



Occupational and  
Environmental  
Medicine

# Diagnosis and Management of Work-Related Injuries and Illnesses

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# Faculty/Presenter Disclosure

- **Faculty:** Anil Adishes, MB ChB, MSc, MD, FRCP, FFOM, FFCI, FRCPC, Hon. FFOM, (Ireland), CIME
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  - **Other:** Director - OccupAI Inc. start-up in occupational health informatics, Chief Medical Officer at Canadian Health Solutions Inc.

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  - None

# Mitigating Potential Bias

- The information presented in this program is based on recent information that is explicitly “evidence-based”.
- This Program and its material is peer reviewed and all the recommendations involving clinical medicine are based on evidence that is accepted within the profession; and all scientific research referred to, reported, or used in this CME/CPD activity in support or justification of patient care recommendations conforms to the generally accepted standards



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# Learning Objectives

By the end of this session, participants will be able to:

1. Define occupational illness and occupational injury
2. Evaluate a patient for a suspected occupational or environmental illness/injury
3. Outline a return-to-work plan

# Personal Injury by Accident

- “accident” includes,
- (a) a wilful and intentional act, not being the act of the worker,
- (b) a chance event occasioned by a physical or natural cause, and
- (c) disablement arising out of and in the course of employment; (“accident”)

[Workplace Safety and Insurance Act, 1997, S.O. 1997, c. 16, Sched. A]

# Definitions

An **occupational disease** is a health problem caused by exposure to a workplace health hazard. Your workplace should be healthy for your body and mind. You can help keep yourself and your workplace healthy by being aware of health hazards in your environment.

These workplace health hazards can cause an occupational disease:

- dust, gases, or fumes
- noise
- toxic substances (poisons)
- vibration
- radiation
- infectious germs or viruses
- extreme hot or cold temperatures
- extremely high or low air pressure

(See <https://www.wsib.ca/en/businesses/claims/occupational-disease-and-workplace-health-hazards>)

# Ontario Workplace Safety and Insurance Act, 1997, s.2.

- **“occupational disease”** includes,
  - (a) a disease resulting from exposure to a substance relating to a particular process, trade or occupation in an industry,
  - (b) a disease peculiar to or characteristic of a particular industrial process, trade or occupation,
  - (c) a medical condition that in the opinion of the Board requires a worker to be removed either temporarily or permanently from exposure to a substance because the condition may be a precursor to an occupational disease,
  - (d) a disease mentioned in Schedule 3 or 4, or
  - (e) a disease prescribed under clause 15.1 (8) (d); (“maladie professionnelle”)



# Taking an Occupational History

What job do you do now (job title)?

What do you do at work (activities)?

Chronologically list all jobs from leaving school  
(with dates, if possible)

Do you know of any Hazards or Risks in your work?

Are there any vapours, gases, dusts or fumes?

- List all materials used by the worker (Safety Data Sheet, SDS)
- Estimate duration and intensity of exposure to substance

Do you have to wear any protective equipment at work  
e.g. masks / gloves

# Taking a History for Occupational Disease



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Is there any special ventilation of the workplace?  
(general, local, enclosed process)

Are your symptoms the same, better or worse on rest  
days? *Followed by* .... Are your symptoms the same,  
better or worse on holidays?

**If better to either question = Work-effect**

Have you had to take time off work because of this  
condition?

