A Pilot Occupational Medicine Workshop for UBC family Medicine Residents

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Occupational medicine and disability management in Primary Care

• In BC the vast majority of WCB claims, return to work planning, disability benefits and revolves around the primary care physician.
• In many practices, more than 50% of the patients are workers or retired workers
• Formal training is very limited and on the job training is by the approach:
  “see one ... do many”
In 1994, the Ontario Medical Association passed the “OMA Position Paper in Support of Timely Return to Work and the Role of the Primary Care Physician.” Subsequently, provincial associations and the Canadian Medical Association have followed suit in an attempt to articulate the role and responsibilities of the physician within return-to-work programs, and to outline a process that meets the need of patients.
The treating physician’s role in helping patients return to work after an illness or injury. 2013 CMA Policy

• Diagnose and treat patient/worker
• Communicate and coordinate with stakeholders to assist and promote return to work
• Support employee and employer relation
• Facilitate the patient’s safe and timely return to the most productive employment possible
THE TREATING PHYSICIAN'S ROLE IN HELPING PATIENTS RETURN TO WORK AFTER AN ILLNESS OR INJURY (UPDATE 2013)
### Disability

<table>
<thead>
<tr>
<th>Priority topics</th>
<th>Key features</th>
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<tbody>
<tr>
<td>99-topics</td>
<td>Patient Centered Clinical Reasoning</td>
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<table>
<thead>
<tr>
<th>Key Feature</th>
<th>Skill</th>
<th>Phase</th>
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<tbody>
<tr>
<td>Determine whether a specific decline in functioning (e.g., social, physical, emotional) is a disability for that specific patient.</td>
<td>Patient Centered Clinical Reasoning</td>
<td>Diagnosis</td>
</tr>
<tr>
<td>Screen elderly patients for disability risks (e.g., falls, cognitive impairment, immobilization, decreased vision) on an ongoing basis.</td>
<td>Clinical Reasoning</td>
<td>History Hypothesis generation</td>
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<tr>
<td>In patients with chronic physical problems (e.g., arthritis, multiple sclerosis) or mental problems (e.g., depression), assess for and diagnose disability when it is present.</td>
<td>Clinical Reasoning Patient Centered</td>
<td>Diagnosis Hypothesis generation</td>
</tr>
<tr>
<td>In a disabled patient, assess all spheres of function (emotional, physical, and social, the last of which includes finances, employment, and family).</td>
<td>Patient Centered</td>
<td>History</td>
</tr>
<tr>
<td>For disabled patients, offer a multi-faceted approach (e.g., orthotics, lifestyle modification, time off work, community support) to minimize the impact of the disability and prevent further functional deterioration.</td>
<td>Patient Centered Professionalism</td>
<td>Treatment</td>
</tr>
<tr>
<td>In patients at risk for disability (e.g., those who do manual labour, the elderly, those with mental illness), recommend primary prevention strategies (e.g., exercises, braces, counselling, work modification).</td>
<td>Clinical Reasoning Patient Centered</td>
<td>Treatment</td>
</tr>
<tr>
<td>Do not limit treatment of disabling conditions to a short-term disability leave (i.e., time off is only part of the plan).</td>
<td>Clinical Reasoning Patient Centered</td>
<td>Treatment</td>
</tr>
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</table>
FAMILY MEDICINE

- Analyze the communities or environments in which patients live and work with regards to their impact on patient health
- Demonstrate the application of basic occupational disability prevention and management principles and practices in clinical settings
- Demonstrate an understanding of the impact of occupation on the health of an individual and the impact of health on work
- Differentiate multiple roles a physician may play in the community and the potential for role conflict
• **MUSCULOSKELETAL MEDICINE FAMILY MEDICINE EXPERT**
  • Assess and manage acute and chronic repetitive stress injury (including occupational)
  • **Priority Topics**: Joint Disorder, Low Back Pain

• **HIV PRIMARY CARE FAMILY MEDICINE EXPERT**
  • Manage risk and occupational exposures according to provincial guidelines including post-exposure prophylaxis

• **TRANSITION TO PRACTICE**
  • Identify the basics of a medicolegal report and other legally binding forms (eg Disability, WorkSafeBC)
HEALTH ADVOCATE

•• Assess barriers to rehabilitation and recovery
•• Support public education which promotes health and prevention of illness and injury

