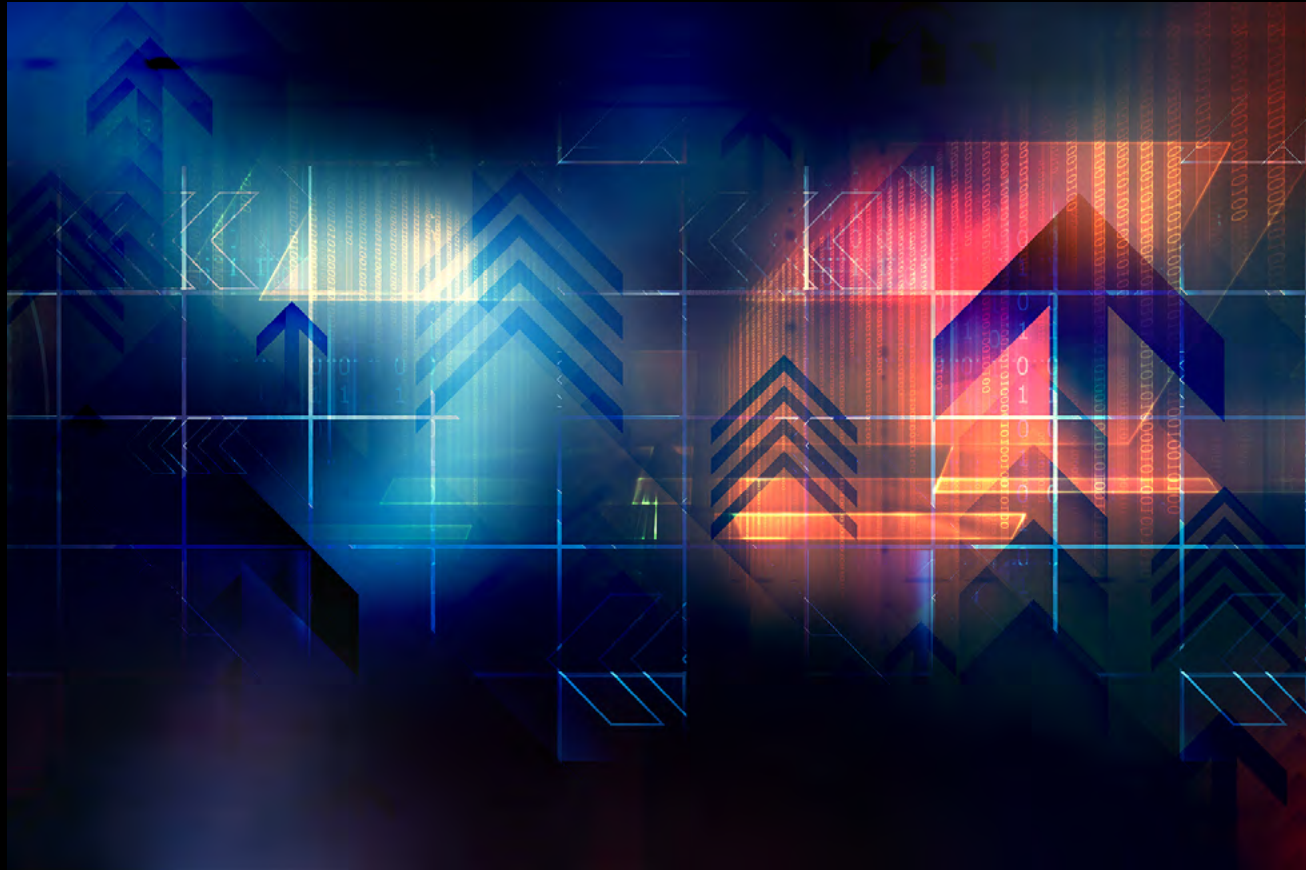


Occupational Health Clinics for Ontario Workers Inc.

Annual Report

2022/23



Occupational Health Clinics for Ontario Workers Inc.

Annual Report 2022/23**Contents**

Vision and Mission	3	Workplace Mental Health	29
Introduction	4	Improving Workplace Mental Health through Survey Support	30
Message from Chair and CEO.....	4	Mayday, Mayday 2022.....	30
Board of Directors.....	5	Covid and Worker Mental Health Research Publications	31
About OHCOV.....	6	Multi-lingual Videos for Migrant Workers	32
internal process updates.....	7	Worker Perspective	33
Prevalent Case Exposures and Classifications	8	Providing Resources, Community and Information for Foreign Workers	33
Financials	9	Free Air Cleaners for Employers of Temporary Foreign Workers.....	33
Case Studies	10	Expansion of Projects to Empower Temporary Foreign Workers	34
Ontario Nurses Association (ONA) Annual Health and Safety Caucus –		Tools and Resources	36
Knowledge Transfer	10	Apps, Tools and Calculators	36
Workers’ Estate Wins Appeal on WSIB Decision.....	11	Diesel Exhaust Lung Cancer Relative Risk Calculator	36
Use of Compressed Air Found to Elevate Risks in Some Workplace Settings.....	12	Occupational Exposure Limits Adjustment Tool.....	37
Ergonomic Interventions at Diverse Worksites	13	Research Papers	37
Lung Cancer due to Multiple Carcinogen Exposure	14	Infection Control and In-person Educators	37
Carpal Tunnel Syndrome (CTS) in a Heavy Equipment Operator (HEO)	15	Educators’ Work Environment During the Pandemic.....	38
Asbestos Exposure and Gastrointestinal (GI) Cancer	16	McIntyre Powder and Cardiovascular Disease	39
Non-Hodgkin’s Lymphoma in an Underground Redevelopment Mining		Knowledge Translation	40
Heavy Duty Vehicle Mechanic	16	Webinars.....	40
Key Priorities	18	Podcasts	40
Occupational Illness	18	infographics.....	41
OCC-TOBER Webinar Series.....	18	Connections	43
Cluster Projects	19	website	43
COVID-19 Pandemic Response	23	newsletters	43
Messaging On Airborne Precautions	25	newsletters	43
Commit to Care partnership.....	26	News and Events	44
Diesel Particulate Project	26	Social Media	45
Health Hazards when Working With Granite	27	Partnerships	46
Injury Prevention	27	Workplace Health Without Borders.....	46
Ergonomics Podcast Series	27	Spring into Action 2022	46
Repetitive Strain Injury (RSI) Day Webinars 2023	28	Canadian Aerosol Transmission Coalition.....	47
Ergo Info Sheets	29		

Vision and Mission

VISION

- the detection, **prevention** and **elimination** of occupational disease, injuries and illnesses; and
- the promotion of the highest degree of physical, mental and social well-being for all workers.

MISSION

- **protect** workers and their communities from occupational disease, injuries and illnesses;
- **support** their capacity to address occupational hazards;
- **promote** the social, mental and physical well-being of workers and their families;

We strive to accomplish this through:

- **Identification** of workplace factors which are detrimental to the health and well-being of workers;
- **Empowering** workplace parties to make positive occupational health changes in their workplace;
- **Providing information, knowledge** and **organizational skills** to the workplace parties to eliminate work practices that cause injury, illness and disability.



Introduction

MESSAGE FROM CHAIR AND CEO

On behalf of David Chezzi (President and Chair of the Board) and Michael Roche (CEO) we welcome you to the 2022-2023 Occupational Health Clinics for Ontario Workers Inc. Annual Report.

April 1, 2022 marks the beginning of our [3-year Strategic Horizon Plan](#). The plan has many component parts. It incorporates a framework, vision, mission, and highlights Ohcow's uniqueness. It also gives strategic directions, priorities with different lens perspectives and a Balanced Scorecard measuring framework. We encourage you to view the plan in its entirety on our web site. A sincere thank you goes to our Board and Local Advisory Committees for their assistance in its development, and for their ongoing support.

Furthermore, we want to acknowledge our Staff and Physicians who continue to do an outstanding job in addressing the needs of the Workers of the Province. This includes work on patient cases at the clinic level as well as several clusters. Related to patient work, we perform ongoing surveillance, assessment, and determination of work-relatedness, as well as generating reports that provide up-to-date medical scientific decision making. For the clusters we have identified, we work with our Stakeholders and System Partners to address the needs of these workers as efficiently and effectively as possible. Also, a new Electronic Medical Records system has been implemented at OHCOW and a global approach to patient work that will continue to streamline clinical processes.

Related to our operational work, it includes three main program areas — Occupational Disease, Workplace Mental Health, and Injury Prevention. All three have robust operational plans with key objectives and timelines.

We also continue to play a unique role in the prevention system, working with our prevention partners as well as our labour partners to meet the needs of Ontario workers.

We thank you for your interest in our 2022-2023 Annual Report and encourage you to explore the rest of the report and learn more about the many wonderful accomplishments of our organization.

David Chezzi
President and Chair of the Board

Michael Roche
Chief Executive Officer



BOARD OF DIRECTORS

Officers and Directors 2022-23

OHCOV's Board of Directors is an appointed group of diverse individuals, chosen to represent the stakeholders we serve. Our Board of Directors guides our strategic direction, while our leadership team carries out the Board's mandate.

David Chezzi

President and Chair of the Board,
Canadian Union of Public Employees (CUPE)

Tracie Edward

Vice-President and Vice-Chair of the Board,
Elementary Teachers' Federation of Ontario (ETFO)

Scott Richardson

Treasurer,
Chair, L.A.C. Southwest Region
UNIFOR

Bob DeMatteo

Secretary, Ontario Public Service Employees Union (OPSEU)

Natasha Luckhardt

Member-At-Large
Ontario Federation of Labour (OFL)

Local Advisory Committee (LAC) Chairs 2022-23

Scott Richardson

L.A.C. Chair – Windsor
Treasurer of the Board, Injured Worker Advocate,
UNIFOR

Russ Archibald

L.A.C. Chair – Hamilton
Teamsters Rail Conference

Laura Lozanski

L.A.C. Chair – Ottawa
Canadian Office and Professional Employees
Union (COPE) Local 225

Andréane Chénier

L.A.C. Chair – Sudbury
Canadian Union of Public Employees (CUPE)

Diane Parker

L.A.C. Chair – Thunder Bay
Ontario Nurses' Association (ONA)

Additional Board Members

Sylvia Boyce

United Steel Workers

Mark Ellerker

Hamilton Brantford
Building Trades

Alan Warrington

O.N.A
Region 5, Vice-President

Debora De Angelis

U.F.C.W. National Rep

Gavin Jacklyn

Ontario Professional Firefighters Association

Janet Paterson

Thunder Bay District Injured Workers Support
Group
Ontario Network Injured of Worker Groups
(ONIWG)

Rona Eckert

CUPW

John Bartolomeo

Workers' Health and Safety Legal Clinic –
Community Member

Vinay Sharma

UNIFOR
NON-VOTING

Michael Roche

CEO - OHCOW

Catherine Petch

Canadian Union of Postal Workers
CUPW

ABOUT OHCOW

The Occupational Health Clinics for Ontario Workers Inc. (OHCOW) is a unique organization dedicated to protecting workers and their communities from occupational illness, disease, and injury; to support their capacity to address occupational hazards; and to promote the social, mental, and physical well-being of workers and their families.

We strive to accomplish this through the identification of workplace factors which are detrimental to the health and well-being of workers; by empowering workplace parties to make positive occupational health changes in their workplace and by providing information, knowledge, and organizational skills to the workplace parties to eliminate work practices that cause injury, illness, and disability.

We are a small organization of experienced and dedicated staff striving to make a significant impact in these key areas by learning from workers (and workplaces), leveraging research, translating knowledge, developing tools, and especially, cultivating partnerships and networks to broaden reach and impact. Together, we are making a difference.



INTERNAL PROCESS UPDATES

Accessibility Survey

The Accessibility and Inclusion Working Group

Accessibility and inclusion benefits everyone. Here at OHCOW, we are committed to identifying, preventing, and removing barriers of all types. In the fall of 2022 The Accessibility and Inclusion Working Group (AIWG) was created. The accessibility and inclusion plan, priority, and practice, would be informed by the experiences of those who use our services, and by those who work for OHCOW. A specific survey was created for OHCOW employees to help the AIWG to identify the visible and invisible barriers that may impact employees, visitors, patients, community partners, colleagues or anyone that may use our services. The survey was entirely anonymous to ensure candid feedback.

The Survey

Accessibility barriers were described across 6 broad categories: Architectural (physical barriers) , Environmental (Light or noise sensory issues), Attitudinal (unconscious bias towards clients), Employment (lack of accommodation for employees with disabilities, lack of adaptive technologies), Communications (lack of accessible information, non-user friendly web pages) , and Transportation (accessible parking, location).

Results

Thirty-seven people responded to the survey. Some notable points were; lack of signs in braille, absence of light alarms, perceived inappropriate communication when referring to clients, inequities in client delivery, barriers to recruitment or career advancement, lack of interpreters and lack of accessible formats for OHCOW materials. Not enough parking or expensive parking was also selected as a problem by over half the respondents.

The results will be further analyzed and action items will be recommended by the team.

OHCOW's Adoption of a New Electronic Medical Records (EMR) System

In 2021, OHCOW identified the need for an Electronic Medical Records (EMR) system to better manage our clinic operations. The team investigated the different types of systems available, and decided on the TELUS Collaborative Health Record (CHR) as the best fit.

