What's New in AMA Style

Cheryl Iverson, Stacy Christiansen, and Annette Flanagin, AMA Manual of Style Committee Members

AMWA Annual Conference
November 3, 2018
Presenter Disclosures

- We are paid employees (SC, AF) or contractors (CI) for the American Medical Association, which owns the *AMA Manual of Style*.

- SC and AF are unpaid members of the Council of Science Editors short course faculty. SC serves on several CSE committees, also unpaid.

- AF is an unpaid board member of STM: International Association of of Scientific, Technical and Medical Publishers.

- Other *AMA Manual of Style* Committee Members include Lauren Fischer, Phil Fontanarosa, Tracy Frey, Brenda Gregoline, Edward Livingston, and Connie Manno (all editorial staff of the JAMA Network).
Updates to be reviewed in this session

- The stylebook revision process
- Manuscript Preparation items
- References: changes and updated examples
- Tables and figures: titles, headers, and axis labels
- Grammar, Punctuation, and Abbreviations updates
- Preferred and Correct Usage: new terms and usage examples
- Nomenclature: Updates including drugs and genetics
- Units of Measure and Numbers
- Statistics
- Mathematical Composition
- Electronic editing and workflow
- Updates to Resources and Publishing Glossary
- Corrections and pervasive errors
- Updates on authorship policies
- Data Sharing Statement
- Updates on public and open access
- How to access stylebook updates
In line with contemporary usage, we have removed the hyphen in *email* and now lowercase *internet* and *website*.

➢ In text: “Send me an email.” In titles: “How Physicians Use Email”

➢ The hyphen is retained in other *e-* compounds (eg, *e-cigarette*, *e-book*).

➢ In titles, capping of words that follow *e-* will be on the first letter of the word that follows: “State Restrictions on e-Cigarette Use”

➢ *website*, *webcam*, *webcast*, *webpage*, *the web*
Discontinuation of the death dagger

The convention of using a dagger (†) next to a name in an article byline, connected to a footnote to indicate a deceased author, has been discontinued. If desired, this information can be included in the Acknowledgment section at the end of the article.

➢ For example:

Additional Information: Coauthor John Doe, MD, died January 30, 2018.
Publisher location for books and reports will no longer be required in the next edition.

In the 11th edition, AMA style will no longer recommend including the publisher’s location for several reasons:

• Many publishers have more than 1 location and determining which location is appropriate to include can be challenging
• Location can be difficult to determine if looking at an online resource (eg, an e-book)
• Publisher location is not a necessary piece of information in retrieving the reference.
Publishers in Book Citations

Formerly:


Future style:

DOIs in Reference List

When a DOI is included for journal references, no period follows

• The ability to easily and accurately copy and paste DOIs is important.
• Because of this, a period should not be included after the DOI; the risk of the period becoming a part of the DOI itself is too great and would create problems with linking.
• Online linking is one of the key reasons to have a DOI.

In reference lists, the URL will be the **last item**, following dates posted/updated/accessed. No period follows it. This style will mirror current formatting for citations with a DOI.

Social Media References

**Facebook:** Mayo Clinic Healthy Living Facebook page. Accessed February 10, 2016. [https://www.facebook.com/mayoclinichealthylivingprogram/](https://www.facebook.com/mayoclinichealthylivingprogram/)

**Twitter:** @AMAManual. The human immunodeficiency virus is widely known by its abbreviation HIV, to the extent that AMA style no longer requires the expansion (especially true in the construction “HIV/AIDS”). Posted October 12, 2018. Accessed October 27, 2018. [https://twitter.com/AMAManual/status/1050763170825076737](https://twitter.com/AMAManual/status/1050763170825076737)

References chapter will include citation guidelines for apps, podcasts, databases, and much more


Tables and Figures: Style Update

Change to sentence-style capitalization in all elements of tables and figures (axis labels, column headings)

– Current style (cap all major words in col headings):

