Writing Scientific Paper

Manual for Writing Scientific Paper Workshop

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INTRODUCTION

Writing a scientific paper in a foreign language is tough work. When the time comes to write it, many feel left to their own devices. However, writing a scientific paper involves not only literary abilities. It is above all a matter of organization. It's not a talent but experience. This writing workshop is designed to help you step-by-step through the process of creating a research paper. Specific exercises will support the process of organizing your work and getting your thoughts down on paper; revision techniques will help you to improve the quality of your writing. Peer review - a crucial part of the writing process - will help to strength the writing of both reviewers and writers. This writing workshop is project-based: you will work on your own publication project using your existing data. Prior to attending, you will need to identify your target journal and bring along the guidelines for authors. This workshop is specially designed for non-native speakers. It will be run in English.

General information

The workshop is interactive, with participants encouraged to think and discuss *why*, *where*, *when* and *how* to publish and *who* their readers are. The workshop is tailored as far as possible to the needs of the group and the outline above may be altered accordingly.

The facilitator will contact participants before the course to gain an understanding of their levels of experience in writing scientific publications, to discover if they have experienced any particular barriers to writing, and if they have any specific needs or skill gaps they wish to address.

Each participant will be asked to bring a current writing project to develop during the workshop. If this is not possible, the facilitator will make alternative arrangements with the participant to ensure s/he gains practical experience during the workshop.

Objectives

- Learning and training an appropriate strategy for writing a scientific paper in English
- Developing autonomy and empowering critical thinking
- Training coherence and logic in argumentative writing
- Finding individual solutions for specific problems.
- Write the best paper you ever have written
- Bring the paper through the review process

Content

- 1. The critical element of a scientific paper
- 2. When should I think about writing up my results as a paper?
- 3. Working toward a paper
- 4. Choosing the right journal
- 5. Practical writing tips
- 6. Submission and the long wait for the reviews
- 7. Dealing with the cycling process of the journal
- 8. Practical examples

Format

- -Interactive lecture covering points 1-6
- -Discussion and computer based practical examples covering points 7-8

Writing a Scientific Paper Workshop Material

Module I (Ref#2)

Writing is often viewed as a difficult task, and is frequently left to the last minute out of dislike, lack of confidence or lack of know-how. However, writing can be fun, and the fruits of your labor can have substantial benefits. Physicians tend to be perfectionists and have a good eye for detail. They often wish to share insights into their work, gained from research or clinical practice. Often they are not trained in the art of communicating these insights on paper, despite having the ability to present their work at meetings in front of their peers. Obviously writers whose first language is not English may require more help than others. However, language should always be "a precision tool, conforming to simple rules and conveying meaning logically". One must remember at all times that the purpose of the paper is communication, and for this reason a "house style" is used, because the aim of such writing is not only to make yourself understood, but to make sure that you are not misunderstood. So, assuming that you are writing a full-length paper, which is reporting a clinical trial, how do you start?

Why did you start? What did you do? What did you find? What does it mean anyway?

In other words, Introduction, Patients and methods, Results, and Discussion. At this point it is necessary to get your data on to paper. There are many different ways of writing a first draft; use the one that suits you best. You may prefer to write the paper by hand, and then transcribe on to the computer but you may prefer to type directly on to the computer. Don't stop to edit at this stage—just write. You can edit later. It is important to keep the flow going. Do not be afraid of simple, everyday words. Readers will thank you, not to mention editors and referees. Keep it simple, and keep it as short as possible; imagine that you are going

to have to pay £1 for every word you use.

Instructions to authors

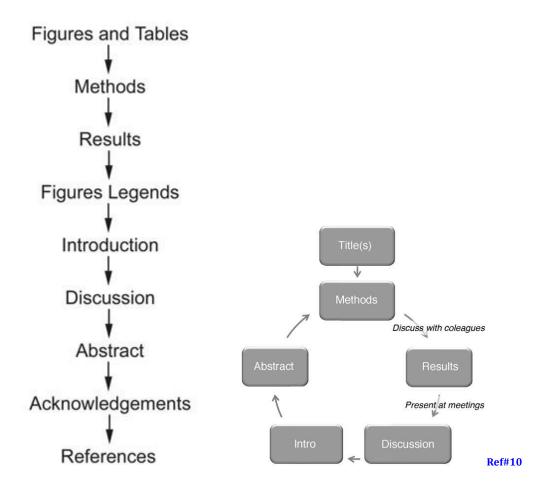
Before writing, it is imperative to obtain the 'Instructions to Authors'. These instructions will detail the total character, word or page length for the manuscript, total number of figures and tables allowed and total character or word count for the abstract. The precise format for the **abstract** will be provided, and typically includes a **background**, **methods**, **results and conclusion sections**. Many journals use different formats; thus, it is critical to obtain these instructions before starting to write. Another important aspect of the 'Instructions to Authors' is the actual typeset format used to prepare the manuscript document. While the majority of journals still require the document to be double spaced with specific margins (typically 1 inch) and specific sections, some journals have now adopted a single-spaced approach or even double-column single-spaced approach. Journals also have requirements regarding the use of abbreviations and references. Last, each journal has specific format requirements for figures. Many journals require the images to be JPEG or TIFF images, with specific requirements for image resolution if they are color (i.e. 600 dpi) versus black and white (i.e. 300 dpi); however, some journals do allow images from PowerPoint files or as PDF images. Therefore, attention to these details will save time, energy and frustration on your part since submission using an incorrect format will ensure either automatic rejection or annoyance on the part of the reviewers, with the later potentially leading to a less than favorable review.

Manuscript writing order

The key to writing a good manuscript is to *tell a story*! This is often best accomplished by writing the manuscript out of order from the journals prescribed order for the sections as certain sections are more logical and easy to write first, while others are easier to write after the bulk of the manuscript has been written. I recommend starting with the figures and tables, as the figures and tables should tell the whole story, as well as a good story. After the figures and tables are determined, create the title page, carefully including all of the information required by the journal. Be sure to include all middle initials of authors if they are used by the authors, as well as correct institution information. After the title page, the methods (or materials and methods) section should be written, as this is simple to do and a logical lead into the results section. Next, complete the results section

and organize this section using subheadings. This should be simple to write with the figures and tables in hand. While on your mind, after preparing the results section, it is convenient to write the figure legends. The introduction, followed by discussion should be written next. After you have all these data committed to paper (or rather, electronically), the introduction and discussion sections are less daunting to write. After all of the above sections are completed, it is time to write the abstract. A common mistake is to write the abstract first, before the results section. However, you will have a better sense of what to include in the abstract, as well as what to emphasize, after the majority of the paper is written. Remember, the abstract should include all pertinent data from the manuscript and accurately portray what is in the manuscript. Finally, do not forget the acknowledgements and references sections.

