



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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 - 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]



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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”)

Quiz

Which one of the following workers do you think is least likely to have ongoing problems at work?

- a) 63-year-old warehouse worker with a recent lower back strain
- b) 30-year-old artisanal baker with a recent diagnosis of asthma
- c) 18-year-old hairdressing apprentice with a recent diagnosis of hand eczema

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?

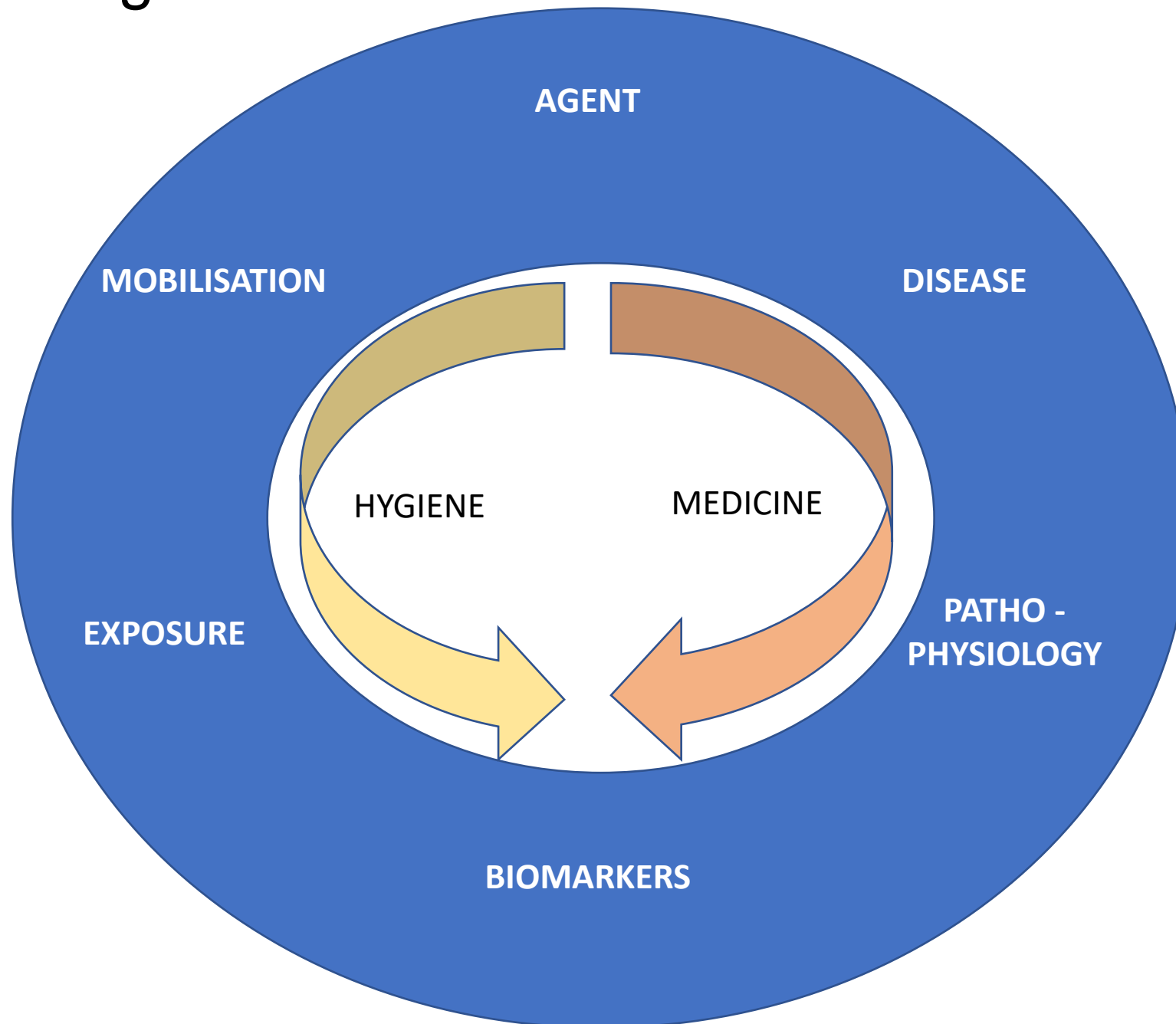
Do you know of anyone else in your workplace with
similar problems?

