Occupational disease prevention – can (specialised) occupational health clinics make a difference?

Presented by Dr. Kevin Hedges | Co-sponsored by NLCAHR and the SafetyNet Centre for Occupational Health & Safety
Taking care of our future

Unsupervised Children will be given cigarettes & taught how to swear.
The Occupational Health Clinics for Ontario Works (OHCOW)

A learning example…Protecting and Promoting occupational health!
Occupational Health Clinics for Ontario Workers (OHCOW)

- An inter-disciplinary occupational health team:
  - occupational physicians
  - occupational health nurses
  - ergonomists
  - occupational hygienists
  - customer service coordinators
  - leadership/administration

- Funded by MoL Prevention Services (from compensation premiums)
- BoD majority from organized labour
MISSION

“The mission of the Occupational Health Clinics for Ontario Workers Inc. (OHCOW) is to protect workers and their communities from occupational disease, injuries and illnesses; to support their capacity to address occupational hazards; and to promote the social, mental and physical well-being of workers and their families.
In 1980 Local 1005 set up a committee to establish an occupational health centre.

Connected with a number of interested doctors associated with McMaster.

Local 1005 hired some of these doctors and the first union sponsored occupational health clinic in North America was established in March 1981.
In 1988, the Ontario Federation of Labour secured an agreement with the Ministry of Labour to fund a three year pilot project for two clinics, one in Hamilton and one in Toronto.

The clinic in Hamilton was opened Feb 1989 and soon after another clinic in Toronto was also opened.

There are now 7 clinics.
OHCOWs 25th Anniversary in 2014
The Occupational Health Clinics for Ontario Workers - Here to help free of charge

ABOUT US

For over 27 years, OHCOW has been a valuable injury and illness prevention resource for the workers and workplaces of Ontario. The first clinics, proposed by the Ontario Federation of Labour (OFL) and funded through the Ontario Ministry of Labour (MOL), were founded in Hamilton and Toronto in 1989. Expansion to Windsor, Sudbury, Sarnia, Thunder Bay (and more recently Ottawa) occurred over the next 20+ years.

Each clinic is built on a unique service model where teams of doctors, nurses, occupational hygienists, and ergonomists provide comprehensive occupational health services plus information to workplace parties regarding work-related health problems. Our clinics work in partnership with a variety of stakeholders to identify occupational injuries and diseases, plus research and resolve health and safety problems.

HIGHLIGHTS
- Interdisciplinary team of health and safety professionals responding to needs of workers in all sectors
- Direct involvement in occupational injury and disease through clinical services
- Funding model allows services to be provided free of charge
- At the front-line in the detection of work-related health conditions
- Provide services to some of the most vulnerable workers in Ontario
- A vital bridge between the prevention system and the worker community
- Rooted in strong labour values: prevention interventions are participatory and include a role for workers and representatives in assessing and addressing workplace hazards.
- Experience working effectively with employers and prevention system partners

SUPPORTING PREVENTION
- Eliminating Exposure: Intervention and Tools
- Early Detection: Resources & Clinical Services
- Diagnosis & Work Link: Medical, Hygiene & Ergonomic Reports

PRIMARY SERVICES
- Medical diagnostic service for workers who may have work-related health problems.
- Group service providing educational and investigative support for joint health and safety committees and workplace parties.
- Inquiry service to answer workplace health and safety questions.
- Outreach and education service to make people aware of health and safety issues and promote prevention.
- Research service to identify, investigate and report on illness, injury & disease trends.

CLIENTELE/STAKEHOLDERS
- Workers
- Joint Health and Safety Committees
- Unions
- Employers
- Advocates
- Doctors
- Nurses
- Community Groups
- Members of the Public

2015 / 2016 OHCOW BY THE NUMBERS

1,078 Clinical Cases
541 Inquiries Answered
490 Prevention Interventions
230 Educational Sessions
69 Local Advisory Committee Members
53 Dedicated Staff
20 Board Members
7 Clinics

http://www.ohcow.on.ca/edit/files/ohcowannualreport_aug312016final.pdf
Clinics

- Thunder Bay Service Area
- Sudbury Service Area
- Toronto Service Area
- Hamilton Service Area
- Southwest Region - Sarnia/Windsor
What does an occupational hygienist do?

Evaluates health hazards…but there is so much more!

The **art** and **science** of occupational hygiene.

**It is about the system!**
What OHCOW Does:

Exposure
- to what
- how much
- how long
- toxicology

Medical
- symptoms
- tests results
- physical exam
- diagnosis

Work Relatedness
- epidemiological review
- strength of association

Prevention
What does an Occupational Hygienist does within OHOW?

