

Chapter-1

The history of Scientific Publishing and Medical Writing

Shaukat Ali Jawaid, Muhammad Aslam

It is said that unless research is published, it has not happened. Hence it is important to look at the historical background of scientific writing. According to reports it was in 1450 when Johann Gutenberg introduced the printing press and standardization became possible.¹ Scientific Journals also emerged as a result of marriage between newspapers and scientific societies² while scientific publishing is said to have started on January 5th 1665. It all started with the publication of a journal in French, *the Journal des scavans* and a few months later British started publishing the *Proceedings of the Royal Society* which first appeared on May 6th 1665. The Proceedings published original research and the publishers also set up some form of Peer Review which was a pre-requisite for publication. Another report says that blind peer review was first described in Preface of French Edition of *Medical Essays and Observations* published by a society in Edinburgh, UK in 1731.³

However, it was in 1697 that first scientific journal particularly devoted to medicine was published. It was named “*Nouvelles Descouvertes sur Toutes les Parties de la Medidcine*”. First scientific journal exclusively devoted to Medicine was published in America in New York in 1797. Its title was “*The Medical Repository*” but it ceased publication after a few years. *New England Journal of Medicine and Surgery and the Collateral Branches of Science* started publication in Boston USA in 1812. It is perhaps the oldest medical journal which continues its publication even today.

Lancet started its publication in London in 1823. In 1859, Pasteur is reported to have added Methods Section to scientific papers which created the IMRAD format.

Hippocrates wrote about seventy books on Medicine in 460 (BCE; Formerly BC) while Galen wrote five hundred books on Medicine in 170 (CE Formerly AD). Al-Razi the leading Muslim Physician wrote his famous book “*Kitab Al-Mansuri*”, a ten volume treatise on Greek medicine in 885 AD, which helped to preserve his teachings. Ibne Sina more commonly known in the West as Avicenna wrote “*Al-Qanun fi al-Tibb (The Canon of Medicine)*” in 1020 AD which was the standard medical textbook in Europe and Middle East for over five hundred years.⁴ George M. Gould published his book “*Suggestions to Medical Writers*” in 1900.⁵

American Medical Writers Associatin⁶ was founded in 1948 while European Medical Writers Association was formed in 1982. Council of Science Editors was established in 1957 which first started as Council of Biology Editors by National Science Foundation.⁷ In the same year Journal of American Medical Association (JAMA) started including Abstracts with the articles which it published. International Committee of Medical Journal Editors (ICMJE) was formed in 1978 at a meeting attended by Ed Huth Editor of Annals of Internal Medicine, John Murray, Editor American Review of Respiratory Diseases Stephen Lock Editor, British Medical Journal; and Therese Southgate from JAMA. This meeting was held in Vancouver hence it is also known as Vancouver Group. The idea to form ICMJE materialized during the discussion on a suggestion sent by Ms. Augusta Litwer in 1968 who was then working as Secretary to an eminent nephrologist at the University of Washington in Seattle.⁸ In 1955 Eugene Garfield introduced the Impact Factor which has now become much popular but at the same time also remains under lot of criticism by the researchers. It was for the first time in 1979 that ICMJE came up with Uniform Requirements for Manuscripts Submitted to Biomedical Journals which has been continuously revised since then. The last revision took place in 2015⁹ World Association of Medical Editors (WAME) was formed in 1995 which

has its members all over the world. It held its first meeting outside USA at New Delhi India from October 2-4, 2015 which was organized by Peush Shani Editor of National Medical Journal of India in collaboration with Indian Association of Medical Journal Editors. Prof. Peush Shani is also a former President of WAME.

National Library of Medicine in USA launched PubMed in 1997 which is world's most comprehensive index to the medical literature in 1997 and a few years later in the Year 2000, PubMed Central, an open-access, digital archives of biomedical and life science journals run by the United States National Library of Medicine became available. This is another extremely useful source which has helped a large number of journals not indexed in Medline to become visible on PubMed. PloS Medicine (Public Library of Science) an open access medical journal started its operations in 2004.

Editors of Journals from various regions not covered in the developed world decided to have their own Regional Associations. Thus Eastern Mediterranean Association of Medical Editors (EMAME) was founded at a meeting held at WHO EMRO Cairo, in 2003.¹⁰ WHO's Asia Pacific Region Medical Journal Editors also formed their own body i.e. Asia-Pacific Association of Medical Editors (APAME) and Federation of African Medical Editors (FAME) was also founded. This was followed by formation of numerous Association of Medical Journal Editors in different countries i.e. Pakistan, Iran, India, Korea, Japan, Singapore, Magnolia, Malaysia, Philippines and Vietnam.¹¹

Structured abstract was introduced by clinical journals in 1987.¹² CONSolidated Standards of Reporting Trials (CONSORT statement) was published for the first time in 1997. It consists of a checklist of twenty two items but asks forty-six specific questions which need to be addressed in manuscripts which report randomized clinical trials.¹³ This was followed by numerous other guidelines which can be accessed through EQUATOR initiative. (Enhancing the Quality and Transparency of Health Research).¹⁴ Yet another important development took place in 1992 when the American Academy for the Advancement of Sciences (AAAS) in collaboration with the Online Computer Library Center (OCLC)

launched the first completely online medical journal named “*The online Journal of Current Clinical Trials*”. The advent of open access electronic publishing has brought a major revolution in the field of scientific publishing and now the number of Open Access Online Journals is in thousands published from all over the world. This has also given birth to Predatory Journals which is a menace and needs to be checked. The topic of predatory journals is discussed in another chapter in this book.

