



Prioritization Approaches for Occupational Exposure under the Chemicals Management Plan

6th Annual Occ-tober Symposia Webinar Series
on Occupational Health & Disease Prevention
October 16, 2020

Outline

- Background
- Considerations for identifying potential risks from exposure to chemicals in the workplace
 - Data Sources
 - Other Factors to Consider

Prioritizing Worker Exposures in an Ever-Changing Climate

What we know...

- Majority of manufactured goods and articles rely on chemistry
- Canada's chemical inventory → ~ 28,000
- U.S. chemical inventory → ~86,000

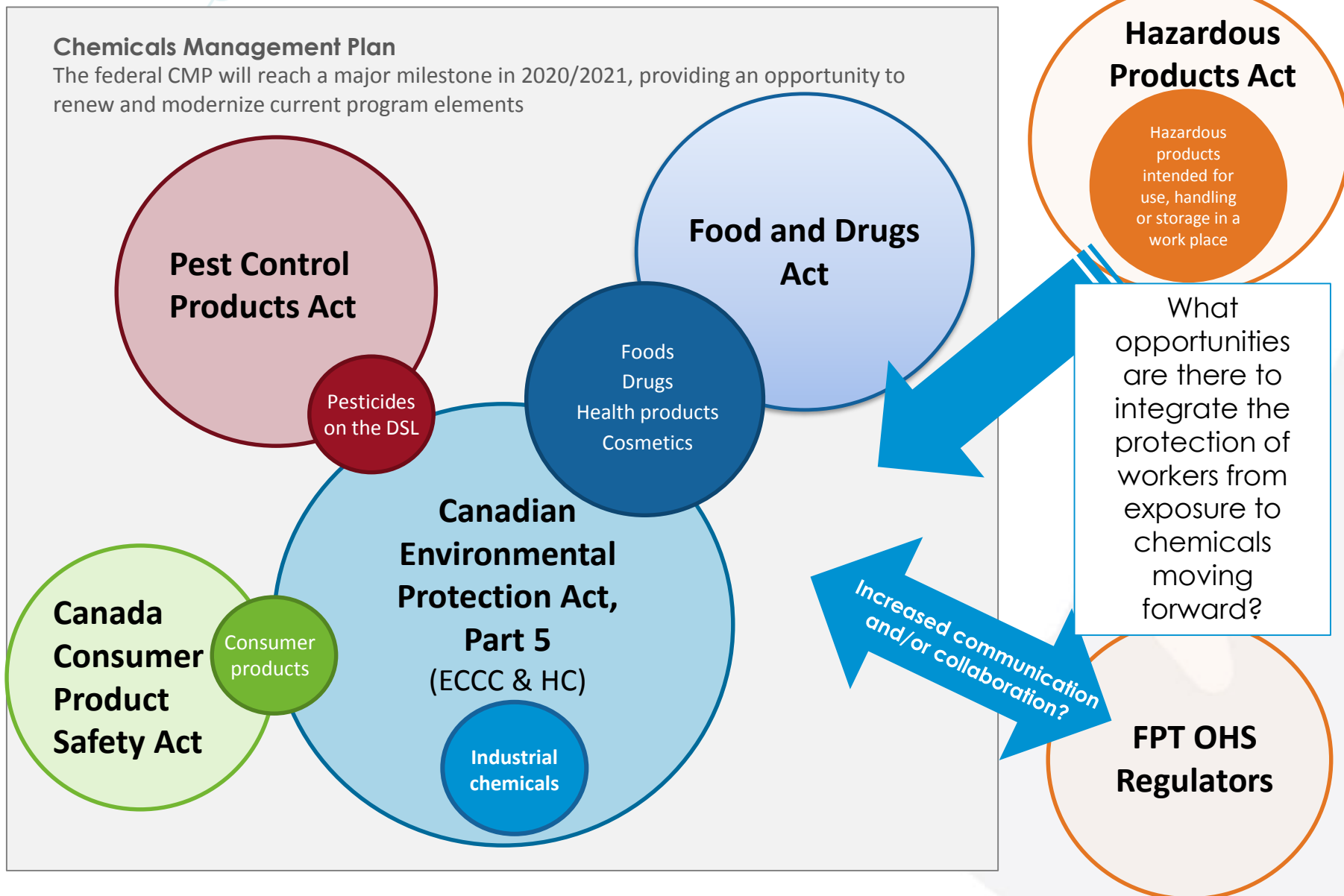


- Market shifts
 - Increase reliance on certain metals
 - Electronics, batteries
 - Recycling
- Changing use of chemicals

