Effectiveness & user experience of digital plain language recommendations in people of different age and health literacy: Results of three randomized controlled trials and qualitative studies

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On behalf of the eCOVID RecMap team

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Disclosures

• No direct financial conflicts
• GRADE Working Group Co-Chair
• Cochrane Canada - Director
• Guidelines International Network – chair
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• Views expressed my own
• RecMap team
Today’s talk

Optimizing the presentation of recommendations for different target groups

• Three trials: adults, parents and youth (15 – 24 yrs)
• Overall results
Background

• We typically develop guidelines for people like us:
  Health professionals
• And that is reflected in how we present and word the recommendations
• In the context of the COVID-19 pandemic and in general it became obvious that that’s a problem!
• Had done trials to present summaries of systematic reviews to the general population, but not recommendations
• Indeed, very little work on that
This is a recommendation by:
World Health Organization (WHO)

Should people with at least one health condition (comorbidities) that increases their risk for severe COVID-19 get the Pfizer-BioNTech COVID-19 vaccine?

Please note that this information could have changed since its publication date.

Who is this for?
- You have at least one health condition that increases the risk for severe illness when infected with COVID-19.
- You are 5 years of age or older.
- You do not have an active case of COVID-19.

Recommendaition

The World Health Organization (WHO) suggests that people with comorbidities that increase their risk for severe illness when infected with COVID-19 should take the Pfizer-BioNTech vaccine to protect against COVID-19.

Learn more about where this recommendation came from.

Recomendation strength

Conditional for Pfizer-BioNTech BNT162b2 vaccine.

A recommendation can be strong or conditional. When a recommendation is conditional, the majority of people want to follow it, but they may want to talk with their health care professional first.

Fig. 3 Example of a plain language recommendation summary format for adult participants.
Goals

Assess the effects of plain language recommendations (PLRs) compared with a standard language versions (SLVs) of COVID-19 recommendations in different age groups and people with different health literacy:

• Understanding
• Usability
• Satisfaction
• Intended behavior
• Preference (by comparing an optimized PLR version to a standard language version)
• Qualitative study
Methods:

- Mixed methods of registered RCTs and qualitative in three populations
- Adults, parents & youth, careful development of protocol with lay people

Charide et al. Trials (2023) 24:27
A multimethods randomized trial found that plain language versions improved adults' understanding of health recommendations.

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**JAMA Pediatrics | Original Investigation**

Plain Language vs Standard Format for Youth Understanding of COVID-19 Recommendations
A Randomized Clinical Trial
Online trials: adults
Fig. 2. Results for understanding questions by recommendation. (A) Vaccine, (B) Rooming-in. Abbreviations: SLV, standard language version; PLR, plain language recommendation.
<table>
<thead>
<tr>
<th>Table 2. Primary and Secondary Outcomes</th>
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<tbody>
<tr>
<td><strong>Outcome</strong></td>
</tr>
<tr>
<td>Understanding (primary outcome)</td>
</tr>
<tr>
<td>Total correct answers (0-7)</td>
</tr>
<tr>
<td>Accessibility/Usability</td>
</tr>
<tr>
<td>Q1. It was easy to find the information I needed.</td>
</tr>
<tr>
<td>Q2. It was easy to understand the information.</td>
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<td>Q3. The information could help people make a decision.</td>
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<tr>
<td>Q4. The order/format of the presented information made it easy to understand the recommendation.</td>
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<td>Q5. People could use and apply this information.</td>
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<tr>
<td>Q6. I can use this information without additional instructions or help.</td>
</tr>
<tr>
<td>Accessibility/Usability: Total Mean Score</td>
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<tr>
<td>Satisfaction</td>
</tr>
<tr>
<td>Q1. How satisfied are you with the presentation of the information (e.g., order of information, location of information, etc.)?</td>
</tr>
<tr>
<td>Q2. How satisfied are you with the length of the document?</td>
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<tr>
<td>Q3. How satisfied are you with the design of the document (e.g., colors, font, etc.)?</td>
</tr>
<tr>
<td>Satisfaction: Total mean score</td>
</tr>
<tr>
<td>Behavior</td>
</tr>
<tr>
<td>Have you already followed this recommendation in any way?</td>
</tr>
<tr>
<td>If you have not followed this recommendation, how likely is it that you would follow it now?</td>
</tr>
<tr>
<td>How likely is it that you would share this recommendation with other people you know?</td>
</tr>
<tr>
<td>Preference</td>
</tr>
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Figure 2. Risk Differences (%) and 95% CIs for correct responses to 7 questions measuring understanding, and Total difference * for WHO recommendation.

![Graph showing risk differences and 95% CIs for correct responses to 7 questions measuring understanding, and total difference for WHO recommendation.]

Figure 3. Risk Differences (%) and 95% CIs for correct responses to 7 questions measuring understanding, and total difference * for CDC recommendation.

![Graph showing risk differences and 95% CIs for correct responses to 7 questions measuring understanding, and total difference for CDC recommendation.]

*Positive Risk Difference scores indicate greater understanding for the PLR over SLY
• Baseline understanding: about 45% complete correct answers, increase about 5%
Preplanned IPD meta-analysis

- 997 participants
- 488 adults, 268 youth & 241 parents
- 515 (52%) PLR format & 482 (48%) SLV format
- Lower English proficiency correlated with lower understanding
- Otherwise, no major subgroup effects (interaction with one rec)

Other outcomes: mean scores of questions with 7 point score
Participants’ preference for the presentation format
Qualitative findings
Summary

• PLRs improved understanding and other key outcomes
• Further optimization possible → qualitative study lots of suggestions for improvement
• Future: Wording issues, address real decisions or health outcomes
• One version for all target audiences!