Patient Education and Counseling is an interdisciplinary, international journal for patient education and health promotion researchers, managers and clinicians. The journal seeks to explore and elucidate the educational, counseling and communication models in health care. Its aim is to provide a forum for fundamental as well as applied research, and to promote the study of organizational issues involved with the delivery of patient education, counseling, health promotion services and training models in improving communication between providers and patients.

Patient Education and Counseling is the official journal of the International Association for Communication in Healthcare (EACH) and the American Academy on Communication in Healthcare (AACH).

Manuscript Submission

The journal welcomes unsolicited manuscripts related to the field of patient education, counseling and clinical health promotion and communication in medicine. During submission, authors can select a category from the list below. The type of manuscript should be indicated in the cover letter.

Original Articles - Preference is given to empirical research which examines such topics as adherence to therapeutic regimens, provider-patient communication, patient participation in health care, degree of social support, decision-making skills, anxiety, physiological changes, or health/functional status. Maximum 4000 words. Please note that manuscript wordcounts EXCLUDE the following in the count: Abstract, acknowledgements, references, tables, figures, conflict of interest statements. Both descriptive and intervention studies are acceptable.

Review Articles (Current Perspectives) - In-depth reviews of the empirical research in one facet of the patient education and counseling including an analytical discussion of contemporary issues and controversies in patient education and counseling (maximum 5000 words not including references and tables).

Educational Model of Health Care - Case studies of innovative programs which exemplify the educational model of health care, for example, self-care groups, patient advocacy efforts, medication self administration programs and co-operative care units (maximum 2000 words not including references and tables).
Short Communications - in any of the above categories will also be considered (maximum 1500 words not including references and tables).

Reflective practice - The Reflective Practice section includes papers about personal or professional experiences that provide a lesson applicable to caring, humanism, and relationship in health care. We welcome unsolicited manuscripts. No abstract is needed. No (section) headings, no numbering. Maximum 1500 words. First name and surname of the author and his/her institution affiliation address, telephone and fax number and e-mail address where the corresponding author can be contacted, title of the papers and text. Submissions will be peer-reviewed by two reviewers. For further information on the Reflective Practice section see: Hatem D, Rider EA. Sharing stories: narrative medicine in an evidence-based world. Patient Education and Counseling 2004; 54:251-253.

Medical Education - Articles on medical education focus on educational efforts that target experiences, programmes and educational research on the teaching/training and evaluation of interpersonal/communication skills of health care providers and their attitudes and skills needed for optimal communication.

Please submit your article via [http://ees.elsevier.com/pec/](http://ees.elsevier.com/pec/)

AUDIENCE

Patient Education Researchers, Managers and Counselors, Health Educators and Health Care Providers, Psychologists and Sociologists, concerned with information, education and counseling of patients.

IMPACT FACTOR

2018: 2.821 © Clarivate Analytics Journal Citation Reports 2019

ABSTRACTING AND INDEXING

Annals of Behavioral Medicine
PubMed/Medline
Current Contents - Clinical Medicine
Sociedad Iberoamericana de Informacion Cientifica (SIIC) Data Bases
CINAHL
Current Contents - Social & Behavioral Sciences
Embase
Hospital Literature Index
Pascal Francis
PsycINFO
International Nursing Index
ERA (Educational Research Abstracts Online)
Inventory of Marriage and Family Literature
Health Promotion and Education Database
Scopus

EDITORIAL BOARD

*Editor-in-Chief*
Arnstein Finset, Oslo, Norway

*Senior Deputy Editors*
P. Butow, Sydney, Australia
R. Hulsman, Amsterdam, Netherlands