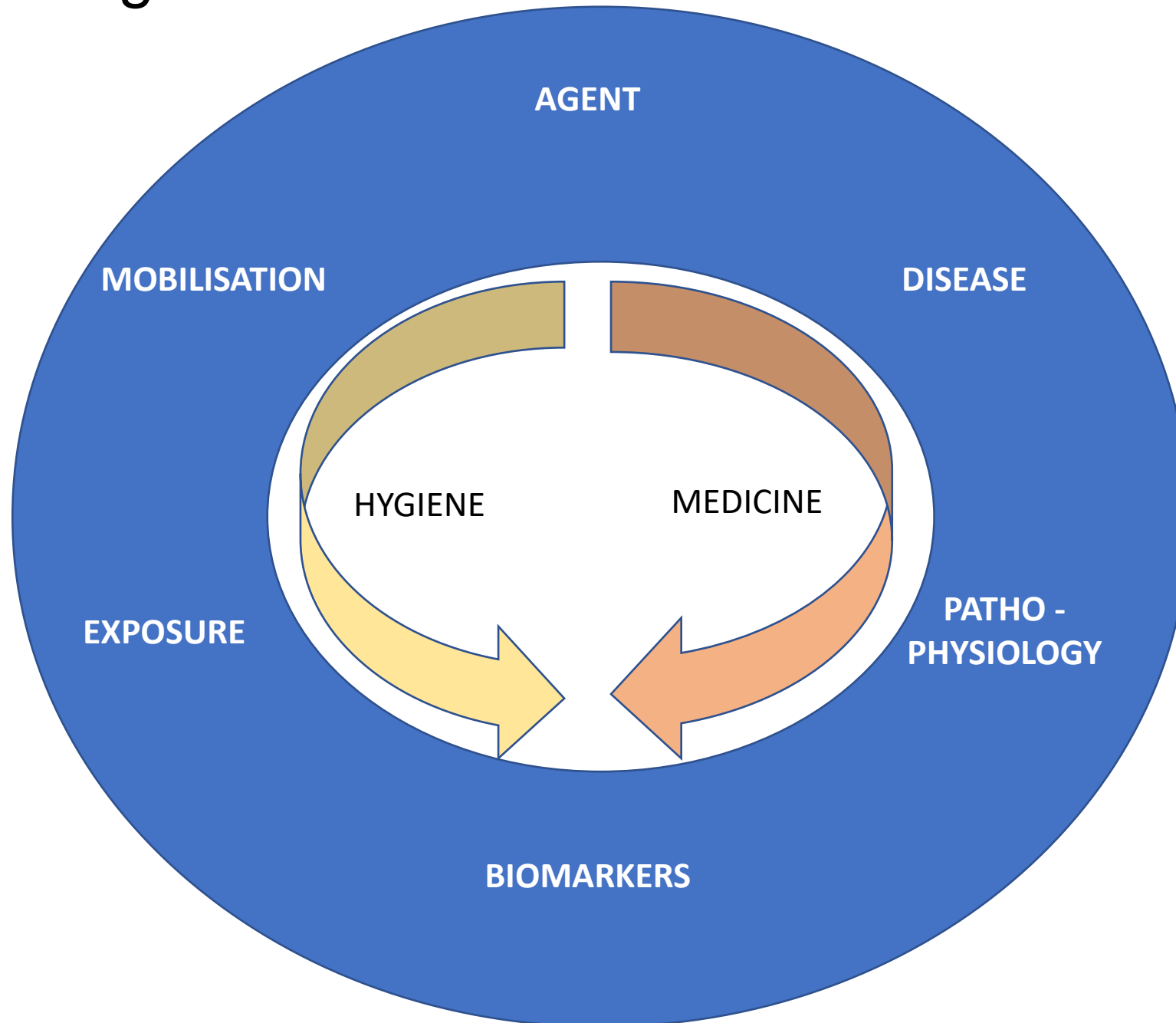
Do you know of anyone else in your workplace with  
similar problems?

Had anything changed in your work or workplace before  
the onset of your symptoms?