The CHR offers many benefits, including the ability to securely exchange health information electronically. This enhances the privacy and confidentiality of patient data. The CHR will promote the use of our resources provincially, rather than by geographic area, and allow for better and more complete documentation. Through the analytics module, the CHR will be able to accurately capture statistics and produce meaningful reports, including performance measures.

OHCOW's CHR Prime Team worked with Telus to modify their CHR system so it matched our unique needs. This development phase took place over a year. After staff training throughout March, the system went live at the end of the month. The CHR Prime Team is continuously working to support staff during the transition, creating manuals, data dictionaries and holding weekly support sessions.

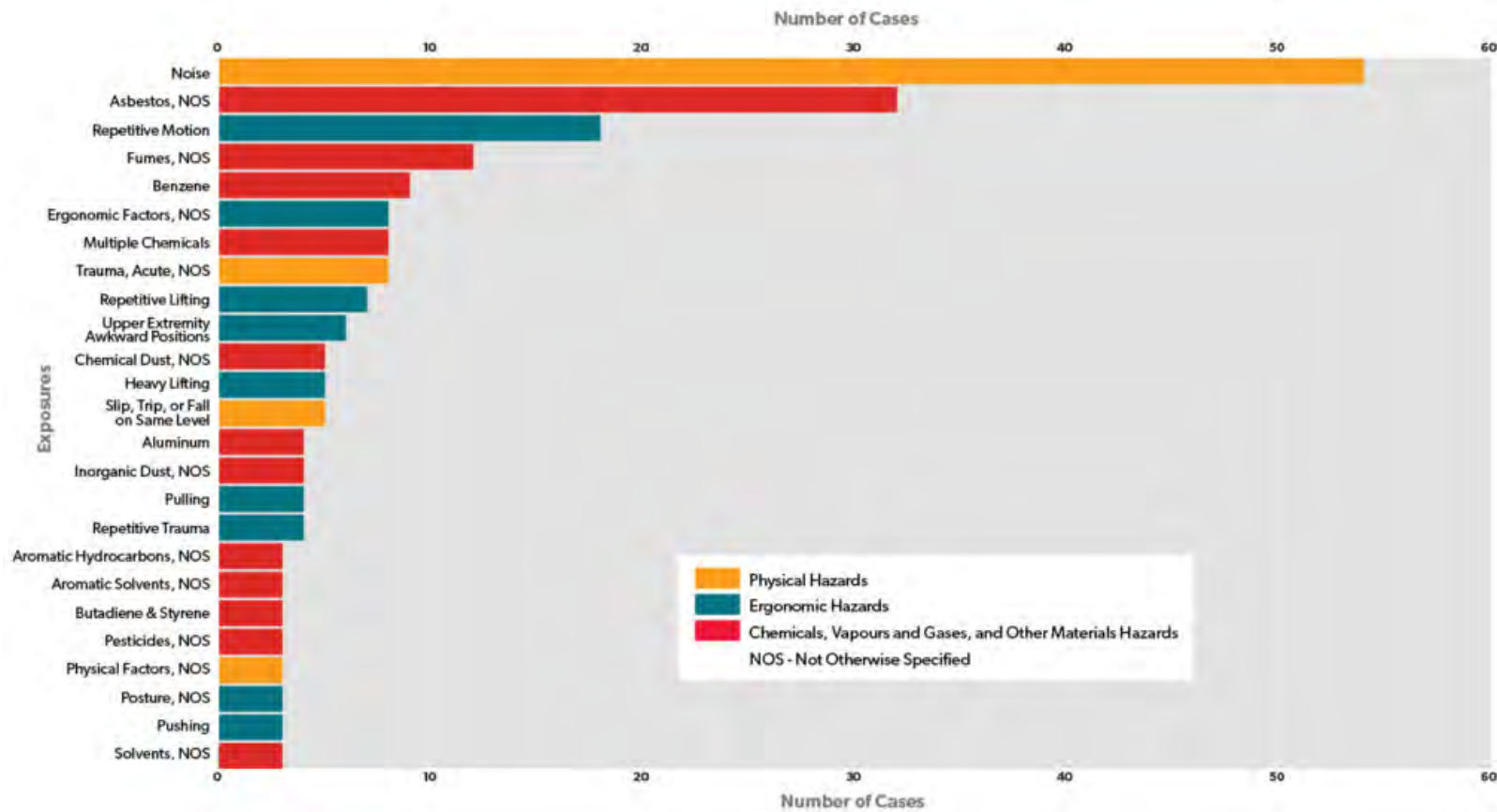
The work is far from over. The CHR launch is better described as a 'roll out,' and as we use this new system we will access all the functionality it has to offer. This will enable OHCOW to offer better service to our clients — the workers of Ontario. We are just getting started!



PREVALENT CASE EXPOSURES AND CLASSIFICATIONS

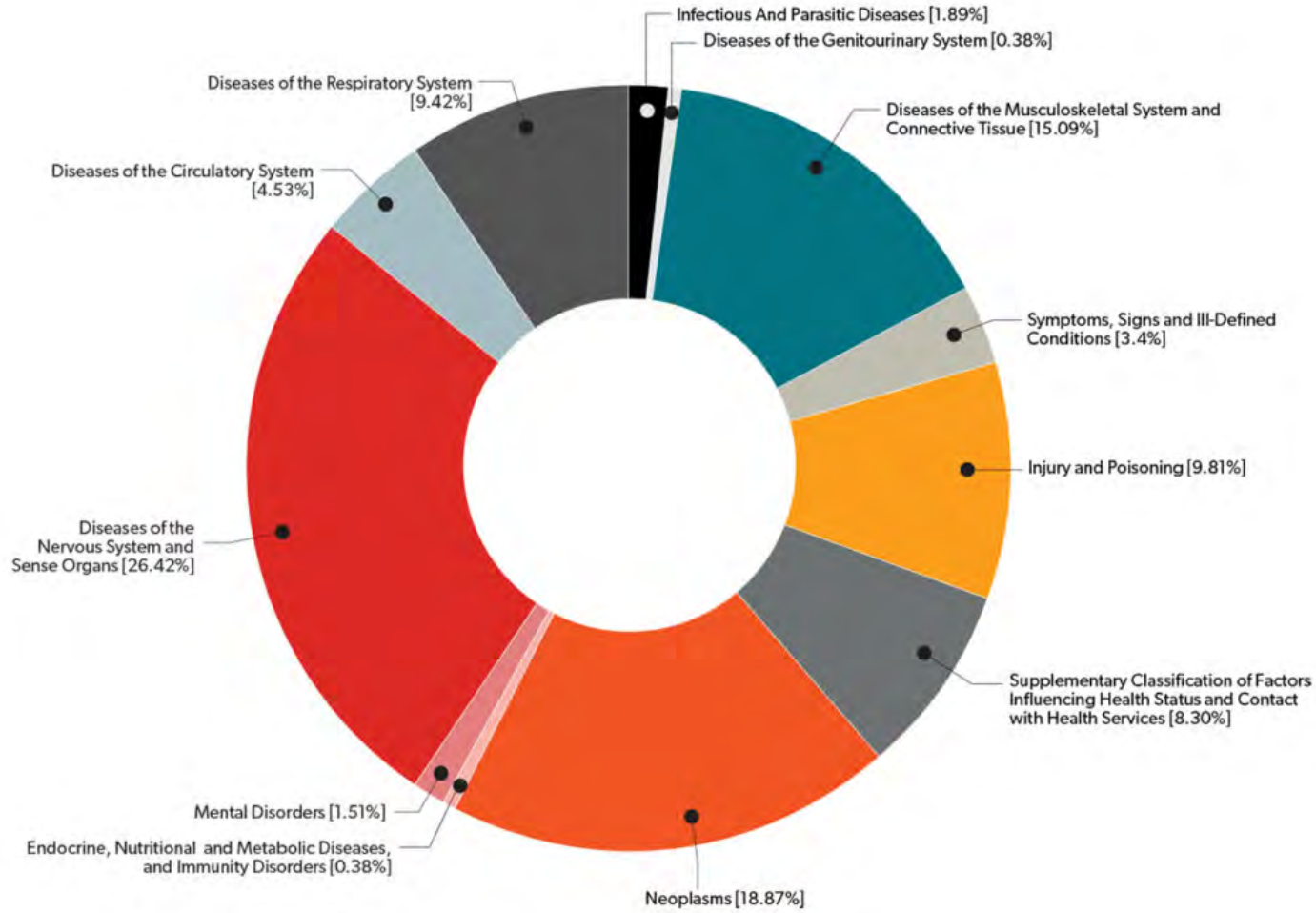
Top 25 Exposures

Based on the International Classification of Diseases (ICD)
 April 1, 2018 to March 31, 2023



International Classification of Diseases

April 1, 2018 to March 31, 2023



FINANCIALS

See financial document [here](#).

Case Studies

It is critical to be able to identify workplace exposures, past or present, and how they affect the health of workers.

Recognizing causal relationships allows for the ability to support claims when warranted, but more importantly, to advise workers, workplaces and even industries on how to prevent such exposures in the future.

The following case studies from 2022/23 illustrate how OHCOW multidisciplinary approach is used to help workers:

ONTARIO NURSES ASSOCIATION (ONA) ANNUAL HEALTH AND SAFETY CAUCUS – KNOWLEDGE TRANSFER

Ontario Nurses Association (ONA) Annual Health and Safety Caucus – Knowledge Transfer on Respiratory Protection and How to Influence Organizations to Push for Improvements

Background

OHCOW was asked by the Ontario Nurses Association (ONA) to develop and deliver an information session on the importance of respiratory protection in the workplace, and help employers implement and monitor its effectiveness during the pandemic and beyond. The goal was to enable nurses to ensure that health care facilities had respiratory protection plans in place – plans that would be updated annually. Nurses would have access to much needed protective equipment and training on its proper selection, use, care, and storage.

Intervention/Approach

Three OHCOW hygienists, one PSHSA hygienist and a long-standing member of the CSA standards group for respiratory protection collaborated to design, develop, and deliver a three hour information session. This would be part of the ONA annual Health and Safety (H&S) caucus in May 2022 at the request of the ONA H&S specialist. OHCOW worked with ONA to meet their requirements in addressing the topic that would be applied both during and after the pandemic.

There were five sections to the presentation. Topics included the definition of a Respiratory Protection Program, a discussion of the components of a program, the selection and type of respirators (N95, Powered Air Purifying Systems, elastomerics) required for infectious disease, the relevant standards (e.g., NIOSH, Health Canada, etc.), and the JHSCs role in relation to the program. The five sections delivered were:

- What is a respiratory protection plan (RPP)/review existing examples
- CSA standards on respiratory protection (RP)
- How to convince members that they need to push for an RPP
- Hierarchy of controls in the context of RP
- How to advocate for improvements to RP and who is responsible



OHCOW Impact

The team delivered five sessions throughout May, covering all ONA geographical regions in Ontario. A session was also delivered in June to Labour Relations Officers. Over 550 ONA members (including leaders) participated in the sessions. More than 90% of the overall satisfaction surveys completed indicated either 4 or 5 out of 5 (agree or strongly agree) for their evaluations.

OHCOW's knowledge transfer contributed to heightened awareness of recommended respiratory protection practices (including device selection) among nurses, mitigating the potential for viral transmission from infected patients and co-workers. The information will also help to protect nurses from additional inhalation hazards (chemical, radiological and biological) in the workplace.

WORKERS' ESTATE WINS APPEAL ON WSIB DECISION

Background

The worker was employed in various jobs at a mining process plant, copper refinery, nickel refinery, welding factory and a smelter from 1968 to 1985. Asbestos exposure was a factor in various duties over the years, such as dry insulation removal and cleanup in high risk areas, at a time when asbestos control practices were not in place. The worker filed for compensation after being diagnosed with rectal cancer, but in 2017 the claim was denied. The worker passed away in 2018 at age 68. His estate continued with the claim. The WSIB refused the entitlement on the basis that the worker's exposure did not meet the criteria for "repetitive" as it is defined in the Operational Policy Manual. The worker's history of tobacco and alcohol use, as well as a non-work related health condition, was believed to play a larger role in his cancer. The worker's estate launched an appeal, and both they and the employer submitted material to the Appeals Tribunal. An appeal of the decision was allowed.

Intervention

The worker's estate obtained a medical opinion from OHCOW that challenged the original WSIB review on which the rejection of the claim was based. The WSIB had claimed that the exposure of the worker was not repetitive which is defined as "daily" or "3-5 times per week", and the exposure must be a major component of the occupational activity. OHCOW hygienists claimed the WSIB "underestimated [his] overall retrospective asbestos exposure." Their re-evaluation included exposure estimates from positions he had held that had been overlooked in the initial WSIB review. The worker's "continuous and repetitive exposures to asbestos...routinely, continuously and repetitively exceeded the current TWA Limit." These high exposures would have resulted in "lung overload, resulting in an increased ingestion of asbestos fibres..." In this light, the worker's exposure levels did indeed meet the criteria for "repetitive" and that the exposure had "materially increased his probability of developing rectal cancer."

The researchers also obtained another opinion from a doctor of occupational medicine, who submitted that while smoking and alcohol consumption did slightly increase his risk of rectal cancer, workplace exposure to asbestos was more likely the cause of the cancer.

