AAOS
AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS

Clinical Practice Guideline for the Management of Hip Fractures in Older Adults

Review Period Report

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Overview of the Review Period

The reviews and comments related to this clinical practice guideline are reprinted in this document and posted on the AAOS website. All reviewers are required to disclose their conflict of interests.

Review Process:

AAOS contacted 12 organizations with content expertise to review a draft of the clinical practice guideline during the three-week peer review period in September and October of 2021.

Additionally, the draft was also provided to members of the AAOS Board of Directors (BOD), members of the Council on Research and Quality (CORQ), members of the Board of Councilors (BOC), members of the Board of Specialty Societies (BOS) and members of the Committee on Evidence-Based Quality and Value (EBQV) for review and comment.

- Thirty-two (32) individuals provided comments via the electronic structured peer review form. No reviewers asked to remain anonymous.
- All thirty-two reviews were on behalf of a society and/or committee.
- The work group considered all comments and made some modifications when they were consistent with the evidence.

Reviewer Key

Each reviewer was assigned a number (see below). All responses in this document are listed by the assigned peer reviewer's number.

Table 1. Reviewer Key

Reviewer Number	Name of Reviewer	Society/ Committee Being Represented
1	Ran Schwarzkopf	American Academy of Orthopaedic Surgeons, Key Informants Panel
2	Robert Teasdale	American Academy of Orthopaedic Surgeons, Key Informants Panel
3	Armando Miciano	American Academy of Physical Medicine and Rehabilitation
4	Roger Bartolotta	American College of Radiology
5	Justin Deen	American Association of Hip and Knee Surgeons
6	Charisse Sparks	JnJ DePuy Synthes
7	Nancy Lundebjerg	American Geriatrics Society
8	Benjamin Miller	American Academy of Orthopaedic Surgeons, Committee on Evidence-Based Quality and Value
9	Clay Spitler	Orthopaedic Trauma Association
10	Aaron Chamberlain	American Academy of Orthopaedic Surgeons, Committee on Evidence-Based Quality and Value
11	Mriganka Singh	American Geriatrics Society
12	Phillip Magidson	American College of Emergency Physicians
13	Wilford Gibson	American Academy of Orthopaedic Surgeons, Key Informants Panel
14	Megan Sorich	American Academy of Orthopaedic Surgeons, Key Informants Panel

15	Julie Dodds	American Academy of Orthopaedic Surgeons
16	Valerae Lewis	American Academy of Orthopaedic Surgeons, Board of Directors
17	Jason Strelzow	Orthopaedic Trauma Association
18	Matthew Abdel	American Academy of Orthopaedic Surgeons, Board of Directors
19	Katren Tyler	American Academy of Orthopaedic Surgeons, Key Informants Panel
20	Jeffrey Geller	American Academy of Orthopaedic Surgeons, Key Informants Panel
21	James Barber	American Academy of Orthopaedic Surgeons, Board of Councilors

Reviewer Demographics

Table 2: Reviewer Demographics

Reviewer Number	Name of Reviewer	Primary Specialty	Work Setting
1	Ran Schwarzkopf	Adult Hip	Academic Practice
2	Robert Teasdale	Other	Private Group or Practice
3	Armando Miciano	Rehab/Prosthetics and Orthotics	Private Group or Practice
4	Roger Bartolotta	Other	Academic Practice
5	Justin Deen	Total Joint	Academic Practice
6	Charisse Sparks	Trauma	Other
7	Nancy Lundebjerg	Other	Other
8	Benjamin Miller	Ortho/Oncology	Academic Practice
9	Clay Spitler	Trauma	Academic Practice
10	Aaron Chamberlain	Shoulder and Elbow	Academic Practice
11	Mriganka Singh	Other	Academic Practice
12	Phillip Magidson	Other	Academic Practice
13	Wilford Gibson	Adult Hip	Private Group or Practice
14	Megan Sorich	Trauma	Academic Practice
15	Julie Dodds	Sports Medicine	Private Group or Practice

16	Valerae Lewis	Ortho/Oncology	Academic Practice
17	Jason Strelzow	Trauma	Academic Practice
18	Matthew Abdel	Adult Hip	Academic Practice
19	Katren Tyler	Other	Academic Practice
20	Jeffrey Geller	Adult Hip	Academic Practice
21	James Barber	Other	Private Group or Practice

Reviewers' Disclosure Information

All reviewers are required to disclose any possible conflicts that would bias their review via a series of 10 questions (see Table 3). For any positive responses to the questions (i.e. "Yes"), the reviewer was asked to provide details on their possible conflict.

Table 3. Disclosure Question Key

Disclosure Question	Disclosure Question Details
A	A) Do you or a member of your immediate family receive royalties for any pharmaceutical, biomaterial or orthopaedic product or device?
B	B) Within the past twelve months, have you or a member of your immediate family served on the speakers bureau or have you been paid an honorarium to present by any pharmaceutical, biomaterial or orthopaedic product or device company?
C	C) Are you or a member of your immediate family a PAID EMPLOYEE for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
D	D) Are you or a member of your immediate family a PAID CONSULTANT for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
E	E) Are you or a member of your immediate family an UNPAID CONSULTANT for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
F	F) Do you or a member of your immediate family own stock or stock options in any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier (excluding mutual funds)
G	G) Do you or a member of your immediate family receive research or institutional support as a principal investigator from any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
H	H) Do you or a member of your immediate family receive any other financial or material support from any pharmaceutical, biomaterial or orthopaedic device and equipment company or supplier?
I	I) Do you or a member of your immediate family receive any royalties, financial or material support from any medical and/or orthopaedic publishers?
J	J) Do you or a member of your immediate family serve on the editorial or governing board of any medical and/or orthopaedic publication?