<table>
<thead>
<tr>
<th>United States</th>
<th>53.2 (41.5 to 67.2)</th>
<th>-42.8 (-47.1 to -37.2)</th>
<th>76.0 (44.4 to 144.2)</th>
<th>-13.3 (-13.9 to -12.6)</th>
<th>10.1 (7.5 to 12.8)</th>
<th>6.0 (-24.2 to 42.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>66.7 (48.0 to 94.3)</td>
<td>-24.3 (-33.0 to -15.2)</td>
<td>123.2 (53.3 to 289.8)</td>
<td>-12.7 (-15.8 to -9.7)</td>
<td>9.1 (5.6 to 11.8)</td>
<td>4.7 (-51.0 to 99.5)</td>
</tr>
<tr>
<td>Alaska</td>
<td>32.2 (19.0 to 49.3)</td>
<td>-32.0 (-41.2 to -22.9)</td>
<td>36.4 (7.8 to 101.6)</td>
<td>-12.0 (-14.8 to -9.1)</td>
<td>39.2 (26.5 to 53.5)</td>
<td>12.0 (-50.8 to 139.6)</td>
</tr>
<tr>
<td>Arizona</td>
<td>60.7 (40.6 to 88.9)</td>
<td>-48.4 (-54.5 to -40.8)</td>
<td>61.7 (22.9 to 164.9)</td>
<td>-12.6 (-15.4 to -9.6)</td>
<td>6.5 (3.2 to 9.3)</td>
<td>7.5 (-48.7 to 120.4)</td>
</tr>
<tr>
<td>Arkansas</td>
<td>56.0 (36.8 to 80.3)</td>
<td>-27.3 (-34.6 to -19.4)</td>
<td>78.6 (30.1 to 205.2)</td>
<td>-12.7 (-15.7 to -9.7)</td>
<td>-0.9 (-4.3 to 1.8)</td>
<td>3.1 (-49.8 to 103.7)</td>
</tr>
<tr>
<td>California</td>
<td>54.4 (36.6 to 75.6)</td>
<td>-60.5 (-67.2 to -51.3)</td>
<td>42.6 (16.3 to 117.8)</td>
<td>-12.9 (-15.8 to -9.7)</td>
<td>11.3 (8.4 to 14.5)</td>
<td>10.6 (-43.1 to 124.6)</td>
</tr>
</tbody>
</table>
Future style: all elements in sentence style (reduces confusion about which style to use where, makes long phrases easier to read)

<table>
<thead>
<tr>
<th>% (95% Uncertainty Interval)</th>
<th>High body-mass Index</th>
<th>Smoking</th>
<th>High fasting plasma glucose</th>
<th>High systolic blood pressure</th>
<th>Drug use</th>
<th>Alcohol use</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53.2 (41.5 to 67.2)</td>
<td>-42.8 (-47.1 to -37.2)</td>
<td>76.0 (44.4 to 144.2)</td>
<td>-13.3 (-13.9 to -12.6)</td>
<td>10.1 (7.5 to 12.8)</td>
<td>6.0 (-24.2 to 42.1)</td>
<td></td>
</tr>
<tr>
<td>Alabama</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.7 (48.0 to 94.3)</td>
<td>-24.3 (-33.0 to -15.2)</td>
<td>123.2 (53.3 to 289.8)</td>
<td>-12.7 (-15.8 to -9.7)</td>
<td>9.1 (5.6 to 11.8)</td>
<td>4.7 (-51.0 to 99.5)</td>
<td></td>
</tr>
<tr>
<td>Alaska</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.2 (19.0 to 49.3)</td>
<td>-32.0 (-41.2 to -22.9)</td>
<td>36.4 (7.8 to 101.6)</td>
<td>-12.0 (-14.8 to -9.1)</td>
<td>39.2 (26.5 to 53.5)</td>
<td>12.0 (-50.8 to 139.6)</td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.7 (40.6 to 88.9)</td>
<td>-48.4 (-54.5 to -40.8)</td>
<td>61.7 (22.9 to 164.9)</td>
<td>-12.6 (-15.4 to -9.6)</td>
<td>6.5 (3.2 to 9.3)</td>
<td>7.5 (-48.7 to 120.4)</td>
<td></td>
</tr>
<tr>
<td>Arkansas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56.0 (36.8 to 80.3)</td>
<td>-27.3 (-34.6 to -19.4)</td>
<td>78.6 (30.1 to 205.2)</td>
<td>-12.7 (-15.7 to -9.7)</td>
<td>-0.9 (-4.3 to 1.8)</td>
<td>3.1 (-49.8 to 103.7)</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54.4 (36.6 to 75.6)</td>
<td>-60.5 (-67.2 to -51.3)</td>
<td>42.6 (16.3 to 117.8)</td>
<td>-12.9 (-15.8 to -9.7)</td>
<td>11.3 (8.4 to 14.5)</td>
<td>10.6 (-43.1 to 124.6)</td>
<td></td>
</tr>
</tbody>
</table>
Sentence-Style Caps in Figures

• Current style

• Sentence style

![Graphs comparing birth rates before and after obstetric services loss](image-url)
Grammar Update

Singular “they”

➢ AMA Manual will join other resources, such as The Chicago Manual of Style and AP Stylebook, in permitting use of they as a singular pronoun when rewriting the sentence as plural would be awkward or unclear. [Note: the other manuals say that rewording usually is possible and always is preferable.]

