Value for Money Audit Report: Occupational Disease and Survivor Benefit Program

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1.0 Executive Summary

1.1 Scope

KPMG conducted a Value for Money Audit (VFMA) of the Occupational Disease and Survivor Benefit Program (“the ODSBP”), for the Workplace Safety and Insurance Board (WSIB) under its legislative requirement. The primary purpose of the audit was to provide observations as to whether current adjudication decision making and ongoing claims administration processes for ODSBP are being delivered in an efficient and effective manner, and an assessment of the effectiveness of the approach for long latency occupational disease, chronic exposures and effects, and acute exposures and effects. KPMG was engaged to:

- Review the WSIB ODSBP in order to assess the cost, efficiency and effectiveness of the Program. The areas for review include:
  
  **Scientific Research:**
  - Extent to which we are able to maintain currency with advances in medical and scientific research relevant to establishing disease causation

  **Policy Renewal:**
  - Extent to which policy and scientific advice provided to the program on causation is sufficient to support consistent, fair, cost-effective and timely initial entitlement decisions

  **Governance / Roles and Responsibilities:**
  - Organization / Program structure

  **Information and Knowledge Management:**
  - Extent to which information systems are leveraged to support complex decision making, with a focus on scientific evidence and research
  - Adequacy of information and IT to support decision making

  **Entitlement and Claims Administration:**
  - Efficiency and effectiveness of initial entitlement and ongoing claims administration processes
  - Resource management

- Provide recommendations on opportunities for strengthened policies and programs and enhanced cost, efficiency and effectiveness; and

- Review ODSBP Programs in other workers’ compensation jurisdictions.

The period of review reflected the current state of the program between the dates of June 2017 to November 2018.
1.2 KPMG Value for Money Audit Approach

The following approach was taken to evaluate the current state of the Program and to develop recommendations on the future state of the Program for the WSIB. All aspects of the engagement were guided by the Canadian Comprehensive Auditing Foundation’s (CCAF) Attributes of Effectiveness.

Project Management

To support the VFMA audit, KPMG developed a Project Management Plan and worked with the WSIB to confirm milestones and key dates. At this stage, a Steering Committee, comprised of persons from the WSIB, was set in place to provide insight, oversight and foresight into the project. The VFM audit was comprised of four phases:

1. **Document Review**: KPMG reviewed documents pertinent to the Program at WSIB. This information was used to develop an understanding of the environment in which the Program operates. This phase also included a review of WSIB policies, practices and corporate documents such as the Occupational Disease Org. Structure, Business Plan and related policies (i.e., WSIB’s Operational Policies on ODSBP).

2. **Stakeholder Consultation**: KPMG conducted interviews with internal stakeholders (management and staff from WSIB) and external stakeholders (other agencies or groups) of the Program. In advance of the interviews, all interviewees were provided a preparation guide to focus the discussion. Listings of the internal and external interviewees can be found in Appendix 2.

3. **Jurisdictional Review**: KPMG compared and contrasted the Program performance against leading practices. Information gleaned from the jurisdictional review was designed to highlight ‘lessons learned’ from like-minded or peer organizations which can be applied to Program. These included similar, provincially-based organizations such as WorkSafe BC and similarly-focused organizations.

4. **Analysis and Reporting**: The culmination of the efforts of Phases 1-3 was the analysis, recommendations, and reporting in Phase 4. Results of this work culminated in the value for money summary.

Note: The Internal and external stakeholder interviews list can be found in Appendix 2.
1.3 Areas of Review

We have drafted a series of observations and recommendations to support the VFM audit of ODSBP Program which are focused on the following areas:

- Efficiency and effectiveness of initial entitlement and ongoing claims administration processes;
- Extent to which policy and scientific advice provided to the program on causation is sufficient to support consistent, fair, cost-effective and timely initial entitlement decisions;
- Extent to which we are able to maintain currency with advances in medical and scientific research relevant to establishing disease causation;
- Extent to which information systems are leveraged to support complex decision making, with a focus on scientific evidence and research;
- Organization / Program structure;
- Adequacy of information and IT to support decision making; and
- Resource management.
1.4 Key Observations & Recommendations

The Occupational Disease and Survivor Benefits Program (ODSBP) provides specialized adjudication and support to Ontario Workers suffering from occupational diseases. It also provides survivor benefits to the spouse and/or dependents of Workers who die from a work-related injury or occupational disease. Decision makers adjudicate initial entitlement for occupational diseases by conducting enquiries to establish a causal association between the disease and potentially hazardous workplace exposures. When a claim is approved, further consideration is required to determine entitlement to a range of benefits including health care, loss of earnings, and survivor benefits payable to the dependents of workers who die from an occupational disease or workplace accident.

The WSIB decides entitlement for a wide range of occupational diseases. These include an array of cancers and other long latency diseases resulting from occupational exposures going back decades, skin or respiratory conditions from contact with workplace chemicals, or a number of other conditions that may arise from a single acute exposure. The Program also assists workers with return-to-work and quality-of-life matters. Occupational diseases carry an enormous cost – for workers and their families. As such, this area remains a significant concern to stakeholders and often leads to challenging and disparate views on disease causation and entitlement. The value for money audit takes into consideration the structure and function of the ODSBP. The Audit was conducted from June to October 2018. Noise Induced Hearing Loss (NIHL) is part of the ODSBP. However, it was not in scope for the audit and was previously reviewed by KPMG in 2014.

There is significant value in the WSIB delivering the program in support of its legislative obligations to workers who experience occupational disease in Ontario. The Program is administered in an efficient manner that meets the needs of both workers and employers. Continuous improvement efforts in terms of the adjudication and client service model, and favorable worker and employer experiences with service delivery indicate that the WSIB is consistent in the provision of quality claims management and related health and benefit services provided by the Program. The WSIB relies on the expertise of a range of health practitioners across the province as part of its adjudication model. These professionals provide the WSIB with a range of medical advice to support both claims adjudication and ongoing Program service delivery to eligible workers. It is important, from both legislative and service delivery perspectives that the WSIB continue to reinforce its commitment to relying on credible external sources of OD scientific discovery and leading practice developments. This will increase overall stakeholder confidence in the credibility and independence of scientific advances which can contribute to the further development and refinement of OD policy governance framework and adjudication processes. The WSIB must continue to provide high quality medical services and responsive client service. The focus should be on continuing to improve communication with leading occupational disease scientific and medical experts, workers and employers about:

- existing and emerging occupational disease risk;
- current and new scientific evidence to support claims adjudication;
- policy, regulation and legislation changes;
- enhancing disease surveillance and workplace exposure capability to plan for emerging occupational disease trends; and
- leading workplace occupational disease prevention practices from Ontario workplaces and other jurisdictions.

The following 10 recommendations have been developed for the WSIB to enhance the Occupational Disease and Survivor Benefits Program. Due to the integrated nature of the recommendations, it is very important for the WSIB to invest the necessary time and resources to take a strategic approach to enhance the program. This approach will establish the foundation for the WSIB to effectively respond to emerging OD disease trends in the future.

**Overarching Recommendation**: The WSIB should develop an integrated and holistic blue-print to understand the necessary steps to complete *Recommendations 1 through 10*. The blue-print may be critical to successful implementation of a progressive model to enhance current and future OD rehabilitation, return-to-work and quality of life provisions. The recommendations have several interdependencies, as such cannot be executed in isolation. The following elements will require detailed planning, co-ordination and sequencing:
- Align the Ministry of Labour (MoL) and WSIB OD policies, program delivery, actuarial provisioning and prevention initiatives;
- Align the OD blueprint with other WSIB strategic initiatives;
- Develop the governance model, composition and terms of reference of the independent credible advisory panel (iODAG);
- Identify on a global basis, the credible scientific sources which can be foundational to a principle-based OD policy framework and funding for future research requirements;
- Identify opportunities, through primary jurisdictional research, to formally develop and implement a progressive principle-based OD policy framework;
- Develop a scientific and research partnership strategy to develop the data & analysis capabilities for OD surveillance, sector and occupational trends and emerging risks;
- Revisit the legislative schedules to identify opportunities to revise based on credible scientific and medical research;
- Develop a detailed implementation timeline for the blueprint;
- Analyze the financial, human resource and external expertise requirements to achieve the OD blueprint;
- Develop a communication strategy that aligns with WSIB’s overall approach to stakeholder engagement; and
- Identify risks to and of the blueprint and develop mitigation strategies.

Recommendation 1: In order to establish an independent and credible scientific research the WSIB should:

1. Establish an Independent Occupational Disease Advisory Group (iODAG) with scientific and medical researchers to identify clusters based on experience and information;
2. Externally contract studies and research to perform global and national research on existing knowledge gaps for scheduled OD. Research should also be contracted for emerging OD risks;
3. Build strategic alliances with research organizations to do more research such as Cancer Care Ontario (CCO);
4. Identify strategic alliances such as the OD Surveillance System (ODSS) for more powerful data analytics of WSIB’s OD claims. Such an alliance should increase the WSIB’s ability to analyze OD, with a comprehensive data set which should also include causation, exposure, duration, medical history and employment records. This approach should be tied to WSIB’s current corporate data governance initiative; and
5. Assess its internal OD policy resources to:
   - Work with the iODAG; and
   - Strengthen strategic alliances with research.

