

**AMERICAN ACADEMY OF ORTHOPAEDIC
SURGEONS**

**GUIDELINE PROCESS PROCEDURE
FOR
UPDATING EXISTING
EVIDENCE –BASED CLINICAL PRACTICE
GUIDELINES**

UPDATING EXISTING AAOS EVIDENCE BASED CLINICAL PRACTICE GUIDELINES

1.0 PURPOSE

The purpose of this document is to outline the procedures for updating existing Evidence-based clinical practice guidelines. Since changes in healthcare are rapid, AAOS must consider this fluid environment and be prepared to update guidelines as important changes occur.

2.0 SCOPE

This procedure applies to all guidelines developed by the American Academy of Orthopedic Surgeons Guidelines Unit. This procedure is also applicable to the physician workgroups, committee members, and council members who anchor the development process.

3.0 RESPONSIBILITIES

- 3.1 The CPG Manager and EBM Coordinator are responsible for identifying guidelines for update review and composing a summary report for the Guidelines Oversight Committee.
- 3.2 The Medical Librarian is responsible for running an updated literature search.
- 3.3 GOC reviews guidelines eligible for updating and instructs which guidelines to update and the size of the physician work group that will be assigned to update the guideline.
- 3.4 GOC, the EBPC, the Council on Research and Quality, and the AAOS Board of Directors vote whether to approve all updated guidelines.

4.0 APPLICATION

- 4.1 The intent of this procedure is to ensure that all AAOS Clinical Practice Guidelines are current, periodically reviewed and updated (or sunsetted) per the directions of AAOS BOD.
- 4.2 The continuous review and updating of AAOS Clinical Practice Guidelines ensures all AAOS approved and supported documents are accurate, current, and reflective of the Academy's high standards.

5.0 REFERENCES

- 5.1 Instructions for Updating Existing AAOS Guidelines (Appendix I)
- 5.2 Guideline Unit Report to GOC (Appendix I)
- 5.3 Guideline Topic Nomination Form (Appendix II)

6.0 SUMMARY OF METHODS

- 6.1 The CPG Manager or EBM Coordinator identifies guidelines considered for update.
- 6.2 The Medical Librarian runs an updated literature search for identified guidelines.
- 6.3 The CPG Manager or EBM Coordinator draft a Guideline Update Report for GOC.
- 6.4 GOC reviews guidelines eligible for update and, based upon a number of criteria, decide if it is necessary or feasible to update a guideline. (See Appendix II)
- 6.5 GOC determines the size of the work group to oversee the guideline update if necessary.
- 6.6 The updated CPG must be approved sequentially by GOC, the Evidence Based Practice Committee, the Council on Research and Quality and the AAOS Board of Directors.

7.0 APPLICABLE SOFTWARE

- 7.1 Microsoft Office (Word) 2007
- 7.2 Reference Manager 12

8.0 ESSENTIAL REQUIREMENTS

- 8.1 It is essential that additional studies identified by the update search be reviewed, compared to the new or original inclusion criteria, and included in the guideline if they meet the inclusion criteria.

9.0 PRECAUTIONS

- 9.1 The updated Guideline development timeline should consider the volume of newly identified studies as well as the meeting calendar for the AAOS Board of Directors.

10.0 PROCEDURE

10.1 Lifetime of a Guideline

- 10.1.1 AAOS clinical practice guidelines are reviewed every five years in accordance with the criteria set forth by the National Guidelines Clearinghouse.
- 10.1.2 Each year the CPG Manager, EBM Coordinator or an appropriate designee identify the guidelines that will be considered for update by GOC. The CPG Manager lists all guidelines that are five years post-approval of the BOD.

10.1.3 Once eligible guidelines are identified for review, the Medical Librarian conducts a preliminary search using the original search terms and criteria on PubMed and Embase.

10.1.4 Based on the results of the literature search, the CPG Manager or appropriate designee reviews the guideline to determine the following:

- Are additional studies found that were not published at the time of the original search?
- Are additional systematic reviews or randomized control trials found that support specific guideline recommendations?
- Are conflicting findings identified in the additional studies that contradict any guideline recommendations?
- Are new technologies or treatments emerging that could potentially impact guideline recommendations and therefore medical practice?
- Is new information available concerning harms and/or benefits that may have impact on the current AAOS guideline recommendations or conclusions?

10.1.5 Based on these questions, a brief summary report is written for GOC. The report identifies when and what recommendations within a guideline were previously updated (if any) and the date(s) of those updates. The report also summarizes the additional studies found and the impact they may have on the guideline recommendations.

10.2 Indications For Revisions

10.2.1 The GOC reviews the guidelines eligible for updating and the corresponding report submitted by the CPG Manager or designee.

