Occupational Health Clinics for Ontario Workers Inc.

Centres de santé des travailleurs (ses) de l'Ontario Inc.

The Law & Tools to Prevent Occupational Cancer and Other Occupational Illnesses

Kimberly O'Connell, CIH, ROH, CRSP

Executive Director, Northern & Eastern Clinics

koconnell@ohcow.on.ca

Why we Need Legislative Changes & Tools

- Approximately 3,000 cancers diagnosed each year in Ontario are due to occupational exposure to 16 carcinogens commonly found in the workplace
    - Solar radiation, asbestos, diesel engine exhaust & crystalline silica

- Occupational disease fatalities have been approximately twice that of traumatic fatalities in each of the past ten years, *however* the number of work-related illness cases and related fatalities is **much** higher than compensation statistics indicate
    - significantly lagging indicators, plus many, many deaths and illnesses unrecognized, unreported and/or not allowed

Occupational Disease Action Plan (ODAP)

Occupational Health and Safety System and partners collaboration toward occupational disease prevention

ODAP Priorities

- Exposures:
  - Noise
  - Allergens & Irritants (both skin & lung)
    - Wet Work, Cleaning Agents, Isocyanates, Preservatives
  - Diesel Exhaust Emissions
  - Respiratory Hazards
    - Asbestos, crystalline silica
  - Emerging Issues
    - Nanotechnology
- Data and Evidence:
  - Intelligence and Decision Support
- Special Focus:
  - Electronic Medical Records

ODAP Journey

2017

Implementation Team

OD Awareness System Priority

Working groups start at different stages

Noise takes lead & sets model for INAD campaign, tools & KTE

2018 A&I Resources

Diesel & Noise Webinars

CARWH Conference Poster

OCRC OD Surveillance System (ODSS)

2019

Preventoccdisease.ca

Respiratory Hazards WG

Heathy Workers in Healthy Workplaces

OCRC ODSP

2020

COVID-19 Resources added to Preventoccdisease.ca

COVID-19 Workplace Safety Plan

Paul Demers Report

Physician/Clinician's Toolkit

OEL Adjust Tool

Action beyond Awareness

Moving Forward **2021** and beyond

Prevention Works: New OH & S System Strategy – systems *focus on occupational illness*

Occ-omplishments (highlights 2019-2021)

- The Lung Health Foundation new e-module for healthcare professionals to support education on work-related asthma.
- CRE-OD /OCRC - Project Advisory Committee participants - study to complete a formal evaluation of the Work-related Asthma Screening Long Version questionnaire in routine practice
- CRE-OD Patch Test Database: ongoing analysis for trends and emerging allergens relevant to workplaces
- OCRC and IWH Future Burden of Cancer in Construction study and workshop – Nov 21, 2019 (report available)
- Presentations by OHCOW, CROSH Mining Diesel Emissions Council (Conferences) in October 2019 and 2020 on diesel & health effects & emission reduction, hosted by Workplace Safety North.
- OHCOW represented on Mining Legislative Review Committee (MLRC). The MLRC is a committee established under Section 21 of OHSA to advise the Minister on occupational health and safety issues specific to the mining industry.
- OHCOW created baseline of reported exposure to workplace hazards (including asbestos, wet work, diesel exhaust, solvents, nanoparticles, solar radiation) organized by workplace size and sector, from analysis of a hazard survey conducted in March 2019 to inform prevention efforts

Legislative Change

- Occupational Health Regulatory Modernization Amendments (January 1, 2020) to streamline and modernize Regulation 833 – Control of Exposure to Biological or Chemical Agents and O. Reg. 490/09 – Designated Substances under OHSA and (July 1, 2020) 833 amended by *O. Reg. 449/19* to reflect the adoption of new or revised OELs for 36 chemical substances
  - replace the 9 separate Medical Surveillance Codes with one single consolidated and updated Medical Surveillance Code (learn more about the new code)
  - replace the 16 separate Codes for Respiratory Equipment and Measuring Airborne Substances with new, updated, and consolidated respiratory protection and measuring provisions
  - permit businesses to use the "Quebec model" for calculating exposures to hazardous substances for irregular work shifts
  - add "substitution," or substituting hazardous substances with those that are less hazardous, to the hierarchy of controls

Legislative Change

- Diesel

Latest from Ministry of Labour (March 20 2018) current and proposed exposure limits:
On and off-road diesel engines are widely used in other industries such as construction, transportation and warehousing. As an important first step in minimizing and controlling worker exposures to DPM in these sectors, the MOL is proposing to add a new listing and OEL for DPM measured as total carbon, in the Ontario Table (Table 1) in **Regulation 833 based on the revised MSHA limit of 160 µg/m^3, (0.16mg/m^3)total carbon (~0.1 mg/m^3 Elemental Carbon)(MOL, 2018). 45 day consultation period due May 4, 2018.**

- Mine Legislative Review Committee
  - Subcommittee –Ventilation & Occupational Hygiene
    - OHCOW represented on Mining Legislative Review Committee (MLRC). The MLRC is a committee established under Section 21 of OHSA to advise the Minister on occupational health and safety issues specific to the mining industry. Input through “labour” representing the sub committee.

