, gooseneck cleaner, and various maintenance personnel. Side oven workers include operators of the push car, quench car and door maintenance personnel. By-product workers are employed in the by-products area where gas and chemical products are recovered from oven emissions. These workers have the potential for exposure to carbon monoxide, ammonia, benzene, carbon disulfide and other contaminants.

Coal gasification plants are quite similar to coke plants that produce coke for steelmaking. Gasification plants are more common in Europe where coal gas is the main product and coke is a by-product. Since exposure to PAHs is similar in both types of plants,17 study results for this type of plant are also considered under coke plants.

BLAST FURNACE

The blast furnace is used to create molten iron by heating iron ore and limestone with burning coke super-heated with injected air.16,18-20 The molten iron from the furnace is removed at the tap hole to a hot metal car for transport to steelmaking facilities such as the open hearth or basic oxygen furnace. Workers have the potential for exposure to

carbon monoxide, fluorides, metal fumes, iron oxide, limestone dust, sulfur dioxide, hydrogen sulfide and PAHs.

BASIC OXYGEN FURNACE STEELMAKING

Approximately 70% iron and 25-30% recycled steel may be mixed with other alloying metals in the basic oxygen furnace to create the exact metallurgical qualities of steel desired.16,18-20 Workers have the potential for exposure to carbon monoxide, metal fumes, iron oxide (in both dust and fume form), and PAHs

ELECTRIC ARC FURNACE STEELMAKING

Alternatively, an electric arc furnace can be used for producing steel alloys, stainless and specialty steels and carbon steel.16,19,20 In this case, workers have the potential for exposure to metal fumes and dusts (including iron oxide), limestone, and carbon monoxide.

FORMING AND FOUNDRY WORK

Metal forming involves casting the molten steel into the moulds of a casting machine.16 This is then usually processed in the rolling mill. Mill operations involve the production of long shapes such as I-beams, tubes, or wires using machines that process the heated metal through a series of rollers. Workers have the potential for exposure to metal fumes and dusts, and oil mists.

Foundry operations involve pattern making, moulding and coremaking (usually using sand mixed with various binders), melting and alloying of metal, pouring the metal (primarily iron or steel) into moulds, shake-out of the cooled moulds, fettling, and finishing which involves grinding or welding of the pieces. Workers have potential for exposure to silica or other mineral dust, metal fumes and dust, binding agents (tar, coal, or other organic chemicals that polymerize), and pyrolysis products that can include carcinogenic PAHs. Foundry workers include patternmakers.

FINISHING

In addition to finishing steps in foundry work which involves grinding or welding of metal, different finishing steps can occur in steel plants. The steel may undergo finishing steps for a number of purposes, such as corrosion resistance. This can include surface treatments such as plating operations, or acid pickling. In the latter operation, workers have the potential for exposure to acid mists.20

Methods

Epidemiologic studies of coke oven workers and steelworkers were collected by searching for publications after 1970. Studies that reported risk estimates for prostate cancer were retrieved and grouped into cohort, surveillance or case-control study types. The study findings were categorized into three levels of relevance to the group under

investigation: findings most relevant were called “Tier 1” (e.g., findings for coke oven plant workers when investigating coke oven workers, marked with ‡ in the tables); less relevant findings were called “Tier 2” (e.g., findings for furnace and oven workers when

investigating coke oven workers, marked with § in the tables); and least relevant findings (when the disease description or exposure category does not closely match the scope of this report, marked in italics in the tables). The last group was noted, but not considered directly in the assessment of the evidence.

When more than one report of the same group was available, the result with the longest follow-up was generally used. Summary risk estimates (SREs) were calculated to provide an estimate of the weighted average of study results. Separate SREs were calculated for tier 1 results, and a total SRE that included both tier 1 and tier 2 results. For the total SRE, when tier 1 and tier 2 results from one group overlap, the larger number of cases for the tier 2 results were used.

SREs were calculated using a variance-based fixed-effects method for combining results. A statistical test of heterogeneity was also calculated. This is a measure of the consistency of study findings. Heterogeneity p-values above 0.1 indicate that study results are consistent and are likely measuring the same effect. When heterogeneity p-values were ≤0.1, an adjustment was made to account for the inter-study variability such that study results were weighted by the same measure of size, but with wider confidence limits.21 The table and discussion of results generally begin with the largest studies, and end with the smallest.

In addition to study characteristics and risk estimates for prostate cancer, the tables for coke oven workers and foundry workers present the lung cancer risk in the group of interest where this result was available. Lung cancer risk is known to be elevated in both coke oven and foundry workers. It may be surmised that groups without an elevated lung cancer risk had relatively low exposures. A sensitivity analysis was therefore conducted to determine if risk estimates were higher when studies that showed no lung cancer elevation were removed from the analysis in these two subgroups.

The discussion sections of this report occasionally include the term “significant” to describe findings. This refers exclusively to the results of statistical testing, and not to biologic or causative significance.

Results

COKE OVEN WORKERS

Six risk estimates in cohorts of coke oven workers were found in five reports. There was only one surveillance result and two case-control results for prostate cancer in coke oven workers. These study results are described below in Table 1.

Table 1: Coke Oven Worker Studies Author/Year Group Studied	**Prostate cancer Risk Estimate (95% Confidence Interval) [Number of observed cases] †**	**Comments**
Cohort studies Costantino/199522 USA 30-year mortality follow-up of 15,818 coke oven workers, compared with non-oven steelworker population employed from the early 1950s.	RR=1.57(1.09-2.30)[58] ‡L RR_{white}=1.77(0.96-3.26)[19] $RR_{nonwhite}$=1.47(0.93-2.37)[39] Exposure response for coal tar pitch volatiles (CTPV): mg/m_3*mth RR 0 1.00[61] 1-199 1.43(0.81-2.37)[21] 200-399 1.93(1.11-3.21)[20] ≥400 1.44(0.80-2.41)[17] p-value for trend 0.11	Includes US and Canadian steel mills. Exposures to coal tar pitch volatile Benzene Soluble Material (BSM) were 3.15mg/m_3 topside full-time 1.99mg/m3 topside part-time jobs 0.88mg/m3 side jobs This cohort included coke oven cohorts covered in Redmond/1976 and Lloyd/1971 along with additional coke plants. Results were adjusted for age, race, coke plant and follow-up period. The relative risk for lung cancer was 1.95 (1.59-2.25) [255] with positive duration and exposure-response trends. The lower lung cancer rates found in the 1976-1982 follow-up compared to the 1966-1975 follow-up may be explained by reduced exposures over time. Efforts began in the 1970s to reduce occupational exposures with respirators and work-area isolation cabins.
Redmond/197623 USA 13-year mortality follow-up of 2543 coke plant workers in seven Pennsylvania steel plants. This cohort is included in the Costantino/1995 cohort.	Coke Plant RR=1.48{0.64-2.92}* [8] Coke Oven RR=1.38{0.38-3.53}[4] Non-oven RR=1.54{0.42-3.94}[4] Employed ≥5 years Coke Plant RR=1.31{0.57-2.58}[8] Coke Oven RR=1.42{0.46-3.31}[5] Non-oven RR=1.2{0.25-3.51}[3] Coke oven RR=1.42{0.46-3.31}[5] Topside Oven full-time RR=1.43{0.04-7.97}[1] Topside Oven part-time RR=2.5{0.06-13.93}[1] Side Oven RR=1.2{0.25-3.51}[3] Non-oven RR=1.2{0.25-3.51}[3] By-products RR=1.0{0.21-2.92}[1] Coal handling RR=2.86{0.35-10.33}[2] All other coke plant non-oven RR=1.0{0.21-2.92}[1]	Coke plant workers relative risk compared to all other steelworkers. Overall, non-oven workers had higher risk than coke oven workers. Results comparing coke oven and non-oven work for employment ≥5 years suggests an exposure-response since coke oven work would have higher exposures to coke oven emissions. Topside coke oven exposures have higher risks than side oven. Topside would have higher exposures to coke oven emissions but this is based on small numbers. Unexpectedly, elevated part-time topside work has a higher risk than full-time but these results are based on one case.

Author/Year Group Studied	Prostate cancer Risk Estimate (95% Confidence Interval) [Number of observed cases] †	Comments
Lloyd/1971[24] USA 9-year mortality follow-up of 3,530 coke plant workers in seven Pennsylvania steel plants. Same cohort as above study.	≥5 Years of Duration Coke Plant SMR=1.82{0.67-3.96}[6] Non-oven SMR=0.91{0.02-5.07}[1] Coke Oven SMR=1.90{0.52-4.86}[4] Side Oven SMR=2.5{0.52-7.30}[3] Topside SMR=2.0{0.05-11.14}[1]	As expected, risks for coke oven work are higher than for non-oven. However, side oven risks are higher than topside risks. These results are based on a small number of cases but coke oven emissions would be expected to be higher for topside jobs. This result was considered in the discussion when collecting risk estimates based on a general population reference.
Swaen/199125 Netherlands 40-year mortality follow-up. 5659 male coke oven plant workers	Exposed Coke plant workers: SMR=1.01{0.64-1.54}[22] ‡ Coke oven workers: SMR=0.81{0.33-1.67}[7] Coke by-product workers: SMR=1.15{0.64-1.90}[15] Unexposed workers SMR=0.55{0.22-1.13}[7]	These results indicate that compared to the unexposed workers, the SMRs of exposed workers are higher. The authors declined to conduct any internal analyses, so comparative relative risks cannot be used. But division of the SMRs by the low SMR for unexposed workers would result in the following approximate risks compared to unexposed workers: Coke plant workers RR=1.8 Coke oven workers RR=1.5 By-product workers RR=2.1 The lung cancer SMRs for coke oven workers (1.29 [62]) and by-product workers (1.00 [104]) were not significantly elevated. The non-exposed lung cancer SMR was 0.87 [107]. Overall SMR was significantly reduced at 90[893]. Exposure levels at a similar Dutch plant were 1.05mg/m3 but exposure data from Dutch plants in this study were not provided.
Hurley/199126 UK 20-year mortality follow-up. Exposed coke plant workers. Two plants (a and b) with 3812 (a) and 2708 (b) men.	SMR_a =0.59{0.31-1.04}[12] ‡L SMR_b =0.99{0.51-1.73}[12] ‡L 1967-1979 SMR_a=0.53{0.14-1.35}[4] SMR_b=1.39{0.51-3.04}[6] 1980-1987 SMR_a=0.64{0.27-1.25}[8] SMR_b=0.77{0.28-1.67}[6]	No analysis was presented for BSM exposure or years of coke oven work. Mean BSM levels ranged from 1.16-2.06 mg/m3 at oven tops, 0.76-0.96 mg/m3 at oven sides and 0.33-0.52 mg/m3 elsewhere in the plant. Exposure controls were implemented in the 1970s. These results were published in a UK Institute of Occupational Medicine report. The lung cancer SMRs are moderately but statistically significantly elevated: SMR_a= 1.25 [192], SMR_b= 1.27 [127]
Bye/199827 Norway 32-year incidence follow-up of 888 male coke plant workers from 1962-1993.	Coke plant workers: SIR=0.53(0.17-1.24)[5] ‡ PAH g/m³-yrs: 0 0.68 [4] <50 0.60 [1] 50-149 0 [0.9 exp] ≥150 0 [0.9 exp]	This cohort included 383 unexposed coke plant workers including laboratory, administration and transportation who would have had no or very low exposures. Airstream helmets were used as respiratory protection from 1976 onwards. The overall risk of lung cancer was not elevated at 0.82 (0.33-1.70) [7]

Author/Year Group Studied	Prostate cancer Risk Estimate (95% Confidence Interval) [Number of observed cases] †	although all cases of lung cancer occurred at the highest PAH and carbon dust group, resulting in 3-4 fold elevated risks. It's possible that overall lung cancer risk was not elevated due to the inclusion of the unexposed coke plant workers and exposure controls. Comments
Gustavsson/199017 Sweden 17-year mortality and incidence follow-up. Cohort study of 295 workers at a coke gas plant employed for ≥1 year between 1965-1972.	SMR=2.04(0.56-5.24)[4] ‡ SIR=0.71(0.14-2.09)[3]	Included all coke plant workers. Mortality was investigated from 1966-1986 and incidence was investigated from 1966-1983. BaP levels in top ovens 1964: 4.3ug/m3 (0.007-33ug/m3) 1965: 0.52ug/m3(0.021-1.29ug/m3) The lung cancer SMR was 0.77 (0.21-1.97) [4]
Surveillance Study		
Krstev/199828 USA 60878 prostate cancer deaths in 24 states from 1984-1993	Furnace, kiln, and oven operators mOR=1.3(1.0-1.7)[61] African-Americans§	Occupation and industry retrieved from death certificates. This category includes foundry and steel mills, but this occupation appears in other industries such as smelting plants, auto repair shops, and oil refineries. Publication bias likely: risk for whites was not provided. Study given little weight here.
Case-Control Studies		
Band/199929 BC, Canada Population-based case-control study of 1519 prostate cancer cases from 1983-1990.	Refined petroleum and coal products Ever worked OR=1.14(0.73-1.78)[21] § Usual Industry OR=0.75(0.32-1.77)[5]	Results were adjusted for education, alcohol consumption, and smoking history. CI is for 90%. Study given little weight due to broad exposure group.
Rybicki/200630 USA Hospital-based case-control study of 637 prostate cancer cases.	PAH exposure from coal source Respiratory exposure OR=1.29(0.73-2.30)[122] § Skin exposure OR=1.48(0.68-3.20)[54]	Job histories were assessed by an occupational hygienist. Results adjusted for age, race, smoking, dietary PAH, and PSA levels. Classification included coke oven workers but only 1 case was found. Therefore study was given little weight. Exposures were classified as either respiratory, skin or both by industrial hygienists based on detailed occupational histories. Results were only provided for respiratory or skin exposure.
Total SRE‡§, Cohort (6)	SRE= 1.12 (0.81-1.56)[113]H	Heterogeneity p= 0.08
Case-control (2)	SRE= 1.21 (0.82-1.78)[143]	Heterogeneity p= 0.76
All studies(9)	SRE= 1.20 (1.02-1.40)[317]	Heterogeneity p=0.22
Tier 1 SRE‡, Cohort (6)	SRE= 1.12 (0.81-1.56)[113]H	Heterogeneity p= 0.08
Tier 1 SRE‡, Incidence for Gustavsson/90 Cohort (6)	SRE= 1.09 (0.79-1.50)[112]H	Heterogeneity p= 0.10
Tier 1 SRE‡, high lung cancer Cohort(3)	SRE= 1.19 (0.69-2.03)[82]H	Heterogeneity p=0.03
Tier 1 SRE European cohorts (5)	SRE= 0.89 (0.65-1.20)[55]	Heterogeneity p=0.36
Tier 1 SRE European cohorts with Gustavsson/90 Incidence (5)	SRE= 0.84 (0.65-1.08)[54]	Heterogeneity p=0.61

* {} indicate that the 95%CI was calculated by the reviewer since they were not reported in the study.
† The following symbols indicate the risk estimate used in the summary risk estimate (SRE) calculation, based on exposure quality score as follows:
‡ Most relevant findings included in Best SRE calculation – Tier 1
§ Less relevant findings included in Total SRE calculation – Tier 2.
L Indicates studies reporting statistically significant increased risks of lung cancer.

H An adjustment was made to broaden the confidence limits to account for inter-study variability indicated by significant heterogeneity.

COHORT STUDIES

The largest cohort study followed workers at US and Canadian steel mill coke plants for 30 years.22 Even so, the authors note that the cohort still contains primarily younger men with only 10-17% over the age of 74 years. They state that for prostate cancer mortality, further follow-up would be needed to fully evaluate their risk. Nevertheless, the risk estimate for coke oven workers compared to a non-oven steelworker population was significantly elevated (1.57). Previous studies of the same group showed similar elevations that were not statistically significant, due to a smaller number of cases and shorter follow-up periods. 23 24

Exposure-response analyses using an exposure index of cumulative Coal Tar Pitch Volatiles (CTPV) did not show a significant trend. Only the middle exposure category showed a significantly elevated risk of 1.93. Earlier studies of this cohort showed conflicting findings. A report by Redmond in 1976 showed little difference in prostate cancer risk between coke oven (1.4) versus non-oven (1.5) workers, or between high top side exposures (1.4) versus lower side oven exposures (1.2).23 An even earlier report by Lloyd in 1971 showed higher risks after more than 5 years in coke oven work (1.9) compared to non-oven workers (0.9). 24 However, the top (2.0) versus side (2.5) oven risks remained inconsistent with an exposure-response relation since top-side exposures are higher, although these results were based on small numbers.

No significantly elevated risks were reported in a large cohort study from the Netherlands with a long follow-up period of 40 years. 25 The overall risk in coke plant workers was 1.01, with a slightly higher risk in by-product workers (1.15) than coke oven workers (0.81). However, the group of unexposed workers in this cohort had a non-significantly reduced risk of prostate cancer (0.55). Therefore relative to a smaller group of unexposed workers, coke oven workers had risks about two-fold higher. Lung cancer risk was also not significantly elevated in coke oven workers (1.29) or by-product workers (1.00), suggesting exposures may have been low in this cohort. Lung cancer risk was even lower in non-exposed workers (0.87). These findings and the significantly reduced overall death rate in non-exposed workers suggests a healthy worker effect may have affected this cohort study. Therefore, in spite of a lack of elevated risk, there is a suggestion that risks may be higher than an appropriate unexposed reference group. Nevertheless, the number of unexposed cases were small, and no such internal analysis was conducted by the authors.

A study of similar overall size reported on two separate cohorts of British coke plant workers at different companies with a follow-up of 20 years.26 Prostate cancer risk was

not elevated in one of the cohorts (0.99) that had shown an elevated risk in a previous 12-year follow-up study. The other slightly larger cohort showed a decreased risk (0.59) that did not reach statistical significance.

An incidence cohort study found a decreased risk (0.53) in all coke plant workers.27 This study was based on a smaller population of coke plant workers. The study population included unexposed coke plant workers such as lab, administrative, and transportation workers which may have contributed to the lower risk estimate reported. Nevertheless, good occupational hygiene information was available and an exposure-response evaluation was conducted. No prostate cancer cases occurred in workers exposed to ≥50 g/m³-yrs (1.8 cases expected). One case was observed among those with 1-50 g/m³-yrs of exposure (1.7 cases expected). Although based on small numbers, this study does not support the presence of an increased risk in coke plant workers exposed to PAH.

A smaller cohort study of coke gas plant workers from Sweden reported a roughly two-fold increased mortality risk that was not statistically significant.17 Oddly, lung cancer risk was decreased in this cohort (0.77). Even more surprising, when measuring prostate cancer incidence, which is a better measure for this often non-fatal cancer, the SIR was decreased (0.71).

SURVEILLANCE AND CASE-CONTROL STUDIES

The relevance of the single surveillance study and two case-control studies is quite poor. They are considered here, largely because there is no other data, but they are given very little weight. Therefore, for coke oven workers, the best available results come from the above cohort studies.

A surveillance study of prostate cancer in 24 US states reported a statistically significant increased risk of 1.30 among African-American furnace, kiln, and oven operators, an occupational classification that included coke oven workers.28 The risk in white workers was not provided. This reporting bias suggests the results in white workers were unremarkable. This category includes foundry and steel mills, as well as other industries such as smelting plants, auto repair shops, and oil refineries. This study therefore has limited applicability to coke oven workers.

A population-based case-control study from British Columbia reported a slightly increased risk (1.14) in refined petroleum and coal products workers after adjusting for education, alcohol consumption, and smoking history.29 However, when results were limited to those with usual occupation in this category, no elevated risks were found. A US hospital-based case-control study found an increased risk (1.29) of prostate cancer in workers with PAH exposure to coal-based sources after adjusting for age, race, smoking, dietary PAH, and PSA levels.30 Although this category included coke oven workers, only one coke oven worker was included among the 122 workers in this

classification. Both of these case-control studies included many occupational exposures other than that associated with coke ovens.

SUMMARY FOR COKE OVEN WORKERS

The information available from surveillance and case-control studies are largely uninformative on the risk of prostate cancer in coke oven workers. The best evidence comes from the six cohort study results. The SRE for these cohort studies indicates a small elevated risk (1.12) that was not statistically significant. However, these results showed statistically significant heterogeneity. This indicates that there were divergent results among these studies such that the combined SRE must be considered with caution. It is possible that the studies are measuring different risks so that combining the results may obscure any underlying risk. When using the incidence data from the Swedish cohort, the SRE was 1.09, but still significantly heterogeneous.

After eliminating the three smaller cohorts that did not show an elevated lung cancer risk (and therefore likely to have low exposures), the SRE was somewhat increased (1.19). It is difficult to make conclusions based on this sensitivity analysis. This elevation was statistically non-significant. Heterogeneity persisted. The studies with presumably lower exposures that were removed were small, and therefore had little impact on the SRE. These factors make any increased risk in groups with potentially higher exposures more difficult to discern.

The heterogeneity identified above was primarily due to the divergent findings in the large US/Canada study (1.57)22 and one of the UK cohorts (0.59).26 Both studies showed significantly increased lung cancer risks, suggesting that carcinogenic exposures were present in both the US/Canada and UK studies. The lung cancer risk was somewhat higher and showed an exposure-response trend in the US/Canada study.

It has been suggested that, in general, coke oven exposures in Western countries may be higher than in Europe.25 Unfortunately, only one result was available from the West (US/Canada). This significantly elevated risk of 1.57 for coke oven workers was based on an internal comparison to unexposed steelworkers. No SMR estimate (which uses a general population reference group) was available for this 30-year mortality follow-up, but an earlier non-significant SMR of 1.82 was observed after a much shorter 9-year follow-up.24 The similar overall elevations observed in the three follow-up studies of this cohort suggest that a modest risk elevation was present regardless of the reference group used.

The remaining five European cohort results showed an overall SRE that was not elevated (0.89), and which was homogeneous. This measure was even more homogeneous when the incidence data from Sweden was used, resulting in an SRE of 0.84.

Exposure-response investigations did not clarify whether risks follow exposure measures. In the US/Canada study, the risk was the same in the group with low coal-tar pitch volatile (CPTV) exposure as in the highest exposure group (1.4), such that no monotonic trend could be identified. The much smaller study in Norway found one death from prostate cancer in the low PAH exposure group where 1.7 were expected, and no prostate cancers in the medium or high exposure group where overall 1.8 were expected. The Dutch study did find a substantially lowered risk in unexposed coke plant workers. This finding would likely result in an elevated prostate cancer risk for exposed coke plant workers in an internal analysis. But this low risk in unexposed coke plant workers is difficult to interpret since the number of unexposed workers was small and the original authors declined to conduct an internal analysis.

In summary, some results, particularly those from a US/Canada cohort, provide suggestive evidence that coke oven exposures can give rise to a small elevation in prostate cancer risk. However, this summary also identified predominantly negative findings in five European cohorts, and an absence of evidence for an exposure-response trend and inconsistent findings for higher risk in jobs with higher exposures. Therefore, the evidence for a causal association between prostate cancer and coke oven exposures remains *inconclusive.* See Appendix I for an explanation of the levels of evidence terminology.

FOUNDRY WORKERS

A 2006 internal review by ODPR of prostate cancer and occupation included epidemiologic studies on foundry workers published up to April 1, 2005.1 Additional studies were identified that reported a risk of prostate cancer in foundry workers. This included two cohort studies, 31 32 and seven surveillance studies.33 34 35 36 37 38 39 An abbreviated table of risk estimates considered in the present follow-up review is provided below.

