DESCRIPTION

Women's Health Issues (WHI) is a peer-reviewed, bimonthly, multidisciplinary journal that publishes research and review manuscripts related to women's health care and policy. As the official journal of the Jacobs Institute of Women's Health, it is dedicated to improving the health and health care of all women throughout the lifespan and in diverse communities. The journal seeks to inform health services researchers, health care and public health professionals, social scientists, policymakers, and others concerned with women's health. It has a particular focus on women's issues in the context of the U.S. health care delivery system and policymaking processes, and it publishes both original research and commentaries.

Benefits to authors
We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our author services.

Please see our Guide for Authors for information on article submission. If you require any further information or help, please visit our Support Center.

AUDIENCE

Health Professionals, Social Scientists, Policy Makers, and others concerned with the complex and diverse facets of health care delivery to women.

ABSTRACTING AND INDEXING

Sociological Abstracts
Cumulative Index to Nursing and Allied Health Literature
Embase
PubMed/Medline
Studies on Women Abstracts
Current Contents
Scopus
EDITORIAL BOARD

Editor-in-Chief

Associate Editors
Chloe E. Bird, Tufts Medical Center Tufts Center for Health Equity Research, Boston, Massachusetts, United States of America
Kevin D. Frick, Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland, United States of America
Anne Rossier Markus, The George Washington University, Washington, District of Columbia, United States of America
Alina Salganicoff, The Henry J Kaiser Family Foundation, San Francisco, California, United States of America
Amita N. Vyas, The George Washington University, Washington, District of Columbia, United States of America
Carol S. Weisman, Penn State College of Medicine, Hershey, Pennsylvania, United States of America

Managing Editor
Liz Borkowski, Jacobs Institute of Women's Health, Washington, District of Columbia, United States of America

Editorial Board
Madina Agénor, Brown University, Providence, Rhode Island, United States of America
Ndidiamaka Amutah-Onukagha, Tufts University School of Medicine, Boston, Massachusetts, United States of America
Lori Bastian, Yale School of Medicine, New Haven, Connecticut, United States of America
Priya Batra, Los Angeles County, Department of Public Health, Los Angeles, California, United States of America
Tracy A. Battaglia, Boston Medical Center, Boston, Massachusetts, United States of America
Arlene S. Bierman, Agency for Healthcare Research and Quality, Rockville, Maryland, United States of America
Janine Austin Clayton, National Institutes of Health, Bethesda, Maryland, United States of America
Karen M. Freund, Tufts Clinical and Translational Science Institute, Boston, Massachusetts, United States of America
Alison Hamilton, University of California Los Angeles, Los Angeles, California, United States of America
Lisa H. Harris, University of Michigan, Ann Arbor, Michigan, United States of America
Jodie G. Katon, VA Greater Los Angeles Healthcare System, Los Angeles, California, United States of America
Sandraluz Lara-Cinisomo, University of Illinois Urbana-Champaign, Urbana, Illinois, United States of America
Cassondra Marshall, University of California Berkeley School of Public Health, Berkeley, California, United States of America
Kristin M. Mattocks, UMass Chan Medical School, Worcester, Massachusetts, United States of America

Associate Editorial Board
Megan M. Landry, The George Washington University, Washington, District of Columbia, United States of America
Mary E. Slaughter, RAND Corporation, Santa Monica, California, United States of America
INTRODUCTION

Women’s Health Issues is a peer-reviewed, bimonthly, multidisciplinary journal that publishes original research and commentaries on women's health care and policy.

The journal has a particular focus on women's issues in the context of the U.S. health care delivery system and policymaking processes, although it invites submissions addressing women's health care issues in global context if relevant to North American readers. As the official journal of the Jacobs Institute of Women's Health, it builds on a history of valuing methodologically rigorous investigation as a basis for improving the quality of health care for women and the health of women across the lifespan.

The journal seeks to inform health services researchers, social scientists, health care and public health professionals, and policymakers and to engage readers in the perspectives of multiple disciplines relevant to the study of women's health.