*Deputy Editors*
H. Bosworth, Durham, North Carolina, USA
Associate Editors
R. Brown, Richmond, Virginia, USA
M. Funnell, Ann Arbor, Michigan, USA
K. Gudzune, Baltimore, Maryland, USA
G. Makoul, New Haven, Connecticut, USA
A.H. Pieterse, Leiden, Netherlands
E.A Rider, Waltham, Massachusetts, USA
P. Salmon, Liverpool, England, UK
J.C.M. van Weert, Amsterdam, Netherlands
A. Visser, Rotterdam, Netherlands
C. Zimmermann, Verona, Italy

Managing Editor
A. Mellblom, Olso, Norway

Editorial Board
M.C. Beach, Baltimore, Maryland, USA
A. Bredart, Paris, France
C. Charles, Hamilton, Ontario, Canada
L. Cooper, Baltimore, Maryland, USA
H. de Haes, Amsterdam, The Netherlands
L. Del Piccolo, Verona, Italy
M. Farrell, Milwaukee, Wisconsin, USA
A. Golay, Geneva, Switzerland
P. Gremigni, Bologna, Italy
M. Holmes-Rovner, East Lansing, Michigan, USA
D. Iverson, Wollongong, New South Wales, Australia
S. Keillor, Philadelphia, Pennsylvania, USA
S. Kurtz, Calgary, Alberta, Canada
W. Langewitz, Basel, Switzerland
A. Meyer-Weitz, Berea, South Africa
A. Ojanlatva, Turku, Finland
M. Poskiparta, Jyvaskyla, Finland
L. Robinson, Newcastle, England, UK
D. Roter, Baltimore, Maryland, USA
D. Schillinger, San Francisco, California, USA
B. Sleath, Chapel Hill, North Carolina, USA
R. Street, Jr., College Station, Texas, USA
E. Taal, Enschede, Netherlands
K. Tercyak, Washington, District of Columbia, USA
L. Tooth, Brisbane, Queensland, Australia
S. van Dulmen, Utrecht, Netherlands
P. Verhaak, Utrecht, Netherlands
GUIDE FOR AUTHORS

PEC Aims and Scope
Patient Education and Counseling is an interdisciplinary, international journal for patient education and health promotion researchers, managers, physicians, nurses and other health care providers. The journal seeks to explore and elucidate educational, counseling and communication models in health care. Its aim is to provide a forum for fundamental as well as applied research, and to promote the study of the delivery of patient education, counseling, and health promotion services, including training models and organizational issues in improving communication between providers and patients.

Patient Education and Counseling is the official journal of the European Association for Communication in Healthcare (EACH) and the American Academy on Communication in Healthcare (AACH).

PCI Aims and Scope
PATIENT-CENTERED INNOVATION
International. Interdisciplinary. Practical.

Patient-Centered Innovation is an online, peer-reviewed, special feature of Patient Education & Counseling (PEC), launching in 2018. Content will focus on work that brings patient perspectives into the design, implementation, and evaluation of interventions intended to improve health and transform health care delivery. As part of PEC, articles in Patient-Centered Innovation will be indexed in Medline/PubMed.

Innovation requires ideas and execution: It involves a disciplined process of defining problems to be solved, developing solutions for transformational change, implementing solutions, and measuring impact. Ideally, patient-centered innovation embraces patient perspectives in problem definition and solution design, and measures impact in terms of outcomes that matter to patients. The scope includes the full range of interpersonal, group, mediated, and technology-enabled innovations and interventions.

By focusing on user-centered design and innovation with practical value, Patient-Centered Innovation aims to advance the pace and sustainability of meaningful change in areas such as care coordination, communication, health care encounters, medical and health professional education, patient activation, patient experience, patient and family engagement, patient involvement, patient-reported outcomes, relationship-centered care, remote monitoring, resilience, self-care, shared decision making, telehealth, and virtual access.

The Editorial Board will include patients and other laypersons, health professionals, innovation leaders, and social scientists. The editorial process will assess scientific quality of the work as well as relevance and utility to patients and health professionals in real-world settings. Robust use of established measures is encouraged unless there is clear need for a new measurement approach.

