A One Day EBM Workshop Changed Physician Attitudes and Behaviours

David Allen, M.D., FCFP
Jacques Abourbih, M.D.C.M., FRCS(C)
Marion Maar Ph.D.
Lisa Boesch, B.A.
Catherine Cervin, M. Ed., M.D., FCFP
James Goertzen, M.CISc., M.D., FCFP
COI

• We have no financial conflicts of interest to declare

• A potential intellectual COI was mitigated by having a neutral group of investigators perform the interviews and qualitative analysis.
Setting

• Northern Ontario School of Medicine is Canada’s newest medical school

• It serves a population of 700,000 distributed over an area the size of France and Germany combined

• It has 1250 clinical faculty in 90 communities
NOSM’s campus
Rationale

• Clinical faculty were expected to teach EBM without being confident in their ability to do so

• Postgraduate learner surveys indicated that EBM was being taught in a vacuum, without application at the bedside
Study design and data analysis

INTERVENTION: WORKSHOP

- Semi-standardized agenda
- Pre-workshop consultation on local needs

DATA
- Pre-workshop survey
- Immediate post-survey
- 3-6 months survey
- Semi-structured phone interviews
What were participants looking for?

- Tips for teaching EBM
- Practical **resources and strategies** for real-time bedside searches besides UpToDate
- Take advantage of a locally based CEPD opportunity and get high value CME credits
What rarely came up?

- Help with critical appraisal
- Help with understanding statistical concepts
- Enhanced Medline/PubMed skills
Typical agenda

• Introduction to the 5 A’s
• How to make a PICO question
• Resources for “hunting” and “foraging” for information
• Ways that the literature can mislead
• Teaching EBM on the run
• Hands-on session taking clinical scenarios and finding answers
Clinical scenario

Albert is a 62 year old patient.

His last six BP readings have averaged 154/96

“Do I really have to take blood pressure pills, doc?”
<table>
<thead>
<tr>
<th>Source</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada CHEP 2015</td>
<td>Maybe – depends how you define “other cardiovascular risk factors” for systolic BP 140-159</td>
</tr>
<tr>
<td>UK NICE</td>
<td>No – specifically defined criteria for systolic BP 140-159</td>
</tr>
<tr>
<td>US JNC-8</td>
<td>Yes for systolic BP &gt;150</td>
</tr>
<tr>
<td>Cochrane 2012</td>
<td>No benefit for most outcomes for systolic BP &lt;160</td>
</tr>
<tr>
<td>Sundstron et. al.</td>
<td>Weak benefit for systolic BP 140-159 in a mostly diabetic population.</td>
</tr>
<tr>
<td></td>
<td><strong>Effects of blood pressure reduction in mild hypertension: a systematic review and meta-analysis. Ann Int Med 2015 Feb 3;162(3)</strong></td>
</tr>
</tbody>
</table>
Figure 1. Kirkpatrick's Model of Evaluation

Level 1 Reaction
• Did the learner think the learning event was relevant?
• Were they satisfied with the learning event?

Level 2 Learning
• What knowledge, skills, attitudes did the learner acquire.

Level 3 Behaviours
• Has the learning event changed the learners behaviour.

Level 4 Results
• Did the learning event make a difference?
• Were the institutional goals achieved?
Questions

1. Can a one-day workshop improve faculty comfort with practicing and teaching EBM?
Questions

1. Can a one-day workshop improve faculty comfort with practicing and teaching EBM?

YES

(Kirkpatrick Level 2 – change in attitude or knowledge)
Questions

2. Which parts of the workshop, if any, resulted in changes to practice or behaviour?
Questions

2. What changed after the workshop?

• Using more resources
• Using PICO
• Getting learners to do more searches

(Kirkpatrick Level 3- change in behaviour)
Results

“Please indicate your comfort level with each of the following?” using a 5 point Likert scale

1. Your ability to keep up to date using high-quality, evidence-based resources
2. Your ability to find and apply answers in response to specific clinical problems
3. Your ability to teach EBM to learners
4. Your ability to role model EBM for learners
Surveys Results

Changes were sustained at 3-6 months later

Q1: keep up to date
Q2: answers to clinical questions
Q3: teach EBM
Q4: role modeling

Differences between pre and immediate post workshop and pre- and 3-6 months later were statistically significant (p < 0.001)
What were the most useful components of the workshop?

- Teaching tips
- PICO
- New resources and apps
- Tips on quick search strategies
What had changed in their teaching or practice?

Over half reported they were using PICO for teaching and/or clinical practice 3-12 months after the workshop.
PICO

The usefulness of PICO was triangulated from three separate sources, which each confirmed the finding:

• **Free text answers** on early responses to the follow-up survey (6/20)

• **Responses to specific questions in the interviews** (8/14)

• **Responses to specific questions in a modified follow-up survey** (14/19)
PICO

• Help with question-framing was an unperceived need, but there was a high uptake in its use
PICO

• “Yes I do [use PICO] and that’s totally new, I wasn’t using the PICO system before at all.”
• “…that's the way I often will frame a question on the TRIP Database. And it usually leads me to articles and then reviewing the articles will help direct my therapy of the patient.”
• “That’s the other thing I learned from the workshop was how to use [PICO]. [...] I think that’s a good system when you know how to use it. [...] Like I didn’t – I never even heard of it before the workshop.”
• “I had a resident at that time so that spurred me to assign a lot more PICO questions to try and answer critical questions.”
What had changed in their teaching or practice?

Getting learners to do more searches

Using new resources:

• TRIP
• Dynamed
• Evidence Updates from McMaster/BMJ Plus
• TheNNT.com
Conclusions

• Clinical faculty want help in improving EBM teaching skills, and want strategies and resources for bedside searches

• Few are looking for help with critical appraisal skills or understanding statistics
Conclusions

• The workshop improved comfort with teaching and practicing EBM, and this effect was sustained 3-12 months later
Conclusions

- Participants incorporated some of the new resources into their practice, specifically TRIP, Dynamed, Clinical Updates and TheNNT.com
Conclusions

Half the participants reported that they were using PICO for teaching, clinical practice or both 3-12 months after the workshop.

This was an unperceived need, but it had a high uptake.
Acknowledgements

- We wish to thank the Northern Ontario Academic Medicine Association and the Northern Ontario School of Medicine for funding this project
Questions?