



## EDITORIAL

## Publish or perish? Perish to publish? (Unrequested advices to young researchers)



### Writing is the painting of the voice

#### Voltaire

Despite the beliefs of (S)Talk-show conductors and No-Vax people, medicine is not an exact science, it is a science of probability and the duty of a physician is to provide the best up to-date care. Optimal management results from the combination of clinical expertise, research evidence and patient preference. In recent decades Evidence Based Medicine (EBM) has stirred up great interest due to full awareness that despite long clinical experience, lack of updated knowledge may lead to inadequate clinical performance.<sup>1</sup> Although the use of EBM may help reduce risks of malpractice, reducing the costs and optimizing the quality of care, it can never replace individual clinical expertise.<sup>2</sup>

In addition, very recently the concept of EBM has been challenged by the new concept of “personalized medicine”: any therapy, whenever possible, should be tailored to the unique features of the individual patient, such as age, gender, race, habit, past medical history, prognosis and disease severity, socio-economical status, literacy and her/his preferences. Of course personalized medicine does not exclude EBM, but avoids indiscriminate use of the “best” treatment in EBM with every patient, regardless of her/his individual specificity and needs. The European Union, has launched the “European Alliance for Personalized Medicine” (EAPM) including European healthcare experts, patient advocates, academia and industry involved with chronic diseases, with the aim of accelerating development, delivery and uptake of personalized medicine and diagnostics.<sup>3</sup>

On March 22nd, 1457, Gutemberg printed the first book. It has been stated that in the history of humanity, while writing has made possible law, contracts, history, narratives, poetry, sacred texts, the press has changed the world more than any other invention in the past two millennia.<sup>4</sup>

This would be enough to understand what medical writing means. Medical writing means to contribute to EBM and overall scientific knowledge. A scientific writer is not like

fantasy, adventure, philosophy, or novel writers, (writers of what is usually considered as literature). Regular medical writing is not literature, it is about getting across a message, usually in a short format. Literature writing is like a Picasso painting, a medical paper is like a photo. However, a little bit of literary skill is not such a bad thing, even in a scientific writer.

In the last few decades, and especially since the COVID-19 pandemic, there has been an increase in medical publications and in the number of (not always high quality) scientific journals. Are we fully aware of what we are doing when writing medical papers?

- Writing papers should **not be just** a means to developing an academic career (although in some countries some academics survive very well publishing nothing).
- **Scientific writing is a big scientific and ethical responsibility:** what you write might be (hopefully or unfortunately) read by someone who might take seriously your described methods and/or results, and accordingly change his/her medical habits.
- **No writing, no work.** If you have brilliant ideas leading to innovation in clinical practice or basic research and don't write anything about your findings/methods, your work might be useful only for yourself and (hopefully) your patients, but not for the scientific community.
- **No medical practice/active research, no writing.** Consider your work as a potential source of scientific information, always measure what you do and collect data : in future they will give you new ideas.
- **No data no writing.** (Unfortunately this is not completely true, given the increasingly huge amount of unsolicited narrative/systematic reviews and meta-analyses of very few randomised controlled trials (sometime only 1 or 2 !) or even of just observational, retrospective studies). A regular writing habit should result from personal solid medical practice or active research work or both. When performing clinical trials the experimental

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protocol and the appropriate selection of statistical tests are the most important steps for a rigorous study.

**Don't fall into the "Publish or Perish" hole.** Writing may be important for an academic career and this may lead to competition with related "*Publish or Perish*" syndrome resulting in emotional pressure, unduly hurrying research steps, shortening the appropriate and thoughtful interval between research work and reporting. As an example, the COVID-19 pandemic has been associated with a storm of information by all media ("infodemic") and with high number of paper submissions ("paperdemic") with high level of retractions.<sup>5-7</sup>

From one side researchers are pushed to improve their H-Index (an index to quantify an individual's scientific research production: the higher, the better),<sup>8</sup> on the other side Journal Editors are obsessed with increasing their Journals' impact factor (IF), "*that's the press, baby, the press! and there's nothing you can do about it, nothing!*".<sup>9</sup>

However a higher H-Index (or IF) does not necessarily mean higher researcher quality. Consider this: if Albert Einstein had published just one article on relativity theory<sup>10</sup> his H-Index would have been only 1 (one) point, no matter how many billion citations and the consequences for humanity of his finding.

Therefore:

- Be ambitious but not too ambitious, don't overstate/underestimate the importance/quality of your paper and chose the target journal appropriately.
- Don't trust in any inverse correlation between journal IF and the probability the paper will be accepted.
- Don't be afraid of and don't be discouraged by rejection of your paper: a rejection is not Divine Judgment, it is just a misfit between your paper and the journal needs. If you believe in your research, submit to another journal.
- On the other hand, don't be arrogant, consider and respect reviewers' comments and suggestions: reviewers are supposed to be expert and have given (usually for free) their time to evaluate your work. Use their comments to grow.
- Quote and discuss with an open mind any relevant publications also those conflicting with your results.
- Use the ReaLiSt protocol:
  - ✓ *Reading. Writing comes from reading, and reading is the finest teacher of how to write*" (Annie Proulx).

