Supplemental materials for:

Shaughnessy AF, Vaswani A, Andrews B, et al. Developing a clinician friendly tool to identify useful clinical practice guidelines: G-TRUST. *Ann Fam Med*. 2017;15(5):413-418.

Supplementary Material

Appendix 1. Source of each item.

The patient populations and conditions addressed by the guideline are relevant to my clinical setting.

Source: Previous relevance criteria from the Information Mastery Working Group guideline evaluation worksheet; AGREE II:[33] "The overall objective(s) of the guideline is (are) specifically described"; The health question(s) covered by the guideline is (are) specifically described"; "The population (patients, public, etc.) to whom the guideline is meant to apply is specifically described"; "The target users of the guideline are clearly defined."

The recommendations are clear and actionable.

Source: Previous relevance criteria from the Information Mastery Working Group guideline evaluation worksheet. Institute of Medicine[47] (5.1, 6.1); AGREE II:[33] "The recommendations are specific and unambiguous;" "Key recommendations are easily defensible"

The recommendations focus on improving patient-oriented outcomes, explicitly comparing benefits versus harms to support clinical decision-making.

Source: Previous relevance criteria from the Information Mastery Working Group guideline evaluation worksheet. Institute of Medicine (5.1, 6.1); AGREE II: "The recommendations are specific and unambiguous;" "Key recommendations are easily defensible"

The guidelines are based on a systematic review of research data.

Source: Institute of Medicine (4.1); AGREE II: "Systematic methods were used to search for evidence."

The recommendations important to you are based on graded evidence and include a description of the quality (e.g. strong, weak) of the evidence.

Source: Institute of Medicine 5.1; AGREE II: "Statements highlighting the strengths and limitations of the evidence should be provided."

The guideline development group is composed of more than content experts and includes a research analyst, such as a statistician or epidemiologist.
Source: Institute of Medicine 3.1; Guyatt, G et al.[19]
The Chair of the guideline development committee and a majority of the rest of the committee are free of declared financial conflicts of interest.

Source: Institute of Medicine 2.3, 2.4

The guideline development group includes members from the most relevant specialties and includes other key stakeholder such as patients and public health entities, when applicable.

Source: Institute of Medicine 3.1, 3.2, 3.3

Appendix 2. Sampling strategy to identify experts for the Delphi group.

To identify expert in critical appraisal (evidence-based medicine), we solicited volunteers from the evidence-based medicine academe via several methods. We posted an invitation to participate on the Evidence-Based Health Care listserve (n=1858) operated by Centre for

Evidence-Based Medicine (EVIDENCE-BASED-HEALTH@JISCMAIL.AC.UK). We solicited help from members of a Guideline Panel Review working group.[58] We also invited experts identified by study team members.

To identify developers of high quality guidelines we used recent evaluations of guidelines that reported overall guideline quality in several clinical areas.[7,13,14,43-46] We contacted up to three authors of high quality guidelines (n=34) for whom we could identify e-mail addresses. In addition, we contacted four authors for non-US/UK guidelines in an effort to diversify the sample. We solicited volunteers with the goal of having representatives from the several countries on several continents, representatives from government, professional society, and non-governmental guideline development groups, and a mix of guideline developers with clinical and methodology backgrounds.

Appendix 3. Complete description of each step of the Delphi process.

The goal of the first round was to develop the wording of the items and to determine whether additional items should be added to the tool. Each item was presented to the participants, followed by a rationale explaining its inclusion, a one-sentence explanation of how to interpret the item, and the original source of the item. For each item, participants were asked three questions: 1) Is this item critical to determine the trustworthiness of the guideline? (yes/no, with an opportunity to comment); 2) How could this item be worded differently to be clearer to the user? (free text); and, 3) Does this item bring to mind a different item that should be added to the questionnaire? (free text). At the end of the survey, participants again were asked to suggest additional items.

For the second round, participants were given the revised checklist items, notated with the percentage of participants from the first round who felt the item was critical to evaluating a practice guideline. They were asked to, "read the revised statements and determine whether the item is required to identify guidelines that present both relevant and trustworthy recommendations."