Please note that we do not accept for review clinical case reports or standard literature reviews. Systematic literature reviews and scoping reviews (see details below) and translational and implementation research studies are welcome.

At this time, we are not considering publication of manuscripts that report only descriptive statistics (e.g., only univariate analysis without accompanying qualitative findings or policy analysis). This is based on the fact that our small staff faces a large number of submissions and must prioritize them in some way, rather than any judgment about the value of such work, and we hope to be able to resume consideration of such manuscripts in the future.

The editorial board is also interested in empirical, methodological, and commentary pieces focused on the evaluation of sex and gender differences, with an emphasis on the reporting of stratified results over statistical adjustment. We also welcome studies that include, or whose samples are entirely composed of, trans men, trans women, and/or nonbinary individuals, because we are interested in the experiences and outcomes of people whose gender means they experience bias.

All manuscripts are subject to peer-review under the direction of the editors. Published manuscripts are abstracted and indexed in leading services, including Cumulative Index to Nursing and Allied Health Literature, EMBASE/Excerpta Medica, Index Medicus, ISI's Current Contents/Social & Behavioral Sciences Research Alert and Social SciSearch, Sociological Abstracts, and Studies on Women Abstracts. Unsolicited manuscripts are invited that address women’s health issues relating to the mission of the journal. The Journal is available online at http://whijournal.com and on www.ScienceDirect.com.

BEFORE YOU BEGIN

Ethics in Publishing

For information on Ethics in publishing and Ethical guidelines for journal publication see https://www.elsevier.com/publishingethics and https://www.elsevier.com/journal-authors/ethics. Ethical Approval of Studies and Informed Consent: If applicable, all manuscripts reporting data from studies involving human participants should include a statement that the research protocol was approved by the relevant institutional review boards or ethics committees. State in the Methods section the manner in which informed consent was obtained from the study participants (i.e., oral or written). For those investigators who do not have formal ethics review committees, the principles outlined in the Declaration of Helsinki of 1975 and as revised in 2000, should be followed. This requirement is in compliance with "Protection of Human Subjects and Animals in Research" described by the International Committee of Medical Journal Editors (http://www.icmje.org/#protect).

Editorial policy for ethics reviews in manuscripts reporting quality improvement studies
The editors of *Women’s Health Issues* encourage submission of manuscripts that assess the impact of various quality improvement initiatives in health care. These initiatives may be at the system, organization, clinic, or provider levels. Often the evaluation of these initiatives involves collection of data from patients, health care providers, staff, trainees, or others. Policies and practices with respect to ethics reviews for quality improvement projects vary, and institutional policies are not consistent.

Accordingly, the editorial board of *Women’s Health Issues* has adopted the following policy for manuscripts based on quality improvement projects that are submitted to the journal for possible publication.

1. When the manuscript is based on quality improvement activities conducted at an academic institution or a health care organization with an Institutional Review Board, or when the author of the manuscript is employed at an academic institution or a health care organization with an IRB, the author of the manuscript is required to provide a statement to the effect that the study was or was not reviewed by the IRB. If the study was not reviewed by the IRB, the reason must be stated. If the study met the IRB's criteria for exemption or if the study was determined to not constitute research, then that should be explicitly stated.

2. When the manuscript is based on quality improvement activities conducted at an academic institution or a health care organization without an IRB or at an academic institution or a health care organization that does not regard quality improvement efforts as research involving human subjects, then the authors are required to provide a statement to that effect.

The editors reserve the right to contact the authors to clarify the situation or to confirm that ethical practices were used in the conduct of the study.

Whether to proceed to peer review is at the Editor's discretion. Inquiries about this policy may be directed to the Editor-in-Chief of *Women's Health Issues*.

**Conflict of Interest**

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. See also https://www.elsevier.com/conflictsofinterest.

**Declaration of generative AI in scientific writing**

The below guidance only refers to the writing process, and not to the use of AI tools to analyse and draw insights from data as part of the research process.

