Atención Primaria is a journal that publishes works relative to the field of Primary Healthcare in Spanish and English. From a conceptual point of view, Atención Primaria adopts the new model of Primary Healthcare, not only directed at the treatment and curing of the disease, but also of its prevention and the promotion of health, both at an individual level as well as at a family and community level. In these new characteristics that define the Primary Healthcare models, are included those that are focused on the research works that Atención Primaria publishes, the leading journal of Spanish originals created to gather and disseminate the scientific production from Primary Care Centres on topics that include, among others, the producing of health care protocols, prevention programs, follow-up and control of patients with chronic illnesses, as well as the organisation and management of Primary Healthcare.

In addition to the rigorously selected, systematically peer-reviewed manuscripts published in the research sections (research articles, scientific letters, editorials, and letters to the editor), the journal also contains other important sections, such as review articles, consensus and clinical guides from the most important scientific societies. The journal is included in Medline/Pubmed, Science Citation Index Expanded, and SCOPUS. Manuscripts with a focus on the practical aspects of the discipline, e.g. case reports, can be submitted to the Journal open access companion title, Atención Primaria Práctica.

Atención Primaria es una revista que publica trabajos de investigación relativos al ámbito de la atención primaria de salud en español y en inglés. Desde el punto de vista conceptual, Atención Primaria asume el nuevo modelo de atención primaria de salud, orientado no sólo a la curación de la enfermedad, sino también a su prevención y a la promoción de la salud, tanto en el plano individual como en el de la familia y la comunidad. En estos nuevos aspectos que definen el modelo de atención primaria de salud es en los que se centran los trabajos de investigación que publica Atención Primaria, la primera revista de originales española creada para recoger y difundir la producción científica realizada desde los centros de atención primaria de salud sobre cuestiones como protocolización de la asistencia, programas de prevención, seguimiento y control de pacientes crónicos, organización y gestión de la asistencia primaria, entre otros. Además de los manuscritos rigurosamente seleccionados que se publican en las secciones de investigación (artículos de investigación, catas científicas, editoriales y cartas al editor), la revista también publica otras importantes secciones como artículos de revisión, documentos de consenso y guías clínicas de las sociedades científicas más representativas.

La revista está incluida en MedLine/Pubmed, Science Citation Index Expanded y SCOPUS.
IMPACT FACTOR

2019: 1.087 © Clarivate Analytics Journal Citation Reports 2020

ABSTRACTING AND INDEXING

Science Citation Index
Embase
Scopus
Directory of Open Access Journals (DOAJ)
PubMed/Medline

EDITORIAL BOARD

Editor in Chief
Amando Martín Zurro, Fundación Educación Médica, Barcelona

Deputy Editors
Carmen Batalla Martín, Institut Catala De La Salut, Barcelona
Joan Gené, Center of Primary Health Care Barcelona Esquerra, Barcelona
Josep Jiménez Vila, Institut Catala De La Salut, Barcelona

semFYC Coordinator
Juan Jose Mascort Roca, University of Barcelona, Catalan Health Institute, Hospitalet de Llobregat, Spain
GUIDE FOR AUTHORS

Introduction
Atención Primaria is a journal that publishes works relative to the field of Primary Healthcare. From a conceptual point of view, Atención Primaria adopts the new model of Primary Healthcare, not only directed at the treatment and curing of the disease, but also of its prevention and the promotion of health, both at an individual level as well as at a family and community level. In these new characteristics that define the Primary Healthcare models, are included those that are focused on the research works that Atención Primaria publishes, the leading journal of Spanish originals created to gather and disseminate the scientific production from Primary Care Centres on topics that include, among others, the producing of health care protocols, prevention programs, follow-up and control of patients with chronic illnesses, as well as the organisation and management of Primary Healthcare. In addition to the rigorously selected, systematically peer-reviewed manuscripts published in the research sections (research articles, scientific letters, editorials, and letters to the editor), the journal also contains other important sections, such as review articles, consensus and clinical guides from the most important scientific societies. The journal is included in Medline/PubMed, Science Citation Index Expanded, and SCOPUS.