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

Making the Link between Work and Illness

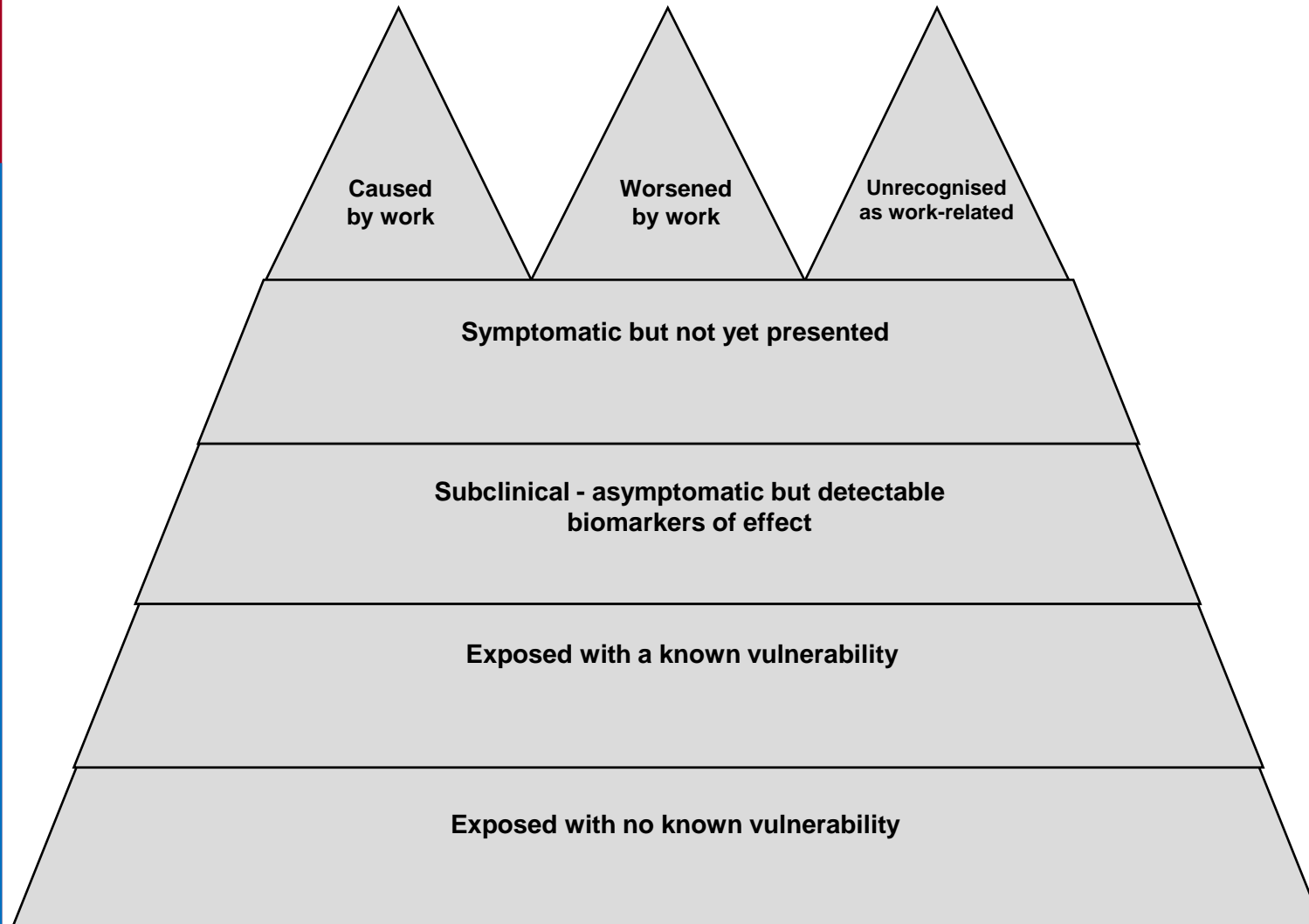


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Occupational disease is like a Swiss mountain

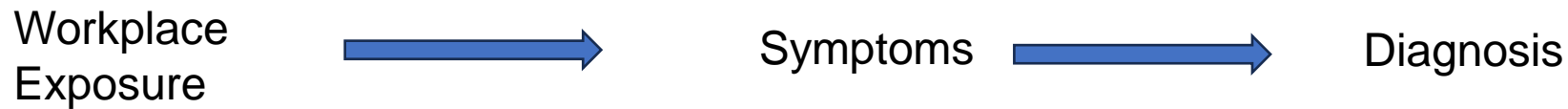


Recognition and reporting: “The three peaks of occupational disease”

© 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

Why use it?

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

New! Guidance for the Occupational History Recording Tool

A GUIDE TO THE OCCUPATIONAL HISTORY RECORDING TOOL About Your Work and Your Health and Wellbeing



The answers provided by your patient to these questions will help you as their healthcare provider to understand the possible effect of their current or previous work on their health/wellbeing and of their health/wellbeing on their ability to do their work.

1. What is your current employment status?

This question is to help you identify whether your patient is currently working and their employment status. Work leads to income, socialisation, and meaningful activity, but also potentially harmful workplace exposures. For those currently not working you may wish to consider if there are any barriers to work that they are facing.

2. If not currently employed, when was your last approximate date worked and how long did you work at that job?

Identifying when your patient was last working lets you know how long they have been out of the workforce. For those in whom a return to work is appropriate, it gives an indication of whether long-term worklessness is an issue and retraining may be necessary.