Table 4. Reviewer's Disclosure Information

Reviewer Number	Name of Reviewer	Disclosure Available via AAOS Disclosure System	A	B	C	D	E	F	G	H	I	J
1	Ran Schwarzkopf	Yes										
2	Robert Teasdale	No	No	No	No	No	No	No	No	No	No	No
3	Armando Miciano	No	No	No	No	No	No	No	No	No	No	No
4	Roger Bartolotta	No	No	No	No	No	No	No	No	No	No	No
5	Justin Deen	Yes										
6	Charisse Sparks	Yes										
7	Nancy Lundebjerg	No	No	No	No	No	No	No	No	No	No	No
8	Benjamin Miller	Yes										
9	Clay Spitler	Yes										
10	Aaron Chamberlain	Yes										
11	Mriganka Singh	No	No	No	No	No	No	No	No	No	No	No
12	Phillip Magidson	No	No	No	No	No	No	No	No	No	No	No
13	Wilford Gibson	Yes										
14	Megan Sorich	Yes										
15	Julie Dodds	Yes										
16	Valerae Lewis	Yes										

17	Jason Strelzow	Yes										
18	Matthew Abdel	Yes										
19	Katren Tyler	No	No	No	No	No	No	Yes	No	No	No	No
20	Jeffrey Geller	Yes										
21	James Barber	Yes										

Reviewer Responses to Structured Review Form Questions

All reviewers are asked 16 structured review questions which have been adapted from the Appraisal of Guidelines for Research and Evaluation (AGREE) II Criteria*. Their responses to these questions are listed on the next few pages.

Table 5. Reviewer Responses to Structured Review Questions 1-4

Reviewer Number	Name of Reviewer	1. The overall objective(s) of the guideline is (are) specifically described.	2. The health question(s) covered by the guideline is (are) specifically described.	3. The guideline's target audience is clearly described.	4. There is an explicit link between the recommendations and the supporting evidence.
1	Ran Schwarzkopf	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
2	Robert Teasdale	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	Armando Miciano	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Roger Bartolotta	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
5	Justin Deen	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Charisse Sparks	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
7	Nancy Lundebjerg	Neutral	Neutral	Neutral	Neutral
8	Benjamin Miller	Agree	Agree	Agree	Agree
9	Clay Spitler	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
10	Aaron Chamberlain	Agree	Agree	Agree	Agree
11	Mriganka Singh	Agree	Strongly Agree	Strongly Agree	Agree
12	Phillip Magidson	Agree	Agree	Neutral	Agree

13	Wilford Gibson	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
14	Megan Sorich	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
15	Julie Dodds	Agree	Strongly Agree	Strongly Agree	Agree
16	Valerae Lewis	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
17	Jason Strelzow	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
18	Matthew Abdel	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
19	Katren Tyler	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
20	Jeffrey Geller	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
21	James Barber	Agree	Agree	Agree	Agree

Table 6. Reviewer Responses to Structured Review Questions 5-8

Reviewer Number	Name of Reviewer	5. Given the nature of the topic and the data, all clinically important outcomes are considered.	6. The patients to whom this guideline is meant to apply are specifically described.	7. The criteria used to select articles for inclusion are appropriate.	8. The reasons why some studies were excluded are clearly described.
1	Ran Schwarzkopf	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
2	Robert Teasdale	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	Armando Miciano	Agree	Strongly Agree	Strongly Agree	Agree
4	Roger Bartolotta	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
5	Justin Deen	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Charisse Sparks	Strongly Agree	Agree	Strongly Agree	Strongly Agree
7	Nancy Lundebjerg	Neutral	Neutral	Neutral	Neutral
8	Benjamin Miller	Agree	Agree	Agree	Agree
9	Clay Spitler	Strongly Agree	Strongly Agree	Strongly Agree	Agree
10	Aaron Chamberlain	Agree	Agree	Agree	Agree
11	Mriganka Singh	Agree	Agree	Strongly Agree	Agree
12	Phillip Magidson	Agree	Agree	Agree	Neutral
13	Wilford Gibson	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
14	Megan Sorich	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree

15	Julie Dodds	Agree	Strongly Agree	Strongly Agree	Agree
16	Valerae Lewis	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
17	Jason Strelzow	Agree	Agree	Agree	Neutral
18	Matthew Abdel	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
19	Katren Tyler	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
20	Jeffrey Geller	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
21	James Barber	Agree	Agree	Agree	Agree

Table 7. Reviewer Responses to Structured Review Questions 9-12

Reviewer Number	Name of Reviewer	9. All important studies that met the article inclusion criteria are included	10. The validity of the studies is appropriately appraised.	11. The methods are described in such a way as to be reproducible	12. The statistical methods are appropriate to the material and the objectives of this guideline
1	Ran Schwarzkopf	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
2	Robert Teasdale	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	Armando Miciano	Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Roger Bartolotta	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
5	Justin Deen	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Charisse Sparks	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
7	Nancy Lundebjerg	Neutral	Neutral	Neutral	Neutral
8	Benjamin Miller	Agree	Agree	Agree	Agree
9	Clay Spitler	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
10	Aaron Chamberlain	Agree	Agree	Agree	Agree
11	Mriganka Singh	Agree	Agree	Strongly Agree	Agree
12	Phillip Magidson	Neutral	Agree	Agree	Neutral
13	Wilford Gibson	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
14	Megan Sorich	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree

15	Julie Dodds	Neutral	Neutral	Agree	Neutral
16	Valerae Lewis	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
17	Jason Strelzow	Strongly Agree	Agree	Agree	Agree
18	Matthew Abdel	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
19	Katren Tyler	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
20	Jeffrey Geller	Agree	Strongly Agree	Agree	Strongly Agree
21	James Barber	Agree	Agree	Agree	Agree