Types of article
ORIGINAL ARTICLES

In this section articles will be published that present clinical and / or epidemiological studies carried out by the authors. Additionally, works on organisational aspects and quality control could be included in the section. The studies must have been carried in the Primary Health Care setting or their results are of interest in this field. The maximum number of authors is 6. The structure of the articles that are requested to be published in this section depends on the type of investigation presented:
Quantitative research. Systematic review (meta-analysis). Qualitative research. ORIGINAL ARTICLES: QUANTITATIVE RESEARCH

Articles will be included here that present clinical and epidemiological studies that have used quantitative methodology in their design and analysis (for example, prevalence studies, follow-up of a cohort, case control studies, randomised clinical trial, etc).
The structure of the articles must be as follows: Cover letter (see general guidelines), first page (see general guidelines), a structured abstract (maximum: 250 words), text: a maximum of 2500 words, not counting Tables, references or the Abstracts, from 3 to 6 key points, tables and figures: maximum 6 (See general guidelines), diagram of the study.
Each one of the previous parts must be started on a new page. The structured ABSTRACT will include the title of the article and must have the following structure:
Objective: clear identification of the main purpose of the study. Design: description of the basic design of the study (randomised clinical trial, case control study,...), and its basic characteristics if they are relevant (double blind, multicentre...). If the design of the study is not clear, its main characteristics must be mentioned (cross-sectional or longitudinal, prospective or retrospective, observational or intervention, controlled or uncontrolled). Location: place where the study was performed and the type and level of health care (Primary, Hospital, Community Care...). Participants: patient characteristics, selection criteria, number of enrolled subjects and non-responders and drop-outs that have occurred. Interventions (in intervention studies): main characteristics, including the administration schedule and duration, of the interventions performed in the study groups, as well as any in the comparison groups. Main measurements: primary variables of the study, especially the response variable used and its evaluation method. Results: main quantitative results, identifying the type of measurement used and it corresponding confidence interval. Where applicable, it should contain the level of statistical significance. Conclusions: the main conclusions arising from the results of the study, including their practical application.

The TEXT must be adapted to the Introduction/Materials and Methods/Results and Discussion structure, following the recommendations set out below:
Introduction: It must present the current situation on the knowledge of the topic and the context in which the study is framed. The objective of the study must be clearly defined. The introduction must be as brief as possible and be supported in a reduced number of key literature references. Material and methods: It must include the design of the study, the centre where the research was carried out, the inclusion and exclusion criteria and the screening procedure of the participants,
the interventions performed (if applicable), the definitions, and the measurement techniques of the variables, the follow-up of the subjects and the analysis strategy, as well as the statistical tests used. It must be written with sufficient detail so that the study could be repeated. The use of headings is recommended in order to organise the information (study population, interventions, follow-up, statistical analysis). **Results:** This must present, not interpret, the principle findings associated with the aims of the study. Headings may be used to make the presentation clearer. It is advised to use Tables and Figures without the unnecessary repetition of the data in the text. The main results must include the corresponding confidence intervals, and must clearly indicate the type of measurement and the statistical tests used, where applicable. When the significance level is less than 0.20, it is preferable to present its exact value. It is recommended to highlight the Table or Figure that contain the principal results of the study, with a description of these in the legend. **Discussion:** It is advised to structure it with the following headings (where relevant): limitations of the design used; a comparison with the scientific literature, attempting to explain the differences observed; practical application of the results, performing an evaluation on their clinical relevance; and directions for future research on the topic. **Acknowledgements:** To individuals or institutions that, not having fulfilled the requirements of authorship, may have collaborated in the performing of the work, providing material, technical or financial help. The type of contribution should be mentioned. **Bibliography:** A maximum of 30 literature references is recommended, which must be as recent and relevant as possible, and carefully written in accordance with the Vancouver format. **Key points:** All original works must include a Table with the key points to help in the understanding of the work by those readers that do not wish to read the full article. It must include a maximum of 3 short and precise sentences that indicate what is known on the topic before carrying out the study and the need to have carried it out (under the heading "What is known on the topic"), and another maximum of 3 sentences that indicate what this study has contributed to the previous knowledge of the topic (under the heading **What this study contributes**). **Study Outline:** A Figure will also be included of the study outline that shows the number of subjects in each of the stages of the study and the reasons of the non-responses, losses and drop-outs that may have occurred. The Figure legend must summarise the main characteristics of the study design. If the study is a randomised clinical trial, this Figure must follow that of the most up to date CONSORT statement, available at [http://www.consort-statement.org](http://www.consort-statement.org)