Retrospective Exposure Assessment

- Elemental carbon (EC) mg/m³ vs. NO₂ ppm
  - \( y = 2.0121x + 0.0112 \)
  - \( R^2 = 0.9791 \)

- Respirable particulate matter mg/m³ vs. NO₂ ppm
  - \( y = 0.8609x + 0.0435 \)
  - \( R^2 = 0.6995 \)

Diesel Exhaust Lung Cancer Risk Calculator

- years of exposure
- average respirable elemental carbon (REC) exposure (in µg/m³)
- 5-year lagged cumulative respirable elemental carbon exposure (in µg/m³·yrs)

Model estimated relative risk (RR) = 2.9

95% confidence interval: 1.5 - 5.6


(Calculator provided by John Oudynk – OHOW Hamilton March 2014)
The Occupational Health Clinics for Ontario Works (OHCAOW)

Provides Solutions – It is about prevention!
**Noise Exposure Calculator:** This table calculates the 8 hour equivalent sound exposure level as per the equation in O.Reg 565/06. To use this table, enter the measured noise level (in dB(A)) and the amount of time and press ENTER.

<table>
<thead>
<tr>
<th>Noise Level (in dB(A))</th>
<th>Exposure Time</th>
<th>8 hr Equivalent Exposure Level ($L_{ex,8}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(hrs)</td>
<td>(min)</td>
</tr>
<tr>
<td>87</td>
<td>6</td>
<td>30</td>
</tr>
</tbody>
</table>

$L_{ex,8}$

- $<80$ dB(A): minimal risk of noise induced hearing loss
- 80–85 dB(A): some risk of noise induced hearing loss
- 85+ dB(A): significant risk of noise induced hearing loss
OHCOW also brings much greater emphasis to promoting occupational health and preventing occupational disease.

Can also allay fears.

Provides an objective (evidence based) service for everyone on Ontario.
Knowledge transfer

### Occ-tober Event

The Second Annual Symposium on Occupational Health and Disease Prevention

**Wednesday, October 26, 2016**
8:30am to 3:30pm
Chestnut Conference Centre, 89 Chestnut St., Toronto

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30am to 8:45am</td>
<td>Registration</td>
</tr>
<tr>
<td>8:45am to 9:00am</td>
<td>Welcome and Introductions</td>
</tr>
<tr>
<td>9:00am to 9:30am</td>
<td>Preventing OD: Epidemiology &amp; Causality by P. Demers</td>
</tr>
<tr>
<td></td>
<td>• Office Ergonomics Tool</td>
</tr>
<tr>
<td>9:40am to 10:10am</td>
<td>Preventing OD: Completing the Picture by D. Kramer</td>
</tr>
<tr>
<td></td>
<td>• Sun Safety</td>
</tr>
<tr>
<td>10:20am to 10:35am</td>
<td>Break</td>
</tr>
<tr>
<td>10:35am to 12:35pm</td>
<td>Preventing OD: ODAP</td>
</tr>
<tr>
<td></td>
<td>• Plan &amp; General Awareness</td>
</tr>
<tr>
<td></td>
<td>• Noise</td>
</tr>
<tr>
<td></td>
<td>• Allergens &amp; Irritants</td>
</tr>
<tr>
<td></td>
<td>• Diesel</td>
</tr>
<tr>
<td></td>
<td>• Emerging Issues</td>
</tr>
<tr>
<td>2:15pm to 2:30pm</td>
<td>Networking Lunch</td>
</tr>
<tr>
<td>1:15pm to 2pm</td>
<td>Preventing Occupational Disease: Designing a System that Works by A. Keefe</td>
</tr>
<tr>
<td></td>
<td>• COPSOQ</td>
</tr>
<tr>
<td>2:15pm to 2:30pm</td>
<td>Break</td>
</tr>
<tr>
<td>2:30pm to 3:15pm</td>
<td>Preventing Occupational Disease: Surveillance &amp; Environmental Health by R. Copes</td>
</tr>
<tr>
<td>3:15pm to 3:30pm</td>
<td>Farewell and Discussion</td>
</tr>
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</table>
What is the cost?
## Budget (2014-2015)

### Revenue

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>from Ministry of Labour</td>
<td>$7,083,449</td>
</tr>
<tr>
<td>from WSIB for reports</td>
<td>$55,743</td>
</tr>
<tr>
<td>OHEP (Firefighter project)</td>
<td>$67,780</td>
</tr>
<tr>
<td>Occupational Disease Project</td>
<td>$10,772</td>
</tr>
<tr>
<td>other</td>
<td>$119,740</td>
</tr>
<tr>
<td><strong>total revenue:</strong></td>
<td><strong>$7,337,484</strong></td>
</tr>
</tbody>
</table>

### Expenses

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>salaries operations/staff</td>
<td>$2,880,551</td>
</tr>
<tr>
<td>employee benefits</td>
<td>$1,019,720</td>
</tr>
<tr>
<td>doctors’ expenses</td>
<td>$883,214</td>
</tr>
<tr>
<td>occupancy</td>
<td>$699,347</td>
</tr>
<tr>
<td>salaries management</td>
<td>$636,979</td>
</tr>
<tr>
<td>other</td>
<td>$1,230,077</td>
</tr>
<tr>
<td><strong>total expenses:</strong></td>
<td><strong>$7,349,888</strong></td>
</tr>
</tbody>
</table>

**deficit:** $(12,404)$
Other models - what about Quebec?
Comes under the Public Health System

The occupational health team from each regional department of public health, has the mandate to develop and implement a health program tailored to companies in priority sectors in their region.

