

## *Using Medline as a medical translation tool: The non-specialist's friend or a dead-end?*

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### **Introduction**

A final-year translation student recently chided me, her technical and scientific translation lecturer, for correcting the term “osseous structures” in her homework assignment which involved translating a manuscript on transcatheter embolization of a post-trauma gluteal hemorrhage. I had suggested that “bony structures” might be preferable.

As the student's legitimate grievance was lodged in my university office and a PC was near to hand, we used a simple, seemingly straightforward method of testing whose terminological choice was more widely accepted, or more commonly used, in the area of biomedical research. I went to Medline and entered “osseous structures” in the PubMed search box, pressed GO, and waited to see how many citations or research titles this search would produce. The answer was 585. Then we repeated the procedure with the term “bony structures” and were informed by the Maryland-based service that there were 1408 titles available. My student's suggestion “osseous structures” also received a pink stripe across the middle of the Medline page onto which appeared the notice “Quoted phrase not found”.\*\* I was vindicated in my university post I felt, but, after further research into Medline, with student assistance, I realized I had much to learn about this database. For teaching purposes in technical translation, this research would spur us on to considerable reflection. I will present some of our findings here.

As my initial training was in journalism (Missouri, 1979), I encourage translation students not only to translate meanings, but to obtain as much infor-

mation as possible about the projected readers of the target text. In the case of Medline we are dealing with medical experts communicating with medical experts. This may involve the use of specific jargon that is peculiar to one area of specialization.<sup>1</sup>

It should be noted that most of the comments in this paper are limited to the scope of translating from Spanish to English. The latter is generally considered a world language in commercial discourse but this estimation is even more evident in the field of medicine. As my students are mostly Spanish natives, with a sizeable percentage of non-Spanish foreign exchange students, for them this is inverse translation. The final subject is compulsory for those students completing this degree with English as their second language. Although it may seem easier for native speakers of English to produce a convincing translation in English for publication purposes, a highly-trained, well-read non-native speaker can also carry out the procedure. Furthermore, current research involving 29 Barcelona-based translation firms indicates that the most common language combination requested by clients was Spanish-English and that the most common genres were, in order of demand: technical, commercial, publicity, legal, computer manuals and tourism.<sup>2</sup>

The comments presented here are limited to personal academic and professional experience as a lecturer and translator over ten years (1992-2002), based in Las Palmas de Gran Canaria, Spain. I have translated medical documentation covering a number of highly specialized areas from histology and morphology to experimentation on the rat model in lab-based projects to clinical fields such as allergology and plastic surgery, among many others. Having translated numerous papers in the area of interventionist radiology, for example, and worked on more than one entire series, I feel confident to handle a specific case report on the role of interventionist radiology in vascular trauma. For a non-specialized linguist, such confidence can only be obtained through considerable experience. By extension, it is

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\*\*This check was carried out on two separate occasions on January 22 and 23, 2003, and the results were the same. In fact, the “Quoted phrase not found” notice only appears when “osseous structures” is entered with quotation marks. Unlike Google and other search engines, Medline does not require the use of quotation marks to limit the search.

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challenging to share this experience in the translation classroom as a tool. The translations I bring to class are never the definitive versions of a paper, even if they have been published. Often students render medical texts in English with considerable skill. Their ability to employ the appropriate terminology is crucial, just as registers of language and exclusive jargon are the subject of discussion in the medical literature.<sup>3</sup>

We will consider Medline, then, within the context of technical translation and also its possible use as a research tool in technical and scientific translation classroom. But first of all, what is Medline?

### **Medline for non-medical translators**

According to the FAQ information provided on the Web, Medline provides free access to its database of over 11 million article references published in more than 4300 biomedical journals and magazines (<<http://www.nlm.nih.gov/medlineplus/faq>>). In many cases these article references include links to an abstract with full details of how to locate the full article. These titles also provide hypertext links to related topics and to books for further reading on the subject. If a researcher needs more information, the links connect to “Linkout” with full bibliographic connections to 779 major internationally-recognized medical journals. Medline access includes an on-line tutorial to orient browsers in their quest, to understand the layout of the search results screen and other facets of this sophisticated tool (<[http://www.nlm.nih.gov/bsd/pubmed\\_tutorial/m3001.html](http://www.nlm.nih.gov/bsd/pubmed_tutorial/m3001.html)>). A brief tour of Medline will illustrate that our possibilities are limited only by the speed of our internet connection and the time we are willing to spend in front of the screen.