In addition to empirical studies on the outcomes of patient-centered innovation, thoughtful articles on innovation design and development, innovation capacity and sustainability, patient-centered research design, feasibility studies, and/or negative findings are welcome, as they can be instructive for others in the field. In an effort to build a coherent literature base and common vocabulary, Patient-Centered Innovation will include editorials and primers with essential background and context.

Please see the Author Instructions for more information on submission guidelines.

Gregory Makoul PhD MS (United States) will serve as Editor-in-Chief, with Sara Rubinelli PhD (Switzerland), Angela Liu PhD MBA (China), Sandra van Dulmen PhD (The Netherlands), Jon Vozenilek MD (United States), and Angela Zambeaux (United States) as Associate Editors.

PEC Manuscript Categories
During online submission, the author can select a category from the following list: Research Paper, Review Article, Short Communication, Reflective Practice, Discussion or Correspondence. The type of manuscript should be indicated in the cover letter.
Research Papers Preference is given to empirical research which examines such topics as provider-patient communication, patient education, patient participation in health care, adherence to therapeutic regimens, social support, decision-making, health literacy, physiological changes, health/functional status etc. Maximum 4000 words. Please note that manuscript word counts EXCLUDE the following: Abstract, acknowledgements, references, tables, figures, conflict of interest statements. Both descriptive and intervention studies are acceptable. Each Research Paper will also require a heading selected from the following to identify the section of the journal to which it best applies: Communication Studies, Patient Education, Healthcare Education, Healthcare and Health Promotion, Patient and User Perspectives and Characteristics, Assessment and Methodology.

Review Articles In-depth reviews of the empirical research in an area relevant to the journal, including analytical discussion of contemporary issues and controversies (maximum 5000 words not including references and tables)

Short Communications Brief articles in any of the above categories will also be considered (maximum 1500 words not including references and tables).

Reflective practice We welcome personal narratives on caring, patient-clinician relationships, humanism in healthcare, professionalism and its challenges, patients’ perspectives, and collaboration in patient care and counseling. Most narratives will describe personal or professional experiences that provide a lesson applicable to caring, humanism, or relationships in health care. No abstract is needed. No (section) headings, no numbering. Maximum 1500 words. Submissions are peer-reviewed. For further information, see the editorial published in PEC: Hatem D, Rider EA. Sharing stories: narrative medicine in an evidence-based world. Patient Education and Counseling 2004;54:251-253.

Discussion Forum - Papers in the Discussion Forum will include two categories: Discussion Papers up to 3000 words with discussion and commentary on relevant topics within the Aims and Scope of the journal. A Discussion paper should elucidate a theory, concept or problem in an area relevant to the journal.

Correspondence Papers (up to 1500 words) with brief comments on articles in previous issues of the journal.

Guidelines We encourage authors to consult appropriate guidance, depending on the design of their study. For randomized trials, consult CONSORT (Consolidated Standards Of Reporting Trials) http://www.consort-statement.org/
For systematic reviews and meta-analyses consult PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) http://www.prisma-statement.org/
For statistical analysis and reporting, consult SAMPL (Basic Statistical Reporting for Articles Published in Biomedical Journals: The "Statistical Analyses and Methods in the Published Literature") http://www.equator-network.org/reporting-guidelines/sampl/
For qualitative studies, see specific editorials published in PEC: Finset A. Qualitative methods in communication and patient education research. Patient Educ Couns, Volume 73, Issue 1, October 2008, Pages 1-2. DOI: 10.1016/j.pec.2008.08.004
Salmon P, and Young B. Qualitative methods can test and challenge what we think we know about clinical communication - if they are not too constrained by methodological 'brands'. Patient Educ Couns Volume 101, Issue 9, September 2018, Pages 1515-1517. DOI: 10.1016/j.pec.2018.07.005

PCI Author Instructions
PATIENT-CENTERED INNOVATION

International. Interdisciplinary. Practical.