Table 2: Foundry Worker Studies Author/year Group	**Risk estimate used (95% CI) [# cases]**	**Comment**
Cohort Studies		
Delzell/200340 23-year follow-up in casting operations of US automotive plant. “casting operations” “metal casting”	SMR= 1.28 (1.02-1.58) [84]‡L SMR= 1.17 (0.81-1.63) [34]	“Casting operations” taken to be the foundry, and “metal casting” the foundry casting job. Lung ca. SMR= 1.22 (1.10-1.35)[371]
Rotimi/199341 18-year follow-up in US automotive plant Iron Foundry	SMR= 1.55 (0.87-2.56) [15]	Risk higher in blacks (2.34; 1.12-4.30 [10])B than whites (0.93). Same cohort as above.
Sherson/199142 19-year follow-up of Danish iron steel and other foundry workers	SIR= 0.99 (0.74-1.31) [50]‡L	The foundry workers were invited to a national silicosis survey. Lung ca. SIR= 1.30 (1.12-1.51)[166]
Sorahan/199443 46-year follow-up in a British Steel Foundry	SMR= 0.85 (0.61-1.14) [42]‡L	Lung ca. SMR= 1.46 (1.34-1.58)[551]

Adzersen/200344 44-years follow-up in a German Iron Foundry	SMR= 0.981 (0.569-2.265) [47.8]‡L	Lung ca. SMR= 1.64 (1.26-2.21)[415]
Andjelkovich/199045 35-year follow-up in a US Iron Foundry	SMR= 1.00 {0.66-1.46} [27]‡L	Risks higher in non-whites (1.47; 0.92-2.23 [22])B and significantly reduced in whites (0.42; .13-.97[5]).
Hansen/199731 22-year follow-up of Danish foundry workers compared to other workers	SMR= 1.01 (0.63-1.52) [22]§	Risk estimate for male genital cancers includes testicular and penile, therefore, less relevant. Lung cancer risk not elevated.
Breslin/197932 18-year mortality follow-up in seven Pennsylvania steel plants for “Ever Foundry” compared to other steelworkers	RR= 1.40 {0.67-2.57} [10]‡	non-white: RR= 0 [0.9 exp]B RR in whites only was 1.61[10] Overall ≥5 years RR= 1.7 [3] No elevated lung cancer risk.
Decoufle/197946 30-year follow-up in US Iron Foundry	SMR= 0.76 {0.23-1.81} [5]‡	Risk higher in non-whites (1.00; 0.62-8.77 [3])B than whites (0.56). The respiratory system cancer SMR of 1.26 [29] was not significant.
Surveillance Studies		
NOMS/200633 White men in 28 US states 1984-1998: “Iron and Steel Foundries”	PMR= 0.87 (0.776-0.973) [308] Black and white males: PMR= 0.84 {0.76-0.93} [409] ‡L	Results for black workers not reported, but were calculated from findings for foundry PLUS “Blast furnaces, Steel works, Rolling and Finishing Mills” MINUS the result for the latter group. PMR= 0.76 {0.61-0.91} [101]B Lung ca PMR= 1.06(1.04-1.08)[9729]
Krstev/199828 Black men in 24 US states 1984-1993: “Furnace, kiln and oven operators”	MOR= 1.3 (1.0-1.7) [61]	Occupational category too broad and includes many other furnace operations. Most recent and relevant results above used. Reporting bias: no results given for white men.
Sharma-Wagner/200047 Prostate cancer 1961-1979 in Sweden: “Pig iron and steel foundries”	SIR= 1.23 (1.00-1.40) [140]‡	Lung cancer not measured.
Egan-Baum/198148 1971-1975 US mortality in “Iron, steel, non-ferrous foundry”	PMR= 0.91 (0.69-1.18) [57]‡L	Higher risks in blacks (1.10; 0.53-2.02 [10])B than whites (0.88) Lung cancer in whites (1.44 [224]) and blacks (1.76 [39]) significantly elevated.
Gallagher/198934 British Columbia male mortality 1950-1984: “metal furnace workers” “moulders and coremakers”	PMR= 0.78 (0.37-1.44) [10] PMR= 0.81 (0.26-1.89) [5] Combined: 0.79 (0.42-1.47) [15]‡	Lung cancer not significantly elevated in furnace workers (1.2 [52]) or moulders (1.02 [14]).
Milham/200135 Men in Washington state 1950-1999: “metal molders”	PMR= 1.39 (0.87-2.14) [21]‡	Some overlap with NOMS is possible for 1984-1998 period. Lung cancer not elevated (1.15 [32])
Dubrow/198436 Massachusetts white male deaths 1971-1973: “Foundry workers”	PMR= 0.45 {0.09-1.32} [3]‡	Lung cancer not significantly elevated (1.2 [23])

Aronson/200049 Canada male mortality 1965-1991: "metal furnacemen and heaters" "moulders"	RR= 1.37 (0.57-3.31) [5] RR= 0.56 (0.14-2.26) [2] L Combined: 1.06 (0.51-2.23) [7]‡	Lung cancer risk in furnacemen was not significantly elevated (1.18 [24]) but that in moulders was (1.99 [37]).
Starzynski/199638 Mortality of Polish men with silicosis 1970-1991: "Metallurgical industry and iron and nonferrous foundry"	SMR= 1.24 (0.45-2.70) [6] §	Lung cancer significantly elevated likely due to silica. Other exposures reduce the relevance of this finding.
Petersen/1980[39] California males 1959-1961: "metal moulders"	PMR= 1.34 (0.45-3.24) [5]‡L	Lung cancer was significantly elevated (1.85 [10]).
Case-Control Studies		
Brown/2000[50] Automotive (Ford) union workers at four US foundries also included in the cohorts studied by Rotimi/1993 and Delzell/2003.	All foundries summed: OR= 1.31 (0.99-1.73) [94]‡ Plant 1 OR= 1.3 (0.4-4.1) [4] Plant 2 OR= 1.3 (0.8-2.2) [20] Plant 3 OR= 1.3 (0.9-1.8) [68] Plant 4 OR= 1.6 (0.3-8.7) [2] Casting operations: Any OR= 1.4 (1.0-1.9) [90] Usual OR= 1.4 (0.9-2.0) [40] Furnace and heat treating; OR= 1.0 (0.7-1.6) [29] Metal casting; OR= 1.5 (1.1-2.1) [70] Core and mold; OR= 1.4 (1.0-2.0) [61] Die cast/metal melt/steel mill; OR= 1.7 (1.0-2.8) [24]	No duration-response trend identified in any production group. Since most workers were long-term, the ORs accounting for a 10-year latency was used where available. This result was used for case-control SREs, but for overall SRE, the result of Delzell/2003 was used. For Black workers, with 10-yr latency: OR= 1.3 (0.9-2.0) [57]B This result was used for Non-white SRE rather than the older Rotimi/93 result with far fewer cases.
Brownson/198837 Missouri white males: "Iron foundries"	OR_1= 1.5 (0.7-3.3) OR_2= 2.0 (0.8-4.9) [10]‡	OR1 using all controls. OR_2 controls excluded lung and bladder cancers.
Band/199929 British Columbia, industry: Iron foundries, ever Usual industry Steel foundries, ever Usual industry	OR= 0.84 (0.45-1.59) [9] OR= 0.36 (0.06-2.34) [1] OR= 1.23 (0.61-2.5) [8]‡ OR= 1.91 (0.56-6.52) [3]	Internally inconsistent results: findings for metal processing and related occupations and primary metal industries showed decreased risks. Steel industry subgroups showed elevations.
Total SRE‡§, Cohort (8)	SRE= 1.07 (0.93-1.22) [288]	Heterogeneity p= 0.59
Surveillance (10)	SRE= 0.92 (0.85-1.00) [572]	Heterogeneity p= 0.29
Case-control (2)	SRE= 1.30 (1.00-1.68) [102]	Heterogeneity p= 0.87
All studies(19)*	SRE= 0.96 (0.88-1.05) [969]H	Heterogeneity p= 0.07
Tier 1 SRE‡, Cohort (7)	SRE= 1.07 (0.93-1.23) [266]	Heterogeneity p= 0.48
Surveillance (9)	SRE= 0.92 (0.85-1.00) [667]	Heterogeneity p= 0.21
Case-control (2)	SRE= 1.30 (1.00-1.68) [102]	Heterogeneity p= 0.87
All studies(17)*	SRE= 0.96 (0.88-1.05) [941]H	Heterogeneity p= 0.04
Tier 1 SRE‡L, with elevated lung cancer risk Cohort (5)	SRE= 1.07 (0.92-1.23) [251]	Heterogeneity p= 0.32
Surveillance (4)	SRE= 0.85 (0.77-0.93) [473]	Heterogeneity p= 0.96
All studies(9)	SRE= 0.91 (0.84-0.98) [724]	Heterogeneity p= 0.12
Non-white SREB,	SRE= 1.33 (0.98-1.79) [35]	Heterogeneity p= 0.19
Cohort (4)	SRE= 0.81 (0.69-0.97) [158]	Heterogeneity p= 0.32
Surveillance (2)	SRE= 0.93 (0.76-1.15) [240]H	Heterogeneity p= 0.06
All studies (6)		

‡ Result used in the Best SRE calculation
§ Less relevant result only used in the Total SRE calculation
L Indicates study showed a significantly elevated risk of lung cancer
B Result for non-white used in the Total non-white SRE
* The result of Delzell/2003 was used for the Ford union cohort also studied by Rotimi/1993 and Brown/2000
H Adjustment was made to broaden the confidence limits to account for inter-study variability

COHORT STUDIES

One large cohort study reported a significantly increased prostate cancer mortality risk of 1.28 in the foundries of a large US auto manufacturer.40 A small study of foundry workers in Pennsylvania steel plants showed a non-significant increased risk of prostate cancer (1.40). 32 The remaining six cohort studies reported null findings.43 44 45 31 46 All cohort studies reported on mortality except one large incidence study of Danish foundry workers invited to a national silicosis survey (SIR 0.99).42 These somewhat discrepant findings did not result in heterogeneity for cohort studies. The cohort SRE was 1.07 (0.93-1.22) [288]. This did not change substantially when only the most relevant tier 1 study results were considered (one small Polish study was dropped). Nor did the SRE change among studies with a significantly increased risk of lung cancer, as these happened to be the largest studies.

SURVEILLANCE STUDIES

Results among nine surveillance studies showed some inconsistent findings. The large study of white men in 28 US states showed a significantly reduced risk of 0.87.33 When black men were added to these iron and steel foundry workers, the risk was lowered even more, to 0.84, based on 409 cancers. Another US study of union workers engaged in iron and steel as well as non-ferrous founding also showed a decreased risk (0.91) that was not significant.48 Two other smaller studies in Canada (0.79)34, and the US (0.45)36 also showed decreased risks.

The other five studies showed modest risk elevations. The largest of these was a group of pig iron and steel foundry workers in Sweden showing a borderline significant risk elevation of 1.23.47 The remaining smaller studies showed non-significantly elevated results in the US (1.39, 1.34)35 39, Canada (1.06)49, and Poland (1.24)38. In spite of these slight elevations, the overall SRE was borderline significantly reduced (0.92). Only one small study was removed to calculate the SRE based on studies with better exposure relevance, and the SRE did not change. When only surveillance studies that found a significantly elevated lung cancer risk were used, some of the more outlying results were dropped, resulting in a more homogenous collection of findings. The SRE was then further decreased to 0.85, which was statistically significant.

CASE-CONTROL STUDIES

Three case-control studies were relevant to this investigation. The largest was a study nested within the cohort of auto workers also studied by Delzell et al. (2003).40 This case-control study found an elevated risk in foundry operations (borderline significant 1.31)50 similar to that seen in casting operations in the cohort study. Most of these workers were long-term employees, so the risk estimates with a 10-year lag period were used from this study. No duration-response trends were identified. Black and white workers showed the same risks for prostate cancer.

The other case-control studies were considerably smaller. A small study of iron foundry workers in Missouri showed a non-significantly elevated risk of 1.5 in white males, which was increased to 2.0 when a more robust control group that did not include lung or bladder cancer was selected. 37 The last study from British Columbia showed some unusual findings.29 Risk estimates were consistently decreased in metal processing industries such as iron foundry operations (0.84). However, steel industry groups such as steel foundries showed elevations (1.23). Since this review centers on the steel industry, the latter result is used in calculating SREs. The combined SRE for the case-control studies was a borderline significant elevation of 1.30.

SUMMARY FOR FOUNDRY WORKERS

The overall SRE for all study types was 0.96 based on almost 1000 cases of prostate cancer in foundry workers. However, study results showed significant heterogeneity. The divergent results can be seen between the case-control study SRE with a borderline significant elevation, and the surveillance study SRE with borderline significant decreased risk. The largest contribution to the heterogeneity was the NOMS/2006 surveillance result. This significantly decreased risk contrasts with two other large studies with modest risk elevations. The Delzell/2003 cohort, or the Brown/2000 nested case-control studies showed about a 30% increased risk in this group of Ford autoworkers engaged in casting operations. The other modest risk elevation came from the large Swedish study of pig iron and steel foundry workers showing a 23% increase. When the NOMS/2006 study result was removed, study results became homogeneous and the overall SRE was a borderline significant elevation of 1.10 (data not shown). But there is no a priori reason to exclude this large study.

Overall results were more homogeneous when using only study results showing elevated lung cancer risks, in an attempt to remove studies with low exposures. The cohort studies still showed the same non-significant risk elevation (1.07), while surveillance studies showed a more consistently decreased risk (0.85). The overall SRE for studies with an elevated lung cancer risk showed a significantly decreased prostate cancer risk of 0.91, which remained homogeneous. In summary, cohort studies overall show no significantly elevated risk of prostate cancer, and surveillance studies show a decreased risk. There is therefore *inconclusive* evidence that foundry work increases the risk of prostate cancer.

NON-WHITE FOUNDRY WORKERS

A number of studies provided separate results for white and non-white or black workers. Four results among the cohort studies showed a borderline significant SRE elevation of 1.33 based on 35 cases among non-white foundry workers. The large nested case-control study in the US (Ford workers) also showed a non-significant risk elevation of 1.3 based on 57 cases.50 However, the two surveillance study findings resulted in a significantly reduced SRE of 0.81. This result was again driven by the NOMS/2006

study with a significantly reduced risk of 0.76 based on 101 cases. Some of the cohort results may be explained by higher exposures in non-white workers engaged in dirtier jobs. But no difference between black and white foundry workers was identified in the nested case-control study of Ford workers. This explanation also doesn't fit with the large surveillance findings in foundrymen from 28 US states in the NOMS/2006 report. Therefore there is *inconclusiv*e evidence for an elevated risk among non-white or black foundry workers.

FOUNDRY FURNACEMEN WORKERS

Similarly, there is insufficient evidence to come to a conclusion about foundry furnace workers. The finding of an elevated risk (1.3) among US black workers in a variety of furnace, kiln and oven operations was not specific enough to foundry work to be informative. Two small Canadian surveillance studies show conflicting findings for metal furnace occupations, with a decreased risk in one (0.78)34, and an increase in the other (1.37).49 The nested case-control study found consistently elevated risks in a variety of foundry casting operations in the auto industry.50 However, the risk among furnace and heat treating workers in these casting operations showed no elevated risk (1.00) based on 29 cancers. There is therefore *inconclusive* evidence for an elevated risk of prostate cancer among foundry furnace workers.

GENERAL STEELWORK

Steel plant work encompasses a rather broad array of exposures. While this broad category encompasses coke oven work and occasionally some foundry work, the emphasis here is on collecting risk information for the larger group of workers engaged in any steelmaking and milling operations. As for the previous sub-groups, an effort is made to distinguish results that are more or less relevant to steelmaking. This distinction was useful only for the surveillance studies collected here. The broader group, in this discussion referred to as "tier 2" and labeled "§" in Table 3 below, was primary metal work, including workers engaged in smelting, founding, and milling of both ferrous and non-ferrous metals. The second more specific results were related to steelworkers such as those employed at blast furnaces, electric arc furnaces, casting and rolling mills. The latter are most relevant to the issue of prostate cancer risk in steelworkers, and are referred to as "tier 1" and are labeled "‡" in Table 3 below.

Table 3: Steelworker Studies Author/Year Group Studied	Prostate cancer* Risk Estimate (95% Confidence Interval) [Number of cases]	Exposure quality score‡ and Comments
Cohort Studies		
Moulin/199351 France 18 years of follow-up. Cohort of 4227 Stainless steel workers employed between 1968 and 1984.	SMR=1.13(0.37-2.63)[5] ‡	Plant consisted of stainless steel melting and casting, foundry, maintenance, rolling mills and other workshop operations. Office and admin. staff excluded.
Surveillance Studies		
NOMS/200633 US Mortality of men in 28 states. States participated for two or more years from 1984-1998.	Blast furnaces, steelworkers, rolling and finishing mills: PMR=0.91{0.88-0.94}[3392] ‡ Whites PMR=0.91(0.878-0.947)[2742] African Americans PMR=0.90(0.833-0.973)[650] Primary Iron and Steel industries: Whites PMR= 0.91 (0.88-0.94) [3050] Blacks PMR= 0.88 (0.82-0.94) [751] Combined PMR= 0.90 {0.87-0.93} [3801] §	States may have only participated for two years. Results are for ages ≥15 years. The Primary Iron and Steel industry category also includes iron and steel foundries
Andersen/199966 Men in 4 Nordic countries 20 years cancer incidence, 1971-1991. "Smelter and metal foundry workers"	Denmark: SIR= 1.13{0.98-1.30}[202] § Finland: SIR= 1.03{0.84-1.25}[103] § Norway: SIR= 1.09{0.97-1.22}[306] § Sweden: SIR=0.97{0.90-1.05}[657] § Total: SIR=1.03(0.97-1.09)[1268]	The standardized incidence ratios (SIRs) are standardized on age, country, time period and gender (only male results are reported here). This category includes the processes found in a steel plant, but may also include non-ferrous processes. Results from each country are considered as separate studies. Sweden result used only for total SRE since there was some overlap with Sharma-Wagner/2000 which was more specific for steelworkers. Therefore the result below was used for Sweden in the Best SRE.
Sharma-Wagner/2000[47] Sweden 19-years incidence 1961-1979 with 36269 prostate cancer cases and employment information from 1960 National Census.	Iron and steel plants SIR=1.17{1.07-1.28}[480] ‡	For iron and steel plants, CI for iron and steel plants printed was 1.00-1.01 which is a typo so CI was calculated. Some overlap with Andersen/1999, so this result was used in the Best SRE for Sweden.
Hobbesland/199953 Norway 39 year incidence 1953-1991 among 8530 workers in 8 ferrosilicon and silicon metal plants.	Furnace workers: SIR= 1.17 (0.85-1.59) [42] ‡ Non-furnace workers: SIR= 1.38 (1.10-1.72) [80] Non-furnace duration: 0 yrs 1.08 (0.63-1.73) [17] 0.1<10yr 1.32 (0.92-1.84) [35] ≥10 yrs 1.79 (1.19-2.59) [28]	These results were not added as tier 2 results in favor of those from Andersen/99 for Norway. Furnace worker findings were likely most similar to steel plant exposures.
Buxton/199954 BC, Canada PMR study of 6485 prostate cancer deaths from 1950-1984.	Metal Mills Age ≥20 years PMR=0.95(0.73-1.24)[56] § Age 20-65 years PMR=0.37(0.10-0.95)[4]	Usual occupation was obtained from death certificates. Iron and steel production mixed with other metals produced in BC. Metal mill workers would have included brass

		workers and aluminum smelter workers. This result with higher numbers of mill workers is used rather than Gallagher/1989.
Gallagher/198955 British Columbia workers 35 year mortality follow-up	Metal furnace workers PMR=0.78(0.37-1.44)[10] Other metal mill workers PMR=1.33(0.84-2.00)[23] Combined PMR=1.10{0.75-1.54}[33]	Included deaths in BC from 1950-1984. Other metal mill workers included non-ferrous metals.
Milham/200135 Men in Washington state 1950-1999: "smelter workers"	PMR= 1.08 {0.81-1.41} [53] §	Partial overlap with NOMS possible. This group includes metal heaters, forgemen, heat treaters, foundry workers and smelter workers including the Tacoma copper smelter.
Finkelstein/199156 Canada PMR study of 335 deceased men identified from plant records at an electric arc steel-making operation.	PMR=1.55{0.80-2.71}[12] ‡ Melting department work PMR=0.47{0.01-2.62}[1] No melting department work PMR=1.96{0.98-3.51}[11] Pouring pit work PMR=1.37{0.03-7.63}[1] No Pouring pit work 0 cases[1.37exp cases]	A cluster of lung cancer cases was found in the melting department, but no excess in non-melting areas. Prostate cancer risk does not follow this trend. Melt shop consisted of electric arc furnaces. Pouring pit work is a part of the melting department. Non-melting department consisted of billet conditioning, annealing, forging, rolling mill, tube mill, and sheet mill operations.
Radford/197657 1-year mortality experience in a US steel mill based on 374 deaths.	PMR=1.18{0.51-2.33}[8] ‡ White PMR=1.52{0.49-3.55}[5] Black PMR=0.86{0.18-2.51}[3]	
Dubrow/198458 Massachusetts Mortality in white males 1971-1973.	Steelworkers, wire workers mOR=1.46{0.59-3.00}[7] ‡	The mOR was adjusted for both age and social class.
Aronson/200059 Mortality of males in Canada 1965-1991.	Metal furnacemen and heaters SIR=1.37(0.57-3.31)[5] §	The study used internal standardization by socio-economic status (blue or white collar), gender, and age. No prostate cancer occurred in metal mill workers.
Case-Control Studies		
Band/199929 BC, Canada 1519 prostate cancer cases from 1983-1990.	Primary steel industry Ever worked OR= 1.56(0.98-2.48)[20] ‡ Usual industry OR=1.91(0.74-4.94)[5] Metal Smelting, Converting, Refining Ever OR=0.47(0.24-0.91)[8] Usual OR=0.19(0.03-1.11)[1] Metal shaping and forming, except machining Ever OR=0.93(0.74-1.17)[72] Usual OR=1.18(0.82-1.72)[29]	Results were adjusted for education, alcohol consumption, and smoking history. CI is for 90%.

Siemiatycki/199160 Montreal case-control study with 449 cases of prostate cancer.	Iron and steel mills and foundries Any exposure OR=2.1(0.9-4.8)[5] ‡ Substantial exposure OR=0.9(0.2-5.6)[1]	Results adjusted for age, family income, smoking and birthplace.
Krstev/199861 Population-based 981 prostate cancer cases (479 black, 502 white) diagnosed between 1986-1989. USA	Blast furnaces, steel works, rolling and finishing mills OR=0.37(0.15-0.95)[# cases not provided] Whites‡	Publication bias: only statistically significant results were presented for the steel industry. No results for black workers. Usual occupation or industry collected from interviews. ORs adjusted for age, study site, race (when both races used).
Brownson/198837 USA Cancer registry-based case-control study with 1239 white male cases from 1984-1986.	Blast furnaces RR=1.3(0.4-4.1)[4]control1 RR=2.6(0.6-11.8)[4]control2 ‡	Occupational data on usual occupation and industry was collected by the registry. Control group #1 was all low risk controls Control group #2 excluded lung and bladder cancer controls. Result with control group #2 was selected since other studies have found increased risks of lung cancer in iron and steel foundry workers and lung cancer controls would not be considered to be suitable for inclusion in a control group.
Van der Gulden/199562 Netherlands 345 prostate cancer cases diagnosed from Jan 1988-April 1990.	Metal Industry Longest held job OR=1.22(0.84-1.76)[43] Job between 1960 and 1970 OR=1.16(0.80-1.69)[41] Metal worker: ╪ Longest held job OR=1.33(0.80-2.20)[22] Job between 1960 and 1970 OR=1.22(0.74-2.00)[22] Iron and steel exposure in all workers: ╫ Sometimes or frequently exposed OR=1.25(0.98-1.61)[140] Frequently exposed OR=1.07(0.79-1.44)[71] Iron and steel work in metal work and maintenance: ┼ from 1960-1970 OR=1.94(0.61-6.12)[32]	Self-administered questionnaire for work history. ╪ results compared to all other occupations. ╫ results compared to non-exposed subjects ┼ this result is age-adjusted and compared to nonexposed metal workers and maintenance men. Metal worker classification includes iron and steel industry work but also includes metal products manufacturing, including metal machining and maintenance work. Classifications are considered too broad for inclusion in SRE calculations.
van der Gulden/199263 Netherlands Hospital-based case-control study of 109 cases diagnosed in 1988 at four hospitals.	Metalworker Occupation between 1958-1968 OR=2.07(0.45-9.46)[5] Longest held occupation OR=2.07(0.45-9.46)[5]	ORs relative to all other occupations. Follow-up time on occupation from 1958-1968 would have been 20-30 years. No clarification on the jobs included for metal worker category. No clarification on whether this occupational category deals predominantly with metal products manufacturing or metal production. The classifications were considered

		too broad for inclusion in SRE calculations.
Houton/197764 US Cancer patients admitted between 1956 and 1965 compared to non-cancer patients and non-exposed clerical workers.	Primary metal operators RR=2.2 [7] Primary metal foremen RR=5.4 [3] Both results non-significant	Control group were patients with non-cancer disease. Men in clerical occupations were chosen as unexposed. Results were adjusted for age. Publication bias: only elevated results reported. Also, no confidence intervals reported. Therefore, not added to SRE.
Zeegers/200465 Netherlands Nested case-control study of 830 prostate cancer cases from a population-based cohort. 7 year follow-up.	Metalworker Ever RR=0.92(0.54-1.56)[668] Longest held RR=1.00(0.49-2.04)[641] Baseline Profession RR=1.05(0.51-2.17)[687]	Metal worker included galvanizer/fitters. Specific information was not provided on whether this involves metal machining or metal production so this result was not included in SRE calculation. Results adjusted for age, fruit consumption, veg consumption, dairy products, meat, alcohol, smoking, family history, education, and physical activity. Prostate cancer incidence from Sept 1986-Dec 1993.
Total SRE‡§, Surveillance (11) Case-control(4) All studies(16)	SRE= 0.94 (0.89-0.98) [5210]H SRE= 1.35 (0.70-2.61) [29] ◘H SRE= 0.94 (0.90-0.98) [5244]◘H	Heterogeneity p= 0.00 Heterogeneity p= 0.02 Heterogeneity p= 0.00
Tier 1 SRE‡, Surveillance(6) Case-control(4) All studies(11)	SRE= 0.94 (0.87-1.01) [3941] H SRE= 1.35 (0.70-2.61) [29] ◘H SRE= 0.94 (0.88-1.00)[3975]◘H	Heterogeneity p= 0.00 Heterogeneity p= 0.02 Heterogeneity p= 0.00

* {} indicate that the 95%CI was calculated by the reviewer since they were not reported in the study.
‡ Most relevant findings included in Best SRE calculation – tier 1
§ Less relevant findings included in Total SRE calculation – tier 2.
Italicized text indicates studies that were not used for SRE calculation due to lack of relevance to steelwork.
H Adjustment was made to broaden the confidence limits to account for inter-study variability
◘ Number of cases does not include those from Krstev/1998 since this information was not provided.

COHORT STUDIES

In spite of the fair number of cohort studies available on cancers in steelworkers, prostate cancer risk has generally not been reported. Only one cohort study of stainless steel plant workers in France provided a risk estimate for mortality from prostate cancer.51 The finding of a slight excess risk (1.13) was based on a small number of deaths.

