

Guideline Implementability Appraisal (GLIA) Tool

Kaiser Permanente (KP) National Heart Lung & Blood Institute (NHLBI) Experience & Implementations

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care management | institute

Overview

➤ Background:

- Guidelines must be implemented to impact health outcomes
- Appraising and addressing potential barriers to implementation can improve implementability

➤ Learning Objectives:

- Explore various methods of implementing GLIA appraisal
- Improve implementability of recommendations

Overview

➤ Methods:

- **GuideLine Implementability Appraisal (GLIA) Tool**
 - Shiffman, et al, Yale Center for Medical Informatics
- **Kaiser Permanente and NHLBI Pilot Projects**
 - Modifications to GLIA Questions
 - Validation & Assessment of GLIA Questions
 - Tools for GLIA Appraisals
 - Implementation of GLIA in Kaiser Permanente
 - Perceived Benefits & Issues

Additional GLIA Questions

KP & NHLBI Parallel Processes

➤ Global Dimension

- Are the recommendations prioritized by clinical importance, in relation to other recommendations within the guideline pertaining to the same patient population?
- Within the scope and eligible patient population for the guideline, are the recommendations reasonably comprehensive, i.e., without clinically important gaps?

➤ Apparent Validity Dimension

- Is the balance between benefits and harms explicitly addressed?
- Has the cost-effectiveness of the recommended action been addressed? If cost-effectiveness was not or cannot be determined, this should be explicitly stated in the rationale
- Does the cited evidence support the recommendation and the language of the recommendation?

➤ Novelty/Innovation Dimension

- Is the recommendation consistent with payor expectations?

Validation & Assessment of GLIA Questions KP & NHLBI Parallel Processes

- Global, Decidability & Executability Dimensions Exempt
- Computability Dimension Left as a Local Implementation Issue
- Sample Recommendations Appraised From:
 - ATP 3 Dyslipidemia Guideline
 - JNC 7 Hypertension Guideline
 - AHA Coronary Artery Disease Guideline
 - Kaiser Permanente Dyslipidemia Guideline

Validation & Assessment of GLIA Questions KP & NHLBI Parallel Processes

➤ Main Learnings:

- Method for doing GLIA appraisal (Excel) was too cumbersome
 - Required to propagate multiple modifications
 - Instructions hard to understand
 - Difficult to collate and adjudicate responses
- Existing GLIA questions were reasonably comprehensive and potentially useful in exposing barriers to implementation
- Led to adoption of the eGLIA tool, and small modifications or extensions to GLIA questions
 - Modifications in Word document supplement to eGLIA

Modifications to GLIA Questions

Modified GLIA Questions

Modified Questions Highlighted in Yellow, with Additions/Alterations in **Bold Font**

GLOBAL CONSIDERATIONS

1. Do the organization(s) and author(s) who developed the guideline have credibility with the intended users of the guideline?
2. **Are the scope of the guideline and 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? **Are the recommendations prioritized by clinical importance, in relation to other recommendations within the guideline pertaining to the same patient population?**
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.? **Within the scope and eligible patient population for the guideline, are the recommendations reasonably comprehensive, i.e., without clinically important gaps?**

Modifications to GLIA Questions

APPARENT VALIDITY

19. Is the justification for the recommendation stated explicitly? **Is the balance between benefits and harms explicitly addressed? Has the cost-effectiveness of the recommended action been addressed? If cost-effectiveness was not or cannot be determined, this should be explicitly stated in the rationale**
20. Is the quality of evidence that supports the recommendation explicitly stated? **Does the cited evidence support the recommendation and the language of the recommendation?**

NOVELTY/INNOVATION

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.

FLEXIBILITY

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 comorbid conditions?

Implementing GLIA Appraisals Kaiser Permanente Processes

➤ Participants

- Clinical Lead(s)
- Methodologist
- Project Manager
- Analyst(s) optional

➤ Training

- Walk-through of GLIA appraisal on one recommendation under consideration, by experienced user

Implementing GLIA Appraisals Kaiser Permanente Processes

➤ Appraisals

- Independent appraisals by Clinical Lead(s) & Methodologist on all existing Problem Formulations, Rationales & Recommendations under review
- Adjudication of discrepancies
- Proposed remedies for exposed potential barriers to implementation discussed by entire Lead Team
 - List of potential barriers & proposed remedies used to guide revisions to Problem Formulations, Rationales & Recommendations
- Re-assessment of revised Recommendations not routinely done

eGLIA User Interface

Attach Guideline Files

GLIA [Instructions](#) [Guideline file](#) [General Instructions](#) [Selection page](#) [Summary](#) [log out](#)

2008 KP Coronary Artery Disease, version 2

Rec	Decidability	Executability	Workflow	Format	Measures	Validity	Innovation	Flexibility	Computability
BB	complete	complete	complete	complete	complete	complete	complete	complete	complete
Statin	complete	complete	complete	complete	complete	complete	complete	complete	complete
Stent 1	complete	complete	complete	complete	complete	complete	complete	complete	complete
Stent 2	complete	complete	complete	complete	complete	complete	complete	complete	complete
Stent 3	complete	complete	complete	complete	complete	complete	complete	complete	complete
Warf ASA	complete	complete	complete	complete	complete	complete	complete	complete	complete

[Review your GLIA global dimension evaluation](#)

[YCMDI, 2005](#)

[Log out](#)

Navigate Recommendations
& Dimension Appraisals

Recommendation Text

2008 KP Coronary Artery Disease, version 2, Dimension **Decidability**

Recommendation BB: For CAD patients, non-intrinsic sympathomimetic activity (non-ISA) beta-blocker therapy is recommended, unless contraindicated. Consensus-based Note: Drugs without ISA are atenolol, betaxolol, bisoprolol, carvedilol, labetalol, nadolol, metoprolol, propranolol, and timolol. Drugs with ISA are acebutolol, and pindolol.