PROFESSIONAL

•• Demonstrate knowledge about patient confidentiality, informed consent, competence and substitute decision makers, about proper interaction with law enforcement agencies and about the role of the medical examiner’s office

•• Demonstrate knowledge of relevant jurisprudence (e.g., Mental Health Act, Duty to Disclose, Apology Act, and Health Professions Act)
Recommended Curriculum Guidelines for Family Medicine Residents

Occupational Medicine

This document was endorsed by the American Academy of Family Physicians (AAFP), the American College of Occupational and Environmental Medicine (ACOEM), the Association of Departments of Family Medicine (ADFM), the Association of Family Medicine Residency Directors (AFMRD) and the Society of Teachers of Family Medicine (STFM), and was developed in cooperation with the Presbyterian Intercommunity Hospital Family Medicine Residency Program.
Needs assessment

• Fam practice curriculum appears to lack some key objectives
• Academic sessions are limited.
• Most learning on the job, by preceptors who often have little or no formal training.
• As a result, participants (at the end of the R2 year) appeared to lack basic concepts and competencies
Proposed Domain of Care:
“Care of the Working Patient”

Proposed UBC Family Residency Program CURRICULUM OBJECTIVES

By the end of postgraduate training, using a patient-centred approach and appropriate selectivity, a resident, considering the patient’s cultural and gender contexts, will be able to...

**Obtain** a structured occupational history from a working patient

**Identify** occupationally-related illness or injury and the occupational causation of a working patient’s clinical condition

**Interpret** basic Hazardous Materials Data Sheet (MSDS) information about the toxic properties of a workplace material
• **Discuss** the routes of exposure to xenobiotics in the workplace and the hierarchy of control to protect working patients from such exposures

• **Demonstrate** knowledge of the common target organ effects of well-known workplace hazardous agents

• **Evaluate** a working patient’s functional ability and tolerance for specific work conditions

• **Distinguish** between impairment and disability and how these apply to the assessment of a working patient’s fitness to work and return to work

• **Recognize** the fitness to work implications of safety sensitive work
Proposed UBC Family Residency Program CURRICULUM OBJECTIVES cont.

• **Discuss** Bona Fide Occupational Requirements (BFORs) of jobs and the types of Job Demands (ergonomic, cognitive-behavioral, shifts, tasks, demand-control-support, etc.)

• **Advise** a working patient on their risk of adverse effects from a workplace exposure

• **Assess and manage** the medical aspects of a return to work to work process for an ill or injured working patient

• **Provide** appropriate fitness to work recommendations and modified work recommendations in order to promote a working patient’s sustained workplace productivity and attendance
• **Demonstrate** knowledge of consent and confidentiality in communicating with employers, insurers, WorkSafeBC, and third parties regarding a working patient’s condition.

• **Demonstrate** knowledge of some key resources in the public domain to care for the working patient and promote their employability
Program wide Occ Med and Disability management in primary care: UBC Pilot

• Objectives
• Workshop planning
• Funding and support: WorkSafeBC, UBC, Providence Health
• Workshop Delivery
• Survey
Objectives

At the conclusion of this activity participants will be able to:

• Define occupational medicine and the relevance of occupational medicine in family practice.

• Integrate an occupational medical history in the context of family practice.

• Apply basic principles of occupational medicine in order to prevent needless disability and to manage work related disability during their residency training and in their clinical practice.
Program

• Brief history of Occupational Medicine - Dr. Hamm

• Relevance of Occupational Medicine in Family Practice - Dr Tura

• Introduction to WorksafeBC - Dr Rothfels

• How corporate Occupational Medicine made me a better Family Practitioner - Dr Hinds
• Small Groups Case #1  Drs Chifor, Pettit, Hamm, Naismith, Hinds, Tura

• Risk assessment, Safety Sensitive Jobs - Dr Pettit

• Capacity assessment; limitations and restrictions - Dr Naismith

• Assessment and management of the injured worker - Dr Naismith

• Small Groups Case #2  Drs Chifor, Pettit, Hamm, Naismith, Hinds, Tura

• Questions  Wrap up
Occupational Asthma case using curriculum objectives

*A small group case example:
Mr. Jones is a 35-year-old man who comes to your office complaining of cough and chest tightness for the past 6 months. He is a non-smoker with no prior history of chest problems or significant health issues. He is otherwise well. You find bilateral basal expiratory wheezes.