OHCOW Impact

The panel found the initial WSIB report was not based on a full understanding of the nature of the various occupational exposures to asbestos that the worker may have had from 1968 to 1985. They preferred the opinion of the OHCOW Occupational Hygienists and determined that the worker meets all of the eligibility requirements for entitlement to benefits.



USE OF COMPRESSED AIR FOUND TO ELEVATE RISKS IN SOME WORKPLACE SETTINGS

Background

The claimant worked on heavy mobile equipment from 1956-1998, servicing brakes and clutch pads and gaskets known to contain asbestos. He stopped working in 2003 after being diagnosed with colorectal cancer.

The WSIB Ontario policy (16-02-11) recognizes an association between asbestos exposure and colorectal cancer. However in the 2019 WSIB decision, the claimant's exposure was described as "moderate" and did not meet the criteria to have caused his cancer. His claim was denied.

Intervention



Figure 1: Visual of how much asbestos containing dust from friction linings becomes airborne when cleaning with compressed air. Source: Rohl et al. 1976 (Figure 4).

The claimant's exposure period, especially from 1956 until the mid-1980s, covered a time when exposure controls were sub-optimal as compared with today's standards. No personal protective equipment (PPE), such as masks, were provided by the employer.

An OHCOW review found evidence that the claimant's exposure was more than moderate. OHCOW focused on asbestos exposure while also addressing diesel engine exhaust and varsol, both substances associated with colorectal cancer. Detailed analysis of the process of the claimant's work conducting brake line inspection, maintenance, and part replacement was included, meticulously breaking down exposures during a typical shift.

Previous studies cited in the OHCOW report showed that exposures to these substances were elevated when using compressed air, which was used in the workplace to clean up residual dust from friction lining products including worn clutch and brake pads. Maintenance and repair of diesel-powered equipment was often carried out indoors, also elevating exposure to diesel exhaust.

Due to the fact that he repaired many vehicles indoors, the worker's "cumulative exposure to diesel particulate matter (DPM) from 1956 was elevated." Varsol, used as a degreaser in the brake maintenance process, was also a factor. In the 1950s and 60s, within the timeframe of the claimant's employment, varsol contained benzene and toluene, when the dangers were not known. Both are associated with rectal cancer.

OHCOW Impact

The report demonstrated consistent, elevated exposures, above the current occupational exposure limit. Once the final (systematic literature) report is released by the WSIB, it is likely that this will open the door to revisit previously rejected claims. This means that all forms of gastro intestinal cancer with "elevated" asbestos exposure, including those who serviced vehicle brake and clutch pads using compressed air which is a common practice, should be awarded compensation for "all forms" of GI cancer.

ERGONOMIC INTERVENTIONS AT DIVERSE WORKSITES

Background

OHCOW ergonomists are contacted by employers to assist with workstation assessments in a variety of occupational sectors. They evaluate workstations based on the user's anthropometrics, needs, duties, setup, and equipment present. This year, four distinct workstations were assessed at different workplaces, including a greenhouse packing line, pathologist laboratory, piano studio, and reception area. Workers at these workstations were experiencing musculoskeletal discomfort in the upper and/or lower extremities because of their setup and occupational duties. Below are the four workstations:

Intervention

Three of the workstations were used by one employee (pathologist, piano instructor, and receptionist) and for each of these the OHCOW Ergonomist had the worker take photographs, complete a questionnaire to identify their current discomforts; equipment used; and the daily duties required. Telephone correspondence with the health and safety representative at the greenhouse for the packing operation was conducted prior to the worksite visit to understand the process and concerns. This information allowed the ergonomist to understand the requirements of each job and how the workstation was being used. During the assessments the duties were discussed in detail and solutions to minimize and eliminate the hazards were explored. Recommendations were provided following the assessment.

The musculoskeletal hazards present at each workstation are indicated in the chart below:

JOB	FORCE	AWKWARD/ STATIC POSTURE	REPETITION	CONTACT STRESS
Greenhouse Packing	X	X	X	
Pathologist	X	X	X	X
Piano Instructor	X	X		
Receptionist	X	X	X	X

Greenhouse Packing

The major concerns observed and expressed during the assessment were repetitive reaching and lifting totes on and off the line. The process requires the worker to lift totes that weigh 20 lbs from a pallet and place them on a conveyor. The worker reaches below knee to above shoulder to remove and stack totes on/off pallets. Recommendations using multiple levels of the hierarchy of controls were provided: automation, reducing the pallet height, balanced two-person operation, and job rotation.

Pathology Laboratory

The concerns observed were force due to static neck and back postures while using the microscope as well as repetition and contact stress (wrists) bilaterally when manipulating the controls. Recommendations included a new chair, wider sit/stand workstation, and microscope.

Piano Instructor

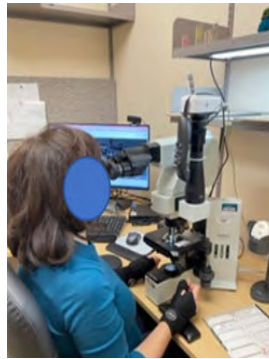
In this case, the instructor's chair was a concern as it could not be adjusted properly to allow for neutral postures and proper support when moving between the piano and computer workstations. Recommendations for a fully adjustable chair were provided.

Receptionist

The receptionist's workstation created problems for the worker due to force and awkward postures that stem from the workstation setup and placement of the client window. Temporary recommendations were provided in terms of the positioning and orientation of equipment. The office will be changing locations in the spring of 2023 and an assessment of the new space has been scheduled.



Greenhouse Packing



Pathology Laboratory



Piano Instructor



Receptionist

OHCOW Impact

Recommendations were implemented for each of these workstations, and workers have since contacted the OHCOW ergonomist with positive feedback, indicating that their discomforts have been reduced. A proactive ergonomic consultation is the most effective in musculoskeletal disorder prevention. The worksite that is moving to a new location has scheduled an assessment to address the workstation and setup requirements once they are relocated.

LUNG CANCER DUE TO MULTIPLE CARCINOGEN EXPOSURE

Background

The claimant worked in a copper refinery for twenty-eight years in different roles, starting in 1970 when he was 35. His jobs included process labourer, chipper and grinder, inspector brakeman, weigher, and in a tank room. When he was diagnosed with lung cancer he claimed it as an occupational disease, and the claim was denied. His 40 year history of smoking was a factor in the decision, and the fact that his exposure levels did not meet the threshold to substantiate the claim. His specific jobs at the refinery were not considered high risk for increased levels of exposure. He passed away before his claim had been decided by the Board and the Estate continued with the claim.

Intervention

Exposures and risks of lung cancer at the copper refinery were referenced in a peer reviewed study, stating the Polycyclic Aromatic Hydrocarbons (PAHs) were possible causes of lung cancer mortality among nickel/copper smelter and refinery workers. The contracted OHCOW physician concluded that the claimant's occupational exposures "appear to have made a material contribution to his development of Squamous Cell Carcinoma." Although his official title was not an "arc furnace operator," he did work in the arc furnace area; therefore his exposure to carcinogens should be recognized. To further understand the working environment, OHCOW conducted an "intake clinic" in 2018 with retired co-workers who were working in the copper refinery from the early 1960s to early 2000s. The investigation found that all copper refinery workers were exposed to a number of confirmed carcinogens, and that the job title of the worker may not fully represent the extent of their exposures.

After conducting statistical analysis of airborne contaminants throughout various areas, the hygienists were able to confirm the contaminants were distributed evenly throughout the entire plant. They showed that all occupants had an elevated level of risk from being exposed to a combination of airborne



contaminants known to cause lung cancer (IARC Group 1) regardless of job title, thus providing a confirmed link between exposures to these Group 1 carcinogens with an increased risk of lung cancer.

OHCOW Impact

WSIAT agreed with the OHCOW report showing evidence that the claimant's occupational exposures significantly contributed to the onset of his lung cancer, and his Estate was therefore entitled to benefits for the worker's disease. Significant weight was placed on OHCOW reports and conclusion of the claimant's indirect exposure to various other lung cancer causing agents. This case indirectly strengthened the power of mixed exposures to various different contaminants and their additive/synergistic effects to the disease outcome. It further strengthens the work-relatedness of exposure to asbestos, and other cancer causing agents in the workplace, by noting that a claimant with a history of smoking could not be denied benefits for lung cancer when there is evidence that the occupational exposures made a material contribution to the onset of disease, then the worker will be entitled to receive benefits for that disease.

CARPAL TUNNEL SYNDROME (CTS) IN A HEAVY EQUIPMENT OPERATOR (HEO)

Background

The worker was referred to OHCOW by their union after a diagnosis of bilateral Carpal Tunnel Syndrome (CTS) developed during their employment as a Heavy Equipment Operator (HEO). He was employed at six different jobs over a 23 year period (1996-2019), 45 to 60 per week operating excavators, loaders, and a timber material handler. Symptoms of CTS had appeared in 2008 but the worker did not seek medical attention until 2018 when the symptoms began to affect his daily routine and ability to perform his duties.

The claim was originally denied by WSIB that claimed his job included manipulating joysticks (that controlled the movement of the trucks), which is considered low risk for CTS. No sustained forceful pressure, vibration, strong gripping or awkward hand position was present.



Figure 1: Material Handler joystick design

Intervention/Approach

The OHCOW ergonomist reviewed the worker's WSIB file – including medical and work history – and interviewed the worker. When the worker remarked that the interview had been far more detailed than that with WSIB, the Ergonomist pointed out that it was necessary to look at a person's entire occupational history and not just current job duties, as musculoskeletal disorders can take years to develop.

The Ergonomist was able to obtain physical demands analysis/description (PDA/PDDs) and combined and weighed them by duration of employment across the

workers 23-year career. The analysis focussed on known risk factors for the development of CTS such as gripping, awkward postures, and low frequency vibration.

The Ergonomist also investigated the timber material handler, the equipment the worker used for the last 7 years. The joystick controls not only control the boom arm but were also designed to steer, rotate the cab/boom, raise and lower the boom, opening and closing the claw, stabilizer control, slewing gear brake operation, horn operation, and cab elevation. The hand and wrist would be in constant use while in operation. Awkward wrist postures would have occurred because of the angle of the joysticks. This also confirms the finding from the PDA/PDDs which had 83.5% of the day spent in wrist flexion and pronation.

OHCOW Impact

Utilizing the information from the worker, the PDA/PDDs, equipment design specifications, and relevant literature, the Ergonomist was able to conclude that [the worker] was indeed subjected to “sustained and prolonged awkward postures of the wrist, high internal forces to sustain holding such positions and muscle fatigue, vibration, and excessive grip force” which are all well documented risk factors for the development of CTS.

Moving Forward

An appeals decision has yet to be rendered by WSIB.

ASBESTOS EXPOSURE AND GASTROINTESTINAL (GI) CANCER**Background**

The claimant had been diagnosed with gastro-intestinal (GI) cancer. As a mining process plant operator with continuous and repetitive exposures to asbestos based on exposure estimates, he considered his cancer to be caused by his work environment. The WSIB Appeals Resolution Officer denied the WSIB Claim stating, “the worker’s exposure to asbestos while employed with the employer was not a significant factor in the development of his rectal cancer”.

Intervention/Approach

The OHCOW occupational hygiene retrospective exposure review (RER) challenged the WSIB resolution officer who denied the claim. The report demonstrated a likelihood that the claimant’s exposure routinely, continuously, and repetitively exceeded the current TWA Limit as well as exceeding the Ceiling Excursion Limits.

Epidemiological evidence has confirmed an increased risk for three GI cancers, namely esophageal, stomach and colorectal with asbestos exposure. The most up to date literature review demonstrated an increased risk for the 3 GI cancers from “any exposure” versus non exposed. The review found “more consistent evidence” for all 3 GI cancers.

Exposure estimates demonstrated that a mining processing plant operator’s exposure to asbestos provided a clear and adequate history of asbestos exposure, that was both continuous and repetitive. This successful WSIAT decision, along with systematic literature further opens the door to both retrospective and ongoing exposure reviews.

OHCOW Impact

Using this successful case accepted by WSIAT, coupled with the recent systematic literature review (Demers et al. 2023), opens the doors for many other claims from workers from non asbestos industries to claim compensation. It further highlights the importance, of adequately managing and controlling exposure, where there is legacy asbestos containing material to negate future claims.

NON-HODGKIN’S LYMPHOMA IN AN UNDERGROUND REDEVELOPMENT MINING HEAVY DUTY VEHICLE MECHANIC**Background**

The worker was employed for 38 years as an Underground Redevelopment Mining Heavy Duty Vehicle Mechanic. His exposure occurred during the Traditional (where diesel was the dirtiest and unregulated before 1998) and Transitional Diesel Engine Exhaust periods. He was diagnosed with Non-Hodgkins Lymphoma (NHL), but his claim for restitution for a work-related illness was denied.

Intervention/Approach

OHCOW reviewed the inhalation exposure to diesel engine exhaust. The substance benzene was present in solvents and diesel fuel as well as diesel engine exhaust. Both the inhalation and the dermal exposure pathways were examined. A WSIB Hygiene report was submitted however they did not characterize the dermal exposure pathways for the patient.

OHCOW Impact

This was a unique case. Firstly, the claimant worked with older pre 2007 Traditional Diesel Engines (TDE) which are typically “heavier polluters” emitting relatively higher levels of diesel particulate matter (DPM), much more than modern diesel engines with stringent emission controls. Secondly, this was while reworking older mines (mothballing) where it is likely that the ventilation would have been suboptimal, which would have exacerbated his exposure. Older “traditional” (pre 2007) engines have still been in service without after-treatment controls (such as diesel particulate filters (DPF)) combined with poor ventilation would have resulted in elevated exposures.