Order For Writing A Manuscript



Abstract

The best time to write the abstract is after the manuscript is completed. The length of the abstract will be clearly stated by the journal and it is prudent to adhere to the length requirements. Sentence writing should be concise and succinct in the abstract, given the length requirements. Additionally, be careful to adhere to the formatting guidelines, as each journal has unique subheadings that must be used. In general, the abstract should provide an overview of the paper that makes sense when read alone and when read with the paper. The abstract should provide enough information for the casual reader to understand what the manuscript is about. Include information from each section of the manuscript in the abstract, being careful to include, highlight or emphasize important data and take home messages, as often the abstract is the only part of the manuscript that is read. The abstract should not contain information that is not included in the manuscript. However, there may be some data in the manuscript that is not necessary to include in the abstract if it is not germane to the overall conclusion of the paper.

Introduction

The **Introduction** should be just that: an introduction to the topic and why you thought that the topic was worth investigating. It usually fills about half an A4 page. Grab the readers' attention with the introduction. Awaken the readers' interest and prepare them to understand the manuscript as well as its context to the scientific area being studied. Limit the introduction sections to no more than three paragraphs. In the first paragraph, clearly state the clinical problem being addressed and its significance within the medical community. In the second paragraph, state what is known and then what is not known about the clinical problem. In the third paragraph, relate what is not known about the clinical problem to your study, providing clear support for why your study is important and being conducted. Then, clearly state the goals or aims of the study, along with the hypothesis. If the introduction is too long or confusing, the reader will lose interest and not read the rest of the manuscript.

Patients and methods

The **Patients and Methods** section should describe the comparability of the groups that you studied (sex [please not "gender", which is a grammatical term]), age, severity-as objectively as possible, current treatment, and so on) and give a brief resume of your statistical methods. Remember to mention the program that you used to analyze the data because the statistical adviser may wish to check the calculations, and programs do differ in some ways. Normally this section should fill about 2–2½ pages. The methods section conveys to the reader what experiments or interventions were performed to address the hypothesis or question that was formed for the study. Methods should be described in enough detail so that the reader can judge whether the findings reported in the results section are reliable. Additionally, enough detail should be provided to allow the reader to reproduce the experiment. If the methods have been described in a previous publication, it is acceptable and advised to reference that publication and only briefly describe the method. However, if deviations from the published methodology occurred, this should be clearly stated and described. If a new methodology is described, be sure to explain what experiments were conducted to test or validate the new methodology. The methods section should be subdivided into descriptive subheadings based on logical topics.

Results

In the **Results** section consider using tables as much as possible. If you can tabulate results, or put them into figures, do so. However, remember that one of the most common faults is to tabulate your results and then describe them in detail in the text. Don't. Use one or the other. The ideal results section would read, "The results are shown in Tables 1–4". As **Figures** are often used as well as tables to illustrate results I will mention them here. They are, of course, partly a matter of the journal's chosen style, but there are rules. First of all, three-dimensional graphs are never acceptable in scientific publishing. Each figure and table should stand on its own without reference to the text. This means that all abbreviations should be spelt out each time that they are used in the specific legend, or as a footnote. And please explain units of measurement. A word about statistical analysis. A *p*-value does not equal truth; there is no substitute for common sense and, if something does not make sense, it probably isn't true. Never say that something is "NS", meaning not significant (always give an exact *p* value). People will have more respect for someone who says "We did not study enough patients, but the result looks promising" than for someone who tries to blind them with statistics. A good rough guide as to whether data are normally distributed or not is to see whether the SD is more than half the mean. If it is, they are skewed. Avoid the SEM; prefer the 95% confidence interval (CI) of the mean instead. Do not use the ±sign. Use a parametric test for normally distributed data, and a non-parametric test for skewed data. Always report whole numbers together with percentages, never percentages alone. The Page | 5

reason for this is that for numbers of less than 20, percentages are misleading. The results section should tell a story and emphasize the take-home message. The results section should state the findings of the experiments and not contain conjecture. The latter is best left for the discussion section. Avoid repeating introductory material and minimize experimental details since experimental details belong in the methods section. Avoid lengthy analyses and comparisons to other studies, as those also belong in the discussion section. Furthermore, remember the difference between data and results. Data are the facts obtained from the experiments and observations, results are statements that interpret the data. Arrange the results section in a logical fashion, either chronologically, most-to-least important, in vitro to in vivo, etc., using descriptive subheadings. For each subheading section, I find it helpful to state the purpose of the experiment(s) being performed to guide the reader seamlessly through these sections. After stating the purpose, the data are provided in a clear, concise and logical manner. At the end of each subheading section, a statement is provided that summarizes and interprets the data, that is, provides the results (e.g. 'these data suggest that. . .'). This technique is a very effective and efficient approach to convey data and results to readers. The results section should also clearly direct the reader to the related figures and tables that support the data. In addition, it is important to avoid overlap between the text in the results section and the figures and tables. If data are described in a table or figure, there is no need to also list those data points in the text, as this is redundant. In summary, well laid-out and well-written results section should be simple to read and should provide a clear story of the data for the reader to interpret and make independent assessments and judgments.

Figure legends

After writing the results section, it is simple to prepare the figure legends, as these two sections are very similar. Use brief sentences to describe the figure. Different journals have unique requirements regarding the format. For example, some journals prefer including a title sentence for each figure legend that is description, while others do not. It is prudent to review publications from that journal to determine how figure legends are formatted. Figure legends should be free-standing from the text of the manuscript, meaning that a reader should be able to fully understand the experiment and data provided in the figure by reading just the figure legend, and not having to refer to the text of the manuscript. Describe all aspects of the figure, and if the figure has multiple panels, each panel must be described separately. Minimize experimental details, as that is the purpose of the methods section. All abbreviations, lines, bars, arrows and symbols must be described. Provide statistical information; if the figure contains statistical notations such as asterisks, the *P*-values for these statistical notations should be provided in the figure legend.