Taken on its own, however, this service is simply a barrage of data which is difficult to fathom, particularly for a non-specialized technical translator. If we return to the search mentioned above, involving the choice of “bony” or “osseous”, we could take the matter to extremes. For example, students often ask whether “evaluation” or “assessment” is preferable in medical translations. The terms seem to be completely synonymous. A check similar to the one described in the introduction tells us that “assessment” occurs 302,721 times while “evaluation” tallies 760,150 hits. So, the latter would seem to be the preferred term in medicine. To verify or refute this conclusion, however, we need to look closely at the areas of medicine listed in the titles

and consider whether our choice could depend on who we are translating for. This is an arduous process at best and still may not provide us with the definite answer we are seeking.

Let’s choose another example from a recent translation of a plastic surgery manuscript prepared for the journal *Burns*. This case report involved a 66-year-old male patient who presented intermediate and profound thickness burns over 30% TBSA, affecting the upper thorax and both upper extremities. The burn occurred after the man had fallen asleep while smoking. In my translated text, I wrote “the patient presented frequent episodes of daytime sleepiness, Pickwick syndrome” which I later changed to Pickwickian Syndrome. My reasoning at the time was based on a Medline search that showed Pickwickian Syndrome garnered 417 titles and the first choice Pickwick syndrome only 77. Further research, not involving Medline, led me to eliminate the term and simply explain the condition briefly, as suggested by Fernando Navarro,<sup>4</sup> and the paper was eventually accepted and published almost without change.<sup>5</sup> In fact, the surgeons involved suggested maintaining the original expression Pickwick Syndrome because, they maintained, “their colleagues at an international level would have heard of this condition”. The disconcerting aspect of this situation, for a non-specialized translator interested in a clear, fluid text, is that we have no idea if what we are working with is a super-specialized language register where “inside experts talk about things without using their simplest names”.<sup>6</sup> In the case of *Burns*, the final decision was simply made by the journal’s editorial board “the patient presented episodes of daytime sleepiness–Pickwick’s syndrome”. Curiously this term with the apostrophe is not listed as available in Medline and receives the pink stripe bearing the message “One of your terms is not found in the database”. As the term “syndrome” elicits 477 579 citations, obviously “Pickwick’s” is the odd word out. However, the decision taken by this journal’s editorial board was perhaps based on other sources or the journal’s own in-house style sheet.

### **Insiders and outsiders**

I mention my colleague Fernando Navarro, who is a doctor working in medical translation. In this sense, he is disqualified from our category of non-specialized translators. His numerous scholarly articles and books are an invaluable source to my stu-

dents and to me but we remain, in a crucial sense, outsiders. Medline provides us with a glimpse of what is accepted terminology, but the situation involves "technical, in-group language as seen by non-technical outgroup members".<sup>7</sup> As in the case of "Pickwick's", it is governed by the same limitation as any search engine. If we misspell a term or alter it in some way, with a hyphen or apostrophe, our search will be rejected.

Thus our use of Medline needs to be combined with a number of other translation strategies including a thorough study of parallel texts, a sound knowledge of the area under study, and open consultation with the experts working in the field. In the case of the plastic surgeons mentioned here, their interest in collaborating is by no means altruistic but stems from a genuine interest in seeing their paper published in a prestigious journal such as *Burns*. Scientific and academic researchers have known for years that their survival—or at least their funding—depends on whether they publish their findings in this calibre of journal. Therefore an accurate, clearly expressed translation is essential to achieve this aim.

This collaborative effort needs to be fostered not only to produce a sound text, but for the enrichment of the translators involved. Collaboration between medical staff and translators may involve both translation and interpreting, and such efforts could have implications on an international level. In countries such as the United States, for example, interpreters are badly needed in hospitals and clinics across the country where staff try to communicate better with non-English-speaking patients to avoid medical errors, improve the patient experience and also follow federal directives concerning civil rights.<sup>8,9</sup>

Only through close cooperation with medical researchers in each field of specialization can we produce a fluid, well structured and consistent style throughout a research paper. Whether the medical personnel we are working with are fluent or not, they will have a working or passive, reading knowledge of English as a world scientific *lingua franca*.<sup>10</sup> Specialists can generally provide considerable bibliographic data and parallel texts to help the translator. The amount of preparatory research carried out prior to translating plus the amassing of glossaries and appropriate databases greatly facilitate the translation process.

