Quality of patient decision aids to support the public making COVID-19 decisions: An online environmental scan

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Introduction

- During the pandemic, new healthcare decisions emerged and were challenged by uncertainty and limited quality of health information (e.g. COVID-19 vaccination, treatment of a health condition, masking/interacting with people, testing for COVID-19).
- People considering these decisions indicated misinformation had interfered with their decision making.
- Patient decision aids (PtDAs) are effective interventions for supporting people making health-related decisions for themselves or a family member.

Aim

To identify and appraise the quality of COVID-19 patient decision aids (PtDAs)

Methods

- Environmental scan of online publicly available COVID-19 PtDAs.
- Two reviewers independently searched and extracted data.
- We calculated median International Patient Decision Aid Standards (IPDAS) scores and proportion scoring > 70% on Patient Education Materials Information Tool (PEMAT) adequate for understandability and actionability.

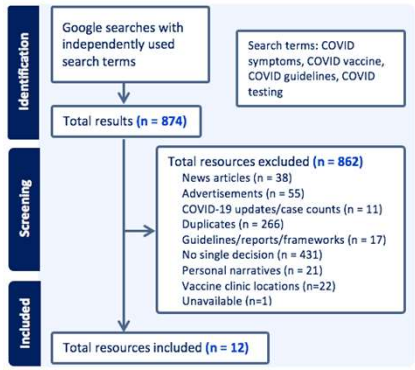
Results

IPDAS Scores

- Median IPDAS score for minimizing risk of biased decisions was 4 of 6 items (IQR 1, range 2–4).
- Quality criteria most met was "made it possible to compare options' positive/ negative features" (all 12 PtDAs).

IPDAS criteria	PtDA ID											
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
Criteria to minimize risk of Biased decisions												
B1 shows negative and positive features of options with equal detail	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B2 provides citations to the evidence	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
B3 provides a publication date	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B4 provides an update policy	No	No	No	No	No	No	No	No	No	No	No	No
B5 provides information on uncertainty around event or probabilities	Yes	N/A	N/A	Yes	Yes	No	No	Yes	N/A	Yes	Yes	No
B6 provides information about the funding source used for development.	No	Yes	Yes	No	No	Yes	No	No	Yes	No	No	No
TOTAL score	4	4	4	4	3	4	3	3	4	4	4	2
Other criteria indicating Quality												
Q1 describes the natural course of the health condition or problem, if no action is taken (when appropriate).	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Q2 makes it possible to compare options' positive and negative features	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Q3 provides information about options' outcome probabilities	No	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Q4 specifies event rates for outcome probabilities	N/A	N/A	N/A	Yes	No	Yes	No	N/A	N/A	Yes	Yes	Yes
Q5 allows users to compare probabilities using same time period	N/A	N/A	N/A	No	No	No	No	N/A	N/A	Yes	Yes	No
Q6 allows users to compare probabilities using same denominator	N/A	N/A	N/A	No	Yes	No	No	N/A	N/A	Yes	Yes	No
Q7 provides more than 1 way of viewing probabilities (words, numbers)	N/A	N/A	N/A	No	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes
Q8 asks patients to think about which positive and negative features of the options matter most to them	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No
Q9 provides a step-by-step way to make a decision	No	Yes	Yes	No	No	No	No	No	Yes	No	No	No
Q10 includes tools like worksheets or lists of questions	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	No
Q11 development process included a needs assessment with patients.	No	Yes	Yes	No	No	No	No	No	No	No	No	No
Q12 development process included a needs assessment with clinicians.	No	Yes	Yes	No	No	No	No	No	No	No	No	No
Q13 development process included review by patients not involved in producing the PtDA	NR	Yes	Yes	NR	NR	Yes	NR	NR	Yes	NR	NR	NR
Q14 development process included review by clinicians not involved in producing the PtDA	NR	Yes	Yes	NR	NR	Yes	NR	NR	Yes	Yes	Yes	No
Q15 PtDA was field tested with patients who were facing the decision.	NR	No	No	NR	NR	NR	NR	NR	Yes	NR	NR	NR
Q16 PtDA was field tested with clinicians who counsel patients	NR	No	No	NR	NR	NR	NR	NR	NR	NR	NR	NR
Q17 describes how research evidence was selected or synthesized.	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Q18 describes the quality of the research evidence used	No	Yes	Yes	No	No	No	No	No	No	No	No	No
Q19 includes authors'/ developers' credentials or qualifications	No	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	No
Q20 reports readability levels (using 1 or more of the available scales).	No	Yes	Yes	No	No	No	No	No	No	No	No	No
Q21 improves match between preferences of patient and option chosen	NR	NR	NR	NR	NR	NR	NR	NR	NR	Yes	NR	NR
Q22 helps patients unprove their knowledge about option' features	NR	NR	NR	NR	NR	NR	NR	NR	NR	Yes	NR	NR