Discussion

The Discussion is difficult to write, because there is such a temptation to mention and discuss everything that you have found. Pick out only your major points (particularly if they are controversial) to explain and elaborate. Again, avoid the passive voice. "The skin was incised" is, for example, shorter and clearer than "An incision was made through the skin". Use simple words:"do "is better than "perform"(you are not a seal) or "carry out"(you are not removing a corpse); and the use of nouns as adjectives should be avoided as it makes a paper difficult to read. It is always a bonus for the reader if you avoid cliche's - prefer "clinically" to "in the clinical situation", and "daily" to "on a daily basis" - and also vogue words such as "determine" and "enhance". Many authors fear writing manuscripts because of the discussion section. However, if the discussion section is deconstructed to just five paragraphs, it can actually be fun to write. In the first paragraph, summarize the results section and answer the question or hypothesis stated in the introduction. Place the data in the context of the bigger clinical problem. Examples of sentences that signal the answer include: 'This study indicates that...', or 'The results of this study show that. . .' Examples of sentences that link the results to the answer they support include: 'In our experiments, we showed that...' or 'In our subjects, we found that...' or 'The evidence provided in this study shows that...'The second and third paragraphs require the most thought and insight to write. First, use these two paragraphs to compare and contrast your data to existing literature. An example is: 'though our results may differ from those of Chen et al. we used a different method to ascertain compliance with therapy,' or 'while our results are opposite to those of Kao et al. we used a different rat strain with our studies.' Second, explain unexpected findings. For example, 'We were surprised to find that a normal WBC was predictive of morbidity following endovascular interventions.' Third, describe patterns, principles, and relationships that the results show.

Fourth, address if the results have theoretical or practical implications. Do the results relate to other situations or other species? Do the results help us to understand the broader topic? By addressing these issues, you will have provided the reader with additional insight into your study and how to place your results in context of the greater scientific field of study. In the fourth paragraph, address limitations and/or weaknesses of the study. Let's be candid – there is no point in ignoring the limitations of your study. All studies have weaknesses and/or limitations and if you do not address them; you are leaving

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yourself open to criticism by the reviewers. Thus, address the limitations and discuss why these limitations or weaknesses exist and how they may affect interpretation of the data. The fifth and final paragraph should be the concluding paragraph. Provide a brief and global summary of the results and what it all means in context of the larger clinical problem discussed in the introduction. Signal the end using phrases such as, 'In conclusion, 'or 'In summary'. Indicate the importance of the work by stating the applications of the work, recommendations suggested from the work, implications of the work or speculations about the importance of the work. Remember, do not overstate the conclusion, and understate it. When writing the discussion section, several errors are common. First, and do not restate the results. This is a crutch that many authors use if they do not know what else to put in the discussion section. Second, understate the conclusions rather than overstate them. Overstating conclusions is a certain way to annoy reviewers and readers. Third, be focused with your writing. Long, tangential thoughts make for sloppy and difficult to read discussion sections. Fourth, write clear and logical paragraphs with introductory and concluding sentences.

Acknowledgements

The beauty of the acknowledgements section is its simplicity and importance. This is where most journals require the listing of support from funding agencies. Also, acknowledge individuals that contributed to the work but did not meet criteria for authorship. Gifts of special reagents, animals, software, etc., can be described here. Administrative support can be acknowledged. Of note, many journals now require that authorization be obtained from all individuals named in the acknowledgements section, so be sure to read the 'Instructions to Authors' on this matter. Last, some journals ask for conflict of interest information or additional disclosure information in this section, or specifically have separate sections addressing those topics.

References

Ensure key statements of fact are referenced. It is not necessary to reference large numbers of papers that all make the same point. However, those that are cited should be entirely relevant, as recent as possible and of the best-quality studies undertaken. As a rule, cite only the original research articles, not review papers. If it is expedient to cite a review paper, be honest and state this. For example, you could state 'In a review by Miller et al. . . .' Make sure that references are done in the format required by the journal. Not doing so annoys both the editors and reviewers.

Choosing a journal

When choosing a journal, consider the journal's impact factor, the readership and the journal's reputation for efficiency and fair review. Like it or not, the impact factor is still important when it comes to securing grants and promotion. A journal is more likely to accept your paper if it will appeal to its readership. For example, studies on Australian snake bite management are more likely to be published in Australian journals. Journals differ in their efficiency. Consider your own previous experience and that of your colleagues. Last, do not be afraid to aim for a good journal and do not underestimate the value of your paper. Never submit a paper to two journals simultaneously.

Too long

Keeping to the word limit can be a challenge. Although the journals usually have some tolerance of papers that exceed the suggested word count, it is not uncommon to be asked to trim the paper, even before peer review. A particularly common criticism is that the discussion is too long. To see where a paper can be trimmed, check: are results duplicated in tables and text, or results and discussion? Is there discussion of previous literature that is not strictly necessary? Is there excessive discussion about secondary outcomes or excessive speculation about mechanisms and the implications of the study? Remember to keep the paper focused on the research question and the primary outcome.

Review process

After submission, your paper will be checked by the journal office for format and completeness. If there is some potential for publication, it will be sent for peer review. Alternatively, the editor might reject the paper immediately. The peer-review process is not perfect and it is best to approach it with a positive and patient attitude. Do not be disheartened by pages of

comments and questions. These are often of considerable use in improving the paper. When the reviewers' comments are received, respond to all their questions and comments. Editors look favorably on a reply letter with the reviewers' comments listed and, below each comment, a description of how the paper has been revised in response. You can disagree with a comment, but you have to provide a clear reason why you disagree. Some comments are just suggestions and might not need to be adopted. Do not ignore any questions and pay particular attention to any comments or questions posed by the editor as they are the ones who make the final decision. Thank the reviewers for their constructive comments and be polite and respectful in your reply. Your paper will inevitably be better after review and some reviewers spend many hours trying to help you produce a better paper. Good editors will filter out unhelpful comments from reviewers, but if some do slip through do not respond with sarcasm or rudeness. If you are rejected, then do not be despondent. It might be that the journal does not think your paper fits their journal or that there is simply no page space available. If you have been rejected and the reviewers and editor have clearly misunderstood your paper, then you may appeal to the editor. If your study question is clear, original and relevant, and your methodology is valid, then your paper will eventually be published somewhere. If you take care to write the paper well, then it will be published sooner and in a better journal.

One paper or two?

Duplicate submission and duplicate publication (generally unacceptable unless editors are notified in special circumstances) and acceptable secondary publications of the same materials are clearly set out in the Uniform Requirements for Manuscripts Submitted to Biomedical Journals by the International Committee of Medical Journal Editors. The more frequent issue for emergency researchers is that in some projects large amounts of data are collected and it might be that some secondary outcomes are important enough to warrant their own paper. There must be a balance between including large amounts of data about secondary outcomes in a single paper and the temptation to split the results among multiple papers. If the latter is excessive this is known as 'slicing the salami' publication. A publication combining as many components as possible will have a bigger scientific impact. In principle, separation of data between papers is acceptable, but this must be acknowledged in each paper. Some journals expect all such related papers to be submitted to the same journal.

