Training and Certification in Occupational Medicine

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OEMAC St John’s June 2017
Four questions

What should we be teaching?

How should it be delivered?

Who should/could be the educators?

At which stage (UGME thru post-experience)?
Four challenges

• Numbers

• Diversity

• Geography

• Philosophy
Numbers

Disparity between need for knowledge and physicians with knowledge/skills to teach.

How many skilled people are there (figures from Allen Kraut, Whistler)?

Royal College 50-65 (40+ active)

CBOM 110-140 (excluding newest members).
Diversity

Diversity in approaches and regulations:
occupational health a provincial not federal responsibility

Diversity in OM application:
a family physician does not need the same skill base in OM as the medical director of an international oil company.
Geography

Canada is big: militates against coffee room discussions that could lead to shared objectives and more formal collaboration.

Large parts of Canada are rural and sparsely populated: family physician is the only physician.

Construction/extraction sectors operate in remote areas.
Philosophy

Occupational medicine is a medical discipline that **emphasizes prevention**........(RCPS of Canada).

Conflict with philosophy in which clinics specialize in the **diagnosis and management** of established disease and of ‘compensation medicine’.

How is prevention reflected in a ‘fee for service’ culture?
Where might Occupational Medicine education sit?

How well are we doing now?

• Undergraduate?
  “the level of priority appears to be minimal”
  Ron House article in *Occupational Medicine*

• Residents – Royal College?
  “shift from 5 year stand-alone specialty to 2 year subspecialty of internal medicine to substantial drop in applicants”
UGME

• Good recognition of the need to introduce all medical students to basics of occupational medicine
• Alberta: grants to U of A and (erstwhile)U of C
• Ontario: funds for a ‘sponsor’ at each medical school.
• Maritimes: creation of a Chair.
BUT......

• Little or no occupational medicine taught in most medical schools – not unique to Canada (or to occupational medicine)
• Few have specialists in OM appointed
• Even where there are, **pressures on curriculum and teaching style/philosophy** prevent core OM curriculum
• Best hope is for occupation to be considered in student centred learning scenarios
Some successes

• University of Montreal.
  10 hours in 4\textsuperscript{th} year as part of community medicine block.

Baillargeon et al The challenge of teaching occupational medicine to medical students
JOEM: 53; 1258-61,2011.

Main challenge: <2\% interest among students.
Realistically

Unless occupational medicine forms a significant part of the LMCC, medical schools will resist attempts to make time in the curriculum.

So what other options do we have to improve the prevention, recognition and management of work-related illness?
Royal College specialty

- Used to be 5 yr stand-alone (as PHPM still is)
- Now entry through internal medicine (subspecialty) 3+2 or through PHPM.
- Only 3 centres (U of A, U of T, U of Montreal)
- Struggle (not unique to OM) with IM exams 4\textsuperscript{th} year and too little time.
- IM entry: compensation not prevention
Bottom line

• Too few Royal College specialists to fill all OM roles
• No (or very little) competence in OM in other physician specialties
• Canadian Board of Occupational Medicine has traditionally provided certification for who have picked up OM knowledge/experience by some other route – but CBOM does not train
So, there is a gap (and a need)

“Many occupational medicine services are provided by family physicians and it is important that they also receive proper training and certification in the field”.

House R Occup Med 2012
Role of the family physician

How well is a family physician trained to manage work-related problems *in his clinic*? Does he understand his statutory duties?

How far can an family physician take on a *preventive* role?

Communication with the workplace from his clinic or taking the next step........
A role in the workplace?

Given the small numbers of specialists, the diversity of workplaces, the (lack of) clustering of workers into urban centres, who else BUT the family physician can respond to the needs of a local employer?

And many do....... 

So how do we train them?
Foundation Course in Occupational Medicine

Gift from the Imperial Oil Foundation to the University of Alberta in 2011.
To train community-based (experienced) physicians.
Using interactive teaching materials developed centrally but adapted for each province.
Delivered by local community-based physicians (family medicine + occupational medicine)
Objectives

• **Part A**: to help community based physicians recognise and manage conditions in patients who walk through the door of their office (or into ER).

• **Part B**: to play a role in helping employers prevent occupational disease/injury and to help employees who are fit to work find work they can do.
Format

**Part A**
8 modules sent out, one each month, for home study and preparation for monthly tutorial (2 hours, face-to-face, teleconference or videoconference).
Two full day workshops face-to-face.