Author Instructions

In general, submissions to Patient-Centered Innovation should clearly reflect the Aims + Scope, with a focus on bringing patient perspectives into the design, implementation, and evaluation of interventions intended to improve health and transform health care delivery. The editors are particularly interested in submissions that highlight user-centered design and innovation with practical value that can advance the pace and sustainability of meaningful change in areas such as care coordination, communication, health care encounters, medical and health professional education,
patient activation, patient experience, patient and family engagement, patient involvement, patient-reported outcomes, relationship-centered care, remote monitoring, resilience, self-care, shared decision making, telehealth, and virtual access.

As Patient-Centered Innovation is a special feature of Patient Education and Counseling (PEC), authors will use the PEC site for online submission. The first line of the cover letter must: (1) clearly state that the manuscript is being submitted for Patient-Centered Innovation; (2) clearly indicate the type of submission by choosing a category from the following list:
Research Articles - 2,500 words Review Articles - 3,500 words Invited Articles + Primers - 2,500 words Commentaries + Letters - 500 words

Authors must follow the category-specific instructions before submitting a manuscript. Research Articles, Review Articles, Invited Articles + Primers will go through a rigorous peer-review process to assess scientific quality as well as relevance and utility to patients and health professionals in real-world settings. All accepted and published submissions will be open to a constructive exchange of ideas with a diverse group of stakeholders.

Research Articles (2,500 words). Preference is given to empirical research that either sets the stage for patient-centered innovation (e.g., well designed feasibility studies) or measures the impact of interventions intended to improve health and transform health care delivery. Thoughtful articles on patient-centered research design and/or negative findings are welcome, as they can be instructive for others in the field. Robust use of established measures is encouraged unless there is clear need for a new measurement approach. All Research Articles should have a structured abstract of up to 300 words, using the following subheadings: Background defining the problem to be solved Objective testing the innovation intended to solve the problem Patient Involvement outlining if/how patients were involved in problem definition, solution design or selection, and impact measurement Methods making the process understandable and replicable Results presenting major findings with appropriate, compelling visualizations Discussion integrating results and implications, with attention to limitations, sustainability and spread Practical Value clearly stating why the results of this study matter at a very practical level (i.e., answer the ‘so what?’ question) Funding sources and role, if any, of the funding organization in the study and/or submission

While the SQUIRE Guidelines were constructed for quality improvement work, authors may find them helpful when constructing their submissions to Patient Centered-Innovation.

Review Articles (3,500 words). Given the variety and volume of work on innovation in health care, well-constructed reviews can be an extremely valuable contribution to the literature. Review articles should catalyze progress by highlighting overlap of, or conflict between, ideas and approaches. All Review Articles should have a structured abstract of up to 300 words, using the following subheadings:

Background defining the problem to be solved Objective specifying the scope of the review and the question it aims to answer Patient Involvement outlining if/how patients were involved in the review process Methods making the process understandable and replicable Results presenting major findings with appropriate, compelling visualizations Discussion integrating results and implications, with attention to limitations Practical Value clearly stating why the results of this study matter at a very practical level (i.e., answer the ‘so what?’ question) Funding sources and role, if any, of the funding organization in the study and/or submission

All systematic reviews and meta-analyses should follow the PRISMA Guidelines.
Invited Articles + Primers (2,500 words). In an effort to build a coherent literature base and common vocabulary, innovators may be invited to share lessons learned and/or essential background that can advance work in Patient-Centered Innovation. These may include articles on innovation design and development, innovation capacity and sustainability, health care delivery science, or useful definitions and approaches to work in the field.

Commentaries + Letters (500 words). The editors are very open to submissions - in the form of commentary on published articles, ideas for invited articles, and other correspondence to advance the field - from the full spectrum of stakeholders, including patients, caregivers, other laypersons, innovation leaders, health professionals, and social scientists.