Table 8. Reviewer Responses to Structured Review Questions 13-16

Reviewer Number	Name of Reviewer	13. Important parameters (e.g., setting, study population, study design) that could affect study results are systematically addressed.	14. Health benefits, side effects, and risks are adequately addressed.	15. The writing style is appropriate for health care professionals.	16. The grades assigned to each recommendation are appropriate.
1	Ran Schwarzkopf	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
2	Robert Teasdale	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	Armando Miciano	Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Roger Bartolotta	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
5	Justin Deen	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Charisse Sparks	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
7	Nancy Lundebjerg	Neutral	Neutral	Neutral	Neutral
8	Benjamin Miller	Agree	Agree	Agree	Agree
9	Clay Spitler	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
10	Aaron Chamberlain	Agree	Agree	Agree	Agree
11	Mriganka Singh	Agree	Agree	Agree	Agree
12	Phillip Magidson	Neutral	Agree	Agree	Agree
13	Wilford Gibson	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree

14	Megan Sorich	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
15	Julie Dodds	Agree	Agree	Strongly Agree	Strongly Agree
16	Valerae Lewis	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
17	Jason Strelzow	Agree	Agree	Agree	Agree
18	Matthew Abdel	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
19	Katren Tyler	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
20	Jeffrey Geller	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
21	James Barber	Agree	Neutral	Agree	Agree

Reviewers' Recommendation for Use of this Guideline in Clinical Practice

Would you recommend these guidelines for use in clinical practice?

Reviewer Number	Name of Reviewer	Would you recommend these guidelines for use in clinical practice?
1	Ran Schwarzkopf	Strongly Recommend
2	Robert Teasdale	Strongly Recommend
3	Armando Miciano	Strongly Recommend
4	Roger Bartolotta	Strongly Recommend
5	Justin Deen	Strongly Recommend
6	Charisse Sparks	Strongly Recommend
7	Nancy Lundebjerg	Recommend
8	Benjamin Miller	Strongly Recommend
9	Clay Spitler	Strongly Recommend
10	Aaron Chamberlain	Recommend
11	Mriganka Singh	Strongly Recommend
12	Phillip Magidson	Recommend
13	Wilford Gibson	Strongly Recommend
14	Megan Sorich	Strongly Recommend

15	Julie Dodds	Strongly Recommend
16	Valerae Lewis	Strongly Recommend
17	Jason Strelzow	Strongly Recommend
18	Matthew Abdel	Strongly Recommend
19	Katren Tyler	Strongly Recommend
20	Jeffrey Geller	Strongly Recommend
21	James Barber	Strongly Recommend

Reviewer Detailed Responses and Editorial Suggestions

Reviewer #1, Ran Schwarzkopf, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
1	Ran Schwarzkopf, M.D.	American Academy of Orthopaedic Surgeons, Key Informants Panel	A. None.

Workgroup Response to Reviewer #1

Dear Ran Schwarzkopf,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. No comment to address.

Reviewer #2, Robert Teasdale, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
2	Robert Teasdale, M.D.	American Academy of Orthopaedic Surgeons, Key Informants Panel	A. None.

Workgroup Response to Reviewer #2
Dear Robert Teasdale, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. No comment to address.

Reviewer #3, Armando Miciano, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
3	Armando Miciano, M.D.	American Academy of Physical Medicine and Rehabilitation	A. The main strength of said hip fracture management clinical practice guideline (CPG) is its applicability, i.e. it described facilitators and barriers to its application (e.g. acceptability and feasibility), potential resource implications of applying the recommendations have been considered. It lists vital outcomes (e.g. functional recovery, quality of life, and return to community) but it lacks in provision of the specific "tools and monitoring and/or auditing criteria (per AGREE II measure)" i.e. need recommendations on specific patient-reported outcomes (PRO) and performance-based assessments (PBAs). B. The other strengths of this CPG are its: scope and purpose; rigor of development; and, clarity of presentation. C. The CPG on Management of Hip Fractures in the Elderly should be highly recommended for its ability to provide health outcomes (e.g. functional recovery, quality of life) related to hip fracture management.

Workgroup Response to Reviewer #3

Dear Armando Miciano, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. The scope of our CPG addresses the management of individuals with hip fracture and was not set up to investigate how to measure patient outcomes.
B. Thank you for your positive feedback.
C. Thank you for your positive feedback.

Reviewer #4, Roger Bartolotta, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
4	Roger Bartolotta, M.D.	American College of Radiology	A. The guideline objectives and target audience are well-described. The inclusion and exclusion criteria for the literature search are appropriate. All relevant studies have been included with accurate grading of relative study strength. Final recommendations reflect the strength and relevance of the studies in the literature review. B. Page 7, Line 190: should state "Unstable" (not "Unstables"). C. Page 17, Line 602: Table 1, Row 1 (Strong) should state "Or Rec is upgraded…" (not "upgrade") in the Description of Evidence Quality column D. Page 21, Line 752: should state "Tosun". E. Page 26, Line 898: should state "five moderate strength studies" (not four) F. Page 29, Line 971: for consistent formatting with the other recommendations, the title might be better stated as "Unstable Femoral Neck Fractures -- Unipolar vs. Bipolar Hemiarthroplasty" G. Page 29, Line 989: should state "overall not significantly different between" H. Page 29, Line 994: should state "adverse events, mortality, and pain" I. Page 30, Line 1025: should state "effect" or "outcome effect" (not "affect") J. Page 32, Line 1166: should state "… for stable intertrochanteric fractures, while another moderate strength study (Varela 2009) found no difference..." K. Page 42, Line 1480: should state "8 moderate studies" (rather than XX) L. Page 43, Line 1515: should state "recruited in 2001-2003 and 2005-2010, respectively." M. Page 43, Line 1517: should state "added comprehensive care for their second cohort of study patients, which included…"