**Part B**
As Part A: only 6 modules but ‘shadowing’ day also.
Progress to date

Part A courses now running in every province (except Quebec – but coming).

To date **305 Part A**

Alberta 110, Ontario 57, British Columbia 48, Maritimes 37, Saskatchewan 23, Newfoundland and Labrador 18, Manitoba 12
More progress

Part B ran in Alberta only in 2014-15 & 2015-16

In 2016-17 ran regionally across Canada

- Western (BC, Alberta, Saskatchewan, Manitoba)
- Central (Ontario)
- Atlantic (Maritime provinces and NL)
Totals taking Part B (so far)

Total of 77 Part B, of which,

41 from Alberta (over 3 years)
10 from Ontario
8 from NL and BC
7 from Maritimes
4 from Saskatchewan.
Evaluation

What evidence do we have that those who go through the Foundation Course think or behave differently as a result?

On every evaluation form we ask:

‘How has this module/tutorial/workshop affected your practice’

Anecdotally we know many physicians have changed their work portfolio.

Can we do any more systematic evaluation?
Study 1: Evaluation of change in attitudes

Use of scenarios developed to assess how physicians differ in their attribution of work-related causation to a specific case.

Beach J Chen Y Cherry N (2012)

- Four scenarios each describing a case with a wrist, back, shoulder or respiratory (asthma) condition.
- Scenarios written to contain elements that were suggestive of both work and non-work factors in causation: each factor could be Strong or Weak.
A forty one year old woman comes to see you in your clinic. Approximately one year ago she experienced the gradual onset of pain and numbness in the palm, index and middle fingers of her left hand. This was worse when she used her hands repeatedly. Sometimes the discomfort woke her at night.
Strong work factor, weak ‘other’ factor variant

- Two years ago she switched to full time work and was transferred to her current job where she works as a seamstress on a sewing machine stitching jeans. She uses her left arm and hand repetitively and vigorously to handle the heavy fabric while it is being sewn.

- She has no past medical history of note. She has no previous history of wrist trauma. She has had 3 previous pregnancies without wrist pain. Her main hobbies are reading and watching TV.

- On further questioning she reports that 3 of the other 18 workers sewing jeans wear wrist supports and at least one has left work because of the pain. The patient feels her current problems are caused by work and wants your advice.
4 variants on each scenario

A: SW – Strong work factors, weak other factors
B: SS – strong work factors, strong other factors
C: WW – weak work factors, weak other factors
D: WS – weak work factors, strong other factors
Each participant received a balanced random allocation of scenarios

<table>
<thead>
<tr>
<th></th>
<th>1 wrist</th>
<th>2 back</th>
<th>3 shoulder</th>
<th>4 asthma</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
Design of Foundation Course scenario evaluation study

• **All** Part A students *completing in June 2015*
  Each sent scenario package in July 2015

• **All** Part A *starting in September 2015*
  Sent *initial* scenario package in September 2015

• **Same** Part A students *completing in June 2015*
  Sent *final* (different) scenarios in July 2016
# Participation rates

<table>
<thead>
<tr>
<th></th>
<th>Target</th>
<th>Completed</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completing June 2015:</td>
<td>60</td>
<td>30</td>
<td>50.0%</td>
</tr>
<tr>
<td>Starting in September 2015:</td>
<td>102</td>
<td>67</td>
<td>65.7%</td>
</tr>
<tr>
<td>Completing June 2016:</td>
<td>101</td>
<td>48</td>
<td>47.5%</td>
</tr>
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Better response than random physicians (30%) in 2012 study (but still not great)
Outcome variables

1) Visual analogue scale

How strongly do you think this case is work-related?

2) Binary response (yes/no)

Would you report this case to the WCB?
For work relatedness

Having allowed for potential confounders (sex, job, previous training, course location) and in a model with variables reflecting

- Work factor (weak/strong) \( p<0.001 \)
- Non-work factors \( p<0.001 \)
- Scenario conditions (asthma seen as least work related)

Post course more likely than pre-course to say cases were work related (\( P<0.001 \))
Change in likelihood that the scenario case is work related: pre to post course
For WCB referral

Would you refer this case to the WCB?

Strong work factor made it more likely (p<0.001) Strength of non-work factor no effect. Again, asthma case much less likely.