Legend: "Yes" = present. "No" = not present. "N/A" = Does not apply. "NR" = Not reported.



Decisions:
- Initial COVID-19 vaccination series (n = 9)
- Location of care for elderly (n = 2)
- Social distancing (n = 1)

PEMAT Scores

- Understandability median score 84.6% (IQR 3.9%; range 69.2–93.3%).
- 11 of 12 PtDAs (91.7%) had adequate understandability rating of ≥ 70%.
- Actionability median score 45.0% (IQR 25%, range 0–50%)
- None had adequate actionability score ≥ 70%.

Understandability	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
1. Purpose evident	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
2. No distractions from purpose	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Uses everyday language	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
4. Medical terms are defined	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes
5. Uses active voice	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6. Numbers easy to understand	No	N/A	N/A	N/A	Yes	No	No	N/A	Yes	Yes	Yes	Yes
7. Calculations not required	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8. Information in short sections	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9. Sections have headers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10. Presented in logical sequence	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11. Summary provided	Yes	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
12. Visual cues used	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15. Uses visual aids	No	No	No	No	Yes	Yes	No	No	No	Yes	Yes	No
16. Visual aids reinforce content	N/A	N/A	N/A	N/A	Yes	Yes	N/A	N/A	N/A	Yes	N/A	N/A
17. Clear titles on visual aids	N/A	N/A	N/A	N/A	No	No	N/A	N/A	N/A	Yes	Yes	N/A
18. Illustrations/photos are clear	N/A	N/A	N/A	N/A	Yes	Yes	N/A	N/A	N/A	Yes	Yes	N/A
19. Uses simple tables	N/A	Yes	Yes	N/A	Yes	N/A	N/A	Yes	Yes	N/A	N/A	N/A
Actionability												
20. At least one action identified	No	No	No	Yes	No	Yes	Yes	No	No	No	No	Yes
21. Addresses users directly	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
22. Explicit steps for actions	No	No	No	No	No	No	No	No	No	No	No	No
23. Tangible tool(s) provided	No	Yes	Yes	No	No	No	No	No	No	Yes	Yes	No
24. Instructions on calculations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25. Explain use of charts, graphs, tables to take actions	N/A	Yes	Yes	N/A	No	N/A	N/A	No	Yes	No	Yes	N/A
26. Uses visual aids to act on instructions	No	No	No	No	No	No	N/A	No	No	Yes	Yes	N/A
Results												
Understandability mean score	69.2	84.6	84.6	83.3	82.4	75.0	84.6	76.9	85.7	87.5	93.3	84.6
Actionability mean score	0	50.0	50.0	40.0	0	40.0	50.0	0	50.0	50.0	50.0	50.0

Conclusions

- We identified 12 online publicly available COVID-19 PtDAs; none were about COVID-19 vaccination boosters or COVID-19 treatment.
- PtDAs scored poorly on actionability, and none met all IPDAS criteria for minimizing risk of biased decisions.
- PtDA developers for COVID-19 and future pandemics should ensure their PtDAs meet all IPDAS criteria for minimizing risk of bias, have adequate scores for actionability, and are disseminated in the A to Z inventory https://decisionaid.ohri.ca.

Acknowledgements

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