Box 1

Introduction

- 1. Why is your research important?
- 2. What is known about the topic?
- 3. What are your hypotheses?
- 4. What are your objectives?

Materials and Methods

- 1. What materials did you use?
- 2. Who were the subjects of your study?
- 3. What was the design of your research?
- 4. What procedure did you follow?

Results

- 1. What are your most significant results?
- 2. What are your supporting results?

Discussion and Conclusions

- 1. What are the studies major findings?
- 2. What is the significance/implication of the results?

Box 2

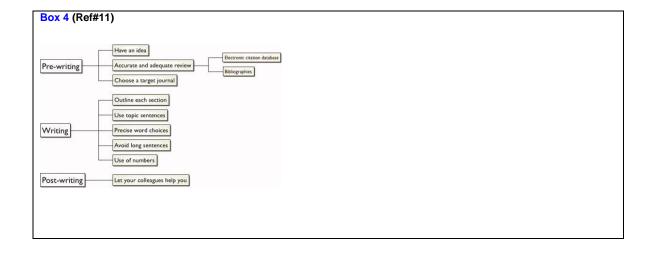
Tortured English

Excessive interposed adipose tissue Mobility of the leg was present In the author's opinion On account of the fact that One out of every two Surgical procedure Exogenous nutrient elements

Meaning

Fat the leg moved I think because Half Operation Food

Box 3		
Poor word choice	Better word choice	
Acquire	Get	
Utilize	Use	
Attempted	Tried	
Ascertain	Make sure	
Subsequent	Next	
Voluminous	Big, large, full	
Purchase	Buy	
Remainder	Rest	



Module II (Ref#5)

Poor writing is one of the principal reasons why many scientific papers are rejected by reviewers. Writing a paper is not easy. The following points are important to keep in mind when writing a scientific paper:

A) BEFORE YOU START

- □ Originality Generate your own educated ideas, and be as innovative as possible.
- □ **Background knowledge**—Study the literature thoroughly before you begin.
- ☐ Consolidate essential information— Make sure that you have all the necessary data available, including figures, graphs and tables, as well as a list of the most essential references.

B) TARGETING A JOURNAL

Your manuscript should be written according to the focus and style of the targeted journal. Before determining where to submit your manuscript, it is worth examining several recent issues of relevant journals in your field of research. When deciding on a journal, keep the following points in mind:

- □ What are the **aims** of the journal?
- □ Which **audience** does the journal target?
- □ What is the **impact** of the journal? See Box 4.

C) OUTLINE

When you start writing the first draft of your manuscript, it may help to prepare a very rough outline covering only the most important points that you want to convey to your audience. In the initial stages of writing it does not matter if your sentences are complete, just as long as you get your main points and ideas on paper. Some people prefer beginning with the introduction and subsequently continue in logical order through each section of the paper. Others prefer to start with the easiest parts, which are usually the methods and results followed by the discussion and introduction. The abstract is typically written after the rest of the paper is completed.

1. TITLE

- ☐ The title should convey the **essence** of the article and draw the **attention** of the reader.
- ☐ Try to keep your title as clear and short as possible.
- \Box Do not use abbreviations in the title.

2. ABSTRACT

- ☐ The abstract should summarize the objectives, methods, results and conclusions.
- ☐ The abstract is the advertisement for the paper, and it is often the only part many people read.
- ☐ Keep your abstract as concise as possible. Most abstracts consist of 100-200 words.

3. INTRODUCTION

- ☐ The purpose of the introduction is to **provide essential background information.**
- ☐ The introduction should make clear why the topic of your paper is important.
- ☐ Always state the objective of your research in the introduction.
- ☐ Make sure that the order in which you present information is logical.

4. METHODS

- ☐ The methods section must include sufficient information to enable others to repeat your work.
- ☐ Methods must be clearly related to your research question and objectives.
- ☐ Most scientific projects start off with a plan that changes during the course of research.

5 1	RESULTS
	This section should summarize all the relevant data.
	Figures and tables should be clear and relevant. Legends should be accurate.
	Often figures are used to convey ideas , whereas tables are used to convey data .
	When describing your data, it is generally better to report standard deviation (SD).
	Do not discuss your data here.
	If you are certain that you used the appropriate statistical treatment for your data, but your
	analyses do not show the significant differences that you were hoping to find – be frank about
	this and do not manipulate your data to get a "better" result.
	Your results need not necessarily always agree with what other people have found.
_	Tour results need not necessarily arways agree with what other people have round.
<i>c</i> 1	DISCUSSION
ш	The discussion should present an interpretation of your results, as well as a comparison with
	those of others. You need to be able to interpret your data , and draw conclusions.
	Ensure that all your arguments and assumptions are scientifically formulated, clearly stated,
	and well supported, either by your own results or by citing other people's work. All your
	statements must be accurate and logical.
	A good paper can be read and evaluated on its own. Ensure that you have provided all the
	necessary information for your reader to make an independent judgment.
	Refer to the original objective of your research. Explain whether or not you have succeeded in
	reaching your objective.
	Make sure to explain why your results are of importance in a wider context.
	Some journals require you to formulate your conclusion in a separate section.
	Some journals require you to formulate your conclusion in a separate section.
_	DISPUNDENCIES
	REFERENCES
	It is important to stay updated with the latest literature.
	Make sure that you cite your sources properly.
	When citing a work by three or more authors, refer to them as "et al." in your paper.
	Focus on peer-reviewed scientific sources of information to support the statements that
	you make in your paper. Peer-reviewed means that the editor of the journal and at least two
	peers read and commented on the paper after it was submitted.
	Manuscripts that are accepted for publication or in press can be cited as peer-reviewed papers
	(Instead of noting the publication issue and page numbers, you add <i>in press</i>). Manuscripts
	that are in preparation or under review should be cited as personal communications within
	the text and NOT listed in the reference section.
ш	Try to avoid citing so-called 'grey' or 'gray' literature as much as possible. Grey literature
	includes all literature that is not peer-reviewed, such as unpublished reports, newsletters,
	working papers, theses, government documents, environmental impact reports, bulletins, fact
	sheets, book chapters and conference proceedings.
	The same problems that exist with grey literature also count for the Internet .
	When citing personal communications with other experts, it is your responsibility to cite
	only reliable sources and recognized authorities.
	Do NOT plagiarize other peoples work.
	Avoid literally copying text, unless it is functional (e.g., if you want to emphasize its original
	meaning or phrasing).
	Before submitting your manuscript, make sure to check if your reference list is complete.
_	before submitting your manuscript, make sure to eneck if your reference list is complete.
D)	FORM & STYLE
	Your writing style is important because it determines the way your reader perceives it.
	Clarity is very important in scientific papers.
	Write the verbs in the active not in the passive voice. Example: "we conducted a pilot survey"
	instead of "A pilot survey was conducted" (Box 7). Also the verb tense in different sections should be noted (Box 5)
	As a rule, the majority of your sentences should contain about 15-20 words, and paragraphs
_	should contain approximately 150-200 words.
	Always ensure that there is a clear and logical continuation from the introduction through the

methods and results to the discussion section.

