# Translating Medical Terminologies: Difficulties and Suggestions

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## Abstract

This study identified some difficulties of translating medical terms and discussed how experienced translators go about such difficulties. Data consisted of 24 English medical terms and their Arabic equivalences. Different types of medical terms were considered, excluding pharmacy-related terms (as most pharmacy terms are formulas, trade names and drug names, most of which cannot be translated into Arabic). Findings showed that translation of medical terms pose difficulties and challenges for medical students and researchers. These difficulties were tabulated and discussed to provide corresponding suggestions to lessen such problematic issues when working with medical terms. Most importantly, approaches to medical translation into Arabic should comply with the Arabic language structure if the terminological inconsistency in medical Arabic is to be overcome.

*Keywords:* Equivalence, Medical terms, Translation, Taiz University

## Introduction

Translation is basically a project that invests great intellectual efforts to convey messages from one language into another. In all its forms it has always been manifested in different fields of knowledge and contexts. For example, the medical translation, whether for specialized or non-specialized types of audience, is a prominent area of investigation (AL-Jarf, 2018; Gonzales, 2007; Haddad, 1997; Montalt, 2011; Shamsan & A-Quheit, 2022). Different types of pharmaceutical and scientific translation fall within the field of medical translation dealing with medical topics (Gonzales, 2007). Medical translation, one of the growing areas, includes several genres ranging from less specialized forms of health information brochures and drug package inserts (DPIs) to the more specialized forms of medical books and articles in medical journals. It deals with what is conventionally known as medical language. It differs from everyday language in the specificity of its terminology (AL-Jarf, 2018; Shahrour, 1997). Due to the enormous achievements and the vast developments the world is witnessing in the scientific fields and the medical branches, hundreds of new words are being coined in this field.

Consequently, transferring such achievements into other languages is rather urgent. Moreover, since the English–speaking countries are taking the lead in the medical fields, the major part of the medical jargon is of English origins, or, for the most part, of Greco–Latin origins that have been adopted by and become overtime an inherent part of English language. Consequently, medical English has been translated internationally into different languages, among which Arabic rises as a good and challenging example. Although Arabic was once the language of medicine, it now struggles to keep up with the frontier of medical sciences through translation. Different institutions have been established throughout the Arab world, most notably the Arab Academies. However, despite the immense efforts exerted by the Arab Academies in this field, medical Arabic still suffers from inconsistency. In some instances, contradictions appear in translating medical terms. Most doctors and specialists in the Arab world, including Arabs, use English when writing medical texts or reports, even for prescriptions (Argeg, 2015; Nadia, 2016; Shahrour, 1997).

There are a number of leading studies upon which the present study can build its basis. For instance, Sieny (1985) discussed the process of terminology production, co-ordination and dissemination and outlined the problems facing the process of arabizing scientific terminology in general. He explained that there are many official and unofficial agencies involved in producing Arabic scientific terminology, the matter that leads to the common problem of multiplicity of terms. Likewise, Haddad (1997) studied translation of medical terms into Arabic and examined the low acceptability of arabized terms among medical students in Jordan. The writer further explained that most of the translated medical terms are unfamiliar as translators depend on Arabic dictionaries which also include many alternatives for a single term while transliterated terms seem more adequate. However, she concluded that due to the unfamiliarity of translated terms and the unnatural use of transliteration, descriptive translation should be put in use. Halloush (2000) outlined the extent to which Arabized medical terms in the field of general surgery were acceptable and used as a means of medical communication among doctors in Jordan. The author elaborated on term planning through which terms are created for any language. She stated that there was a poor acceptability of Arabized terms among Arab doctors regardless of their degree of specialty, gender, and center of work.

Nassar (2002) investigated the problem of lexical and non–lexical meaning loss in medical translation between English and Arabic. He explained through individual illustrative examples collected from drug leaflets and one medical journal that the loss in lexical meaning results from problems of mis-lexicalization, lack of standardization, and even lexical over standardization. Non–lexical loss in meaning, on the other hand, emanated from grammatical loss in meaning represented in the random placement of

syntactic entities in sentences and structural ambiguity and from textual loss resulted, for example, from differences in punctuation and paragraphing.

Khashīm (2006) argued that Arab doctors in most Arab countries such as XXX, Egypt, Iraq, Sudan and all Arab Gulf countries use English when they write reports and prescriptions because they have been educated in English. So, it is important for Arabic translators to be an effective link between doctors and readers and patients.

In this regard, this study emphasizes the importance of the knowledge of the subject matter of the texts. Translation translators alike have been suffering from the problems that are faced the process of Arabizing scientific terminology in general and when translating medical texts.