Recommendation 2: There is an opportunity for the WSIB to invest in and leverage external research centers to fill knowledge gaps with relevant scientific information for both current and emerging occupational diseases. Specifically, the WSIB should:

- Further mature strategic alliances with independent research entities such as Cancer Care Ontario (CCO). Larger and dedicated research centers have comprehensive data-sets and specialized teams that can identify OD risks and trends;
- Work with an external research organization to develop an integrated OD information, data and knowledge management system for surveillance, exposure analytics and disease trends; and
- Explore opportunities to work with external research organizations to digitize historical employment and screening records (i.e. Mining Master File).

Recommendation 3: The WSIB should evaluate the opportunity to update the Regulations and Schedules 3 & 4 (Appendix 3) based on the current body of scientific knowledge to increase adjudication efficiency and provide further decision-making transparency to its stakeholders. Some opportunities to update Schedule 3 include:

- Respiratory Disease – Asthma: Consider an updated scientific review to develop a more general policy on asthma (i.e. sensitizer induced asthma or RADS) and recognition of other occupation
exposures. For example, WorkSafe BC recognizes western red cedar dust; isocyanate vapors and gases; dust, fumes or vapours of other chemicals or organic materials known to cause asthma; and

- Cancer – Primary cancer of the nasal cavities or paranasal sinuses: Consider an updated scientific review to develop a more general policy on nickel exposures (not specific to one employer) (This is referenced in *IARC Monograph 100C*), adding wood and possibly leather dust. For example, WorkSafe BC has the following Nasal Cavity requirement: "Where there is prolonged exposure to dusts, fumes or mists containing nickel or the dusts of hard woods".

**Recommendation 4:** The WSIB should develop an OD policy governance framework based on the principles for quality OD care and fair adjudicative decisions by including the following elements:

- An effective iODAG (composed of research and medical experts) who can provide objective, credible and transparent advice. The iODAG will provide advice to WSIB for credible medical & scientific sources to support the recommended OD policy governance framework. The composition of the group should consist of credible medical and scientific OD experts. This group should be supported by the WSIB staff from Policy, ODSBP, Health Services and Legal & Privacy. This will increase the trust and confidence of the worker and employer community in the WSIB through the independence of the iODAG;
- Stakeholder rules of engagement, roles and responsibilities to increase the effectiveness of the scientific renewal efforts by increasing the level of risk awareness;
- An OD policy framework that reinforces principles in OD claims adjudication and emphasizes the role of scientific evidence in decision making:
  - The framework should reference credible scientific sources such as IARC that are accepted by the scientific / medical community and updated frequently to reflect the current OD developments. This would reduce WSIB’s need to constantly update its policies as scientific developments emerge;
  - Formalize the required level of scientific certainty to inform the OD policy framework. This includes credible scientific research entities, acceptable confidence intervals, protocols to leverage emerging scientific research in support of schedule & regulation updates etc.; and
  - The framework should also address the process to identify emerging diseases, trends and workplace latency risks (cluster management);
  - The process to develop or renew regulations & schedules (including incorporation of current research); and
  - The WSIB should inventory their existing OD policies to determine the requirements for an overarching and principles-based OD policy.

**Recommendation 5:** The WSIB should tailor the proposed corporate stakeholder engagement strategy to the requirements of OD. A progressive approach to stakeholder engagement for OD should be based on leading risk communication practices which include:

- Translating scientific findings and probabilistic risk assessments into understandable terms;
- Explaining uncertainty ranges, knowledge gaps and ongoing research programs;
- Addressing the issue of credibility and trust;
- Understanding the worker, the employer and their representatives “framing” of OD risk issues, especially in qualitative terms;
- Acknowledging specific questions that arise in OD (which may be and are, quite different that those posed by experts); and
- Analyzing the conditions needed for allowing workers, employers and their representatives to acquire evolving OD information, research, skills and participatory opportunities.\(^\text{1}\)

As per **Recommendation 4**, the iODAG should also assume responsibility for fostering the stakeholder communication process to discuss OD risk, developments in science and treatment, emerging risks and awareness/education opportunities.

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\(^1\) William Leiss and Douglas Powell, *Mad Cows and Mother’s Milk, The Perils of Poor Risk Communications, Second Edition,*
**Recommendation 6:** The Ministry of Labour (MoL) should also work with the Ministry of Health and Long-term Care (MoHLTC) and the WSIB to increase OD training of medical students and increase awareness of the broader physician community. Funding for this initiative should be provided through the grants and research program administered by the MoL and funded by the WSIB.

**Recommendation 7:** The WSIB should mature and formalize a partnership with research centers such as the Occupational Cancer Research Centre (OCRC) for surveillance data. Furthermore, WSIB should explore automating the information retrieval process for employment and medical information with Canada Revenue Agency (CRA), the Ministry of Health and Long-term Care (MoHLTC), Service Canada, the Ontario Health Insurance Plan (OHIP), and the Ministry of Labour (MoL).

**Recommendation 8:** The WSIB should expand the use of e-adjudication for straightforward claims that will provide workers with faster benefit decisions, more timely access to healthcare and allow adjudicators to focus on more complex claims.

**Recommendation 9:** We recommend that the WSIB further examine training opportunities for adjudicators to develop specialized knowledge in areas such as exposure agents, emerging diseases and employer / sector specific risks. This specialized training and knowledge transfer can increase the overall quality of OD decision making, enhance responsiveness to high-risk employers / sectors, provide cross training and job enrichment opportunities for staff.

**Recommendation 10:** Leverage existing medical programs to more quickly connect workers with expert resources to help expedite the required information regarding exposure to support decision-making and recommended treatment plans.
1.5 A Historic Lens

Since 1914, occupational diseases have been historically eligible for compensation through coverage provided by the Workplace Safety and Insurance Board (WSIB). Occupational disease can be caused by physical, chemical or biological agents in the workplace that manifest in three kinds of reactions in the body:

1. **Acute** – Immediate or acute reactions like shortness of breath or nausea, can be caused by a one-time event such as a chemical spill. These reactions are not usually permanent;

2. **Gradual** – Gradual reactions like asthma or dermatitis (skin rashes) can get worse and persist over days, weeks or months. These reactions tend to last for a longer time period; and

3. **Long-latency** – Delayed reactions or long latency diseases that take a long time to develop like lung cancer or hearing loss can be caused by long-term exposure to substance or work activity. These reactions can be noticed long after the job or career is over.

Under the original 1914 Workmen’s Compensation Act, entitlement to benefits for industrial disease was defined under Schedule 3. Six diseases were initially listed under Schedule 3: anthrax, lead poisoning, mercury poisoning, phosphorous poisoning, arsenic poisoning and ankylostomiasis. Between 1914 and 1956 an additional 29 diseases were added to Schedule 3. In 1940, the definition of “industrial disease” was amended to mean a disease in Schedule 3 or a disease “peculiar to a characteristic of a particular industrial process, trade or occupation. In 1963, the definition of “accident” was amended to include “disability arising out of and in the course of employment” recognizing that “accident” includes injuries that develop gradually over time and also can include some diseases. From 1981 to 1983 the Royal Commission on Asbestosis was established and a report by Paul Weiler entitled Protecting the Worker from Disability: Challenges for the Eighties was completed. Weiler’s work addressed: the dimensions of industrial disease; statutory obstacles; procedural hurdles; adjudication approaches; statutory schedules; policy guidelines, evaluating claims that do not meet a guideline and establishing an Industrial Disease Panel. In 1986, the Industrial Disease Standards Panel (IDSP) was created as an independent agency to recommend compensation criteria for occupational diseases. Schedule 4 was introduced in 1986. The WSIB will consider a disease for entry into Schedule 4 when there is strong and consistent evidence linking the disease to a single cause and that cause is uniquely associated with an occupation, workplace or work process. Therefore, entries into Schedule 4 require both:

- Strong and consistent scientific evidence; and
- A strong statistical association, meaning a high risk of disease associated with the identified sole occupational cause.

For diseases listed in Schedule 4, the presumption that the disease has occurred due to the nature of the worker’s employment cannot be rebutted. As a consequence, non-occupational factors must not be a likely cause of the disease. Four additional diseases were added to Schedule 4 and the 30th disease was added to Schedule 3 in the early nineties. During that time, the Ministry of Labour established a Task Force on Occupational Disease and the IDSP became the Occupational Disease Panel (ODP). In 1997 the ODP was dissolved and was eventually replaced by the Occupational Disease Advisory Panel (ODAP) which was created to support the timely adjudication of occupational disease claims. The Final Report of the ODAP was delivered in 2005 under the leadership of Brock Smith. During that time, the WSIB also adopted the Occupational Disease Response Strategy. In 2007, the Firefighters’ Regulation for full time firefighters created a legislative presumption of work-relatedness for certain cancers and heart injuries. In 2009, the same presumptions were extended to part-time and volunteer firefighters and fire investigators. In 2014,

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2 Please refer to Appendix 3 for Schedules 3 and 4.
additional cancers were added to the *Firefighter Presumptions*. The presumption was also extended to First Nations band council firefighters.
2.0 Observations & Recommendations

Through the course of the VFMA, observations and recommendations have been developed for the following occupational disease and survivor benefit program elements:

1. Scientific Research;
2. Policy Renewal;
3. Governance / Roles and Responsibilities;
4. Information & Knowledge Management; and
5. Entitlement and Claims Administration.