“Every patient should take their medication.” Could be reworded “Patients should take their medication.”

➢ This construction can be useful in medical articles in which patient identifiability is a concern (eg, removal of gender-specific pronouns).

“The patient was adamant that they were not taking illicit substances.”
Grammar for Social Media

Scientific articles often have a life beyond their formal full-text publication, including social media such as Twitter and Facebook.

Because these posts have strict space limits (Twitter allows just 280 characters) or expectations of brevity from followers, it is usually not possible, or even desirable, to strictly adhere to grammar, punctuation, and usage norms.

However, some standards are necessary to ensure clarity.
Grammar for Social Media (cont)

In blogs and social media posts about scientific content, aim for the following:

• Use proper capitalization; capital letters do not take up more characters than lowercase.
• Use basic punctuation to help ensure clarity.
• Avoid texting jargon, such as “U” for “you” or “L8” for “late”; these abbreviations are too colloquial (even, in some cases, regional) and may not be widely understood.
• Contractions are appropriate, as are easily recognized symbols such as &, <, and =.
Punctuation: When Not to Use Hyphens

Expanded list of nonhyphenated terms

➢ Do not hyphenate modifiers in which a letter or number is the second element.

  type 1 diabetes                  phase 2 study

➢ Some combinations of words are commonly read together as a unit.

  amino acid levels               lower extremity amputation
  bone marrow biopsy              medical school students
  deep venous thrombosis          open access journal
  health care system
### Abbreviations: New Entries

New abbreviations added

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACEI</td>
<td>angiotensin-converting enzyme inhibitor</td>
</tr>
<tr>
<td>ACL</td>
<td>anterior cruciate ligament</td>
</tr>
<tr>
<td>CKD</td>
<td>chronic kidney disease</td>
</tr>
<tr>
<td>GWAS</td>
<td>genome-wide association study</td>
</tr>
<tr>
<td>LGBTQ</td>
<td>lesbian, gay, bisexual, transgender, and queer</td>
</tr>
<tr>
<td>MERS</td>
<td>Middle East respiratory syndrome</td>
</tr>
<tr>
<td>OUD</td>
<td>opioid use disorder</td>
</tr>
<tr>
<td>SNV</td>
<td>single-nucleotide variant</td>
</tr>
</tbody>
</table>
Abbreviations: Fellowships Removed

Omission of all fellowship designations

➢ Fellowship designations are generally not listed in bylines or elsewhere. These can be difficult to police (in current style, what qualifies for inclusion?). Straightforward rules keep things fair, simpler for editors.

➢ FRCP, FRCPC, etc, have been removed from the list of degrees

➢ Emphasis is on academic degrees. Honorary degrees and other awards (eg, knighthood) are not included.
Addition of socioeconomic status

- 11.12.5 Socioeconomic Status.—Avoid labeling people with their socioeconomic status, such as the poor or the unemployed. Instead, terms such as low income and no income are preferred.

- low-income, limited-income, resource-limited, resource-poor, transitional terms added

- Use of the terms first world/third world and developed/developing are not recommended as descriptors when comparing countries or regions.
Usage: More Terms

Addition of terminology on addiction

➢ Avoid use of “alcoholic,” “addict,” “user,” and “abuser” — replace with “she was addicted,” “people with opiate addiction,” “he abused alcohol,” “alcohol misuse disorder”

New additions to correct and preferred usage list

➢ nauseous, nauseated
➢ foreign-born—replace with specifics, eg, “non-US born”
➢ elicit, illicit, solicit
➢ alternative, alternate
Spelling and Spacing Preferences

Spelling and spacing variations added to Correct and Preferred Usage chapter, with JAMA Network preferences (boldface) noted.

- **health care**/healthcare/health-care
- **data set**/dataset
- **email**/e-mail/Email
- **website**/Web site/Website
Drugs: we no longer include manufacturer location

➢ In section 15.5 (page 583 in the print), Equipment, Devices, and Reagents, we no longer require the inclusion of the manufacturer location. This is so easy to look up online, should anyone desire more specific details, that we believe it is not necessary to continue to require this.