SURVEILLANCE STUDIES

Five reports of large cancer surveillance studies provided a number of risk estimates. By far the largest study was the recently published surveillance of mortality in 28 US states for both white and black workers.33 Results for both the tier 1 (‡) steelworker group (0.91), and the tier 2 ( ) primary iron and steel industries (which added iron and steel foundries to the previous steelworker group) (0.90), showed statistically significant decreased risks that were based on more than 3,000 prostate cancer deaths. There was little difference in risks between black and white men. Because of its size, this study had a large impact on the calculated SREs. The reason for this significantly reduced risk is not readily apparent. While it is possible that a healthy worker effect (HWE) may have contributed to this reduction, cancers, as well as the proportional design of this study, are generally less sensitive to such bias. Also, this study showed a significantly elevated risk of cancer overall (1.02) with six cancers showing significantly elevated risks and six with significantly decreased risks (including prostate cancer). This observation suggests a strong HWE is not present. It is also possible that in a proportional study such as this, a large excess of another cause of death can lead to a decreased risk of a particular disease such as prostate cancer. There was a significantly elevated risk of circulatory and heart diseases (1.02) in a large number of workers, but the risk of death from accidents and injuries (0.92), as well as lung diseases such COPD were significantly reduced (0.94). Therefore, although studies such as this proportional mortality study based on death certificate data have a number of limitations, there is no a priori reason to exclude this study from consideration.

Only two other surveillance results, which were in the less relevant tier 2 category, showed decreased risks. These were a large study of smelter and metal foundry workers in Sweden (0.97)66 and metal mill workers in British Columbia (0.95).54 Three other tier 2 findings were just above unity, for smelter and metal foundry workers in Finland (1.03) and Norway (1.09)66 and smelter workers in Washington (1.08).35 Modestly elevated risks were observed in tier 2 smelter/foundry workers in Denmark (1.13)66 and in the tier 1 study of iron and steel plants in Sweden (1.17).47

The remaining four surveillance results were based on much smaller numbers. Three tier 1 study results showed elevated risks in a Canadian electric arc steel plant (1.55),56 a US steel mill (1.18),57 and Massachusetts steel and wire workers (1.46).36 The remaining study was small, and in the broader tier 2 category. Metal furnacemen and heaters in Canada (1.37)49 showed an elevated risk.

CASE-CONTROL STUDIES

The four case-control studies were all rated as tier 1 and three reported elevated risks. A Canadian case-control study from BC reported an increased risk of 1.56 that approached statistical significance for workers with any employment in the primary steel industry.29 An even greater elevation (1.91) was found in the Canadian workers whose usual work was in this industry. Another Canadian case-control study reported an increased risk of 2.1 in workers with any iron/steel mill and foundry exposures.60 However, no elevation (0.9) was found in workers with substantial iron/steel mill and

foundry exposures. A US study of blast furnace workers showed a prostate cancer risk of 1.3 using all low-risk controls, and a risk of 2.6 when the control group excluded lung and bladder cancer. The latter risk estimate is probably the more appropriate one to consider from this study, but these results were based on small numbers.

Another US case-control study reported a statistically significant decreased risk of 0.37 in white workers involved with blast furnace, steel work, rolling and finishing mill operations, after adjusting for age, and study site. This study only reported statistically significant findings and did not report findings for the similar number of non-white prostate cancer cases, which were likely unremarkable. 61

SUMMARY FOR STEELWORKERS

The single cohort study for steelworkers contributed little to the evidence on prostate cancer risk due to its small size. In contrast, some surveillance studies were very large. Among the 6 largest studies, there were seven results for tier 2 groups. The largest study of US workers showed a significantly reduced risk of 0.90. The remaining six tier 2 study results ranged from 0.97 to 1.13, none of which were statistically significant. Among the three large tier 1 studies, the same large US study again showed a significantly reduced risk of 0.91 based on 3,392 prostate cancer deaths. The remaining two tier 1 studies both showed a risk elevation of 1.17 that was statistically significant in the Swedish study, but not in the Norwegian study. Four smaller studies all showed risk elevations ranging from 1.18 to 1.55. The overall SRE for tier 1 and 2 studies were both 0.94, and was statistically significant for tier 2 studies. For both groups there was significant heterogeneity in study results. These SREs were heavily influenced by the one large US study. When this study was removed from the analysis (data not shown) the remaining studies were homogeneous. The SRE for tier 2 studies was a non-significant 1.03, while the tier 1 studies SRE was significantly elevated at 1.18. But as for foundry workers above, there is no a priori reason to exclude this large study of the relevant industrial group.

All four case-control study results were tier 1, and the overall SRE was a non-significant 1.35. Here again, there was significant heterogeneity, with three studies showing non-significant elevations of 1.56 to 2.6, and one significantly decreased risk of 0.37. The latter result would likely be higher if findings for the equal number of black workers had been included, because this study had a clear reporting bias. The slightly higher risk for usual (1.91) (rather than ever, 1.56) employment in British Columbia is counterbalanced by the finding of a drop in risk for substantial 0.9 (rather than any, 2.1) exposure in the Montreal study. These inconsistent findings based on small numbers add little to our knowledge of prostate cancer risk in this industry.

Because of the small size of the cohort and case-control studies in relation to the surveillance studies, the overall SRE essentially follows the SREs reported for surveillance studies alone. The overall SRE is 0.94, which was statistically significant for tier 2 studies and borderline statistically significant for tier 1. Substantial heterogeneity

remained. To gauge the impact of the largest US study, it was removed from the SRE analysis (data not shown). As with the surveillance studies alone, the overall SREs showed a small non-significant excess in the SRE for tier 2 studies (1.03), but a significantly increased risk of 1.19 for tier 1 studies. These conflicting findings in both the surveillance studies and case-control studies are difficult to reconcile. The overall picture of at most small risk elevations, inconsistent findings, weak study designs, and no evidence for an exposure-response trend indicate that the evidence for prostate cancer risk in the steel industry is *inconclusive*.

Overall Summary

Prostate cancer is a common disease in older aged men, with most diagnoses occurring after the age of 65. In addition to age, a family history of prostate cancer is a strong risk factor for this disease.

In spite of some suggestive findings from one cohort study in North America, the overall evidence for a causal association between prostate cancer and coke oven exposures is *inconclusive.*

Cohort studies of foundry workers show no overall significantly elevated risk of prostate cancer, and surveillance studies show a decreased risk. There is therefore *inconclusive* evidence that foundry work increases the risk of prostate cancer.

- The evidence regarding the risk of prostate cancer among non-white or black foundry workers is also *inconclusive*.
- The evidence on prostate cancer risk in the subgroup of foundry furnace workers is also *inconclusive.*

The overall findings of at most small risk elevations, inconsistent findings, weak study designs, and no evidence for an exposure-response trend indicate that the evidence for prostate cancer risk in the steel industry is *inconclusive*.

Reimar Gaertner
Manager
Occupational Disease Policy and Research Branch

May 9, 2008

APPENDIX I
Grading the Evidence

This table describes the terminology used to summarize the scientific evidence following a review of the scientific literature on an exposure-disease relationship.

Level of evidence	**Description of the scientific evidence**
Positive evidence	The scientific evidence is considered positive if it is consistent and strong enough to conclude that a causal association exists. Examples for classifying evidence as positive include: consistent positive findings across several studies of high methodological quality, and/or high statistical power (i.e., large population size) evidence of an exposure–response trend
Limited evidence	The evidence is considered limited if a preponderance of scientific evidence or suggestive evidence supports a causal association, but inconsistent results and methodological weaknesses preclude a definitive conclusion. Examples for classifying evidence as limited include: inconsistent findings, but positive findings in a small number of good quality studies more consistent findings, but uncertainty due to study limitations
Inconclusive evidence	The scientific evidence is considered inconclusive if it is neither consistent nor strong. Both positive and negative findings are present. Study weaknesses increase uncertainty. A causal association can neither be identified nor ruled out. Examples for classifying evidence as inconclusive include: limitations in study design or lack of statistical power few studies on the exposure-disease relationship
Evidence suggesting no association	If the scientific evidence, including several large, good quality studies, consistently shows no association between exposure and the disease, a causal association is unlikely.

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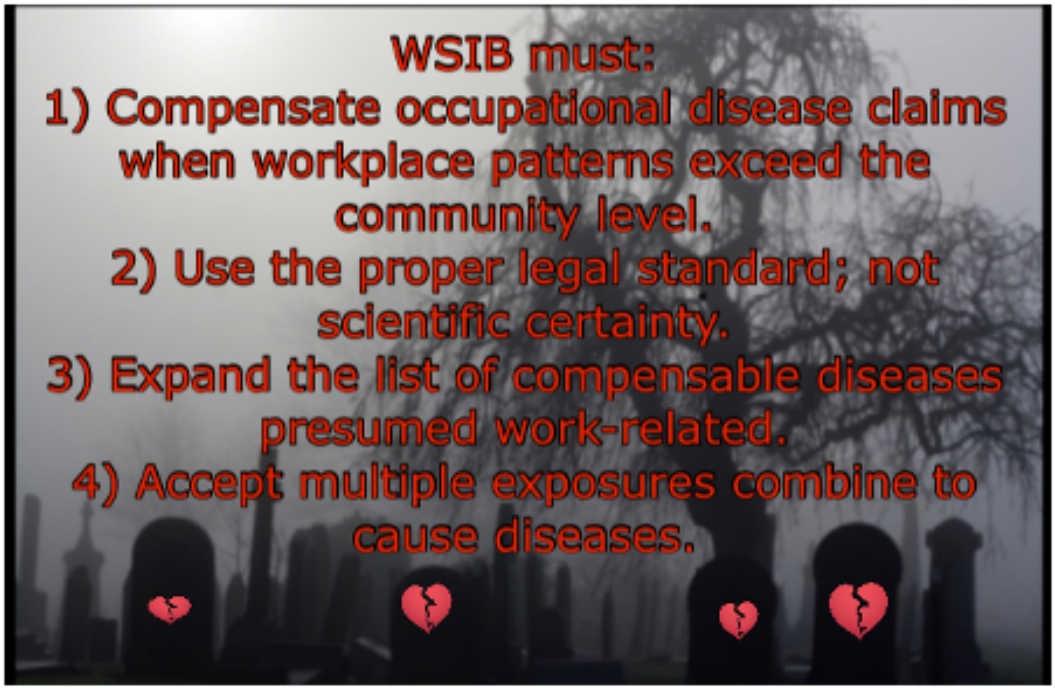
Addendum #2



A CALL FOR JUSTICE FOR THE VICTIMS OF OCCUPATIONAL DISEASE

Making a Case for Change in WSIB Occupational Disease Adjudication Principles

ABSTRACT

There have been several clusters of occupational diseases in workplaces across this province. Representatives from these cluster groups have come together to form an alliance and to call for change. We are the Occupational Disease Reform Alliance (ODRA).

Who we are:

We are a group of people with various backgrounds from across the province who have come together for a common goal, to demand justice for victims of occupational disease. Our group name is the Occupational Disease Reform Alliance (ODRA), and it includes members who are; victims of occupational disease (workers, retirees, and family members including far too many widows), advocates (Union and Community alike), and allies (injured worker groups, injured worker representatives, and others who believe in this cause). Members in this group are from Peterborough, Sarnia, Kitchener, Waterloo, Hamilton, Niagara, Toronto, Sudbury, Elliot Lake, Sault Ste. Marie, Thunder Bay, and Dryden. We have witnessed the injustices to the workers and families who filed occupational disease claims related to their work at GE, Ventra, Neelon Castings, Algoma Steel, Uniroyal, and in other industries or mining, especially those who were forced to inhale McIntyre Powder. A common goal of fighting for justice for the victims of occupational disease has united us, and we are calling on the government and the WSIB to implement necessary changes.

Background:

Occupational disease has been observed and documented as early as the 1700s by Bernardino Ramazzini and Percivall Pott. Pott[22] observed an increased incidence rate of scrotal cancers in chimney sweeps and made the link to the soot as the cause of their squamous cell carcinomas which were later referred to as chimney sweeps' carcinoma. Ramazzini has been called the father of occupational medicine[23] for being the first to catalogue diseases of workers in his work titled *De Morbis Artificum Diatriba*. We believe it is worth noting that not all diseases catalogued by Ramazzini resulted from exposures; some were from physical agents much like bursitis that is listed as an occupational disease in Schedule 3, essentially, he recognized injuries and diseases that are currently defined in the WISA. It is clear that observing diseases in groups of workers isn't new, and that epidemiological studies aren't necessary to determine a causal link to the workplace.

Providing compensation for occupational diseases (previously called industrial diseases) has been part of the history of Ontario's workers' compensation system from its inception. In fact, Sir William Ralph Meredith stated that,

[22] Sir Percivall Pott, English Surgeon, Britannica https://www.britannica.com/biography/Percivall-Pott
[23] Bernardino Ramazzini: The Father of Occupational Medicine
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446786/

> "It would, in my opinion, be a blot on the act if a workman who suffers from an industrial disease contracted in the course of employment is not entitled to compensation[24]" (page XV, second full paragraph, fourth sentence).

At that time there was only Schedule 3 and it started with six diseases listed, which likely created issues when seeking compensation for an occupational disease not in the schedule. However, it is clear that the intent of the Act was to provide compensation for occupational diseases and that remains a primary objective in the current version of the legislation (see section 1(4) of the WSIA).

The current version of the Act lists 30 occupational diseases in Schedule 3 that are afforded a rebuttable presumption regarding work-relatedness; with an additional 4 diseases in Schedule 4 that have an irrebuttable presumption. Section 15(1) and 15(2) as well as the definition of 'occupational disease' found in section 1 of the WSIA provide a mechanism to compensate for diseases that aren't listed in the schedules. Despite the evolution of the legislation, the fight for compensation for occupational diseases remains a difficult task.

WSIB has Administrative Practice Documents (formerly referred to as Adjudicative Advice Documents) that can be used to assist in understanding issues that are common to occupational disease and injury claims (e.g., loss of earnings, maximum medical recovery, weighing of medical evidence, etc.). They also have some that are specific to certain claims such as traumatic mental stress, but there isn't one single document of that nature to specifically address occupational disease. The overall message in the Adjudicative Advice Document *Initial Entitlement (Disablement)*[25] seems to call for a liberal interpretation of the worker's report and advises against adjudicating these claims in an "unnecessary restrictive" manner. Applying this type of adjudicative principle to occupational disease claims (which usually result in a disablement) would be justified and is in fact consistent with section 15(1) of the WSIA. It shouldn't be so difficult to get justice for the many victims of occupational disease.

Recommendations:

ODRA members have observed many issues with occupational disease adjudication and have 4 recommendations that we believe would help resolve a lot of issues. Overall, we are calling for recognition of occupational disease that is more reflective of the disease burden noted in reviews such as the Ontario Cancer Research Centre's *Burden of Occupational Cancer Project*.

[24] Sir William Ralph Meredith, *Final Report on Laws Relating to the Liability of Employers* https://archive.org/details/finalreportonlia00onta/page/n17/mode/2up

[25] WSIB Adjudicative Advice: Initial Entitlement (Disablement) https://www.wsib.ca/sites/default/files/2019-03/advice_initialentitlement.pdf

1. We are calling on the WSIB to grant entitlement for occupational diseases when they exceed the level out in the community.

2. To accomplish this, the WSIB must not wait for scientific certainty. Canada's Supreme Court has confirmed that this is not what the law requires for workers' compensation. Instead, the WSIB must use the evidence at hand, including evidence gathered by workers and communities about occupational disease in the workplace. WSIB must not leave workers and families in poverty until the body count has mounted up over decades.

3. Additionally, the WSIB must implement presumptions of work-relatedness for cancers listed in categories 1 and 2 by the International Agency for Research on Cancer (IARC). Irrebuttable presumptions for those with the most significant occupational contribution and a rebuttable presumption for the others.

4. WSIB must also recognize diseases resulting from exposures to multiple carcinogens/irritants (i.e., cancers, COPD, etc.) as recommended by the Demers Report, rather than focusing on single separate exposures.

These recommendations are specific to occupational disease, and address issues regarding initial entitlement. They are not the only issues with the compensation system, and once victims of occupational disease are granted entitlement, they become part of a system that needs to change the way it treats injured workers. Therefore, in addition to these specific recommendations we support the Ontario Network of Injured Workers Groups (ONIWG) in their call for change in the workers' compensation system regarding issues such as deeming, return to work issue, reliance on external medical consultants in place of the treating physician, adjudication delays, etc.

Some recommendations required a more detailed explanation than the others, but the length of that explanation shouldn't be viewed as an indication of preferring one recommendation over another. We will be referencing the recent reviews of the WSIB where relevant to the issue, but that shouldn't be taken as an endorsement of the recommendations contained therein unless specified. Cited works will be included in the footnotes and any additional materials considered (such as the OCRC project mentioned above) will be in Appendix A. Given that there have been two government commissioned reviews of the WSIB, and one value for money audit that will be referenced, we want to be clear that we are not calling for any further reviews and that it is our position that the time for action is overdue.

Making the Case for Change:

Each of our four recommendations have come from our experience that includes a combined total of hundreds (if not thousands) of occupational disease claims registered with

the WSIB. We also recognize that there are likely just as many, if not more, occupational diseases that were never reported to the WSIB. Some of that lack of reporting comes from a place of unfamiliarity with the reporting requirements of the WSIB, and others come from workers who made the decision not to take on the added fight of filing a claim. Far too many workers have died from occupational diseases without being provided compensation, and others never see their claim successfully resolved. All workers deserve a compensation system that is fair and just; that is the driving force behind our recommendations.

Recommendation #1: Compensate occupational disease claims when workplace patterns exceed the community level.

Recognizing diseases in workers that are more prevalent than in the surrounding community and/or general population is a large part of the reason why some people may have heard of Ramazzini and Pott. This type of observation has also led to other important discoveries, such as the origins of diseases (e.g., Typhoid Mary, mad hatters' disease, etc.). Observed increased incidences are a reliable indicator that something is wrong, and while the exact cause might not be known it isn't required to determine that there is a causal relationship present. Knowing the work history of those affected by disease could lead to the conclusion that there is something in that workplace that is a significant contributing factor in the onset of the observed disease. Accurate work history information also prevents counting the work observations as community incidence which would skew any comparison if counting one case in both categories wasn't avoided. Implementing recommendation 1 not only allows for compensation to be provided, but it also identifies a workplace risk that can be used to hopefully prevent future cases.

In response to the Occupational Disease Advisory Panel's Final Report commissioned by the WSIB, a draft protocol document was created by the Board. This document will be referenced as part of rationale for all four recommendations, and it demonstrates that these recommendations aren't foreign concepts at the WSIB. For the purpose of recommendation 1, we want to draw your attention to page 20 where it states that,

> "In general, the WSIB does not use the public health approach of "doubling" the risk as the baseline to define an "increased" risk" (first bullet under the heading 'Strength of association')[26].

It is our position that recommendation 1 aligns with the WSIB's protocol document and that it should already be part of occupational disease claims adjudication process.

[26] *Taking ODAP into the future, A protocol for occupational disease policy development and claims adjudication* https://www.wsib.ca/sites/default/files/2019-03/protocoldraft05.pdf

Scientific and/or medical evidence doesn't exist in every case; the absence of such evidence should never be viewed as an absence of a causal connection. The draft protocol document provides a reason for scarce or absent evidence of this nature on page 24 under the heading 'Funding of research'. It takes a fair sum of money to conduct epidemiological studies and that is disadvantageous to workers who can't afford to fund a study. Industries have the money to pay for research, and that money provides the freedom to choose the researcher who will serve their needs best. The use of scientific and/or medical evidence in the proper legal context will be discussed below.

The WISB would already have the information required for most of the groups that we represent to look at the difference between the workplace incidence compared to the community or general population. Statistics for disease incidence from reliable sources such as the Canadian Cancer Society are readily available on the internet. It is noted in the protocol document that the WSIB has an Occupational Disease Information and Surveillance System to provide information on disease and fatal claims submitted to the WSIB (page 4, first bullet, footnote 4). Given this information, we see no obstacles that would prevent the implementation of recommendation 1.

We have several examples that can be provided to show where the WSIB has denied claims for workers when the incidence rate exceeded that of the surrounding community and/or general population. Should the WSIB wish to confirm this is the case they need only look at the past breast cancer claims from Bell or Ventra Plastics, glioblastoma multiforme claims for coke oven workers at Algoma, or the lung cancer claims at Ventra Plastics, among others to verify our point. While we recognize that a cluster of breast cancer claims at Bell was denied by the Tribunal, our point is that those claims should have never had to be appealed. The test to recognize these claims as work-related includes implementing recommendation 2.

Recommendation #2: Use the proper legal standard; not scientific certainty.

The documentation establishing the proper legal standard to be employed includes numerous Supreme Court of Canada Decisions, Tribunal decisions, reviews of the compensation system, and the WSIB draft protocol document. We recognize that section 119(1) of the WSIA stipulates that the Board is not bound by legal precedent, and documentation that we're referencing is intended to be instructive on the issue. Not being bound is different from not having to consider that information, and nowhere in the Act does it stipulate those legal precedents are to be completely ignored. In fact, the requirement to base the decision on the merits and justice requires consideration of all relevant information as stated in WSIB Policy 11-01-03 *Merits and Justice*.

In the previously mentioned *Final Report of the Chair of the Occupational Disease Advisory Panel*[27] (ODAP) the legal standard was described in four sections that combine to set the proper legal standard (see pages 7 – 11). Those sections are:

- The causation test to determine the relationship between the condition and work,
- Burden of proof clarifying who is responsible for proving the case,
- The standard of proof describing the degree of certainty required, and
- Applying the benefit of doubt as prescribed by section 119(2) of the WSIA.

It is noted on the WSIB website that the ODAP Final Report was approved by the Board of Directors on June 9, 2005 for implementation[28]. Most of the information in the report is reflected in the Board's protocol document, but we are not seeing this reflected in the decisions of the WSIB adjudicators.

Rather than duplicate all the information provided in the ODAP Final Report and the WSIB draft protocol document, we will simply state where we have observed the Board's adjudicators departing from the proper legal standard. For the examples given regarding our position, we would be happy to provide specific claim examples but feel that there are so many it shouldn't be difficult to verify our position. We will also stipulate why we disagree with the limitation placed on the use of the benefit of doubt, and why the Board should not place such a limit in the decision-making process.

Burden of proof:

The burden of proof in the compensation context is very different from the courts. Neither the employer nor the injured worker is required to prove their case, and an adjudicator cannot refuse to provide a decision based on insufficient evidence. Workers' compensation is an inquiry system, not an adversarial like the courts. However, we recognize that the adjudicator isn't responsible for making the case for either party and they need only gather the information that they feel necessary to render a decision. Workers and employers are required to provide the WSIB with information they request, and it is also open to the parties to provide additional information that they feel is relevant to the case. This information is captured in Policy 11-01-02 *Decision-Making* under the heading 'Principles' which reads,

> "As an inquiry system (rather than an adversarial system), the WSIB gathers the relevant information, weighs evidence, and makes decisions."

Causation test:

[27] *Final Report of the Chair of the Occupational Disease Advisory Panel* https://www.wsib.ca/sites/default/files/2019-03/docd_chairfinalreport2005.pdf

[28] Chair's final report https://www.wsib.ca/en/chairs-final-report

Significant contribution has been equated with material contribution (the term used by the courts) and accepted as the test for causation as stated in both the ODAP Final Report and the WSIB draft protocol document. It is curious that the only WSIB Policy that even mentions significant contribution is Policy 15-02-03 *Pre-existing Conditions*. This is the well accepted established test for causation, and it isn't even found anywhere in the suite of "Decision Making" policies.

Adjudicators use the phrase "significant contributing factor" in multifactorial claims that are adjudicated on a case-by-case basis, but we believe that the concept isn't fully understood as demonstrated in numerous decision letters. Far too often an occupational disease claim is denied because the adjudicator determines that the workplace wasn't a significant contributing factor in the onset of the disease, but we are of the position that it falls short of considering the standard of proof. The causation test is only one part of determining entitlement under the WSIA and it isn't a stand-alone test as it must be used in conjunction with the standard of proof applying the benefit of doubt where necessary (e.g., when the evidence on the issue is approximately equal).

Standard of proof:

In the criminal justice system, a high bar is required to be sure that the decision to punish someone for a crime is correct, so they employ the standard of "beyond a reasonable doubt" to attain the required certainty. A lesser standard is used in civil proceedings, and that lesser standard has been accepted as the standard under the WSIA which is the balance of probabilities. The protocol document provides an eloquent explanation on pages 37 and 38 stating that,

> "The analysis of the balance of probabilities should be evident in any claim where the significant contribution test is applicable.
>
> There is a difference between balance of probabilities and work-relatedness. For example, a worker smoked four packs of cigarettes a day and was also exposed to agent X. The question is whether it is more likely than not that his or her employment significantly contributed to the development of the disease. The adjudicator does not consider whether it is more likely than not that the disease is work-related. Considering work-relatedness suggests the concept of a "predominant cause", which is a higher standard of proof than envisioned by the WSIA.
>
> Using the balance of probabilities as the standard of proof also reminds us that adjudicators can make decisions without having scientific or other certainties."

It is our position that making a determination regarding whether it is more likely than not that a worker's employment significantly contributed to the development of the disease

using the balance of probabilities requires examination of the evidence on both sides. We believe that this is where the WSIB stops short and will discuss it further after explaining our issue with the limitation place on the benefit of doubt because it is our contention that they are all connected.

Benefit of doubt:

Both the ODAP Final Report and the WSIB draft protocol document state that the benefit of doubt doesn't apply to the final decision, but no such exclusion is found in the WSIA or WSIB Policy 11-01-13 *Benefit of Doubt*. The wording in the ODAP report could be taken to mean that the benefit of doubt shouldn't be reserved until the final decision and should be applied during the entire process whenever the evidence is approximately equal in weight. However, the WSIB draft protocol document clearly, and incorrectly, states that the benefit of doubt only applies to specific issues "not the final decision" (page 38, first bullet, footnote 4). No document, report, memo, or anything of that nature can supersede the WSIA or WSIB Policy.