Where authors use generative artificial intelligence (AI) and AI-assisted technologies in the writing process, authors should only use these technologies to improve readability and language. Applying the technology should be done with human oversight and control, and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. AI and AI-assisted technologies should not be listed as an author or co-author, or be cited as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans, as outlined in Elsevier’s AI policy for authors.

Authors should disclose in their manuscript the use of AI and AI-assisted technologies in the writing process by following the instructions below. A statement will appear in the published work. Please note that authors are ultimately responsible and accountable for the contents of the work.

**Disclosure instructions**

Authors must disclose the use of generative AI and AI-assisted technologies in the writing process by adding a statement at the end of their manuscript in the core manuscript file, before the References list. The statement should be placed in a new section entitled ‘Declaration of Generative AI and AI-assisted technologies in the writing process’.

Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.
This declaration does not apply to the use of basic tools for checking grammar, spelling, references etc. If there is nothing to disclose, there is no need to add a statement.

**Submission Declaration**
Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see https://www.elsevier.com/postingpolicy), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere including electronically in the same form, in English or in any other language, without the written consent of the copyright-holder. Further to this policy, each author must attest to the following statement in the cover letter: "I certify that this material has not been published previously and is not under consideration by another journal. I further certify that I have had substantive involvement in the preparation of this manuscript and am fully familiar with its content."

**Submission declaration and verification**
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify compliance, your article may be checked by Crossref Similarity Check and other originality or duplicate checking software.

**Preprints**
Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

**Equity and Inclusivity**
We strive to publish research that recognizes and works to address structural inequities that affect the health of women and others whose gender means they experience bias. We strongly encourage authors to consider (in)equity when designing their studies - e.g., by thinking carefully about which demographic variables to include in their analyses and how to treat them - and by using inclusive language in their writing. Our Equity Guide for Authors contains specific recommendations; we encourage, but do not require, that authors read it before submitting their work.

**Reporting sex- and gender-based analyses**

**Reporting guidance**
For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

**Definitions**
Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth"), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging.
whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms "sex" and "gender" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed. Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Copyright
Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see more information on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete a 'License Agreement' (more information). Permitted third party reuse of gold open access articles is determined by the author's choice of user license.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. Funders must be identified by name. If the funding source(s) had no such involvement then this should be stated.

Data Access and Responsibility
For all reports (regardless of funding source) containing original data, at least one (1) named author (e.g., the principal investigator) who is independent of any funder or sponsor should indicate that she or he "had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis." This exact statement should be included in the Acknowledgments section on the Title Page of the manuscript. Modified statements or generic statements indicating that all authors had such access are not acceptable.

These requirements are consistent with "Potential Conflicts of Interest Related to Project Support" described by the International Committee of Medical Journal Editors (http://www.icmje.org/#conflicts).
Elsevier will send to PubMed Central the author's manuscript on behalf of authors reporting research supported by an NIH grant. The author manuscript reflects any author-agreed changes made in response to peer-review comments. Elsevier will authorize its public access posting on PubMed Central 12 months after final publication. Authors will receive further correspondence from PubMed Central after the manuscript is deposited.

Open access
Please visit our Open Access page for more information about open access publishing in this journal.

Language (Usage and Editing Services)
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop https://webshop.elsevier.com/language-editing/ or visit our customer support site https://service.elsevier.com/ for more information.

Women's Health Issues uses the serial (Oxford) comma.

Submission
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Submit your article
Please submit your article via https://www.editorialmanager.com/whi.

Peer Reviewers
Please submit, with the manuscript, the names, addresses and e-mail addresses of three potential referees. Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

PREPARATION

Manuscript Length and Type
This journal accepts two kinds of submissions:

Full-length articles: These report the results of original research and contain the "Article structure" elements listed below. Full-length article manuscripts should contain 2,000 to 4,000 words, excluding front matter, references, and tables and figures; systematic and scoping reviews may contain up to 5,000 words, with the same exclusions. Systematic literature reviews and Policy Matters submissions fall into this category and have additional requirements described below.