**ORIGINAL ARTICLES: SYSTEMATIC REVIEWS (META-ANALYSIS)**

This section will include all articles that present systematic reviews of the literature and other sources of evidence, which are critically evaluated in order to provide an answer to a particular question, therefore, narrative type reviews or knowledge update articles are not included. The structure of the articles must be as follows: Cover letter (see general guidelines); first page (see general guidelines), a structured abstract (maximum: 250 words); text: a maximum of 2500 words, not counting tables, references or the abstract; from 3 to 6 key points; tables and figures: maximum 6 (See general guidelines); study outline.

Each one of the previous parts must be started on a new page.

The structured ABSTRACT will include the title of the article and must have the following structure:

**Objective:** clear identification of the main purpose of the review. If there is more than one, it is advised to point out the primary one and the secondary ones. **Design:** It study must be identified as a systematic review. **Data sources:** Data bases consulted, period covered and main characteristics of the search strategy of the individual studies used. **Selection of studies:** selection criteria of the studies, number of studies included and excluded, main characteristics of the studies included. **Data extraction:** method for assessing the validity of the studies and data collection, and main variables collected. **Results:** main quantitative results, identifying the type of measurement used and its corresponding confidence intervals. Where applicable, it should include the level of statistical significance. Where applicable, the results of the sensitivity analysis should be included. **Conclusions:** the main conclusions arising from the results of the study, including their practical application. The TEXT must be adapted to the Introduction/Materials and Methods/Results and Discussion structure, following the recommendations set out below: **Introduction:** It must present the current situation on the knowledge of the topic and the context in which the study is framed. The question that the review seeks to answer must be clearly defined. The introduction must be as brief as possible and be supported with a reduced number of key literature references. **Material and methods:** The strategy for identifying the relevant studies must be described, including the data bases consulted and the descriptive terms used, the inclusion and exclusion criteria of the studies, the procedure for assessing their validity, the data extraction methods and the analysis strategy, as well as the statistical tests.
used for the data analysis. It must be written with sufficient detail so that the study could be repeated. The use of headings is recommended in order to organise the information (identification of studies, selection of studies, data extraction, analysis...). \textit{Results:} It must present, not interpret, the principle findings associated with the aims of the review. Headings may be used to make the presentation clearer. It is advised to use Tables and Figures without the unnecessary repetition of the data in the text. It is recommended to include a Table with a breakdown of the main characteristics and results of the studies included in the review. The main results must include the corresponding confidence intervals, and must clearly indicate the type of measurement and the statistical tests used, where applicable. It is recommended to graphically present the confidence intervals in a Figure. When the significance level is less than 0.20, it is preferable to present its exact value. It is recommended to highlight the Table or Figure that contain the main results of the study, with a description of these in the legend.

\textit{Discussion:} It is advised to structure it with the following headings (where relevant): limitations of the review, including suggestions on the effect of a possible publication bias, and comments on the homogeneity of the individual studies and the possible influence of variability on the final results; a comparison with the scientific literature, attempting to explain the differences observed; practical application of the results, performing an evaluation on their clinical relevance; and directions for future research on the topic.

\textit{Acknowledgements:} To individuals or institutions that, not having fulfilled the requirements of authorship, may have collaborated in the performing of the work, providing material, technical or financial help. The type of contribution should be mentioned.

\textit{Bibliography:} The literature references must be numbered consecutively in the order in which they appear for the first time in the text, identifying them using Arabic numbers (in parentheses). A maximum of 30 literature references is recommended, which must be as recent and relevant as possible, and carefully written in accordance with the Vancouver format. The studies included in the review must be included in the literature references.