Submission checklist
You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

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

All necessary files have been uploaded:

Manuscript:
• Include keywords
• All figures (include relevant captions)
• All tables (including titles, description, footnotes)
• Ensure all figure and table citations in the text match the files provided
• Indicate clearly if color should be used for any figures in print

Graphical Abstracts / Highlights files (where applicable)

Supplemental files (where applicable)

Further considerations
• Manuscript has been 'spell checked' and 'grammar checked'
• 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 Internet)
• A competing interests statement is provided, even if the authors have no competing interests to declare
• Journal policies detailed in this guide have been reviewed
• Referee suggestions and contact details provided, based on journal requirements

For further information, visit our Support Center.

BEFORE YOU BEGIN

Ethics in publishing
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

Studies in humans and animals
If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. The manuscript should be in line with the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms sex and gender should be used correctly.

Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

All animal experiments should comply with the ARRIVE guidelines and should be carried out in accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated guidelines, EU Directive 2010/63/EU for animal experiments, or the National Institutes of Health guide for the care
and use of Laboratory animals (NIH Publications No. 8023, revised 1978) and the authors should clearly indicate in the manuscript that such guidelines have been followed. The sex of animals must be indicated, and where appropriate, the influence (or association) of sex on the results of the study.

**Policy and Ethics**

For work described in your article involving human experimental investigations of any kind, must have been carried out in accordance with The Code of Ethics of the Declaration of Helsinki; [http://www.wma.net/e/policy/b3.htm](http://www.wma.net/e/policy/b3.htm)

**Declaration 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 competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. [More information.]

**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 originality, your article may be checked by the originality detection service [Crossref Similarity Check.]

**Preprints**

Please note that preprints can be shared anywhere at any time, in line with Elsevier's [sharing policy](https://www.elsevier.com/locate/pec). Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

**Use of inclusive language**

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

**Author contributions**

For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRediT role(s) following. [More details and an example]

**Authorship**

All authors should have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted.

**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.

Article transfer service
This journal is part of our Article Transfer Service. This means that if the Editor feels your article is more suitable in one of our other participating journals, then you may be asked to consider transferring the article to one of those. If you agree, your article will be transferred automatically on your behalf with no need to reformat. Please note that your article will be reviewed again by the new journal.

More information.

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 an 'Exclusive 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. If the funding source(s) had no such involvement then this should be stated.

Funding body agreements and policies
Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the gold open access publication fee. Details of existing agreements are available online. After acceptance, open access papers will be published under a noncommercial license. For authors requiring a commercial CC BY license, you can apply after your manuscript is accepted for publication.

Open access
This journal offers authors a choice in publishing their research:

Subscription
- Articles are made available to subscribers as well as developing countries and patient groups through our universal access programs.
- No open access publication fee payable by authors.
• The Author is entitled to post the accepted manuscript in their institution’s repository and make this public after an embargo period (known as green Open Access). The published journal article cannot be shared publicly, for example on ResearchGate or Academia.edu, to ensure the sustainability of peer-reviewed research in journal publications. The embargo period for this journal can be found below.

**Gold open access**
• Articles are freely available to both subscribers and the wider public with permitted reuse.
• A gold open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For gold open access articles, permitted third party (re)use is defined by the following Creative Commons user licenses:

*Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)*
For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The gold open access publication fee for this journal is **USD 3650**, excluding taxes. Learn more about Elsevier's pricing policy: [https://www.elsevier.com/openaccesspricing](https://www.elsevier.com/openaccesspricing).

**Green open access**
Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our open access page for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution’s repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. Find out more.

This journal has an embargo period of 12 months.

**Elsevier Researcher Academy**
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

**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 Author Services.

**Informed consent and patient details**
Studies on patients or volunteers require ethics committee approval and informed consent, which should be documented in the paper. Appropriate consents, permissions and releases must be obtained where an author wishes to include case details or other personal information or images of patients and any other individuals in an Elsevier publication. Written consents must be retained by the author but copies should not be provided to the journal. Only if specifically requested by the journal in exceptional circumstances (for example if a legal issue arises) the author must provide copies of the consents or evidence that such consents have been obtained. For more information, please review the Elsevier Policy on the Use of Images or Personal Information of Patients or other Individuals. Unless you have written permission from the patient (or, where applicable, the next of kin), the personal details of any patient included in any part of the article and in any supplementary materials (including all illustrations and videos) must be removed before submission.