Overall OR 1.55 (post course compared with pre) p=0.03. Adjusted for all factors OR=1.49 p=0.07

Post course more likely than pre course to say they would report.
Change in likelihood would report to the WCB: pre to post course
Study 2: Does taking the Foundation Course affect behaviour?

This study limited to Alberta – needed collaboration from WCB.

All Alberta FC students from any year approached in 2016. Comparison group: random sample of family physicians not known to the Foundation Course.

Asked to complete a brief questionnaire about hours/week they worked in each year 2012-2015 in family medicine, ER, occupational, WCB, other

Asked for consent for WCB to release numbers on cases referred
Methods

Excluded any years for which respondent worked for the WCB.

Coded each Foundation Course respondent for each year 2012 – 2015 as

- before FC
- during FC
- since FC

Random family physicians served to look for trends in WCB referral
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<tr>
<th></th>
<th>Target</th>
<th>Response</th>
<th>%</th>
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<tbody>
<tr>
<td>Foundation course</td>
<td>61</td>
<td>38</td>
<td>62.3%</td>
</tr>
<tr>
<td>Random family physicians</td>
<td>???</td>
<td>128</td>
<td>?? 30%</td>
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Exclusions:
5 FC and 7 family physicians reported they spent time working for WCB
Results - 1

No time trend for WCB reporting among random group.

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean cases reported</th>
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<tbody>
<tr>
<td>2012</td>
<td>29.4</td>
</tr>
<tr>
<td>2013</td>
<td>31.2</td>
</tr>
<tr>
<td>2014</td>
<td>31.8</td>
</tr>
<tr>
<td>2015</td>
<td>28.5</td>
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Results - 2

Trend to greater WCB reporting with stage of Foundation Course

Mean number of cases reported

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<table>
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<tbody>
<tr>
<td>Pre-course</td>
<td>86.9</td>
</tr>
<tr>
<td>During course</td>
<td>128.3</td>
</tr>
<tr>
<td>Post course</td>
<td>186.1</td>
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Random family physicians 30.2
Conclusions of this evaluation of the effects of taking the Foundation Course

**Attitudes**
Foundation Course does affect the way in which a participant rates work relatedness and assesses WCB referral.

**Behaviour**
Foundation Course increases referral to the WCB (in a group with already high referrals)

**Knowledge**
Had planned pre-post MCQ study but CBOM has overtaken us: Foundation Course does appear to affect knowledge: 52 exam passes (so far) this year on CBOM entry level qualification.
Finally, how far does the Foundation Course meet the 4 challenges identified?

• **Numbers**: More have completed Part A than all active RC or traditional CBOM:

• **Diversity**: all provinces/centres reflect local needs and resources

• **Geography**: Strong interest from rural/isolated physicians and those serving extraction industries.

• **Philosophy**: patient care *and* prevention
More information

The website for the Foundation Course is:

www.foundacioncourse.ualberta.ca

e-mail
Omcourse@ualberta.ca
Foundation Course and CBOM

In May 2017 the first cohort of Foundation Course participants sat the CBOM entry level exam designated for those who had satisfactorily completed Parts A and B of the Foundation Course: one hour MCQ exam.

This is in addition to (rather than replacing) the traditional route to ACBOM

Exciting complement to new developments at the College of Family Physicians of Canada
College of Family Physicians of Canada

• Recognition of occupational medicine as part of the Communities of Practice in Family Medicine (CFPM)

• CPFMs provide a connection between CFPC and members with an interest in the area, with a goal of advocacy, education and certification

• Occ Med is one of 19 other CPFMs’
College of Family Physicians of Canada

Certificates of Added Competence (CAC)
Currently 7 programs approved

Now:
• Emergency Medicine (previous designation)
• Care of the Elderly
• Anaesthesia
• Palliative Care
• Sports and Exercise Medicine

Pending:
Addiction Medicine
Enhanced Surgical Skills
Possible Pathways available for CAC designation in Occupational Medicine

• Previously demonstrated Added Competence at the time CAC begins:
  
  *CBOM credentials and Foundation Course could potentially be very relevant*

• Practice eligible route:
  
  *Foundation Course could be very relevant*

• Completion of enhanced skills residency program
Occupational Medicine CAC application pending

Occupational Medicine section within the CFPC appears to have all the elements for a CAC application.

Awaiting CFPC Board of Directors to decide:
• *whether* further CAC's will be created
• if so, the *details of the process*.

Hoped for this fall.