Policy 11-01-02 *Decision-Making* stipulates that,

> "The WSIB's decisions and practices must be consistent with the provisions of the Act and the rules of natural justice."

By extension of that statement, and consistent with the spirit and intent of section 126(4) of the WSIA, WSIB Policies must be consistent with the provisions of the Act. As noted above, Policy 11-01-13 *Benefit of Doubt*[29] is consistent with the Act (specifically section 119(2)) but deviating from the direction provided in the WSIA is a breach of the WSIB's legislative duty.

There are rare and unusual circumstances where an adjudicator can depart from applicable WSIB Policy described in Policy 11-01-03 *Merits and Justice*. However, the Policy clearly states that,

> "If there are specific directions within the Act that are relevant to the facts and circumstances of the case, decision-makers are legally bound to follow them with no exceptions."

The only time that section 119(2) isn't relevant to a worker's case is when the evidence isn't approximately equal in weight. Therefore, section 119(2) must be applied to all issues being decided, including the final decision, whenever the evidence is approximately equal in weight.

[29] WSIB Policy 11-01-13 *Benefit of Doubt* https://www.wsib.ca/en/operational-policy-manual/benefit-doubt

It was suggested by the ODAP Chair that there should be a discussion and/or a definition of the term "issue", but that seems to ignore past and current practice and rules that would eliminate any need to further define the word issue. One very common "issue" in dispute or issue decided by the WSIB is initial entitlement, which would be the final decision of that adjudicator. This past and present practice of using the word issue in this manner (i.e., something that requires a decision) supports our position that the final decision is an "issue" within the accepted definition of that word.

The plain and ordinary meaning rule of interpretation and the Legislation Act, 2006, would also be applicable and lead to the conclusion that the final decision is an issue. The word isn't part of the definitions clause and absent a specified definition in the WSIA then the plain and ordinary meaning rule would direct us to the dictionary to find the meaning of issue. Merriam-Webster[30] defines an issue as:

- A vital or unsettled matter,
- A matter that is in dispute between two or more parties,
- The point at which an unsettled matter is ready for a decision, etc.

The plain and ordinary meaning rule would lead to the conclusion that the final decision is an issue that is subject to section 119(2) when the evidence is approximately equal in weight.

Section 64 of the Legislation Act, 2006, prescribes the rule of liberal interpretation stating that,

> "An Act shall be interpreted as being remedial and shall be given such fair, large and liberal interpretation as best ensures the attainment of its objects.[31]"

One objective, or object, is to provide compensation as stated in the purpose clause (see section 1(4) of the WSIA). Section 118 of the WSIA prescribes the Board's authority to decide all matters and questions arising under the Act and section 131(4) requires that those decisions be provided in writing demonstrating that decisions are an object of the legislation. It should be noted as well that section 119(2) applies to providing a decision on an issue since it specifically states,

> "If, in connection with a claim for benefits under the insurance plan, it is not practicable to **decide an issue** because the evidence for or against it is approximately equal in weight, the issue shall be resolved in favour of the person claiming benefits" [emphasis added].

The requirement for the issue to be in connection with a claim for benefits means that section 119(2) doesn't apply to other issues decided by the Board (e.g., employer

[30] Merriam-Webster definition for issue https://www.merriam-webster.com/dictionary/issue
[31] Legislation Act, 2006 https://www.ontario.ca/laws/statute/06l21#BK74

classification or other employer account matters). However, the final decision on entitlement is an issue that is connected to a claim for benefits and where the evidence is approximately equal in weight then section 119(2) must be applied.

Not only is this interpretation of the benefit of doubt provision of the WSIA consistent with interpretation rules, regulations, and WSIB Policies, but it is also consistent with WSIAT jurisprudence (see for examples WSIAT Decision Nos. 97/01[32], 1672/04[33], 1780/04[34], & 2018/17[35]) and potentially consistent with WSIB decisions. We are not asking for a retraction of the statements made in error about the application of the benefit of doubt, only that the Board use the proper application of this provision. The method described herein is the way that the benefit of doubt must be applied (when the evidence is approximately equal in weight) in the application of the proper legal standard despite the statements made in the ODAP Final Report or the WSIB draft protocol document in that regard.

Application of the proper legal standard:

We will stipulate that the WSIB uses the phrases 'balance of probabilities' and 'significant contributing factor' in their decision letters but contend that they don't properly apply the legal test even when those phrases are utilized. This has been frequently demonstrated in claims where the WSIB's Occupational Disease Policy and Research Branch (ODPRB) have conducted scientific literature reviews on a topic, and our contention on this issue is easily verifiable. It is especially true when the ODPRB has graded the evidence in their review as lower than having a positive association (i.e., "limited evidence" or "inconclusive evidence" gradings).

Since there is a thinly veiled reference to the fact that the WSIB ignores Policy 16-02-11 *Gastro-Intestinal Cancer-Asbestos Exposure* on a regular basis in the KPMG Value for Money Audit[36], we would be derelict in fighting for change in the compensation system if we failed to address it. If issues of this nature were corrected by the WSIB, then they could proclaim

[32] WSIAT Decision No. 97/01
https://www.canlii.org/en/on/onwsiat/doc/2001/2001onwsiat148/2001onwsiat148.html?autocompleteStr=Decision%20No.%2097%2F01&autocompletePos=1
[33] WSIAT Decision No. 1672/04
https://www.canlii.org/en/on/onwsiat/doc/2009/2009onwsiat150/2009onwsiat150.html?autocompleteStr=Decision%20No.%201672%2F04&autocompletePos=1
[34] WSIAT Decision No. 1780/04
https://www.canlii.org/en/on/onwsiat/doc/2005/2005onwsiat179/2005onwsiat179.html?autocompleteStr=Decision%20No.%201780%2F04&autocompletePos=1
[35] WSIAT Decision No. 2018/17
https://www.canlii.org/en/on/onwsiat/doc/2018/2018onwsiat32/2018onwsiat32.html?autocompleteStr=Decision%20No.%202018&autocompletePos=1
[36] February 7, 2019 KPMG Value for Money Audit Report; Occupational Disease and Survivor Benefit Program
https://www.wsib.ca/sites/default/files/2019-05/wsib_occupational_disease_and_survivor_benefits_program_vfma_report.pdf

that they are applying the proper legal standard. Currently, the WSIB is holding claims to a much higher standard than required by the WSIA and have failed in far too many claims to properly apply the benefit of doubt provision.

Use of scientific information:

Both the ODAP Final Report and the WSIB draft protocol document discuss the various types of scientific evidence and their weaknesses, with the overall message being that such information is only part of the evidence to be considered by the adjudicator. While such evidence can be persuasive on an issue, it shouldn't be considered determinative, and all information must be considered in the proper legal context applying the benefit of doubt when the evidence is approximately equal in weight. Unfortunately, WSIB adjudicators adopt scientific conclusions of the ODPRB as a legal determination on the issue of entitlement and deny claims when the evidence is graded as 'limited' or 'inconclusive'.

The definitions for the terms used in grading the evidence are on pages 17 & 18 of the WSIB's draft protocol document (footnote 4), and there is also a discussion about the type of evidence required for adding to Schedule 4 on page 26 indicating that when the evidence is graded as "Positive evidence" that such a disease association can be included. Schedule 4 is afforded an irrebuttable presumption and most other claims only required that the workplace be more likely than not a significant contributing factor in the onset of the disease. Requiring evidence to be at the same level for initial entitlement as for adding to Schedule 4 is holding the claim to a higher standard than required by the WSIA.

'Limited evidence' is defined as,

> "The evidence is considered limited if a preponderance of scientific evidence or suggestive evidence supports a causal association, but inconsistent results and methodological weaknesses ***preclude a definitive conclusion***." [emphasis added].

Since there is no requirement for scientific, medical, or other certainties then you would expect this grading of the evidence to be viewed as supporting a causal relationship, but the WSIB denies claims when the evidence is graded as 'limited'. The balance of probabilities doesn't require that the evidence supporting a claim consist of a preponderance of evidence. Having a preponderance of evidence supporting one side of the issue would render the benefit of doubt inapplicable. Requiring a definitive conclusion may be reasonable in the field of science or even medicine, but it is a standard that is much higher than the balance of probabilities which is the proper legal standard of proof.

The 30 conditions listed in Schedule 3 are afforded the rebuttable presumption prescribed by section 15(3) of the WSIA. Having a rebuttable presumption implies that there is a level of uncertainty regarding the work-relatedness of those conditions and allows for the opportunity to show that a claim for one of those conditions might not be due to the

worker's employment. It shifts the onus from proving a claim to disproving the work-relatedness of that condition, but claims are allowed that include a degree of uncertainty. Therefore, it is submitted that denying claims based on evidence graded as limited by the ODPRB holds claims to a much higher standard than required by the WSIA.

> 'Inconclusive evidence' is defined by the ODPRB as,
>
> "The scientific evidence is considered inconclusive if it is neither consistent nor strong. Both positive and negative findings may result from a variety of study weaknesses. ***A causal association can neither be identified nor ruled out.***" [emphasis added].

Adjudicators are advised to use the benefit of doubt provision when the scientific evidence about the possible causal connection to the worker's condition (see page 38, footnote 4), but they tend to simply deny claims based on the evidence being graded as 'inconclusive'. There is also direction stating that the adjudicator must still compare the circumstances of the claim before them with the information reported in the literature (see page 54), and that the grading of the evidence as 'inconclusive' doesn't negate the responsibility to apply the proper legal standard (see pages 28 & 29). Scientific conclusions are not legal determinations, and they don't use the proper standard to decide issues arising under the WSIA. It is therefore submitted that the WSIB might use the proper terminology, but they are failing to apply the proper legal standard in far too many claims.

Adopting a scientific conclusion doesn't just hold the claim to a higher standard it also amounts to abdicating the authority of the Board prescribed by section 118 of the WSIA. The ODPRB papers are only one piece of the evidence to be considered, and in that consideration the proper legal standard must be applied. There must be an examination of that evidence to determine the relevance in order to assign the appropriate weight to be afforded that piece of evidence. When the evidence is approximately equal in weight then the adjudicator must apply the benefit of doubt provision. WSIB has been failing to deliver this justice to injured workers despite being the agency that has been legislated to provide it.

An example of the WSIB's failure to properly evaluate an ODPRB paper that graded the evidence as 'inconclusive' can be found in WSIAT Decision No. 2863/17[37]. That case didn't require the application of the benefit of doubt but did require a careful review of the scientific information provided by the ODPRB. The ODPRB used mortality ratios in their review for kidney cancer which are unreliable to determine the risk posed for a cancer with a low mortality rate as stated by the WSIAT Medical Assessor in paragraph 17 of the decision. It was also noted by the Medical Assessor that the ODPRB used studies that weren't relevant to the worker. These points were made to the WSIB by the advocate prior to the appeal progressing to the Tribunal, and the appeal could have been avoided had the

[37] WSIAT Decision No. 2863/17
https://www.canlii.org/en/on/onwsiat/doc/2019/2019onwsiat2178/2019onwsiat2178.html?autocompleteStr=Decision%20No.%202863%2F17&autocompletePos=2

WSIB adjudicator applied the proper legal standard instead of abdicating their decision-making authority to the ODPRB.

Standard for consideration of non-occupational factors:

There is nothing in the WSIA, or anywhere else for that matter, that would support using a different standard when considering any non-occupational risk factors in the decision-making process. It is stipulated in the WSIB's draft protocol document that the benefit of doubt provision applies to the worker's medical history and the scientific information regarding non-occupational risks (see page 38, last two bullets, footnote 4). Therefore, it is implicit that non-occupational risks be determined to be significant contributing factors in the onset of the medical condition to support a decision that the worker isn't entitled to benefits.

To be clear, we are not suggesting that the WSIB needs to determine the exact cause, only that the balance of probabilities requires consideration of both sides of the issue to determine which is more likely. The requirement of examining both sides of the evidence is also necessary to determine if the benefit of doubt is applicable (e.g., is the evidence approximately equal in weight?). In reviewing the non-occupational risk factors the same legal standard must be applied as a matter of fairness and impartiality.

For example, the Canadian Cancer Society lists the risk factors for kidney cancer[38] as: smoking tobacco; overweight and obesity; high blood pressure; certain genetic conditions; end-stage kidney disease and dialysis; family history of kidney cancer; contact with trichloroethylene (TCE) at work; and tall adult height. Some risks could be significant contributing factors like heavy tobacco use, while others are simply correlational risks that aren't significant contributing factors like being tall, and these types of determinations are necessary to know which cause is more likely (occupational or non-occupational) or if the evidence is approximately equal in weight to trigger the application of the benefit of doubt. It would be an injustice to victims of occupational disease to deny their claim based on a separate standard used to determine the non-occupational risks for their condition.

Gastro-intestinal cancer-asbestos policy:

It is noted in the KPMG report that,

"the WSIB currently uses Adjudicative Support Documents (ASD) in place of outdated policies" (see page 14, footnote 13).

[38] Canadian Cancer Society, Risk factors for kidney cancer https://www.cancer.ca/en/cancer-information/cancer-type/kidney/risks/?region=on

The report goes on to state that WSIAT is bound by WSIB policy (as per section 126 of the WSIA) and not ASDs, but that statement overlooks the fact that the WSIB is bound by policy too. Since the KPMG report is specific to occupational disease, and that there is a memo dated May 27, 2009, regarding the adjudication of gastro-intestinal cancers for asbestos exposures (not an ASD), then it becomes obvious that this is the issue being referenced.

As stated above, Policy 11-01-03 *Merits and Justice* allows adjudicators to depart from a relevant policy in,

> "rare cases where the application of a relevant policy would lead to an absurd or unfair result that the WSIB never intended."

The WSIB's draft protocol document further clarifies the use of this exception to applying all relevant policies stating that,

> "adjudicators do not use the "merits and justice" argument to avoid the intended result of a policy simply because they do not like that result." (page 42, third bullet, footnote 4).

With respect to using adjudicative advice documents, or ASDs, the WSIB's draft protocol specifies that such materials

- do not direct the adjudicator in deciding a claim
- do not offer fixed criteria
- do not set guidelines to be applied in decision-making
- **do not replace policy**, and
- **must work with existing policies**. [emphasis added, see page 31].

The unchallenged statement found in the KPMG report is demonstrating the WSIB's disregard for policy, transparency, fairness, and justice.

Using an unpublished memo in place of policy is not fair, transparent, or just and such a practice should have never been initiated by the very agency responsible for administering the WSIA and developing policy. There is some indication that the WSIB knows that this course of action isn't appropriate because there is no mention of it in the report from Dr. Paul Demers *Using scientific evidence and principles to help determine the work-relatedness of cancer*[39] released in 2019 or in the 2020 review conducted by Sean Speer and Linda Regner-Dykeman (Speer/Dykeman report) *Workplace Safety and Insurance Board*

[39] *Using scientific evidence and principles to help determine the work-relatedness of cancer*, Dr. Paul Demers https://www.ontario.ca/document/using-scientific-evidence-and-principles-help-determine-work-relatedness-cancer

operational review report[40]. The WSIB must stop this practice and re-adjudicate past claims that were wrongfully denied on that basis.

The fact that WSIAT refuses to apply the WSIB memo in place of Policy 16-02-11 should also reaffirm that this practice isn't consistent with law and policy. WSIAT Decision No. 1429/11[41] noted that the memo wasn't policy and didn't work with an existing policy, and WSIAT Decision No. 25/13[42] provided an interpretation of the policy as well as noting that the memo wasn't an appropriate substitute for policy. There are at least a dozen WSIAT Decisions that have cited and followed the reasoning of Decision No. 25/13 (e.g., Decision Nos. 124/20, 3588/17, 1064/20, 503/19, etc.). Workers and/or their survivors shouldn't be forced to endure years of waiting for an appeal decision to provide justice when a published policy should have been applied to their first decision from the Board and the claim should have been allowed at that level.

Putting it all together:

There was a comment in the KPMG report about undue political interference in cluster case management giving the examples of General Electric (GE) and McIntyre Powder (see page 15, footnote 13). We take exception to that statement and believe that it is a gross mischaracterization. It is our position that neither of those clusters were an example of undue political interference, but rather a reflection of the WSIB's inconsistency in the application of the proper legal standard.

For McIntyre Powder the WSIB had a Policy that was nothing more than an exercise in fettering discretion and it was only recently revoked. When the policy was in place there was a rigid adherence to its direction that claims relating to aluminum powder for neurological conditions weren't occupational diseases. This precluded the consideration of entitlement for a claim which meant that the proper legal standard wasn't applied. Clearly, the WSIB only has itself to blame for the negative attention it attracted as a result of their mishandling of those claims that some would argue was an abuse of power.

In the case of the GE claims there were several well written news articles that shouldn't need to be cited here to establish the events. Again, it was issues with WSIB's handling of those claims that drew the negative attention. This negative attention, and the negative consequences suffered by the victims of occupational disease, could have been avoided if the proper legal standard had been applied.

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[40] *Workplace Safety and Insurance Board operational review report,* Sean Speer and Linda Regner-Dykeman https://www.ontario.ca/document/workplace-safety-and-insurance-board-operational-review-report

[41] WSIAT Decision No. 1429/11 https://www.canlii.org/en/on/onwsiat/doc/2012/2012onwsiat1404/2012onwsiat1404.html?autocompleteStr=Decision%20No.%201429%2F11&autocompletePos=1

[42] WSIAT Decision No. 25/13 https://www.canlii.org/en/on/onwsiat/doc/2013/2013onwsiat437/2013onwsiat437.html?autocompleteStr=Decision%20No.%2025&autocompletePos=1

The low acceptance rate and low reporting rate of occupational diseases was noted in Dr. Demers' report (see pages 4 & 5, footnote 16). He also noted that the denied claims only made up a fraction of the gap between the estimated number of occupational cancers and allowed cancer claims (see page 14). One way to improve the underreporting of occupational disease claims is to increase the number of accepted claims because these workers know each other and talk about their experiences which could discourage others from filing. As noted above, there have been news stories covering the issues with occupational disease claims adjudication that could also discourage victims of occupational disease from filing WSIB claims. Applying the proper legal standard to claims would increase the acceptance rate and likely have a positive impact on the reporting of occupational diseases as well as improving the WSIB's reputation.

Recommendation #3: Expand the list of compensable diseases presumed work-related.

There are two recent reports that have recommended the WSIB expand the list of diseases and/or conditions in Schedules 3 & 4 (see footnotes 13 &16). Both the ODAP Final Report and the WSIB draft protocol document provided a framework for adding to the Schedules, which would indicate that expanding the lists was their recommendation as well. Schedule 3 has expanded from just 6 diseases to now including 30 diseases and/or conditions, but there haven't been any additions made to it since the early 1990s. Schedule 4 (introduced in 1986) hasn't existed as long as Schedule 3 has, and nothing has been added to it since the 1990s (it was an empty Schedule until that time). Expanding the list of compensable diseases presumed work-related isn't a novel concept and it should be part of the ongoing work to provide justice for victims of occupational disease.

We prefer the wording of the recommendation in Dr. Demers' report (footnote 16) that states,

> "the WSIB should update and greatly expand the list of presumptions regarding cancer in Schedules 3 and 4" (page 6 under the heading 'Recommendations to update presumptive list and cancer-relevant policies').

KPMG's report is the only one cited that includes a response from the WSIB to their recommendations, and the response regarding Schedule 3 & 4 is disappointing. The WSIB's response on page 17 (footnote 13) under the heading 'Response to Recommendation 3' was that,

> "The WSIB will do a preliminary review of the current state of the science, against Schedules 3 and 4 over the course of 2019 and explore with the Ministry of Labour whether there is an opportunity to update."

From that statement it appears that the WSIB is only interested in determining if there is an opportunity to eliminate diseases or conditions from the Schedules and not exploring opportunities to expand them. Instead, the WSIB should be looking to greatly expand the Schedules as recommended in the report from Dr. Demers.

In any review of current scientific information, the WSIB needs to be mindful of the fact that this current information could be a reflection of reduced exposures compared to past practices. Occupational disease claims are generally a result of past exposures, and the older studies likely reflect the experience of those workers. This approach would be consistent with the merits and justice provision of the WSIA as well as WSIB Policy requirement to consider all relevant facts and circumstances.

Another issue regarding the Schedules that needs to be addressed is the rebutting of the presumption of section 15(3) of the WSIA. In some of the Tribunal decisions referenced regarding the application of the benefit of doubt, there is a reference to the Supreme Court of Canada (SCC) Decision *F. H. v. McDougall, 2008 SCC 53*[43] which clarified that the only standard of proof in civil law is the balance of probabilities. Our issue isn't with the SCC's decision, or even that WSIAT Decisions that were cited referencing the SCC decision, it's with the application of that determination in the compensation system which wasn't part of the SCC decision.

There is a notable distinction between the WSIA and civil litigation which is that the WSIA provides presumptions whereas none are afforded to the parties in civil litigation. As noted above, there is a presumption in criminal law that an accused person is considered innocent until proven guilty beyond a reasonable doubt. It is not clear from the Tribunal decisions that referenced the SCC decision that sufficient consideration was given to this notable distinction between civil litigation and workers' compensation. In a system without any presumptions, it makes sense to only have one standard of proof, but in the worker's compensation system there are presumptions which change the onus from proving a claim to disproving it if possible. Claims without a presumption are established based on the standard of proof of the balance of probabilities and to rebut the presumption the same standard would essentially nullify the presumption.

Clearly the legislature intended for the claims that are afforded a presumption to require a higher standard of proof to rebut the presumption, in fact there isn't even an opportunity to rebut the presumption of section 15(4) of the WSIA. The wording of the presumption demonstrates that the Legislature intended for workers to be entitled to compensation, even when there are alternative theories of causation, unless the contrary is shown. Suggesting that there are other theories of causation doesn't show that claim wasn't work-related, and it wouldn't be proper to weigh various theories of causation on a balance

[43] F.H. v. McDougall, 2008 SCC 53 (CanLII), [2008] 3 SCR 41, https://www.canlii.org/en/ca/scc/doc/2008/2008scc53/2008scc53.html

of probabilities to rebut the presumption. It is our position that rebutting the presumption requires clear and convincing evidence to establish that the contrary has been shown.

We propose that addressing the recommendations regarding the Schedules needs to include transparency regarding the standard required to rebut the presumption of section 15(3) of the WSIA.

Recommendation #4: Accept multiple exposures combine to cause disease.

It was noted in the ODAP Final Report that,

> "A single exposure rarely results in a disease outcome. However, exposure of a given individual to several causal agents may increase his/her risk of disease in a synergistic, additive or antagonistic manner. Equally, different individuals may respond differently to specific exposures depending on their individual susceptibilities, on the promotional effects of the exposures, or on other contributory factors.
>
> Given the many combinations and permutations of occupational exposures, it is not uncommon for the WSIB decision-maker to be faced with adjudicating a claim for which there is no specific relevant scientific evidence. In other circumstances, the scientific evidence may be weak or contradictory" (last paragraph on page 20 and first paragraph on page 21).

This issue has been a challenge for the WSIB and noted in other reviews as well, with the exception of the Speer/Dykeman report. Recommendations from some of those reviews include additional training for WSIB decision-makers and policy development to address this complex issue.

Dr. Demer's report contains a section titled 'The combined impact of multiple causes' noting that such a combination can range from additive to multiplicative. It was also noted that most epidemiological studies don't address the issue of multiple exposures combining to cause diseases, and in the absence of evidence to show that a combined effect is multiplicative that the exposures should at least be presumed to have an additive effect. A practical example of such consideration in a claim can be found at paragraph 10 in WSIAT Decision No. 2863/17 (footnote 14). That type of explanation regarding the consideration of the effects of multiple exposures from the workplace hasn't been consistently part of the decision letters of the WSIB.

Workers aren't lab rats that are being subjected to one substance to observe its effects, they are fathers, mothers, sons, and daughters working to provide for themselves and/or their families. That work far too often involves exposures to multiple carcinogens, toxins, irritants, chemicals, etc. in various forms (gas, liquid, solid, etc.) with different

exposure routes (skin contact, inhalation, ingestion, etc.). The cause of their disease(s) would likely be multifactorial and there needs to be full consideration of all potential factors, including their interaction(s) with each other.

Conclusions:

ONIWG and the various reviews referenced herein have made several important recommendations, but there hasn't been any action taken. We recognize that two of the referenced reports were commissioned by the government and that the WSIB might take the position that the follow-up for those reports is the government's responsibility. However, the impact from the lack of action (dating back to before the ODAP report) has been borne by the victims of occupational disease.

While we have representatives in this group from most of the occupational disease clusters in this province, we recognize that we are not the voice for all victims of occupational disease. We are confident that all concerned would like to see improvements in the compensation system and many would like the opportunity to have their voices heard. COVID-19 has dominated the news lately, but it hasn't stopped the government from having consultations, including health, safety, and workers' compensation issues. Therefore, we are calling on the government as well as the WSIB to hold the necessary consultations to implement our recommendations and to hear the voices of all injured workers regarding the recommendations of the recent WSIB reviews.

We look forward to your response to this call for change and we also look forward to participating in the consultations required to implement recommendations in the very near future.

Appendix A:

Additional materials mentioned and web link.