➢ “The 9-valent HPV vaccine (Gardasil 9, Merck & Co) was administered to 5 vaccination cohorts.”

➢ “The active medication was 1 mL of triamcinolone (purchased from Bristol-Myers Squibb), 40 mg/mL, for injection.”
Nomenclature: Genetics

Genetics: Discourage use of aliases/nicknames for genes and proteins

<table>
<thead>
<tr>
<th>Gene symbol</th>
<th>Gene description</th>
<th>Acceptable expression</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>TP53</em></td>
<td>tumor protein p53 (Li-Fraumeni syndrome) gene</td>
<td>The <em>TP53</em> gene (p53 is the alias; the official term is preferred to the alias)</td>
</tr>
</tbody>
</table>

May be necessary to “dual report” for aliases well-entrenched in use:

“*ERBB2* (previously HER2/neu)”
The Human Genome Variation Society recommends avoiding the terms *mutation* and *polymorphism*, preferring instead the terms *sequence variant*, *sequence variation*, *alteration*, or *allelic variant*.

In view of this recommendation, single-nucleotide variation (SNV) is now more frequently used instead of SNP (single-nucleotide polymorphism) and may become standard.

To aid readers’ understanding during this transition, at first mention SNV may be used, with SNP in parentheses:

“…SNV (formerly SNP)…”
Units of Measure: Currencies

Currencies will be updated, including African denominations

- Ethiopian birr (ብር)
- Ghana cedi (GH₵)
- Malawi kwacha (MK)
- Nigeria naira (₦)
- Uganda shilling (USh)
- Zimbabwe dollar ($)

AMWA session 2018 • Slide 27
Units of Measure: Spacing in Temperature

Per SI convention, we will no longer close up degree symbols in temperature but use a space after the number:

➢ temperature of 37.5 °C (not 37.5° C or 37.5°C)
In the list of abbreviations (Section 14.11, page 504 in the print), an asterisk was added after CI to indicate that this abbreviation no longer needs to be expanded.

➢ “Low-quality evidence has shown that risedronate reduces the risk of fragility fractures (hazard ratio, 0.27; 95% CI, 0.09-0.83; \( P = .02 \)).”

➢ “The primary analysis followed a modified intention-to-treat principle and used a 1-sided 95% CI for noninferiority.”
The terms *multivariable* and *multivariate* are not synonymous, as the entries in the current Glossary suggest (Chapter 20.9, page 881 in the print). To be accurate, *multivariable* refers to multiple independent variables for a single outcome (dependent variable). *Multivariate* refers to 1 or more independent variables for multiple outcomes. See the Update on the stylebook site.

- Most clinical studies use a *multivariable* approach (a single outcome)

- “Using sex-stratified multivariable-adjusted Cox proportional hazards models, black women and men were more likely to develop diabetes than white men and women (black women: HR, 2.86 [95% CI, 2.19-3.72]; black men: HR, 1.67 [95% CI, 1.28-2.17]).” Diabetes is the single outcome; sex and race are independent variables.
Mathematical Composition: Updates

Update to the chapter to include more examples.

➢ To avoid confusion, do not display forms of statistical analysis as subscript, such as $P_{\text{interaction}} < .001$.

   Better: $P < .001$ for interaction.

➢ Thin spaces (a character usually 1/5 or 1/6 the width of an em dash; the Unicode value for the 1/6 em space is 2006) should be used before and after the following math symbols used as verbs, conjunctions, or operators: $\pm, =, <, >, \leq, \geq, +, -, \div, \times, \cdot, \approx, \sim, \cap, \int, \prod, \Sigma, \text{and } |$.

   When used to describe a quantity, they are closed up: Patient age <30 years. Values were −50 to −25. White blood cell count is expressed as $\times 10^9$/L.
Addition of XML (discussion and tagging examples)

- XML (extensible markup language) provides rules for naming and defining parts of a document and their relationship with each other.

- XML uses tags in start-end pairs (such as `<title>Title of the Article</title>` and `<body> </body>`) to define the elements in that piece of content.

Electronic Editing Workflow

Software programs have text editing functionality that allows users to view edits and track changes. Some newer software programs permit collaborative writing and editing. How authors and editors respond to the editing depends on not only the software program but also the technologies and workflow involved.

