Using different types of evidence to inform guideline development

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Disclosures

• No relevant financial interests

• Contributed to some of the cited work

• Reflections are based on the collective experience of many guideline methodologists working with different organizations
Going from question to recommendation

WORKING GROUPS

PROCESSES

TOOLS

INFORMATION
• I will be presenting the guideline development perspective, and reflecting on the evidence synthesis perspective

• Examples I will refer to (COVID-19 related)
  • Vaccination
  • Use of masks
  • Quarantine
Outline

• Types of information needed
• Types of evidence needed
• Processes and tools
Outline

• Types of information needed
• Types of evidence needed
• Processes and tools
Types of information

• Health effects
• Non health effects
• Contextual information
Types of information

• Health effects
  • Desirable effects
  • Undesirable effects
  • Certainty of evidence/ Confidence in qualitative evidence
  • Effect modification
Types of information

• Non health effects
Types of information

• Non health effects

Question to the audience:

What kind of non-health effects information can you think of in relation to the examples I’ve used so far?
Types of information

• Non health effects
  • Economic
  • Educational
  • Crime related
Types of information

• Contextual information
Doctors slam face mask price hikes, call for better coronavirus protection for health workers
Man in gas mask sparks panic aboard American Airlines flight

By Amanda Woods

February 3, 2020 | 9:02am | Updated

Joseph D S
@ThePlatypusesTX

@AmericanAir , Just FYI flight 2212 to Houston was delayed an hour because you let this guy on the plane wearing a gas mask. This then panicked people on the plane and we had to wait for him to be escorted off. @abc13houston @KHOU @HoustonChron @KPRC2 @FOX26Houston #trainbetter
Coronavirus: China’s surgical mask shortage ripples through global supply chain as health crisis continues

- China is the world’s largest producer of medical facial masks, but surging demand amid the coronavirus outbreak has created a severe shortage
- The shortfall has prompted Beijing to adopt quasi-wartime rationing, leading to an increase in imports and pushing some companies to manufacture their own for staff

Dentists threatened by coronavirus face-mask shortage

14 February 2020

Some UK dentists may have to "down drills" if the shortage of face masks caused by the coronavirus outbreak continues, according to the British Dental Association.
Types of information

• Contextual information
  • Values and preferences
  • Resource use
  • Health equity considerations
  • Acceptability
  • Feasibility
  • Sustainability
Outline

• Types of information needed
• **Types of evidence needed**
• Processes and tools
Types of evidence

• Primary vs. secondary source of evidence
• Direct, indirect, and irrelevant evidence
• Randomized only vs. other types of evidence
Types of evidence

• **Primary vs. secondary source of evidence**
• Direct, indirect, and irrelevant evidence
• Randomized only vs. other types of evidence
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                   • Minimal time or resources                                                | • Panel may not represent all key stakeholders, or stakeholders’ view         |
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<td>A primary study</td>
<td>• Tailored to questions of interest</td>
<td>• Reliance on one study; not peer reviewed</td>
</tr>
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<td>• Opportunity to produce high quality evidence</td>
<td>• Time and resources +/−</td>
</tr>
<tr>
<td></td>
<td>• Engaging stakeholders</td>
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<td>• Quantitative, qualitative, or mixed methods approaches</td>
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Increasing access to health workers in rural and remote areas: what do stakeholders’ value and find feasible and acceptable?

Onyema Ajuebor¹, Mathieu Boniol¹, Michelle McIsaac¹, Chukwuemeka Onyedike¹ and Elie A. Aki²
Knowledge, attitudes, beliefs, values, preferences, and feasibility in relation to the use of injection safety devices in healthcare settings: a systematic review

Rami Tarabay¹, Rola El Rassi², Abeer Dakik², Alain Harb¹, Rami A. Ballout³, Batoul Diab¹, Selma Khamassi⁴ and Elie A. Akl⁵,⁶,⁷*
Types of evidence

• Primary vs. secondary source of evidence
• Direct, indirect, and irrelevant evidence
• Randomized only vs. not randomized only evidence
Types of evidence

• Direct, indirect, and irrelevant evidence
Types of evidence

• Direct, indirect, and irrelevant evidence

Question to the audience:
For a question focused on elderly population (e.g., vaccination), what age populations would respectively provide, irrelevant, indirect, and direct evidence?
Types of evidence

- Direct, indirect, and irrelevant evidence

Non-adults ➔ Non-elderly adults ➔ Elderly

Irrelevant evidence ➔ Indirect evidence ➔ Direct evidence
Types of evidence

• Primary vs. secondary source of evidence
• Direct, indirect, and irrelevant evidence
• Randomized only vs. other types of evidence
Types of evidence

• Randomized only vs. other types of evidence
Types of evidence

• Randomized only vs. other types of evidence

Question to the audience:
What type of study designs (other than RCTs) do you think are important for guideline development? And for what purpose?
Outline

- Types of information needed
- Types of evidence needed
- Processes and tools
Processes and tools

• ‘Checkpoints’ for interaction between guideline groups and SR teams:
  • Developing the recommendation question
  • Determining the information needed to develop the recommendation
  • Developing the SR protocol
  • Presenting interim findings
  • Presentation at final findings the time of the panel meeting
Processes and tools

• ’Checkpoints’ for interaction between guideline groups and SR teams:
  • Developing the recommendation question
  • **Determining the information needed to develop the recommendation**
  • Developing the SR protocol
  • Presenting interim findings
  • Presentation at final findings the time of the panel meeting
PICOrdering tool

Framing the public health intervention

<table>
<thead>
<tr>
<th>Setting</th>
<th>Population</th>
<th>Background interventions</th>
<th>Intervention</th>
<th>Comparator(s)</th>
<th>Outcome</th>
<th>Timeframe</th>
<th>Potential effect modifiers</th>
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## PICOrdering tool

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<th>EtD domain &amp; related question</th>
<th>Type of study</th>
<th>Collection of evidence</th>
<th>Notes</th>
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| Desirable and undesirable effects | □ Randomized trials  
□ Non-randomized comparative studies  
□ Accuracy studies  
□ Observational/prognosis studies for baseline risks | □ Systematic review  
□ Other: | If no direct RCT data identified, preferred source of evidence:  
□ Direct observational data  
□ Indirect RCT data |
| In Population, what is the relative impact of Intervention and Comparator on Outcomes (benefits and harms)? PICO | | | |
## PICOrdering tool

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<td><strong>Acceptability</strong></td>
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<tr>
<td>• What is the comparative acceptability of Intervention and Comparator by different stakeholders (Population, clinicians, public health agents, managers, policy makers, etc.)?</td>
<td>□ Survey study</td>
<td>□ Systematic review</td>
<td>□ Study conducted for the guideline: □ Expert input □ Other:</td>
</tr>
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<td></td>
<td>□ Qualitative study</td>
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Conclusion

• There is no doubt evidence synthesis community and guideline development community have been able to build synergies

• There is a need to build on those and enhance the collaboration with other communities (e.g., trialists) for the public health good

• Importance of methodological development!
Thank you!

Questions?