What would you enquire about? (structured occupational history)

*adapted from a case example by Philip Harber et al. in Journal of Occupational and Environmental Medicine 59 (Nov. 2017):231-235.
Mr. Jones has worked at an automotive glass repair shop for the past 10 years. He began work about 8 months ago in a new process using a new adhesive called Dura-Pro™. He has the MSDS for this product (handout):

(interpret basic MSDS information)

<table>
<thead>
<tr>
<th>Components of Dura-Pro™</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene diphenyl diisocyanate (MDI) CAS # 101-68-8</td>
<td>5.0-15</td>
</tr>
<tr>
<td>Isocyanic acid, polymethylene polyphenylene ester CAS # 9016-87-9</td>
<td>5.0-15</td>
</tr>
</tbody>
</table>
Occupational Asthma case using curriculum objectives

• What do you learn about this product’s effects? (demonstrate knowledge of some key resources)

Google™ search e.g. Wikipedia, WorkSafeBC, ATSDR (e.g. “Toxicological Profile for Toluene Diisocyanate and Methylenediphenyl Diisocyanate,” June 2018)

Occupational Asthma case using curriculum objectives

• What do you know about the exposure and its effects?
  (demonstrate knowledge of the common target organ effects)

Mr. Jones began having symptoms about 2 months after starting his new process with the diisocyanate adhesive. His chest tightness and cough are worse at work and better on his weekends off work.

Your pulmonary function testing shows FEV1 at 74% of predicted (89% post-bronchchodilator, a 20% change), FVC at 87% of predicted and FEF25-75% is 50% of predicted. Discuss these findings. What next?
Occupational Asthma case using curriculum objectives

Peak Flow Diary:

• What do you see in this pattern?
Occupational Asthma case using curriculum objectives

• What other steps would you take?
  (evaluate a working patient’s functional ability and tolerance for specific work conditions);
  (advise a working patient on their risk of adverse effects from a workplace exposure);
  (provide appropriate fitness to work recommendations and modified work recommendations in order to promote a working patient’s sustained workplace productivity and attendance)
Occupational Asthma case using curriculum objectives

Make WSBC claim (let WSBC define occupational exposure issues, further testing e.g., methacholine challenge, and fitness to work)

Manage treatment

Possible referral

Possible change of work (pending WSBC claim)

(Demonstrate knowledge of consent and confidentiality in communicating with employers, insurers, WorkSafeBC, and third parties regarding a working patient’s condition)
KEY POINTS

• Occupational asthma is the most common chronic occupational lung disease, and can be caused by over 400 agents.
• SIC is the reference standard for diagnosis of occupational asthma but can produce both false positive or false negative results.
• Serial recordings of asthma symptoms, peak PEFRs (or spirometry), induced sputum eosinophil counts performed for several weeks both on-and-off work are helpful in establishing an association between sensitizer-induced asthma and work.
• Elimination of exposure to the causative agent is the most effective management approach for sensitizer-induced occupational asthma. Exposure reduction is not as effective and has unpredictable benefits.
Sorting out work-related asthma

**Figure 1.** Relationships of asthma to the workplace. Reproduced with permission [18].
Current Guidelines for Diagnosis and Management of Work-Related Asthma

See e.g., ACCP statement in *Chest* 134(2008, Supp):1S-41S

_Eur Resp J* 39(2012):529-545


Positive outcomes

• Generally positive feedback from residents
• Great support from main stakeholders: UBC family practice and Worksafebc, providence health
• Very engaged presenters and organizers with a broad variety of experience
Challenges

1. According to the participant feedback:
   • too theoretical and lecture based;
   • need to be more interactive and focused on “disability management” skills;
   • more case based and small group learning.

2. Logistically complicated to have sufficient attendance from residents across the Province and not financially sustainable.

3. Cumbersome mechanism to advertise the workshop.
Plan

• Develop a curriculum with similar objectives but shifting the focus on disability management
• More case based and small group learning.
• Instead of organizing a “province wide” workshop, move to an iterating smaller group regional workshop; avoid weekends and aim to engage the academic sessions
• Improve the admin coordination
Conclusion

• There is certainly an educational gap, recognized in the literature, by our observation and by the participants
• The current pilot was well received and the curriculum was generally in keeping with the learning needs.
• There are significant logistical challenges in providing educational opportunities
• The delivery format and some of the content needs adjustment