For example, JAMA Network manuscript editors send edited manuscripts to authors showing text insertions and deletions and comments/questions as a PDF file. Authors can respond by using editing/commenting tools directly on the PDF; by printing it out, marking up the copy, scanning it, and returning via email; or by outlining corrections and query answers in an email. Authors are also provided with proofs that are generated programmatically to look like a composed proof for initial review before final composition and publication.
XML-Based Workflow (cont)

The JAMA Network journals have created efficiencies by using a “single-source” workflow. In this process, content remains in the original document format (eg, Word) and is stored with the XML file and related content (eg, supplemental files, multimedia).

Because XML is the basis of this workflow and content, any changes required (before, during, or even after publication) must be made in the source document and new XML generated. If an individual output is corrected but the source file is not, any current and future versions of that content will not reflect the change.

For example, if a correction is made to the HTML version only, and the source file is not updated, the PDF will not contain the updated content.
Guidelines Added to Resources Section

Section on Guidelines added to Resources chapter

• Committee on Publication Ethics (COPE).  https://www.publicationethics.org

• EQUATOR Network.  https://www.equator-network.org


• World Association of Medical Editors (WAME) policy statements.  http://www.wame.org/policies-and-resources
Publishing Glossary: Updates

Many additions and deletions, especially to reflect technological updates to publishing, document creation and retrieval, and communication

➢ Removal of CD-ROM, CPU, DOS, elite type, fax, hard disk, internet, keyboard, LAN, mainframe, mouse, page proof, password, PC, program, RTF, storage

➢ Addition of cloud, ghost writer, IP address, JATS, landscape, NISO, open access, scholar’s margin, stylesheet, STEM, thin space, Unicode
Corrections are important to the integrity of the published literature.

Errors range from relatively minor and inconsequential errors to major errors that invalidate the results and the underlying science.

# Editorial Assessment: Corrections

<table>
<thead>
<tr>
<th>Minor Error</th>
<th>Substantive Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsequential error (e.g., a typographical error that could result in misunderstanding)</td>
<td>Errors requiring a Correction notice (e.g., author name misspelled, incorrect numbers, important missing information)</td>
</tr>
<tr>
<td>Article corrected online</td>
<td>Correction notice published</td>
</tr>
<tr>
<td>An indication of correction and date of correction are added to the article information (HTML and PDF versions)</td>
<td>The article is corrected online with indication of correction and date of correction added to the article information (HTML and PDF versions)</td>
</tr>
<tr>
<td>No Correction notice</td>
<td>The Correction notice and corrected article are reciprocally linked</td>
</tr>
</tbody>
</table>
**Pervasive errors**

Inadvertent errors that result in the need to correct important or numerous data and information in the abstract, text, tables, and figures (eg, a coding error)

<table>
<thead>
<tr>
<th>No major changes</th>
<th>Change and valid</th>
<th>Change and invalid</th>
</tr>
</thead>
<tbody>
<tr>
<td>If none of the conclusions or interpretations are affected and there are no statistically significant changes in the results</td>
<td>If the direction or significance of the results, interpretations, and conclusions change—and the science is still valid</td>
<td>If the results, interpretations, and conclusions change—and the science is no longer valid</td>
</tr>
<tr>
<td><strong>Letter of explanation and Correction</strong></td>
<td><strong>Retraction and Replacement</strong></td>
<td><strong>Retraction</strong></td>
</tr>
</tbody>
</table>
New Option: Retraction and Replacement

• **Why?** – 21% of retractions are due to error, not misconduct
• This mechanism allows authors to do the right thing without the stigma or penalties associated with retractions

• **When?** - Used judiciously – for cases of inadvertent pervasive errors that when corrected change the findings, interpretations, and/or conclusions
• And after review – the science is still considered valid

• **How?** - Requires a Letter of explanation from all authors
• An itemization of all errors and corrections
• Replacement article retains the original article DOI and any usage and citation metrics
• No “retraction” or do not use watermark
Retraction and Replacement: This article was retracted and replaced on August 23, 2018, to fix errors throughout the article and tables (see Supplement 2 or the retracted article with errors highlighted and Supplement 3 for the replacement article with corrections highlighted).
Retraction and Replacement

Retraction

Original Investigation

Association of Cataract Surgery With Mortality in Older Women

Findings from the Women's Health Initiative

Victoria L. Tong, MD, PhD; Rowan T. Chobanian, MD, PhD; Fei Yu, PhD; Jane A. Caudy, DrPH; Wenguan Li, PhD; Hedvig Hricik, MD, PhD; Beth A. Ving, PhD; Ann L. Coleman, MD, PhD

Importance Previous studies have suggested an association between cataract surgery and decreased risk for all-cause mortality, potentially through a mechanism of improved health status and functional independence, but the association between cataract surgery and cause-specific mortality has not been previously studied and is not well understood.