### Scientific Research

**Observation 1: Scientific Capability to Support OD Policy**

There is a lack of capability to appropriately update policies based on current scientific knowledge. Currently, there are two research resources in the Policy branch to update OD policies. It can take the WSIB up to 6 months to internally consolidate meta-data of existing scientific knowledge for exposure duration and intensity levels. It can take up to 2 years to update policies through stakeholder engagement. There are 4 contributing factors as to why the WSIB is challenged to remain current with the OD scientific knowledge:

1. **OD Policy Governance Framework:** There is no OD policy governance framework on the use of credible sources and methods used to gather medical and scientific research to inform policy and adjudicative decisions for occupational diseases. This presents risks to the WSIB in terms of OD decision quality and causes delays in worker recovery and return-to-work (RTW). There is a lack of clarity in roles and responsibilities for commissioning and analyzing medical research in a consistent manner. Immature policy governance contributes to a lack of trust and transparency with key stakeholders who, because of this governance void, are incented to be critical of the medical and scientific sources and methods that the WSIB uses for adjudication of OD claims.

2. **Third-Party Information Sources:** There is inconsistent reliance on third-party data sources (International Agency for Research on Cancer (IARC)), Cancer Care Ontario (CCO), Ministry of Labour) to support the WSIB in OD decision making. Currently, the WSIB systems cannot facilitate the efficient exchange of OD information from third-party information sources.

3. **Research Sources:** There is currently no consensus among stakeholders on authoritative sources to establish causal association between occupational exposures and diseases. The WSIB has no formal position on this issue. Some jurisdictions (e.g. Australia) have declared IARC as the authoritative research source on occupational related cancers.

4. **Scientific Evidence:** The limitations and evolving nature of research about disease causation is an obstacle to a purely scientific adjudicative process. Even when science does support a causal association between an agent and an OD, the threshold information about the duration and intensity of exposure required to produce an effect/disease can be uncertain.

Jurisdictional research indicates that in Denmark, the Occupational Diseases (OD) Committee reviews the list of occupational diseases at least every two years. The Danish Working Environment Act is regularly amended to reflect scientific advances. Safe Work Australia (SWA) commissioned a report titled Deemed Diseases in Australia to review the latest scientific research to inform policy development. This resulted in a national list of deemed occupational diseases. It is based on the most recent scientific evidence of a causal link between diseases and occupational exposure. The list was published in 2015.

California has adopted a specialized research approach for workers’ compensation. The Research Unit of California’s Division of Worker’s Compensation (DWC) of the Department of Industrial Relations oversees a variety of projects aimed at discovering and interpreting facts related to the workers’ compensation system to produce a greater knowledge of system behaviors and make practical applications and changes possible. The California Workers’ Compensation Information System contains data for an extensive range of occupational diseases including asbestosis,
black lung, byssinosis, cancer, dermatitis, dust disease, loss of hearing hepatitis C, mental illness, mental stress, myocardial infarction (heart attack) respiratory disorders (gases, fumes, chemicals, etc.), silicosis, etc.

In Canada, WorkSafe BC has funded independent research on occupational exposure and disease which has incorporated a pan-Canadian approach. For example, the 2014 research report entitled *Tracking Occupational Exposure and Disease: An Analysis of Approaches for the Canadian Context indicated* that “decision makers have recently shown interest in the use of registries for monitoring occupational exposure. In particular, the development of a new exposure registry in British Columbia and the development of a retrospective exposure and disease registry for asbestos miners in Newfoundland and Labrador (the Baie Verte Miners’ Registry) have drawn increased attention to the possibility of using registries to track occupational exposure and disease. Due to the latency and long period of exposure required for the onset of some occupational diseases, WorkSafe BC has also created an exposure registry as a way for workers, employers, and others to register a worker’s exposure to a harmful substance or agent or work.

In Ontario, for the past five years, the Occupational Cancer Research Centre (OCRC) has been conducting research to identify viable options for occupational disease surveillance in Ontario with support from the Ontario Ministry of Labour, the Workplace Safety and Insurance Board (WSIB) and the Public Health Agency of Canada (PHAC). The Occupational Disease Surveillance System (ODSS) was created to identify patterns and monitor trends in work-related disease in Ontario. It also has a long-term goal of providing a model that could be adopted nationally to fill a gap in Canada’s chronic disease surveillance framework. By linking provincial health databases, the ODSS provides a cost-effective and practical approach for examining existing patterns and emerging trends in work-related diseases and risk factors across hundreds of occupation and industry groups. This system will increase the capacity of the occupational health and safety system in Ontario to identify high-risk populations and provide the evidence needed to implement effective prevention strategies, as well as to improve decision making, planning and service delivery.

**Risk & Impact:** Limited internal and external scientific capabilities constrains the WSIB’s ability to develop and renew OD policies.

**Observation 2:** Proactive Cluster Identification & Emerging OD Risks

OD clusters are a significant number of claims that emerge from a single organization, sector or geographic region. These clusters are challenging as a result of long-latency, the risk of employers no longer existing and poor historical employment and medical exposure data. Often, these factors combined with the gap between scientific evidence and public perception of the risk, can result in adjudicative decision making inconsistencies. The OD cluster decision making environment can be characterized as reactive, emotionally charged and subject to political influence.

The WSIB reactively manages OD clusters as they arise, often as a result of stakeholder pressure. A dedicated team has been resource to adjudicate and supervise emerging claims (e.g. General Electric and McIntire). However, the cluster management process suffers from the innate tension between “expert” risk assessments and “public” perceptions of OD risk. This innate tension is further compounded by the following factors:

- A lack of a OD policy governance framework;
- A lack of forward looking studies / research to identify emerging clusters that would assist the organization in identifying future risks, developing adjudication and claims management strategies, formulating stakeholder relations and establishing reserve requirements; and
- A lack of agreement on credible up-to-date scientific research, inadequate Ontario-based longitudinal exposure data and delays in obtaining the relevant information.

The WSIB has been historically challenged in establishing its OD scientific and research capabilities that are viewed as independent and credible with its stakeholders. We observed opportunities to capitalize on third-party information sources such as Cancer Care Ontario (CCO) that have significant data sets that could inform research processes (please refer to **Observation 5**). WSIB has commissioned the Occupational Cancer Research Centre (OCRC) to perform research on emerging risks within the cancer claimant pool using surveillance data. This collaborative approach is in keeping with leading practices identified in the jurisdictional research (e.g. United Kingdom and New Zealand). However, this type of collaborative research is not pursued for other long latency occupational diseases at the WSIB.

**Risk & Impact:** Without leveraging external research sources, the WSIB will not be able to efficiently detect, allocate and manage upcoming OD risks specific to Ontario. There is the risk that without the proactive identification of clusters,

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1 In high-risk situations involving causation for life-threatening diseases, this risk communication conundrum that the WSIB faces is not atypical, as observed in the seminal work of William Leiss and Douglas Powell, two of Canada’s foremost thinkers on effective risk communication.
timely and credible decisions regarding worker recovery and the prudent allocation of insurance benefits may be compromised.

**Recommendation**

**Recommendation 1:** In order to establish independent and credible scientific research the WSIB should:

1. Establish an Independent Occupational Disease Advisory Group (iODAG) with scientific and medical researchers to identify clusters based on experience and information;
2. Externally contract studies and research to perform global and national research on existing knowledge gaps for scheduled OD. Research should also be contracted for emerging OD risks;
3. Build strategic alliances with research organizations to do more research such as Cancer Care Ontario (CCO);
4. Identify strategic alliances such as the OD Surveillance System (ODSS) for more powerful data analytics of WSIB’s OD claims. Such an alliance should increase the WSIB’s ability to analyze OD, with a comprehensive data set which should also include causation, exposure, duration, medical history and employment records. This approach should be tied to WSIB’s current corporate data governance initiative; and
5. Assess its internal OD policy resources to:
   - Work with the iODAG; and
   - Strengthen strategic alliances with research.

**Recommendation 2:** There is an opportunity for the WSIB to invest in and leverage external research centers to fill knowledge gaps with relevant scientific information for both current and emerging occupational diseases. Specifically, the WSIB should:

- Further mature strategic alliances with independent research entities such as Cancer Care Ontario (CCO). Larger and dedicated research centers have comprehensive data-sets and specialized teams that can identify OD risks and trends;
- Work with an external research organization to develop an integrated OD information, data and knowledge management system for surveillance, exposure analytics and disease trends; and
- Explore opportunities to work with external research organizations to digitize historical employment and screening records (i.e. Mining Master File).

**WSIB Management Response:**

**Response to Recommendation 1:**

The WSIB agrees that the reliance on independent and credible scientific research is key to providing quality support to decision making in the OD&SBP program.

We will explore, over the course of 2019, the expansion of scientific sources relied upon within the program, including the feasibility of creating an expert panel resource and partnering with research organizations to enhance our policy resources (and will report the results to the CEO).

We will continue to rely on credible external scientific research, which includes systematic reviews conducted by independent research bodies.

**Response to Recommendation 2:**

The WSIB has benefited from partnering with external research organizations such as, Institute for Work and Health (IWH), and currently has strategic alliances with expert entities such as OCRC, to look into the effects of McIntyre Powder. We will continue to consider opportunities to form similar partnerships as opportunities arise.

We will continue to seek opportunities to leverage historical records including surveillance data within the context of applicable privacy laws.

**Policy Renewal**

**Observation 3:** OD Policy Governance

Policy management (i.e. the ability to develop, renew and update Policies) impacts the WSIB’s ability to adjudicate in an efficient and effective manner to render a decision. The WSIB has identified that 26 of the 48 occupational disease
(OD) policies have been assessed as “requiring a systematic scientific review”. These outdated policies no longer reflect current scientific knowledge (e.g. asbestos related policies on lung cancer and gastro-intestinal cancer).

