

## Medical Writing- A Rewarding Career for Life Sciences Graduates

Article by Lyndon Fernandes  
Medical Writer, Mumbai, India  
E-mail: lyndon\_fernandes@yahoo.co.in

### Abstract

*Medical writing is a unique and rewarding profession. Individuals with a science background who have a flair for writing can opt for medical writing as a career. Interpreting complex data and presenting it in a simple and readable format is one of the major roles of a medical writer. Medical writers need to have key skills, i.e. excellent English communication (writing and speaking), literature search, interpretation and presentation of data. In addition to skills, medical writers would also require domain knowledge, i.e. medical/therapeutic area knowledge, drug development process, statistics, and technical guidelines. Medical writers can freelance independently after gaining several years of experience or be employed in pharmaceutical companies, academic institutes, and hospitals among others. There are several writing associations such as the American Medical Writers Association (AMWA) and the European Medical Writers Association (EMWA) that can help medical writers. The demand for medical writers has increased exponentially in India. Medical writing can be a rewarding and fulfilling career for life sciences graduates.*

### Introduction

Medical writing is a critical part of scientific communication and medical literature. In science, it is the words that matter the most. However, medical literature often involves words that are wrongly chosen or inappropriately arranged. In most cases, inappropriate use of words often causes confusion and difficulty in reading.

Careless writing is not only a barrier to publication and dissemination of useful science but also makes it difficult for researchers and peers to understand. Poor communication not only acts as a barrier to medical research but also negatively influences clinicians and patients. The development of ambiguous and vague clinical guidelines has often been associated with inconsistent interpretation and medical errors.

Writing complex medical information in simple language is challenging [1]. The use of technical terms, jargon, and acronyms are often used repeatedly but cannot be avoided exclusively. Academic institutions, medical educators, and healthcare researchers play a key role in improving the quality of written communication. In the era where clinicians and allied healthcare professionals do not have time to write or are unable to present useful findings and results, medical writers play a critical role in bridging this gap.

### Who can take up medical writing?

Any biomedical or life science graduate who has good command over English and a flair for writing can opt for medical writing [2]. A post-graduate or a doctorate would have an added advantage in seeking the same role. In addition to excellent verbal and written English skills, it is important for writers to have basic computer skills. Medical writers would need to deal with stress and stringent deadlines. In some cases, prior experience in pharmaceutical companies, clinical laboratories, or academic institutions would be an added advantage. Although industry experience in core medical writing is not required, it may help in getting a better pay-scale.

### Where do medical writers work?

A growing demand for medical writers has been observed in the pharmaceutical industry. The role of writers in the pharmaceutical or clinical research industry includes writing and editing technical and regulatory documents for drugs or medical devices. The role often involves stringent adherence to clinical guidelines and regulatory formats. There is a growing demand for medical writing in the

healthcare communications industry. In this case, writers are involved in developing and managing documents for general audience. Medical writers are also involved in the development of presentations/slide kits for clinicians. Publication writing is an emerging field wherein writers develop manuscripts, case reports, and clinical studies for academic journals on behalf of authors. Academic institutes, research organizations, or publication firms often require highly skilled writers. Lastly, highly skilled and experienced writers may opt to freelance. One should only opt to become a freelance writer if he/she has developed sufficient clientele and skills over several years of experience. Thus, medical writers have several potential employers such as pharmaceutical companies, clinical research organizations, publishing houses, healthcare communications agencies, hospitals, and academic institutions (Fig. 1).



**Figure 1.** Potential employers of medical writers

### **How a professional writer helps?**

Due to the interdisciplinary nature of medicine, a wide number of journal articles may eventually be read by experts in the same field or by people from other disciplines. For example, an article on metformin for the management of type 2 diabetes may be read by a pharmacologist, endocrinologist, diabetes educators, clinical research professional, as well as a general physician. In the era of technology, even patients and their caretakers find it helpful in reading articles published in medical journals.

A professional writer, at times, is naïve in the therapeutic area. However, he or she should understand the concept and develop a comprehensible, concise, coherent, and clear content. The professional medical writer adds flow, logic, and improves the style of writing for making high-quality research articles. A professional medical writer would fill gaps in flow and clarity to the content. Medical writers are proficient in putting medical jargon into simple and reader-friendly language. Professional medical writers are aware of style formats and relevant guidelines applicable for publication. Professionals medical writers are often hired to reduce the number of review cycles, enhance the rate of acceptance, and publication.

### **Statistics and medical writing**

Statistics is an integral part of clinical research and medical literature. Medical writers are expected to know the basics of statistics. The role of medical writers may involve data collection, analysis, and presentation. Medical writers would ensure that results of a study/research are presented in a manner

that enables clinicians and other research professionals to critically assess the reliability and quality of the research. Medical writers have to deal with confidence intervals, randomization schemes, regression analyses, t-tests, and P-values [3]. Medical writers need to have a good understanding of statistics in order to present high-quality research. Medical writers may attend workshops on biostatistics in order to enhance their knowledge in the field of statistics [3].

In the past few years, the concept of lean and mean medical writing has evolved. It has been globally accepted by academic, pharmaceutical companies, and scientific communities [4]. The concept of lean and mean is based on the principles of presenting enormous data in a limited volume with a focus on robust data analysis. Presenting large data into limited volume is only possible with the combined and targeted efforts of regulatory authorities, pharmaceutical companies, scientific communities, and academia.

### **Compensation of medical writers**

There is no standard data available on the average salaries of medical writers in India. However, as per my experience, a beginner medical writer would have a salary in the range of 1.8 lakhs INR to 2.4 lakhs INR per annum. Mid-level writers would have a salary range between 3 INR lakhs to 5 lakhs INR per annum. However, there are several factors that need to be considered such as level of education, combined experience in regulatory or promotional writing, geographical location, and type of organization. As per my personal experience, highly skilled and experienced medical writers may even make up to 12-15 lakhs INR per annum in the pharmaceutical and publication industry.

### **Medical writing associations**

Medical writing is a well-established business in some countries such as the United States of America (US) and the United Kingdom (UK). The American Medical Writers Association (AMWA) is one of the oldest organizations for editors, writers, and communicators. AMWA was founded in 1940 and has grown exponentially with over 4000 members in the US, Canada, and 30 other countries [5]. The European Medical Writers Association (EMWA) is similar to the AMWA with over 1000 members from 39 different countries. The EMWA was founded in 1989 and includes members from 12 countries outside of Europe [6].

### **Conclusion**

Medical writing is an alternative and rewarding career option. Medical writing has immense potential in India, wherein writers could either be employed in an organization or freelance independently. Medical writing is a combination of art and science where writers require both, the love for writing and thorough knowledge of medical science. In the past few years, the demand for medical writing has increased steadily. To conclude, medical writing can be a rewarding lifelong career for many life sciences graduates.

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