GLIA

GuideLine Implementability Appraisal v. 1.0

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Implementation refers to that part of the guideline lifecycle in which systems are introduced to influence clinicians' behavior toward guideline adherence. Some guidelines have been found to be more difficult to put into practice than others. The GuideLine Implementability Appraisal (GLIA) is intended to provide information about a guideline's *implementability* to:

• a guideline authoring group, which may decide to modify content to improve implementability

• those individuals who choose guidelines for application within a health care delivery system, in which case, GLIA can be used to anticipate potential problems in implementation.

Implementability is an abstract construct, relating to a number of factors, some of which are intrinsic to the guideline itself—and therefore are under the control of the developers—and some of which are extrinsic. Extrinsic factors are largely site-specific and are beyond the scope of this instrument. GLIA emphasizes a consideration of primarily intrinsic factors, including:

- Decidability (precisely *under what circumstances* to do something)
- Executability (exactly *what to do* under the circumstances defined)
- Effect on process of care (the degree to which the recommendation impacts upon the usual workflow in a typical care setting)
- Presentation and formatting (the degree to which the recommendation is easily recognizable and succinct)
- Measurable outcomes (the degree to which the guideline identifies markers or endpoints to track the effects of implementation of this recommendation)
- Apparent validity (the degree to which the recommendation reflects the intent of the developer and the strength of evidence)
- Novelty/innovation (the degree to which the recommendation proposes behaviors considered unconventional by clinicians or patients)
- Flexibility (the degree to which a recommendation permits interpretation and allows for alternatives in its execution)
- Computability (the ease with which a recommendation can be operationalized in an electronic information system) is only applicable when an electronic implementation is planned

Definitions

- A *conditional recommendation* states one or more *actions* to be performed for members of the target population **IF** they fulfill one or more stated *conditions*.
- *Conditions* may include patient descriptors (e.g., age, gender), clinical observations, laboratory results, etc.
  Example: ***If pain is present, the clinician should recommend treatment to reduce pain***. In this example, the *condition* is presence of pain. The *action* is recommending treatment to reduce pain.
- Both conditions and actions may be combined using connectors AND and OR to create complex logical statements.
  Example: ***when the patient manifests dyspnea or tachycardia, treat with a diuretic and monitor vital signs hourly***.
  (Question 9 addresses the clarity of these linkages.)
- An *imperative recommendation* states one or more *actions* to be performed for all members of the target population, i.e., the patients eligible for guideline advice.
  Example: ***Assess whether the patient is experiencing pain***.
- The dimension of "*decidability*" (items 8-10) focuses our attention on the conditions of a conditional recommendation. These items do not apply to an imperative recommendation.
- The dimension of *executability* (items 11-12) focuses our attention on the recommended action. These items apply to both imperative and conditional recommendations, as both types of recommendation must contain an action.

Using GLIA

- GLIA questions 1 through 7 (GLOBAL dimension) relate to the guideline document as a whole. It is not uncommon for a single guideline to contain recommendations that vary widely in their implementability. The unit of implementability, therefore, is the individual recommendation, not the entire guideline. The remaining dimensions of GLIA consider recommendations individually.
- GLIA users should prepare to use the instrument by *selecting* those recommendations for which implementation is planned. Note that individual recommendations may contain imperative and/or conditional components. Complex statements may be difficult to rate because individual components may deserve different ratings. Therefore, each complex recommendation should be analyzed into its components.
- Users should pay particular attention to guideline text formatted as "recommendations" but recognize that the accompanying text and diagrams often amplify the highlighted information.
- For evaluating recommendations supplied in algorithmic (diagrammatic) format, structure the branches as IF…THEN statements to identify conditions and actions before evaluating decidability and executability.
- Some guideline developers issue statements that intentionally prescribe no recommendation, usually because there is insufficient evidence to guide a course of action. Such "No rec" recommendations are difficult to operationalize and to rate with GLIA.

Response options

Rate each item with one of the following responses

Y The recommendation meets this criterion fully.

N The recommendation does not meet this criterion.

? Rater is unable to address this question because of insufficient knowledge or experience in this area

N/A Criterion is not applicable to this recommendation

Comments about how a recommendation fulfills or fails to fulfill a criterion promote discussion.

Scoring GLIA

It is useful for two or more people to independently score each recommendation and then to discuss divergent ratings in an effort to achieve consensus Rating teams should include sufficient expertise to resolve any "?" scores. When any GLIA criterion is scored as a NO, its corresponding barrier to implementation should be added to the summary report.

- A conditional recommendation that fails any decidability criteria or executability criterion 11 will be impossible to implement as stated.
- Likewise, an imperative that fails executability criterion 11 will not be implementable.

An examination of the barriers recorded on the summary report should provide an understanding of impediments to implementation of the guideline statement. Developers may choose to make modifications to the guideline document before disseminating the guideline. Implementers can target their efforts toward addressing identified barriers.