- Workplace Safety and Insurance Act https://www.ontario.ca/laws/statute/97w16
- Schedule 3 of the WSIA https://www.ontario.ca/laws/regulation/980175#BK13
- Schedule 4 of the WSIA https://www.ontario.ca/laws/regulation/980175#BK14
- WSIB Administrative Practice/Adjudicative Advice Documents https://www.wsib.ca/en/businesses/claims/administrative-practice-documents
- Ontario Cancer Research Centre *Burden of Occupational Cancer Project* https://www.occupationalcancer.ca/burden/
- International Agency for Research on Cancer (IARC) https://www.iarc.who.int/
- Ontario Network of Injured Workers Groups (ONIWG) https://injuredworkersonline.org/injured-workers-community/ontario-network-of-injured-workers-groups-oniwg/
- Canadian Cancer Society https://www.cancer.ca/en/get-involved/events-and-participation/home-march/?region=on
- Supreme Court of Canada Decisions https://www.canlii.org/en/ca/scc/
- Workplace Safety and Insurance Appeals Tribunal Decisions https://www.canlii.org/en/on/onwsiat/
- Workplace Safety & Insurance Board Policies https://www.wsib.ca/en/policy/operational-policy-manual

Addendum #3

WSIB ONTARIO CSPAAT

Occupational Disease Policy & Research Branch

To: Irene Hocko, Assistant Director, Occupational Disease Services

From: Starly Catli, Senior Scientist

Date: May 27, 2009

Subject: **Interpretation of Policy 16-02-11, Gastro-Intestinal Cancer-Asbestos Exposure**

Thank you for your inquiry on the entitlement criteria for gastro-intestinal (GI) cancers (including cancers of the esophagus, stomach, small bowel, colon and rectum) and exposure to asbestos (Policy 16-02-11, Gastro-Intestinal Cancer-Asbestos Exposure). Clarification will be provided for the section of the policy on entitlement criteria:

> "Based on medical studies, claims are favourably considered if the following circumstances apply
> - there is a **clear and adequate** history of occupational exposure to asbestos dust, and while such occupational exposure cannot be quantitatively described, it should be of a **continuous and repetitive** nature, and should represent or be a manifestation of the major component of the occupational activity, AND
> - there is a minimum interval of 20 years between the first exposure to asbestos and the diagnosis of gastro-intestinal cancer."

The plain reading of the WSIB documentation that exists established that the authors of the policy intended that regular, significant exposures to asbestos would provide sufficient exposure to explain the development of GI cancers.

1. "Clear and adequate" was intended to refer to known asbestos exposure and not exposure that is hypothetical or speculative. The presence of airborne asbestos in the workplace in the vicinity of the worker must be established.
2. "Continuous" refers to ongoing exposure, and not a brief exposure period such as six months, unless it included extraordinarily high levels of exposure.
3. The term "repetitive" was used to describe the frequency of exposure, which should be daily or exposures of 3-5 times per week. This term was not intended to refer to a single exposure event or to exposure that was occasional or incidental in nature.
4. Consistent with the continuous and repetitive nature of the exposure, asbestos exposure must be a major component of the occupational activity.

The exposure circumstances described in Policy 16-02-11 for entitlement reflect the state of epidemiological evidence and the knowledge of asbestos exposures of the period prior to 1976. These epidemiological studies had focussed on worker populations that had experienced a substantial amount of exposure to asbestos (Dupre, Mustard et al. 1984). The intent of the policy was to compensate those claims of workers with high levels of exposure to asbestos.

Prior to 1976, the major cohort studies of asbestos-exposed workers with reported risk estimates for GI cancers were conducted among the following groups of workers:

- Insulation workers (Selikoff, Churg et al. 1964; Elmes and Simpson 1971; Selikoff, Hammond et al. 1972)
- Asbestos manufacturing and mill workers (Enterline, DeCoufle et al. 1972)
- Asbestos mine workers (McDonald 1972)
- Asbestos product workers (Enterline 1965; Mancuso and el-Attar 1967)
- Asbestos textile workers (Newhouse 1972)

These workers were exposed to high levels of asbestos on a continuous and regular basis.

In general, the scientific literature on asbestos and cancer sites other than lung cancer during this era was limited, and could not be used to elucidate guidance on the quantifiable level or duration of occupational exposure to asbestos that could contribute to the development of GI cancer. Hence, additional guidance has been requested on the sufficient level and duration of asbestos exposure specific to each of the individual cancers covered by Policy 16-02-11, i.e. cancers of the esophagus, stomach, small bowel, colon and rectum, using the recent scientific literature.

Summary of the Recent Scientific Literature

Policy 16-02-11, Gastro-Intestinal Cancer-Asbestos Exposure, specifies gastrointestinal cancer as an accepted occupational disease in asbestos workers whose major occupational activity involves clear and repetitive occupational exposure to asbestos; however, this policy is silent on duration of employment. Nevertheless, decision-makers are directed to adjudicate all claims on their individual merits, which requires consideration of all facts and circumstances relating to the case. This includes current scientific information (See Appendix I for details).

Epidemiological evidence has consistently shown an association between occupational exposure to asbestos and an increased risk of lung cancer. Based on two published reviews of the current scientific literature,

- there is **limited** evidence for increased risks of stomach and colorectal cancers (including colon and rectal cancers) but the risks are much weaker in magnitude than that for lung cancer.
- The evidence is **inadequate** to infer the presence or absence of a causal relationship between asbestos exposure and esophageal cancer.

For stomach cancer risk, the majority of studies did not show a dose-response relationship with either cumulative exposure to asbestos or duration of employment. The few positive findings were equivocal, and not helpful for determining a cumulative exposure or duration of employment that may contribute to the development of stomach cancer. One such positive finding from the cohort study of Quebec miners and millers had suggested a cumulative exposure that was several orders of magnitude more severe than any exposure levels observed in recent times. Although insufficient for elucidating additional guidance for stomach cancer, this result does support the premise that longer durations of exposure to very high levels of asbestos increase the risk of developing stomach cancer.

Overall, there was scanty evidence for a dose-response relationship between estimates of asbestos exposure and colorectal cancer risk. Suggestive evidence of a statistically significant trend of increasing colorectal cancer risk with increasing cumulative asbestos exposure was observed in one study, which also reported a three-fold excess risk in the highest exposure category. This finding is suggestive of an excess risk of colorectal cancer for occupations with high levels of asbestos exposure (e.g. asbestos miners and millers, asbestos production workers, insulators, etc.), and with considerable durations of exposure.

Evaluation of the link between individual cancers of the gastrointestinal tract and asbestos exposure is difficult due to the limited scientific evidence available for each specific cancer. Examining the broader group of gastrointestinal cancers (a category including cancers of the esophagus, stomach, colon, rectum and pancreas) increases the number of cases in each cohort and may increase the statistical power to detect elevated risks and dose-response relationships.

Eighteen dose-response analyses of gastrointestinal cancer risk and cumulative asbestos exposure were found. Most results based on more than two exposure levels did not have discernible trends. Five studies of asbestos workers had found a positive trend of increasing GI cancer risk with increasing cumulative exposure. Two of these results reached statistical significance. These selective results suggest risks are high among those with high cumulative levels of asbestos exposure.

Interpretation of the policy

The scientific literature published since 1976 on asbestos exposure and specific cancers within the gastrointestinal tract continues to be limited. The level and duration of asbestos exposure necessary for the development of specific gastrointestinal cancers, i.e. stomach, colorectal, colon and rectal cancers, remains unquantifiable. There is suggestive evidence of an increased risk of gastrointestinal cancer for those with high cumulative exposure to asbestos. This result together with the general understanding of asbestos toxicology continues to support the interpretation of OPM Policy 16-02-11 that gastrointestinal cancer is an accepted occupational disease in asbestos workers whose major occupational activity involves clear and repetitive high levels of occupational exposure to asbestos for long durations.

In the absence of suitable exposure-response evidence specific to stomach, colorectal, colon or rectal cancers, the results for the broader group gastrointestinal cancers are the most relevant, and could be extrapolated to apply to these cancers individually. However, it is important to note that such extrapolations involve considerable uncertainty. The greatest uncertainty would involve any extrapolation for esophageal cancer.

APPENDIX I - GASTROINTESTINAL CANCER AND ASBESTOS EXPOSURE

Asbestos

Asbestos is a generic term applied to a number of hydrated mineral silicates, including amosite, chrysotile, tremolite, actinolite, anthophyllite and crocidolite (Hathaway and Proctor 2004). Epidemiological studies of asbestos-exposed workers and supporting animal studies have indicated that inhalation is the principal route of exposure (Agency for Toxic Substances and Disease Registry 2001). Depending on the size and shape of inhaled asbestos fibres, deposition may occur in lung tissues. Some fibres are removed by mucociliary clearance or macrophages while others may remain in the lungs for extended periods. Hence, inhalation exposure is generally regarded as cumulative, and exposures are typically expressed in terms of concentration of fibres over time or fibre/mL-years. Studies have shown that asbestos exposures may lead to the development of pulmonary disease, including asbestosis, lung cancer and mesothelioma of the pleura and peritoneum. A number of researchers have found that the occurrence of asbestosis and lung cancer correlates with cumulative exposure.

For lung cancer, the magnitude of the risk appears to be a complex function of a number of parameters, the most important of which are: (1) the level and the duration of exposure; (2) the time since exposure occurred; (3) the age at which exposure occurred; (4) the tobacco-smoking history of the exposed person; and (5) the type and size distribution of the asbestos fibers (Agency for Toxic Substances and Disease Registry 2001). In general, diseases from asbestos exposure take a long time to develop. Most cases of lung cancer or asbestosis in asbestos workers occur 15 or more years after initial exposure to asbestos.

For the esophagus, stomach, and intestines, fibres cleared from the respiratory tract can be swallowed and can move through the gastrointestinal tract, with the potential for interaction with target cells in the epithelium. However, for non-respiratory organs, concepts of dose are not well developed and related experimental and observational data are limited (Institute of Medicine 2006).

The following document explores the recent scientific literature for additional guidance on the level and duration of asbestos exposure related to the development of cancers of the esophagus, stomach, colon and rectum.

Literature Search

Consideration of the epidemiological literature on gastrointestinal (GI) cancer risk with exposure to asbestos included examination of the results from two recent reviews, namely the reviews by Gamble (2008) and the Institute of Medicine (IOM) (2006). In addition, the results from a recent review on stomach cancer and asbestos exposure commissioned by the WSIB were also evaluated (Finkelstein 2006). These three reviews will be summarized below. Studies that had investigated dose-response gradients between asbestos exposure and gastrointestinal cancers will also be summarized. The studies from these reviews were supplemented by a search of recent studies (published up to April 30, 2009) identified in Pubmed.

The discussion sections of this report occasionally include the term "significant" to describe findings. This refers exclusively to the results of statistical testing, and not to biologic or causative significance.

Asbestos and Gastrointestinal Cancer - Systematic Reviews

Two published meta-analyses examined groups of workers predominantly exposed to asbestos (Institute of Medicine 2006; Gamble 2008). There is some overlap in the published studies reviewed

between the two meta-analyses; however, the review by the IOM (2006) had also included results for esophageal cancer, whereas the review by Gamble (2008) did not.

The review by Gamble (2008) had searched Toxline and Medline for cohort and case-control studies of asbestos-exposed workers where mortality or incidence of stomach, colon, rectal or colorectal cancers were reported. The bibliographies from individual studies and reviews were also searched for additional studies that had not been identified by the literature search. Only the latest updates of relevant studies were included. Three causal criteria were used to assess the weight of the evidence, including strength of association, biological gradient and consistency. Because there were relatively few studies that had assessed dose-response, average risks of lung cancer and mesothelioma were used as exposure surrogates to crudely assess the biological gradient of asbestos exposure and risk of GI cancer.

The investigation by the Institute of Medicine (2006) was conducted by a multidisciplinary committee that included experts in biostatistics, epidemiology, mineralogy, oncology, toxicology and cancer biology. This comprehensive and systematic review examined the cancer risk posed by asbestos at the specified sites in humans and experimental animals. Epidemiological evidence came from cohort and case-control studies, which were classified by method of exposure assessment. Quantitative meta-analysis was performed, yielding summary estimates of cancer risks at each anatomical site. The criteria for causal inference considered included consistency, strength of association, temporality, and the coherence or plausibility of the association. The IOM committee did not attempt to quantify the risk of cancers in relation to magnitude of exposure. However, for studies that examined dose-response relationships, summary estimates were calculated for the extreme exposure categories within the cohorts.

In 2006, the WSIB had commissioned a review of the association between occupational exposure to asbestos and stomach cancer (Finkelstein 2006). This review had examined cohort studies published from 1966 to 2006. Those studies in which there was a statistically significant increase in lung cancer mortality with an SMR of 125 or more were considered to be an asbestos-related "carcinogenic occupational environment" and considered to be an environment where smoking was unlikely to account for the major cause of lung cancer. Effect estimates were combined using methods of meta-analysis.

Results – Stomach Cancer

Gamble (2008)
The review by Gamble (2008) did not report a summary risk for stomach cancer that was elevated (1.01, 95% CI 0.94-1.08). This result was based on 37 study results and 791 cases, and approximately half of the studies had relative risks equal to 1.0 or less. A third of the cases came from two studies (Waage, Langard et al. 1993; Liddell, McDonald et al. 1997). The study by Waage et al. (1993) involved a cross-sectional cohort study in Norway of 21319 males aged 40 years in 1982, and followed to 1990. Of those, 3879 were asbestos exposed, and the reported risk estimate for stomach cancer was not elevated.

The largest cohort study was of 10918 male Canadian chrysotile miners and millers followed from first employment to 1992 (Liddell, McDonald et al. 1997). The SMR for deaths from stomach cancer from 1950 to 1992 was statistically significantly elevated at 1.24 {1.07-1.43, based on 183 cases}[1]. This cohort study is discussed in more detail below. Statistically significant excess risks were reported in a study of Chinese chrysotile factory workers with four-fold and seven-fold stomach cancer mortality risks reported for all workers and male workers, respectively (Pang, Zhang et al. 1997). These estimates

[1] {} indicates that the 95%CI was calculated by the reviewer since they were not reported in the study

were based on 5 cases that had 15 to 25 years of exposure, and latency averaging 22.6 years (range 18-26 years).

When surrogate measures of asbestos exposure were considered, there was no apparent trend of increasing stomach cancer risk with increasing lung cancer risk or mesothelioma incidence (Gamble 2008). Seven cohorts had assessed dose-response associations of stomach cancer risk with some estimate of asbestos exposure, but there was a lack of consistent results. Inconsistent results were also found among four studies that had used qualitative estimates of cumulative exposure.

The reviewers concluded that the evidence published since 1964 "does not support the hypothesis that asbestos exposure causes stomach cancer at concentrations found in today's workplace". The reviewers found no consistent associations, and a lack of consistent dose-response trends.

IOM 2006
The reviewers found that the results from the occupational cohorts suggested a statistically significant increased risk for stomach cancer (summary RR 1.17, 1.07-1.28) based on 42 study populations (Institute of Medicine 2006). Most of the individual cohort estimates exceeded the null value; however, the estimates varied in magnitude. The results from five case-control studies were less consistent (summary RR 1.11, 0.76-1.64). This small increase in risk was influenced largely by two studies with lower-quality exposure assessment with an aggregate estimate of 1.43. The combined RR estimate for those three case-control studies with better exposure assessments was 0.91. The case-control study by Cocco et al. (1994) had suggestive evidence of an increased risk with longer duration of exposure for those with greater than 21 years of exposure to asbestos.

In the dose-response analyses, the summary risk estimates for high versus no/low exposure were similar whether based on the smallest (RR 1.31) or largest (RR 1.33) estimates of risk for the extreme exposure categories in the cohort studies. The reviewers felt that the dose-response results from Liddell et al. (1997) were also noteworthy in addition to the results among UK female asbestos-factory workers (Berry, Newhouse et al. 2000) and for American insulation workers (Selikoff, Hammond et al. 1979).

The largest cohort study consisted of 10918 Quebec chrysotile miners/millers followed from first employment (earliest in 1904) to 1992 (Liddell, McDonald et al. 1997). Updates of this cohort have been reported since 1971. When mortality was examined according to exposure accumulated to age of 55 years, the results were suggestive of a threshold for stomach cancer (Liddell, McDonald et al. 1997). At exposures below 300 mppcf-years, the summary SMR for stomach cancer was 1.16 (0.96-1.39 based on 118 cases), and there was no trend of increasing risk with increasing exposures observed. Between $\geq$300 to 1000 mppcf-years of cumulative exposure, the summary risk estimate was slightly higher at 1.23 (0.78-1.85, based on 23 cases). A three-fold statistically significant increased risk of stomach cancer was found at cumulative exposure above 1000 mppcf-years.

Overall, the IOM reviewers found that the results from the cohort studies suggested a slightly increased risk of stomach cancer compared to the general population (2006). They felt that a number of strong dose-response gradients were observed; however, results from case-control studies were inconsistent. The IOM conclusion was that the evidence is "suggestive but not sufficient to infer a causal relationship between asbestos exposure and stomach cancer".

Finkelstein 2006
This author found that among asbestos-exposed working populations with significant increases in lung cancer, most of the risk estimates for stomach cancer were elevated (Finkelstein 2006). Across all studies there was a significant association between the stomach cancer and lung cancer risk estimates (Pearson's r = 0.59, $p<0.01$). When the results from 29 studies, which had elevated lung cancer risks and that had reported risk of stomach cancer, were combined, the meta-SMR was statistically

significant at 1.19 (95% CI 1.09-1.32). The most influential study in this analysis was the cohort study of mortality among Quebec chrysotile miners (Liddell, McDonald et al. 1997) because of its large size. In contrast, eight studies of asbestos-exposed workers were found in which the absence of a significant increase in lung cancer suggested the absence of a "carcinogenic environment". When these results were combined, the meta-SMR was 0.86 (0.70-1.08).

Five case-control studies were reviewed. Four of these studies had collected data on potential confounders and reported adjusted risk estimates. The results from the case-control studies were mixed, and the combined odds ratio was 1.11 (0.76-1.64).

The issue of dose-response was examined in nine studies. Only 3 studies had quantitative estimates of exposure (Hughes, Weill et al. 1987; Liddell, McDonald et al. 1997; Reid, Ambrosini et al. 2004). An American study did not find a trend of increasing risk with increasing exposure in a New Orleans asbestos cement factory (Hughes, Weill et al. 1987). In Australian crocidolite miners, the association between cumulative exposure and stomach cancer was borderline statistically significant ($p = 0.057$) in a regression model (Reid, Ambrosini et al. 2004). And again, in the largest study of Quebec chrysotile miners, the SMR for stomach cancer was significantly higher among miners with greater dust exposure (Liddell, McDonald et al. 1997). In general, the results for dose-response were difficult to assess because of the small numbers of deaths observed and low statistical power. The author felt that this evidence was consistent with a dose-response relationship between asbestos exposure and stomach cancer risk.

Overall, this author concluded that workplace exposure to asbestos should be a factor considered in the development of stomach cancer.

Table 1. Summary of Systematic Review Results for Stomach Cancer

	Gamble 2008	IOM 2006	Finkelstein 2006
Number of Studies reviewed	37 cohort and case-control study results with 791 cases	42 cohorts in 36 citations 5 population-based case-control studies	29 results where lung cancer significantly elevated 5 case-control studies
Summary Risk Estimate	RR 1.01, 0.94-1.08	Cohort RR **1.17, 1.07-1.28** Case-control RR 1.11, 0.76-1.64	Meta-SMR **1.19, 1.09-1.32** Meta-OR 1.11, 0.76-1.64
Dose Response	For cumulative exposures ≥1000 mppcf-years SMR 3.21 [17] Note: 1000 mppcf-years is roughly equivalent to 350 times the asbestos TLV of 0.1 f/ml over a 40-year working lifetime (assuming that 1.4 f/ml is approximately equivalent to 1 mppcf)	High vs. none Lower bound RR 1.31, 0.97-1.76, 12 study populations Upper bound RR 1.33, 0.98-1.79, 13 study populations Some studies had reasonably prominent DR gradients, RR values exceeding 3.0	Only 3 studies provided quantitative information 2 mining studies reported that workers with higher exposure had higher risk. No trend with exposure in an American asbestos-cement study
Overall Review Conclusion	Weight of evidence suggests that at current exposure limits for asbestos, there is no increased risk of stomach cancer	Generally consistent pattern of fairly modest risk increases Some evidence of dose-response trends. Biologic plausibility did not strengthen the case for causation. Suggestive but not sufficient.	Overall increase is much lower in magnitude for stomach cancer than for lung cancer Associations with dose-response factors, i.e. length of exposure, are weak; however, miners with heavy exposure for a substantial period of time may be at increased risk

IARC 2009

Recently, IARC reassessed the carcinogenicity of metals, arsenic, dusts and fibres previously classified as "Group 1 – Carcinogenic to Humans", and identified additional tumour sites and mechanisms of carcinogenicity (Straif, Benbrahim-Tallaa et al. 2009). The Working Group concluded that the evidence for asbestos exposure and stomach cancer was "limited"[2].

Summary

The two reviews by IOM (2006) and Finkelstein (2006) confirm the presence of a weak to modest elevated risk of stomach cancer with exposure to high levels of asbestos. As well, IARC has recently classified the evidence for an association between asbestos and stomach cancer as "limited" (Straif, Benbrahim-Tallaa et al. 2009). Gamble (2008) did not conclude an association between asbestos exposure and stomach cancer risk is causal at exposure levels found in today's workplaces.

The majority of studies did not show a dose-response relationship between stomach cancer risk with either cumulative asbestos exposure or duration of employment. The few positive findings were equivocal, and not helpful in elucidating additional guidance. One positive result was from the large Quebec cohort study of chrysotile miners and millers.

The cumulative exposure results from the study of chrysotile miners and millers (Liddell, McDonald et al. 1997) were:

- <300 mppcf-years - no trend of increasing risk with increasing exposures observed.
- ≥300 to 1000 mppcf-years - summary risk estimate was slightly higher at 1.23, lacking statistical significance
- ≥1000 mppcf-years - three-fold statistically significant increased risk of stomach cancer

The measurement unit of mppcf comes from the use of midget impingers to measure asbestos dust concentrations prior to 1964. Converting particle concentrations from midget impingers (mppcf) to membrane filter fibre exposures (f/ml) (which is the current measurement unit) is problematic since conversion factors vary with the distribution of fibre thickness and length in the environment of interest (Institute of Medicine 2006). The most valid approach to conversion involves taking measurements simultaneously under the same conditions using the different methods for which conversion factors are needed. Using this approach still results in a range of conversion factors across facilities in an industry; hence, there is no single conversion factor that can be applied to mine and mill data in general (Gibbs 1994). For this cohort of Quebec miners and millers, conversion factors were derived for individual jobs using 10205 particle count samples and 11819 fibre count samples, and an overall conversion factor of 3.64 was determined. Hence, 1000 mppcf-years would be equivalent to a cumulative exposure of 3640 f/ml-years or equivalent to exposures of 910 times the current asbestos TLV of 0.1 f/ml for a 40-year working lifetime. The authors noted that exposures at even 300 mppcf-years or 1000 f/ml-years would be several orders of magnitude more severe than any exposure levels that have been seen for many years.

The review by Gamble (2008) had interpreted this result from Quebec miners and millers using a different conversion factor. This author felt that 1000 mppcf-years would be roughly equivalent to exposures of 350 times the asbestos TLV of 0.1 f/ml over a 40-year working lifetime, assuming that 1.4 f/ml is approximately equivalent to 1 mppcf.

Regardless of which conversion factor is used, the result from the study by Liddell et al. (1997) suggests a level and duration of exposure to asbestos for the development of stomach cancer that is

[2] Limited evidence of carcinogenicity: A positive association has been observed between exposure to the agent and cancer for which a causal interpretation is considered by the Working Group to be credible, but chance, bias or confounding could not be ruled out with reasonable confidence.

extremely high. However, this result does support the premise that longer durations of exposure to very high levels of asbestos increase the risk of developing stomach cancer.

Results – Colorectal Cancer

Gamble (2008)

The review by Gamble (2008) reported an overall risk for colorectal cancer that was less than unity (meta-SMR 0.97, 0.89-1.05). This result was based on 22 study results and 599 cases, and approximately half of the studies had relative risks less than 1.0. The largest study of 10918 male Canadian chrysotile miners and millers also reported a risk less than unity (Liddell, McDonald et al. 1997). Only two studies reported significant results that ranged from 1.38 to 2.12 (Selikoff, Hammond et al. 1979; Seidman, Selikoff et al. 1986).

Six studies had assessed dose-response associations of colorectal cancer risk with some estimate of asbestos exposure, but there was a lack of consistent results (Gamble 2008). Due to small numbers of cases, two studies had estimates that were too unstable to evaluate trends (Amandus and Wheeler 1987; Hughes, Weill et al. 1987). Two studies with semi-quantitative exposure categories did not find risk associated with moderate or high asbestos exposure (Demers, Burns et al. 1994; Meurman, Pukkala et al. 1994). Inconsistent results were found among studies that had used quantitative estimates of cumulative exposure.

The study by Albin et al. (1990) included 1929 male Swedish asbestos cement workers who were employed between 1907 and 1977, and were followed to the end of 1986. The estimated median cumulative exposure was 2.3 fibre/ml-years. The reference population was made up of 1233 industrial workers and non-case referents. A minimum latency of 20 years since start of employment was used in the analysis. The overall risk estimate for lower gastrointestinal (GI) cancer (including colon and rectal cancers) was elevated (RR 1.5, 0.7-3.0, based on 26 cases), but was not statistically significant. The risk for lower GI cancer showed no relation with duration of employment. However, analysis for cumulative exposure showed a statistically significant trend (p=0.04) of increasing risk with increasing exposure. The risk was statistically significant at the highest exposure category of greater than 40 fibre-years/ml (RR 3.4, 1.2-9.5). All cases but one were verified by histopathological review.

The reviewers concluded that the weight of evidence suggests "asbestos does not cause colorectal cancer" due to consistent lack of association and a lack of dose-response using surrogate exposures as well as individual level exposures.