□ Always keep the text left-justified.	
Do not include figures and tables within the text, but place them at the end of the	
paper (after the references). Every journal follows different standards with respect to formatting of their papers.	
The journal is responsible for the final layout of your paper.	
- The journal to toop of the mid managed or your paper.	
E) GENERAL POINTS	
Get in the habit of reading scientific papers on a regular basis.	
☐ Proofreading and editing your own work can be difficult sometimes.	
☐ When you revise your paper, try to look at it from the point of view of a critical reviewer.	
☐ Hand in drafts to your coauthor (s) way ahead of a final deadline, if possible.	
□ Papers often have more than one author.	
☐ The last author does not necessarily have much input in the actual writing of the paper, but is	
typically a supervisor.	
F) SUBMITTING YOUR PAPER	
There are a few important points to keep in mind before you send your drafts out for review:	
☐ Make sure that you refer to all the figures and tables you include in the paper.	
☐ Mistakes such as spelling errors, mislabeled figures, inaccurate names, are inexcusable.	
☐ Your paper should be accompanied by a cover letter.	
C) THE DEVIEWING PROCESS	
G) THE REVIEWING PROCESS	
Before a paper is published, it's typically undergoes several rounds of editing. You will receive comments from you authors as well as reviewers. Learning how to deal with criticism is something that every scientist needs to go through	
Remember that critique of your paper is not personal. Never simply ignore comments. Try to see them as something po	
that you can learn from, and use them to improve the quality of your scientific writing.	/51t1 V
☐ When resubmitting your manuscript, it should be accompanied by a response letter. This letter	
should address all the points raised by the reviewers. The best way to do this is to repeat and	
number each point in your cover letter.	
☐ Either deal with questions or objections in a revised, or justify in your response letter why	
you choose not to deal with them in your revision.	
☐ If a reviewer misunderstood something in your paper, it is likely that you did not express your	
idea or data clearly enough.	
Always respond positively and constructively to feedback or criticism of your paper.	

Box5

Section	Verb tense
Introduction	Present tense
Methods	Past tense
Results	Past tense
Discussion	Your study: Past tense Other studies: Present tense

BOX 6. SCIENTIFIC IMPACT FACTORS

The impact factor of a scientific journal is a measure of how frequently this journal is used (cited) by researchers. Therefore, the impact factor is often used as an indicator of the importance of a journal to its field. Impact factors are calculated on a yearly basis using citation data drawn from over 7,500 scholarly and technical journals, and published in **Thomson Scientifics' Journal Citation Reports**. Publishing in high impact journals can help you in your future scientific career. However, as a beginning scientific writer you need to first focus on getting your information published. Aiming too high can sometimes be a rather discouraging experience, and it is often better to publish your data in a lower impact journal than not publish at all. Furthermore, it is important to know that the impact factor is not a direct measure the scientific quality of a journal or its contents. Journal impact factors depend on the research field. High impact factors are likely in journals that cover large areas of basic research with rapidly expanding but short-lived articles that use many references. Journals with a very specific focus often have low circulation numbers, and are unlikely to obtain high impact factors – regardless of the scientific merit of the papers within it. Therefore, you should never depend solely on the impact factor in your evaluations, but also pay careful attention to other important factors, such as the aims and audience of the journal.

Box 7. Use active voice (Ref#9)

Example 1: What is wrong with this sentence?

(1) A decrease in maternal blood pressure occurred. Improved

(2) Maternal blood pressure decreased.

Example 2: What is wrong with this sentence?

(1) When tobacco smoke is inhaled it takes 10-20 seconds for nicotine to be delivered to the central nervous system via arterial circulation.

Improved

(2) Nicotine takes 10—20 s to reach the brain after inhalation.

Example 3: What is wrong with this sentence?

(1) Participants under aged 16, who did not get parental consent, were not recruited.

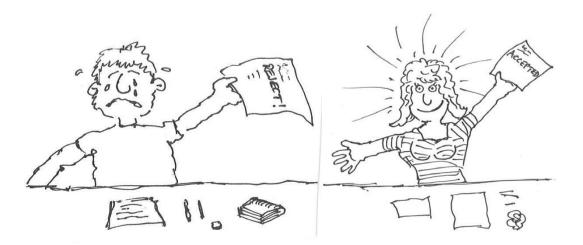
Improved

(2) I decided not to recruit participants under the age of 16 unless they also got parental consent.

Example 4: What is wrong with this sentence?

- (1) It was concluded that delaying induction of labor until
- 41 completed weeks is safe and results in less inductions.
- (2) We concluded that delaying induction of labor until 41 completed weeks is safe and results in fewer inductions.

Mistakes to avoid - section by section



1. In general: Avoid long convoluted sentences

2. In general: Avoid boring writing

3. Title

- Avoid long titles
- A title should be the fewest possible words that accurately describe the content of the paper.

4. Keywords

- · Avoid too many keywords
- The keyword list provides the opportunity to add keywords, used by the indexing and abstracting services, in addition to those already present in the title.

5. Abstract

- Concisely states the principal objectives and scope of the investigation.
- Concisely summarizes the results and principal conclusions.
- Do not include details of the methods used unless the study is methodological, i.e. primarily concerned with methods.
- The abstract must be concise.
- Do not repeat information contained in the title.
- Omit all references
- Omit obscure abbreviations and acronyms

6. Introduction

- Begins by introducing the reader to the pertinent literature.
- A common mistake is to introduce authors and there are as of study in general terms without mention of their major findings.
- Important function: establish the significance of your current work: Why was there a need to conduct the study?
- After introducing literature and demonstrating the need for the current study, you should state clearly the scope and objectives. If possible, specify hypothesis.
- The introduction can finish with the statement of objectives or with a brief statement of the principal findings.

7. Materials and Methods I

- Main purpose: provide enough detail for competent worker to repeat study and reproduce results.
- The scientific method requires that results be reproducible (provides a basis for repetition of the study by others.