For the third round, participants were given aggregate responses from the second round asked to rank-order the items and then, beginning by identifying the most important and least important items. After this rank ordering, the participants' lowest-ranked item was assigned a score of 10 for the next question. Participants were instructed, "Starting with the next lowest-ranked item, give that item a score from 10 - 100. If the item should have the same weight as your lowest ranked item, give it a score of 10 as well. If it's five times as important, give it a score of 50."

Repeat for all the remaining items, determining their score relative to the item below them on your ranking list. Give every item a score that is between 10 and 100." This approach to ranking and ordering makes it easier for participants to see meaningful relationships among a list of items. [59,60]

For the fourth Delphi round, participants were given the utility for each item (based on aggregate ranks and weights from the previous round) and asked to determine whether each item is a "major" or "minor" threat to the usefulness of a practice guideline. The criteria for these categories was described in this manner:

1. **Major threats** must *not* be present; if even one of these is present, the guideline is not trustworthy.

2. **Minor threats** are, by themselves, not fatal flaws but more than one puts the guideline at risk.

Appendix 4. Results of each Delphi round.

Round 1: "Is this item critical?" (n=40)

Item	**Percent "critical"**
The patient populations and conditions are relevant to you, the reader.	75.0
The recommendations are explicit and focus on improving patient-oriented outcomes.	79.5
The guidelines are based on a systematic review of the literature.	100
The recommendation statements important to you are based on high quality, graded evidence.	73.7
The guideline development includes a methodologist.	71.1
The Chair of the guideline development committee is free of declared financial conflicts of interest, as well as the majority of the rest of the committee.	87.2
The guidelines are the official stance or policy of a professional society.	33.3
The guideline development group includes members from a range of applicable specialties and include key affected groups, including	76.7

patients when possible.	

Delphi round 2. “Is this item required?” (n= 40)

Item	**Percent required**
The patient populations and conditions are relevant to my clinical setting.	95.0
The recommendations are clear and focus on improving patient-oriented outcomes, explicitly comparing benefits versus harms to support clinical decision-making.	87.5
The guidelines are based on a systematic review of the research data.	97.5
The recommendation statements important to you are based on graded evidence and include a description of the quality (e.g. strong, weak) of the evidence.	92.3
The guideline development includes a methodologist, such as a statistician or epidemiologist.	67.5

The Chair of the guideline development committee and the majority of the rest of the committee is free of declared financial conflicts of interest. (87% EBM vs 61% guideline developers, p = .14)	75.0
The guidelines are the official stance or policy of a professional society.	7.5
The guideline development includes members from the most relevant specialties and includes other key stakeholder such as patients, payer organizations, and public health entities when applicable.	77.5

Third round: Multiple Attribute Utility Analysis (n=38)

Item	**MAUA* (Median score)**
The recommendations focus on improving patient-oriented outcomes, explicitly comparing benefits versus harms to support clinical decision-making.	18.0
The patient populations and conditions are relevant to my clinical setting.	15.73

The recommendations are clear and actionable.	11.24
The guidelines are based on a systematic review of the research data.	22.47
The recommendation statements important to you are based on graded evidence and include a description of the quality (e.g. strong, weak) of the evidence.	20.22
The guideline development includes research analyst, such as a statistician or epidemiologist.	2.25
The Chair of the guideline development committee and the majority of the rest of the committee is free of declared financial conflicts of interest.	3.37
~~The guidelines are the official stance or policy of a professional society.~~	
The guideline development includes members from the most relevant specialties and includes other key stakeholder such as patients, payer organizations, and public health entities when applicable.	6.74

*Multiple attribute utility analysis

Round 4. Dichotomizing to establish cutoffs (n=34)

Item	Percent "Major"
The patient populations and conditions are relevant to my clinical setting.	29.4
The recommendations are clear and actionable.	35.3
The recommendations focus on improving patient-oriented outcomes, explicitly comparing benefits versus harms to support clinical decision-making.	82.4
The guidelines are based on a systematic review of the research data.	100
The recommendation statements important to you are based on graded evidence and include a description of the quality (e.g. strong, weak) of the evidence.	85.3
The guideline development includes research analyst, such as a statistician or epidemiologist.	26.5
The Chair of the guideline development committee and the majority of the rest of the committee is free of declared financial conflicts of interest.	47.1
The guideline development includes members from the most relevant specialties and includes other key stakeholder such as patients, payer organizations, and public health entities when applicable.	41.2