\textit{Key points:} All original works must include a Table with the key points to help in the understanding of the work by those readers that do not wish to read the full article. It must include a maximum of 3 short and precise sentences that indicate what is known on the topic before carrying out the study and the need to have carried it out (under the heading "What is known on the topic"), and another maximum of 3 sentences that indicate what this study has contributed to the previous knowledge of the topic (under the heading "What this study contributes").

\textit{Outline of the Study:} A Figure will also be included with an outline that shows the number of studies selected in each of the stages of the review and the reasons for the exclusions. It is recommended that the outline follows the most up to date PRISMA statement, available at: \url{http://www.prisma-statement.org/}

\textbf{ORIGINAL ARTICLES: QUALITATIVE RESEARCH.} Articles will be included here that present studies that have used qualitative methodologies for the approach to the topic of the research. The structure of the articles must be as follows: Cover letter (see general guidelines); First page (see general guidelines); A structured abstract (maximum: 250 words); Text: a maximum of 2500 words, not counting tables, references or Abstract; From 3 to 6 key points; Tables and Figures: maximum 6 (See general guidelines); Study outline.

Each one of the previous parts must be started on a new page.

The structured ABSTRACT will include the title of the article and should have the following structure:

\textit{Objective:} clear identification of the main purpose of the study. If there is more than one, it is advised to point out the primary one and any secondary ones. \textit{Location:} place where the study was performed and the type and level of health care (Primary Care, hospital, Community Care...).

\textit{Participants and / or contexts:} Selection criteria and acquisition process.

\textit{Method:} Sample design, description of the information collection technique/s, mechanisms for ensuring information saturation, strategy and theoretical framework of the analysis.

\textit{Results:} the main findings, interpretations, topics and concepts identified, structure of the segmentation and categories constructed, and relationship within the conceptual framework.

\textit{Conclusions:} the main conclusions arising from the study and their use for the understanding of the problem and for action and change.
The TEXT must be adapted to the Introduction/Materials and Methods/Results and Discussion structure, following the recommendations set out below (adapted by: Fernández de Sanmamed Santos MJ. Adecuación de las normas de publicación en revistas científicas a las investigaciones cualitativas. (Adaptation of the guidelines published in scientific journals to qualitative research) Aten Primaria. 2000;25:502-4).

Introduction: The current situation on the knowledge of the topic must be presented, the relevance and the context in which the study is framed, including the formal and informal documental sources, opinions, intuitions and general theoretical and interpretative frameworks, where necessary, all of them in the most concise and brief form as possible, being supported in a reduced number of key literature references. The objective of the study must be clearly defined.

Participants and methods: It is recommended to structure this section into the following headings: Design: projected design and methodological strategies, justification for their use, temporal contextualisation, information collection techniques, changes in the design or emerging design, if applicable, etc; Sample and participants and/or contexts: sample design, number and description of participants and/or contexts, selection criteria of the informants and/or contexts, collection procedure, mechanisms for ensuring information saturation, etc; Analysis: strategy and theoretical framework of the analysis, description and validation of the analysis, strategies for ensuring the reliability of the results, etc; Results and Discussion: In qualitative research it is difficult to separate the results from the discussion. The results must be presented in a form that makes the analysis method and the structure of the segmentation and categories constructed clear, and associating them within the prior conceptual framework. An exhaustive presentation of the results must be avoided, only showing the most relevant and significant, that may be real contributions to the knowledge of that examined. It is advisable to use narrative fragments or observations to support the analytical synthesis, and to use illustrative matrices and Tables to facilitate the reading and comprehension of the results. It is recommended to highlight the Table or Figure that contain the main results of the study, with a description of these in the legend; Conclusions, usefulness and limitations: The key findings and interpretations of the research must be highlighted, along with their use in the knowledge of the problem and for action or change. The limitations of the study must be included, as well as proposals for new questions or research lines;

Acknowledgements: To individuals or institutions that, not having fulfilled the requirements of authorship, may have collaborated in the performing of the work, providing material, technical or financial help. The type of contribution should be mentioned.

Bibliography: The literature references must be numbered consecutively in the order in which they appear for the first time in the text, identifying them using Arabic numbers (in parentheses). A maximum of 30 literature references is recommended, which must as recent and relevant as possible, and carefully written in accordance with the Vancouver format.