10.2.2 GOC will consider the following when determining which guidelines will be updated:

- Is the newly published information likely to reverse a recommendation?
- Is the newly published information likely to change the grade of recommendation in the existing guideline?
- Are potential new topics, nominated for guideline development, more important to the AAOS membership? (GOC will evaluate the value of updating a published guideline against potential new topics for guideline development.)
 - Should this guideline topic have been initially developed?
 - Did this guideline topic spur additional high-quality research from the specialty societies or the AAOS membership?
 - Did this guideline topic clarify practice or resolve an area of controversy?
 - Guidelines that contain 50% or greater of its recommendations as consensus (expert opinion) or inconclusive generally should not be updated.

- It is highly unlikely sufficient high-quality new literature will have been published to justify a full update of these guidelines.
- In these cases, the guidelines should be evaluated for updating in 10 years or, if GOC does not identify this topic as vital to the membership, it should be sunsetted.

10.2.3 Following GOC review and consensus, GOC determines which of the following options of updating will be applied to a guideline:

- Re-release: The guideline will be re-released without modification but with an introductory page and supporting information that explains why no update is warranted at this time. The re-released guideline will be valid for five years.
- Update: The guideline will undergo an update. This can be a partial review of the recommendations in the guideline or it can be a complete rewrite of the entire recommendation list.¹
- The guideline will be withdrawn.² This would be the option if the original guideline evidence contained 50% or more consensus or inconclusive recommendations. No additional work will be completed on this guideline; AAOS will not continue to support this guideline. This guideline topic should not be considered for development for a minimum of 10 years unless the preliminary literature search indicates technology or other changes that directly affect the evidence base for the topic.

10.2.4 Based on the review and consensus of GOC, the GOC Chair notifies the CPG Manager of the status of each guideline that was eligible for updating.

10.2.5 GOC provides a prioritized list of the guidelines to be updated for the calendar year (see Appendix I: Forms - Instructions for Updating Guidelines).

10.2.6 The GOC Chair instructs the CPG Manager as to the size of the work group, if any, that will be convened to update a guideline.

10.2.6.1 If GOC deems it necessary, an abbreviated work group of five or less members is convened for a partial or selective review of a guideline. This abbreviated work group may contain a maximum of one member from the original work group. GOC determines if the updated guideline requires enough editing to be counted as one-half or

¹ If a guideline is completely revised it will be considered a new guideline

² If a guideline is outdated, the AAOS will withdraw the guideline and discontinue support of the document.

one guideline when the number of new guideline drafts produced by the AAOS Guidelines Unit for the calendar year is tallied.

10.2.6.2 In rare cases, a complete work group of six to eight members is convened if a guideline is substantially rewritten because a change in standard practice is indicated.

10.2.6.3 If GOC indicates a guideline must be completely rewritten, a full physician work group is convened and the guideline is developed following all procedures for new guideline development. These extensively updated guidelines are identified as a new guideline in the number of guideline drafts produced by the AAOS Guideline Unit for the calendar year.

10.2.6.4 When any guideline is updated and a complete work group is convened, a maximum of two members of the original work group are invited to participate on the work group panel. Generally, the Vice-Chair will be invited to chair the updating committee and he/she will have the option of retaining one member of the original work group. This restriction promotes transparency, enhances reproducibility and minimizes bias.

10.3 Guideline Update

10.3.1 AAOS guideline updates are completed based on the quality and quantity of additional studies found in the preliminary library search and the potential impact of the studies on AAOS guideline recommendations.

10.3.2 An update is defined as reproducing the original search in the elapsed time since publication. The additional studies identified are reviewed and included based on the original inclusion criteria.

10.3.3 Grades of a recommendation will not be changed and additional analyses will not be completed if:

- No new studies are identified to address a recommendation.
- Few high quality studies (Level I or II) are identified in the searches and the reported results are unlikely to overturn the existing recommendations or modify their grades.
- If the additional studies are of lower quality than the evidence the existing recommendation is based upon.

10.3.4 Grades of recommendation may change and additional analyses be completed if additional high quality studies (Level I and Level II) are identified in the searches and meta-analyses for interventional studies are recalculated.

- 10.3.5 The Chair of GOC, the guideline work group chairperson, and/or the guideline workgroup that was designated to assist the Guidelines Unit in updating the published guidelines approve the results of the library search, list of additional studies, additional evidence tables and recalculated analyses using the modified nominal group technique for voting on guidelines recommendations.
- 10.3.6 The edited document, new literature search with clearly irrelevant articles eliminated, and any updated guideline content is submitted sequentially for approval to GOC, the Evidence Based Practice Committee, the Council on Research and Quality and the AAOS Board of Directors.
- 10.3.7 Updated guidelines contain the following disclaimers:
- Re-release: This guideline is greater than 5 years old and is reviewed every five years. New studies have been published since this guideline was developed, however the AAOS has determined that these studies are not sufficient to warrant changing the guideline at this time. The information contained in this guideline provides the user with the best evidence available.
 - Update: This guideline is greater than 5 years old and is reviewed every fifth year. New studies have been published since this guideline was developed that warranted updating X recommendations: LIST HERE. The AAOS has determined that the remaining recommendations did not warrant updating and these recommendations remain current and reflect the best available evidence.