The Chemicals Management Plan (CMP)

- The Federal Government is exploring opportunities to renew its approach to chemicals management and work is underway to inform the future of chemicals management program in Canada
 - Throughout the CMP, stakeholders have often identified occupational exposure as a gap in risk assessments under the *Canadian Environmental Protection Act, 1999 (CEPA)*, as the assessments focus only on the risks to the environment and the general population
 - This approach has been identified as an area of misalignment internationally through the US-Canada Regulatory Cooperation Council (RCC) Chemicals Management Project
 - In international, government risk assessments, occupational exposure is often found to be a driver for risk management

Potential Future Opportunities in Chemicals Management



Opportunities Analysis

- HC has been working with Federal, Provincial and Territorial (FPT) occupational health and safety (OHS) regulators to understand if and how the information, tools and technical expertise developed under the CMP can be used to support FPTs in the delivery of their programs

What we heard from FPTs: Expanding the role of and broader collaboration with HC could serve to advance a more preventive or proactive approach to OHS program delivery

Established HC-PT Working Group (Jan 2018)

Surveyed OHS Regulators* (Fall 2018)

Face-to-face meeting with OHS Regulators (Feb 2019)

Public consultation on proposed strategy** (July 2019)

CMP Science Committee Meeting on prioritization (Feb 2020)

Chemical Priorities & Protecting Workers – Potential Outcomes

Consultation document¹ published outlining a number of potential outcomes where substances could be prioritized for further work:

Risk Assessment

Occupational Exposure Limit
(OEL) Development

Research and Monitoring

Hazard (WHMIS) Classification

Increased awareness or compliance and
enforcement are needed under the
Hazardous Products Act

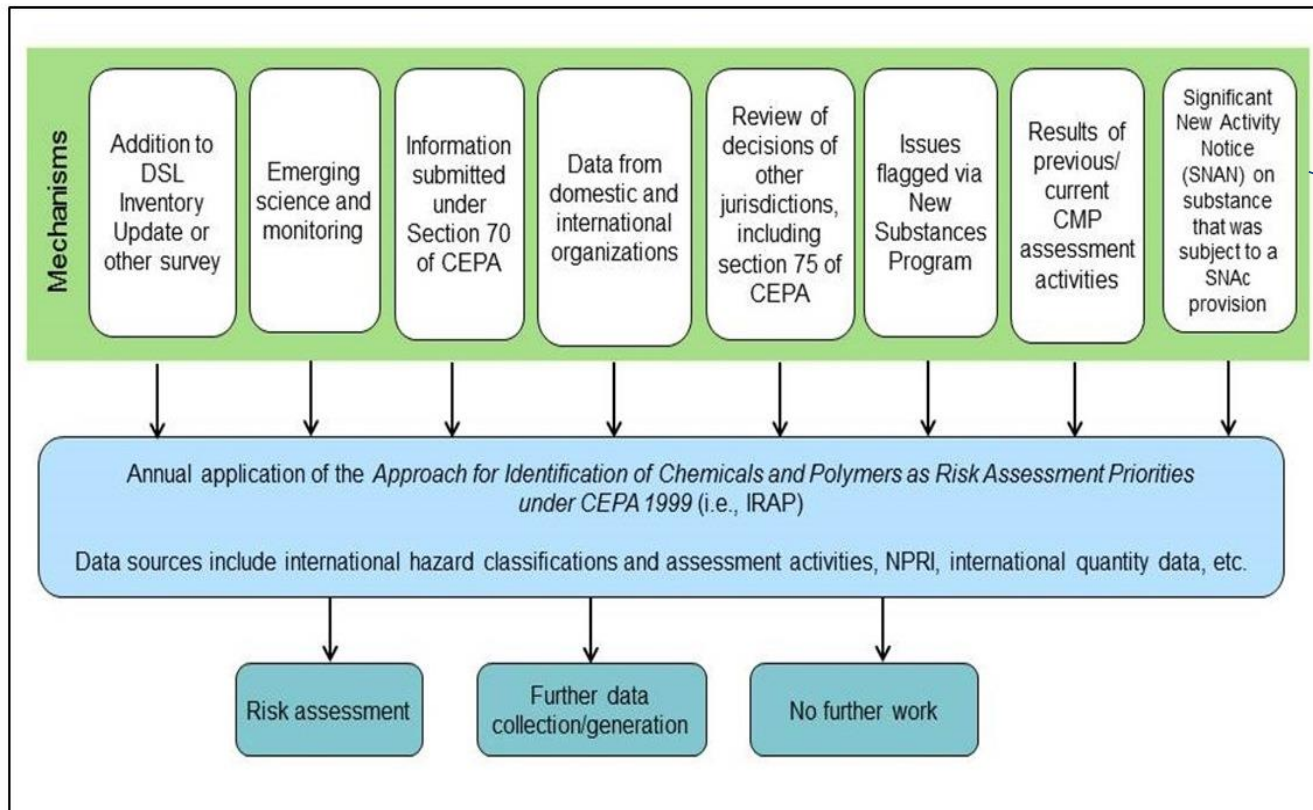
7 ¹ <https://www.canada.ca/en/health-canada/programs/consulting-integrated-strategy-protection-canadian-workers-exposure-chemicals/document.html>