Commentaries: Commentaries should make a compelling, novel, evidence-based argument for a research or policy agenda related to any aspect of women's health. Arguments should be supported by references. Commentary submissions will be evaluated based on the topic's timeliness and importance, strength of the argument, use of evidence, and overall writing quality, including clarity and flow. Commentary manuscripts do not require abstracts and do not need to follow the structure of full-length articles. The text should contain no more than 2,000 words.

Each submission from either of these categories must include a Cover Letter and a Title Page as well as a blinded Manuscript without Author Details. If a manuscript is revised and re-submitted, the revision must be accompanied by a Response to Reviewers and by an Author Biography file if this was not submitted with the original manuscript.

Systematic Literature Reviews We consider two types of reviews for publication: systematic literature reviews and scoping reviews. Reviews must address a clear research question of importance to women's health and of interest to WHI readers. Both types of reviews should provide detailed information about how the review was conducted, particularly the inclusion criteria for identifying the studies reviewed. Systematic literature reviews must include data syntheses (rather than just
summaries of published work) and evaluate the quality of included studies; see the Cochrane Collaborative for examples. Scoping reviews must be clear about how authors determined the types of studies to include, the quality of evidence they provide, and how those decisions affected conclusions about what is known and the gaps in knowledge. Please note that we do not accept for review clinical case reports or literature reviews that do not meet these standards for transparency and rigor.

**Policy Matters** We invite authors to submit scholarly, thoughtful, and timely policy analyses related to various issues affecting women's health. These could include, for example: Policy implications of proposed legislation, regulations, judicial decisions at the federal, state, and local levels as they may affect women's health; Policy implications of current and future developments in programs integral to women's health (e.g., Medicaid, Medicare, community health, Healthy Start, WIC, family planning, public health, and private sector insurance coverage); Scholarly policy analyses of health and social issues affecting women's health from a historical perspective, e.g., the effects of delinking Medicaid from welfare and subsequent reproductive health choices, or the effects of state and national health reform efforts on women's health; and, Scholarly policy analyses that contribute to our understanding of how effective policy actions can improve the scope and quality of women's health care services and the organization, financing, and delivery of these services.

"Policy Matters" submissions may contain recommendations for "next steps," however a key peer review criterion will be the extent to which such recommendations are supported by the rigor and comprehensiveness of the supporting policy analysis. Please note in your submission cover letter that you

**Peer review**
This journal operates a double anonymized review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor’s decision is final. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an interest. Any such submission is subject to all of the journal's usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.

**Double anonymized review**
This journal uses double anonymized review, which means the identities of the authors are concealed from the reviewers, and vice versa. More information is available on our website. To facilitate this, please include the following separately:

**Title page (with author details):** This should include the title, authors' names, affiliations, acknowledgements and any Declaration of Interest statement, and a complete address for the corresponding author including an e-mail address.

**Anonymized manuscript (no author details):** The main body of the paper (including the references, figures, tables and any acknowledgements) should not include any identifying information, such as the authors' names or affiliations.

**Article structure**
Manuscripts should be double-spaced, use fonts of no smaller than 12 points, include continuous line numbering, and contain no identifying information. Please blind the name of your institution (if mentioned when describing IRB approval, study location, etc.) and any references that are identified as being previous work by the same author(s). Please submit manuscripts as Word files whose titles do not include identifying information (e.g., the file title should not include the author’s last name).

**Introduction**
State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

**Material and methods**
Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.
Results
Results should be clear and concise.

Discussion
This should explore the significance of the results of the work, not repeat them. Note any limitations of the study.

Implications for Practice and/or Policy
All manuscripts must contain a section entitled, "Implications for Practice and/or Policy" as part of or following the Discussion section. This section should address what practical lessons practitioners and/or policymakers can learn and potentially implement to improve outcomes. The manuscript text must not include any identifying author details.

Conclusions
The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential Title Page Information
• Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
• Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
• Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.
• Funding statement. A statement of any funding sources for the work reported in the manuscript, with disclosure of any financial conflicts of interest involving any of the co-authors. Funders must be identified by name.
• Acknowledgments. As needed.

Author Biography
The Author Biography page must contain short (< 41 words) descriptions of the affiliations and research interests or areas of expertise for each author for publication with the manuscript if accepted for publication.