The inability to refresh policies is primarily caused by a lack of stakeholder agreement on acceptable research entities. As such, representatives contest changes in policies using research that supports their perspective in place of unbiased sources. Without agreement on the scientific research bodies (e.g. International Agency for Research on Cancer (“IARC”)) between all stakeholders, policy updates are prolonged and inefficient. The policy update process can take over 2-years on average. There is a delay in accepting the most recent studies until they are highly conclusive. This is a systemic issue within the WSIB and presents adjudicative and reputation risk4.

There is no OD policy governance framework that details the use of credible sources and methods (i.e. thresholds for causation or significant contribution to an OD) to support decision making. To supplement the inability to update policies in an effective manner, the WSIB currently uses Adjudicative Support Documents (ASD) in place of outdated policies. ASDs are developed by the Policy group to provide internal guidelines and establish exposure requirements for policies that are out-of-date or where there is a time lag between emerging science and policy development / revisions. ASDs are developed using current scientific knowledge. However, without updating the policies, decisions may be over-turned by the Workplace Safety & Insurance Appeals Tribunal (WSIAT). The tribunal, is legally required to rely on WSIB policy not ASDs. An OD progressive policy framework aligns with the client service, healthcare recovery, and return-to-work objectives of the WSIB. Currently there is no OD policy governance framework to ensure:

- Decision making is supported by up-to-date OD research for causation, exposure and duration, medical history and employment records;
- Clearly defined roles and responsibilities between the WSIB and external stakeholders (research centers, worker representatives, etc.) that have been formally documented and agreed to. Please refer to Recommendation 4 which describes the respective role and responsibilities of the WSIB, the research community, and the stakeholders; and
- Effective and transparent stakeholder engagement with the following objectives:
  - Bridging the gap between expert scientific evidence and stakeholder perception of OD risk; and
  - Establishing a continuous process to raise the risk awareness of the OD worker, employer and medical communities of current and emerging Occupational Disease risk.

Jurisdictional research indicates that some countries (e.g. Denmark) update policies as frequently as every 2 years. The research also indicates that progressive jurisdictions (e.g. Australia) use external research centers (e.g. International Agency for Research on Cancer (IARC)) and independent panels to effectively refresh and develop policies based on the most up-to-date scientific knowledge.

Safe Work Australia (SWA) acts as a workers’ compensation policy development and advisory body for government but it does not manage individual workers’ compensation claims. SWA is responsible for coordinating and developing national policy and strategies, drafting model Work Health and Safety (WHS) laws, undertaking research and collecting, analyzing and reporting data. SWA works collaboratively with the community, work health and safety authorities, industry groups and unions to achieve the national vision of healthy, safe and productive working lives. In August 2013, SWA agreed to a project with the objective of developing an up-to-date national list of deemed diseases based on the most recent scientific evidence of a causal link between diseases and occupational exposure. SWA agreed that impact assessment, consideration of inclusion of information in the deemed disease list itself or in guidance material and/or public consultation were more appropriately undertaken at jurisdictional level by those jurisdictions considering revising their own deemed diseases lists. While the report was developed primarily for use by jurisdictions, SWA agreed to publish the report as it provides useful evidence-based information. The report was published in August 2015. SWA tries to understand current workplace exposures to disease-causing hazards as a way of estimating the work contribution to the burden of disease and to identify groups of workers who may be currently at risk of developing a work-related disease later in life. This approach allows SWA to modify or develop policy based on current exposures rather than current disease incidence, which may reflect the work health and safety practices of the past.

WorkSafe BC has developed an industry initiative for occupational disease. The Occupational Diseases Initiative for 2016–2018 uses a risk-based approach to proactively identify, prioritize, and address the occupational diseases of greatest risk to workers across B.C. This three-year plan focuses on three categories of disease and six primary risk exposures:

- Cancer (asbestos, silica, solar radiation, welding fumes);
- Asthma (sensitizers); and
- Poisoning (lead).

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1 The systemic policy development risk was previously identified by KPMG in the Adjudication and Claims Administration Value for Money Audit Report, 2011.
The Workers’ Compensation Board (WCB) of Alberta has a formalized Policy Development and Consultation Process which contains the following elements:

- Research and Analysis;
- Process or Procedural Change/Clarification;
- Policy Development/Amendments;
- Stakeholder Consultation for Policy Concepts, Policy Draft or Both; and
- Policy Approval and Implementation Requirements

The Policy Roadmap is published yearly and a consultation archive is maintained.

Risk & Impact: Outdated policies can result in inefficiencies and decision-making inconsistencies across the adjudicative process and case management processes. Policy gaps can undermine the efforts to achieve recovery and return to work objectives and potentially add additional costs to the insurance scheme.

Risk & Impact: Without an OD policy governance framework, OD decision making and the WSIB’s credibility with workers, employers, the medical community and researchers are at risk. This gap can result in an inconsistent model of decision making which can result in significant adjudicative delays and the associated impacts on the workers and their families. It has also contributed to undue political influence in cluster case management (e.g. General Electric and McIntyre Powder).

Risk & Impact: Without an effective stakeholder risk communication strategy tailored to OD, the ability to reduce the innate tension between stakeholders and the WSIB limits collective understanding of the risk, the science, and areas of uncertainty. The WSIB will not bridge the gap between the science understanding and public perception of the associated risks. The persistence of this gap will continue to have a significant impact on the WSIB’s brand and reputation.

Risk & Impact: Outdated policies can result in workers being subjected to lengthy appeals. The policy gap, has contributed to an adversarial dispute resolution culture and lengthens the time for the injured worker to receive quality medical care and delays their focus on return to work or quality of life.

Recommendation

Recommendation 3: The WSIB should evaluate the opportunity to update the Regulations and Schedules 3 & 4 (Appendix 3) based on the current body of scientific knowledge to increase adjudication efficiency and provide further decision-making transparency to its stakeholders. Some opportunities to update Schedule 3 include:

- Respiratory Disease – Asthma: Consider an updated scientific review to develop a more general policy on asthma (i.e. sensitizer induced asthma or RADS) and recognition of other occupation exposures. For example, WorkSafe BC recognizes western red cedar dust; isocyanate vapors and gases; dust, fumes or vapours of other chemicals or organic materials known to cause asthma; and
- Cancer – Primary cancer of the nasal cavities or paranasal sinuses: Consider an updated scientific review to develop a more general policy on nickel exposures (not specific to one employer) (This is referenced in IARC Monograph 100C), adding wood and possibly leather dust. For example, WorkSafe BC has the following Nasal Cavity requirement: “Where there is prolonged exposure to dusts, fumes or mists containing nickel or the dusts of hard woods”.

Recommendation 4: The WSIB should develop an OD policy governance framework based on the principles for quality OD care and fair adjudicative decisions by including the following elements:

- An effective iODAG (composed of research and medical experts) who can provide objective, credible and transparent advice. The iODAG will provide advice to WSIB for credible medical & scientific sources to support the recommended OD policy governance framework. The composition of the group should consist of credible medical and scientific OD experts. This group should be supported by the WSIB staff from Policy, ODSBP, Health Services and Legal & Privacy. This will increase the trust and confidence of the worker and employer community in the WSIB through the independence of the iODAG;
- Stakeholder rules of engagement, roles and responsibilities to increase the effectiveness of the scientific renewal efforts by increasing the level of risk awareness;
- An OD policy framework that reinforces principles in OD claims adjudication and emphasizes the role of scientific evidence in decision making:
The framework should reference credible scientific sources such as IARC that are accepted by the scientific / medical community and updated frequently to reflect the current OD developments. This would reduce WSIB’s need to constantly update its policies as scientific developments emerge;

Formalize the required level of scientific certainty to inform the OD policy framework. This includes credible scientific research entities, acceptable confidence intervals, protocols to leverage emerging scientific research in support of schedule & regulation updates etc.; and

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

The process to develop or renew regulations & schedules (including incorporation of current research); and

WSIB should inventory their existing OD policies to determine the requirements for an overarching and principles-based OD policy.

The following proposed model represents the relationship between the ODSBP’s core objectives aligned with the WSIB’s operational goals. It also demonstrates how the OD objectives must be achieved by strengthening the core program elements and their interrelationships. The program elements include:

- Principle-based OD policy framework;
- Quality & timely adjudication;
- Stakeholder awareness; and
- Emerging OD risk.

The program elements must be enhanced by credible external scientific resources, iODAG and the ODSS. These three support elements will enhance the ODSBP by:

- Up-to-date and objective scientific research;
- Independent advice from leading scientific and medical experts; and
- Enhanced exposure, duration, medical history and employment record data & analytics.
The model is supported by detailed decision process-flow diagrams in Appendix 3.

WSIB Management Response:

Response to Recommendation 3:
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.

Response to Recommendation 4:
During 2019, the WSIB will review its current Framework for Policy Development and Renewal. As part of that exercise, we will consider how to best reflect a refreshed governance approach to occupational disease policy.

In addition, we will explore the opportunity to formalize the WSIB’s current occupational disease policy principles within an overarching policy or policies – we currently rely on principles recommended by the Occupational Disease Advisory Panel (ODAP) to guide occupational disease policy development, including the approach to reviewing available scientific research. The principles recommended by ODAP were accepted by the WSIB Board of Directors in 2005 and have been reflected in WSIB protocols since that time but have not been imbedded in policy.