Considerations for Identifying Priorities - CMP Science Committee

- In February 2020, the CMP Science Committee met to consider international lessons learned, and identify key feeders and sources of information HC could consider to inform future work related to the protection of workers from exposure to chemicals in Canada
- The Committee report is anticipated to be published in late 2020/early 2021



Current Approach for the Identification of Risk Assessment Priorities (IRAP) in Canada



While many of these data sources may include information on occupational exposures; prioritization to-date has focussed on identifying priorities in the general population

Potential Data Sources for Prioritization - Workers

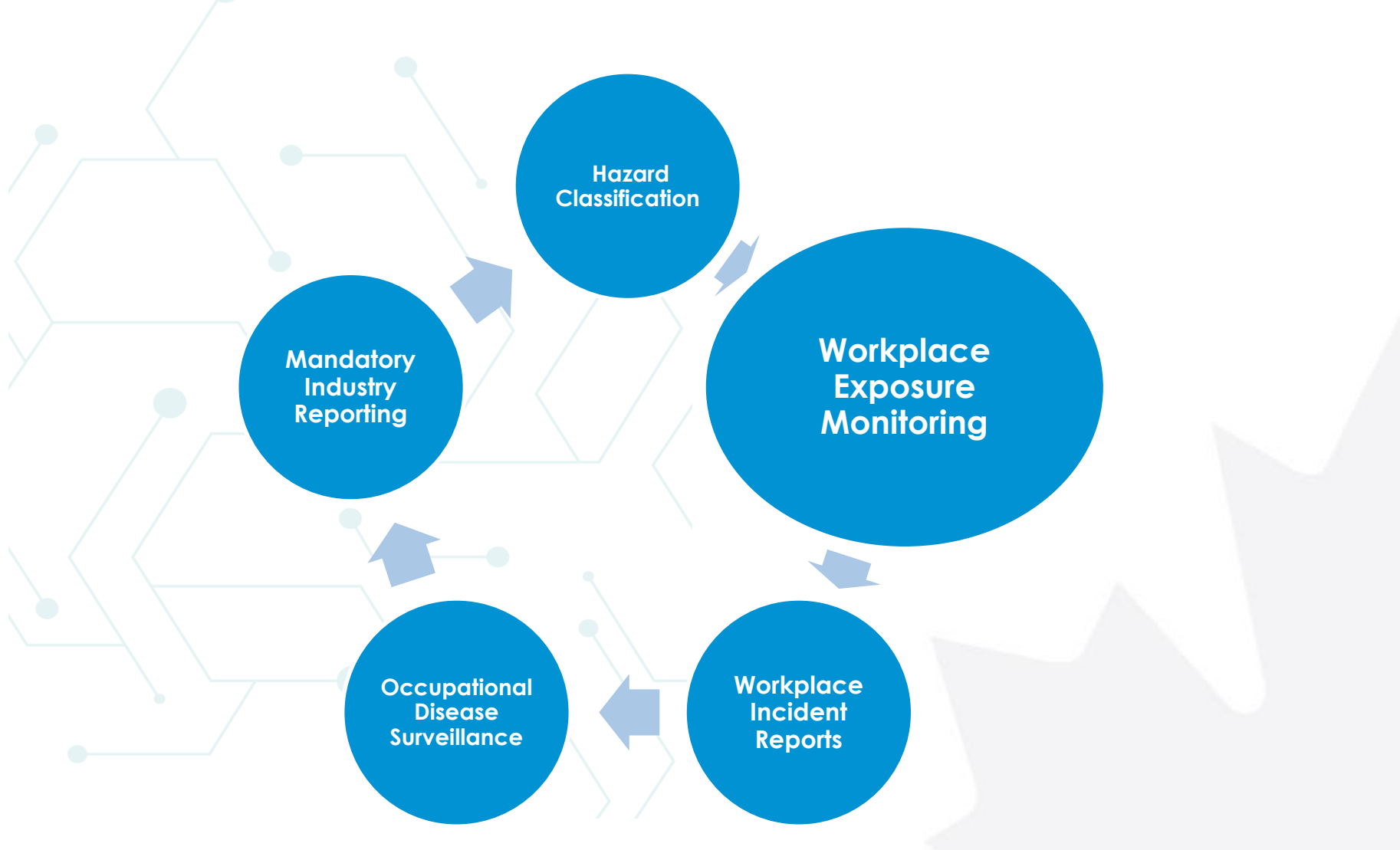


Hazard Classification

- Hazards are typically communicated in the workplace via safety data sheets.
- Hazards are based on available science – as new data becomes available, or classifications change, this could trigger an increase or decrease in how a chemical is prioritized both for workers and the general population.



Data Sources for Prioritization - Workers

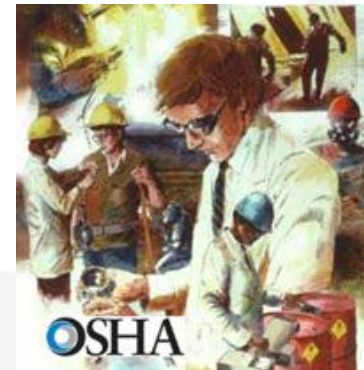


Workplace Exposure Monitoring

- In all jurisdictions in Canada, workplace exposure monitoring is an employer responsibility; monitoring results may or may not be available to OHS regulators.
- The Canadian Workplace Exposure Database (CWED) has centralized nearly half a million air sampling measurements for approximately 330 substances across 6 jurisdictions (BC, Saskatchewan, Manitoba, Ontario, Yukon, Human Resources and Skills Development Canada) from the 1970s - 2010