Key Priorities

Occupational Illness

OHCOW's clinical work, large cluster investigations, and vulnerable worker lens, provide a unique perspective on a full circle occupational illness/disease prevention approach (primary, secondary and tertiary) and continue to provide leadership to Ontario's Occupational Illness Prevention System Focus.

Though the global pandemic has created continuing demands for the latest science and prevention tools in response to COVID-19, it has also fostered an unprecedented public awareness of Occupational Illness/Disease and the Hierarchy of Controls. This awareness can and must be leveraged to the longer latency priorities of the Occupational Illness Prevention Plan.

OCC-TOBER WEBINAR SERIES

Preventing Occupational Illness/Disease is an Area of Focus in Ontario's Prevention Works 5-year strategic plan. OHCOW leads the Occupational Illness Steering Committee (formerly the Occupational Disease Action Plan (ODAP)) aligning the efforts of the Occupational Health and Safety System and partners to reduce the incidence and burden of occupational illness/disease whether chronic/long latency or more acute/infectious.

The 2022 Occ/tober session Kickoff event was online October 27, and featured Chief Prevention Officer Dr. Joel Moody. He spoke about the Collective Impact of the Occupational Health & Safety System Partners efforts through the Occupational Illness Prevention Steering Committee (OISC) (formerly the Occupational Disease Action Plan -ODAP). This includes bringing the Silica Control Tool to Ontario, the Occupational Disease Review, and the upcoming Healthy Worker in Healthy Education & Enforcement Initiatives.



As the sessions continued into November, topics included the Diesel Exhaust Exposure tool, and addressed other occupational exposures. Speakers include: MLITSD Program Leads (Industrial, Mining, Healthcare, Radiation) Cristina St. Pierre, Provincial Hygienist, William Roy, Director, Strategy and Integration, MLITSD, Kimberly O'Connell, Executive Director, OHCOW (Co-Chairs OISC). **Find the playlist for all these videos [here](#).**

October 27, 2022: Worker-Focused Science & Prevention Webinars Kickoff Event

November 3, 2022: Diesel Exhaust Exposure – Influencing Change

November 10, 2022: Occupational Exposures and Community Responses

November 17, 2022: Worker Informed Science: Learning and Collaborating

November 24, 2022: Making It All Easier: Knowledge Mobilization & Tools Webinar

CLUSTER PROJECTS

Rubber Worker Project

The Rubber Worker Project is one of OHCOW's most long-standing projects. Research has shown that there are links between certain rubber industry exposures and health impacts experienced by workers, including cancer outcomes. In this project, we aim to review and conduct research on potential connections between rubber work and health as well as share our learnings with rubber workers and their families to help: (1) prevent or reduce harmful exposures at work, (2) synthesize medical and hygiene evidence for worker's compensation claims, and (3) identify areas for further research.

What did we accomplish this year?

We are organizing our rubber worker client database to prepare for further case support.

- We have created an improved database to organize our patient medical and exposure data.
- This database will help us to better support workers and their families with exposure prevention and worker's compensation matters.
- This database will also allow us to investigate emerging links between certain workplace exposures and health outcomes.

We are reviewing groups of cases organized by common diagnoses and exposures to identify known and emerging patterns.

- This year, we have focused on reviewing groups of bladder cancer, lung cancer, and salivary gland cases to learn more about any potentially-linked exposures.
- We will continue to review other outcomes of concerns raised by rubber workers and their families.

We are preparing a salivary gland cancer case series publication.

- In the scientific literature, there is early evidence that employment in the rubber industry may be associated with development of salivary gland cancer.
- Salivary gland cancer is a rare cancer of the salivary glands, which are the glands that produce saliva in your mouth.
- We are working with rubber workers who have been diagnosed with salivary gland cancer to better understand the exposures they may have experienced.
- We aim to publish this work in a scientific journal article in 2023.

We hosted a focus group with rubber worker retirees (SOAR) to learn more about exposures.

- We met with a small group of rubber retirees to interview them about exposures they may have experienced in the plants in which they worked.
- This will help us to build additional evidence of potential connections between the illnesses they are experiencing and exposures they may have experienced.

We have been engaged in archival research, finding historic photos and maps of rubber industry plants to learn more about the processes used in the past. These photographs will be shared on our website (if possible), as we use them to inform our research on plant processes and exposures.

What's coming next?

- Expanding worker outreach in 2023-2024, including to active rubber workers

- Hosting a public information session to share our findings to date.
- Continuing to support workers with exposure prevention and workers' compensation matters.

McIntyre Project

This was an exciting year for the McIntyre Powder Project, in which years of dedicated work saw the result of an established fund to compensate workers who became afflicted with Parkinson's Disease due to their exposure to McIntyre Powder when working in Ontario mines. OHCOW researchers share in this success. Below are summaries of 2022/23 milestones and accomplishments for this important project. For more information, Go to the OHCOW McIntyre Project page for more information.

OHCOW Researchers Make Valuable Contributions to Study of Occupational Illness Caused by McIntyre Powder

McIntyre Powder (MP) was administered to miners for decades in Ontario mines in the belief that it prevented silicosis. OHCOW researchers have helped determine the harmful and life-long damage to miners' health caused by preventable exposure to the substance.

The latest paper, "[McIntyre Powder and its potential contributions to cardiovascular disease risk: A literature review through the McIntyre Powder historical lens](#)," appears in the American Journal of Industrial Medicine. Published in June of 2022, the study was published by Andrew M. Zarnke, BSc., an Occupational Hygienist at OHCOW, Sudbury; and Christine Oliver, MD, a medical consultant to OHCOW and an Adjunct Professor at the University of Toronto in the Division of Occupational and Environmental Health.

In this research Zarnke and Oliver continue their study of the period from 1943 to 1979, when mine workers in Ontario (as well as other locations throughout Canada and worldwide) were exposed to the powder in their workplace, often in high concentrations. The degree of fineness of the powder, along with its high concentration when used in the mines, resulted in a respirable dust that increased the lung dust burden of workers, causing lung disease over time. For ten minutes before every work shift, the powder was administered to miners.

Previous research by the team showed that the high airborne concentration that miners were exposed to caused lung damage, in combination with the respirable dust they breathed as they worked in the mines. Their recent study shows that, combined with the air pollution particulates already present in the environment, miners were also put at increased risk of cardiovascular disease (CVD).

Oliver and Zarnke have been studying occupational illness in miners for years. They previously wrote and co-wrote papers on sarcoidosis, an inflammatory lung disease. These papers are "Sarcoidosis: An Occupational Disease?", published in 2021, and "Sarcoidosis in Northern Ontario hard-rock miners: A case series" published in the American Journal of Industrial Medicine in February 2022.

The research helped make the case for a strong causal association between occupational exposure to MP and lung disease, damage to the immune system, and gene-exposure interactions.

OHCOW research has significantly contributed to the medical literature that has forced insurance granting organizations, such as the WSIB in Ontario, to reconsider their previous denials of compensation for miners exposed to MP. Its impact has been felt as well in other regions where the substance was used. The research is not over, as more connections are being found between exposure to MP and neurological damage in miners.



Miners Harmed by McIntyre Powder get Official Apology

Former mine workers who were made ill from their exposure to McIntyre Powder have [received an apology](#) from Ontario Labour Minister Monte McNaughton. Thanks in large part to the spearheading of the McIntyre Powder Project by activist Janice Martell and her partnerships with OHCOW and others, the substance has been identified as having caused respiratory illness, lung disease and neurological conditions in workers. Martell was [interviewed on CBC](#) about the campaign and what the long-awaited apology means to her and injured miners.



From 1943 to 1979, miners in northern Ontario were forced to breathe in the black ground aluminum dust before they started their shifts.

McIntyre Powder is essentially ground aluminum dust, and it was administered to miners for over thirty years until 1979. The miners were told they had to take it or be fired. It was supposed to prevent lung disease, but in some cases actually ended up causing it, as well as other illnesses and irreversible neurological damage.

The Workplace Safety and Insurance Board of Ontario (WSIB) has recognized that miners forced to inhale McIntyre Powder were at a higher risk of developing Parkinson's disease. Early in 2022, the province made the changes to allow families and miners who developed Parkinson's tied to McIntyre Powder inhalation to file claims and be compensated for occupational disease.

Millions in Unclaimed Compensation Available for McIntyre Powder Miners

This article by Dave Wilken was originally published in Northern Ontario Business, April 6, 2023.

Despite recent policy changes by Ontario's Workplace Safety & Insurance Board (WSIB) that make it much easier for workers exposed to McIntyre Powder aluminum dust at gold and uranium mines between 1943-1979 to claim compensation for Parkinson's disease, only a fraction of those eligible have been compensated. The issue has now shifted from bad, outdated policy and resulting legal hassles to getting the word out about a streamlined compensation process open to McIntyre Powder-exposed Parkinson's sufferers and their families.

Compensation can include awards for lost wages, pain and suffering, reimbursement of non-OHIP-covered medical expenses, including long-term care or assistance with daily living activities while staying at home (including from family members), a stipend to cover other expenses such as yard work and household repairs and, where the condition is fatal, funeral expenses and death benefits. These benefits are available with full retroactivity, but without an application, the money stays in the WSIB's multi-billion-dollar investment fund and never makes it to those who have suffered the human costs of this terrible disease. The employer-funded WSIB also keeps the money that would be refunded to OHIP for costs that it did cover for these work-related conditions.

Read the entire article [here](#).

Ventra Plastics Plant

In 1981, a German firm manufacturing plastic automobile parts moved to Kitchener, Ontario in a 22,000 square-foot facility. By 1986, parts were manufactured at this plant using an innovative process called "reaction injection molding." With production expanding, the company set up a second facility in Peterborough, which was expanded in the late 1990s to accommodate its larger thermoplastic injection molding machines and production operations. Over the next decade (1986 to 1996), the Ventra Plastics workforce grew from 75 to 575 women and men, with production increasing from one product to 30 different products.

Over the years, Pebra/Ventra Plastics workers began to raise concerns about various health conditions, including but not limited to: (1) various cancers (e.g. lung, salivary gland, breast, etc.), (2) Chronic Toxic Encephalopathy, (3) reproductive issues, (4) cardiovascular disease, (5) among other health issues. In response, OHCOW initiated an investigation in partnership with plant workers and Unifor Local 1987. OHCOW continues to review and conduct research on potential connections between plastics production and health, as well as share our learnings with Pebra/Ventra workers and their families to help: (1) prevent or reduce harmful exposures at work, (2) synthesize medical and hygiene evidence for worker's compensation claims, and (3) identify areas for further research.

What did we accomplish this year?

We are building our team to expand worker outreach and case support.

- We hired new staff this year to support the Ventra/Pebra project.
- We mailed project update letters to workers and their families.
- Our team hosted two public (virtual) information sessions in February 2023.
- We have been supporting workers and their families to navigate the WSIB claims process, including conducting health and work history interviews.

We are preparing a salivary gland cancer case series publication.

- In the scientific literature, there is early evidence that employment in the plastics production industry may be associated with development of salivary gland cancer.
- Salivary gland cancer is a rare cancer of the salivary glands, which are the glands that produce saliva in your mouth.
- We are working with plastics workers who have been diagnosed with salivary gland cancer to better understand the exposures they may have experienced.
- We aim to publish this work in a scientific journal article in 2023.

We are completing an investigation of asbestos exposure at Pebra/Ventra.

- Our team of hygienists have reviewed potential sources of asbestos exposure at the Ventra/Pebra plant.
- We are currently working to prepare materials for workers and their families to summarize our findings.

We are reviewing worker cases of illness by common diagnosis (e.g. reproductive issue cases) to learn more about potentially-related exposures at the Pebra/Ventra plant.

- We have onboarded a new doctor to support our case reviews.
- We have created a new worker questionnaire focused on reproductive health issues.

What's coming next?

- We hope to expand worker outreach in 2023-2024, including to active Ventra/Pebra workers.
- We hope to host a public information session to share our findings to date.
- We will continue to support workers with exposure prevention and workers compensation



General Electric Plant

OHCOW has been actively engaged with the Peterborough community since 2004, with a particular focus on workers at General Electric and Pebra/Ventra Plastics and their families. Throughout 2021-2022, Out of the 825 General Electric Peterborough workers that have registered with OHCOW, 253 workers with respiratory conditions were identified and their claims were reviewed in detail to assist in obtaining further supporting documentation for these workers.

Through these outreach efforts new General Electric workers have come forward and registered with OHCOW and new worker's compensation claims have been established with the WSIB. In response to a recent systematic literature review carried out at the University of British Columbia, commissioned by the WSIB, that investigated the relationship between gastrointestinal (GI) cancers and asbestos exposure an additional 10 workers with esophageal cancers have been included in the active follow-up and outreach to GE workers. The 253 workers with respiratory conditions, as well as the 10 workers with esophageal cancer, were also screened for eligibility for the Low Dose CT Scan lung cancer screening program through Cancer Care Ontario.