As regards developments in Pakistan, Pakistan Medical Journalists Association (PMJA) was formed in 1983 and in 1991 some distinguished editors of medical journals were also offered its honorary membership. It organized first seminar on Medical Writing in Pakistan at King Edward Medical College, Mayo Hospital Lahore on September 24, 1992. In May 1993, PMJA approached College of Physicians & Surgeons of Pakistan to organize a workshop on Research Methodology and Medical Writing which was held from January 29-31st 1995. PMJA organized first ever national conference on Medical Editing at Army Medical College Rawalpindi in 2007 wherein the then Principal of AMC Prof. Maj. Gen. Muhammad Aslam played a vital role. This conference was attended by seven invited guest speakers from overseas. In January 2009 after detailed discussions among the members, it was decided to rename the PMJA as Pakistan Association of Medical Editors (PAME) with Maj. Gen. Prof. M. Aslam was elected as the founder President. Since then PAME has been organizing seminars, Hands on workshops on Medical Writing, Peer Review, and Publication Ethics besides training courses for Medical Editors from its platform all over the country.

PAME in collaboration with WHO EMRO organized EMMJ5 Medical Journals Conference at College of Physicians & Surgeons of Pakistan at Karachi from December 2-5 2010 which was preceded by a workshop on Medical Writing organized at Aga Khan University by Prof. Anwar Siddiqui. This conference attracted 34 delegates from overseas. PAME organized the Second National Conference from April 26-28, 2014 at UHS Lahore and Third National conferences was also organized at University of Health Sciences on March 31st to April 2, 2016. The scientific programme

included five Hands on Workshops on Medical Writing, Peer Review, Publication ethics, Use of Information Technology in Medical Journals and Editorship, copy editing, in-house review system, technical editing. PAME organized its fourth National Conference at Khyber Medical University Peshawar from March 3-4, 2018. PAME list serve is used extensively for communication among the members besides sharing their views on important issues related to medical journalism and scientific publishing.¹⁵

The emergence of South Asian Association of Medical Editors (SAAME) is in the phase of concept approval. It is believed that perceptions of the past of Medical Journalism would be reflected well leading to quality research, quality publications and quality journals. There is a dire need to translate research from bench to bedside for innovative healthcare for the community/ mankind.

REFERENCES

1. Taavirsainen I. Scriptorial “house-styles” and discourse communities in: Taavitsainen I, Pahta P, editors. *Medical and Scientific Writing in the Late Medieval English*. Cambridge. Cambridge University Press; 2004.
2. Houghton B. *Scientific Periodicals: Their Historical Development. Characteristics and control*. London. Clive Bingley. 1975.
3. Kronick D. *The Literature of the Life Sciences*. Philadelphia; ISI Press 1985:24.
4. Thomas Lang. *An overview of Writing and Publishing in Health Sciences: in How to Write, Publish and Present in the Health Sciences; A Guide for clinicians and Laboratory Researchers* published by American College of Physicians 2010.
5. Gould GM. *Suggestions to Medical Writers*, Philadelphia. The Philadelphia Medical Publishing Company, 1900.
6. Swanberg H. *History of the American Medical Writers Association and its previous Associated Organizations in Two Volumes. Volume-1 History of the American Medical Writers Association (Including the Mississippi valley Medical Editors Association)*. Quincy, Illinois, Society of Academic Achievements, 1965.
7. Council of Science Editors. www.councilofscienceeditors.org. Accessed on July 15, 2017.

8. Ferro LA. The evolution of the “Uniform Requirements for Manuscripts Submitted to Biomedical Journals” AMWA J. 1993;8(3):90-93.
9. Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly work in medical journals. Updated Dec. 2015. Available at: <http://icmje.org/recommendations/>
10. Proceedings of first regional conference on medical journals publishing organized by WHO EMRO at Cairo, Egypt in October 2003. Pak J Med Sci. 2003;19(4):330-333.
11. Jawaid SA, Jawaid M. Medical Writing: Basic Definitions and Some Useful Information. (Second Edition) Published by Professional Medical Publications, Karachi. Pakistan.2017.
12. Ad Hoc working Group for Critical Appraisal of the Medial Literature. A proposal for more informative abstracts of clinical articles. Ann Intern Med. 1987;106:598-604.
13. Moher D, Schulz KF, Altman DG. The CONSORT statement; revised recommendations for improving the quality of reports of parallel-group randomized trials. Lancet. 2001;357:1191-1194.
14. Enhancing the transparency and Quality of Health Research: The EQUATOR Network. www.equator.network.org/
15. History of Pakistan Association of Medical Editors (PAME) In “Medical Writing: Basic definitions and Some Useful Information”. (Second Edition) Eds. Shaukat Ali Jawaid & Masood Jawaid. Published by Professional Medical Publications, Karachi. Pakistan. 2017

-
1. Shaukat Ali Jawaid
Chief Editor,
Pakistan Journal of Medical Sciences,
Karachi. Pakistan.
E mail: pjms@pjms.com.pk,
pulse@pulsepakistan.com
 2. Maj Gen [Retd] Professor Muhammad Aslam,
MBBS, M.Phil, Ph.D, FPAMS, FCPS
Pro-Vice Chancellor
National University of Medical Sciences
The Mall, Rawalpindi (Pakistan)
E-mail: provc@numspak.edu.pk
professormaslam@yahoo.com