 - Quebec also collects exposure measurements in workplaces but is not included in the CWED
- US OSHA Chemical Exposure Health Database includes data on personal, area, and bulk samples for various airborne contaminants taken by OSHA compliance officers

**CW
ED**

**Canadian Workplace
Exposure Database**



Data Sources for Prioritization - Workers



Workplace Incident Reporting

- Incident reporting is a component of chemicals management programs at Health Canada in the areas of pesticides, drugs and other consumer products (e.g., cosmetics, children's products)
- Reporting systems whereby workers/employers notify OHS regulators of occupational exposures/incidents is not common in Canada.
 - WorkSafeBC has an Employers Incident Reporting System and a voluntary on-line exposure registry
- Canadian poison centres collectively manage ~184,000 cases annually

Workplace exposures reported to Poison Control Centres in 2019*

Poison Control Centre	Cases of workplace exposure (and % of total cases)	Total cases
Quebec*	~3,000 (6%)	49,530
Maritimes	318 (3.87%)	8,207
United States	33,116	Not available

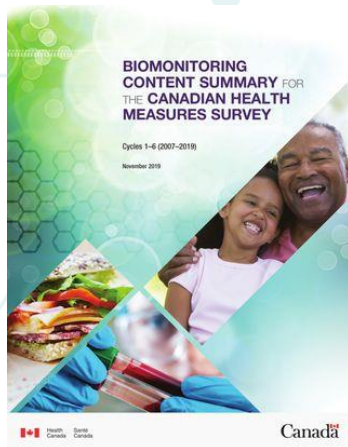
Examples of frequently reported chemical exposures

Industrial cleaners: alkalis
Alkalis (excluding cleaning agents, bleaches, batteries, and detergents)
Industrial cleaners: acids
Chlorine
Bleaches: hypochlorite (liquid and dry)