Dryden Weyerhaeuser Paper Mill Recovery Boiler

OHCOW continues to investigate the Dryden Weyerhaeuser Paper Mill Recovery Boiler #4 project which resulted in the exposure of hundreds of building trades workers to a recurring plume of toxic emissions. At the request of some of the unions involved, OHCOW conducted intake clinics in Dryden and Thunder Bay in November 2004, resulting in the registration of nearly 400 patient files and the filing of 160 health professional reports to WSIB, primarily regarding reported neurological effects. This was followed by the completion of a general report on the nature of the exposures and in-depth assessments of some of the most affected workers.

Currently, we have a total of 462 workers that have registered with OHCOW since the beginning of this project. 158 of these workers are currently active following our initial follow-up attempt during 2022. During 2022 the priority has been to help Dryden project workers with acquiring WSIB claim files, initiating new WSIB claim files focusing on cases of respiratory disease, cancers, and neurological disease. The local media has also taken an interest in this project and has assisted the Thunder Bay and District Injured Worker's Group in raising awareness.

COVID-19 PANDEMIC RESPONSE

Science, Solutions and Success Stories

This year's Occ-Covid series featured the usual high calibre expert speakers and discussion. Popular speaker Joey Fox, professional engineer and HVAC specialist, shared his knowledge in two sessions, Clean Air REALLY Matters and Let's hear from the Engineers & stop the spread! Professionals Marianne Levitsky and Stéphane Bilodeau joined him. Roy T. McKay, Ph.D., Occupational Pulmonary Services, was featured in the next session Why Respirators, Seal and Fit, Really Matter.

The Spring session featured world-leading Australian biosecurity expert Raina MacIntyre speaking about her new book on the topic. Investigation in outbreaks, maximizing good air quality and analyzing statistics were topics of subsequent webinars in the series.

OCC-COVID Webinars 2022/23

SPRING 2022 (Find the Youtube Playlist [here](#))

- April 5, 2022: Frontline Mental Health, Stressors and Strategies for Workplaces
- April 5, 2022: COVID-19 and Societal Inequities: A Look at the Impact on the Mental Health of Health workers
- April 5, 2022: What the Evidence Suggests is Occuring for the Impact of COVID on Mental Health
- April 22, 2022: Healthcare Implications Now and in the Future
- April 22, 2022: Trust and the Noise of Misinformation
- April 22, 2022: COVID-19: A Lesson on Environmental Justice
- June 3, 2022: Protecting Teachers and Students – Optimizing Ventilation in Older Schools
- June 3, 2022: Clean the Air and Commit to C.A.R.E.
- June 3, 2022: Risk Assessment Toolbox

FALL-WINTER 2022/3 (Find the Youtube Playlist [here](#))

- September 16, 2022: Clean Air REALLY Matters
- October 7, 2022: Preventing Viral Transmission in the Workplace
- October 14, 2022: Why Respirators, Seal and Fit, Really Matter
- December 9, 2022: Let's hear from the Engineers & stop the spread!
- December 16, 2022: Critical Concepts in Ventilation & Viral Evolution
- January 27, 2023: Dark Winter – Past Lessons to Inform Future Health
- February 10, 2023: A 3 year check-up — Not “just the cold or flu”

The COVID and Infectious Diseases Reference Team (CIRT)

Background

OHCOW had been monitoring COVID-19 as an infectious disease before it even had a name prior to the declaration of a pandemic. Initially known as the “novel coronavirus,” OHCOW adopted the precautionary principle, and recognized the need to develop an internal committee to monitor the rapidly evolving understanding of COVID-19 in order to recommend best practices for occupational health & safety. As the COVID-19 Response Team, it evolved to ensure that the leading evidence and best practices were shared with the workers of Ontario.

What has OHCOW done about it?

As COVID-19 has changed and advanced, research and knowledge around transmission and prevention has increased. In September 2022, the team published “Returning to the Office: COVID-19 Communicable Disease Prevention Plan.” This robust document included detail to keep our employees, contractors, clients, and their families as safe as possible. All layers of the hierarchy of controls for prevention were reviewed and as many layers as possible were implemented.

In an effort to educate as many people as possible, the team also organized information sessions called “Occ-COVID,” on a variety of topics related to COVID-19. Occ-COVID sessions have been hosted by OHCOW since 2020, inviting scientists, epidemiologists, physicians, nurses, and engineers to speak to the public about the latest research. Topics have included aerosol transmission, cleaning the air, computational fluid dynamics, engineering controls, investigating outbreaks, respiratory protection, wastewater monitoring, among many, many other sessions.

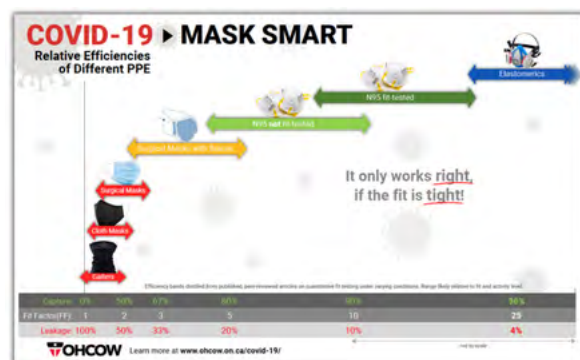
As COVID-19 knowledge increased, the team evolved and expanded to other infectious diseases of concern. The name was changed from the COVID-19 Response Team to the COVID-19 and Infectious Diseases Reference Team (CIRT). The CIRT will continue to meet as COVID-19 and other infectious diseases remain present, still causing potential serious illness.

OHCOW Impact

By creating an infectious disease recognition and prevention team, OHCOW has been at the fore front of providing information and recommendations for illness prevention to the workers of Ontario.

Resource: [Relative Efficiencies of Different PPE](#)

A bar graph created from peer-reviewed data that shows the relative efficiencies of various types of masks / respirators – from ineffective gaiters and cloth masks to surgical masks (with and without fit-braces), to fitted and non-fitted N95 respirators to highly effective elastomeric.



MESSAGING ON AIRBORNE PRECAUTIONS

Spreading Information to Prevent Infection

OHCOW has continued through 2022 – 23 to provide clear and evidence based guidance towards safe practices for indoor air quality. Through webinars and virtual online conversations with Canadian and international experts, OHCOW continues to educate and promote public awareness of the need for clean air in both public and private spaces. The importance of preventing exposure to aerosol transmissible diseases ATDs including COVID-19 is stressed, in addition to providing tools and important guidance. The library of publicly available [OHCOW COVID-19 resources](#) is growing.

Dr. Howard Nioo, Deputy Chief Public Health Officer and Interim Vice-President Infectious Diseases Programs Branch Public Health Agency of Canada, recognized OHCOW’s results in providing public health information and guidance in September of 2022, stating publicly “I would like to take this opportunity to acknowledge the work of OHCOW and the important contributions you are making to workplace safety by increasing awareness of health and safety issues, and promoting workplace prevention strategies.”

Webinars with a Global Reach

World class experts who presented at Occ-Covid webinars and Occ-Covid Conversations included:

- [Protecting Teachers and Students – Optimizing Ventilation in Older Schools / Buildings: Lessons from Australia](#)
- [Workplace Case Studies in Ventilation](#) – Directing Clean Air and Raising Awareness About the Science of Computational Fluid Dynamics (CFD)

OHCOW's Occ-COVID 2022 Webinars addressed ventilation and clean air, respirators, preventing viral transmissions, and other related topics. This complements the extensive materials such as the ventilation calculation tool and checklist and more developed the previous year.

COMMIT TO CARE PARTNERSHIP

The Importance of Clean Air in the Workplace



[Commit to C.A.R.E.](#) is a public awareness campaign with a mission to level the playing field of understanding of environmental strategies to combat COVID-19 and other airborne viruses like measles and tuberculosis. The goal of the Commit to C.A.R.E. website is to provide access to science-based information about infectious diseases and how to reduce their spread in the workplace. It shares safe and practical action plans and recommendations to prevent disease transmission. Clean air is more important than ever given increasingly transmissible variants plus increased air pollution risk due to climate change.

OHCOW has teamed up with the American Industrial Hygiene Association (AIHA) and the Integrated Bioscience and Built Environment Consortium (IBEC) to encourage workplaces to Commit to C.A.R.E. (Community, Awareness, Responsibility and Equity): leveling the playing field to understand environmental strategies to combat COVID-19 and other airborne viruses like measles and tuberculosis. The June 2022 Occ-Covid Webinar series featured content addressing the C.A.R.E. program.

[OCC-COVID Webinar Series: Cleaning the Air and Committing to C.A.R.E.](#)

DIESEL PARTICULATE PROJECT

Advocating for Safer Diesel Legislation in our Underground Mines

The current Occupational Exposure Limit in Ontario for Diesel Particulate is set at a dangerously high level. This poses an unacceptable occupational disease risk to thousands of mine workers who are being exposed.

USW Local 6500 has partnered with the Center for Research in Occupational Safety and Health (CROSH) to combine advocacy with applied research. The Diesel Particulate Project's objective is to provide education and awareness to our mine workers and their families to create meaningful change in our underground mines. Our team consists of occupational health and safety experts, researchers, labour activist, occupational hygienists, and worker compensation representatives.

Our mission is simple, bring the Occupational Exposure Limit for Diesel Particulate in Ontario to a safe, scientifically recommended level.



Diesel Exhaust Lung Cancer Relative Risk Calculator

The calculator can be used as a guide to communicate the risk from DEE exposure and lead to prevention.

Webinar: Diesel Exhaust Exposure – Influencing Change

In this webinar, Part of the Occ/tober 2022 Webinar Series, learn how workers and researchers are influencing change to reduce DEE exposures in Mining through the Diesel Particulate Project. The International Agency for Research on Cancer (IARC) has concluded that Diesel Engine Exhaust (DEE) is a cause of lung cancer (Group 1: carcinogenic to humans). CAREX Canada (2022). Approximately 966,000 Canadians are currently exposed to diesel engine exhaust at work. Potential next steps through tool development and continuing analysis of additional data/evidence will also be discussed.

Speakers:

Sean Staddon, WSIB Worker Representative, United Steelworkers Local 6500; Dr. Sandra Dorman, Ph.D., Centre for Research in Occupational Safety and Health (CROSH); Tobias Mankis, Science Communication Officer, CROSH Dr. Kevin Hedges, Ph.D., Occupational Hygienist, OHCOW.

HEALTH HAZARDS WHEN WORKING WITH GRANITE

This video, [Health Hazards when Working with Granite](#), by Sonia Lal and James Miuccio details the hazards and proper PPE wear and precautions to use when working with granite and its particulates. The basics are covered with regards to the mineral itself, silica, the health hazards and how we can implement controls.

Presenters: James Miuccio, Occupational Hygienist, CIH, CRSP; and Sonia Lal, Occupational Hygienist, CIH, CRSP

Injury Prevention

Prevention programs are a proactive way to find and fix workplace hazards before workers are injured or become ill. These programs can be effective at reducing injuries, illnesses, and fatalities.

Workplace Ergonomics, Musculoskeletal Disorders and Work Environment are all key topics of the prevention picture.

ERGONOMICS PODCAST SERIES

The onset of the COVID-19 pandemic led to people spending more time interacting with technology and less time interacting with other people. This continual interaction with technology such as computers, tablets, and cellular telephones has led to “technology burnout”. Since people were spending so much time viewing their screens to perform their work, they began to decrease use of their screens for other things such as their own personal Health and Safety education.

Due to this, the Ergonomists at OHCOW recognized that they needed to find an alternate way of providing Ergonomics education to people.

What Has OHCOW Done about it?

The OHCOW Ergonomics Podcast Series was created to provide a “non-screen” option for people to continue to educate themselves about injury prevention through the implementation of Ergonomics strategies. To this point eight Ergonomics related podcasts have been created and posted for all to hear. Many of the podcasts are also accompanied by an information sheet that may serve as a useful printed reference.

Ergonomics Podcast Series (find on our [Podcast page](#))

Back to School: Ergonomics for Educators & Students

About the series

Ergonomics of Fall Yard/Garden Chores: Preparation for Winter

Ergonomics and Sleep – Part 1

Ergonomics and Sleep – Part 2

Ergonomics of Winter Chores

Lawn Care: Safety and Ergonomics

The Role of a MLITSD Ergonomist

Ergonomics and Working in the Heat



OHCOW Impact

By creating an auditory educational option that people listen to without having to view a computer, tablet, or cellphone screen workers of Ontario can still learn about ergonomics while avoiding “screen burnout”.

REPETITIVE STRAIN INJURY (RSI) DAY WEBINARS 2023



The event this year was the most successful RSI Day event that the Occupational Health Clinics for Ontario Workers (OHCOW) has hosted in the event’s 24-year history. Since 2021, the RSI Day webinar has been altered from a full one-day event into a four-week 2-hour webinar series for the entire month of February. Each week consisted of a different theme to address multiple issues relation to Ergonomics and musculoskeletal disorders.

Registration for the session combined was greater than any previous year. The total registration for all four sessions combined was 4,288. Due to factors such as time differences and scheduling many of the registrants are unable to attend the sessions live, and instead wait for notification that the session recordings have been uploaded to the OHCOW YouTube channel.

Previously for the RSI Day events, registrants were emailed a link to an evaluation after the session had ended. This year, during the live sessions, we piloted the use of Slido to conduct an evaluation for each session in real time. In addition, to ensure we were gathering all possible responses registrants were also emailed a link to the evaluation if they were unable to attend live and were viewing the session on OHCOWs YouTube channel. Overall, Slido had a 58.6% response rate when averaged across the four sessions compared to the previous year (31% response rate) when the evaluation was emailed.