Since foreign inventions need to be named in Arabic to be read and understood by Arabic speakers, Arab terminologists try to produce and provide names for each foreign medical term. Moreover, Arabic translators are involved in finding suitable Arabic terms equivalent to the terms created by Arab terminologists for each given foreign term to be understood by Arabic readers. The need to translate medical terminology into Arabic stems from the fact that English dominates the medical field in Arabic countries. The language used in the study of medicine is either English or French.

## Objectives

This study aims to examine problems related to specific medical terms translations. It mainly investigates the problems that Arabic translators face in rendering English medical terms into Arabic. It aims to obtain answers for the following question: How do current translators translate complex medical terms?

## Method

Based on the author's experience in the field, the descriptive analysis describes two translation and medical terminology. In contrast, the comparative analysis aims to compare the SL and the TL and to analyze the translation procedures adopted while translating medical terms. Thus, medical diagnoses, progress reports, prescriptions, etc., are all written in English rather than Arabic. Attempts have been made to make medical texts originally coined in a foreign language appear in Arabic. Arab terminologists and lexicographers are or have been worried that Arabic might be badly left behind.  The following are five methods used by Arabic translators to translate English medical terms into Arabic.

## Data Collection

In order to measure the terminological inconsistency in medical Arabic, translations of the most problematic and inconsistent term were extracted from three medical books. These books are:
1. The Unified Medical Dictionary (UMD), published by the WHO, and published by the Arabic Language Academy in Cairo, Egypt.
2. Anatomy and Physiology: A Self–Instructional Course by Cambridge Communication Limited.
3. Reviews of pharmocology.
  The investigation undertakes the translation procedures employed in both dictionaries when translating English medical terms into Arabic. The data under examination consisted of English medical terms and their Arabic translation equivalence (transliteration, literal translation, borrowing, calque, and paraphrasing) as outlined in the following section.

## Results
The goal of this study is to highlight the translation procedures adopted by professional medical translators during the process of translating English Medical Terminology into

Arabic. Five translation procedures were adopted: a) borrowing, b) literal Translation, c) calque, d) transliteration, and e) paraphrasing.

**Table 1.** *List of the Collected Terms from the UMD and Glossary of Medical Terms*

| No. | Medical Terminology | Unified Medical Dictionary (UMD) | Method | glossary of medical | Method |
|---|---|---|---|---|---|
| 1 | Dextromethorphan | ديكستروميثوفان(دواء مضاد للسعال) | borrowing | Blank | |
| 2 | Diphenhydramine | دايفينهيدرامين | borrowing | Blank | |
| 3 | Adrenaline | الادرينالين | transliteration | هرمون الادرينالين | transliteration |
| 4 | Bwamba fever virus | فيروس حمى بومبا | calque | Blank | |
| 5 | Carisoprodol | كريزوبرادول | borrowing | Blank | |
| 6 | HCG (human chorionic gonadotropin) | مختصر موجهة غدد التناسلية المشيمية البشرية | paraphrase | Blank | |
| 7 | insulin | الأنسولين | borrowing | هرمون الأنسولين | borrowing |
| 8 | Kerandel'ssign | علامة كيراندل في دواء | calque | Blank | |
| 9 | lactulose | لاكتوز | borrowing | Blank | |
| 10 | rabies vaccine | لقاح داء الكلب | literal translation | Blank | |
| 11 | rabies virus | فيروس داء الكلب | literal translation | Blank | |
| 12 | soma | جسد او اجساد | literal translation | Blank | |
| 13 | trazodone | ترازودون | Borrowing | Blank | |
| 14 | yellow fever vaccine | لقاح الحمى الصفراء | Literal Translation | Blank | |
| 15 | ENT(Ear, Nose, Throat) | مختصر الاذن و الانف و الجنجرة | Literal Translation | الأذن و الأنف و الحنجرة | Literal Translation |
| 16 | erc (erythrocyte) | مختصر كرية حمراء | Literal Translation | كرية حمراء | Literal Translation |
| 17 | HI (=hearing loss) | مختصر فقدان السمع | Literal Translation | فقدان السمع (الصمم) | Literal Translation |
| 18 | ICD (international classification of diseases) | مختصر التصنيف الدولي للأمراض | Literal Translation | Blank | |
| 19 | LD (lethal dose) | مختصر الجرعة المميتة | Literal Translation | Blank | |
| 20 | MI (myocardialinfarction) | مختصر احتشاء عضلة القلب | Paraphrase | Blank | |
| 21 | Adrenoleukodystrophy | حثل الكظر و بيضاء الدماغ | Paraphrase | Blank | |
| 22 | Asthma | ربو | Literal Translation | الربو | Literal Translation |
| 23 | Ataxia | ذاتوية | Paraphrase | Blank | |
| 24 | Atrioventricular | اذيني بطيني | Paraphrase | الأذينية البطينية | Paraphrase |

Common problems as indicated in Table 2 and Figure 1 can be encapsulated below. Each of the five translation procedures were analysed and discussed separately according to their own statistical results and these will be presented in the form of Table 2.