Data Sources for Prioritization - Workers

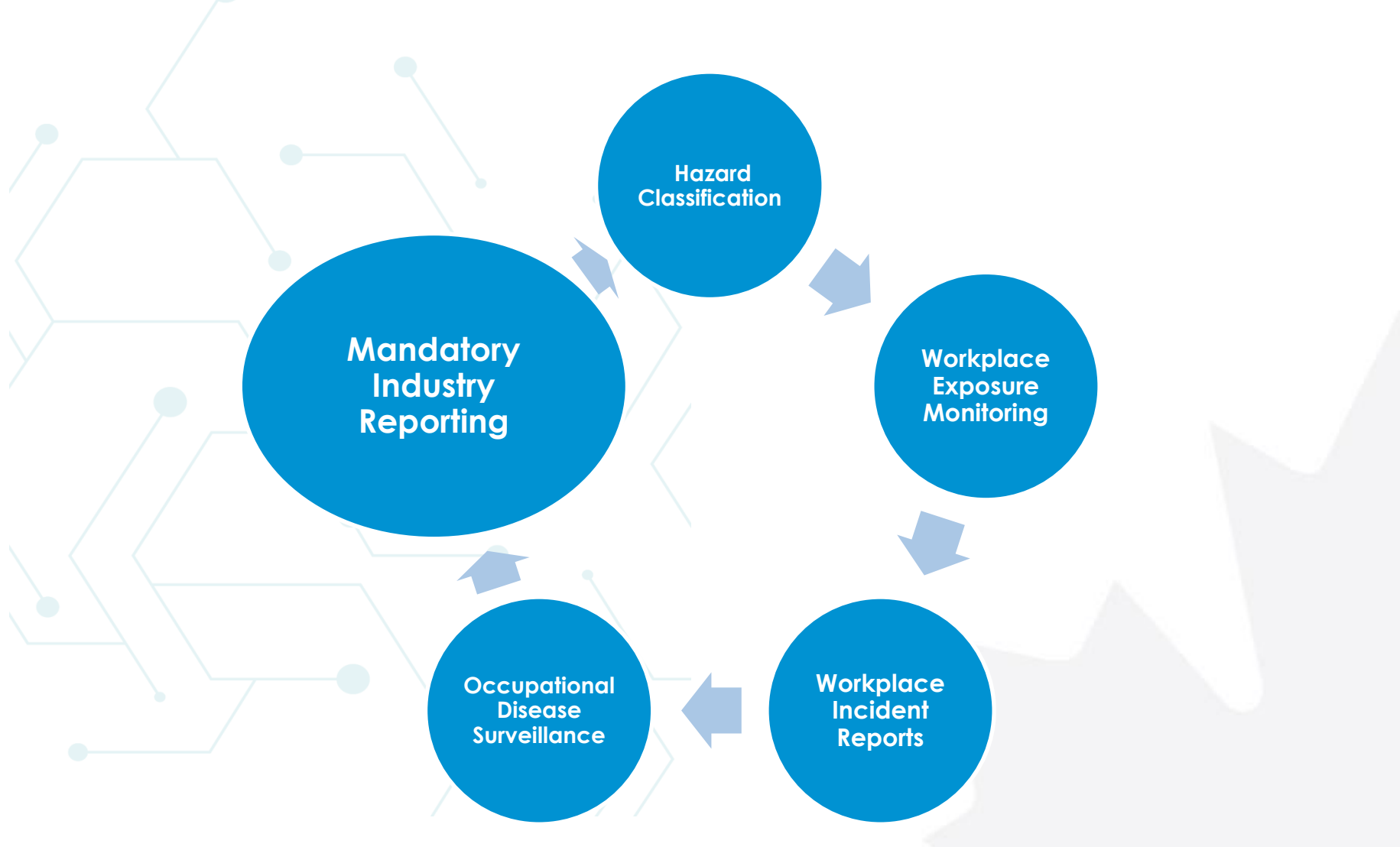


Occupational Disease Surveillance Data



- The Occupational Cancer Research Centre's (OCRC) Occupational Disease Surveillance System (ODSS) was created in 2016 by linking existing health databases with job information to study occupational disease and inform prevention. ODSS links:
 - Tumor registry data (Ontario Cancer Registry)
 - Hospital records (Canadian Institute for Health Information's Discharge Abstract Database)
 - Ambulatory care records (National Ambulatory Care Reporting System)
 - Physician billing records (Ontario Health Insurance Plan eClaims Database)
- Health/disease status, occupation and chemical exposures are also captured in population health surveys (e.g. CHMS, MIREC)