All authors must include one of these two statements at the end of their manuscript:
"I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story."

OR

"I confirm that the patient/person(s) have read this manuscript and given their permission for it to be published in PEC."

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://ees.elsevier.com/pec/.

PREPARATION

Peer review
This journal operates a single blind 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 one independent expert reviewer 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. More information on types of peer review.

Use of word processing software
It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Article structure
Subdivision - numbered sections
Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Manuscripts should be organized as follows:
Title page, Abstract, 1. Introduction, 2. Methods, 3. Results, 4. Discussion and Conclusion, References, Legends.

Discussion and Conclusion should be headed as one section and divided into three parts. Example:
4. Discussion and Conclusion, 4.1. Discussion, 4.2. Conclusion. 4.3 Practice Implications

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 and Conclusion
Discussion and Conclusion should be headed as one section and divided into three parts. Example: 4. Discussion and Conclusion, 4.1. Discussion, 4.2. Conclusion. 4.3 Practice Implications

Practice Implications
Articles should include a paragraph or paragraphs entitled 'Practice Implications' as part of the discussion and conclusion, which outlines the implications for practice suggested by the study. Authors should take care that these implications follow closely from the data presented, rather than from other literature. In the event that an article presents very preliminary data or conclusions, these paragraphs may be omitted

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. Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. 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.
• Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding 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.

Highlights
Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view example Highlights on our information site.

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 (selection of study subjects, observational and analytical methods), main findings (giving specific effect sizes and their statistical significance, if possible), principal conclusions and practice implications. Abstracts should adhere to the following format: Objective, Methods, Results, Conclusion, Practice Implications. The word limit for abstracts is 200.

Acknowledgements
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

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, please 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
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

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.
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): Bitmaped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
TIFF (or JPEG): Combinations bitmaped line/half-tone (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 online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. For color reproduction in print, you will receive
Information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. Further information on the preparation of electronic artwork.

Illustration services
Elsevier's Author Services offers Illustration Services to authors preparing to submit a manuscript but concerned about the quality of the images accompanying their article. Elsevier's expert illustrators can produce scientific, technical and medical-style images, as well as a full range of charts, tables and graphs. Image 'polishing' is also available, where our illustrators take your image(s) and improve them to a professional standard. Please visit the website to find out more.

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.

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.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:
http://open.mendeley.com/use-citation-style/patient-education-and-counseling
When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

Reference style
Text: Indicate references by number(s) in square brackets in line with the text. The actual authors can be referred to, but the reference number(s) must always be given. Example: '..... as demonstrated [3,6]. Barnaby and Jones [8] obtained a different result ....'
List: Number the references (numbers in square brackets) in the list in the order in which they appear in the text.
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 citations should be numbered consecutively throughout using Arabic numerals in parentheses or square brackets (not superscripts). References should be double-spaced and start on a separate page. References should conform to the system used in Uniform Requirements for Manuscripts Submitted to Biomedical Journals (Brit Med J 1991;302:338-41; N Engl J Med 1991;324:424-8), using standard abbreviations of the journal titles cited in Current Contents.

Note All authors’ names should be listed. Issue numbers should not be included.

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.

**Supplementary material**
Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

**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. To facilitate reproducibility and data reuse, this journal also encourages you to share your 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).

**Mendeley Data**
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley Data. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the Mendeley Data for journals page.
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.

AFTER ACCEPTANCE

Online proof correction
Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.
If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.
We will do everything possible to get your article published quickly and accurately. 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. 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. Both corresponding and co-authors may order offprints at any time via Elsevier’s Author Services. 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