Workgroup Response to Reviewer #4

Dear Roger Bartolotta, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your positive feedback.
B. Thank you for the feedback. The guideline draft has been modified.
C. Thank you for the feedback. The guideline draft has been modified.
D. Thank you for the feedback. The guideline draft has been modified.
E. Thank you for the feedback. The guideline draft has been modified.
F. Thank you for the feedback. The guideline draft has been modified.
G. Thank you for the feedback. The guideline draft has been modified.
H. Thank you for the feedback. The guideline draft has been modified.
I. Thank you for the feedback. The guideline draft has been modified.
J. Thank you for the feedback. The guideline draft has been modified for clarity.
K. Thank you for the feedback. The guideline draft has been modified.
L. Thank you for the feedback. The guideline draft has been modified.
M. Thank you for the feedback. The guideline draft has been modified.

Reviewer #5, Justin Deen, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
5	Justin Deen, M.D.	American Association of Hip and Knee Surgeons	A. Line 144, 155, 197- Consistent use of "Upgrade/Downgrade" versus "upgraded/downgraded". B. Line 254- Consider adding Hemoglobin, Hb, or Hgb to specify to what 8g/dL is referring. C. A well-organized, comprehensive, and easy-to-read set of practical guidelines.

Workgroup Response to Reviewer #5

Dear Justin Deen, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. The guideline draft has been modified.
B. Thank you for your feedback. The amount of Hemoglobin in blood is commonly expressed in grams per deciliter (g/dl).
C. Thank you for the positive feedback.

Reviewer #6, Charisse Sparks, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
6	Charisse Sparks, M.D.	JnJ DePuy Synthes	This review was compiled on behalf of the following: • Charisse Sparks • Michael Blauth • Yuriy Grebenyuk • Sven-Olrik Streubel • Alex Wu A. Line 131- It's agreed preoperative traction should not routinely be used. It needs to be noted that pre-operative traction may be required for certain individual case with per-trochanteric fractures. B. Line 140, 783- It's suggested a deeper understanding of the impact of variables including, a shorter waiting time than 48h, to clinical outcome be considered in the future research. C. Line 221- We propose to differentiate between "pertrochanteric", and "intertrochanteric" fractures as described in the OTA/AO Foundation Fracture and Dislocation Classification Compendium 2018. Pertrochanteric fractures are classified as OTA 31.A1 and OTA 31.A2. Intertrochanteric fractures are classified as OTA 31.A3. "Intertrochanteric fractures" are equivalent with "reverse obliquity fractures". In the OTA classification, the term "stable intertrochanteric fractures" has not been utilized; one common definition outside the classification for stable intertrochanteric fractures is the absence of a fracture with or without displacement of the lesser trochanter." D. Line 232- According to the Compendium, the term "subtrochanteric" does not longer exist for the femur. Reverse obliquity fractures are equivalent with intertrochanteric fractures and "subtrochanteric fractures" belong to fractures of the upper 1/3 of the femoral shaft. This differentiation has been introduced to overcome confusion about the exact meaning of these terms. E. Line 244- It is suggested to replace "intertrochanteric" by "pertrochanteric". F. Line 300- I wouldn't consider non-operative care because in many instances impacted fracture without fixation turns displaced eventually. G. Line 301- In patients with stable (impacted/non-displaced) femoral neck fractures, hemiarthroplasty, internal fixation or non-operative care may be considered - moderate evidence

- previously: moderate evidence for operative fixation. Is there new evidence? In the summary is stated: "For the vast majority of fractures, surgical treatment is indicated and carries greater potential benefit than harm." Does that apply to stable femoral neck fractures? If so, perhaps the operative approach should be stressed more.
- Previously the following items were included: nutrition – mod evidence; intensive physical therapy – strong evidence; postoperative multimodal analgesia – strong evidence; Calcium & vitamin D – mod evidence; osteoporosis evaluation & treatment – mod evidence; MRI as advanced imaging choice – mod evidence. Certainly some of them (analgesia, intensive PT, nutrition) are still applicable. I am not sure why they were removed"

H. Line 404- The "elder patient" is defined as age 55 and older in this guideline which is very broad. Our suggestion, further definition of subgroup populations is warranted. With that refined definition, the impact of relevant comorbidities can then be investigated.
I. Line 430-431- Are more recent data or estimates available?
J. Line 454-455- In addition to sex and gender differences, consideration of the impact of racial and socioeconomic disparities in hip fracture care on future research.
K. Line 721- A "T" is missing (typo)
L. Line 746- It is known from Geriatric and Orthogeriatric literature that any type of tethering older patients may deteriorate mental confusion and trigger delirium which is the most frequent and potentially life threating complication in geriatric fracture treatment and hospitalization. This applies specifically but not exclusively to demented patients. Preoperative traction be a kind of tether and forced immobilization. Delirium is not mentioned in the list of complications and is difficult to measure. Maybe it could be added to future research topics.
M. Line 780- Colon could be deleted.
N. Line 821- It would also be important to know, which comorbidities should be improved preoperatively. To delay for surgery only makes sense for issues that may be improved preoperatively. It is also suggested to consider the impact of racial disparities to time to surgery in the future research.
O. Line 944- It's suggested to consider modern/newer generation fixation device into future research
P. Line 1154- It's suggested to consider external fixation as one of the treatment options in future research.
Q. Line 1189-1190- As mentioned earlier, "subtrochanteric fractures" are not a well-defined entity, at least according to the OTA classification. The differentiation between these 2 entities is not always comprehensible in literature. On top,