Data Sources for Prioritization - Workers

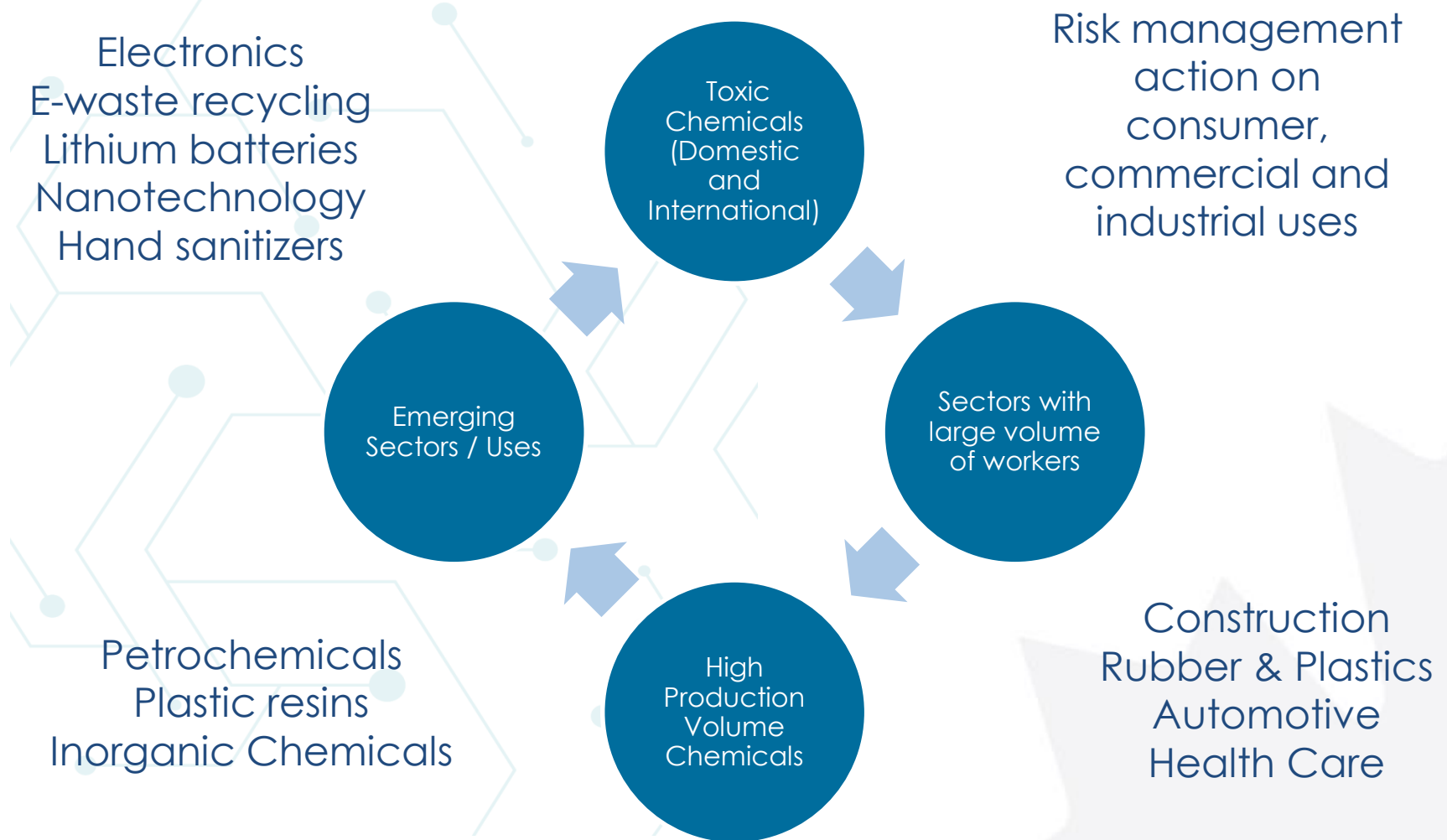


Mandatory Industry Reporting

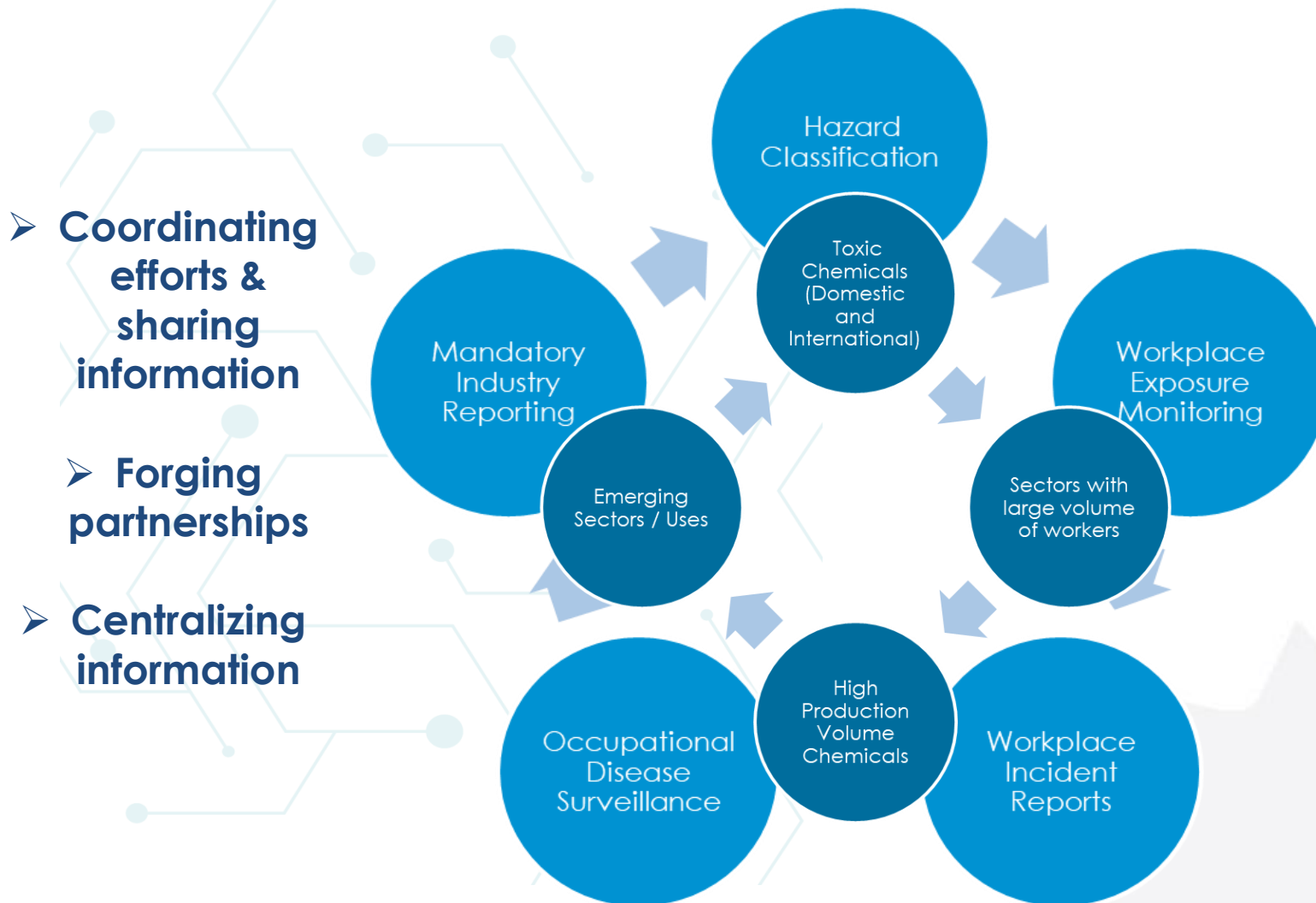
- Sections 46 and 71 of the *Canadian Environmental Protection Act, 1999* allow the Government of Canada to collect information from industry (e.g., quantities and uses, concentration, facility information, release data, toxicological information)
- Similar information gathering provisions exist in the US under the *Toxic Substances Control Act* (Chemical Data Reporting Rule) and include questions about workplace exposure such as:
 - Volume used on site
 - Number of workers at manufacturing and/or processing site
 - Number of commercial workers reasonably likely to be exposed



Potential Approaches for Targeting Prioritization Efforts



Integration of Data Sources and Approaches for Prioritizing Worker Health



Potential Factors to Consider in Prioritization of Worker Exposures



Next Steps

- Continue to work with FPT OHS regulators to identify how a modernized CMP could be leveraged to best support them in the delivery of their programs
- Continue to engage stakeholders

➤ **To inform the development of a modernized CMP**

Risk Assessment

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