Abstract
A structured abstract, by means of appropriate headings, should provide the context or background for the research and should state its purpose, basic procedures (observational and analytical methods), main findings (giving specific effect sizes and their statistical significance, if possible), and principal conclusions (including implications for practice and/or policy). It should emphasize new and important aspects of the study or observations. Abstract should be no longer than 250 words.

Abbreviations
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Formatting of funding sources
List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].
It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Units**

U.S. units of measure must be used: e.g., U.S. dollars, pounds, ounces, inches, feet, etc.

**Math formulae**

Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

**Footnotes**

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

**Artwork**

**Electronic artwork**

**General points**

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.
- Ensure that color images are accessible to all, including those with impaired color vision.

A detailed guide on electronic artwork is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

**Formats**

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

- EPS (or PDF): Vector drawings, embed all used fonts.
- TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/halftone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.
Color Artwork
Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF) or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color on the Web (e.g., ScienceDirect and other sites). For further information on the preparation of electronic artwork, please see https://www.elsevier.com/artworkinstructions.

Figure captions
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References
Citation in text
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Reference links
Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, Crossref and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. Journal of Geophysical Research, https://doi.org/10.1029/2001JB000884. Please note the format of such citations should be in the same style as all other references in the paper.

Web references
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

Preprint references
Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.
References in a special issue
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference management software
Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Reference style
List: references should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.
Examples:
Reference to a journal publication:
Reference to a journal publication with an article number:
Reference to a book:
Reference to a chapter in an edited book:
Reference to a website:
Reference to a dataset:
Reference to a conference paper or poster presentation:
Reference to software:

Journal abbreviations source
Journal names should be abbreviated according to the List of Title Word Abbreviations.

Video
Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly
relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

**Data visualization**
Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions [here](#) to find out about available data visualization options and how to include them with your article.

**Research data**
This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings, which may also include software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the [research data](#) page.

**Data linking**
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the [database linking](#) page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

**Data statement**
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the [Data Statement](#) page.

The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

**Ensure that the following items are present:**
One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address
- Phone numbers

All necessary files have been uploaded, and contain:

- Keywords
- All figure captions
- All tables (including title, description, footnotes)
Further considerations

- Manuscript has been 'spell-checked' and 'grammar-checked'
- References are in the correct format for this journal
- All references mentioned in the Reference list are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Web)
- For any further information please visit our customer support site at https://service.elsevier.com.

Revisions

If a revision is requested, authors must submit both a tracked-changes version of the revised manuscript file and a clean version. The submission must also include a Response to Reviewers document that describes the changes the authors made in response to each comment, point by point, or else a reason for not making the suggested change. For each change made, the document should either include the updated text or give the line numbers of the updated text (specifying whether the numbers are in the tracked-changes or clean version) so the reviewer can find it easily. If authors did not include an Author Biography file with the original submission, they must include it with the revision.

AFTER ACCEPTANCE

Proofs

One set of page proofs (as PDF files) will be sent by e-mail to the corresponding author (if we do not have an e-mail address then paper proofs will be sent by post) or a link will be provided in the e-mail so that authors can download the files themselves. To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. Elsevier now provides authors with PDF proofs which can be annotated; for this you will need to download the free Adobe Reader, version 9 (or higher). Instructions on how to annotate PDF files will accompany the proofs (also given online). The exact system requirements are given at the Adobe site.

If you do not wish to use the PDF annotations function, you may list the corrections (including replies to the Query Form) and return them to Elsevier in an e-mail. Please list your corrections quoting line number. If, for any reason, this is not possible, then mark the corrections and any other comments (including replies to the Query Form) on a printout of your proof and scan the pages and return via e-mail. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. We will do everything possible to get your article published quickly and accurately. It is important to ensure that all corrections are sent back to us in one communication: please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

Offprints

The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

AUTHOR INQUIRIES

Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also check the status of your submitted article or find out when your accepted article will be published.

© Copyright 2018 Elsevier | https://www.elsevier.com