Take a look at an extensive summary of the feedback and evaluation of the 2023 RSI Day event:

See the webinars:

RSI Day 2023 Week 1 – [Concussions in the Workplace](#)

RSI Day 2023 Week 1 – [Four E's of Shoulder Injuries](#)

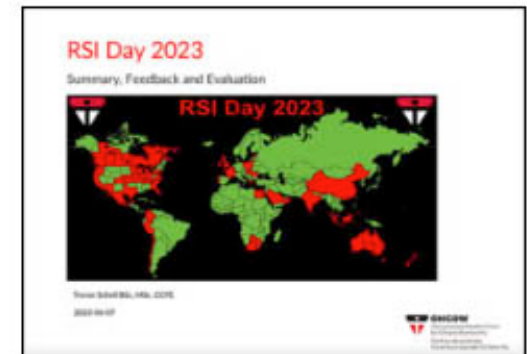
RSI Day 2023 Week 2 – [Ergonomics and Sleep](#)

RSI Day 2023 week 2 – [Implications of Indoor Environment Quality in an Office Setting](#)

RSI Day 2023 Week 3 – [Review of and New Directions for OHCOW's PDD Handbook](#)

RSI Day 2023 Week 3 – [Women's Experiences with Personal Protective Equipment](#)

RSI Day 2023 Week 4 – [Job Demands: Physical and Cognitive](#)



ERGO INFO SHEETS

OHCOW Ergonomists have been working on a series of Ergo Info Sheets addressing different types of ergonomic hazards and ways to prevent them. Titles include: Bursitis, Ligament Sprain and Tear, Carpal Tunnel, and more. See the list [here](#).

Special topics aimed at Temporary Foreign Agricultural Workers (TFAWS) are available in [English and the Thai language](#).

Workplace Mental Health

Mental health at work is crucial for worker wellness and engagement. The crisis, challenges and trauma of the Covid pandemic and lockdowns, that profoundly disrupted both personal lives and the workplace, have put mental health front and center. Dialogue and discussion are the key to help strengthen workplace mental health initiatives and make the future of work, in a post-pandemic world, psychologically safe and healthy.

OHCOW has been a prevention system leader in Workplace Mental Health since 2011, when we worked with academic and labour partners to research survey tools. Many tools created by OHCOW such as the [StressAssess Survey](#) are still used regularly as a starting point to help ignite that discussion.

IMPROVING WORKPLACE MENTAL HEALTH THROUGH SURVEY SUPPORT

OHCOW has been a leader in the Prevention System with respect to [Workplace Mental Health and Injury Prevention](#) since 2011 when we worked with labour and academic partners to create the Mental Injury Toolkit which is still regularly one of our top 20 website downloads. The Toolkit is based on the use of the [Copenhagen Psychosocial Questionnaire](#) to identify workplace factors that contribute to stress and mental harm.

OHCOW has since converted the COPSOQ and other validated research questions into the personal and workplace versions of the [StressAssess](#) survey tool. The tool can be used to “take the temperature” of a workplace or evaluate the impact of changes by establishing a baseline and then doing iterative surveys every 1 or 2 years. It includes national comparison data generated every ~3 years by EKOS on OHCOW’s behalf (2016, 2019 and 2023). The survey is “self-serve” but we also offer additional support to workplace parties if they would like the data analysed in more detail or some assistance with responding to the information in a constructive and positive way. In 22/23 several dozen self-serve surveys were created plus OHCOW’s multi-disciplinary WMH Community of Practice staff supported more than 10 workplaces/groups (ranging from 33 to 10000 workers) with additional analysis, knowledge translation and especially figuring out next steps. Several StressAssess stories, as well as other current Workplace mental Health research, resources and services, were highlighted at OHCOW’s annual [Mayday, Mayday](#) webinar series.



MAYDAY, MAYDAY 2022

The 2022 Mayday, Mayday! Webinar series took a closer look at the personal and societal problems affecting workplaces. Issues of addiction, bullying, foreign workers and international perspectives were addressed over five webinars.

Session 1 April 29, 2022

[Addiction and Opioid Harm Reduction at Work](#)

- Chronic Pain and the Mental Health Impact of Disablement; Dr. Fergal O’Hagan, Department of Psychology, Trent University
- Understanding Mental Health and Opioids During Return-to-Work (RTW), Research Findings; Dr. Ellen MacEachen, School of Public Health Sciences, University of Waterloo
- We Are All in This Together, Supporting Workers and Fighting Addiction in the Workplace; Sari Sairanen, Health, Safety & Environment Director, Unifor National: Mike Byrne, Unifor EFAP Liaison
- Listen to the Voices of Experience: A Worker Perspective; Wayne Harris, RSE, UA Local 853 Executive Board and Toronto VP for ONIWG

Session 2 May 6, 2022

[Violence, Harrassment and Bullying in the Workplace](#)

- Digital Harassment as a New Workplace Risk; Rebecka Cowen Forsell, PhD., Assistant Senior Lecturer in Leadership and Organization at Malmö University, Sweden
- Changes in Offensive Behaviour Experience During the Pandemic; John Oudyk, Occupational Hygienist, OHCOW

- Violence and Harassment in the Workplace; Andrew Falotico, Health and Safety Representative, Allied Transit Union (ATU) 113

Session 3 May 13, 2022

Survey Experiences and Insights from Around the World

- How to (Not) Go Mad at Work in Chile: Mandatory Assessing and Intervening with a Sentinel Event in the Workplace; Juan M Pérez Franco, Professional, Unidad de Prevención y Vigilancia, Intendencia de Seguridad y Salud en el Trabajo, Superintendencia de Seguridad Social Ministerio del Trabajo | Gobierno de Chile
- Job Stressors and Burnout: Does the Relationship Run in Both Directions? Faraz Vahid Shahidi, Associate Scientist, Institute for Work & Health and Assistant Professor, Dalla Lana School of Public Health, University of Toronto
- Addressing Psychosocial Factors in the Workplace – A Partnership Between Union and Employer; From the Correctional Services Division of the Ministry of the Solicitor of Ontario: Michelle MacLean, Correctional Officer and Vice-Chair (Union) of the Provincial Joint Occupational Health and Safety Committee; Denise Sidsworth, Probation and Parole Officer and member (Union) of the Provincial Joint Occupational Health and Safety Committee, and more...

Session 4 May 20, 2022

Diverse Perspectives on Workplace Mental Health

- Psychologists' Perspectives on Improving Workplace Mental Health; Dr. Deborah Scharf, PhD CPsych, Associate Professor of Psychology, Lakehead University; Dr. Mandy McMahan, PhD CPsych (ON); Clinical, Health, and Counselling Psychologist; Vice President, Professional Services and Business Strategy and Development, Odyssey Health Services
- When Domestic Violence Enters the Workplace; Dr. Kari Sampsel, Emergency Physician and Medical Director of the Sexual Assault and Partner Abuse Care Program at the Ottawa hospital
- The Healthy Work Survey: Progress and Challenges in Year One; Marnie Dobson, Ph.D., Director of the Healthy Work Campaign

Session 5 May 27, 2022

Workplace Mental Health Interventions and Other Solutions

- Practice-based Strategies for Designing Organizational Wellness Interventions; Kelly McShane, PhD, CPsych, CE
- Building on Successive Surveys: A Worthwhile Investment; Enzo Garritano, President and CEO, Infrastructure Health & Safety Association (IHSA)
- Supporting the Mental Health of Ontario Agricultural Workers; Eduardo Huesca, Community Program and Outreach Coordinator and Leonor Cedillo, Research Lead, OMAFRA Project, OHCOW

COVID AND WORKER MENTAL HEALTH RESEARCH PUBLICATIONS

Published Peer-Reviewed Papers: Educators During the Pandemic

OHCOW is also quite involved in research in the WMH sphere, as part of the [COPSOQ network](#) and with other partners from around the world. In 22/23

we were named in 3 publications. More information, including links to related presentations can be found on our [Workplace Mental Health Landing Page](#)

The pandemic changed education and the lives of students and teachers. Teachers switched from in-person classroom teaching to online technology. Restrictions were in place when in-person classes resumed, such as masking, social distancing, and hybrid learning. Educators had to balance the requirements of teaching with keeping students, and themselves, safe. A pair of peer-reviewed papers by the Institute for Work & Health (IWH) and Occupational Health Clinics for Ontario Workers (OHCOW) describes how these policies affected Ontario educators. It was a needed perspective, as the bulk of study looking at the effects of pandemic restrictions in schools had focused on children. OHCOW Hygienist John Oudyk and Researcher Leonor Cedillo were co-authors of the papers.

Educators and the Pandemic: In-Person vs. Virtual

[The psychosocial work environment among educators during the COVID-19 pandemic](#), was published in Occupational Medicine in June 2022. Its aim was “To compare various dimensions of the psychosocial work environment and health outcomes between educators engaged in online learning to those engaged in in-person learning in the Canadian province of Ontario.” The paper looks at the “growing evidence base on the potential advantages and disadvantages of school closures as they relate to the mental and physical health of students, their families, and the broader community.”

Keeping Educators Safe

The second paper, [Perceived Adequacy of Infection Control Practices and Symptoms of Anxiety Among In-Person Elementary School Educators in Ontario](#), was published in the Journal of Occupational and Environmental Medicine in November 2022. It looks at the adequacy of infection control practices was connected to anxiety among educators in Ontario. Its findings highlighted the importance of adequate administrative and engineering controls in schools, not only to minimize risk of infection, but also for educator’s mental health.

Young Workers in Public Transportation Services

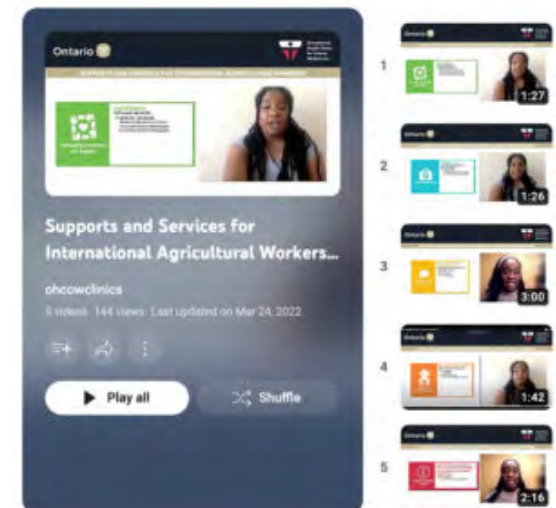
Essential Public Services, Essential Workers’ Health: Union-based initiatives to protect the [Mental Health of Young Public Transport Workers](#).

MULTI-LINGUAL VIDEOS FOR MIGRANT WORKERS

Accessible, Critical Information for Foreign Workers

Foreign workers experience isolation and stress when they come to Ontario’s agricultural communities for temporary work. They are away from their families and culture. OHCOW partners with other organizations to help them adjust, meet other workers and know that they are not alone. Along with other print and social media materials, in 2022 OHCOW published a playlist of videos that explain the various types of supports and services available to international agricultural workers. The short videos are available in English and Spanish, and cover topics such as health care services and community connection and support. They address their rights as workers in Ontario, and advise on reporting cases of abuse and safety infractions.

Find more info and links to videos [here](#).



Worker Perspective

From migrant farm and indigenous workers to new, young and aging workers, to vulnerable or injured workers, we cover a variety of worker groups and provide guidance and direction on dealing with workplace situations specific to these groups.

PROVIDING RESOURCES, COMMUNITY AND INFORMATION FOR FOREIGN WORKERS

Eye & Oral Health Information Day for Migrant and Temporary Foreign Workers

One of the many events that OHCOW holds in its support of Temporary and Migrant Foreign workers in 2022/23 was Eye & Oral Health Information Day on Sunday March 26th. Invited to the event were partners and stakeholders such as the [TeamMWork Project](#), CARE para Trabajadores Internacionales / CARE for International Workers, The Harrow Health Centre: Family Health Team, Consulado de México en Leamington and the Bayanihan Center. OHCOW presented information around eye care and protection in the workplace, and distributed safety glasses for use in the greenhouse. Smile Wagon Mobile Dental Hygiene was present and spoke about oral health.

Sandwiches and drinks were provided for all in attendance, with a raffle being held and prizes presented by the consul of Mexico, Rodrigo Baez. Music was performed by Grupo Diamante.

Below is (left to right) A served hot lunch, a musical performance and an Informative presentation



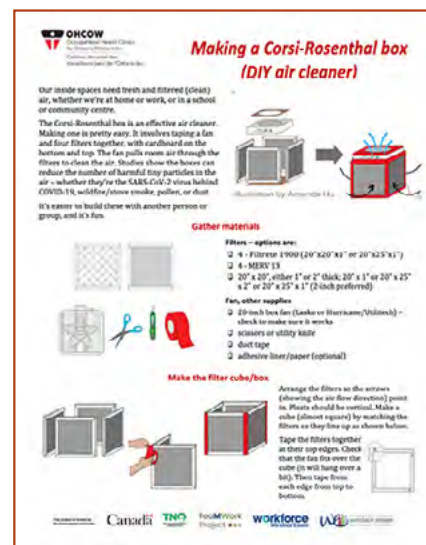
FREE AIR CLEANERS FOR EMPLOYERS OF TEMPORARY FOREIGN WORKERS

Wherever people congregate, good air quality is important to reduce disease transmission and maintain a healthy workplace. When workers are living in close quarters, or working indoors together, using an air filter is a good way to reduce germs and contaminants in the air. Because migrant workers are often housed in dorm-like conditions, air filters are recommended. OHCOW has made obtaining air filtration systems easier!