Non-specialized linguists can move from one area

of medicine to another with a certain amount of confidence but we need to be aware that every field has its own jargon. Thus our decisions about terminology in the science of gerontology, for example, involve a very diverse branch of medicine encompassing a myriad array of other disciplines. Here Medline was used to decide between various terms in a translation of 500 pages. We provide just two examples here:

Expression	Medline citations
elderly health care	65,272
geriatric health care	64,699
elderly day care	1,578
geriatric day care	1,565

Given that the Medline results were so close for each alternative, perhaps this not the optimal use of the database. Indeed these comparative tabulations may seem irrelevant with terms that are so synonymous. The decisions made, guided by these results, were crucial, however, to the overall presentation of a text that involved a number of different authors from not only the medical profession but also the social services and even the transportation sector, all working in the care of the elderly. Maintaining a consistent register over 30 chapters of text can only be accomplished by thoroughly editing our work and relying on the experts for guidance as to what terminology may be preferable in a given situation.<sup>11</sup> In the case of gerontology, however, perhaps the fact that so many non-medical personnel were involved should have indicated that "elderly" would be the preferred adjective.

We hardly need to state the obvious demand that our translations be as clear as possible and never distort the facts. Translation in itself is a potentially rich source of errors and one has to take that into account when using international databases such as Medline.<sup>12</sup>

### Keeping pace

One prominent medical journal editor recently noted "Science does not exist until it is published", and more and more journals are being published every year.<sup>13</sup> This language of publication, as we have already noted, is English. Medline references

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are kept exclusively in this language, although there are references to non-English language publications.

Logically enough, if there are so many more journals available, it might seem that we are exponentially better informed than we have been at any time in our history though this is difficult to substantiate.<sup>14</sup> By the same token, the dizzying pace of change in communications, reflected in Medline's extensive database entries, may provide the mistaken illusion that science is somehow racing forward out of all control.<sup>15</sup> Within the medical community, there is considerable debate about the dissemination of knowledge and the veracity of the sources being broadcast and reported.<sup>16</sup> Certainly, scientific advancement and the research process itself must strive to avoid being compromised by commercial considerations<sup>17,18</sup> and many important journal editors have expressed an interest in maintaining quality through such time-honored methods as peer-review assessment.<sup>19</sup> Returning to Medline, it should be noted that its entries are designed so the most recent articles are first to come up in the results. Some of the newer Medline providers rank the citations according to relevancy based on machine logic that varies from vendor to vendor. This logic may be flawed depending on the specific search topic and the articles that tackle the subject (<<http://www.medlib.iupui.edu/faculty/medline-faq.html>>). All these changes and challenges in the medical field are of interest to medical translators as we work to ensure the quality of our texts. Keeping pace with communication issues in the medical field will help us to improve our profession, whether we are specialized medical personnel or general linguists with an interest in the translation of medical documentation.

### Conclusion

As translation theorist Pamela Faber of the University of Granada has stated, non-specialized translators have a negative tendency to treat the scientific knowledge of specialists with excessive veneration. Faber suggests that translators need to understand the cognitive processes, how knowledge is acquired and structured, to shore up these insecurities. Professor Faber applied her analogy to the organization of terminology within the car industry but her remarks extrapolated her observations to the medical field.<sup>20</sup> Medline provides a useful guide to what is currently accepted terminology, and it allows us a glimpse of an extremely broad spectrum of scientific research.

In this sense, there is no other area of science with such scope.

Just as it would be short sighted, even irrational, for a translator to shun Medline, it is also not recommended as the final word on all medical terminology. This may be the most sophisticated, state-of-the-art database at a translator's disposal, but it is only one of many possible tools. Translators specializing in technical and scientific translation, particularly non-specialists who have not studied medicine, should make every effort to consult with experts in the area under study and read extensively in that area. Texts aimed at improving general expression within the field of medicine are also worth reading, particularly John Dirckx's fascinating *The Language of Medicine*, which not only traces the history of much terminology but also provides guidelines for good writing.

The use of parallel texts is of particular importance for non-native English speakers to produce a final product that will be considered favorably by an editorial board. Although specialized medical personnel, doctors or researchers, may have an advantage when it comes to understanding certain concepts, the non-specialized linguist can produce a target text that is of a high, convincing standard. The only possible limitation with Medline, as stated, is that we only learn what has been published, not what may be possible. Thus, its usefulness is limited by our ability to integrate different translation strategies.

Thus the possibilities of Medline seem limitless. But as social theorist James Gleick warns us, the ability to be instantaneous is a powerful drug<sup>21</sup> and Medline may overwhelm us with its speed and wealth of information. It should be noted that spending long hours in front of a computer screen learning to use this database efficiently is only one of a number of translation strategies at our disposal. Careful and extensive reading in the area of medicine under study is equally important, and consultation with experts is also highly recommended to complement the use of Medline by non-specialized translators.

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