Objective To examine the association between cataract surgery and total and cause-specific mortality in older women with cataract.

Design, Setting, and Participants This prospective cohort study included nationwide data collected from the Women's Health Initiative (WHI) clinical trial and observational study linked with the Medicare claims database. Participants in the present study were 65 years or older with a diagnosis of cataract in the Medicare claims database. The WHI data were collected from January 1, 1993, through December 31, 2005. Data were analyzed for the present study from July 1, 2014, through September 1, 2017.

Exposures Cataract surgery as determined by Medicare claims codes.

Main Outcomes and Measures The outcomes of interest included all-cause mortality and mortality attributed to vascular, cancer, accidental, neurologic, pulmonary, and infectious causes. Mortality rates were compared by cataract surgery status using the log-rank test and Cox-proportional hazards regression models adjusting for demographics, systemic and ocular comorbidities, smoking, alcohol use, body mass index, and physical activity.

Results A total of 74,044 women with cataract in the WHI included 41,735 who underwent cataract surgery. Mean (SD) age was 70.5 (6.2) years; the most common ethnicity was white (64,432 [87.0%]), followed by black (5,283 [7.3%]) and Hispanic (1,712 [2.3%]). The mortality rate was 2.56 per 100 person-years in both groups. In covariate-adjusted Cox models, cataract surgery was associated with lower all-cause mortality adjusted hazards ratio (AHR) (0.84, 95% CI 0.80-0.88) as well as all-cause mortality specific to vascular (AHR, 0.84; 95% CI 0.75-0.93), cancer (AHR, 0.80; 95% CI 0.70-0.92), accidental (AHR, 0.84; 95% CI 0.77-0.92), neurologic (AHR, 0.84; 0.75-0.93), pulmonary (AHR, 0.84; 95% CI 0.75-0.93), and infectious (AHR, 0.84; 0.75-0.93) diseases.

Conclusions and Relevance In older women with cataract in the WHI, cataract surgery was associated with lower risk of total and cause-specific mortality, although whether this association is explained by the intervention of cataract surgery is unclear. Further study of the interplay of cataract surgery, systemic disease, and disease-related mortality would be informative for improved patient care.

Author Affiliations and List of Authors are listed at the end of this article.

Corresponding Author: Ann L. Coleman, MD, PhD, Stein Eye Institute, David Geffen School of Medicine, UCLA, 100 Stein Plaza, Room 2.18, Los Angeles, CA 90095 (coleman@ucla.edu)

JAMA Ophthalmology. 2018;000:0-0. doi:10.1001/jamaophthalmol.2017.4532
Published online October 26, 2017.

Replacement

Original Investigation

Association of Cataract Surgery With Mortality in Older Women

Findings from the Women's Health Initiative

Victoria L. Tong, MD, PhD; Rowan T. Chobanian, MD, PhD; Fei Yu, PhD; Jane A. Caudy, DrPH; Wenguan Li, PhD; Hedvig Hricik, MD, PhD; Beth A. Ving, PhD; Ann L. Coleman, MD, PhD

Importance Previous studies have suggested an association between cataract surgery and decreased risk for all-cause mortality, potentially through a mechanism of improved health status and functional independence, but the association between cataract surgery and cause-specific mortality has not been previously studied and is not well understood.

Objective To examine the association between cataract surgery and total and cause-specific mortality in older women with cataract.

Design, Setting, and Participants This prospective cohort study included nationwide data collected from the Women's Health Initiative (WHI) clinical trial and observational study linked with the Medicare claims database. Participants in the present study were 65 years or older with a diagnosis of cataract in the Medicare claims database. The WHI data were collected from January 1, 1993, through December 31, 2005. Data were analyzed for the present study from July 1, 2014, through September 1, 2017.

Exposures Cataract surgery as determined by Medicare claims codes.

Main Outcomes and Measures The outcomes of interest included all-cause mortality and mortality attributed to vascular, cancer, accidental, neurologic, pulmonary, and infectious causes. Mortality rates were compared by cataract surgery status using the log-rank test and Cox-proportional hazards regression models adjusting for demographics, systemic and ocular comorbidities, smoking, alcohol use, body mass index, and physical activity.