11.0 CHAIN OF APPROVAL

Approved By:

Charles M. Turkelson Ph.D.
AAOS Director of Research and Scientific Affairs

Janet L. Wies MPH
AAOS Clinical Practice Guidelines Manager

Signatures available upon request.

APPENDIX I:

**INSTRUCTIONS FOR UPDATING EXISTING
AAOS EVIDENCE –BASED CLINICAL PRACTICE
GUIDELINES**

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I. INTRODUCTION

Well-defined processes are an integral part of evidence-based medicine. The intent of these processes is to insure that relevant data are comprehensively and objectively examined. The processes used should be transparent, so that users of an evidence-based guideline can verify that any given document was objectively prepared.

Developing guidelines based on the best available evidence is not however, the end of the process. Rapid changes are an accepted norm in healthcare. This includes changes in practice, healthcare technologies, and pharmacology. All guideline developers must consider this fluid environment and they must be prepared to update current guidelines as important changes occur.

II. PROCESSES

LIFETIME OF A GUIDELINE

AAOS clinical practice guidelines will be reviewed every three to five years. Each year the AAOS Clinical Practice Guideline Manager, Evidence-based Medicine Coordinator or an appropriate designee will identify the guidelines that will be considered for update by the AAOS Guidelines Oversight Committee (GOC). The Guidelines Manager will list all guidelines that are three to five years post publication or post updating.

A. LIBRARY SEARCH

Once eligible guidelines are identified for review, the Medical Librarian will conduct a preliminary search using the original search terms and criteria on PubMed and Embase.

B. LITERATURE REVIEW

Based on the results of the literature search, the AAOS Guidelines Manager or appropriate designee will review the guideline to determine the following:

1. Were additional studies found that were not published at the time of the original search?
 - a) Are additional systematic reviews or randomized control trials found that support specific guideline recommendations?
 - b) Are conflicting findings identified in the additional studies that contradict any guideline recommendations?^{1,2}
2. Are new technologies or treatments emerging that could potentially impact guideline recommendations and therefore medical practice?³
3. Was new information identified concerning harms and/or benefits that may have significant impact on the current AAOS guideline recommendations or conclusions?^{1,2}

Based on these questions, a brief summary report will be written for GTOC. The report will identify when and what recommendations within a guideline were previously updated (if any) and the date(s) of those updates. The report will also summarize the

additional studies found and the impact they may have on the guideline recommendations. (Appendix A) ^{1,2,3}

C. INDICATIONS FOR REVISIONS

The GOC will review the guidelines eligible for updating and the corresponding report submitted by the AAOS Guideline Manager or designee. “A full review of a guideline after a fixed time period is not always appropriate as new evidence is published at different rates in different fields. It also imposes a workload for future years that may not be achievable in practice.” ³ Therefore, GOC will consider the following when determining which guidelines will be updated:

1. Is the newly published information likely to reverse a recommendation?
2. Is the newly published information likely to change the grade of recommendation in the existing guideline?
3. Are potential new topics, nominated for guideline development, more important to the AAOS membership? GOC will evaluate the value of updating a published guideline against potential new topics for guideline development.³

Following GOC review and consensus, GOC will determine which of the following options of updating will be applied to a guideline: ^{3,4}

- The guideline will be re-released without modification but with an introductory page and supporting information that explains why no update is warranted at this time. The re-released guideline will be valid for three years.
- The guideline will undergo an update. This can be a partial review of the recommendations in the guideline or it can be a complete rewrite of the entire recommendation list.
- The guideline will be withdrawn. (No additional work will be completed on this guideline; AAOS will not continue to support this guideline.)

Based on the review and consensus of the Guidelines and Technology Oversight Committee, the GOC Chair will notify the AAOS Clinical Practice Guidelines Manager of the status of each guideline that was eligible for updating. GOC will provide a prioritized list of the guidelines to be updated for the calendar year. The GOC Chair will also instruct the AAOS Clinical Practice Guidelines Manager as to the size of the work group, if any, that will be convened to update a guideline.

If GOC deems it necessary, an abbreviated work group of five or less members will be convened for a partial or selective review of a guideline. GOC will determine if the updated guideline will require enough editing to be counted as one-half or one guideline when the number of new guideline drafts produced by the AAOS Guidelines Unit for the calendar year is tallied.