Governance / Roles and Responsibilities

Observation 4: An iODAG

The WSIB is self-reliant in terms of the criteria to determine eligible occupational diseases. This work is performed by a small research & policy team who internally consolidate meta-data of existing scientific knowledge for exposure duration and intensity levels. However, there is no consensus among stakeholders on the criteria and sources of independent research to support changes to acceptable occupational diseases and benefit entitlement criteria. This is often viewed as a closed system by key stakeholders as originally identified in the report entitled Protecting the Worker from Disability: Challenges for the Eighties (Paul C. Weiler, 1983).

In 2000, the WSIB adopted an Occupational Disease Response Strategy. The key aims of the strategy were to prevent OD in the future and provide timely compensation and assistance to workers affected by OD, their families and their survivors. As well, the strategy called for developing appropriate guidelines to:

- Aid adjudication of OD claims; and
- Support the WSIB Board of Directors in the evaluation of existing policies and development of new policies; and when making recommendations to the government for the scheduling of certain diseases.

To assist in this process the WSIB created the Occupational Disease Advisory Panel (ODAP) in 2001. ODAP members represented employers, workers, researchers, the Ministry of Labour and the WSIB. ODAP was asked to develop guidelines for the application of legal and scientific principles to be used in scheduling, policy development and case by-case adjudication of OD claims (Smith, Brock. The Final Report of the Chair: Executive Summary).

In 2005, The Final Report of the Chair of the Occupational Disease Advisory Panel developed under Brock Smith gave rise to sweeping recommendations around the policy and adjudicative processes of occupational diseases. This report used legal principles to assist decision makers with establishing work relatedness, including the causation test, burden of proof, standard of proof, benefit of doubt, and justice and merits. It also discussed legal principles and levels of evidence including scientific and epidemiological studies that are necessary for OD adjudication and policy making. The WSIB adopted the adjudicative principles outlined in this report and frontline decision makers in ODSBP were trained accordingly. Although the framework and the OD program structure have been refreshed in 2009, 2011, and most recently in 2018, the foundational elements have not changed. The report is available on the WSIB website for further review.

Even with the adjudicative clarity found in the ODAP report, the ODSBP is still dependent on access to current science and up-to-date policy and procedure documents. While acute and chronic illnesses may resemble the adjudication of physical injury claims, long latency occupational disease pose unique risks. The development of the long latency occupational disease often materialize many years after exposure, and in many instances well after a worker is no longer exposed to the agent. In some cases, given the severity of the diagnosis (e.g. mesothelioma) workers may not be alive, causing further challenges to adjudicate or reconsider their cases. Despite the extensive and prolonged review of the ODAP Principles between 2001 and 2004, some recommendations have not realized due to lack of consensus by stakeholders. Currently the ODAP is no longer in existence which indicates that the WSIB has not been
consistent in terms of establishing an iODAG to provide up-to-date scientific advice supporting the policy development and renewal efforts.

Jurisdictional research indicates that some countries (e.g. Denmark and United Kingdom) have established independent occupational disease committees (comprised of medical and scientific experts), and to provide advice on the list on eligible occupational diseases. In the UK, The Social Security Contributions & Benefits Act 1992 allows ministers to prescribe a disease if they are satisfied that it can be caused by work and that such a link can be made with “reasonable certainty” in the individual claimant’s circumstances. In this context “reasonable certainty” means “more likely than not” that the disease is due to a person’s work. The government is guided in this by scientific advice from the Industrial Injuries Advisory Council (IIAC). It is an independent body, set up by an Act of Parliament (originally in 1948) to advise on which diseases should be recognized and in what types of job (i.e. what is put in Schedule 1 of the 1985 Regulations). Most of IIAC’s members are medical and scientific experts, knowledgeable in how and why diseases occur in the general public and in workers with particular jobs or exposed to particular hazards. However, it does not have its own research budget to directly fund scientific studies. It relies on independent, peer-reviewed research published in medical and scientific journals when considering whether to recommend changes to the list of diseases for which industrial injuries benefits may be paid. It may also ask organizations, stakeholders or specific academic experts for scientific evidence in areas it decides to investigate. Where IIAC has identified a gap in the research evidence it may make a call for additional research to be undertaken by external organizations or bodies. IIAC welcomes and considers research evidence about any occupational diseases and their exposures submitted by any individual or organization.

Risk & Impact: Without an iODAG, the WSIB risks continued inefficient policy renewal efforts which are not well regarded by the stakeholder community.

Observation 5: Stakeholder Engagement & Risk Communication

Historically, the stakeholder engagement and risk communication approach that the WSIB uses for OD is reactive, episodic and issue driven. The approach lacks a conscious strategy based on progressive risk communication practice directed at reducing the gap between scientific or expert opinion on casualty, probability and exposure (“expert” assessment) vs. practical OD life experiences of workers and employers (“public” assessment). This group views the risk of OD from the context of their own experiences without necessarily being full aware of the results and maturity of specialized research and knowledge which is constantly evolving in the OD realm. Pressure to choose “expert” vs. “public” assessments of OD risk causes frustration and a breakdown of trust between the WSIB, workers and employers. KPMG’s previous value-for-money reviews for the WSIB have observed this inherent tension between “expert” and “public” assessments of health and safety risk. It is culturally ingrained. This tension has contributed to delays in maturing the OD policy governance framework of the WSIB and added to case adjudication and appeal inefficiencies. It has contributed to the rise of an advocacy industry in Ontario supporting the “public” assessment approach to OD. The tension is rooted in the qualitative terminology of the “experts” vs. the qualitative language of the “public”. Neither language nor interpretation of the risk can replace the other.

Both parties are correct given the residual uncertainties associated with OD risks and the constantly evolving scientific landscape – the ongoing gap in the “expert” assessment approach. Therefore, experts cannot monopolize the assessment of OD risk and dictate the outcomes or decisions of the WSIB. On the other hand, those advocating for the “public” assessment approach cannot do so without regard for scientific or quantitative evidence and an awareness of emerging developments in the field of OD. Given the residual uncertainties and the constantly maturing scientific landscape, informed consent is foundational to the allocation of public resources for OD risk reduction in Ontario. Closing the risk communication gap is dependent on the following factors:

- Whether the types of risks involved have unique characteristics of dread or unfamiliarity;
- Whether workers, employers or their representatives believe that they are being misinformed by the WSIB or their experts;
- Whether extensive media coverage of sensational events, attributable to a particular OD risk event or cluster occurs;
- How scientific research findings are interpreted by various stakeholders;
- Whether key stakeholders choose certain issues for special attention; and
- Whether a competent and independent group assumes responsibility for implementing good risk communication practice at any time throughout the development of an OD risk event or emerging research findings.

However, on a positive note, the WSIB has a corporate initiative underway to mature stakeholder communications. The proposed corporate stakeholder engagement process reflects leading practices established by experts such as Dr.
William Leiss, a leading Canadian researcher in risk communication and a former President of the Royal Society of Canada. He resides at University of Ottawa in the R. Samuel McLaughlin Centre for Population Health Risk Assessment as a scientist and adjunct professor. The objective of the communication strategy is to increase transparency and effective communication with the injured workers by acknowledging and understanding the injured workers’ personal experience and emotion. This approach will help bridge the gap between the “science” and the “public” perception and causality of OD. The corporate stakeholder engagement strategy is under development, and has not been formalized into the OD policy management process.

Jurisdictional research indicates that in the UK, the Industrial Injuries Advisory Council IIAC may ask organizations, stakeholders or specific academic experts for scientific evidence in areas it decides to investigate. Where IIAC has identified a gap in the research evidence it may make a call for additional research to be undertaken by external organizations or bodies. IIAC welcomes and considers research evidence about any occupational diseases and their exposures submitted by any individual or organization. It does not limit submissions to just the science and medical communities.

WorkSafe BC has established a formalized stakeholder engagement approach. As part of this process it created the Policy and Practice Consultative Committee (PPCC) which meets on a monthly basis. In July 2008, WorkSafe BC initiated a review of the Policy & Practice Consultative Committee (“PPCC”) to ensure it continues to be an effective avenue for obtaining stakeholder input and advice. In October 2008, a report was published documenting the review findings and outlining fifteen recommendations to clarify the committee’s role, structure, and priorities. The Committee is supported by a Terms of Reference, and stakeholder meeting process and protocols. Ongoing efforts are made to ensure that the PPCC remains a forum in which employers and workers are on an even footing to learn about and provide feedback on WorkSafe BC’s policies, regulations, guidelines, and other key issues. WorkSafe BC’s approach to stakeholder engagement in the policy and regulation development process is defined and documented.

Risk & Impact: The current approach to reject, eliminate or persuade each side that their approach to OD risk assessment is “correct” is futile and costly to the suffering worker, their families and to the public insurance scheme. The lack of trust and the disproportionate amount of time spent on this divisive culture detracts from efforts to focus on a worker’s recovery, return to work or quality of life. Therefore, the WSIB, workers, employers and their representatives must manage the innate tension between these fundamentally different ways of assessing OD risk rather than trying to eliminate or disregard the differences.  

Observation 6: Occupational Disease Reporting Requirements by Physicians

As part of the current adjudication process, we observed that there is no requirement for physicians to report potential OD claims or to advise patients of potential WSIB coverage. Currently, the responsibility is placed solely on the patients / injured workers to identify and submit claims to the WSIB. However, occupational diseases are inherently difficult for workers to understand in terms of eligibility and coverage. This may result in under-reporting. This is further exacerbated by eligibility and adjudication processes for certain diseases (e.g. Mesothelioma) which should be auto-adjudicated because the workplace causation is well established. Without early reporting by physicians, the WSIB has challenges identifying the “Date of Accident” to determine benefits.