Results A total of 74,044 women with cataract in the WHI included 41,735 who underwent cataract surgery. Mean (SD) age was 70.5 (6.2) years; the most common ethnicity was white (64,432 [87.0%]), followed by black (5,283 [7.3%]) and Hispanic (1,712 [2.3%]). The mortality rate was 2.56 per 100 person-years in both groups. In covariate-adjusted Cox models, cataract surgery was associated with lower all-cause mortality adjusted hazards ratio (AHR) (0.84, 95% CI 0.80-0.88) as well as all-cause mortality specific to vascular (AHR, 0.84; 95% CI 0.75-0.93), cancer (AHR, 0.80; 95% CI 0.70-0.92), accidental (AHR, 0.84; 95% CI 0.77-0.92), neurologic (AHR, 0.84; 0.75-0.93), pulmonary (AHR, 0.84; 95% CI 0.75-0.93), and infectious (AHR, 0.84; 0.75-0.93) diseases.

Conclusions and Relevance In older women with cataract in the WHI, cataract surgery was associated with lower risk of total and cause-specific mortality, although whether this association is explained by the intervention of cataract surgery is unclear. Further study of the interplay of cataract surgery, systemic disease, and disease-related mortality would be informative for improved patient care.

Author Affiliations and List of Authors are listed at the end of this article.

Corresponding Author: Ann L. Coleman, MD, PhD, Stein Eye Institute, David Geffen School of Medicine, UCLA, 100 Stein Plaza, Room 2.18, Los Angeles, CA 90095 (coleman@ucla.edu)

JAMA Ophthalmology. 2018;000:0-0. doi:10.1001/jamaophthalmol.2017.4532
Published online October 26, 2017. Retracted and replaced on August 23, 2018. See supplemental content for various text and corrections.
Ethical and Legal Updates: Authorship

• **Contributor:** anyone – an author, collaborator, writer, assistant, etc

• **Author:** meets all 4 ICJME criteria and completes an authorship form.
  – Byline author: Author name in byline
  – Nonbyline author: author name not in byline – listed at the end of article

• **Collaborator:** nonauthor member of a formal group who contributes significantly

• **Group author:** a group of individuals, usually involving multicenter study investigators, members of working groups, and official or self-appointed expert boards, panels, or committees, who wish to display a group name to indicate authorship.
Ethical and Legal Updates: Authorship

Authors et al – who is who?

Contributors

Collaborators (Nonauthor investigators or members of a formal group)

Authors

Assistance with research, analysis, writing, editing, reviewing

Corresponding Author(s)
Shared Authorship Positions

• It has become increasingly common for authors to request “co-first authorship,” “co-senior authorship,” or some other indication of equal contribution.

• Journals accept indication of co-first authorship – but someone’s name will need to go first in the byline or author list.

• Requests for “co-first authorship” beyond 3 or 4 named authors may not be justifiable.

• This information can be displayed in the Acknowledgment just before the list of author contributions, such as
  • “Drs Brown and Jones served as co-first authors and contributed equally to the work.”
Corresponding Authors

- Requests for having up to 2 individuals listed as corresponding authors on a published article will be considered if justified.

- In such cases, 1 author must be designated as the primary point of contact who will serve the primary corresponding author
  
  - For all communications with the journal
  - Will review an edited manuscript/proof
  - Make decisions regarding release of information to the news media
  - Handle any postpublication inquiries, errors/corrections, etc

- Two can be listed in the Corresponding Author section of the published article, but the primary corresponding author will be listed first.
Formatting 2 Corresponding Authors

From same institution
Corresponding Authors: Jie Qiao, MD, PhD (jie.qiao@263.net), and Tianpei Hong, MD, PhD (tpho66@bjmu.edu.cn), Peking University Third Hospital, 49 N Garden Rd, Beijing 100191, China.

From same institution, different departments
Corresponding Authors: Jie Qiao, MD, PhD, Center of Reproductive Medicine (jie.qiao@263.net), and Tianpei Hong, MD, PhD, Department of Endocrinology and Metabolism (tpho66@bjmu.edu.cn), Peking University Third Hospital, 49 N Garden Rd, Beijing 100191, China.

From different institutions
Corresponding Authors: Linhong Wang, PhD, Chinese Center for Disease Control and Prevention, Beijing 100050, China (linhong@chinawch.org.cn); Yonghua Hu, MD, Department of Epidemiology and Biostatistics, School of Public Health, Peking University, Beijing 100191, China (yghu@bjmu.edu.cn).
Many research sponsors and government agencies have policies to encourage data transparency and sharing.