As of September 13, 2022, employers can receive one free HEPA unit or more depending on the size of the work area, living spaces and number of employees. Employers are also given instructions on how to build the DIY Corsi-Rosenthal box, and instructions are posted on the web site.

The four-filter Corsi-Rosenthal box is an effective air cleaner, and making one is pretty easy. It involves taping a fan and four filters together, with cardboard on the bottom and top. When there's no space for a four-filter box, a one-filter version is useful. It's less expensive to make, although the filter needs to be changed more often.

Below are the pdfs that demonstrate how to make two different types of air filters. Find files [here](#).



EXPANSION OF PROJECTS TO EMPOWER TEMPORARY FOREIGN WORKERS

Engagement and Empowerment

OHCOV'S Temporary Foreign Worker Engagement and Empowerment Projects (which combine OHCOV management coordination and professional expertise with ESDC-funded regional and cultural outreach staff) continued in 22/23 with the wrap-up of the 1.5 year Kairos project in Q1 and Q2 and then the launch of new partnerships with The Neighbourhood Organization (TNO Worker Support Services) and Workforce Windsor Essex (WWE Team-Work) in Q3 and Q4.

Delivering services with dedicated teams

These projects have collectively built our capacity to deliver OHS services and resources across the province, primarily to migrant agricultural workers across the Southwest, South Central and Eastern Regions with recent expansion to other TFWs, especially in ESDC target areas of the and Ottawa and Thunder Bay. Plus, we have been able to connect more with workers for individual case support.

The Project teams includes Project Management by OHCOW's Community Outreach and Program Coordinator, executive and accounting oversight, plus involvement of Nursing, Hygiene and Ergonomic staff, along with three subject matter experts in occupational, public and worker mental health acting as Regional Coordinators and 12 outreach workers to reach the Thai, Caribbean, Latinx and Filipino communities.



Over the course of the year more than 3000 workers were contacted at community events organized by partners as well as at their workplaces and gathering spaces and we have expanded our social media reach as well. We also provided more than 30 workshops on subjects like Rights and Responsibilities, Eye Safety, and Air Cleaning, plus distributed thousands of print and digital resources on those and other subjects which can be found on the Migrant and Temporary Agricultural Workers Landing Page.

Connecting workers to services

Along the way, we listened to and supported workers and community groups with information and knowledge to help address gaps they identified. We delivered, and contributed to, webinars and capacity building workshops, and connected workers and community groups to stakeholders and service agencies who provided additional support. This included connecting workers to WSIB, healthcare services, vaccination clinics, and healthcare professions who have provided vaccine related information and consultation to workers.

We have continued funding in 23/24 for the Southwest project funded through WWE and the pan-Ontario project funded by TNO and are especially grateful for the continued support of the ESDC which allows us to expand our reach and impact and improve occupational health and safety for workers across the province.

Tools and Resources

Apps, Tools and Calculators

DIESEL EXHAUST LUNG CANCER RELATIVE RISK CALCULATOR

The Danger of Exhaust Fumes

This calculator was created by OHCOW in response to the accumulating scientific evidence pointing to the risk to human health from Diesel Engine Exhaust (DEE) exposure. Using the calculator, people are able to determine their risk of developing lung cancer from inhaling DEE. Such knowledge can lead to prevention measures, such as choosing cleaner methods, diverting or reducing the substance at the source or the use of Personal Protective Equipment.

The evidence cannot be ignored. The [International Agency for Research on Cancer](#) (IARC) has concluded that DEE is a cause of lung cancer (Group 1: carcinogenic to humans). [CAREX Canada](#) estimates that approximately 897,000 Canadians are currently exposed to diesel engine exhaust at work. Approximately 2.4% (OCRC) to 6% (Vermeulen et al 2014) of annual lung cancer deaths may be due to DEE exposure.

Combined data from three U.S. occupational cohort studies including more than 40,000 workers in the trucking and mining industries (Vermeulen et al 2014) have provided a powerful estimate of the risk of lung cancer based on the level and duration of exposure to DEE. The truckers' study Garshick et al. (2012) and miners' studies Silverman et al. (2012), (Attfield et al. 2012), (Stewart et al. 2010) combined, allows for a determination of the risk of lung cancer based on the level of exposure to diesel particulate matter (DPM). DPM measured as elemental carbon (EC) is the best surrogate of exposure.

The tool requires either an estimate of exposure, as EC (NIOSH 5040) and duration of exposure. Where the only measures available are total carbon (NIOSH 5040) or Respirable Combustible Dust (RCD) conversion factors have been provided.

OHCOW recommends the use of a calculator tool to determine risk levels for inhaling toxic substances such as DDE.

[GO TO CALCULATOR](#)



OCCUPATIONAL EXPOSURE LIMITS ADJUSTMENT TOOL

Calculating Work Exposures

Created in partnership with the Occupational Disease Action Plan Contributors, the Occupational Exposure Limits (OEL) Adjustment Tool allows the calculation of the adjusted workplace exposure limit for an unusual or extended work shift which has been adapted using the methodology set out in the [Guide for the Adjustment of Permissible Exposure Values for Unusual Work Schedules](#) (March 2015), published by Quebec's Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST).

This method, used in the Province of Quebec and referenced by the ACGIH and other health and safety organizations, considers toxicological information such as sensitization, irritation, organ toxicity, reproductive system toxicity and teratogenicity, in addition to exposure and recovery times.

Irregular work shifts are now commonplace in many industries, and the standard eight-hour work day/40 hour work week (which has been the basis for time-weighted average [TWA] occupational exposure limits) is often not the reality. To address this change, exposure limit adjustments have increasingly become an essential component in workplace exposure assessment.

In addition to providing adjustment for Ontario compliance limits, OHCOW used its own research, data published by GESTIS and the ACGIH to assist in determining the lowest exposure limit easily accessible for occupational hygienists, advanced JHSC members or workers with additional training. These limits vary by jurisdiction, and are published by a number of different governments or private organizations. The limits reflect the understanding and interpretation by those jurisdictions of the science used in determining a limit for workers.

This tool is intended to provide knowledge translation in a user-friendly manner. It is the user's responsibility to fully understand the limitations and application of the adjusted OEL to their workplace scenario and exposure/risk assessment. Results must be used with caution, as they are simply a guide and any misuse may affect the health and safety of workers in their respective workplaces.

A guidance summary has been prepared to allow the user to review the health-based limit proposed and in the case of limits proposed by OHCOW reference to research used in determining the limit.

See the tool [here](#).

Research Papers

INFECTION CONTROL AND IN-PERSON EDUCATORS

Perceived Adequacy of Infection Control Practices and Symptoms of Anxiety Among In-Person Elementary School Educators in Ontario

Smith, Peter M. PhD; Oudyk, John MSc; Cedillo, Leonor ScD; Inouye, Kimiko MA; Potter, Guy PhD; Mustard, Cameron ScD

Abstract**Objective**

The aim of this study was to examine the association between the perceived adequacy of infection control practices (ICPs) and symptoms of anxiety among educators in Ontario, Canada.

Methods

Data from 4947 educators were collected in December 2020. Modified Poisson models assessed the association between adequacy of ICPs and moderate or severe anxiety symptoms, adjusting for a range of covariates.

Results

Approximately 60% of respondents reported moderate or severe anxiety symptoms. Two-thirds (66.5%) of the sample had less than half of their ICP needs met. Respondents with less than half their ICP needs met were more than three times more likely to have moderate or severe anxiety, compared with respondents with their ICP needs met.

Conclusion

Findings highlight the importance of adequate administrative and engineering controls in schools, not only to minimize risk of infection, but also for educator's mental health.

Read the paper [here](#).

EDUCATORS' WORK ENVIRONMENT DURING THE PANDEMIC*The Psychosocial Work Environment Among Educators During the COVID-19 Pandemic*

P. Smith, J Oudyk, L Cedillo, K Inouye, G Potter, C Mustard

Abstract**Background**

The education sector has been heavily impacted by COVID-19. While the impact on school-aged children has received much attention, less attention has focused on the experiences of educators.

Aims

To compare various dimensions of the psychosocial work environment and health outcomes between educators engaged in online learning to those engaged in in-person learning in the Canadian province of Ontario.

Methods

Responses from 5438 educators engaged in either online or in-person learning were collected between 23 November and 21 December 2020; three months after the start of the 2020/21 academic year in September 2020. Psychosocial outcomes included quantitative demands, work pace, predictability, role conflicts, and social support from supervisors and co-workers; assessed using an abbreviated version of the Copenhagen Psychosocial Questionnaire. Secondary outcomes included burnout and sleep troubles. Ordinary Least-Squares regression models examined adjusted mean differences in the levels of outcomes for respondents in in-person versus online learning, after adjustment for a variety of covariates.

Results

Compared to respondents engaged in in-person learning, respondents engaged in online learning reported less predictability, higher role conflicts and less support from supervisors and co-workers. Statistically significant differences in work pace, burnout and sleep troubles were also observed across learning modes, although these differences did not exceed previously suggested thresholds for minimum important differences.

Conclusions

Important differences in the psychosocial work environment were observed between respondents engaged in in-person learning versus online learning. Addressing these differences is required, given the potential continued importance of online learning within the context of the COVID-19 pandemic and beyond.

Read the Paper [here](#).

MCINTYRE POWDER AND CARDIOVASCULAR DISEASE

McIntyre Powder and its potential contributions to cardiovascular disease risk: A literature review through the McIntyre Powder historical lens

Andrew Zarnke, Christine Oliver, Sandra Dorman

Abstract

McIntyre Powder (MP) is a fine aluminum powder that was developed to prevent silicosis in gold and uranium mine workers in Ontario, Canada, and was administered to miners there from 1943 to 1979. Mine workers were exposed to high concentrations (35.6 mg/m³) of MP for approximately 10 min before every work shift. Contemporary physical and chemical characterizations of this powder have revealed that 12% of the powder is in the ultrafine particle size-range (nanoparticles); and the remaining 88%, in the fine particulate size range (below 2.5 µm in diameter). The confluence of ultrafine particulate (UFP) composition and high airborne concentration of MP would be expected to overwhelm the defense mechanisms of the lung and increase the lung dust burden of the mine worker exposed to respirable dust in the mine. Published studies revealing associations between air pollution particulates and increased risk for cardiovascular disease (CVD) shown a dose-response relationship with ambient PM_{2.5} and UFP and suggest that miners exposed to MP may also be at increased risk of CVD. The historical perspective of the use of MP in northern Ontario hard-rock mines and its potential implications for CVD in exposed mine workers are discussed.

Read the Paper [here](#).

Knowledge Translation

WEBINARS

The following webinar series occurred during the 2023-24 year:

[MAYDAY, MAYDAY 2022](#)

Opioid treatment, harm reduction, addiction in the workplace

[OCC-COVID CONVERSATIONS, SPRING 2022 & WINTER 2024](#)

Preventing Viral transmission, Clean Air and Ventilation

[OCC-TOBER 2022](#)

Worker-Focused Science & Prevention. Informative webinars presented by experts on the topic of the science behind Occupational Health, with Q&A by live audience.

[RSI DAY WEBINAR SERIES 2023](#)

Repetitive Strain Injury Day increases awareness of the debilitating issues and serves to educate workers about the hazards and prevention methods.

[OCC-DISEASE 2022](#)

Managing Heat Stress, New research, OHCOW's Humidex-based Heat Stress Plan

PODCASTS

The popular OHCOW podcast series discusses a wide array of topics and the challenges of current and emerging trends in occupational health. Effective prevention strategies to empower workers are examined. Both Ergonomics and Occupational Hygiene topics are discussed. Find links to hear the podcasts [here](#).

Our Nurses. Our Future. The Role of the Occupational Health Nurse at OHCOW

In celebration of the 2023 National Nurses Week, a discussion of the nursing role in our organization.

Demystifying the Joint Health and Safety Committee Dysfunctions

Uncovering the top 10 items that roadblock successfully functioning committees.

The Role of a MLITSD Ergonomist

A discussion with Andrew Flanagan, ergonomist and Amir Estulin, who is the Western Region MLITSD Ergonomist (MLITSD).



Top Ten Tools to Prevent Noise Induced Hearing Loss

An overview of possible causal occupational and environmental exposures, while discussing statistics and Top 10 Tools to Prevent NIHL.

Ergonomics of Winter Chores

A discussion the ergonomic risk factors related to winter weather.

Ergonomics and Sleep – Part 1**Ergonomics and Sleep – Part 2**

Learn how important sleep is, how sleep deprivation negatively affects us and how poor sleep can lead to and exacerbate musculoskeletal injuries.

Ergonomics of Fall Yard/Garden Chores: Preparation for Winter

People don't always realize the ergonomic risk factors associated with these chores.

Back to School: Ergonomics for Educators & Students

People aren't always aware of the ergonomic risk factors associated with the return to school.

Ergonomics and Working in the Heat

Many people work in the heat, not only in the summer, but all year round. There are a wide range of risk factors.