Key points
All original articles must include a Table with the key points to help in the understanding of the work by those readers that do not wish to read the full article. It must include a maximum of 3 short and precise sentences that indicate what is known on the topic before carrying out the study and the need to have carried it out (under the heading "What is known on the topic"), and another maximum of 3 sentences that indicate what this study has contributed to the previous knowledge of the topic (under the heading "What this study contributes").

EDITORIALS
The articles published in this section are usually commissioned by the editors. However, the Editorial Board may consider non-solicited editorial reviews for publication and submission to the review process, with no obligation of corresponding about them. It is expected that the articles of this section are opinions and reflections of interest in Primary Health Care, that might stimulate debate, or present new perspectives on a topic. The maximum number of authors is 3. The structure of the works must be as follows: Cover letter (see general guidelines); First page (see general guidelines); Text (maximum: 1,000 words. not counting the bibliography); Tables and Figures (maximum: 1 (See general guidelines); The maximum number of literature references is 12.
Each one of the previous parts must be started on a new page. With the aim of helping in its understanding, it is recommended that the text is structured as follows: establishment of the problem, positioning of the author, arguments in favour, arguments against, and conclusions. It is important that the discussion is presented logically and that it cites the type of tests on which the key statements are based (personal or expert opinions, observational studies, clinical trials, systematic reviews).

**LETTERS TO THE EDITOR**

Letter that comment on articles that have recently appeared in the Journal will be published preferentially and as quickly as possible. The letter will be sent to the authors of the article to which it refers and, if they wish to reply to it, the letter and its reply will be published simultaneously. Letters to the Editor will also be accepted that present experiences and opinions of interest for Primary Health Care, such as short reports on research studies and descriptions of series of clinical cases. In the text of these types of letters, it must mention the aims, design of the study, measurements, results and main conclusions.

The Editorial Committee reserves the decision to publish Letters to the Editor in paper form or online. In both cases the reference to the article will be published in the Contents.

The maximum number of authors will be 4.

The structure of the works must be as follows: Cover letter (see general guidelines); First page (see general guidelines); Text (maximum: 600 words, not counting literature references or Tables); Tables and/or Figures (maximum: 1 (See general guidelines).

Each one of the previous parts must be started on a new page. The maximum number of literature references is 6. In the case of letters that refer to a published article, one of the references must correspond to this article.

**SCIENTIFIC LETTERS**

This section will accept letters that present short reports on research studies and descriptions of series of clinical cases. In the text of these types of letters, it must mention the aims, design of the study, measurements, results and main conclusions.

The maximum number of authors will be 4.

The structure of the works must be as follows:
- Cover letter (see general guidelines).
- First page (see general guidelines)
- Text (maximum: 600 words, not counting literature references or Tables).
- Tables and/or Figures (maximum: 1 (See general guidelines). Each one of the previous parts must be started on a new page. The maximum number of literature references is 6.

**SPECIAL ARTICLES**

Special Articles are usually commissioned, and will be published under different headings, depending on their contents (consensus conference, continuing education, technical reports, or in-depth reviews of a topic). The Editorial Board may consider non-solicited editorial reviews for publication and submission to the review process, with no obligation of corresponding about them. The maximum number of authors is 6.

The structure of the works must be as follows: Cover letter (see general guidelines); First page (see general guidelines); Abstract (maximum: 150 words that present the key ideas of the study); Text maximum: 3,000 words, not counting Tables, literature references or the Abstract; Tables and Figures (maximum: 6 (See general guidelines).

Each one of the previous parts must be started on a new page. The maximum number of literature references is 24.

**UPDATED RECOMMENDATIONS IN PRIMARY HEALTH CARE**

This section will publish those recommendations in Primary Health Care that support the need for them to be updated due to new evidence. It will give a concise presentation of the new evidence and will explain the relevance of its practical application. The text will have a maximum of 700 words, not
including the literature references, which will be a maximum of 6 recent references. The title will be the updated topic, and will be as short as possible. Only one Table may be included with the text of the updated recommendation, with no other Tables or Figures being accepted. The maximum number of authors will be 3, with the working group to which it represents being added at the end.