We were informed that generally physicians are undertrained in the field of OD to make informed referrals to the WSIB. There is an opportunity for the WSIB to provide further funding to medical schools to give appropriate and relevant OD training to future physicians. There is further opportunity for the Ministry of Labour to increase OD awareness of the medical community through its prevention strategy. Jurisdictional research indicates that WorkSafe BC through its three year occupational disease initiative.

Risk & Impact: Without early medical referrals from physicians, the WSIB risks under-serving injured workers who may be entitled to OD coverage. Adjudication delays can also result since the primary care physician can be a valuable source of diagnostic and medical history evidence.

Recommendations

In terms of the IODAG roles and responsibilities, please see Recommendation 4.
Recommendation 5: The WSIB should tailor the proposed corporate stakeholder engagement strategy to the requirements of OD. A progressive approach to stakeholder engagement for OD should be based on leading risk communication practices which include:

- Translating scientific findings and probabilistic risk assessments into understandable terms;
- Explaining uncertainty ranges, knowledge gaps and ongoing research programs;
- Addressing the issue of credibility and trust;
- Understanding the worker, the employer and their representatives “framing” of OD risk issues, especially in qualitative terms;
- Acknowledging specific questions that arise in OD (which may be and are, quite different that those posed by experts); and
- Analyzing the conditions needed for allowing workers, employers and their representatives to acquire evolving OD information, research, skills and participatory opportunities.

As per Recommendation 4, the iODAG should also assume responsibility for fostering the stakeholder communication process to discuss OD risk, developments in science and treatment, emerging risks and awareness/education opportunities.

Recommendation 6: The Ministry of Labour (MoL) should also work with the Ministry of Health and Long-term Care (MoHLTC) and the WSIB to increase OD training of medical students and increase awareness of the broader physician community. Funding for this initiative should be provided through the grants and research program administered by the MoL and funded by the WSIB.

WSIB Management Response:

Response to Recommendation 5:
The WSIB communications strategy includes a focus on empathetically communicating information in language that is tailored to our audiences and easy to understand.

Response to Recommendation 6:
The WSIB will collaborate with the appropriate government agencies on potential strategies to increase awareness across the broader physician community.

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Observation 7: Surveillance Data Collection

The WSIB does not have an in-house OD surveillance and data collection system – a systemic weakness across all WCBS in Canada. Ontario and other Canadian jurisdictions have never had OD (including cancer) surveillance systems to identify high-risk populations and target prevention efforts. Occupational diseases have generally been excluded from traditional workplace surveillance, which has focused primarily on injuries, and relied largely on workers’ compensation data. In addition, population-based risk factor surveillance systems, including the Public Health Agency of Canada’s Canadian Chronic Disease Surveillance System, do not capture information on where people worked. Unfortunately, only a very small fraction of occupational chronic diseases are recognized or compensated, and work history is not part of routinely collected health data in Canada, so a new approach was needed.

The WSIB has provided some research funding to the Occupational Cancer Research Centre (OCRC) which has created the Occupational Disease Surveillance System (ODSS). The ODSS was created to identify patterns and monitor trends in work-related disease in Ontario. It also has a long-term goal of providing a model that could be adopted nationally to fill a gap in Canada’s chronic disease surveillance framework. To create the ODSS, a cohort of workers was identified using workers’ compensation claimant data from the WSIB. The occupation and industry of individuals who receive compensation for a time-loss work-related injury or illness is collected and coded by the WSIB and was used to establish a cohort of 2.2 million workers who made claims between 1983 and 2014.

The ODSS is now part of a larger Occupational Disease Surveillance Program funded by the Ontario Ministry of Health and Long-Term Care and the Ontario Ministry of Labour. The first published peer-reviewed paper on the risk of lung cancer across occupations and industries demonstrated the validity of this approach to detect associations across well-established groups and to examine new associations. Papers on other disease outcomes, including prostate cancer, asthma, dermatitis and breast cancer, are in progress. In addition, efforts are underway to actively disseminate findings from the ODSS to a broad set of prevention stakeholders and to provide open access to an extensive array of analyses via a searchable interface on the web. The OCRC is seeking additional funding from the Public Health Agency of Canada to promote the use of this model in other Canadian jurisdictions and to contribute to building OD surveillance capacity across the country.

The ODSS initiative is highly progressive and can be very beneficial to the WSIB in terms of quality & timely adjudication, stakeholder awareness, emerging OD risks and OD policy governance framework. However, additional research and surveillance platforms for other types of long latency occupational diseases have not been planned.

Risk & Impact: Without an appropriate surveillance data and analysis, the WSIB cannot proactively examine the associations between occupations, industry and disease. The WSIB cannot actively anticipate and mitigate emerging high-risk clusters and diseases.

Observation 8: Data Interchange for Medical & Employment History

There is a significant amount of delay in the adjudicative process in terms of establishing and corroborating employment and medical history for claimants. Claims from previous decades are difficult to corroborate as a result of the businesses no longer existing or the accessibility to exposure information is not readily available. There is a perception among workers and their representatives that the responsibility for gathering the information in support of the adjudicative decision is their sole responsibility. This can be an arduous and stressful experience for a worker suffering from an OD.

Currently there is no data interchange system with other public agencies to efficiently obtain, medical and employment history. Partnerships with external stakeholders, including but not limited to the Canada Revenue Agency (CRA), the Ministry of Health and Long-term Care (MoHLTC), Service Canada, the Ontario Health Insurance Plan (OHIP), and the Ministry of Labour (MoL) need to be established and/or strengthened in order to facilitate the timely access to relevant employment history, medical treatment information and exposure data.

Risk & Impact: There is a risk that the WSIB cannot reduce delays in the OD adjudicative process without automating medical and employment information retrieval from relevant public agencies.

Observation 9: E-Adjudication Opportunities
According to the WSIB 2019-2021 Corporate Strategy, it is “committed to quick and fair entitlement decisions, making it easier to access high-quality health care, reducing the stress of an injury, improving return-to-work outcomes, giving employers more time back to run their business, and easing the burden of catastrophic injury, illness or death. By investing in and adapting our processes to the right technology, we can provide better service that makes the experience people have with us more convenient and successful while preparing to meet the demands of our digital future”.

The WSIB has identified injuries that can be adjudicated electronically for straight-forward claims. This has decreased overall adjudication timelines for straightforward cases and allows adjudicators to focus on more severe and complex cases. However, there is an opportunity to further expand the use of e-adjudication to increase the OD claims management efficiency.

**Risk & Impact:** There is a risk that the WSIB cannot make "quick and fair entitlement" OD decisions. Such delays can impede access to high-quality health care, increase the stress of an injury, inhibit return-to-work outcomes, and increase the burden of OD.

**Recommendations**

**Recommendation 7:** The WSIB should mature and formalize a partnership with research centers such as the Occupational Cancer Research Centre (OCRC) for surveillance data. Furthermore, WSIB should explore automating the information retrieval process for employment and medical information with Canada Revenue Agency (CRA), the Ministry of Health and Long-term Care (MoHLTC), Service Canada, the Ontario Health Insurance Plan (OHIP), and the Ministry of Labour (MoL).

**Recommendation 8:** The WSIB should expand the use of e-adjudication for straightforward claims that will provide workers with faster benefit decisions, more timely access to healthcare and allow adjudicators to focus on more complex claims.

**WSIB Management Response:**

**Response to Recommendation 7:**
Q3 2019 - The WSIB will leverage existing and consider new partnerships with agencies to improve the collection of medical and employment information to expedite decision-making and timely payment of benefits.

**Response to Recommendation 8:**
Q4 2019 – The WSIB will continue to modernize through leveraging technology and optimizing business processes to support improved customer service and timelier decision-making.
**Entitlement and Claims Administration**

**Observation 10: Risk-based Resource Management**

The OSDBP Refresh was implemented during April, 2018 and established the following claims management streams:
- Triage stream;
- Recovery and Return To Work (RTW) stream; and
- Quality of Life and Fatalities.

The purpose for updating the structure of the OD claims management process was to broaden knowledge, skills and experience of all OD staff, assist the program’s succession planning as more senior staff retire, and align it with the outcomes based adjudicative approach at the WSIB. From our discussions with stakeholders, we were informed that throughout the claims adjudication and treatment process, the claimant and employer may interact with multiple adjudicators. We observed the following:

- The new model is in its infancy, however, the OD triage stream has been aligned with other WSIB adjudication models within the organization. OD adjudication is presently based on case characters;
- There is further opportunity for adjudicators to develop specialization in areas such as exposure agents, emerging diseases and employer / sector specific risks. This specialized knowledge through a risk-based approach can increase the overall quality of OD decision making, enhance responsiveness to high-risk employers / sectors, provide cross training and job enrichment opportunities for staff.

**Risk & Impact:** There is a risk that the current adjudication model may not have training for specialized employers or sector knowledge to effectively respond to emerging diseases.

**Observation 11: Opportunities for Early Involvement in Diagnosis**

We observed that there is an opportunity to identify specific Occupational Diseases which can be sent for diagnosis in the first week of receiving a claim. In doing so, the organization can expedite the adjudication timeline for complex Occupational Diseases.