3. How long have you been at your current job?

Length of time in a job lets you know how well established the person is in their workplace. For a person with any work exposures, this is also the likely period of time they have been exposed.

4. For your current or last job worked, what was your occupation/job title?

The job title is an important piece of information as it describes their role at work and may be related to potentially harmful workplace exposures. It may also be useful for completion of various forms e.g. workers compensation, insurance etc.

5. For your current or last job worked, what are/were your main tasks or duties in the job?

The activities someone performs at work and the way in which they do them are important to describing their exposures and health experiences e.g. working at a comfortable pace in a clean, well managed environment versus a fast paced dirty and disorganised workplace.

6. Do / did you work in more than one job at the same time?

It is not uncommon for people to have more than one job and depending on the situation this may indicate precarious work and vulnerability.

(see [CCOHS: What is meant by precarious employment?](#))



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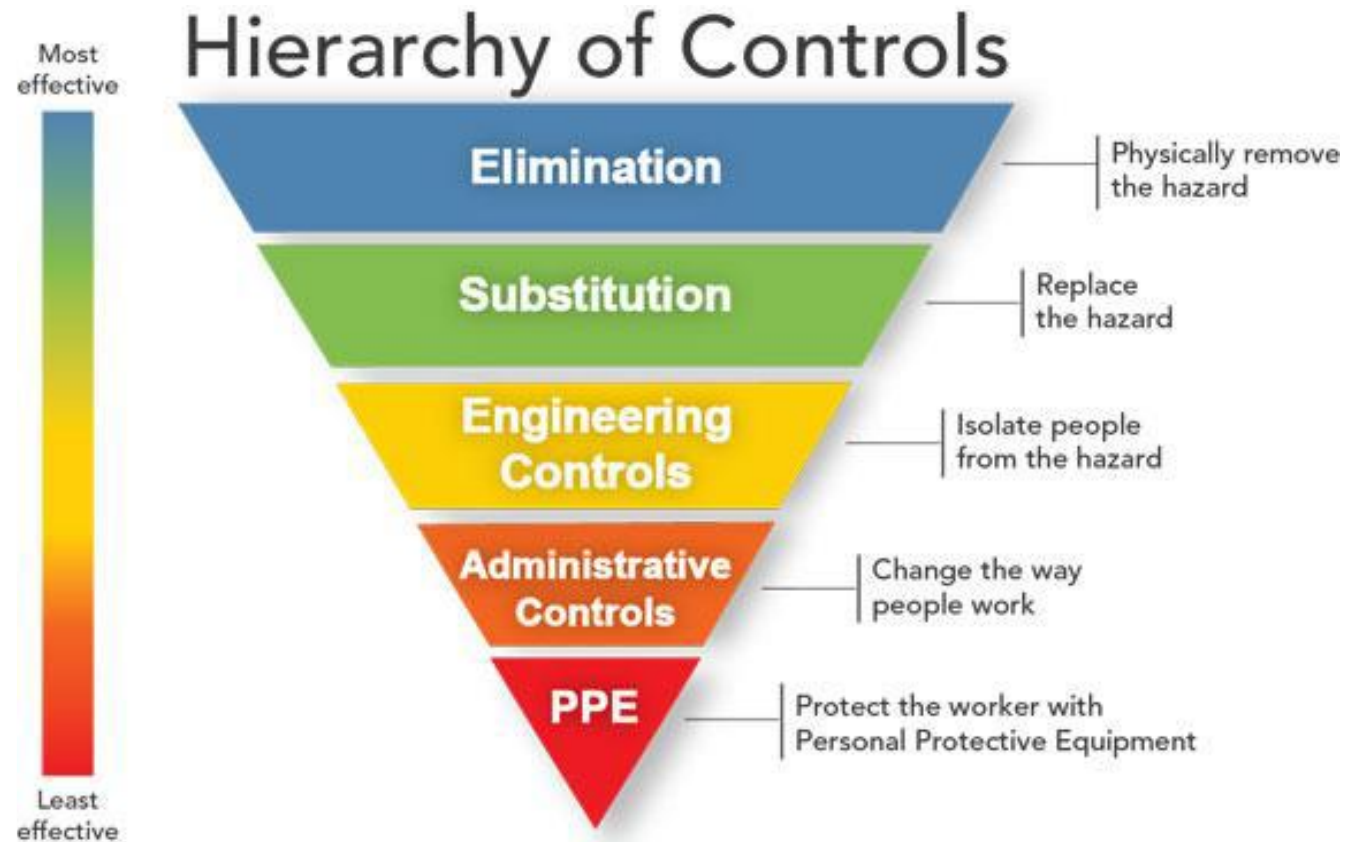
Applying a Prevention Model to Management

- 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?

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

Question 3: When can they RTW?

Question 4: Are there compensation issues?

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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