			subtrochanteric fractures are usually not considered as belonging to "hip fractures", the theme of this guideline. R. Line 1197- To my best knowledge, there are no "stable" intertrochanteric and subtrochanteric fractures, both entities are always considered as being unstable. S. Line 1218- The tip-to-apex distance may only serve as a secondary indicator of varus malreduction in A3 fractures. The TAD may be of less importance in A3 fractures compared to A1 and A2 fractures. It has been shown in literature, that avoiding varus malreduction in A3 fractures is crucial. Future research should add evidence to that question. T. Line 1248, 1257, 1261- Only A3 fractures are intertrochanteric fractures. A2 fractures are pertrochanteric fractures. U. Line 1480- A number is missing (XX moderate studies) V. Line 1617- Pertrochanteric instead of peritrochanteric W. Line 1703- A possible correlation between weight bearing instructions and an increased loss in muscle mass and muscle power in hip fracture patients should be investigated. Restrictive instructions may lead to delayed and less active mobilization and overcaution of patients. As has been shown by Kammerlander et al. (The Journal of Bone and Joint Surgery: June 6, 2018 - Volume 100 - Issue 11 - p 936-941 doi: 10.2106/JBJS.17.01222) older patients may be unable to follow instruction of limited weight bearing. In future studies, the effective weight put on the affected extremity should be continuously measured during patients' activities and over a longer postoperative time period to assess the feasibility of WB instruction. X. Considering the wide target population of age 55 and above, it's suggested to assess the opportunity of out-patient surgery for certain sub-group patients. Y. This guideline has been collectively reviewed by JnJ DePuy Synthes Medical Affairs Department, Drs. Charisse Sparks, Michael Blauth, Yuriy Grebenyuk, Sven-Olrik Streubel, and Alex Wu.

Workgroup Response to Reviewer #6

Dear Charisse Sparks, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. The guideline draft has been modified.
B. These variables can be considered for review in the scheduled CPG update.
C. Thank you for your feedback. The guideline draft has been modified.
D. Thank you for your feedback. The Rationale has been modified for clarity.
E. Thank you for your feedback. The guideline draft has been modified.
F. Commenter is expressing opinion. A PICO was specifically created to address the topic of non-operative care and as such all evidence discussing the topic was required to be reviewed and reported.
G. Yes, the change in recommendation was based on new evidence, and downgrading of previously cited evidence in the previous guideline. The new study (Wei, 2020) showed strong evidence of equipoise between non-operative care, internal fixation, and hemiarthroplasty groups for stable femoral neck fractures.
H. The average age of included populations was restricted to at least 65. While the range could include 55-year-old subjects, on average the populations were focused on older individuals. Sub-analyses can be considered in the next scheduled update.
I. Thank you for your feedback. The guideline draft has been modified.
J. These variables can be considered for review in the scheduled CPG update.
K. Thank you for your feedback. The guideline draft has been modified.
L. Thank you for your feedback. The guideline draft has been modified.
M. Thank you for your feedback. The guideline draft has been modified.
N. Thank you for your feedback. The guideline draft has been modified.
O. Thank you for your feedback.
P. Thank you for your feedback, however, it not a standard of care in the U.S. to externally fixate fracture, though it is used in other areas of the world.
Q. Thank you for your feedback. The Rationale has been modified for clarity.
R. The rationale does not imply that the subtrochanteric fracture exists in a stable pattern. It just groups both unstable intertrochanteric or peritrochanteric fractures with subtrochanteric fractures together.
S. Thank you for your feedback. The Future Research section has been modified for clarity.
T. Thank you for your feedback. The Rationale has been modified for clarity.
U. Thank you for your feedback. The guideline draft has been modified.
V. Thank you for your feedback. The guideline draft has been modified.
W. Thank you for your feedback. The guideline draft has been modified.
X. Thank you for your feedback. The topic can be considered for review in a scheduled CPG update.
Y. Thank you for your input.

Reviewer #7, Nancy Lundebjerg, M.D.

<table>
<tr><th>Reviewer Number</th><th>Reviewer Name</th><th>Society or committee you are representing</th><th>Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.</th></tr>
<tr><td>7</td><td>Nancy Lundebjerg, M.D.</td><td>American Geriatrics Society</td><td>This review was compiled on behalf of the following:
Stefan Gravenstein
Nadia Mujahid
Liron Sinvani
Lynn McNicoll
Stephanie Rogers
Mieke Deschodt
Bernardo Reyes Fernandez
<ol type="A">
Title: Since the review is specifically focused on inpatient management of hip fracture, it is recommended that the title be changed to be more precise, such as “Acute Care Management of Hip Fractures in Older Adults.” AGS recommends using the terminology “Older Adults” instead of “Elderly.” (https://agsjournals.onlinelibrary.wiley.com/doi/10.1111/jgs.14941)
Population: We did not see a clear rationale for including age groups 55+, as opposed to 65+.
We additionally hope the workgroup is considering the implications of race and ethnicity within the patient population, given the impacts those factors have on a patient’s quality of care.
Additional topics to include: The AGS/American College of Surgeons guidelines for perioperative management of older adults cover topics we suggest including in the AAOS guidelines:
capacity assessment
cognitive screening
nutritional management
medication management/Beers Criteria
decision making/advanced care planning
delirium prevention and management
functional decline prevention
https://geriatricscareonline.org/ProductAbstract/optimal-perioperative-management-of-the-geriatric-patient/CL022
We suggest that future versions of this document address the following:</td></tr>
</table>