Why is exposure to diesel exhaust an issue (the latest)?

Organisation	Year	Comments
BHPB[6]	November 2015	After reviews by a leading Australian Epidemiologist and the IOM[7] BHPB (Global Standard) – Exposure must be **as low as technically feasible**. Interim target set at **0.03mg/m³** (measured as EC NIOSH 5040)
Health Canada[8]	2017	Human Health Risk Assessment for Diesel Exhaust. **Causal lung cancer, suggestive bladder cancer.**
OCRC[9]	2017	Burden of Occupational Cancer in Ontario. Policy Recommendations For Diesel Engine Exhaust: 1. Adopt occupational exposure limits of **0.02mg/m³ (elemental carbon EC) for the mining industry and 0.005 EC mg/m³ for other workplaces).** 2. Upgrade or replace old on-road and off-road trucks and diesel engines. (OCRC, 2017 p.25).
CAREX Canada	Dec 2019	E Scan –trend towards more protective OELs DEE Recommends: 1. Canadian jurisdictions move towards an OEL based on elemental carbon of 20 µg/m3 (0.02 mg/m³) for the mining industry* and 5 µg/m³ for other workplaces to protect worker health" 2. The process to impose limits should be representative of the sector and not an arbitrary number based on an underground mining limit from the US, MSHA rule applied in 2008. Link (30 CFR Part 57).

Tools/ Resources (2019-2021)

- Healthy Workers in Healthy Workplaces: Respiratory Hazards and MSDs- Compliance Initiative – Webinar/Inspection Blitz/Toolkit Fall 2019
- OEL Adjust Tool – OHCOW/MLTSD Phase 1 Compliance, Phase 2 Health Based…in progress
- The Occupational Cancer Research Centre (OCRC) launched www.occdiseasestats.ca
- preventoccdisease.ca- search capacity, COVID, Physician/Clinician's Toolkit
- Is your Cancer Work-Related Webinar & Resources
- Occupational Disease Prevention Winter Webinar Series

Tools/ Resources (2019-2021)

- CRE-OD created 17 Fact sheets for priority irritants and allergens for lungs and skin tailored to sectors in partnership with Health and Safety Associations
- New program website was launched (https://www.odsp-ocrc.ca/) to disseminate ODSS results in 2019
- OCRC hosted the National Occupational Disease Exposure and Surveillance Workshop – Nov 7-8, 2019. Attendees from six provinces and three federal agencies shared best practices (report available)
- CAREX Canada Videos (Diesel, Occ Lung Cancer, Solar etc.)
- HazardAssess App

Diesel Exhaust Lung Cancer Risk Calculator

years of exposure	**25**	years
average respirable elemental carbon (REC) exposure (in µg/m^3)	**100**	µg/m^3
15-year lagged cummulative respirable elemental carbon exposure (in µg/m^3-yrs)	**1000**	µg/m^3 - years
model estimated relative risk (RR) =	**2.92**	
95% confidence interval:	1.51	5.64

(model based on 0-1000 µg/m^3-yrs range)

model taken from: Vermeulen R, Silverman DT, Garshick E, Vlaanderen J, Portengen L, Steenland K. 2014. "Exposure-response estimates for diesel engine exhaust and lung cancer mortality based on data from three occupational cohorts". Environ Health Perspect 122:172–177; http://dx.doi.org/10.1289/ehp.1306880

http://jnci.oxfordjournals.org/content/suppl/2012/01/28/djs034.DC1/Supp_methods_and_tables_4-30-12.pdf

John Oudyk, Occupational Hygienist OHCOW

Occupational Health Clinics for Ontario Workers Inc.
Prevention Through Intervention

Refer to OHCOW webinars: "Is your cancer work related" https://www.youtube.com/watch?v=8RbOZ9cjUK0 and

Also Disease Prevention:

Session 5: Leading into November - Lung Month - October 30: 10-12
Diesel Calculator & Background, Kevin Hedges and John Oudyk, OHCOW
Preventative Maintenance in Mining to reduce Diesel Emissions Exposure, Sean McGinn, MKNIZD Factors
Work-Related Lung Disease, Dr. Christine Oliver, Medical Consultant, OHCOW; Division of Occupational and Environmental Health, Dalla Lana School of Public Health, University of Toronto

https://www.ohcow.on.ca/news/occ-tober-2020.html

Tools/ Resources (on the Horizon)

- Silica Control Tool (Pilot)
  - BCCSA/OHCOW/CCOHS
  - Looking for Construction Participation

- Exposure/Control Banding
  - Health Canada Project
  - eCHAP Tool

OHS strategy overview: 2021 - 2026

Vision: *An Ontario where workplaces promote and practice health and safety in their every-day work and are free from occupational injuries, illnesses and fatalities.*