- Equipment and materials available off the shelf should be described exactly.
- Sources of materials should be given if there is variation in quality among supplies.
- Modifications to equipment or equipment constructed specifically are carefully described.

7. Materials and Methods II

- Usual order of presentation of methods is chronological.
- If your methods are new (i.e. unpublished), you must provide all the detail required to repeat them. If a Method has been previously published, only the name of the method and a literature reference need be given.
- Be precise in describing measurements and include errors of measurement.
- Ordinary statistical methods should be used without comment; advanced or unusual methods may require a literature citation.
- Show materials and methods section to a colleague (Ask if they would have difficulty in repeating your study).

8. Results I

- In the results section you present your findings: display items (figures and tables) are central in this section.
- Present the data, digested and condensed, with important trends extracted and described.
- Results comprise the new knowledge that you are contributing to the world hence, it is important that your findings be clearly and simply stated.

8. Results II

- The results should be short and sweet.
- However, don't be too concise. Readers cannot be expected to extract important trends from the data unaided.
- Combine the use of text, tables and figures to condense data and highlight trends.

9. Discussion

- Now it's time to interpret your results:
- Do they support your hypothesis?
- Are they in line with other published studies?
- What do they imply for research and policy making?
- Is that supported by your results?
- Are other interpretations possible?
- What is shortcoming of your study? How could you improve your study?

9. Discussion – typical structure

- (1) Statements of principal findings
- (2) Strengths and weaknesses of your study
- (3) Differences to other studies
- (4) Implications of your study for research or policymaking
- (5) Open questions and future research

9. Discussion – common mistakes

- ☐ Discussion unrelated to the results
- ☐ Bad structure which meanders back and forth
- ☐ Missing comparison of your results to results from the literature

10. Conclusions

- Think of it as an abstract for the informed reader
- Typical mistakes:
- Copy and paste from other parts of the paper
- Treat it as a summary

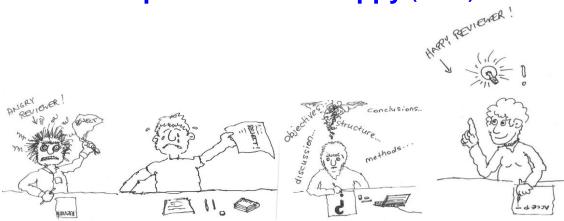
10. Conclusions – typical content

- Very brief revisit of the most important findings with a focus on the advance behind the state of the art
- Final judgment on the importance and significance of the findings with respect to implications and impact
- Suggested further research
- Suggested policy changes
- Limitations of the study and potential improvements

11.	Figures	and	tables	- tv	vpical	mistal	ces
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Missing legend
Caption too short to understand the figure without reading the text
Inappropriate colors
Color blindness
Print in grayscale

How to keep the referees happy (Ref#1)



- (1) Remember that a referee has no obligation to review your paper
 - Be clear and concise
- (2) Write in a way that a non-expert or less experienced person can understand
 - bear in mind that your reader may not be as expert as you are
- (3) Make your paper interesting enough for an expert
 - Try to ensure enough meat (i.e. scientific substance) for the experts
- (4) Look at the forms used in referees' reports
 - check carefully if your paper is suitable for the chosen journal
- (5) Take your time to respond to the referees questions
 - The response to the referee's letter is quite often longer than the submitted manuscript.
 - Make it easy for referees to detect changes and to tick their list
- (6) Only argue with the referee if absolutely necessary
 - If the referees did not have your point you might have to express it differently?
 - If you disagree with the referees try bringing this up in the discussion. Argue with your data and published literature there possible.
- (7) Be polite.
 - Remember, the referees are doing you a favor.

Some examples of author reply to the reviewers comments:

Reviewer: What do we get by the method? Also, citations are missing. Some of the citations seem to be unrelated to the context in which they are used. It seems that some important information is missing here.

Author: The citations is good for my paper, so I choice them.

Reviewer: The paper needs to be restructured. At the time being it is not possible to follow the text properly. Therefore, it is not possible to review the paper accurately.

Author: I already check the structure of the text.

Reviewer: The English language in which the manuscript is written itself is not bad but the structure of the whole text, of the majority of the paragraphs and of the sentences should be changed to improve readability.

Author: I look for Canadian scientist to help me improve readability.

Reviewer: I did not get the message from figure #5. I see that we have 5 working groups and that they have different numbers of final services but what does that tell us?

Author: Following the suggestion of Reviewer 1 and that of the editor for shortening the text, I have deleted Figure 5. It was intended to show that, using the proposed method, we have managed to insure a balanced distribution of the final set of indicators among the different units of the working groups (which was one of our initial objectives). I have explained this in the revised text.

How to Get Your Paper Rejected (Ref#3)

NUMBER 10: You did not read the instructions to authors for the journal to which you are submitting your article.

Every journal may have its own specific instructions for authors and these should be read and followed. In order to cut down on the variability in style or requirement between journals, many have adopted the Uniform Criteria for Journal Style, as recommended by the International Committee of Medical Journal Editors (ICMJE) and can be found at http://www.icmje.org. This group began in 1978

with an informal meeting of medical editors (known as the Vancouver group) and they have continued to meet and update their recommendations. An informal organization of a large group of medical editors that meets regularly, The World Association of Medical Editors (WAME), has adopted the recommendation of the ICMJE. More recently many journals have endorsed the CONSORT statement of reporting clinical trials which can be found at www.consort-statement.org. The ICMJE has recommended that all clinical trials be registered with a data base that is able to be accessed by the public such as http://clinicaltrials.gov/. Registration is a trial prerequisite. The point is to read the "Instructions to Authors" for the journal of interest and to follow those instructions.

NUMBER 9: There is a major and undisclosed conflict of interest.

For example, you submit a paper that clearly shows that Drug A is more efficacious for asthma than Drug B. What is not disclosed is that you are the owner of the company that makes drug A; you designed the study and did all of the statistical analysis of the results. These are three major non-disclosure items. Although the study may have been well designed and the statistical analyses above board, it is the non-disclosure that makes the editor highly suspicious about the validity of the results. There are other types of non-disclosure that are equally as serious. Suppose you have previously submitted a study for publication and now submit a similar study to another journal. The new paper has an expanded number of subjects but you come to similar conclusions. So far, so good! However, the paper is submitted without disclosing to the editor that you have a similar paper in press or that has already been published. A reviewer writes to the editor that he/she has seen a similar paper which is now in press with another journal. The editor has not been advised of this fact by the author of the paper. The editor wonders why the author (s) have tried to mislead him/her and is likely to put a very low priority on or even reject the new paper which may contain some new information or be useful to publish for the particular readership of the journal. The author should have been candid and up front with the editor and not only disclosed the presence of another paper in press but also should have included a copy of the manuscript or at the very least the abstract of the paper, so that the editor and the reviewers may have all of the information. Many times the author (s) is trying to get more publications from data than they are worth and this non-disclosure approach is highly suspect.