IOM 2006

Overall, this review found that the results from the occupational cohorts suggested a small statistically significant increased risk for colorectal cancer (RR 1.15) based on 41 study populations (Institute of Medicine 2006). The cohort studies were limited in that they were largely restricted to mortality. The largest excesses of risk were observed in North American insulation workers (Selikoff, Hammond et al. 1979) and British male insulation workers (Berry, Newhouse et al. 2000). Many studies did not report increased risks.

The results from eleven case-control studies included one study that had only reported on rectal cancer and five studies that had investigated colon cancer only. The separate results for colon and rectal cancers were not combined with the results for colorectal cancer; however, all the results were considered in the review. Thirteen risk estimates for any exposure to asbestos were combined and the summary estimate was 1.16 (0.75-1.29). When the quality of the studies was considered, the summary risk estimate for the colorectal case-control studies with higher quality was null (1.00, 0.75-1.29). The lower-quality studies had a two-fold increased summary risk, and this suggests that studies with less rigorous classification of exposure and without adjustment for confounding were more likely to report associations. The case-control studies evaluating dose response did not find stronger associations for the highest exposed groups.

Overall, the IOM reviewers found that the cohort studies suggested fairly consistent modestly elevated risks of colorectal cancer. However, the results from case-control studies lacked consistency with a range of effects from protective to harmful, and there was an absence of convincing dose-response relationships in either type of study design. The IOM conclusion was that the evidence is "suggestive but not sufficient to infer a causal relationship between asbestos exposure and colorectal cancer".

Table 2. Summary of Systematic Review Results for Colorectal Cancer

	Gamble 2008	IOM 2006
Number of Studies reviewed	22 results with 599 cases	41 study populations 11 case-control studies
Summary Risk Estimate	Meta-SMR 0.97, 0.89-1.05	Cohort RR **1.15, 1.01-1.31** Meta-OR 1.16, 0.90-1.49
Dose Response	6 studies assessed dose-response relationships Due to small numbers many estimates were too unstable to evaluate trends Largest study by Liddell et al., 1997 did not observe any dose-response relationships Albin et al., 1990 observed a significant dose-response trend, which was flat except for a significantly increased risk (RR 3.4) in the highest exposure category of 40+ f/ml-years	High vs. none Lower bound RR 1.24, 0.91-1.69, 13 study populations Upper bound RR **1.38, 1.14-1.67**, 13 study populations
Overall Conclusion	Weight of evidence suggests that asbestos is not linked to colorectal cancer development	Some evidence suggestive for a small increased risk Overall lack of consistency in case-control study results and absence of convincing dose-response Suggestive but not sufficient

IARC 2009

Recently, IARC reassessed the carcinogenicity of metals, arsenic, dusts and fibres previously classified as "Group 1 – Carcinogenic to Humans", and identified additional tumour sites and mechanisms of carcinogenicity (Straif, Benbrahim-Tallaa et al. 2009). The Working Group concluded that the evidence for asbestos exposure and colorectal cancer was "limited". There were members who felt that the evidence may be strong enough to warrant classification as "sufficient"[3].

Summary

The review by the IOM (2006) reported the presence of a weak to modest elevated risk of colorectal cancer with exposure to high levels of asbestos, and concluded that overall, there was a suggestive causal relationship. As well, IARC has recently classified the evidence for an association between asbestos and colorectal cancer as "limited" (Straif, Benbrahim-Tallaa et al. 2009). Gamble (2008) did not conclude there is an association between asbestos exposure and colorectal cancer risk.

There was scanty evidence for the dose-response relationship between estimates of asbestos exposure and colorectal cancer risk. One of the few positive results came from the Swedish cohort study of asbestos cement workers (Albin, Jakobsson et al. 1990). This Swedish cohort study observed a statistically significant trend of increasing risk with increasing exposure. A three-fold elevated risk of colorectal cancer was observed among those cases in the highest exposure category.

[3] Sufficient evidence of carcinogenicity: The Working Group considers that a causal relationship has been established between exposure to the agent and human cancer. That is, a positive relationship has been observed between exposure to the agent and cancer in studies in which chance, bias and confounding could be ruled out with reasonable confidence.

Overall, the evidence is suggestive of a weak to modest excess risk of colorectal cancer for occupations with high levels of asbestos exposure (e.g. asbestos miners and millers, asbestos production workers, insulators, etc.), and with considerable durations of exposure.

Results – Colon Cancer

Due to the difficulty in separating colon and rectal cancer diagnoses, the category "colorectal cancer" is most commonly reported and most reliable. Nevertheless, some studies report separate results for colon and rectal cancers. These results are briefly reviewed below.

Only the review by Gamble (2008) had evaluated the evidence for colon cancer and asbestos exposure. The summary mortality risk was 0.96 (0.87-1.07) based on 16 cohorts and 365 colon cancer cases. Most of the studies had observed small numbers of cases. The largest number of cases was 157 from a population-based survey of Norwegian men with qualitative asbestos exposure info (Waage, Langard et al. 1993). A large number of colon cancer cases (70 in total) were also reported in a Finnish surveillance study (Koskinen, Pukkala et al. 2003).

There were no dose-response evaluations using quantitative measures. Six studies had evaluated colon cancer risk using qualitative estimates of asbestos exposure (Gamble 2008). Notable results included an almost three-fold excess risk among those heavily exposed to asbestos in a nitric acid plant (Hilt, Andersen et al. 1991). A slight excess risk (1.42) of colon cancer was also found among those with more than 30 years since first exposure. A three-fold risk was also reported among female Finnish anthophyllite asbestos miners with a minimum 3 months of exposure and a mean duration of 28 years follow-up (Meurman, Pukkala et al. 1994).

The reviewers felt that the analysis of colon cancer revealed similar results as colorectal cancer, but with less available data and more heterogeneity in the risk estimates.

Summary

The evidence for colon cancer is insufficient to elucidate any additional guidance on the sufficient duration of asbestos exposure for development of colon cancer.

Results – Rectal Cancer

The review by Gamble (2008) was the only one that had evaluated the link between rectal cancer and asbestos exposure. A summary mortality risk of 1.06 (0.94-1.19) was found for 15 cohorts with 291 cases. Five studies had reported mortality risks greater than 1.2. Half of the cases were from the Norwegian population survey by Waage et al. (1993).

Two studies had assessed rectal cancer risk with qualitative estimates of exposure to asbestos. Only one case of rectal cancer was found among female Finnish anthophyllite asbestos miners with a minimum 3 months of exposure and a mean duration of 28 years follow-up (Meurman, Pukkala et al. 1994). Risk estimates were below unity for Finnish women both exposed to low levels and high levels of asbestos (Weiderpass, Vainio et al. 2003).

The reviewers concluded that because of consistently weak associations and lack of any dose-response, the available evidence "does not support the hypothesis that asbestos exposure causes rectal cancer".

Summary

The evidence for rectal cancer is insufficient to elucidate any additional guidance on the sufficient duration of asbestos exposure for development of rectal cancer.

Results – Esophageal Cancer

The available literature on asbestos exposure and the risk of esophageal cancer was not as extensive as for the other cancers (Institute of Medicine 2006). There were more cohort study results available than case-control; however, observed numbers were low, and hence, so was statistical precision. Only the two studies of UK asbestos-factory workers (Berry, Newhouse et al. 2000) and North American insulation workers (Selikoff and Seidman 1991) reported increased risks of esophageal cancer with any asbestos exposure. There was suggestive evidence of a dose-response in Finnish anthophyllite miners (Meurman, Pukkala et al. 1994) and UK textile workers (Peto, Doll et al. 1985). The summary risk estimate for 25 study results on esophageal cancer with any exposure to asbestos was near unity (RR 0.99, 0.79-1.27).

Only 3 case-control studies were included in the analysis (Institute of Medicine 2006). Two studies were large, and had adjusted for smoking, alcohol consumption and other risk factors (Gustavsson, Jakobsson et al. 1998; Parent, Siemiatycki et al. 2000). The Canadian case-control study of men in Montreal found a small excess risk in esophageal cancers, which decreased slightly when substantial exposure was considered (Parent, Siemiatycki et al. 2000). No association was found with high or low exposure in the Swedish study of occupational exposure and squamous-cell esophageal cancer (Gustavsson, Jakobsson et al. 1998).

Overall, the results from 25 separate cohorts were mixed. And the three case-control studies reviewed did not have consistent results. What little information there is from animal experiments does not support biological activity at this site. Based on this evidence, the IOM had concluded that the evidence is inadequate to infer the presence or absence of a causal relationship between asbestos exposure and esophageal cancer.

Summary

The evidence reviewed is inadequate to infer the presence or absence of a causal relationship between asbestos exposure and esophageal cancer.

Results – Gastrointestinal Cancers

Evaluation of the link between individual cancers of the gastrointestinal tract and asbestos exposure is difficult due to the limited scientific evidence available for each specific cancer. As a result, the possible guidance that can be gleaned from this information is limited. Examining the broader group of gastrointestinal cancers (a category including cancers of the esophagus, stomach, colon, rectum and pancreas) may provide additional information for determining risk with duration of exposure.

Eighteen cohort studies conducted dose-response analyses based on duration of exposure and/or cumulative asbestos exposure (See Appendix II for the summary table of results). The following summarizes the results by duration of exposure, followed by cumulative exposure.

Duration of Exposure
Eleven of the cohort studies had examined gastrointestinal cancer risk by duration of exposure. Ten of the eleven studies had more than two levels of duration, but did not report any significantly elevated risks or trends.

Cumulative Exposure

Twelve of eighteen analyses for cumulative exposure had more than two exposure levels. However, no clear trends were found (including among the 5 largest studies). Five of the twelve studies found suggestive evidence of a positive trend of increasing gastrointestinal cancer risk with increasing cumulative exposure. Three studies showed no trend using statistical testing:

McDonald (1983)[4]	
f/mL-yrs	GI SMR
<14	90 [26]
14<28	131 [8]
28<56	80 [5]
56<112	219 [8]
≥112	237 [7]

Albin (1990)	
f/mL-yrs	RR
<15	1.0 NS[5]
15-39	1.4 NS
40+	1.8 NS

Brown (1994)	
f/mL-yrs	GI SMR
<2.74	70 NS [2]
2.74-27.4	39 NS [1]
27.4-109.6	225 NS [4]
109.6-274	390 NS [3]
>274	0 [0.14 exp]

Among these results, the risks begin to increase after more than 40 f/mL-years and are the highest at approximately 100 f/mL-years. However, no individual risk estimates were statistically significant, nor did any trends reach statistical significance.

Two cohort studies did find significant results for cumulative exposure. In the study by Seidman et al. (1986) of New Jersey asbestos factory workers, a statistically significant threefold risk is reported for a cumulative exposure between 50 to 99.9 f/mL-years. Finkelstein (1983; 1984) reported a statistically significant trend of increasing gastrointestinal cancer risks with increasing cumulative exposure in a cohort of asbestos cement workers. The risks peaked in the highest cumulative exposure category of greater than 150 f/mL-years. Air sampling data reported exposures to chrysotile asbestos in 1949 of 8-40 f/mL, in 1969 of 4-20 f/mL, and in 1979, exposures ranged from 0.2-0.5 f/mL.

Seidman (1986)	
f/mL-yrs	GI SMR
<6	166 [6]
6-11.9	66 [2]
12-24.9	274 [9]
25-49.9	40 [1]
50-99.9	304 [7]
100-149.99	140 [2]
250+	196 [2]

Finkelstein (1983; 1984)	
f/mL-yrs	GI SMR
controls	0
≤30	200 [2]
30.1-75	350 [2]
75.1-105	240 [1]
105.1-150	0
>150	1010 [3]

Summary

Examining the broader group of gastrointestinal cancers (a category including cancers of the esophagus, stomach, colon, rectum and pancreas) increases the number of cases in each cohort and increases statistical power. This may improve the ability of these studies to detect elevated risks and dose-response relationships.

The evidence is suggestive of an increased risk of gastrointestinal cancer for those with high cumulative levels of asbestos exposure, i.e. greater than 100 f/mL-years.

[4] Used a factor of 1.4 f/ml to convert the measurement unit of mppcf to fibres/ml
[5] NS = Not statistically significant

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Appendix II. Summary table of study results of gastrointestinal cancer.

1st Auth/ Yr/ Population	Exposure/ Confounders	Cancer Rate* [number of cancers]	Comments/ Dose-Response
Liddell (1997) 10918 men in Quebec chrysotile asbestos mines/mills, followed 1950-1992. 8009 deaths.	Exposures estimated from 1904 (first exposure) to 1985 when the last of the birth-cohort retired. 300 mpcf-yr about the same as 1,000 f/mL-yr. Lung ca SMR= 137[646]. 38 mesotheliomas {0.5% of deaths}	GI not S SMR= 91 [353]	Dose-response pattern for exposure cumulated to age 55: Mpcf-yr GI not S SMR <300 93 [260] 300 <400 73 [11] 400 <1,000 90 [33] ≥1,000 112 [15]
Newhouse (1989) Updates Newhouse 1982 and Berry 1983. 9,104 male and 4,346 female asbestos factory workers in the UK, 1941-1979 followed to 1986. 2,371 male and 571 female deaths.	Exposure primarily to chrysotile, but some crocidolite before 1944. After 1951 exposure improved (up to 2-5 f/mL) until 1970 when levels were 0.5-1 f/mL. Exposures were generally low. 13 mesothelioma deaths {0.4%of deaths}. Lung ca SMR= 119 BS [97].	10-year lag, male: GI SMR= 93 NS [156] 10-year lag, female: GI SMR= 98 NS [46] 20-year lag, 10 years employment, male: GI SMR= 89 NS [56] 20-year lag, 10 years employment, female: GI SMR= 123 NS [13]	From Berry (1983)(follow-up only to 1979) a nested case-control study: 86 GI cancer deaths and 317 controls. Dur. in yrs. GI OR 0-0.9 1 [16] 1-4.9 1.29 [24] 5-9.9 1.49 [9] 10-19.9 1.56 [26] 20-33.5 0.98 [11] Cum. exp. GI OR 0-9 f/mL-yr 1 [36] 10-49 1.18 [40] 50-99 0.83 [9] 100-356 0.24 [1]
Hughes (1987) 6,931 male asbestos cement workers in New Orleans employed 1942 (plant 1) or 1937 (plant 2) to 1970, followed to 1982. 2,143 deaths	Chrysotile the primary asbestos but amosite and crocidolite also used in plant 1, while plant 2 had small amounts of only crocidolite. 1940-1960 mean levels were about 7-10 mppcf. In the 1960s levels were 1-4 mppcf. All ca SMR= 113 S [353], resp. ca SMR= 134 S [155]. 10 mesos {about 0.5% of deaths}.	GI SMR= 89 NS [70] Plant 1, 20-year lag: Dur. GI SMR ≤6mo 87 [11] 7-12mo 56 [2] >1-5yr 104 [6] >5-15 107 [3] >15 89 [4] Plant 2, 20-year lag: Dur. GI SMR ≤3mo 96 [16] 4-12mo 75 [11] >1-5yr 138 [13] >5-15 0[2.3exp] >15 58 [4]	Expected numbers based on Louisiana rates. Plant 1 >6 months, 20-yr lag: Cum Exp GI SMR <6 mppcf-yr 55 [1] 6-24 108 [6] 25-49 108 [3] 50-99 98 [3] ≥100 59 [2] Plant 2 >3 months, 20-yr lag: Cum Exp GI SMR <6 mppcf-yr 77 [10] 6-24 136 [13] 25-49 26 [1] 50-99 83 [3] ≥100 32 [1]

1st Auth/ Yr/ Population	Exposure/ Confounders	Cancer Rate* [number of cancers]	Comments/ Dose-Response
Hodgson (1986) 31,150 male asbestos workers under the Asbestos regulations in the UK, followed 1971-1981. 1,128 deaths. Cross-sectional.	Asbestos exposure is divided into higher exposures before the 1969 regulations and lower exposures after this date. Lung ca before SMR= 130 S [157]. 34 mesotheliomas pre-1969 {3.4% of deaths}, only 1 after 1969.	Total GI SMR= 74 [49]	No SS trends with cumulative exposure: Years GI SMR <10 82[8] 10-20 75[16] 20+ 72 [25]
Melkild (1989) 4,778 male shipyard workers in Norway from 1946-1977. Cancer incidence followed 1953-1986. 716 deaths.	Chrysotile asbestos, welding and paint exposures. All ca SIR= 103 NS [252], lung ca SIR= 169 S [53], and 2 mesotheliomas (SIR= 267){0.3% of deaths}.		Trends by length of employment, with 10-year latency: Years GI SIR <1 yr 79 [7] 1-5 yrs 63 [9] >5 yrs 96 [20]
McDonald (1984) 3,641 male asbestos factory workers in Connecticut from 1938 to 1958, followed to 1977. 1,267 deaths.	Chrysotile, with some anthophyllite. Resp. cancer SMR= 149 [73]. No mesotheliomas.	GI SMR= 114 [59] By service duration: Years GI SMR <1 133 [17] 1<5 128 [16] 5<20 61 [5] ≥20 117 [21]	SMRs lagged by 20 years. Cumulative dust exposure to 10 years before death: mpcf-yr GI SMR <10 103 [34] 10<20 135 [9] 20<40 153 [8] 40<80 120 [5] ≥80 127 [3]
Hughes (1980) 5,645 male asbestos cement plant workers <1940 followed to 1974. 601 deaths.	Mainly chrysotile, but also crocidolite and amosite. Resp ca SMR= 104 [51], mppcf×yr >100 resp ca SMR= 247 S [23]. 2 mesos {0.3% of deaths}.	GI SMR= 50 [25] Cumulative exposure >100 mppcf-yr GI SMR= 21 [2]	20- year lag used for all exposure measurements. No DR trend by cumulative dust exposure: mppcf×yr GI SMR ≤2 21 [2] 2-5 33 [3] 5-10 69 [4] 10-25 81 [6] 25-50 111 [5] 50-100 71 [3] 100-200 0[3.0 exp] 200 31 [2]
McDonald, 1983b 4,137 male asbestos factory workers in Pennsylvania from 1938 to 1959, followed to 1977. 1,400 deaths.	Chrysotile, with some amosite and crocidolite. 14 mesothelioma deaths {1%}. Resp. cancer SMR= 105 [53]	GI SMR= 113 [54] By service duration: Years GI SMR <1 73 [8] 1<5 134 [11] 5<20 106 [11] ≥20 131 [24]	SMRs lagged by 20 years. Cumulative dust exposure to 10 years before death: Mpcf-yr GI SMR <10 90 [26] 10<20 131 [8] 20<40 80 [5] 40<80 219 [8] ≥80 237 [7]

1st Auth/ Yr/ Population	Exposure/ Confounders	Cancer Rate* [number of cancers]	Comments/ Dose-Response
Albin (1990) 1,929 asbestos cement workers in Sweden 1907-1977, mortality followed 1927-1986. 592 deaths in those with >20 yr. latency. A referent cohort was used rather than general population rates (more closely matching the exposed group); 1,233 Swedish men not exposed to asbestos, but with similar entry criteria. Mortality rates stratified by age, year, cumulative dose, and duration of employment (this design is more reliable than SMR).	Mainly chrysotile, some amphiboles. Median cumulative exposure was 2.3 f/mL-yr, with median intensity of 1.2 f/mL. All ca. RR= 160 S [164], resp. ca RR= 180 NS [35]. 13 meso-theliomas with>20 lag {2.2% of deaths, RR= 720}.	Mortality: GI RR= 120 NS [49]	All rates based on a 20-year latency. By cumulative dose: GI cancer deaths: f/mL-yr RR <15 1.0 NS 15-39 1.4 NS 40+ 1.8 NS
Tsai (1996) 2,504 male maintenance workers at a US refinery with potential asbestos exposure, 1948-1989. 725 deaths.	Minimum one year employment. Maintenance around asbestos insulation gave highest exposure. All ca SMR= 85 S [185], lung ca SMR= 81 NS [68]. 5 mesothelioma {0.7% of deaths, SMR 469}.		Digestive organs SMR by duration of exposure: Years SMR 1-4 71 NS [8] 5-19 74 NS [21] ≥20 94 NS [13]
Newhouse (1985) 3,000 male (1933-1964) and 700 female (1936-1942) factory workers and 1,400 laggers in London, followed to 1980. 818 deaths males, 274 deaths females, 157 laggers	Crocidolite used as well as amosite and chrysotile. Heavy exposure, factory closed 1967. 60 male, 25 female and 13 lagger mesotheliomas {7.5% of deaths in males, 9% in females}. Lung ca SMR was about 200 after lagging 20 years and about 500 in severely exposed men and higher still in women.	Male factory workers: Low/mod exp. ≤2 years: GI SMR= 109 [14] Low/mod exp. >2 yrs.: GI SMR= 106 [11] Severe exp. ≤2 years: GI SMR= **162** S [23] Severe exp. >2 years: GI SMR= **181** S [19] Laggers: GI SMR= 136 NS [11]	SMRs lagged 10 years. Female factory workers: low/mod exp. ≤2 years: GI SMR= 143 NS [2] Low/mod exp. >2 years: GI SMR= 200 NS [2] Severe ≤2 years: GI SMR= 160 NS [12] Severe >2 years: GI SMR= 212 NS [7]

Brown (1994) Dement (1994) 3,022 workers in a US textile plant 1940-1965 followed to 1990. 1,259 deaths. Wht men: 607 deaths Blk men: 289 deaths Wht wmn: 363 deaths	Almost entirely chrysotile exposure. Wt men caSMR=146 S[137] Blk men caSMR=77 S[48] Wht wmn caSMR=82 S[98] Lung Cancer SMRs: wht men: 224 S [74] blk men: 70 NS [14] wht women: 207 S [38]	Dement (1994) had: wht men S SMR=0.75 NS [3] wt men GI SMR=0.94NS[23]	Update of Dement 1983. Dose-response trend for lung cancer with cumulative dose. From Dement (1983), possible dose-response with 15-year latency: f/mL-days GI SMR <1,000 70 NS [2] 1,000-10,000 39 NS [1] 10,000-40,000 225 NS [4] 40,000-100,000 390 NS [3] >100,0000 [0.14 exp]
Seidman (1986) 820 male New Jersey asbestos factory workers starting work 1941-1945, followed to 1982. 593 deaths	Amosite asbestos exposure with follow-up 5-40 years after first exposure. All ca SMR= 266 S [197], lung ca SMR= 497 S [102]. 17 mesotheliomas {2.9% of deaths}.	GI SMR= **162** S [32] Years since onset of work: Years GI SMR 5-9 73 NS [2] 10-14 150 NS [5] 15-19 144 NS [5] 20-24 162 NS [5] 25-29 179 NS [5] 30-34 251 NS [6] 35-39 **319** S [6]	Length of time worked: Time GI SMR <1 mo 189 NS [4] 1 mo 89 NS [2] 2 mo 87 NS [2] 3-5 mo **299** S [11] 6-11 mo 0 [2.32exp] 1 year **294** S [7] 2+ yrs 129 NS [6] Cumulative exposure: f/mL-yrs GI SMR <6 166 NS [8] 6-11.9 66 NS [2] 12-24.9 **274** S [9] 25-49.9 40 NS [1] 50-99.9 **304** S [7] 100-149.9 140 NS [2] 150-249.9 74 NS [1] 250+ 196 NS [2]
McDonald (1983) 2,543 male asbestos factory workers in South Carolina from 1938 to 1958, followed to 1977. 863 deaths.	Essentially only chrysotile was used. Resp. cancer SMR= 200 [59]. 1 mesothelioma death {0.1%}.	GI SMR= 152 [26] By service duration: Years GI SMR <1 108 [6] 1<5 146 [5] 5<20 240 [7] ≥20 151 [8]	SMRs lagged by 20 years. Cumulative dust exposure to 10 years before death: mpcf-yr GI SMR <10 115 [14] 10<20 232 [4] 20<40 247 [4] 40<80 384 [4] ≥80 0
Lacquet (1980) 2,650 male Belgium asbestos cement workers with one year between 1963-1977. 201 deaths.	Manufacture using primarily chrysotile, 8% crocidolite, 3% amosite. All ca SMR= 87 [48], lung ca SMR= 94 [21]. One meso {0.5% of deaths}.	GI SMR= **144** S [17]	Dose-response trend not significant: Fibre-years GI SMR 0-49 145 [4] 50-99 76 [1] 100-199 41 [1] 200-399 178 [7] 400-799 200 [2] 800-1599 690 [2] 1600-3200 0 [0.04 exp] Internal case-control analysis confirms lack of DR.