**MEDICAL IMAGES**
Images that by themselves allow to perform a visual diagnosis will be accepted. These

**Contact details for submission**
You can send your manuscript at https://www.evise.com/profile/api/navigate/APRIM.

**Language**
This journal is published in Spanish and in English language.

**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**

**Cover Letter** The text will be accompanied by a Cover Letter addressed to the Editorial Secretary of the Journal, in which it will include the title of the work and requesting its publication in one of the sections, mentioning that the content of the work has not been previously published and that the article, or part of it, has not been submitted simultaneously to another journal. Furthermore, it must state the explicit acceptance, by all the authors, of the content of the version submitted, as well as a postal and e-mail address and a contact telephone number in order to speed up the correspondence related to the editorial process. It should also indicate the funding source of the study in this letter. Thus, the Cover Letter will include the following information: Originality of the material: a statement that the content of the article is original and has not been published previously and has not been submitted for consideration to any other publication, either wholly or in any of its parts. **Atencion Primaria** (Primary Care) will not consider any manuscripts for publication that are simultaneously submitted to other journals, or redundant or duplicate publications, that is, articles that substantially overlap another article already published, printed, or in electronic media. In this sense, the authors are obliged to provide information on any previous or duplicated publication or
on the submitting of part of the work in another journal or circulation media. These restrictions do not apply to published abstracts of presentations, presentations or conferences presented at national or international scientific meetings. The authors must be aware that not to reveal that the material submitted for publication has been wholly or partially published is a severe breach of scientific ethics. Similarly, authors who reproduce previously published material in their article (text, Tables or Figures) are responsible for obtaining the appropriate permissions to reproduce that material in *Atención Primaria*. The authors must have obtained written authorisation from the author, as well as the publisher that has published this material, and submit a copy of them along with the article to *Atención Primaria*. Authorship: a statement that all authors have read and approved the manuscript and that the requirements for authorship have been met. Each one of the persons that appear as an author of an article should have participated significantly in the design and development of this, as well as to assume responsibility for the contents and, furthermore, should agree with the definitive version of the article. Thus, in general, to appear as an author the following requirements should be met; to have substantially contributed to the conception and design, or to the data acquisition, or the analysis and interpretation of the data: to have written the draft of the article or have critically reviewed its intellectual content, and to have approved the version that will finally be published. *Atención Primaria* declines any responsibility for any conflicts arising from the authorship of works published in the Journal.

**BEFORE YOU BEGIN**

**Informed Consent:** a statement on the obtaining of the written informed consent of the patients. If the article reproduces photographs or patient data (including names, initials, or patient hospital numbers), these must not be able to identify the subject. In all cases, the authors must have obtained the written informed consent of the patient (or parent or guardian, if the patient is a minor) that authorises their publication, reproduction and circulation on paper support and on the Internet in *Atención Primaria*. Similarly, the authors must state that they have followed the protocols established by their respective health centres in order to access data from medical records in order to write this type of publication for research / disclosure purposes for the scientific community. Protection of human and animal research subjects: when results of experiments performed on humans are presented it must state the compliance with the ethical guidelines of the corresponding committees (institutional or national) and with the 1975 Helsinki Declaration in its most current version. In necessary, the authors must mention the obtaining of the corresponding informed consents. When experiments on animals are described, it must indicate whether they have followed the corresponding institutional recommendations and national regulatory laws on the care and use of laboratory animals. This information must also be explicitly stated in the Materials and Methods Sections of the articles.

**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.

**Declaration of competing 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. Authors should complete the declaration of competing interest statement using this template and upload to the submission system at the Attach/Upload Files step. **Note: Please do not convert the .docx template to another file type. Author signatures are not required.** If there are no interests to declare, please choose the first option in the template. This statement will be published within the article if accepted. 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. 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. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns (“clinicians, patients/clients”) as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

**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.

**Clinical trial results**
In line with the position of the International Committee of Medical Journal Editors, the journal will not consider results posted in the same clinical trials registry in which primary registration resides to be prior publication if the results posted are presented in the form of a brief structured (less than 500 words) abstract or table. However, divulging results in other circumstances (e.g., investors' meetings) is discouraged and may jeopardise consideration of the manuscript. Authors should fully disclose all posting in registries of results of the same or closely related work.
Reporting clinical trials
Randomized controlled trials should be presented according to the CONSORT guidelines. At manuscript submission, authors must provide the CONSORT checklist accompanied by a flow diagram that illustrates the progress of patients through the trial, including recruitment, enrollment, randomization, withdrawal and completion, and a detailed description of the randomization procedure. The CONSORT checklist and template flow diagram are available online.