This process is done in collaboration with the employer, the health committee (CSS) and workers. In most cases, the occupational health teams consist of:

- doctors;
- nurses;
- occupational health technicians;
- hygienists;
- ergonomists.
Quebec model continued

Services offered:

Hazard identification and risk assessment - which covers physical, chemical, biological, and ergonomics in the workplace

Monitoring health status - After the risk assessment the next step is to check to see whether health effects have resulted from exposure. Confidentiality is ensured!

Provision of information – on hazards, risks and health effects.

Ways to prevent, eliminate hazards or control risks.

The occupational health team offers support in finding solutions.

Provides advice to the organization regarding emergency and first aid.

For pregnant or nursing workers, when the worker suspects that her work represents a danger to her health or that of her baby, she should consult her doctor. The doctor then asks the Occupational Health team to carry out a hazard assessment related to the work station and tasks as required by the Occupational Health and Safety Act (LSST). According to the results of the assessment, the occupational health doctor may recommend a change in the workplace or tasks, the reassignment of the worker to safer work or removal of the pregnant worker from the workplace.

(Courtesy of Ms. Ruth Nelcy / Dr. Susan Stock - McGill University, University of Montreal)
What about Newfoundland and Labrador?

What does a worker do if they have an occupational disease?
It is important that we raise awareness about occupational disease!

<table>
<thead>
<tr>
<th>Fatal (work-related) accidents and diseases 2008</th>
<th>2.34 million worldwide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal work related accidents</td>
<td>321,000 (14%)</td>
</tr>
<tr>
<td>Fatal work related diseases</td>
<td>2,020,000 (86%)</td>
</tr>
</tbody>
</table>

The hidden epidemic a global picture (ILO 2013)
We must also **focus** on preventing **occupational disease** and control / reduce exposures to prevent occupational disease.

Studies have shown that 90% of error in thinking is due to error in perception. If you can change your perception, you can change your emotion and this can lead to new ideas (Edward de Bono)
Reporting a Workplace Incident/Injury

What is a work injury?

A workplace injury is one that:

- happens at work, on company property or on company business;
- requires medical treatment; and
- may or may not require time away from work.

We suggest you take the following actions to support your worker’s recovery and to ensure they receive workers’ compensation benefits, if needed, without delay.

- When you are first notified of the injury, and are confident the worker has received the necessary care, collect details about the incident. Note what happened, where it happened and the names of people who saw the incident;
- Advise your worker to tell their doctor this incident occurred at the workplace and to get copies of the appropriate paperwork: physician’s report (8/10) or chiropractor’s report (8/10c). Your injured worker will need to provide you with copies of these reports. The doctor will submit their copy of the form 8/10 directly to the Commission;
- You must complete an injury report - employer’s (7) and submit it to the Commission within three days to avoid a penalty;
- Your worker is responsible for completing an injury report - worker’s (6) and submitting it to the Commission as quickly as possible; and
- When we receive your injury report - employer’s (7), the Injury report - worker’s (6) and the doctor’s 8/10, an intake adjudicator will review the claim to determine if your injured worker qualifies for compensation.

Please Note: Recurrences of previous workplace injuries are reported on the form 6 and form 7.

If the claim is accepted, the injured worker will receive written notification outlining any entitlement they may have to compensation benefits (wage-loss benefits) and other general information. If the claim is denied, the injured worker will receive written notification giving reasons for denial and outlining their right to appeal. Both you and your worker have the right to ask for an internal review of any decision.

If you have claim costs, the Commission produces a monthly PRIME Status Report for employers who have requested access to their claim cost information. These reports include not only claim cost information but also your current experience range.
Hearing Loss and Noise Exposure Among Commercial Fisherman in the (US) Gulf Coast. Mean hearing threshold levels in the worse ear at all frequencies tested categorized by years of experience in the commercial fishing industry. Levine et al. (2016), JOEM 5 (3), p.309.
Hearing loss in the commercial fishing industry

How might an occupational health clinic, in the province, have an increased likelihood of prediction of noise induced hearing loss (NIHL) in commercial fishing, and drive the development of prevention programs in close collaboration with the Newfoundland fishing and harvesting safety association (NLFHSA)?
We must get the art and science right!

The art and science of occupational hygiene.

It is about the system!
Every worker home safe and HEALTHY every day
## Simple tools from OHCOW

<table>
<thead>
<tr>
<th>Tool</th>
<th>Hyperlink</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat</td>
<td>Humidex heat stress calculator</td>
</tr>
<tr>
<td>Measuring workplace stress</td>
<td>Measuring workplace stress app</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td><a href="https://example.com/painpoint">Painpoint – Prevent Musculoskeletal Disorders (MSD) at work app</a></td>
</tr>
</tbody>
</table>
Removing the faults in a stage-coach may produce a perfect stage-coach, but it is unlikely to produce the first motor car (Edward de Bono)

Dealing with complexity is an inefficient and unnecessary waste of time, attention and mental energy. There is never any justification for things being complex when they could be simple (Edward de Bono)