In rare cases, a complete work group of six to eight members will be convened if a guideline is substantially rewritten because a change in standard practice is indicated. If GOC indicates that a guideline must be completely rewritten, a full physician work group will be convened and the guideline will be developed following all procedures for new guideline development. These extensively updated guidelines will be identified as a new guideline in the number of guideline drafts produced by the AAOS Guideline Unit for the calendar year.

D. GUIDELINE UPDATE

AAOS guideline updates will be completed based on the quality and quantity of additional studies found in the preliminary library search and the potential impact of the studies on AAOS guideline recommendations.

An update is defined as reproducing the original search in the elapsed time since publication. The additional studies identified will be reviewed and included based on the original inclusion criteria.

Grades of a recommendation will not be changed and additional analyses will not be completed if:

1. No new studies are identified to address a recommendation.
2. Few high quality studies (Level I or II) are identified in the searches and the reported results are unlikely to overturn the existing recommendations or modify their grades.
3. If the additional studies are of lower quality than the evidence the existing recommendation is based upon.

Grades of recommendation may be changed and additional analyses will be completed if additional high quality studies (Level I and Level II) are identified in the searches and meta-analyses for interventional studies are recalculated.

The Chair of GOC, the guideline work group chairperson, and/or the guideline workgroup that was designated to assist the Guidelines Unit in updating the published guidelines will approve the results of the library search, list of additional studies, additional evidence tables and recalculated analyses using the modified nominal group technique for voting on guidelines recommendations.

The edited document, new literature search with clearly irrelevant articles eliminated, and any updated guideline content will be submitted sequentially for approval to GOC, the Evidence Based Practice Committee, the Council on Research and Quality, and the AAOS Board of Directors.

Updated guidelines will contain the following disclaimers: ⁵

1. This guideline is greater than 5 years old and is reviewed every three years. New studies have been published since this guideline was developed, however the AAOS has determined that these studies are not sufficient to warrant changing the

- guideline at this time. The information contained in this guideline provides the user with the best evidence available at the time this guideline was published.
2. This guideline is greater than 5 years old and is reviewed every third year. New studies have been published since this guideline was developed that warranted updating X recommendations: LIST HERE. The AAOS has determined that the remaining recommendations did not warrant updating and these recommendations remain current and reflect the best available evidence at this time.

Note 1: If a guideline is completely revised it will be considered a new guideline.

Note 2: If a guideline is outdated, the AAOS will withdraw the guideline and discontinue support of the document.

REFERENCES

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5. The American College of Chest Physicians, Health Policy and Evidence-based Medicine; Guideline Review and Ranking System. <http://www.chestnet.org/education/hsp/guidelinesProducts.php#> Retrieved on June 30, 2008.

III. APPENDIX I
GUIDELINE UNIT REPORT TO GOC^{1, 2, 3}

GUIDELINE: _____

Previously Updated: _____

Partial Complete

If partially updated, list recommendations that were edited: _____

CURRENT RECOMMENDATIONS TO BE CONSIDERED FOR UPDATING:

ORIGINAL SUPPORTING DATA:

NEW FINDINGS:

SOURCE OF NEW EVIDENCE:

IMPACT ON RECOMMENDATION/GUIDELINE:

Opposing findings

Substantial Harm

Superior new treatment

Important change (explain)

**GUIDELINES OVERSIGHT COMMITTEE INSTRUCTIONS FOR UPDATING
GUIDELINES**

PRIORITIZED LIST OF GUIDELINES ELIGIBLE FOR UPDATING

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Size of work group assigned for each guideline and additional details or instructions:

IV.APPENDIX II

Topic Prioritization Matrix

The AAOS Guidelines and Technology Oversight Committee will prioritize guideline topics by answering the following questions about each guideline:

1. Does the health problem in question carry a high individual or population burden of morbidity, mortality, or disability?
2. Does the health problem and/or its diagnosis and/or treatment carry a high unit or aggregate cost?
3. Are there substantial variations in the diagnosis and/or treatment of the health problem?
4. Are there existing guidelines on this topic? If so, will a newly developed guideline have a meaningful impact on clinical decision-making/clinical outcomes and/or reduce practice variation, and/or be of significant benefit to AAOS members?
5. Are there sufficient research findings available upon which to base a clinical practice guideline?
6. Is there substantial public or political demand for this practice guideline?
7. Is performing this guideline feasible with current AAOS resources?

To address these questions, each member of the Committee will complete the following matrix by answering “yes” or “no” in each of its cells. Then vote on whether to pursue a guideline by using the completed tables.

Guideline Topic	High Disease Burden?	High Cost?	Practice Variation?	No Existing Guidelines?	Sufficient Research?	Substantial Public or Political Demand?	Feasible?
<i>Topic 1</i>							
<i>Topic 2</i>							
<i>Topic 3</i>							
<i>Topic 4</i>							
<i>Topic 5</i>							