# Making the Link between Work and Illness

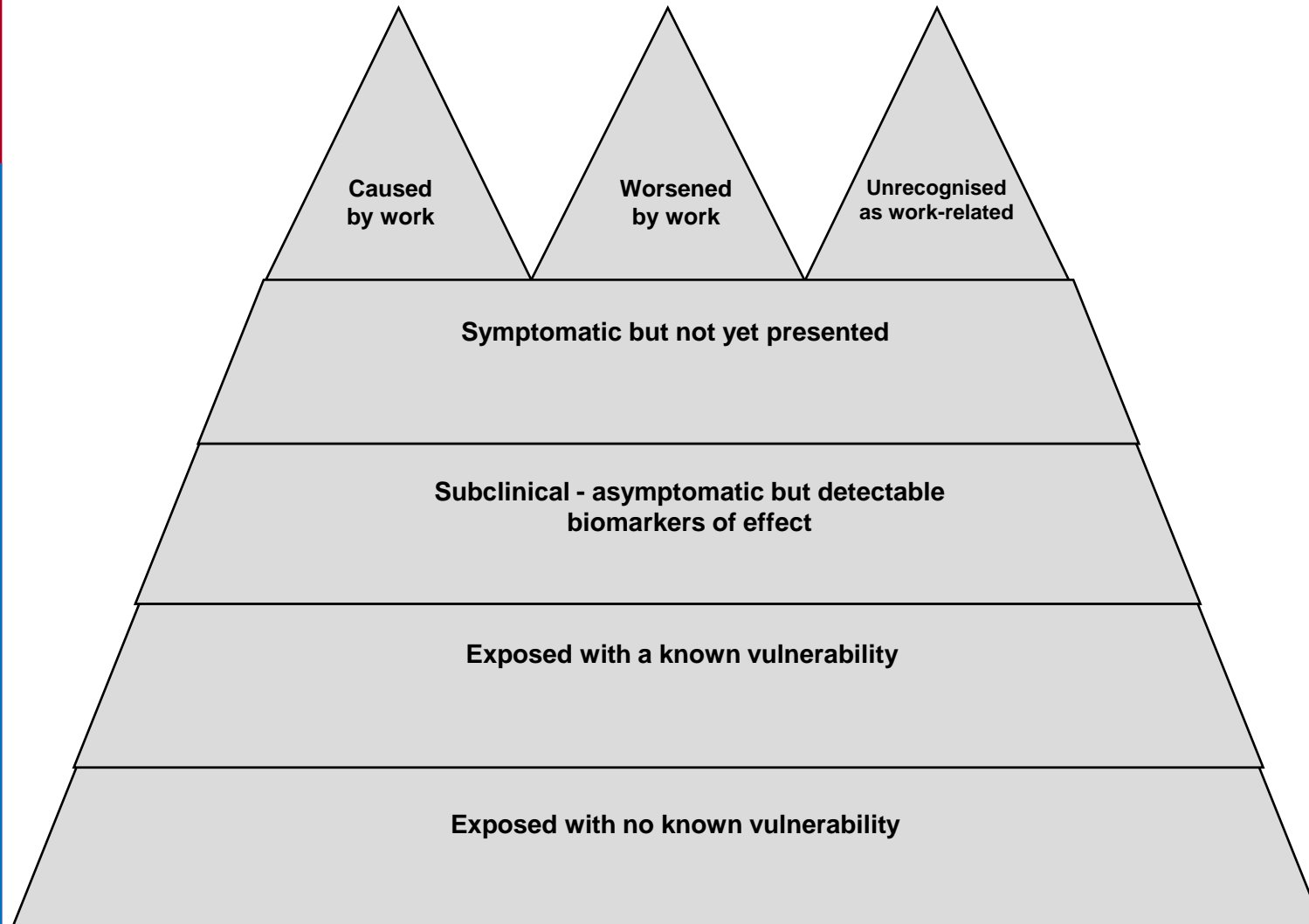


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Occupational disease is like a Swiss mountain

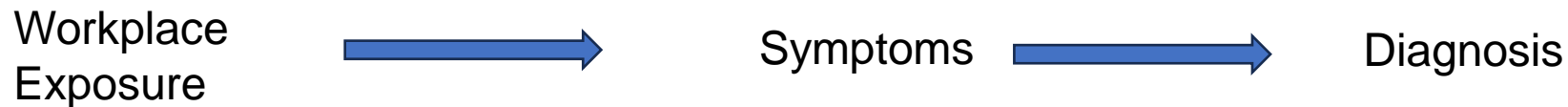


# Recognition and reporting: “The three peaks of occupational disease”

© Anil Adisesh, 6th edition, Occupational Health  
– Pocket Consultant, Wiley-Blackwell

# Causation

## Occupational Causation



## Occupational Exacerbation / Aggravation



### For WSIB Ontario

**Aggravation:** is the temporary effect that a minor work-related injury/disease has on a pre-accident impairment requiring health care and/or leading to a loss of earnings.

# Consequence

- “permanent impairment” means impairment that continues to exist after the worker reaches **maximum medical recovery**; (“déficiência permanente”)



# Clinical Evidence

- A clear exposure that preceded the illness/injury
- A plausible temporal relationship between exposure and outcome
- The exposure is known to cause the outcome in question
- Other causes have been ruled out or deemed less likely

## Supportive features:

- Co-workers with similar outcome
- Improvement with cessation of exposure
- Prior symptoms with similar exposures
- No other apparent cause



# Occupational History Recording Tool



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## Why use it?