Lawn Care: Safety and Ergonomics

Join OHCOW Occupational Ergonomists in a discussion about ergonomic safety while performing lawn care.

Top 12 Challenges Related to Indoor Air Quality

Indoor Air Quality (IAQ) is an important health and safety concern for workplaces, this is a discussion of the major challenges workers face.

What does 'Health' in Health and Safety mean to me?

The 'Health' side of Health and Safety for workers, and building awareness of the many workplace variables which can adversely affecting your health.

Demystifying the Safety Data Sheet

Join OHCOW Occupational Hygienists for a candid discussion on Safety Data Sheets (SDSs).

Workplace Exposure Histories: Looking at Yesterday for Tomorrow, Today

A Podcast to help employees gather information from their current workplace regarding their exposures.

INFOGRAPHICS

These MSD info sheets are downloadable pdfs, some with accompanying podcasts on the same topic. They also have live web versions, that are available here. By offering the information in a variety of different formats and presentations, users have multiple ways to take in the information.

MSD Info Sheets

Back to School

Psychosocial Risk Factors & Musculoskeletal Disorders

Quick Workstation Setup Guide

Ergonomics of Fall Yard/Garden Chores

Ergonomics and Sleep

Ergonomics of Winter Chores



Health and Safety Prevention Controls

Prevention is the best way to deal with job-related hazards – by getting rid of them. This is the third step* in a process to identify hazards and brainstorm ways to prevent or reduce them. The front page of this poster makes clear that prevention protects everyone, while limiting the harm with controls relies more on individuals. Users can determine where the measures in their job fit now, and what would be more effective and really preventive. The back page describes the types of measures, from most effective to least effective. Available in English, Spanish and Thai.

Where Does it Hurt? Body Maps

“Where does it hurt?” is a great way to start conversations about health and safety on the job, and to make visible the often-hidden harm of work. It’s the first step* in a process to identify hazards and brainstorm ways to prevent or reduce them. It also helps workers see they aren’t alone in suffering symptoms, illnesses, etc.

Using male and/or female outlines, people use coloured sticky dots/labels to indicate (in red) where they have aches and pains, (in green) where stress shows up in their body, and (in blue) where they have other symptoms (e.g., allergies, breathing problems, cuts). The questions are asked in English, Spanish and Thai.

Workers’ Basic Health and Safety Wallet Cards

Available in English, Spanish and Thai, the following wallet-size reference cards contain helpful information for workers who need to exercise their rights for a healthy and safe work environment.

Working in the Cold

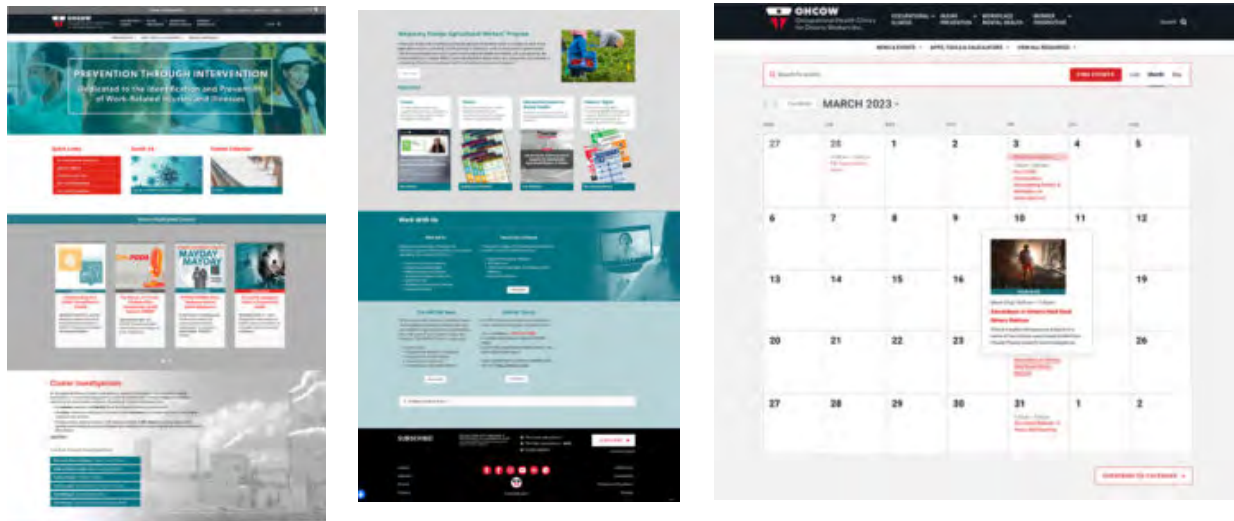
Tips on how to prevent hypothermia, frostbite and other extreme cold-related injuries. Double sided.

Connections

WEBSITE

The New Homepage Design

A full redesign of the current site is underway, with the homepage and some sections being given a different look. An events calendar has also been added.



NEWSLETTERS

In 2022/23, OHSCOW continued sending out a monthly newsletter, the Lens, that contains information and links for our regular webinars, information about current events and news, and links to external webinars and conferences from our partner organizations. See links to the newsletters.

[September 2023](#)

[October 2023](#)

[November 2023](#)

[December 2023](#)[January 2024](#)[February 2024](#)[March 2024](#)[April 2024](#)

NEWS AND EVENTS

Official Apology given to Miners Exposed to McIntyre Powder

December 9, 2022



Former mine workers who were made ill from their exposure to McIntyre Powder have received an [apology](#) from Ontario Labour Minister Monte McNaughton. Thanks in large part to the spearheading of the McIntyre Powder Project by activist Janice Martell (photo, left) and her partnerships with OHCOW and others, the substance has been identified as having caused respiratory illness, lung disease and neurological conditions in workers. Martell was interviewed on CBC about the campaign and what the long-awaited apology means to her and injured miners. From 1943 to 1979, miners in northern Ontario were forced to breathe in the black ground aluminum dust before they started their shifts.

McIntyre Powder is essentially ground aluminum dust, and it was administered to miners for over thirty years until 1979. The miners were told they had to take it or be fired. It was supposed to prevent lung disease, but in some cases actually ended up causing it, as well as other illnesses and irreversible neurological damage.

The Workplace Safety and Insurance Board of Ontario (WSIB) has recognized that miners forced to inhale McIntyre Powder were at a higher risk of developing Parkinson's disease. Early in 2022, the province made the changes to allow families and miners who developed Parkinson's tied to McIntyre Powder inhalation to file claims and be compensated for occupational disease. As a long time supporter of Martell, the OHCOW web site has been reporting on the McIntyre Powder Project for a while... [get more information.](#)

OHCOW Hygienist wins award

May 2023

OHCOW Occupational Hygienist **John Oudyk** was awarded the [Hugh Nelson Award](#) from the Occupational Hygiene Association of Ontario (OHAO). His colleagues at OHCOW, and those at partner organizations who also work with him, are pleased to see his professionalism, integrity, and humanitarian approach on behalf of workers recognized by his peers across Ontario.

The Hugh Nelson Award of Excellence in Occupational Hygiene may be presented annually to an individual who has worked or is working as an occupational hygiene professional in a full-time capacity.

John started in Chemical Engineering as a Co-op student, then at the shop floor/foundry level and eventually found his way to OHCOW. His mark as an

occupational hygienist is something to be celebrated. He quickly became the teacher to many workers, unions and beyond at both college and university level, authoring /co-authoring several research papers, and translating the latest scientific research to his peers and Ontario Workers through his workplace interventions, presentations, and the development of hazard assessment tools and surveys to mobilize knowledge around workplace illness and injury prevention. John’s colleagues at OHCOW proudly congratulate him on the honour. [Read more.](#)

SOCIAL MEDIA

OHCOW’s social media platforms are used regularly to promote webinars and other events, to commemorate notable dates and occasions, and link to web content. Some posts, such as our acknowledgement of Doctor’s Day and Nurse’s Week, have included motion graphics.

Sample icons of the posts:

LinkedIn

The analytics for the LinkedIn page show a 266.67% increase in page views from April 31 2022 to April 31 2023. 176 new followers were added.

Twitter

Between May 2022 and May 2023 OHCOW’s Twitter page saw an increase of 413 followers, and currently has 1,847 followers. Tweet impressions grew from 374 to 17.1K during April 2023.

Facebook

OHCOW currently has 1.2K followers on Facebook. As well as ads for events and notable dates, webinars are streamed live on the platform and can be watched later, as well as on YouTube. Posts are regularly “liked”, “shared” and clicked, with engagement for posts anywhere between 50-350 “reaches” (times a post is viewed)

Youtube

All OHCOW webinar events are posted to the Youtube channel. Between May 22 and May 23, the channel saw 28,179 views, with a watch time of 1,740 hours. 119 Subscribers watched content. 220,637 impressions (or times the post link was viewed) with a click through rate of 5.3%. The top viewed video from that time period is the RSI Day webinar, week 1, “Four Es of Shoulder Disorders.”

Instagram

OHCOW currently has 316 followers on instagram. 58 posts were made between May 22 and May 23.



Partnerships

WORKPLACE HEALTH WITHOUT BORDERS

A Partnership to Spread Health and Science



OHCOW Occupational Hygienist, Dr. Kevin Hedges CIH, ROH, is past president of Workplace Health Without Borders (International) and current board member. Workplace Health Without Borders International was founded in the spring of 2011 by a group of occupational hygienists in Toronto, Canada. Since then, WHWB has grown to include national branches in the United Kingdom, United States, and Australia. Each branch is an autonomous entity that operates consistently within WHWB's strategic framework.

WHWB has published recent webinars related to accelerated silicosis affecting younger workers and their exposure to respirable crystalline silica (RCS) - from artificial / engineered stone countertops - a deadly and debilitating occupational disease.

Workplace Health Without Borders works to advance the protection of workers and promote best practices to improve worker safety and Health. To this end, in 2019 WHWB International signed a Memorandum of Collaboration with the United States National Institute for Occupational Safety and Health (NIOSH).

Like OHCOW, WHWB has delivered numerous international webinars that are COVID-19 related which can be seen on the WHWB YouTube channel. Recently WHWB hosted two international webinars that are silica related with a focus on engineered / artificial stone and the processing fabrication of this material for countertops. In both Australia and the US there has been a surge in cases of accelerated silicosis. The Australian data is showing that 1 in 4 operators have their respiratory health seriously impacted, with workers dying from silicosis at relatively young age in their 40s. Dr Bob Harrison from the US calls artificial / engineered stone "silicosis in a box" and WHWB believes that what is seen so far with numbers of workers with accelerated silicosis is the "tip of the iceberg".

Webinars

Engineered Stone Countertops: How Big is the Problem? and WHWB Silica in Countertops Webinar.

[Part A](#) and [Part B](#). Part B, Session B focuses on exposure controls.

SPRING INTO ACTION 2022

This free virtual event that occurred on April 8, 2022, was a joint effort between the Ottawa & District Labour Council (ODLC), Health & Safety and Environment Committee and Education Committee and the Occupational Health Clinics for Ontario Workers (OHCOW) Local Advisory Committee.

The event was intended for anyone working in public health, including colleagues, committee members and all with an interest in Occupational Health and Safety.

This conference will benefit all workers.

SESSIONS / SPEAKERS

Session 1:

Presenter: Daryl Stephenson, Ergonomist, Occupational Health Clinics for Ontario Workers (OHCOW)

Title: Concussion, Post-Concussion Symptoms, Under-Reporting, and Prevention of Workplace Hazards

Session 2:

Presenter: Trevor Schell, Ergonomist, Occupational Health Clinics for Ontario Workers (OHCOW)

This webinar will Explain the anatomy of the shoulder, Examine common risk factors for injury, Explore the most common shoulder injuries including Thoracic Outlet Syndrome and Rotator Cuff Tears and Expand upon prevention measures

Title: The Four E's Of Shoulder Injuries

Session 3:

Presenters: James Brophy, PhD, Occupational Health Researcher; Margaret Keith, PhD, Occupational Health Researcher; Michael Hurley, President, Ontario Council of Hospital Unions (CUPE)

Title: Code White: Sounding the Alarm on Violence Against Health Care Workers and Violence in the Long-Term Healthcare Sector

See Webinar [here](#).

CANADIAN AEROSOL TRANSMISSION COALITION

Occupational hygienists from OHCOW regularly meet (on a volunteer capacity) with the Canadian Aerosol Transmission Coalition (CATC). This coalition allows for learning about and sharing the latest knowledge and guidance. This includes sources of information such as Indoor Air Quality Reports, provided by the Ontario Society of Professional Engineers (OPSE). Joey Fox P.Eng, a regular presenter in OHCOW webinar sessions, helped develop this good practice guidance. His website offers up-to-date information and useful graphics such as How Can You Clean The Air? W.A.T.C.H.

Toronto Centre Queen's Park Representative Kristyn Wong-Tam used information provided by CATC and OHCOW to craft a recent members bill that promotes the Ontario Society of Professional Engineers core recommendations for safer indoor air to the Ontario government. The Bill is for an Advisory Committee to Protect Ontario's People and Economy from Airborne Pandemics Act, 2023 which includes OHCOW as a stakeholder.

OHCOW knows the importance of messaging during a time of crisis such as the COVID-19 Pandemic, and have not stopped promoting best health and safety practices even as the official safety regulations are winding down.





Annual Report

2022/23

© Occupational Health Clinics for Ontario Workers Inc.