1st Auth/ Yr/ Population	Exposure/ Confounders	Cancer Rate* [number of cancers]	Comments/ Dose-Response
Amandus (1987) 575 male vermiculite miners in US employed >1 year prior to 1970, followed to 1981. 161 deaths.	Average cumulative exposure was 200 f-yr. All ca SMR= 134 NS [38], lung ca SMR= 223 S [20]. 2 mesotheliomas {1.2% of deaths}.	GI SMR= 74 NS [6]	Dose-response analysis, no latency: Fiber-yrs GI SMR <50 56 NS [2] 50-99 166 NS [2] 100-399 0[1.7 exp] >399 122 NS [2]
Finkelstein (1989) 1,657 Ontario automotive friction material workers employed ³1950 for ³1 year, followed to 1985. 563 men with TSFE ³20 years, 104 deaths.	After 1970 chrysotile asbestos <2 f/mL. Results for men with ³20 years since first exposed: All ca SMR= 124 NS [29] Lung ca SMR= 140 NS [11] 1-2 mesotheliomas possible {1.9% of deaths}.	Men ≥20 YSFE: GI SMR= 81 NS [6]	Provincial rates used. Men ³20 years since first exposed by duration of employment : Years GI SMR 1<5 193 [1] 5<20 0 ≥20 92 [5] A case-control analysis found no significant exposure factors between cases and controls.
Finkelstein (1983; 1984) Mortality of 535asbestos-exposed and 2055 nonexposed employees of an asbestos-cement factory 1960-1977. Results quoted for production workers.	Exposures in 1949 were 8-40 f/mL, in 1969 they were 4-20 f/mL, in 1979 0.2-0.5 f/mL chrysotile asbestos. Lung ca SMR= 512 [21] 15 mesos out of 86 production worker deaths {17% of deaths}.	production wrkrs ³20 YSFE: GI SMR= 285 [8]	GI is ICD150-154 (E, S, I, C, R) Trend for D-R is significant: f/mL-yrs GI SMR controls 0 ≤30 200 [2] 30.1-75 350 [2] 75.1-105 240 [1] 105.1-150 0 >150 1010 [3]

SMR — Standardized Mortality Ratio; SMOR — standardized morbidity ratio; SIR — standardized incidence ratio; sMOR standardized mortality odds ratio; PMR — proportional mortality ratio; PCMR — proportional cancer mortality ratio; OR — odds ratio; S - significant, $p < 0.05$; NS -non-significant, $p > 0.05$; BS-borderline significant $p \sim 0.05$. Only statistically significant results are in bold. E — esophagus; S — stomach; D — duodenum; I — intestines; C — colon; R — rectum; C/R — colorectal; GI — gastrointestinal.

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Addendum #4

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Ms. Nicolette Carlan
Chair
Industrial Disease Standards Panel
69 Yonge Street
10th floor
Toronto, Ontario
M5E 1K3

June 22, 1994

Dear Niki:

Linda Jolley asked me to respond to your letter of June 1, 1994 in which you asked about Entry #4 in Schedule 3. You also asked if the Board could provide you with details of our claims experience. Attached is a memo from Reimar Gaertner to me which answers your questions. Please feel free to contact me or Reimar (927-4944) if you have any questions.

Yours sincerely,

Lynn Elinson
Director
Medical and Occupational Disease
Policy Branch

Attachment

cc: L. Jolley

Workers' Compensation Board | Commission des accidents du travail

MEMORANDUM

To: Lynn Elinson, Director
Medical and Occupational Disease
Policy Branch

From: Reimar Gaertner, Toxicologist

Date: June 21, 1994

Subject: **Interpretation of Entry #4 of Schedule 3.**

Linda Jolley has asked our Branch to respond to Nicolette Carlan's request for the Board's interpretation on the above issue. Specifically, Ms. Carlan asked whether skin cancer in workers exposed to metalworking fluids can be considered to be included under entry #4 of Schedule 3.

Entry #4 of Schedule 3 is as follows:

COLUMN 1		COLUMN 2
Description of Disease		Process
4.	Epitheliomatous cancer or ulceration of the skin due to tar, pitch, bitumen, mineral oil or paraffin or any compound, product or residue of any of these substances	Handling or use of tar, pitch, bitumen, mineral oil or paraffin or any compound, product or residue of any of these substances

I have confirmed with Dr. Moira Gribbin that epitheliomatous cancer of the skin is synonymous with skin cancer, both malignant melanoma and malignant neoplasm of the skin. On the other hand, the "mineral oil" description in entry 4 of Schedule 3 only applies to some metalworking fluids. Straight cutting oils and soluble cutting fluids contain mineral oil, but synthetic and vegetable oil metal working fluids contain no mineral oil. Therefore entry #4 of Schedule 3 applies only to those metalworking fluids that contain mineral oil.

The Board's occupational disease database lists 142 claims for malignant melanoma of skin (ICD 172) and malignant neoplasm of the skin (ICD 173). Of these claims for skin cancer, 19 involve exposure to agents described in the process column of entry #4, Schedule 3. Eleven claims specifically mention cutting fluids or lubricating oils and nine of these have been allowed. No claims for malignant neoplasm of the skin of the scrotum (ICD 187.7) is listed in the database.

Addendum #5

LUNG CANCER - COKE OVEN WORKERS - GUIDELINES FOR ADJUDICATION

BACKGROUND

Steel Companies operate coke ovens to convert coal into coke which is in turn used as a fuel for making the steel in blast furnaces. Although there have been no studies done in Ontario industry on coke oven workers, studies done in the U.S.A. indicate that coke oven workers experience an increased incidence of lung cancer compared to other workers in the steel industry.

As early as 1936 in Japan, an apparent increase in lung cancer was noticed in coke workers and in England it was found that workers exposed to coal gas and tar showed a higher incidence of lung cancer.

Our experience in Ontario shows that we accepted about 12 cases of lung cancer from the Consumer's Gas Works in the late 1940's for workers engaged in coal gasification.

Relationship to Cigarette Smoking

Both cigarette smoking and coke oven emissions contain certain hydrocarbon volatiles, some of which are identical. Cigarette smoke also contains Arsenic which in itself, is a known causative agent of lung cancer.

It is a proven fact that most lung cancers are caused by cigarette smoking. There exists strong evidence that cigarette smoking plus exposure to coke oven emissions has an additive effect. It is a proven fact that cessation of cigarette smoking decreases the risk of lung cancer from subsequently developing.

It is reasonable to assume, therefore that cessation of exposure to coke oven emissions will have a similar effect in decreasing the risk of subsequent development of lung cancer. (see Appendix "C").

STUDIES

A study conducted by C.H. Redmond, Ph.D., concludes that coke oven workers with 5 or more years of experience in the coke plant show an increased incidence of lung cancer in comparison to other steel workers.

A study by Dr. J. W. Lloyd, found an overall 2 1/2 fold increase in respiratory cancer among coke oven workers generally. He found a 10 fold increase in lung cancer for top-of-the-factory workers who were employed 5 or more years in that occupation. See attached article (Appendix B) for description of coke oven battery operations and jobs involved.

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LUNG CANCER - COKE OVEN WORKERS - GUIDELINES FOR ADJUDICATION

It is concluded from these studies that there are several carcinogens in the immediate vicinity of a coke oven battery. These substances are produced when coals are baked at high temperatures and there is significant smoke dust and other emissions originating from several operations of the coke ovens. (see page 2 of Appendix A).

The Board has allowed 1 claim for coke oven cancer recently for an employee who worked 28 years in the area of coke ovens, 3 of which were spent top side. (see page 3 Appendix A).

RECOMMENDATIONS

1) That lung cancer for coke oven workers in the steel industry be accepted as an industrial disease under Section 118 and Section 1 (1) (L) of the Act as peculiar to and characteristic of exposure to coke oven emissions in the steel industry.

2) That based on medical studies lung cancer claims be favourably considered when the following circumstances apply:

2.1 Persons employed 5 or more years in full time top side jobs.

2.2 Persons employed as bench level workers in an oven of "old design" and who are in the 40 - 50 year age group and have 10 or more years of exposure.

2.3 Employees who have been non-smokers for a minimum of 10 years preceding the diagnosis of lung cancer and who were working partially on ground and partially at bench level, with 10 or more years exposure.

2.4 Employees who have been non-smokers for a minimum of 10 years duration preceding the diagnosis of lung cancer and who are retired coke oven workers and who have worked 20 or more years at ground and bench level.

2.5 Employees who are smokers or who have stopped smoking in less than 10 years prior to the diagnosis of lung cancer not included in 2.1 or 2.2 and who have worked partially at top side bench, level and ground level for 20 years or more.

3) Claims which do not meet the criteria in "2" be individually judged on their own merits in view of the variations in exposures which could cause lung cancer and where it seems reasonable that the lung cancer resulted from exposure to coke oven work in the steel industry, consideration be given to these cases. The benefit of reasonable doubt applies.

APPENDIX A - Dr. C. Stewart's I.D.C. of April 30, 1975
APPENDIX B - Article from "Job Safety and Health" describing the operations of coke ovens in the steel industry.
APPENDIX C - Dr. C. Stewart's I.D.C. of December 1, 1975

January 5th, 1976.

TO Mr. J. MacDonald, Director, Claims Adjudication Branch,

FROM Dr. C. Stewart, Chest Disease Consultant, Medical Branch,

DATE April 30, 1975.

SUBJECT Lung Cancer - Coke Oven Workers

There have been no studies done in Ontario Industry on coke oven workers, although I believe that one such study was started in the early 1960's, but was inconclusive. I have talked to Dr. R.B.Sutherland, on this score and he informs me that the lack of records was instrumental in aboarding the studies. Stelco, for one, apparently destroyed all their personnel records.

→ Judging from the statements of the plant safety compensation officer from Algoma Steel, coke ovens in Ontario don't really differ from those in the U.S.A., and it is from the later industries that many studies have been completed and publicized. Of course, there are other studies too, done on coke oven workers in European countries.

A brief look at some of these studies is warranted.

1) C. H. Redmond, P.H.D., University of Pittsburg. As far back as 1953, studies of 58,000 men employed in seven Allegheny county steel plants, showed that coke oven workers experienced a high mortality from lung cancer, with the risk of being directly related to the proximity of the workers to the coke ovens and the length of time exposed.

This report was recently updated and the findings were as follows:

(a) All coke workers with 5 or more years of experience in the coke plant has excesses in mortality due to lung cancer, as well as cancers in the kidney and prostate occurring in both oven and non-oven workers. Cancers of the digestive system are shown to be significantly increased in non-oven workers.

2) Edward P. Radford, M.D., Johns-Hopkins University, has begun studies on coke oven workers in plants not included in the studies by Redmond and early results suggest that cancers of the respiratory system, bladder ← and kidney are increased, but these excesses are not restricted solely to coke oven workers, but applied generally to all workers in the steel industry.

Continued...

The study suggests that carcinogenic agents may be more prevalent in steel making than has been previously supposed.

3). J.W. Lloyd, M.D., Long Term Mortality Study of Steelworkers in 1971. Dr. Lloyd found overall a 2 1/2-fold increase in respiratory cancer among coke oven workers generally and a ten-fold increase in lung cancers for top-of-the-factory workers who are employed 5 or more years in this occupation.

Dr. Lloyd's studies have been most widely quoted.

It is now widely agreed that there are at least one and probably several carcinogens in volatile form at an immediate vicinity of coke oven battery. These volatile substances are produced when bituminous coals are baked at high temperature in the absence of air. The object being to drive off most of the volatile matter, which constitute about 30% of the weight of the coal. Significant smoke dust and other emissions originate from the following operations:

(a) coal cleaning and preparation.

(b) charging of coal into red-hot ovens.

(c) oven door and lid leakage during the carbonization period.

(d) venting of combustion products to the atmosphere.

(e) pushing the coke out of the ovens.

(f) quenching the hot coke.

The chief pollutants would be dust, sulphur dioxide, benzene, ammonia, carbon monoxide, hydrogen sulphide, cyanide and phenols.

COMMENTS ON LUNG CANCER

As early as 1936, Japanese workers noticed apparent increase in lung cancer in coke workers and gas generator workers.

In the same year, English workers found the workers exposed to coal gas and tar, and tended to show increase prevalents to lung cancer.

This is in line with our own experience in Ontario with respect to the Consumer's Gas works, where we accepted about 12 cases of lung cancers in workers engaged in coal gasification, in the late 40's.

There is evidence to show that the higher the temperature used in a coke oven to carbonize coal, the greater the chance of lung cancer.

THE DAVID SMITH CLAIM - #10011032

His experience was as follows:

(a) he worked 28 years in the coke ovens.

(b) 3 years were spent topside and 23 years at the bench level.

(c) there is a statement from the company in a letter to us of September 23, to the effect that "during his work in coke ovens he would have been exposed to percentages of coke oven gas, along with some particulate matter." The gas fumes would result from door leakages, lid leakages, and from stand-pipes. The particulates would include dust from coal and coke. The letter went on to state that the work duties on the topside would have doubled the exposure to those at the bench level.

From the job classification break-down given to us by the company, we can readily see that Mr. Smith as a pusher helper, door pusher slide, and door machine operator, would have been exposed to the "pushing" emissions, which occur when the oven contents are dumped into the quench car.

As a pusher operator, the company's job classification includes a description of the surroundings - "works in cab, extreme heat, dust and fumes at times."

Continued...

As a door cleaner,he would also "be exposed to extreme heat approaching the point of endurance, extreme conditions of dust, dirt and fumes."

Again, as a door machine operator, he would be "exposed to extreme heat, dust and fumes. Works outside in all weather."

Finally, as a stand-pipe man working topside, he would "be outside in all weather conditions and exposed to heat, fumes, smoke and pitch of intense degree and for considerable time."

CONCLUSIONS:

Most studies of coke oven workers in different countries clearly show an increased incidence of lung cancer in the topside workers. The most widely quoted study in this respect is by J. W. Lloyd, in the U.S.A. "Long Term Mortality Study of Steel Workers Respiratory Cancer in Coke Plant Workers". He found that there was a ten fold increased risk of lung cancer, in men employed 5 or more years at full time topside jobs.

Mr. Smith spent 3 years in a full time topside job, but was also exposed at least to 22 years of moderate exposure at bench level. In my opinion, the combination of the two adds up to the equivalent of 5 years or more at the topsode level and it seems reasonable, therefore, to accept this claim.

RECOMMENDATIONS:

In future lung cancer claims from coke oven workers, the following criteria should be considered:

(a) age at first appearance of primary lung cancer.

(b) Duration of exposure.

(c) Job Description
-topside?
-bench level?
-gound level?

Continued...

UNITED STEELWORKERS USW DISTRICT 6

(d) Smoking history.

(e) coke oven - old?
- new?

CONSIDERATIONS:

1) Generally speaking, coke oven workers at ground level are not thought to be at significantly increased risk. Therefore, lung cancer in the 50 and 60 age group, particularly in a smoker, would not have much merit.

2) Lung kidney or bladder cancer in a topside worker, with 5 years or more exposure, accompanied by a latent period of 10 years, would almost certainly be acceptable.

3) Lung cancer in a bench level worker, in an oven of old design in the 40 to 50 age group, with 10 to 20 years exposure should receive serious consideration.

4) Lung cancer in a non smoker, working partly on ground, partly in the bench level, with 10 to 20 years exposure and in 45 to 55 age group, should receive serious consideration.

5) Lung cancer in the 60 to 80 age group, in a retired coke oven worker would appear compensable if:

(a) a non smoker, worked 20 to 30 years at ground and bench level, and in an oven of old design.

(b) a smoker if he worked partly in bench level, partly topside and partly ground level for 20 to 30 years.

These suggested criteria could be subject to comment by Medical Officers of the Department of Health and the companies involved. However, since no studies exist in Ontario coke oven workers, no specific criteria of acceptance can be formulated.

C. Stewart, M.D.,
CS*sn

Controlling Coke Oven Emissions

by George Clack

The word you hear from the men who work on the coke ovens is "hell": Howard Holmes—safety committee man at U.S. Steel's Clairton, Pa., works: "From the top of the valley at night, it's like looking down into hell."

Willie Ford—Clairton coke worker: "All of 'em come here. You had the county commissioner, he come here. You had some senator from New Jersey, I think. He come here. Well, you know what they say, 'Ain't nothing but a hell-hole, and I wouldn't work there.' So what? Everyday I'm still going across the tracks."

Charles Stokes—union grievance man at Clairton: "The men around here say, 'Don't be scared of dying. You been to hell already on the ovens.'"

Their description isn't just the usual griping against the company and the job. As a daily matter of course, a coke oven worker faces clouds of black coal smoke which may obstruct his vision in a dangerous area and can make him feel, in the words of one worker, "like somebody dumped a shovel of sand in your nose." Summer and winter he must work in close proximity to 2500°F oven openings while breathing assorted mixtures of escaping fumes and vapors. The tops of the ovens themselves are so hot that lidmen, who regularly tend this area, wear thick, wooden-soled shoes in addition to fireproof suits, face shields, and respirators. Physically unpleasant as these working conditions are, the scientific evidence which indicates that coke oven workers face unusually high risks of death from cancer is far more disturbing.

Medical researchers have recognized for a long time that some element in the coal tar products released when coal is carbonized can cause cancer in man. As early as 1775 Percivall Pott pointed out cancer of the scrotum as a disease peculiar to London chimney sweeps and attributed it to soot lodging in the folds of their skin. In the second half of the 1800's, physicians began to discover evidence of this so-called "chimney sweeps' cancer" among trades as diverse as French briquette workers, Irish tar workers, and English gas workers—the only common factor being exposure to coal tars on the job.

In this century various studies have revealed high rates of other types of cancer among workers exposed to coal tar products. In one Japanese steel mill researchers found that workers involved in making producer gas for blast furnaces (from a coal-carbonizing process) had a lung cancer death rate 33 times higher than other steelworkers in the same plant. A large-scale survey of bladder cancer deaths in England and America for the period from 1921 to 1928 revealed that of the 15 occupational groups exhibiting a 50 percent higher than normal death rate from this disease, five were among the "coal tar" occupations. In 1918 researchers first induced cancerous tumors in rabbits by painting their ears with coal tar.

Still, until relatively recently, there was little specific evidence clearly linking cancer deaths to work on coke ovens. In 1962, the University of Pittsburgh School of Public Health, with the cooperation of three major steel companies, launched a comprehensive survey of steelworker mortality. Under the direction of Dr. J. William Lloyd, now an assistant director of the National Institute for Occupational Safety and Health (NIOSH), a team of researchers tracked down the health records for a group of 59,072 workers employed in 1953 at seven steel mills in Allegheny County, Pa. Of these, 3,350 had worked for some length of time in coke plants. Only 97 workers in the original group could not be traced. To make certain that the results obtained were not peculiar

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high rates of death from cancer. Technology for controlling oven emissions is in a state of flux. OSHA faces a critical and complex task--formulating a new standard.

to Allegheny County, the study was later expanded to include workers at 10 other steel mills across the United States and Canada. The findings of this national survey coincided almost identically with those of the original.

What the researchers found can be summarized as follows:

- Coke oven workers as a group are 2½ times as likely to die from lung cancer as steelworkers who do not work in coke plants.
- The lung cancer risk depends in part on how long a man works near the ovens and exactly where he works. For instance, after 5 years on the job the lung cancer death rate rises to 3½ times the normal rate, and for topside coke workers alone the rate is 7 times what is expected. For topside workers with at least 5 years on the job, the rate is 10 times the expected—15 deaths out of 132 workers.
- There also is an unexpectedly high death rate from kidney cancer—a rare disease that caused 8 deaths among coke workers in the study, 7½ times what could be expected.

Currently Dr. Carol Redmond and a research team from the School of Public Health are gathering additional data on steelworkers employed in 1961, but the evidence so far seems clear-cut. When asked if these studies show merely a statistical association, Dr. Lloyd says, "I think we've gone much beyond that. All accumulated evidence—studies of other occupational groups and lab animals as well as my own work—points to a definite cause-effect relationship. We've isolated out as many factors as we possibly could, like smoking or geographic location, and we're still left with these abnormally high cancer death rates, which are even higher where the greatest exposures are."

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workers raise two questions:

1) Given the present state of technology, what can be done to reduce emissions from coke ovens?

2) What should OSHA's role in this effort be?

To answer either question, it is necessary first to understand how a coke oven works.

Coke itself is the solid residue, mainly carbon, left after coal has been heated and the volatile materials distilled away. It is used primarily as a fuel for making steel in blast furnaces. Modern coke ovens also allow recovery of such valuable by-products from the coking process as benzene, creosote, toluene, road and roofing tars, and ammonia for fertilizer.

Coke ovens vary in size between 12 and 20 feet in height, 40 and 48 feet in length, and 17 and 19 inches in width, and the ovens are arranged in batteries of 10 to 100. Latest figures show 66 by-product coke plants in the United States employing about 10,000 workers.

In a typical coke plant, during the "charg- moves along a track on top of a battery of coke ovens, pausing to pour coal down three or four chutes into each oven. The coal is then heated at temperatures between 2200°F and 2800°F. After 16 to 20 hours of coking, a "pushing" machine shoves the whole mass of material from the oven into a "quench car" along side. Finally the hot material is carried to the quenching plant and doused with water to cool it. This "quenching" process produces enormous clouds of billowing white steam—the sure sign of an American coke plant. Though the steam may obstruct vision, most experts view it as a relatively innocuous emission if the quenching water is unpolluted.

The three major sources of harmful emissions are charging, pushing, and leakage from oven doors during the coking. To draw off the hot gases produced when coal pours into the red-hot oven during the three to five minute charging process, each oven has one or two ducts hooked up to a vacuum system under steam pressure. The problem in traditional coke plants is that these ducts

A view of U.S. Steel's coke oven works at Clairton, Pa. There are about 66 such coke oven plants in the United States, employing more than 10,000 workers.

with carbon build-up, or the steam pressure may simply not be enough to draw off all vapors. When any of these things occur, flames, black smoke, and gases may shoot 10 feet into the air out of the charging holes at the top of the oven. These charging emissions account for as much as 70 percent of total emissions.

The lidman has the particularly unpleasant chore of removing the lids (almost the size of manhole covers) from the charging holes, putting them back on, and sealing them again. As one former lidman says, "He got the worst job of anybody I know in the mill. You can hardly see, and you can hardly breathe. It's . . . it's terrible."

During pushing, large quantities of dust and volatile materials escape into the open air when the fiery contents of the oven are dumped into the quench car. The size of these dust clouds depends on how thoroughly the coal has been carbonized during coking. If the oven has not heated the coal uniformly enough or long enough, much unburnt "green coke," which emits the noxious clouds, is produced.

Leakage from the doors on the sides of the ovens is not as serious for workers as charging or pushing emissions are, and it varies considerably from plant to plant. The problem arises when carbon collects on the inside edges of the doors, making a perfect fit difficult to achieve. The extreme heat in the oven may also warp the door itself, or the machine which puts the doors on again after pushing may be improperly centered. For a variety of reasons, then, a row of heating coke ovens with no wisps of smoke escaping from their sides is a rare sight.

The steel industry, through the efforts of individual companies and a series of coke oven studies undertaken by the American Iron and Steel Institute (AISI) in the 1960's, has developed several promising methods for controlling all three types of emissions. For charging controls, the method called "stage charging," pioneered by U.S. Steel at its Clairton works and now adopted by many other companies, seems the most easily adaptable for existing coke oven batteries. The basic principle is simple. Instead of opening all four hoppers of the larry car at once and so allowing the coal to drop indiscriminately into the oven, the #1 and #4 hoppers on the opposite sides of the oven are opened together. After these two hoppers empty, #3 hopper is emptied, followed [illegible] can be controlled so that they do not build up around any one opening and block it. The result, in theory at least, is a smokeless charge. Though this method slightly increases charging time, Dean Wilson, superintendent at Clairton, says that production is not reduced.

In long-range terms, an even more efficient method of reducing emissions is "pipeline charging." Currently only one full-scale operation uses this process—Allied Chemical's retrofitted plant at Ironton, Ohio—though several more are being built and others are in the start-up stages. In pipeline charging, the coal is preheated in another part of the plant and forced by steam jet through a pipe into the coke oven. Because the system is largely automatic, the coal never touching the open air, charging emissions are completely eliminated.

In addition, pipeline charging offers considerable economic benefits. Since preheated coal can reduce coking time from 16 to 12 hours, the plant at Ironton increased productivity 45 percent even before it had reached its peak operating capacity. Pipeline charging also allows the use of cheaper, poorer quality coals.

The major disadvantage is that this system requires an initial investment that can be quite expensive. The new coke oven battery Jones and Laughlin Steel Corporation is building at its Aliquippa, Pa., works, for instance, will cost $53 million when completed in 1975. Still, as G. E. Balch, Allied Chemical's air pollution supervisor, points out, "It will be cheaper to build new pipeline batteries—based on the additional yield—than to build new conventional batteries."

Pushing controls are at an equally developmental stage. Several American companies—Ford, Interlake Steel, and National Steel—are trying out various types of movable hood arrangements which fit over the quench car to trap dust particles. None of these has been in operation long enough to be fully evaluated, but in Europe difficulties with similar hoods arose in obtaining a seal tight enough to prevent winds from blowing the dust into the open air and in preventing corrosion and tar collection on the inside of the hood.

Another route to pushing emission control is to build a shed over the entire side of the oven. Great Lakes Carbon Corporation has done so at its St. Louis plant, and Bethlehem, Jones and Laughlin, Inland, and U.S. Steel are designing similar systems.

A photo-cell system on the side of a coke oven automatically centers the door as it closes. Doors must be tightly closed to prevent leakage of noxious fumes.