In 2017, the International Committee of Medical Journal Editors (ICMJE) issued a statement on sharing clinical trial data that indicates new requirements for sharing of data underlying the results presented in published clinical trials. (JAMA. 2017;317[24]:2491–2492. doi:10.1001/jama.2017.6514)

Beginning in July 2018, data sharing statements are required for reports of RCTs; optional for other study types.

Statements are required, but actual sharing is not yet required.
Data Sharing Statement – Questions for Authors

• Will data be shared? Yes or no (with optional explanation
• If yes, what types of data
  – Deidentified participant data
  – Participant data with identifiers
  – Data dictionary
• How shared and where to access?
• When will data be shared?
• Will supporting documents be shared
  – Trial protocol and statistical analysis plan
  – Statistical/analytic code
  – Informed consent document
• Who can access? For what types of analyses? By which mechanisms (eg, with investigator support or a signed agreement)? Any restrictions on access or use?
Data Sharing Statement Example

Data Sharing Statement: See Supplement 4. (This is a PDF)

Data Sharing Statement


Data
Data available: Yes
Data types: Deidentified participant data
How to access data: Data can be shared by accessing the following link, https://neonatal.rti.org/index.cfm?fuseaction=DataRequest.Home
When available: With publication

Supporting Documents
Document types: None

Additional Information
Who can access the data: Researchers whose proposed use of the data has been approved following the NIH data sharing policies.
Types of analyses: Analysis of those approved proposals. Mechanisms of data availability: After approval and with a data use agreement.
Data Sharing Statement – Other Examples

• New England Journal of Medicine: Links to a PDF
  – A data sharing statement provided by the authors is available with the full text of this article at NEJM.org.

• Annals of Internal Medicine: Included in Article Information section
  – Reproducible Research Statement: Study protocol: Available from Dr. Miller (email, dmiller@wakehealth.edu). Statistical code and data set: Available to approved persons through agreement with the authors (email, dmiller@wakehealth.edu).
Public access and open access

- **Public access:** free access to content, permitting users to read, download, print, search, and link to content, but with copyright restrictions and limitations on sharing and reuse.

- Many journals make research articles free public access at 6, 12, or 24 months after publication; required for US-funded research since 2013.

- Many journals deposit research articles in public repositories (eg, PMC) for free public access at 6,12, or 24 months after publication; some permit posting before publication in preprint servers or repositories.
Open access

• **Open access**: Users have unrestricted access without typical copyright restrictions and can freely **read, download, copy, distribute, print, search, or link to full text of articles, and reuse and modify** the content in part or whole, without permission, for any lawful purpose provided that authors are properly acknowledged and cited.

• Typically requires an author processing charge (APC)
  – Range: $1200 to $5000
  – Clinical medicine journal average: $2093
  – Multidisciplinary journal average: $3464
# Differences between public and open access

<table>
<thead>
<tr>
<th>Public Access</th>
<th>Open Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free to read</td>
<td>Free to read, reuse, modify without permission</td>
</tr>
<tr>
<td>No author fee</td>
<td>Author processing charge (APC)</td>
</tr>
<tr>
<td>Delayed access (6, 12, 24 months after publication)</td>
<td>Immediate access with publication</td>
</tr>
<tr>
<td>Transfer of copyright or publication license to journal</td>
<td>Use of CC license; author retains copyright</td>
</tr>
<tr>
<td>Required by NIH</td>
<td>Required by some funders, eg, Gates, Wellcome Trust</td>
</tr>
</tbody>
</table>
Open access journal models

• **GOLD OA journals**: all articles are fully open access—with or without an author-pay APC
  – PLOS journals, BMC journals, *JAMA Network Open*

• **Hybrid journals**: subscription journals that offer a mix of delayed public access without fees and an OA option with APCs
  – *JAMA Internal Medicine, Clinical Infectious Diseases*

• **Mega journals**: journals that publish large numbers of OA articles with APCs; manuscripts are reviewed only for technical soundness; high acceptance rates
  – *PLOS ONE* (31 000 articles published in 2103; 20 000 in 2017)
  – *Scientific Reports* (25 000 articles published in 2017)
**Updates**: Any new policy decisions are published on the Updates page, which is freely available to anyone at [http://www.amamanualofstyle.com/page/updates](http://www.amamanualofstyle.com/page/updates).

**Twitter**: Regular communication via @AMAManual

Stay tuned! We have revised every chapter, all have been through peer review, and plans are in motion for print book and website publication in 2019.

Cheryl Iverson and Stacy Christiansen
committee co-chairs: stylemanual@jamanetwork.org