GLIA item

8 Would the guideline's intended audience consistently determine whether each condition in the recommendation has been satisfied?

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?

Appraisal

Yes No

NA ?

Reset

Yes No

NA ?

Reset

Yes No

NA ?

Reset

Comments (and flag item for discussion)

CAD is not explicitly defined, but there are a number of subcategories discussed in the PF. Contraindications are not specified

"No," "?," or Comments
Flags Item for Discussion

"Yes" or "NA"
Indicates No Issues

GLIA Questions

At first recommendation
At first dimension
Main Menu
Next Dimension
Next Recommendation

[YCMD, 2005](#)

[Log out](#)

Breast Cancer Screening Guideline Version 2008 v2 Dimension: Executability

Recommendation 1: Recommendation #1: Breast Cancer Risk Factors 1. Asymptomatic women are considered to be at high risk if they have one or more of the following risk factors: □ Personal history of breast cancer (including ductal carcinoma in situ). (Consensus-based) □ Breast biopsy showing atypical hyperplasia or lobular neoplasia (lobular carcinoma in situ). (Evidence-based: B) □ First-degree relative diagnosed with breast cancer. *(Evidence-based: B) □ Women who have been tested and found to have a clinically significant alteration in a BRCA gene associated with increased risk for the development of breast cancer, or who have a first-degree relative who has been tested and found to have such an alteration, or a first- or second degree relative with early-onset (diagnosis before age 50) breast cancer and/or ovarian cancer (at any age). (Consensus-based) □ Prior chest radiation therapy. (Consensus-based) Footnote: *(First-degree relative = parent, sibling, or child; Second-degree relative = aunt, uncle, grandparent, niece, nephew, or half sibling (National Cancer Institute, 2006(1))

Item	Tally	Decision	Report to authors
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.	Yes: 0 No: 2 NA: 0 q: 0	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA <input type="radio"/> Clear	<div style="border: 2px solid black; padding: 5px;"><p>Davino(no): The recommendation as written is not actionable. Possible rephrase: Identify high risk in asymptomatic women with one of more of the following risk factors:</p><p>schottinger(no): First, you have to take a family history, including of genetic alterations. Documentation of that in charts is exceedingly rare.</p></div> <p>Davino (yes) schottinger (yes)</p>
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?	Yes: 2 No: 0 NA: 0 q: 0	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA <input type="radio"/> Clear	

Final Decision

At first recommendation

- Previous Dimension
- Main Menu
- Next Dimension
- Next Recommendation

KP GLIA Appraisal Report

Suggested Remedy

GLIA Appraisal Report: 2008 KP Coronary Artery Disease

Recommendation Statin:

Dyslip R#22: In patients with acute coronary syndrome, treatment with a statin should be initiated as soon as possible regardless of baseline LDL-C. Consensus-based

	GLIA Item	Specifics	Suggested Remedy
7	8	The guideline's intended audience can not consistently determine whether each condition in the recommendation has been satisfied.	Actually, this recommendation isn't in the 2008 CAD GL. For this ACS recommendation, the only thing that might be missing is a definition of ACS def of ACS
8	19	The justification for the recommendation is not stated explicitly.	Yes, in Dyslipidemia. Cost-effectiveness not explored. Harms not explicitly explored, but presumed to be far outweighed by benefits. Will presumably appear in the discussion.
9	25	The recommendation does not consider coincident drug therapy and common co-morbid conditions.	But may not be applicable. Are there any situations where statins would not be given? Allergy? Contraindications?
10	26	There is no explicit statement by the guideline developer regarding the strength of this recommendation.	Allergy or Intolerance. (refer to the Dyslipid med. Table) Consider creating a medication table for CAD GL (revise regional ones) Note: consider having a uniform format for med tables. Contact Gary Besinque in Pharmacy for his help.
11	31	Is it not clear by what means a recommended action can be executed in an electronic setting.	Not as explicit as it could be. The wording does not follow the Common Methodology, so strength of recommendation is not easy to infer, except by the 'Consensus-Based' label.
12			Change the wording to match the standard wording, strongly recommend or recommend.
			Defer to regional implementation

Kaiser Permanente Experience Perceived Benefits & Issues with GLIA

- Time to do Appraisals
 - Initially ~30 minutes per Recommendation
 - Dropped to ~5 minutes with experience
- Uniformly Felt to be Useful to Expose Potential Barriers to Implementation
 - 8 Guidelines, as of June, 2010
 - ~50 Problem Formulations
 - ~60 Recommendations
- Now a Standard Part of Guideline Development

Summary

- Only a Few Modifications to GLIA Were Sufficiently Useful to Retain
- eGLIA is an Efficient Platform to do GLIA Appraisals
- Efficient Training and Implementation Workflows Can Be Devised
- GLIA Was Useful to Expose Potential Barriers to Implementation

Summary

➤ Conclusion:

- Appraisal of potential barriers to implementation should be a routine part of guideline development
- GLIA is a useful tool for appraisal of implementability
 - eGLIA is an efficient platform

➤ Next Steps:

- Improve efficiency in GLIA appraisals
- Explore feasibility & utility of appraisals on revised or new Recommendations
- Explore appraisals outside the Guideline Development Team
- Explore enhancements to GLIA & eGLIA

Implementing GLIA Kaiser Permanente & NHLBI Experience



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