**Risk & Impact:** Without referring straight-forward cases that require early diagnosis to expert resources early, the organization delays diagnosis and injured worker recovery. Furthermore, this encumbers OD claims management and adjudication resources and contributes to worker anxiety and frustration about to speed to which their cases are managed.

**Recommendations**

**Recommendation 9:** We recommend that the WSIB further examine training opportunities for adjudicators to develop specialized knowledge in areas such as exposure agents, emerging diseases and employer / sector specific risks. This specialized training and knowledge transfer can increase the overall quality of OD decision making, enhance responsiveness to high-risk employers / sectors, provide cross training and job enrichment opportunities for staff.

**Recommendation 10:** Leverage existing medical programs to more quickly connect workers with expert resources to help expedite the required information regarding exposure to support decision-making and recommended treatment plans.

**WSIB Management Response:**

**Response to Recommendation 9:**
Formal and informal development opportunities will be implemented in a phased approach throughout 2019 and continuing.

**Response to Recommendation 10:**
Q2 2019 – The WSIB will leverage new, and existing, health care programs to expand general assessment services and provide better access across Ontario. This program will integrate with the Occupational Disease Specialty Program to provide integrated and unified care paths and collaboration with family physicians.
Appendix 1 — Interviews and Information Requested

We undertook interviews with internal stakeholders to inform this work, including:

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<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Kate Lamb</td>
<td>Chief Corporate Services Officer</td>
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<tr>
<td>Angela Powell</td>
<td>VP, Policy &amp; Consultation Services Division</td>
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<tr>
<td>Brian Jarvis</td>
<td>Chief Operational Officer</td>
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<tr>
<td>Armando Fatigati</td>
<td>VP, Complex Claims</td>
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<tr>
<td>Slavica Todorovic</td>
<td>VP, Appeals Services Division</td>
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<tr>
<td>Fred Broad</td>
<td>Manager, Appeals Services Division</td>
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<tr>
<td>Tiffany Turnbull</td>
<td>Assistant Director, Policy</td>
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<tr>
<td>Irene Dias</td>
<td>Director, ODSBP, Complex Claims</td>
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<td>Anthony Kelly</td>
<td>Director, ODSBP, Complex Claims</td>
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<tr>
<td>Judith D’Souza</td>
<td>Director, ODSBP, Complex Claims</td>
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<tr>
<td>Starly Catli</td>
<td>Senior Scientists</td>
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<td>Deborah McBride</td>
<td>Senior Scientists</td>
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<tr>
<td>Adil Dossa</td>
<td>Operational Policy Analysts</td>
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<tr>
<td>Christopher Misura</td>
<td>Operational Policy Analysts</td>
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<tr>
<td>Dr. Aaron Thompson</td>
<td>Medical Director, Occupational Disease, Health Services</td>
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<tr>
<td>Magdalena Warczok</td>
<td>Manager, Occupational Hygiene, ODSBP, Complex Claims</td>
</tr>
<tr>
<td>Paula Houston</td>
<td>Manager, ODSBP, Complex Claims</td>
</tr>
<tr>
<td>Freda Mroczek</td>
<td>Project Director</td>
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<tr>
<td>Jean-Serge Bidal</td>
<td>Executive Director, Risk</td>
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<tr>
<td>Michael Martini (Triage)</td>
<td>Adjudicators, ODSBP</td>
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<tr>
<td>Cheryl Mahoney (RTW/Acute)</td>
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<tr>
<td>Amanda Walker (LLOD)</td>
<td>Adjudicators, ODSBP</td>
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<tr>
<td>Scott Bujeyea</td>
<td>VP, Health Services</td>
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<tr>
<td>Maria Marchese</td>
<td>Ontario Business Coalition</td>
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<tr>
<td>Yasmin Tarmohamed</td>
<td>Canadian Vehicle Manufacturers’ Association</td>
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<td>Dave Wilken</td>
<td>Occupational Health Clinics for Ontario Workers</td>
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<tr>
<td>Lois Cromarty</td>
<td>Ontario Legal Clinics' Provincial Workers' Compensation Network</td>
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<td>John McKinnon</td>
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<td>John Bartolomeo</td>
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<tr>
<td>Rob Halpen</td>
<td>The Ontario Federation of Labour (OFL)</td>
</tr>
<tr>
<td>Melissa Faber</td>
<td>Ministry of Labour, Policy</td>
</tr>
<tr>
<td>Dr. Leon Genesove</td>
<td>Ministry of Labour</td>
</tr>
<tr>
<td>Dr. Linn Holness</td>
<td>Centre for Research Expertise in Occupational Disease (CRE-OD)</td>
</tr>
<tr>
<td>Dr. Paul Demers</td>
<td>Occupational Cancer Research Centre</td>
</tr>
<tr>
<td>Katherine Lippel</td>
<td>University of Ottawa</td>
</tr>
<tr>
<td>(Canada Research Chair in Occupational Health and Safety Law)*</td>
<td>University of Ottawa (Focuses on juridictional comparisons and has done significant study of QC vs ON particularly re medical model vs legal model)</td>
</tr>
<tr>
<td>Laura Russell</td>
<td>Schedule 2 Employers' Group</td>
</tr>
<tr>
<td>Kathleen Therriault</td>
<td>Office of the Worker Adviser (OWA)</td>
</tr>
<tr>
<td>Michael Zacks</td>
<td>Office of the Employer Adviser (OEA)</td>
</tr>
<tr>
<td>Carmine Tiano</td>
<td>Provincial Building and Construction Trades Council of Ontario</td>
</tr>
<tr>
<td>Jason Mandlowitz</td>
<td>Mandlowitz Consulting and Paralegal Services</td>
</tr>
<tr>
<td>David Corbett</td>
<td>Chair of WSIAT</td>
</tr>
</tbody>
</table>
We reviewed policies, process documents, organizational structures, research papers, etc. to inform this work, including:

<table>
<thead>
<tr>
<th>Documents Reviewed</th>
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</thead>
<tbody>
<tr>
<td>Paul Weiler Report WSIB (2 documents)</td>
</tr>
<tr>
<td>Brock Smith Report WSIB (1 document)</td>
</tr>
<tr>
<td>OD Surveillance System Report: Paul Demers CCO</td>
</tr>
<tr>
<td>Role of Scientific Evidence in OD Scheduling</td>
</tr>
<tr>
<td>OD Claims Adjudication ODAP Policy</td>
</tr>
<tr>
<td>Principles in OD Claims Adjudication - ODAP Policy</td>
</tr>
<tr>
<td>Feedback on VFMA Draft Recommendations</td>
</tr>
<tr>
<td>Ontario Workplace Health Champions Program</td>
</tr>
<tr>
<td>Framework for Operational Policy Development and Renewal Documents:</td>
</tr>
<tr>
<td>• Method for Policy Review</td>
</tr>
<tr>
<td>• Method for Policy Request</td>
</tr>
<tr>
<td>• Policy Development Framework</td>
</tr>
<tr>
<td>• Policy Agenda for On-going Policy Projects</td>
</tr>
<tr>
<td>• Protocol for Operational Policy and Claims Adjudication (ODAP)</td>
</tr>
<tr>
<td>ODAP Advisory Panel Chair Report</td>
</tr>
<tr>
<td>Internal Presentation for ODSBP Refresh</td>
</tr>
<tr>
<td>Other Documents:</td>
</tr>
<tr>
<td>• Organizational Charts (3 documents)</td>
</tr>
<tr>
<td>• Overview of ODSBP Program Presentations and Documents (6 documents)</td>
</tr>
<tr>
<td>• Occupational Disease Policy Inventory (3 documents)</td>
</tr>
<tr>
<td>• ODSBP Resources and Process Documents (7 documents)</td>
</tr>
<tr>
<td>• ODAP Documentation (9 documents)</td>
</tr>
<tr>
<td>• Fair Practices Commission (4 documents)</td>
</tr>
<tr>
<td>• Data &amp; Reporting Products (8 documents)</td>
</tr>
<tr>
<td>• Other Background Documents (4 documents)</td>
</tr>
<tr>
<td>• Operational Policy Manual (1 document)</td>
</tr>
</tbody>
</table>
Appendix 2 — Listed Occupational Diseases in WSIA Schedule 3 & 4