Registration of clinical trials
Registration in a public trials registry is a condition for publication of clinical trials in this journal in accordance with International Committee of Medical Journal Editors recommendations. Trials must register at or before the onset of patient enrolment. The clinical trial registration number should be included at the end of the abstract of the article. A clinical trial is defined as any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects of health outcomes. Health-related interventions include any intervention used to modify a biomedical or health-related outcome (for example drugs, surgical procedures, devices, behavioural treatments, dietary interventions, and process-of-care changes). Health outcomes include any biomedical or health-related measures obtained in patients or participants, including pharmacokinetic measures and adverse events. Purely observational studies (those in which the assignment of the medical intervention is not at the discretion of the investigator) will not require registration.

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 an 'Exclusive License Agreement' (see more information on this). Permitted third party reuse of 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.

Open access
Please visit our Open Access page for more information.
The publication fee is partially covered by the affiliated Society (semFYC). Authors contributes to the publication fee (excluding taxes) with 610 EUR (original, reviews and special articles), 390 ? for scientific letters and 250 EUR for Images in medicine section.
The contribution fee (excluding taxes) for non-affiliated Society (semFYC) Authors is 810 EUR (original, reviews and special articles), 590 ? for scientific letters and 350 EUR for Images in medicine section.

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.

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.evise.com/profile/api/navigate/APRIM.

Referees
Please submit the names and institutional e-mail addresses of several potential referees. For more details, visit our Support site. Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

PREPARATION
Double-blind review
This journal uses double-blind 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 a complete address for the corresponding author including an e-mail address.
Blinded 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.

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, superscripts, subscripts 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 - unnumbered sections
Divide your article into clearly defined sections (Introduction, Material and methods, Results and Discussion). Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply 'the text'.

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. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

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.

Structured 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 or laboratory animals, observational and analytical methods), main findings (giving specific effect sizes and their statistical significance, if possible), and principal conclusions. It should emphasize new and important aspects of the study or observations.

The headings will consist of:Objective, Location, Participants, Interventions, Main measurements, Results and Conclusions.

Graphical abstract
Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum
of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site. Authors can make use of Elsevier’s Illustration Services to ensure the best presentation of their images and in accordance with all technical requirements.

**Keywords**
Immediately after the abstract, provide a maximum of 6 keywords, using British spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

**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.

**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.

**Artwork**

**Image manipulation**
Whilst it is accepted that authors sometimes need to manipulate images for clarity, manipulation for purposes of deception or fraud will be seen as scientific ethical abuse and will be dealt with accordingly. For graphical images, this journal is applying the following policy: no specific feature within an image may be enhanced, obscured, moved, removed, or introduced. Adjustments of brightness, contrast, or color balance are acceptable if and as long as they do not obscure or eliminate any information present in the original. Nonlinear adjustments (e.g. changes to gamma settings) must be disclosed in the figure legend.

**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/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). 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.

If you manage your research with Mendeley Desktop, you can easily install the reference style for this journal by clicking the link below:

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice. For more information about the Citation Style Language, visit http://citationstyles.org.

Reference style
Text: Indicate references by superscript numbers in the text. The actual authors can be referred to, but the reference number(s) must always be given.

List: Number the references 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 dataset:

Note shortened form for last page number. e.g., 51–9, and that for more than 6 authors the first 6 should be listed followed by 'et al.' For further details you are referred to 'Uniform Requirements for Manuscripts submitted to Biomedical Journals' (J Am Med Assoc 1997;277:927–34)(see also Samples of Formatted References).

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

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).

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 be notified and receive a link to the published version of the open access article on ScienceDirect. This link is in the form of an article DOI link which can be shared via email and social networks. 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.

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.