NUMBER 8: The manuscript was NOT checked for typographical errors, spelling or grammar before submission.

Some large journals have copy editors on staff that can go through a manuscript and make suitable corrections (although this is sometimes aggravating to authors when their meaning gets changed). Most journals do not have this luxury and editors simply do not have the time to act as copy editors. We have experienced an increase in submissions from countries where English is not the primary language and often suggest that the paper be checked by a native English speaker before submission of the initial paper or a revision. We now include in our instructions the names of several professional services that will check manuscripts for grammar and English. In addition, there are commercial software programs designed to improve spelling and grammar (http://www.studygs.net/spelling.htm). We realize that some latitude is necessary when we receive a paper from an area where English is not the primary language, but it is extremely aggravating to receive a manuscript from a country where English is the primary language and yet it is full of errors in grammar, errors in quoting references and typos. If the written record is sloppy this always makes editors and reviewers suspicious that the entire study was carelessly done and not worth publishing. All authors should check for grammar, typos and other errors before the paper is submitted.

NUMBER 7: The manuscript consists of the 19th case report of "syndrome obscurity as" and contains no new information or insight about the abnormality.

The case may be the first to occur in Borneo per se but this is hardly of international interest. Some editors are reluctant to accept case reports and some do not publish case reports at all because they are rarely cited and thus have an adverse effect on the journal's impact factor (IF). The IF is calculated by dividing the number of papers quoted from a particular journal over a 2-year period by the number of papers published in that 2-year period (including case reports). The "first case in Borneo" may be of interest for a local publication rather than one that is international in scope. If it is to be published anywhere it still should contain new information that is not available in the existing literature, which is overly cluttered as it is.

NUMBER 6: The paper has been rejected by the editor of a journal and it is now submitted to another journal without substantive changes.

The editor of the second journal sends the paper to a reviewer who comments: "I have rejected this paper for another journal and provided an in depth review of the problems with the paper. They have now submitted this paper to your journal without making any significant changes. Why do they think its good enough for your journal?" This makes the editor angry and personally offended. A variation of this theme, for example, is when the editor of a journal gets a letter accompanying a submitted article which states, "Dear Dr.EIC, I am very pleased to submit this paper to your prestigious journal. It is not under consideration for publication elsewhere." I wonder why!! Obviously it has been rejected by another journal and is now being sent to the second (or maybe, a third) choice. Editors (at least this editor!) like authors to be candid and forthcoming. There is nothing the matter with stating in a covering letter that the paper has been rejected elsewhere but that there have been substantial changes incorporated into the paper which is now submitted to your journal (e.g., new data added to the paper, or a re-analysis of the results, etc.). The corresponding author might even submit (and we encourage this practice) a list of potential reviewers who are experts in the field and who would provide an unbiased review. There is the possibility of a nepotism factor (favoritism granted to relatives) in a list of suggested reviewers and this editor always tries to find an expert reviewer that is not on the list submitted by the author(s)!

NUMBER 5: There is no hypothesis mentioned anywhere in the text.

The readers (including the editor, reviewers and other interested parties) need to know as quickly as possible just what idea or notion you are testing and why you are testing this idea. This is called a hypothesis and needs to be clearly stated in the Introduction section of the manuscript. Why did you do this study? Armed with this information the reader is then better able to assess whether or not your study design was adequate to appropriately test the hypothesis.

NUMBER 4: Author(s) plagiarize other authors or themselves, misquote or omit pertinent references.

This is a real can of worms and is a big NO-NO in scientific writing (or any kind of writing for that matter). The issue of plagiarism has recently been dealt with by WAME and ICMJE. Here is what they have to say: "you see its okay for me to use their words because I am quoting them verbatim and acknowledging the source of the quote. If I gave you my thoughts on plagiarism a used their precise wording then that would be plagiarism!" Almost as bad as plagiarism is the deliberate or even not so deliberate misquote of an already published paper. Believe me, this happens and in the former case it is totally dishonest and in the latter case it is very sloppy to say the least. The majority of us (editors, reviewers, and readers) are trusting folks, and we want to believe that what we are reading is an original and accurate treatise on the subject at hand and dishonesty, even blatant dishonesty, may be hard to pick up. Luckily, this degree of dishonesty, I believe, is rare and when discovered it is dealt with harshly by editors and academic institutions.

NUMBER 3: Failing to do a power analysis before the study begins and/or misusing statistics.

Type 2 errors are particularly common because of inadequate numbers of tests or subjects for comparison. This error occurs when you falsely conclude that no difference exists between two sets of data when in fact there is a significant difference. You just do not have enough numbers for a proper comparison. The misuse of statistics is found in the following scenario. In the Methods section of the paper you accept the 5% level as being statistically significant (P<0.05). Everything else is supposed to be non-significant. However, you report a "trend" towards statistical significance when the P-value is<0.07. This is another big NO; something is either statistically significant or it is not. You cannot have it both ways!! You either reject the null hypothesis or you do not, but you cannot only slightly reject the null hypothesis! Additionally, one should always remember that the fact that something is statistically significant does not mean that it is biologically significant.

NUMBER 2:The paper as written is rambling and unfocused and is full of senseless abbreviations making it very difficult to read. The Results and Discussion sections are totally confusing to the reader.

The novice writer of a scientific paper needs to have an appropriate mentor who is familiar with the publication process and is well versed in writing scientific articles. Even seasoned writers often have their papers reviewed "in house" to make certain it is understandable and written in a non-confusing manner.

NUMBER1:You ask a very uninteresting question that is not going to advance the field at all, and then submit a boring paper that contains unsubstantiated data.

What should you do when you are trying to do a scientific study? If you have an idea you want to pursue, particularly in clinical research, get statistical advice about the study design, number of subjects and statistical analysis before you start the study. Once the study is completed and you are ready to write your paper, read the instructions to the authors of the journal to which you wish to submit your paper. The final draft of the manuscript should have been read and critically reviewed by all of the authors and carefully checked for spelling, grammar, typographical errors, and references before it is submitted to the journal.

Finally, if despite your best efforts your paper gets rejected, do not take it too hard. It has happened or will happen eventually to any author including me!