			• Guidelines related to medical management on constipation (standard) or type of analgesia (IV Tylenol, morphine, etc.), management of urinary retention (a common post-op complication), fall risk management post-op, and guidance on time to ambulation. • Delirium. While the guidelines do include delirium within interdisciplinary team programs, given the high prevalence of delirium in hip fracture patients, a dedicated recommendation for the use of multicomponent nonpharmacologic prevention strategies (e.g., HELP) would be beneficial. • Topics such as perioperative intravenous fluids as well as minimization of indwelling bladder catheters are highly prevalent and important to this patient population but are not mentioned. F. We suggest adding a recommendation for surgical repair in patients with poor prognosis/recommendation for goals of care. G. We suggest adding expected prognosis after hip fracture (rate of 1-year mortality): https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6545641/ https://fmda.org/Journal/HipFxEditorialJAMAIM14.pdf H. This section states that surgery within 24-48 hours is optimal, but there are studies that show that compared to same-day surgery, each additional day of delay was associated with: • ↑complication rate • Respiratory • Urinary/renal • PE • Overall complications • ↑in-hospital mortality Ryan, et al. J. Orthop Trauma. Delay in Hip Fracture Surgery: An Analysis of Patient-Specific and Hospital-Specific Risk Factors. 2015 Aug;29(8):343-8. https://doi.org/10.1097/bot.0000000000000313 I. There is strong evidence in medical literature that patients undergoing hip fracture repair sooner than later will have better outcomes. The wording “may be” seems to diminish the impact of the timing of surgery. We suggest removing away the words “may be.” Timing of surgery is “strong” and not limited. J. We suggest including the HIP ATTACK Trial, which focuses on Accelerated Time to Surgery (within 6 hours). This was a large international randomized trial. https://doi.org/10.1016/s0140-6736(20)30058-1 K. We suggest adding important outcomes for older adults including anesthesia type and effect on delirium, functional outcomes, and discharge to facilities.

			L. We suggest dividing multimodal systemic anesthesia and regional anesthesia into 2 different sections. The use of gabapentin in this combination is over-used in current practice and is associated with somnolence and other negative outcomes with no strong evidence to support its use. We suggest providing a strength of recommendation of whether or not to use gabapentin specifically in multimodal regimens. M. It might be useful to specify the dosing of tranexamic acid, whether only one dose or two doses (pre- and post-op) are recommended in the literature. There is confusion at times related to this N. Tranexamic acid use is associated with risk of VTE and this should be discussed in detail. This clinical practice guideline is for hip fracture patients, and majority of these patients are at high risk of VTE given their underlying medical conditions. Recommending use of tranexamic acid in hip fracture patients without caution can lead to unfavorable and higher VTE. Consider changing the 1408 line to, "Tranexamic Acid may be considered in patients with low risk of VTE to reduce blood loss and blood transfusion in patients with hip fractures." O. This may also include hospitalists/internal medicine providers who have been trained in geriatrics in addition to geriatricians. P. We suggest adding to this line improved pain management and prevention of complications (such as falls and constipation) and management of polypharmacy. Q. The number of moderate studies is currently noted as "XX"; that will need to be updated in the final version. R. Thank you again for the opportunity to provide feedback on this clinical practice guideline.

Workgroup Response to Reviewer #7

Dear Nancy Lundebjerg, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. The work group has modified the title of this clinical practice guideline.
B. Population delineation is described in inclusion criteria section. It is also mentioned in the introduction under "Differences between the Present and Previous Guidelines".
C. While race and ethnicity were not explicitly investigated by a particular PICO question, they are important topics for readers to consider while reviewing all recommendations.
D. The PICO question included in this CPG were re-evaluated prior to beginning the systematic review process. At that time the workgroup decided to modify which PICOs were included in our final CPG and added new PICOs.
E. These topics can be considered during the future CPG update.
F. Topic can be considered for review in scheduled CPG update.
G. The rationales discuss PICO specific prognoses as appropriate.
H. The recommendation was based on evidence meeting our specific inclusion criteria. The study was excluded as we were only including RCTs for this PICO from the updated search.
I. The language was selected to meet our a priori strength and language criteria.
J. The article was excluded because it did not meet our inclusion criteria.
K. Thank you for your feedback. The guideline draft has been modified.
L. Thank you for your feedback. Since the literature search did not include information on gabapentin, we did not change the recommendation. However, the Future Research section has been modified.
M. Thank you for your feedback. Dosing of tranexamic acid continues to be controversial. In the literature reviewed, it was also somewhat controversial, with most of the studies using only IV with varied dosing.
N. While we acknowledge the concern of increased VTE risk factors due to underlying medical conditions, few studies excluded additional medical conditions and instead excluded ongoing, current, or recent VTE history within 30days. Additionally, nearly all patients in the studies received chemoprophylaxis of low molecular weight heparin. Summary statement unfortunately is based on the strength or GRADE of the evidence. Words such as "may" or "considered" are allowed with moderate or lower strength evidence, however the evidence of this PICO is strong.
O. Thank you for your feedback. Geriatric providers would include geriatricians and other providers who are trained/ treat older adults.
P. Thank you for your feedback. The guideline draft has been modified.
Q. Thank you for your feedback. The guideline draft has been modified.
R. Thank you.