- Time management
- Record keeping
- Communication
- Collaboration
- Assessment
- Environmental exposures
- Disclosure of information
- Prognosis
- Special populations (adolescents, pregnant workers)

The screenshot shows the Occupational History Recording Tool (OHRT) form. At the top right is the Project ECHO logo. The title is "Occupational History Recording Tool (OHRT): About Your Work and Your Health and Wellbeing". Below the title is a small ECHO logo. The text reads: "Your answers to these questions will help your healthcare provider understand the possible effect of your current or previous work on your health/wellbeing and of your health on your ability to do your work." The form includes fields for Name and Date of Birth (YYYY/MM/DD). It contains seven numbered questions with checkboxes and text input fields. Question 1 asks about current employment status. Question 2 asks about the last job worked, including date and duration. Question 3 asks about current job duration. Question 4 asks for the current or last job title. Question 5 asks for main tasks or duties. Question 6 asks if the respondent worked in more than one job at the same time. Question 7 asks about the working schedule, with options for regular daytime, regular night, rotating, split, or other shifts.

**Occupational History Recording Tool (OHRT):  
About Your Work and Your Health and Wellbeing**

Your answers to these questions will help your healthcare provider understand the possible effect of your current or previous work on your health/wellbeing and of your health on your ability to do your work.

Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ (YYYY/MM/DD)

1. What is your current employment status? (Check the most appropriate answer)

Employed by an organization full-time / part-time / on leave (→ Go to question 3)  
 Self-employed full-time / part-time / on leave (→ Go to question 3)  
 Full-time university or college student / Homemaker / Not employed / Long term disability benefits/ Retired (→ Go to question 2)

2. If not currently employed, when was your last approximate date worked and how long did you work at that job?  
Last date worked: \_\_\_\_\_ (YYYY/MMM)  
How long were you employed in your last job?: \_\_\_\_ Years \_\_\_\_ Months (→ Go to question 4)

3. How long have you been at your current job?: \_\_\_\_ Years \_\_\_\_ Months

4. For your current or last job worked, what was your occupation/job title? (Please give your full job title and be specific. For example: Fruit picker, Legal secretary, Restaurant manager, Secondary school teacher, Drywall, Heavy Equipment Mechanic...)  
\_\_\_\_\_

5. For your current or last job worked, what are/were your main tasks or duties in the job? (Please give details, for example: picking and carrying apples and peaches, preparing legal documents, managing the operations of a restaurant and serving customers, teaching mathematics, taping and sanding walls, grinding and using impact wrenches...)  
\_\_\_\_\_

6. Do / did you work in more than one job at the same time?  
 Yes  No (If yes, provide details): \_\_\_\_\_

7. Which one of the following best describes your working schedule in your current main job (or last job worked)? A night shift is work during the early hours of the morning, after midnight. An evening shift is work during the evening ending at or before midnight. Check ONE only:

Regular daytime schedule or shift  Regular evening shift  
 Regular night shift  Irregular schedule, or on call  
 Rotating shift, changing periodically from days to evenings or to nights  Split shift, consisting of two ammore distinct periods each day  
 Other, please specify: \_\_\_\_\_