Some live examples from Saudi J Anesthesia on reviewer's decisions:

1. Reject:

The study's protocol is the same as 13 numbered reference that is also used by the authors own article. JAFMC 2009; 5: 25-28 " For this reason, I do not think this article's publishing is ethical any journal.

2. Accept With Revision:

Major Drawback: Administering any anesthetic drug in a patient without an intravenous line is highly debatable. Authors will have to scientifically justify the reason of not securing an i.v line. How did the authors choose the dose of dexmedetomidine and ketamine to be administered in combination? How did the authors ensure patient will not pass into obstructive sleep apnea with sedation? References can be limited.

3. Reassess:

The discussion describes similar studies existing in the literature. In those studies, a lower dose of ketamine used has been shown to decrease the incidence of emergence agitation post general anesthesia in children. The authors do not explain the difference between the submitted study and other studies. Another study in the literature where ketamine had a negative effect on emergence delirium is worthy of mentioning in the discussion. Emergence agitation after cataract surgery in children: a comparison of midazolam, propofol and ketamine. Please enhances the logical flow of the discussion: what does this study add to what is already known in the literature. Please indicate specifically the limitations of the study such as the use of midazolam preoperatively versus parental, different scales for measuring emergence agitation.

4. Accept:

Thank you for the modifications that render the paper more accurate.

5. Reject:

All references except one are more than 15 years old. The author gives an invalidated statement that in this case Regional technique is superior to GA but fails to provide any evidence. The content of the article describes about this syndrome in detail but fails to elucidate anesthetic implications or use of a novel technique to manage. Here are numerous pitfalls in the management of this case- There is no mention of pre-operative airway assessment though the article states these patients are prone for difficult airway. Arrhythmias can occur, yet adrenaline used with renal failure can occur but pre-operative creatinine levels not done.

6. Reject:

This is a reasonably well written paper. Secondary outcomes were evaluated including hemodynamic stability and early postoperative pain. The manuscript can benefit from review and editorial assistance of a native speaker, as "a" and "the" and the like are missing in the sentence structure here and there. The authors need to decide to either apply the British or the American spelling, but should not mix these, as is presently the case. The paper follows a similar study referenced in ref 16 very closely, and a plagiarism checker should be used to ascertain integrity of the writing. Please be referred to my specific notes to the authors. The paper cannot be accepted in this form.

7. Reject:

Not really new data

8. Reject:

I would like to see some explanation for the above mentioned remarks and may require re writing the whole article.

9. Accept With Revision:

It is a nicely designed and well written manuscript and I would recommend its publication if the discussion section which is exceedingly long is shortened and the tables are decreased as their number is a little more for the manuscript.

10. Accept with revision:

Although no new message is found in the manuscript, the problem of autologous blood transfusion is very important to be addressed, since it has been declining in US and Europe, but on the contrary, for societal reasons, such as the risk of blood shortage and the incentive from the government, it has been increasing in countries such as Japan. However, with the advent of the patient blood management, there is tendency to reconsider autologous blood transfusion even in US. So, it is important for the international readers to know the different policies related to blood transfusion among the different countries, and it is important that these differences are discussed in the paper.

Reject

I think that this very poor quality article could be directly refused by the editor

12. Reject:

Since there are major problem with study design and methodology, it is hard to prove the results of this investigation are valid. I would suggest rejecting this article. Thank you for inviting me to review this article and sorry for the delay

13. Accept with revision:

I would accept this as a letter. You can cut it down by 70%.

14. Reject:

Besides having no message this article also show unclear language. An example is the following sentence: This study was prospective and non-intervention design performed on patients who underwent surgical ICU during 6 month. Which should be this study was a prospective observational study of patients admitted to our surgical ICU during a 6 months period.

15. Reject:

in my opinion the article I reviewed is not well written, it contains major formal and structural errors and, above all, the message it carries is not clear, useful and potentially biased. I think that if the editors would like to give these authors the occasion for resubmitting the paper, it should be completely re-written.

16. Accept with revision:

The author(s) present(s) a very rare complication due to brachial plexus block in anesthesiology practice. I just recommend adding to the list of references the most recent works that deal with this issue.

17. Reassess:

This manuscript needs a major revision, help from an English native person, and needs to be restructured . The study criteria are not good (set-up, exclusion criteria, monitoring, registration,) and should be written in more detail. I'm not sure whether this material is really new. To me, others have demonstrated what these authors want to tell us. The Truview is an older video-laryngoscope, whereas nowadays there are at least ten other companies providing video-laryngoscopes. Nothing has been said about this.

18. Reassess:

The statistics should be assessed by an expert.

19. Reject:

Thank you for asking me to review this article. I apologize for the delay in sending my comments. I do not think that this article should be published. It has to be re-written.

20. Retractions:

On January 13, 2012, it came to the attention of the Editorial Board of the *Saudi Journal of Anesthesia* that the journal had published a fraudulent manuscript. The article described a study assessing the effects of dexmedetomidine and propofol in children undergoing magnetic resonance imaging (MRI) scanning. The data reported by authors are identical to those from a 2006 manuscript published in *Anesthesia and Analgesia* with an identical title by another authors. The article retracted from SJA (Ref#6). Also two more major incidences are described in the literatures on retraction of fraud articles (Ref#7-8).

References

- 1. Evans M. Writing paper. Brit J Oral and Maxillofacial Surg 2007; 45:485-87.
- 2. Kibbe MR. How to write a paper. ANZ J Surg 2013; 83:90-92.
- 3. Chernick V. How to get your paper rejected. Pediatr Pulmonol 2008; 43:220-23.
- **4.** Davidson A, McD Taylor D and Babl FE. Review article: emergency department: Part III: How to write a scientific paper. Emerge Med Austral 2012; 24: 357–362.
- **5.** African Journals Online (AJOL):http://www.ajol.info.
- 6. Eldawlatly A and Shafer S. Caveat Lector. Saudi J Anaesth 2012; 6:99-101/ Anesth Analg 2012; 114:1160-2.
- 7. White PF, Rosow CE, Shafer SL. The Scott Reuben saga. Anesth Analg.2011; 112:512-5.
- 8. Hirota K. Retraction Note: Further notice of formal retraction of articles by Dr. Yoshitaka Fuji. J Anesth 2013
- **9.** Fahy K. Writing for publication: The basics. Women and Birth 2008; 21, 86—91
- 10. Moreira A and Haahtela T. How to write a scientific paper and win the game scientists play! Rev Port Pneumol. 2011;17:146—149
- 11. Lin PY and Kuo YR. A guide to write a scientific paper for new writers. Microsurgery 2012;32:80-85.