Reviewer #8, Benjamin Miller, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
8	Benjamin Miller, M.D.	American Academy of Orthopaedic Surgeons, Committee on Evidence-Based Quality and Value	A. I commend the workgroup for making the statements uniform, concise, and easy to interpret. It is well written and care has been taken to justify the conclusions and decisions. Thank you for your work. B. The patients discussed are >55 yo which is younger than what many would think of as "elderly." It is not obvious who this applies to if one does not take the time to read through the intro paragraphs. Would it be more appropriate to title this "hip fractures in patients over 55 years old" since most users will look at the title and recommendations only? C. Line 145- The italic statement under the recommendations is confusing. For instance, in "surgical timing" line 145 - this appears to be describing a strength of evidence of "moderate," however this one is "limited" and the "moderate" recommendation comes from EtD not the evidence. There are many like this and some are contradictory (L198 is a downgraded strong rec) - each of these statements should be cleaned up for each guideline statement to ensure it is accurately reflecting the methodology applied to the literature search and use of EtD. D. Line 737- For the recommendations (L737) should also place the strength of evidence and similarly make sure the description matches the evidence so as not to mislead the reader. For example "Surgical Timing" (L783) is limited evidence based on the literature but that is not mentioned anywhere and the description is of moderate evidence. This is only moderate because of the EtD upgrade not because of the strength of evidence. VTE (L825) has the same issue so each recommendation should be reassessed. E. Line 1025- L1025 - should be "effect size" F. Line 1615- would be helpful to define "pertrochanteric" in the rationale

Workgroup Response to Reviewer #8

Dear Benjamin Miller, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your positive feedback.
B. Thank you for your feedback. The guideline draft has been modified.
C. Thank you for the feedback. The guideline draft has been modified for clarity.
D. Thank you for the feedback. The guideline draft has been modified for clarity.
E. Thank you for the feedback. The guideline draft has been modified.
F. Pertrochanteric femur fractures is loosely known to be OTA 31A1-3, which the readers may review in the cited literature. The cited literature did not specifically look at OTA31A3, but those fractures were included in the studies.

Reviewer #9, Clay Spitler, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
9	Clay Spitler, M.D.	Orthopaedic Trauma Association	A. Overall well organized and presented in a fashion that will be easily understood. The recommendations are in keeping with the existing literature and should continue to encourage surgeons to treat patients according to best practices.

Workgroup Response to Reviewer #9
Dear Clay Spitler,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.

Reviewer #10, Aaron Chamberlain, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
10	Aaron Chamberlain, M.D.	American Academy of Orthopaedic Surgeons, Committee on Evidence-Based Quality and Value	A. None.

Workgroup Response to Reviewer #10
Dear Aaron Chamberlain, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. No comments to address.

Reviewer #11, Mriganka Singh, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
11	Mriganka Singh, M.D.	American Geriatrics Society	A. The review of literature, the methodology adhered to in developing this clinical practice guideline appears to be in depth and thorough. The discussion under benefits and harms under each section helps the clinician choose the best course of action in discussion with the patient and family. The discussion under future area of research is also helpful to further the evidence base in the area of hip fracture management in the elderly.

Workgroup Response to Reviewer #11
Dear Mriganka Singh, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.

Reviewer #12, Phillip Magidson, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
12	Philip Magidson, M.D.	American College of Emergency Physicians	A. Under "intended users" I would spell out "other healthcare providers" a bit more clearly. B. The term "elderly" has fallen out of favor and is thought to be somewhat pejorative. Whether one agrees or disagrees with that, any guideline or article that has "elderly" in the title published in 2021 or beyond will already be considered "outdated" by those in the field before we even start reading it. Please consider using "geriatric patients" or "older adults" C. Line 801 and the tag line for "surgical timing" are not consistent. I know it places an increased burden on orthopedic surgeons to do surgery within 24 hours (as opposed to 48 hours) but the studies, as I understand them and as you have outlined in line 801, would favor the sooner the better. Line 801 should either say "48 hours" or the tag line should say "...surgery within 24-48 hours of admission..." D. Line 1395 should define "multiple settings" more clearly. Specifically, I would comment that trained emergency medicine providers should being using regional anesthesia. That's where most of these patients present and much of the initial pain management is addressed.

Workgroup Response to Reviewer #12

Dear Philip Magidson, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. The guideline draft has been modified.
B. Thank you for your feedback. The guideline draft has been modified.
C. Thank you for your feedback. The guideline draft has been modified.
D. Thank you for your feedback. The guideline draft has been modified.

Reviewer #13, Wilford Gibson, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
13	Wilford Gibson, M.D.	American Academy of Orthopaedic Surgeons, Key Informants Panel	A. The questions asked are clinically important and appropriate. The strength of recommendations are appropriate based upon the studies and evidence. The downgrades are appropriate based on evidence and sample sizes. The final recommendations are evidence based and appropriate and will help guide clinical care in the study group.

Workgroup Response to Reviewer #13
Dear Wilford Gibson, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your positive feedback.

Reviewer #14, Megan Sorich, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
14	Megan Sorich, M.D.	American Academy of Orthopaedic Surgeons, Key Informants Panel	A. The only big question that I have… I thought there was stronger evidence to get hip fx to the OR within 48 hours. I thought that would have been "strong" I was a bit surprised about that one.

Workgroup Response to Reviewer #14

Dear Megan Sorich, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. All literature meeting inclusion criteria were assessed as low quality; No RCTs were returned in the literature search.

Reviewer #15, Julie Dodds, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
15	Julie Dodds, M.D.	American Academy of Orthopaedic Surgeons, Committee on Evidence-Based Quality and Value	A. Transfusion PICO is confusing as written. Consider revision of wording.

Workgroup Response to Reviewer #15

Dear Julie Dodds, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. PICOs are written before the literature search is performed and cannot be edited after the review is complete.

Reviewer #16, Valerae Lewis, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
16	Valerae Lewis, M.D.	American Academy of Orthopaedic Surgeons, Board of Directors	A. Well written and resourced. .

Workgroup Response to Reviewer #16

Dear Valerae Lewis, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your positive feedback.