Objectives

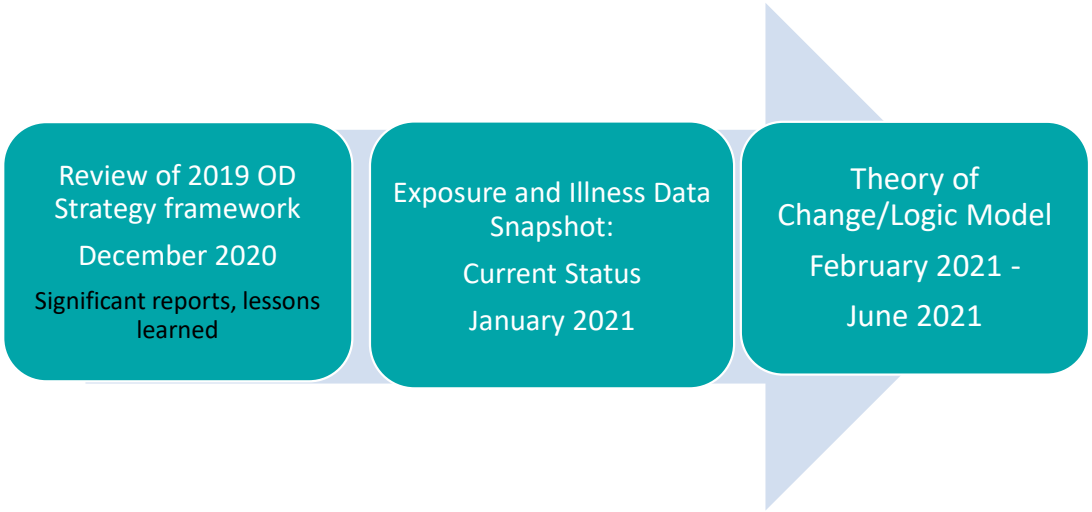
- **Build & use the best evidence to target initiatives and measure performance**
- **Improve OHS knowledge & practices**
- **Support workplaces to fulfill OHS roles & responsibilities & achieve excellence**
- **Make OHS easier for small businesses**

Areas of Systems Focus

Occupational illnesses
Workplace mental health & workplace violence and harassment

Occupational Illness Systems Approach

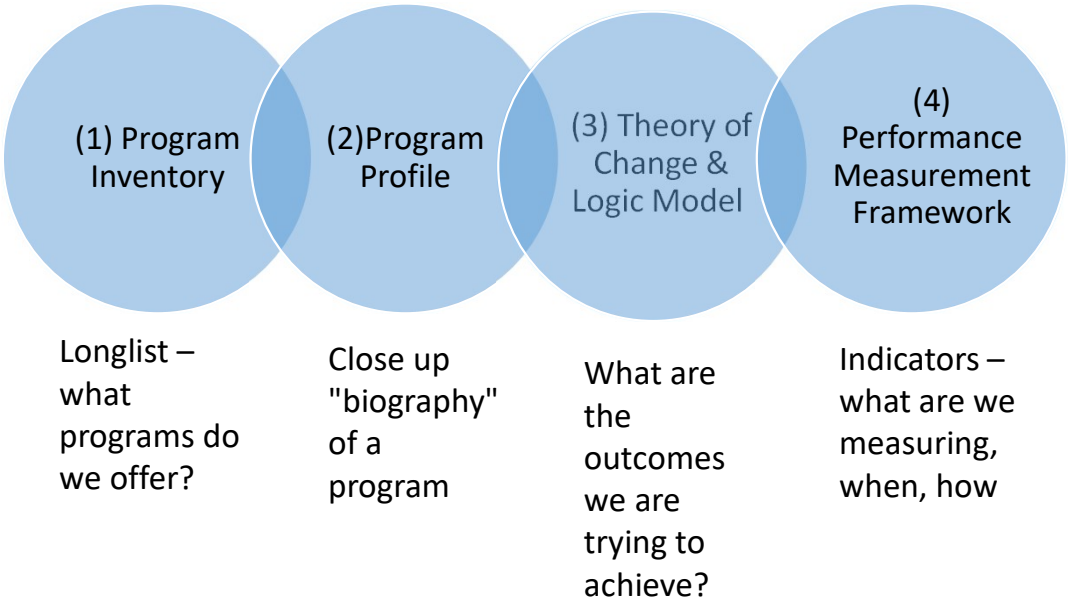
Collaborative Development Process



Ontario

Performance Measurement & Evaluation toolbox

- Theory of change & logic models part of a broader toolkit that can be used to measure outcomes/impact



Ontario

Join in on the ACTION:
Help us Populate !

Check-Out, Tools and Resources on Occupational Disease Prevention

▶ preventoccdisease.ca

?

QUESTIONS/COMMENTS

?