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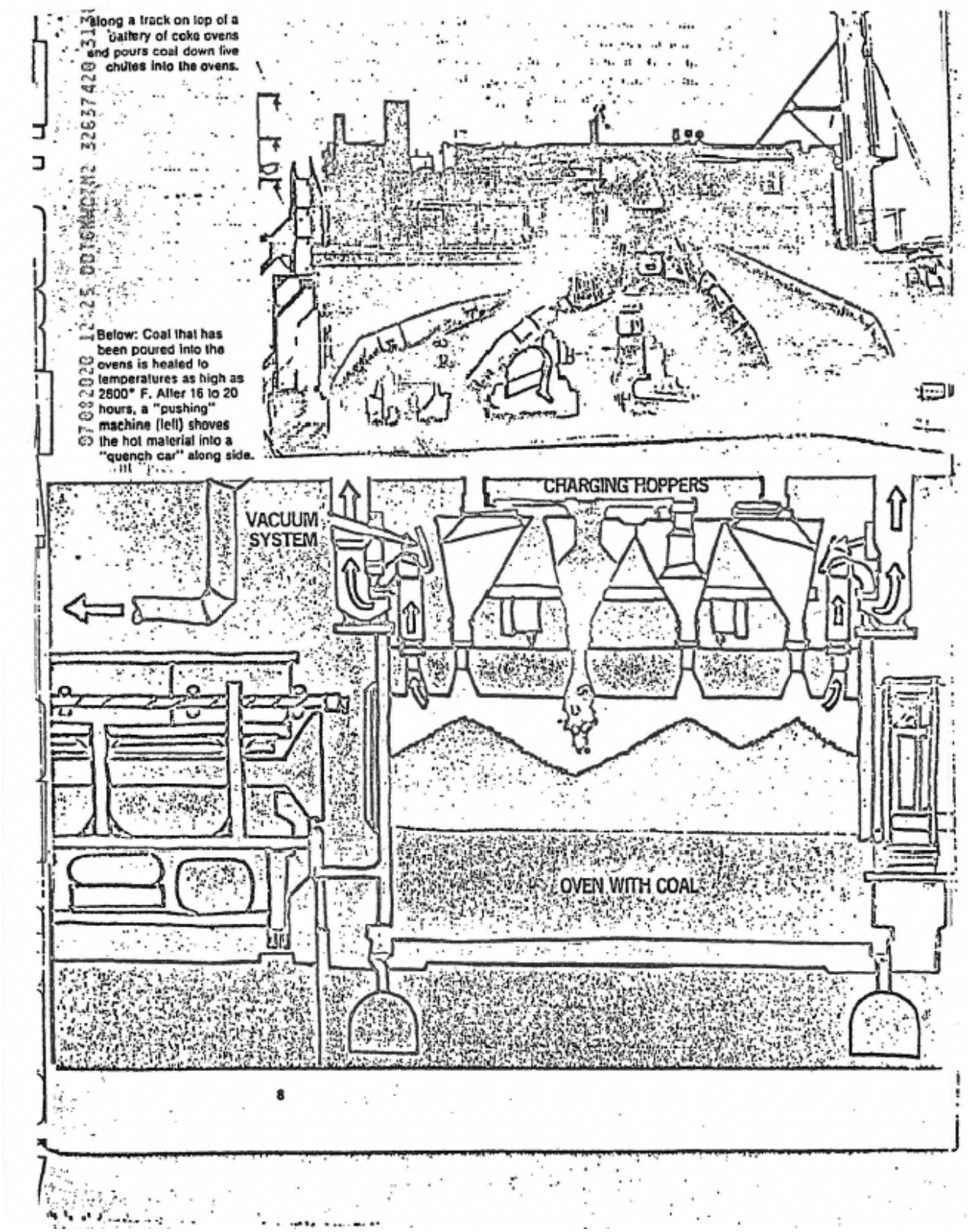
along a track on top of a battery of coke ovens and pours coal down live chutes into the ovens.
Below: Coal that has been poured into the ovens is heated to temperatures as high as 2600° F. After 16 to 20 hours, a "pushing" machine (left) shoves the hot material into a "quench car" along side.
CHARGING HOPPERS
VACUUM SYSTEM
OVEN WITH COAL
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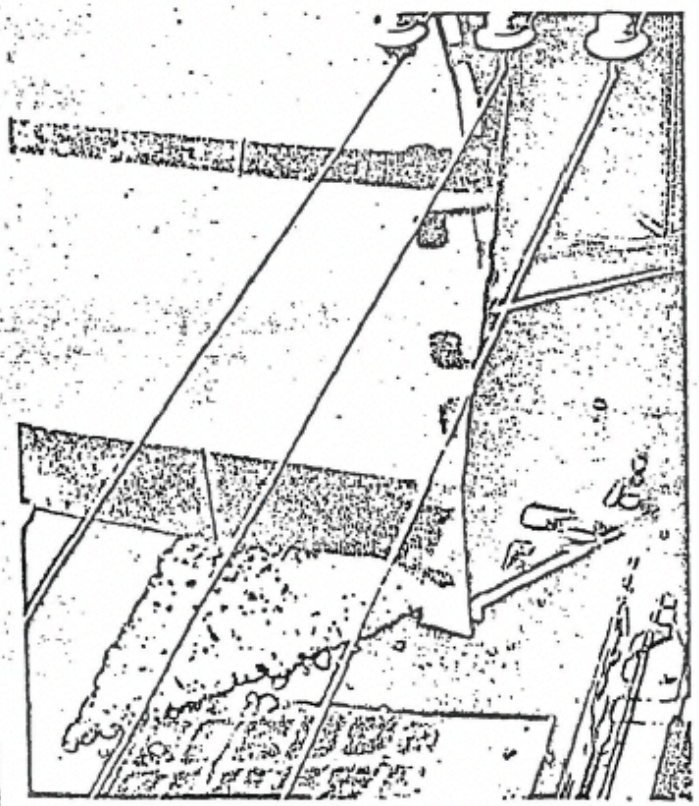
Company favors an alternative method of controlling pushing emissions—a waterfogging spray developed in Germany in 1971. In this method a sprinkler system blankets the quench car with a spray which knocks down most of the dust particles. This system, which has reduced pushing emissions 52 percent at Granite City, cost about $100,000 to install on the quench car, inexpensive in comparison to the multi-million dollar hoods and sheds.

The smallest source of emissions—door leakage—is the one that can be controlled most easily using available equipment. There are almost as many ways of getting better door seals as there are imaginative engineers working for coke plants. Jones and Laughlin's Hazelwood, Pa., works has developed a photo-cell system that automatically centers the door before the door machine shoves it back onto the oven. At Kaiser Steel in Fontana, Calif., an incentive system has been successful in cutting these emissions to nearly zero. The company takes random photos of its coke ovens

A fiery mass of coke flows from the oven into the "quench car," where it will be doused with water to cool it.



cleaners whose doors smoke least.

AISI is now on the verge of publishing a comprehensive report on the current state of coke oven technology. Summarizing the state of the art is a difficult task because each expert's viewpoint depends a great deal on the direction from which he approaches the problem—as an environmentalist, as a company engineer, or as a worker. What can be said is that coke oven technology is in a state of flux—many companies trying out new ideas in their development stages. Quite a few of these improvements are likely to require both time—the research on Allied Chemical's pipeline charging began in 1954—and money.

"Industry knows how to reduce emissions, and it's known how for years," says Bernard Bloom, air pollution control engineer for the Allegheny County Health Department. "The problem is money, and the issue is particularly crucial right now because one-half the coke oven batteries in this country are 15 years old or older. This means that within 10 years most of them are going to have to be replaced. So the race is on. Are we going to keep on building conventional coke ovens with all their limitations, or are we going to build new batteries incorporating the latest technological improvements?"

Faced with the unsettled state of coke oven technology on the one hand and clear evidence of a serious health hazard on the other, OSHA is now in the process of formulating a new standard to protect coke oven workers. Complicating the task is the fact that oven emissions may present an air pollution hazard to the general population living near coke plants. Consequently coke plants are already subject to a maze of regulations put out by agencies ranging from the federal Environmental Protection Agency to state and local health departments.

One of the regulations now in effect is an OSHA standard on coal tar pitch volatiles (1910.93), which has been applied to coke ovens. It provides for a threshold limit value of 0.2 milligrams of benzene soluble material in a cubic meter of air, time-weighted over an eight-hour period. The American Conference of Governmental Industrial Hygienists (ACGIH) originally formulated this 0.2 level in 1965 as a "guide" to exposure for workers in any trade who come in contact with coal tar pitch volatiles. OSHA adopted this standard, along with ACGIH guidelines on many other substances, because it had been an existing federal stan-

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from every conceivable angle. The most vociferous in opposition are spokesmen from the steel industry. A typical view is: "To enforce that 0.2 standard, you'd have to shut down every coke plant in the country. You get that much particulate in the air when you sit in your den smoking a pipe." Or, as T. E. Dancy, formerly manager of process engineering for Jones and Laughlin, puts it, "No one who's been around coke ovens very long believes that this is a 'realistic' standard given our present equipment."

The available data on sampling pollution levels in coke plants seem to confirm this view. Surveys taken by AISI and the Pennsylvania Department of Environmental Resources in the late 1960's (before the latest engineering controls were in use) both reveal levels far above the 0.2 limit even for coke workers not on top of the batteries. Some examples of average exposures:

larry car operator	AISI	2.2	(11 times the standard)
	PA.	3.1	
lidman	AISI	2.6	
	PA.	3.2	
quench car operator	AISI	.44	
	PA.	.94	
pusher operator	AISI	.40	(double the standard)
	PA.	.39	

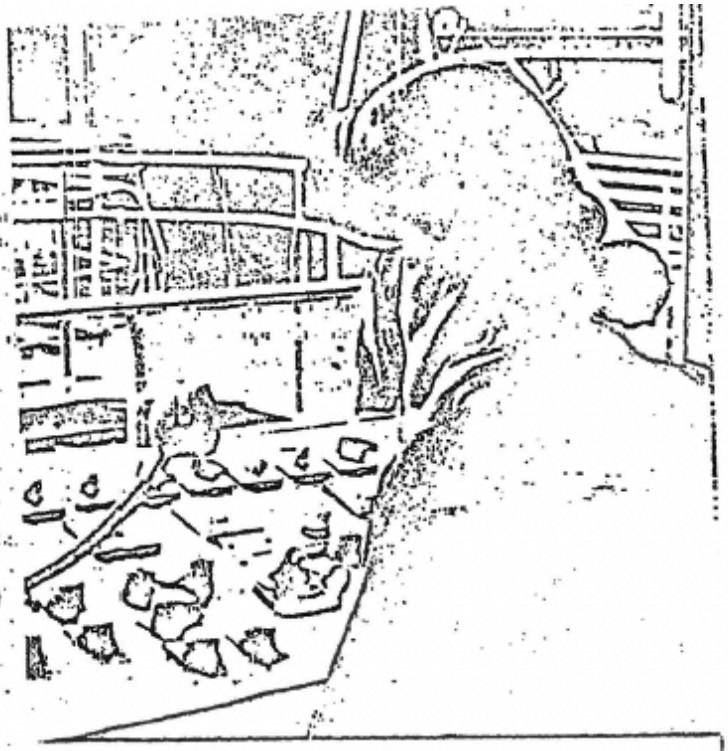
Much of the difficulty with the 0.2 limit on benzene soluble material is that researchers have not yet isolated the specific cancer-causing compound, or compounds, in coal tar pitch. In a recent paper a team of NIOSH researchers points out that the benzene soluble measure does not even distinguish between carcinogenic and non-carcinogenic materials. As Dr. Redmond explains, "It's going to take a great deal more research, —years of it—to establish a specific dose-response relationship, but the coke workers who face cancer can't wait for all the scientific facts to come in."

"The people who work in cancer research would say that any level of carcinogenic exposure, even the smallest amount, is not safe," says Dr. Lloyd. "We now believe that cancer does not result from the cumulative build-up of a substance over a period of time but that it can be activated by a single case of exposure. Therefore, from the purely medical point of view, a zero exposure level may be the only truly safe one."

The problems in formulating a new standard, then, are complex. Coke oven workers are dying of cancer at alarming rates, but researchers have not discovered how best to measure the carcinogenic substances or even exactly what substances cause the cancer. A criteria document issued by NIOSH in February 1973 tries to provide some of the answers to protecting workers within the present state of relative ignorance.

This criteria document does not set any specific level of exposure but recommends a series of practices to minimize emissions and cancer risk. Its major recommendations are:

- Engineering controls—air-conditioned cabs for pusher, quench car, door machine, and larry car operators; air-conditioned stand-by pulpits and mechanical lid lifters for lidmen.
- Operating procedures—a set of detailed maintenance instructions for keeping emissions from present ovens to their lowest possible levels—for example, keeping steam nozzles clear of tar or carbon build-up or replacing charging hole lids as soon as possible after the coal empties from the larry car.
- Medical surveillance—a preplacement and annual physical exam including chest



Use of an air-conditioned cab during the "pushing" process reduces the worker's exposure to heat, dust, fumes, and volatile materials.

by NIOSH, OSHA, and an employee's physician; maintenance of medical records for 20 years after employment ends.

- Labeling—posting of a cancer-warning sign and respirator protection signs.
- Respiratory protection—topside workers not in air-conditioned cabs must wear approved air-supplied respirators or powered positive-pressure respirators; side oven workers must wear these or the unpowered half-mask type.
- Informing workers—training and alerting each worker to the importance of good operating procedures in controlling emissions.

OSHA will use the recommendations of the criteria document, and the public comments upon it, as advice in formulating a new standard on coke oven emissions. What will happen to the present 0.2 standard if OSHA adopts a new standard similar to the criteria document? The criteria document itself says that it is not intended to "supplant" the old standard, but most observers within OSHA feel that, as with asbestos, a new standard would probably replace the 0.2 standard, though the latter would stay in effect for other kinds of exposure to coal tar pitch.

Thus far the chief objections to the criteria document have come from the United Steelworkers of America. Dan Hannan, a member of the union's safety and health staff and a former coke oven worker, says, "Our major objection to the criteria document is that it places the burden of control on the worker rather than upon the industry as a whole. It's the worker who has to wear the respirator that isn't really adequate yet. And the language on how mandatory better engineering controls must be is too fuzzy. It says engineering controls are 'best' and 'should be used,' but it doesn't force anybody to use the very latest technology. We think that coke oven emissions should be declared a target health hazard, that a crash program to develop an effective respirator should be started, and that the government should decide what engineering controls are feasible and set deadlines to meet them."

In his comment to OSHA on the criteria document, the Steelworkers' legislative director John Sheehan elaborated on some of these points. He proposed, among other things, that:

ties and be held to them.

- The standard should take into account other hazards in the coke oven environment such as heat and carbon monoxide, which the criteria document doesn't deal with.
- Removal from work for medical reasons must be accompanied by transfer rights at an equal wage.
- Since discomfort is a very real problem in wearing respirators, workers should be given relief periods.

In its negotiations with the steel industry, the Steelworkers' union also is advocating bargaining for such benefits as a four-day work week, early retirement, and employee rotation.

Edward Baier, NIOSH's deputy director, feels that there is little substance to the union's charge that the criteria document puts all the burden of protection on the worker. "The criteria document makes clear that it is primarily the employer's responsibility to control emissions through technological improvement," he says. At the same time Baier doubts industry claims that our present technology is not adequate to control emissions. "In Japan, I've seen coke ovens with air-conditioned cabs and long-stemmed apparatus for charging, and these were working well," he says.

So the research into cancer goes on, the engineers continue to seek better ways to control emissions, and OSHA moves toward formulating a new standard. But the men who work on the ovens, like Willie Ford, must be saying to themselves, "Every day I'm still going across the tracks." The obvious question is, "Why do you keep working there?" Charles Stokes, who's spent 27 years on top of the battery, can probably answer that best:

"Well, first of all, we didn't really find out about the cancer until Dan Hannan went down to Washington and testified in front of a Congressional committee, back in about 1967. The company didn't tell us about it then and they still haven't. And you take the average man like me with six kids growing up the whole time and other work just not that available. Is he going to walk out on his job 'cause it's dirty and hot? Now I'm just putting in my time, hoping they will remedy the situation so that I can survive—if I don't have it already."

Mr. Clock is assistant editor of JOB SAFETY & HEALTH.

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"APPENDIX C"

TO Dr. Wm. J. McCracken, Executive Director, Rehabilitation Services Div.,

FROM Dr. C. Stewart, Chest Disease Consultant, Medical Branch,

DATE December 1, 1975.

SUBJECT Cancer - Coke Oven Workers - Guidelines for Adjudication

RELATIONSHIP TO CIGARETTE SMOKING

The substances arising out of the combustion or destructive distillation of coal, i.e. as encountered by gas retort workers or coke oven workers, embrace an unusually large and complicated series of hydrocarbons many of which have been identified as carcinogenic for the skin and for lung substance. As a group, these carcinogens are usually classed in the polycyclic aromatic hydrocarbons (nuclear or ring molecules), the most prominent member being benzo (a) pyrene. The variations in carcinogenic activity of the members of this group depend on variations in molecular structure. Not all of these polycyclic substances are carcinogenic and not all carcinogens are confined to poly-nuclear aromatic hydrocarbons.

The inclusion of the smoking habit as a factor in the assessment of lung cancer risk in coke oven workers seems to be absolutely essential in view of the following:

1) benzpyrene and other carcinogens are found in combusted tobacco.

2) tobacco condensate when applied experimentally to the skin of laboratory animals produces the same kind of skin cancers as are produced by the application of coal tar.

3) traces of arsenic are found in tobacco smoke and the former is a known carcinogen for skin and lung.

In assessing risks arising out of coal coke oven exposure, there are complicated factors which are not met in considering risk associated with uranium mining or asbestos manufacture. They are as follows:

1) we, at least, have some idea of the quality of exposure in each of these 2 areas - this is not so with coke oven exposure.

Continued...

2) there is a likelihood that following cessation of coke oven exposure, the risk declines in the same way which the risk declines in cigarette smokers, wherein after 10 years of abstinence the risk of lung cancer is not much greater than that faced by the nonsmoker.

This is in contrast to the situation of asbestos fiber and radiation exposure. The risk does not seem to decline after cessation of exposure in these 2 areas, and therefore, one could never justify assigning weight to cigarette smoking in the assessment of cause and effect after cessation of industrial exposure to asbestos or radiation. While the risks from smoking would decline, the industrial exposure risk would not and one could never be sure in a situation where 2 entirely different co-carcinogens are inter-relating, whether the overall risk declines in proportion if one of these carcinogens is removed, i.e. the smoking factor.

In the case of the smoking coke oven worker, decline in the risk associated with one carcinogen on it's removal would logically be expected in the other on it's removal since they share the most prominent carcinogen - benzpyrene.

Finally, we know very little about the absolute levels of coal tar volatiles in coke oven workers, and while this is not too critical in topside workers because of the relatively high risk, it does introduce uncertainty in assessing risk at bench level where exposure is much less hazardous. By including smoking, a more rational approach to cause and effect can be justified.

C. Stewart, M.D.,
CS*sn

From: Andrew Carlquist
To: Consultation Secretariat
Subject: feedback on Draft Occupational Disease Policy Framework
Date: Friday, December 17, 2021 10:57:14 AM

Good morning,
I would like to provide feedback/question on one item from the framework:

In the gathering scientific evidence section, it is nicely highlighted what evidence will be used and I believe this is an excellent framework. What is not specified is how this evidence will be collected, by whom, and from which specific sources--i.e., will the WSIB be completing their own rigorous literature reviews or will pre-existing reviews be relied upon (such as Cochrane reviews, WHO, etc). Further, whether or not the WSIB's process for reviews will be published and available to the general public is of interest.

I believe it is absolutely in the interest of all parties to publish the methodology used for review, the results, and the rationale for conclusions *even when the data does not support a particular illness/injury as likely work-related*. This work-product is inherently valuable for decision-makers and stakeholders, enhancing transparency, and will facilitate trust-building for all parties.

Thank you for your consideration.

Sincerely,
Andrew

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SUBMISSION

RE: WORKPLACE SAFETY AND INSURANCE BOARD

CONSULTATION ON THE DRAFT OCCUPATIONAL

DISEASE POLICY FRAMEWORK

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Who We Are

The Workers' Health and Safety Legal Clinic ("the Clinic") is a community legal clinic funded by Legal Aid Ontario. Our mandate is to provide legal advice and representation to non-unionized low wage workers in Ontario who face health and safety problems at work.

Clinic staff have appeared before the Ontario Labour Relations Board on behalf of workers who were fired for raising occupational health and safety concerns. Staff have also assisted federally regulated workers with unlawful reprisal complaints before the Canada Industrial Relations Board. The Clinic also represents workers before the Workplace Safety and Insurance Board ("the WSIB") who have made occupational disease claims or have appeals with respect to returning to work or work transition services, and workers who have reprisal claims under the Ontario *Employment Standards Act, 2000*.

Overview

We appreciate the opportunity to provide comments on the Draft Occupational Disease Policy Framework ("the Draft Policy Framework"). Adjudication of occupational disease claims is no easy task. In fashioning the correct approach it is important to consider that claims be adjudicated with compassion and that a formulaic approach would only serve to limit entitlement.

The key word in the report by Dr. Paul Demers entitled, "*Using Scientific Evidence and Principles to Help Determine the Work-Relatedness of Cancer*" is "help". Scientific evidence and principles are used to assist but not are the determining factors. Scientific evidence should be sought out to support entitlement.

As noted in the Draft Policy Framework, scientific certainty is not required. The *Workplace Safety and Insurance Act, 1997* ("the Act") does not require anything near certainty to allow for entitlement. In fact, according to s. 119(2), "If, in connection with a claim for benefits under the insurance plan, it is not practicable to decide an issue because the evidence for or against it is approximately equal in weight, the issue shall be resolved in favour of the person claiming benefits." Continual reference to strong scientific evidence may be necessary for

inclusion in Schedule 4 but it is by no means necessary for entitlement. The language throughout the framework sets or implies an adjudicative bar higher than necessary in the Act.

A Worker Centred Approach

The framework is not centred on workers. It should be.

In criminal law Blackstone's Ratio is, "It is better that ten guilty persons escape than that one innocent suffer." It is submitted that the WSIB should take a similar approach with occupational disease – it is better that ten insufficient claims get benefits than let one injured worker suffer.

History demonstrates that the current approach favours denial.

WSIAT Decision No. 1052/12R[1] was a decision required to revoke a prior Tribunal decision. The worker was denied entitlement for respiratory problems and lung cancer as a result of workplace exposures. The reconsideration decision was necessary because the WSIB accepted "updated information". The need to update information to satisfy the WSIB wrongly delays entitlement.

Recently, the advocacy surrounding exposure to McIntyre Powder led to claims being reconsidered and to the inclusion of Parkinson's disease in Schedule 3. That inclusion was not simply a re-review of evidence. It was the struggle of one worker's daughter to fight for justice.[2] We should be under no pretence – if not for her perseverance those exposed workers' claims would remain denied. There would have been no inclusion under Schedule 3.

[1] 2018 ONWSIAT 3729 (CanLII)
[2] https://www.mcintyrepowderproject.com/

Justice came too late for many to see the recognition that they were right that their workplaces made them sick. There is nothing in the Draft Policy Framework that curtails the potential for similar mistakes. What is needed now is recognition that the WSIB approach to entitlement questions should not be an unscalable wall. Mindful of the danger that overreliance on scientific evidence will deny claims, the WSIB should look for minimums. This may mean more claims are allowed. It will however provide assurance that justified claims are not denied. It is particularly troubling that justice is not mentioned in the Draft Policy Framework.

If scientific certainty is not required then scientific uncertainty is not only allowed but it should be embraced. The Draft Policy Framework needs more clarity on adjudication with scientific uncertainty. That means workers see benefits sooner. That means workers don't have to wait decades for confirmation of what they already knew: their workplaces were making them sick.

Concern Regarding Adjudication Highlighted in Schedule 3

The Draft Policy Framework is insufficient with respect to the adjudication of claims. An example of this concern can be seen in the potential pitfalls surrounding adjudication of Schedule 3 related claims.

As a rebuttable presumption, it is unclear whether the WSIB will actively look for evidence to rebut the presumption. When paired with how the WSIB defines "fiscal responsibility" in policy development, it would appear that the WSIB in its own financial interest, would actively try to find reasons for denying claims. This effectively negates the purpose of including exposures in Schedule 3.

It is therefore necessary that the Draft Framework, in the interests of transparency, provide clarity as how claims will be adjudicated under the Schedules, policy, or a case by case basis.

Concerns Regarding Occupational Disease Policy Development

Policy development using scientific evidence is not an issue. The concern for workers and their families is when the WSIB determines there is "sufficient" evidence. Use of descriptors such as "best" or "strong" do not explain when the WSIB will be satisfied to create a policy or include something in Schedule 3 or 4.

Reference is made to the "WSIB Strategic Direction". The WSIB Strategic Direction is not science based. It is not open to public debate. It is not one where worker side stakeholders can make immediate changes. A quick search of the Board's website found little clear evidence as to what exactly was the WSIB Strategic Direction and no reference to public involvement in guiding such a Direction. This is not the "transparency" stakeholders would expect from the WSIB when it comes to policy making.

The WSIB Strategic Direction should not be considered in policy development.

Fiscal responsibility as understood by not being wasteful of public funds is understandable and acceptable. Fiscal responsibility as understood by deciding on criteria so as to limit entitlement unfairly is unacceptable. The use of "fiscal responsibility" to deny claims is inherently wrong. Fiscal Responsibility is already found in s. 1 of the Act. It need not be referenced or considered in policy development.

Fiscal Responsibility should not be considered in policy development. The Historic Compromise does not have a financial cap.

Concerns Regarding Occupational Disease Policy Development Process

The development process appears lacking to address new trends. It is unclear what the WSIB approach will be when there has been no scientific literature or evaluation. When a cohort of claims in a single industry may signal an issue, the Draft Policy Framework does not explain how the WSIB will prioritise that information if there is limited scientific literature.

Reference to WSIAT Decisions is strongly encouraged. However experience from representatives is that the WSIB relies on s. 119(1) – that each case is determined on

individual merits and not legal precedent – to force representatives to effectively reinvent the wheel by making the same arguments over and over until reaching the Tribunal.

It is not enough to reference WSIAT case law in the Draft Policy Framework. The WSIB must either accept WSIAT case law or take steps to challenge decisions.

The process should be clear that the WSIB is committed to ongoing investigation, especially in claims where the evidence may lead to entitlement but is insufficient in the view of the WSIB. In situations where the evidence reaches a level of possibility but not on a balance of probabilities, the WSIB should provide stakeholders with clarity as to what is lacking that would otherwise lead to entitlement being granted.

Further, the WSIB should craft an Occupation Disease Reconsideration Policy that would apply to dated denied claims. Such a policy would commit the WSIB to reconsider decisions where there has been a change in perspective, including seeking WSIAT reconsiderations.

We appreciate the opportunity to provide submissions.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

28 February 2022