### Schedule 3 Occupational Diseases

<table>
<thead>
<tr>
<th>Description of Disease</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Poisoning and its Sequelae — by arsenic</td>
<td>Any process involving exposure to or the use of arsenic, arsenic preparations or arsenic compounds</td>
</tr>
<tr>
<td>2. Poisoning and its Sequelae — by benzene</td>
<td>Any process involving exposure to or the use of benzene</td>
</tr>
<tr>
<td>3. Poisoning and its Sequelae — by beryllium</td>
<td>Any process involving exposure to or the use of beryllium, beryllium preparations or beryllium compounds</td>
</tr>
<tr>
<td>4. Poisoning and its Sequelae — by brass, nickel or zinc</td>
<td>Any melting or smelting process involving exposure to brass, nickel or zinc</td>
</tr>
<tr>
<td>5. Poisoning and its Sequelae — by cadmium</td>
<td>Any process involving exposure to or the use of cadmium, cadmium preparations or cadmium compounds</td>
</tr>
<tr>
<td>6. Poisoning and its Sequelae — by carbon dioxide</td>
<td>Any process involving exposure to carbon dioxide</td>
</tr>
<tr>
<td>7. Poisoning and its Sequelae — by carbon disulphide</td>
<td>Any process involving exposure to carbon disulphide</td>
</tr>
<tr>
<td>8. Poisoning and its Sequelae — by carbon monoxide</td>
<td>Any process involving exposure to carbon monoxide</td>
</tr>
<tr>
<td>9. Poisoning and its Sequelae — by chlorinated hydrocarbons</td>
<td>Any process in the manufacture of, or the use of, or involving exposure to chlorinated hydrocarbons</td>
</tr>
<tr>
<td>10. Poisoning and its Sequelae — by chromium</td>
<td>Any process involving exposure to or the use of chromium or chromium compounds</td>
</tr>
<tr>
<td>11. Poisoning and its Sequelae — by lead</td>
<td>Any process involving exposure to or the use of lead, lead preparations or lead compounds</td>
</tr>
<tr>
<td>12. Poisoning and its Sequelae — by mercury</td>
<td>Any process involving exposure to or the use of mercury, mercury preparations or mercury compounds</td>
</tr>
<tr>
<td>13. Poisoning and its Sequelae — by nitro- or amino- derivatives of benzene, phenol or their homologues</td>
<td>Any process involving manufacture, handling, use or exposure to nitro- or amino- derivatives of benzene, phenol or their homologues</td>
</tr>
<tr>
<td>14. Poisoning and its Sequelae — by oxides of nitrogen</td>
<td>Any process involving exposure to oxides of nitrogen</td>
</tr>
<tr>
<td>15. Poisoning and its Sequelae — by phosphorous</td>
<td>Any process involving exposure to or the use of phosphorus</td>
</tr>
<tr>
<td>16. Diseases from Biological Agents — Anthrax</td>
<td>Handling of animals and animal parts, or any other process that results in exposure to a source of anthrax infection</td>
</tr>
<tr>
<td>17. Diseases from Biological Agents — Tuberculosis</td>
<td>Any employment in a health care facility, a laboratory as defined in the Laboratory and Specimen Collection Centre Licensing Act or a reform institution, any employment in providing health care services or health care support services or any other employment in which there is a known risk of exposure to tuberculosis or to the tubercle bacillus</td>
</tr>
<tr>
<td>18. Diseases from Physical Agents — Bursitis</td>
<td>Any process involving constant or prolonged friction to or pressure on the bursae</td>
</tr>
<tr>
<td>Description of Disease</td>
<td>Process</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>19. Diseases from Physical Agents — Infected blisters</td>
<td>Any process involving friction to the skin that creates opportunity for infection</td>
</tr>
<tr>
<td>20. Diseases from Physical Agents — Tenosynovitis</td>
<td>Any process involving continual or repetitive injury to tendons of the limbs</td>
</tr>
<tr>
<td>21. Diseases from Physical Agents — Dysbarism: decompression sickness including caisson disease</td>
<td>Any process involving work in compressed or decompressed air</td>
</tr>
<tr>
<td>22. Any disease due to exposure to X-rays, radium or other radioactive substances</td>
<td></td>
</tr>
<tr>
<td>23. Respiratory Diseases — Asthma</td>
<td>Any process involving exposure to allergenic non-offset sprays in the printing industry</td>
</tr>
<tr>
<td>24. Respiratory Diseases — Silicosis</td>
<td>Any process involving exposure to crystalline silica</td>
</tr>
<tr>
<td>25. Respiratory Diseases — Pneumoconioses other than silicosis or asbestosis</td>
<td>Any process involving exposure to the relevant dust</td>
</tr>
<tr>
<td>26. Skin and Eye Diseases — Allergic contact dermatitis</td>
<td>Any process involving exposure to a skin allergen</td>
</tr>
<tr>
<td>27. Skin and Eye Diseases — Ulceration of the skin or cornea</td>
<td>Any process involving use, handling, or exposure to tar, pitch, bitumen, mineral oil or paraffin or any compound, product or residue of these substances</td>
</tr>
<tr>
<td>28. Skin and Eye Diseases — Photo keratoconjunctivitis and photo retinitis</td>
<td>Any process involving prolonged or intense ultra-violet or infra-red exposure, including gas or arc welding or use of lasers</td>
</tr>
<tr>
<td>29. Cancer — Epitheliomatous (skin) cancer</td>
<td>Any process involving use or handling of tar pitch, bitumen, mineral oil or paraffin or any compound, product or residue of these substances</td>
</tr>
<tr>
<td>30. Cancer — Primary cancer of the nasal cavities or of paranasal sinuses</td>
<td>Concentrating, smelting or refining in the nickel producing industry</td>
</tr>
</tbody>
</table>
### Schedule 4 Occupational Diseases

<table>
<thead>
<tr>
<th>Description of Disease</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Asbestosis</td>
<td>Any mining, milling, manufacturing, assembling, construction, repair, alteration, maintenance or demolition process involving the generation of airborne asbestos fibres</td>
</tr>
<tr>
<td>2. Primary malignant neoplasm of the mesothelium of the pleura of peritoneum</td>
<td>Any mining, milling, manufacturing, assembling, construction, repair, alteration, maintenance or demolition process involving the generation of airborne asbestos fibres</td>
</tr>
<tr>
<td>3. Primary cancer of the nasal cavities or of paranasal sinuses</td>
<td>Any process at the Copper Cliff sinter plant of Inco Limited</td>
</tr>
<tr>
<td>4. Primary cancer of the nasal cavities or of paranasal sinuses</td>
<td>Any process in the Port Colborne leaching, calcining and sintering department of Inco Limited that was practised before January 1, 1966</td>
</tr>
</tbody>
</table>
Appendix 3 — OD Policy Governance Framework Flow

Regulation & Schedule Change

Principles Based OD Policy Framework
- Reference credible sources of science and exposure information to update Regulations & Schedules

External Research Bodies
- External Research entities (e.g. IARC) provide basis for updating information

Independent OD Advisory Group (IODAG)
- Composed of medical and scientific experts
- Provide insights into emerging risks
- Provide insights into exposure information

WSIB Policy & Stakeholder Engagement
- Update Regulations & Schedules
- Develop administrative guidelines

OD Surveillance System (ODSS)
- Identify emerging clusters and new potential emerging diseases that impact workforce

Stakeholders
- Informed of changes by IODAG
- Informed of changes to Regulations and Schedules

Roles

Current OD scientific research
- Information screened by IODAG
- WSIB stakeholder engagement
- Receive vetted information from IODAG
- Exposure, duration, employment record and medical history research

Evaluate information from Research Centre
- WSIB stakeholder engagement
- Receive vetted information from IODAG
- Update Schedules & Regulations
- Develop administrative guidelines

Receive up to date causation research
- Receive up to date exposure and duration research
- Informed of changes to schedules and regulations
Emerging Risk Research

- **Principles Based OD Policy Framework**
  - Reference credible sources of science and exposure information to update Regulations & Schedules

- **External Research Bodies**
  - Current and emerging OD scientific research

- **Independent OD Advisory Group (IODAG)**
  - IODAG representatives discuss and vet potential emerging risks

- **WSIB Policy & Stakeholder Engagement**
  - WSIB stakeholder engagement
  - Communicate potential emerging risks for validation
  - Evaluate emerging risk information from ODSS
  - Receive information
  - Inform Senior Management of potential risks
  - Develop mitigation strategies
  - Validate information obtained from ODSS

- **OD Surveillance System (ODSS)**
  - Communicate potential emerging risks
  - Surveillance centres are requested to track and report new findings
  - Inform stakeholders of emerging risk findings

- **Stakeholders**
  - Informed of changes by IODAG
  - Informed of changes to Regulations and Schedules
Appendix 4 — Disclaimer

The information contained herein is governed by the Engagement Letter between WSIB and KPMG. Although we endeavor to provide accurate and timely information at the time of review, there can be no guarantee that such information will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

KPMG was not engaged to perform an audit, review, or compilation of financial statements or financial information and, accordingly, it expresses no opinion or other form of assurance on financial statements or financial information. Furthermore, KPMG was not engaged or qualified to conduct and has not conducted any legal analysis or to provide any legal conclusions, opinions, or advice. In conducting this assessment, KPMG made subjective judgments in a variety of areas relating to legal, regulatory, and financial services industry standards. These judgments are based on relevant laws and regulations, and on KPMG’s knowledge and experience in understanding relevant guidance. There is no guarantee, however, that KPMG’s views will be consistent with those of regulators and, therefore, KPMG makes no representation in this regard. During the course of the assessment, KPMG was provided with various documents and explanations. If further documentation or explanations come to light after the issuance of our report, KPMG reserves the right to, but is not obligated to, amend its observations and, recommendations or considerations for enhancement.

The observations and recommendations of KPMG as presented in this report are based on the procedures performed as described above, and on the information supplied by WSIB, its management and officers, or employees, and on the analysis of relevant documents that we relied upon, which were provided at the time of our request. Were KPMG to perform expanded procedures, or should the information that had been provided to KPMG be inaccurate for any reason, it is possible that our assessment and observations would be different. WSIB is solely responsible for identifying any remedial actions that may be appropriate to address any compliance gaps.

Our report is intended for the use of the Board of Directors and management of the WSIB. We do not assume any responsibility or liability for any costs, damages, losses, liabilities or expenses incurred by WSIB as a result of circulation, publication, reproduction, use of or reliance upon our report, other than as outlined above. We do not assume any responsibility or liability for any costs, damages, losses, liabilities or expenses incurred by anyone else as a result of circulation, publication, reproduction, use of or reliance upon our report.