Reviewer #17, Jason Strelzow, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
17	Jason Strelzow, M.D.	Orthopaedic Trauma Association	A. Overall the Exclusion of studies could be more inclusively described although the inclusion criteria are clearly reviewed. Establishing the specific reasoning behind 1623 excluded texts may be beneficial for the readers understanding. B. Overall the structure and content of the guidelines is appropriate. I do believe there are a number of other areas where guidelines may be helpful to health care professionals including: 1) Urinary Catheter management, 2) peri-operative anticoagulation/anti-platelet therapy management.

Workgroup Response to Reviewer #17
Dear Jason Strelzow, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. Excluded literature list will be published in the e appendix.
B. Thank you for your feedback. Topic can be considered for review in scheduled CPG update.

Reviewer #18, Matthew Abdel, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
18	Matthew Abdel, M.D.	American Academy of Orthopaedic Surgeons, Board of Directors	A. None.

Workgroup Response to Reviewer #18

Dear Matthew Abdel, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. No comment to address.

Reviewer #19, Katren Tyler, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
19	Katren Tyler, M.D.	American Academy of Orthopaedic Surgeons, Key Informants Panel	A. From an Emergency Medicine perspective: Nerve block, TXA, and multidisciplinary team sections are excellent. B. Would have been great to have a section on reducing delirium in hip fracture patients. C. Would be good to see more evidence for prevention of delirium.

Workgroup Response to Reviewer #19

Dear Katren Tyler, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.
B. Topic can be considered for review in scheduled CPG update.
C. Topic can be considered for review in scheduled CPG update.

Reviewer #20, Jeffrey Geller, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
20	Jeffrey Geller, M.D.	American Academy of Orthopaedic Surgeons, Key Informants Panel	A. Overall, the CPG is well organized with a good review of the literature, and presented in a clear, meaningful way. The reader can appreciate the updated nature of the current CPG with reference to the prior review and the updates made since then. B. There was less committee consensus in this review. That is likely deliberate, but for some of the questions raised, with poor peer reviewed data, if might be helpful (but not essential) to have some areas of consensus by the committee, specifically surgical timing and weight bearing where there was no specific recommendation. C. In addition, there are multiple typographical errors that should be corrected.

Workgroup Response to Reviewer #20

Dear Jeffrey Geller, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.
B. A recommendation for surgical timing and consensus statement for weight bearing were included in the CPG.
C. Thank you for your feedback. The guideline draft has been modified.

Reviewer #21, James Barber, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
21	James Geller, M.D.	American Academy of Orthopaedic Surgeons, Board of Councilors	A. Cemented Stems: As I read this statement, there is no indication whatsoever for press-fit stems. I think this statement is a bit too strong. If there is an indication for press-fit stems in non-fracture cases, there surely is some leeway for press-fit in fracture cases. I cement almost every fracture, but occasionally for a really sick patient who needs to get out of the OR as fast as possible, I will press-fit. Is there a way to add a "consider" or something to allow the option of press-fit in some cases? B. TXA: The Benefits/Harms point out that patients were excluded who had previous thrombotic events, and that is the type of patient who I would also strongly consider holding off on TXA. I think the summary statement should be amended by adding a caution or consideration if previous thrombotic event. I am concerned this may lead to litigation by clueless attorneys.

Workgroup Response to Reviewer #21
Dear James Barber, M.D.,

Thank you for your expert review of the Management of Hip Fractures In Older Adults Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. The rationale for our statement is supported with high and moderate strength evidence. The benefits and harms are explained and address that surgical time and blood loss is lower with non-cemented stems. Additionally, Outcome Importance and Utilization addresses the variability in implant selection due to acknowledged obstacles such as cementation supplies, OR staffing, and surgeon familiarity.
B. Thank you for your feedback. While we acknowledge the concern of increased VTE risk factors due to underlying medical conditions, few studies excluded additional medical conditions and instead excluded ongoing, current, or recent VTE history within 30days. Additionally, nearly all patients in the studies received chemoprophylaxis of low molecular weight heparin. Summary statement unfortunately is based on the strength or GRADE of the evidence. Words such as "may" or "considered" are allowed with moderate or lower strength evidence, however the evidence of this PICO is strong.

Appendix A – Structured Review Form

Review Questions (REQUIRED)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The overall objective(s) of the guideline is (are) specifically described.	○	○	○	○	○
2. The health question(s) covered by the guideline is (are) specifically described.	○	○	○	○	○
3. The guideline's target audience is clearly described.	○	○	○	○	○
4. There is an explicit link between the recommendations and the supporting evidence.	○	○	○	○	○
5. Given the nature of the topic and the data, all clinically important outcomes are considered.	○	○	○	○	○
6. The patients to whom this guideline is meant to apply are specifically described.	○	○	○	○	○
7. The criteria used to select articles for inclusion are appropriate.	○	○	○	○	○
8. The reasons why some studies were excluded are clearly described.	○	○	○	○	○
9. All important studies that met the article inclusion criteria are included.	○	○	○	○	○
10. The validity of the studies is appropriately appraised.	○	○	○	○	○
11. The methods are described in such a way as to be reproducible.	○	○	○	○	○
12. The statistical methods are appropriate to the material and the objectives of this guideline.	○	○	○	○	○
13. Important parameters (e.g., setting, study population, study design) that could affect study results are systematically addressed.	○	○	○	○	○
14. Health benefits, side effects, and risks are adequately addressed.	○	○	○	○	○
15. The writing style is appropriate for health care professionals.	○	○	○	○	○
16. The grades assigned to each recommendation are appropriate.	○	○	○	○	○

Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline:

Would you recommend these guidelines for use in clinical practice? (REQUIRED)

- Strongly Recommend
- Recommend
- Would Not Recommend
- Unsure

Additional Comments regarding this clinical practice guideline?