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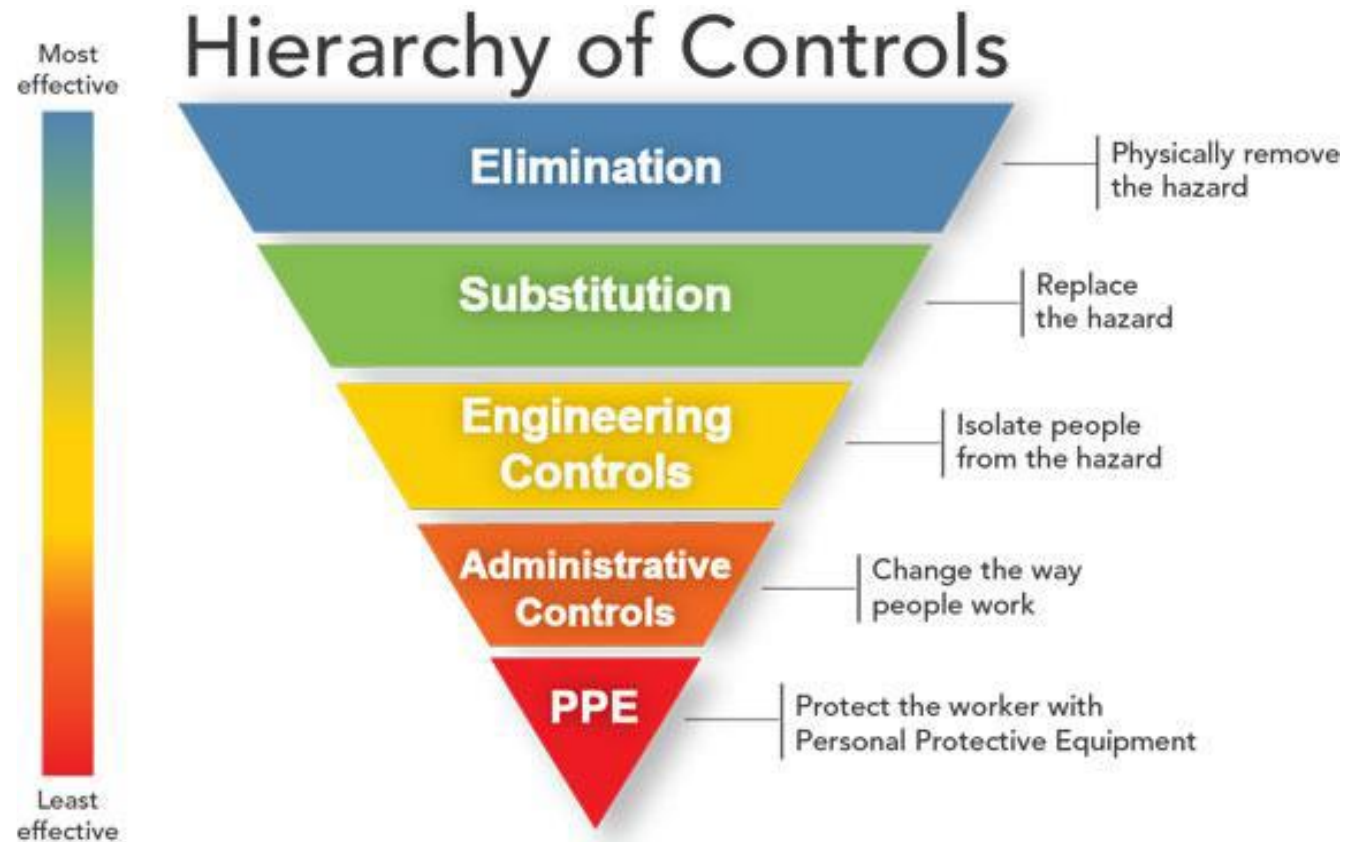
# Applying a Prevention Model to Management

- Tertiary prevention:
  - Treatment/management of the illness/injury.
  - Assess if there is a risk for ongoing or re-exposure, and if so, define limitations and/or restrictions –could also consider specialist (occupational medicine) referral.
  - St Michael's Hospital Occupational Medicine Clinic.
  - WSIB claim
- Secondary prevention:
  - Occupational health surveillance to detect conditions at the earliest time.
- Primary prevention:
  - Reduce or eliminate the hazard.

# Primary Prevention



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<https://www.cdc.gov/niosh/topics/hierarchy/default.html>

# Return to Work (RTW)

- As soon as medically possible
  - 100% recovery is NOT necessary and waiting may risk longer absence with health consequences
- Advise on Limitations of condition  
(What they cannot do even if they wanted to)
- Advise on Medical Restrictions  
(What they should not do in your opinion)
- Consider timing
  - Graduated return
  - Shift work
  - Nature of work

# Questions to Consider



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## **Question 1: Could the disease/illness, injury or treatment affect ability to work?**

- Be mindful of “Safety Sensitive Work” (SSW); work where any brief incapacitation, impairment of cognition etc. could result in loss of life or damage, e.g. commercial driving, pilots, law enforcement, health care, etc.)
- May be legal obligations on you e.g., to report pilots to Regional Canadian Aviation Medical Officer
- The Canadian Medical Association Driver’s Guide can be helpful!
- Canadian Medical Protection Association

## **Question 2: Could work worsen/exacerbate the disease/illness or injury?**

- Role of medical restrictions
- Human rights / disability accommodation

## **Question 3: When can they RTW?**

- As soon as medically reasonable, with modified duties and/or hours as needed to support recovery (use evidence-based guidelines)

## **Question 4: Are there compensation issues?**



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# Take Home Messages

- Ask about patient's work and what they do
- Consider the effect of their work on their health and of their health on their work
- Remember good work is good for people



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# Questions/Discussion

## Thank you!

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