GLOBAL CONSIDERATIONS (entire guideline)

1) Do the organization(s) and author(s) who developed the guideline have credibility with the intended users of the guideline?

2) Is the patient population eligible for the guideline clearly defined?

3) Does the guideline document suggest possible strategies for dissemination and implementation?

4) Is the guideline supported with tools for application e.g., a summary document, a quick reference guide, educational tools, patients' leaflets, online resources or computer software?

5) If any guideline recommendations are considered more important than others, does their presentation or formatting reflect this?

6) Is it clear in what sequence the recommendations should be applied?

7) Is the guideline internally consistent, i.e., without contradictions between recommendations or between text recommendations and flowcharts, summaries, patient education materials, etc.?

Statement Number						
						DECIDABILITY **(precisely under what circumstances to do something)**
						8) Would the guideline's intended audience consistently determine whether each condition in the recommendation has been satisfied? That is, is each and every condition described clearly enough so that reasonable practitioners would agree when the recommendation should be applied?
						9) Are all reasonable combinations of conditions accounted for, i.e., is the recommendation comprehensive?
						10) If there are more than one condition in the recommendation, is the logical relationship among all conditions (ANDs and ORs) clear?

Comments:

Statement Number						
						EXECUTABILITY **(exactly what to do under the circumstances defined)**
						11) Is the recommended action (what to do) stated specifically and unambiguously? That is, would members of the intended audience execute the action in a consistent way? In situations where two or more options are offered, the executability criterion is met if the user would select an action only from the choices offered.
						12) Is sufficient detail provided or referenced (about how to do it) to allow the intended audience to perform the recommended action, given their likely baseline knowledge and skills?

Comments:

Statement Number						
						EFFECT ON PROCESS OF CARE (the degree to which the recommendation impacts upon the usual workflow of a care setting)
						13) Can the recommendation be carried out by current non-performers without substantial increases in provider time, staff, equipment, etc.?
						14) Can the recommendation be tried without full provider commitment? For example, buying and installing expensive equipment to comply with a recommendation is not easily reversible.

Comments:

Statement Number						
						PRESENTATION & FORMATTING **(the degree to which the recommendation is easily recognizable and succinct)**
						15) Is the recommendation easily identifiable, e.g., summarized in a box, typed in bold, underlined, presented as an algorithm, etc.?
						16) Is the recommendation (and its discussion) concise?

Comments:

Statement Number						
						MEASURABLE OUTCOMES **(the degree to which the guideline identifies markers or endpoints to track the effects of implementation of this recommendation)**
						17) Can criteria be extracted from the guideline that will permit measurement of adherence to this recommendation? Measurement of adherence requires attention to both the actions performed and the appropriateness of the circumstances under which they are performed.
						18) Can criteria be extracted from the guideline that will permit outcomes of this recommendation to be measured?

Comments:

Statement Number						
						APPARENT VALIDITY **(the degree to which the recommendation reflects the intent of the developer and the strength of evidence)**
						19) Is the justification for the recommendation stated explicitly?
						20) Is the quality of evidence that supports the recommendation explicitly stated?

Comments:

Statement Number						
						NOVELTY/INNOVATION (the degree to which the recommendation proposes behaviors considered unconventional by clinicians or patients)
						21) Can the recommendation be performed by the guideline's intended users without the acquisition of new competence (knowledge, skills)?
						22) Is the recommendation compatible with existing attitudes and beliefs of the guideline's intended users?
						23) Is the recommendation consistent with patient expectations? In general, patients expect their concerns to be taken seriously, benefits of interventions to exceed risks, and adverse outcomes to fall within an acceptable range.

Comments:

Statement Number						
						FLEXIBILITY **(the degree to which a recommendation permits interpretation and allows for alternatives in its execution)**
						24) Does the recommendation specify patient or practice characteristics (clinical and non-clinical) that require (or permit) individualization? For example, immediate angioplasty and MR imaging may not be available in all settings.
						25) Does the recommendation consider coincident drug therapy and common co morbid conditions?
						26) Is there an explicit statement by the guideline developer regarding the strength of this recommendation? Note: There is a difference between quality of evidence (item 20) and stringency of a policy. Potential statements to satisfy this criterion might include “Strong recommendation”, “Standard”, Clinical option”, etc.
						27) If patient preference is considered does the recommendation propose mechanisms for how it is to be incorporated?

Comments:

Statement Number						
						COMPUTABILITY* (the ease with which a recommendation can be operationalized in an electronic information system)
						28) Are all patient data needed for this recommendation available electronically in the system in which it is to be implemented?
						29) Is each condition of the recommendation defined at a level of specificity suitable for electronic implementation?
						30) Is each recommended action defined at a level of specificity suitable for electronic implementation?
						31) Is it clear by what means a recommended action can be executed in an electronic setting, e.g., creating a prescription, medical order, or referral, creating an electronic mail notification, or displaying a dialog box?

***optional:* only applicable when an electronic implementation is planned for a particular setting)**

Comments:

Barrier	Specifics	Suggested Remedy	Resolution