Daily accessing medical literature is the corner stone for any researcher or practitioner: **no reading, no research; no reading, no good medical practice (or even= malpractice), no reading, no writing.** Whenever possible, in clinical research prefer prospective rather than retrospective studies.

- ✓ *Learning. Once you stop learning you start dying* (Albert Einstein).

Learn from your teachers (provided they are good writers), even better, **choose a mentor**, if necessary and if possible spend some time in excellence centers.

- ✓ *Start. Brevity in writing is the best insurance for its perusal* (Rudolf Virchow).

Start from simple case reports, through retrospective observational studies, to randomised controlled trials, finally to reviews. However don't write reviews on topics you have not contributed to with any personal reference.

**There is a last but not least issue.** When forgetting the ethical bases, the competition may result in inappropriate if not illegal behaviours. Researchers should be cautious when submitting data for publication, to avoid problems with data analysis or ethical issues, such as lack of authorization by the Ethical Committees or patients' permissions (even for retrospective studies). Avoid **plagiarism**, the "appropriation" of another author's "language, thoughts, ideas, or expressions" and the representation of them as one's own original work. Avoid **duplicate publication**, multiple publication, or redundant publication, publishing the same intellectual material more than once. These problems should be avoided by using available tools, such as appropriate softwares and by improving the efficacy of the peer-review process.

Finally an analysis of literature indicates that pulmonology research might be lacking in efforts to increase replicability.<sup>11</sup> Reproducible and transparent procedures should be incorporated into research. Publications should provide sufficient information about materials, protocols, raw data, statistical analysis and other indicators. Clinical decisions may depend on replicable or refutable results.

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## References

1. Davidoff F, Haynes B, Sackett D, Smith R. Evidence based medicine. *BMJ*. 1995;310(6987):1085–6. <https://doi.org/10.1136/bmj.310.6987.1085>.
2. Sackett DL, Rosenberg WM, Gray JA, Haynes RB, Richardson WS. Evidence based medicine: what it is and what it isn't. *BMJ*. 1996;312(7023):71–2. <https://doi.org/10.1136/bmj.312.7023.71>.
3. European alliance for personalized medicine. 2022. <https://www.euapm.eu/who-we-are.html#:~:text=The%20European%20Alliance%20for%20Personalised,and%20earlier%20diagnostics%2C%2>. Accessed March, 19th, 2022.
4. Nesse R. In what is the most important invention in the past two thousand years? <https://www.edge.org/responses/what-is-the-most-important-invention-in-the-past-two-thousand-years#:~:text=the%20Schumacher%20College-,The%20most%20important%20invention%20in%20the%20past,years%20is%20the%20printing%20press>. Accessed March, 19th, 2022.
5. Valencise FE, Boschiero MN, Palamim CVC, Marson FAL. The COVID-19 impact on the scientific production on the 25 main death causes according to world region. *Pulmonology*. 2022;28(1):1–3. <https://doi.org/10.1016/j.pulmoe.2021.05.011>.
6. Carvalho TA, Lima TM, Melani VF, Mendes MF, Pereira LR, Marson FAL. The scientific production during 2009 swine flu pandemic and 2019/2020 COVID-19 pandemic. *Pulmonology*. 2020;26(6):340–5. <https://doi.org/10.1016/j.pulmoe.2020.07.009>.

7. Boschiero MN, Carvalho TA, Marson FAL. Retraction in the era of COVID-19 and its influence on evidence-based medicine: is science in jeopardy? *Pulmonology*. 2021;27(2):97–106. <https://doi.org/10.1016/j.pulmoe.2020.10.011>.
8. Hirsch JE. An index to quantify an individual's scientific research output. *Proc Natl Acad Sci U S A*. 2005;102(46):16569–72. <https://doi.org/10.1073/pnas.0507655102>.
9. Deadline U.S.A. 1952. Brooks R director. <https://www.youtube.com/watch?v=Wpa4Sf2o9IY>. Accessed March 20th, 2022.
10. Einstein A. Die Grundlage der allgemeinen Relativitätstheorie. *Ann Phys*. 2016;49(7):769–822.
11. Smith CA, Nolan J, Tritz DJ, Heavener TE, Pelton J, Cook K, et al. Evaluation of reproducible and transparent research practices in pulmonology. *Pulmonology*. 2021;27(2):134–43. <https://doi.org/10.1016/j.pulmoe.2020.07.001>.

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