In terms of percentage, 4 % of the terms from the UMD and 14% in glossary of medical terms were translated by using the mechanism of transliteration, which means, writing English medical terms (SL) in the characters of Arabic language (TL). The Transliteration is mainly used to translate proper names (name of people, places, and institutions); in medical terms, the translators use this method to translate eponyms.

From Table 2 and figure 1, the results show that literal translation were the most dominant mechanism applied in the UMD (42 %) and (58 %) in glossary of medical terms.

**Table 2.** *Percentage Results of the Translations of Medical Terms into Arabic*

| Translation Mechanisms | Unified Medical Dictionary (UMD) | | glossary of medical terms | |
|---|---|---|---|---|
| | Frequency | Percentage % | Frequency | Percentage % |
| Borrowing | 6 | 25 | 1 | 14 |
| Literal Translation | 10 | 42 | 4 | 58 |
| Calque | 2 | 8 | 0 | 0 |
| Transliteration | 1 | 4 | 1 | 14 |
| Paraphrase | 5 | 21 | 1 | 14 |
| Total | 24 | 100 | 7 | 100 |

The findings in the Table 2 and Figure 1 indicate that the percentages of the borrowed medical terms in the UMD are 10.71% while in glossary of medical terms are 14 %. Calque is another issue which refers to a term or an expression introduced into another language by 'literally' transition; translating it from the original language, with no grammatical or semantic adjustments. In the table 2 and figure 1, we can see that the translators in the UMD are 8 %, while in glossary of medical terms the percentage is none (0 %). The reason behind using Calque as the best method to translate the above medical terms is that most of those medical terms, which includes word parts, could not find a single term equivalent in the Arabic language.

Paraphrase is another productive way of extending vocabulary in Arabic language. When a term developer is comforted with new concepts, which they are unable to express with other term formation strategies. The research results show that paraphrasing is the most dominant mechanism applied in the UMD (21 %) and (14 %) in. glossary of medical terms.
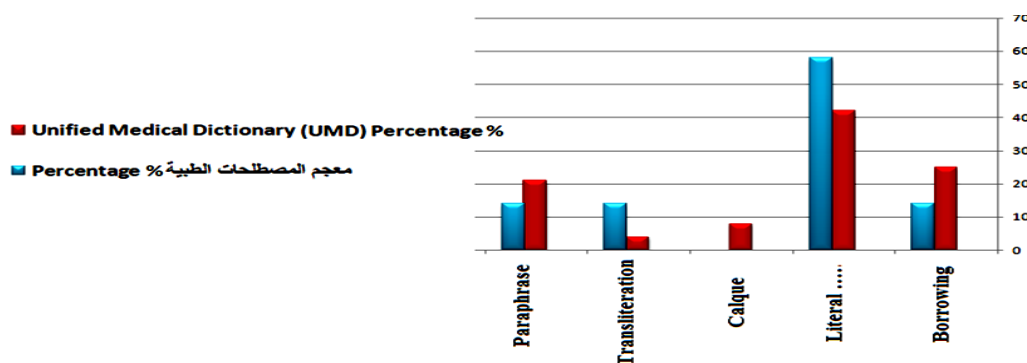


**Figure 1.** Comparative Results of Medical Term Translations into Arabic

## Discussion

This study has been concerned with identifying the problem of terminological inconsistency in medical translation from English into Arabic. The study focused on the nature of potential challenges that the translation of medical terms presents for translators. It has attempted to discover the most successful type of equivalence in specialized and non-specialized contexts of medical dictionaries and DPIs. Five types of terminological inconsistency in relation to types of equivalence have been found: a) Borrowing, b) Literal Translation, c) Claque, d) Transliteration, and e) Paraphrase.

The technical translator plays an important role in this process of transferring and communicating through translating new technology, scientific discoveries and updated medical information from and into different languages worldwide. Translators of medical tests are required to have a good command of both the SL and the TL, a good knowledge of the subject matter, an up-to-date knowledge of their specialized field and a broad understanding of medical terms and abbreviations. As the translator of medical texts (such as medical authors, doctors, specialists, etc.) deals with a subject related to human life, he/she should be careful in choosing the exact and accurate Arabic equivalent for each English medical term.

Moreover, a translator must look for the medical lexis in an English-Arabic medical dictionary. Translators should be able to translate words into the target language accurately, maintaining the tone, intent, and style and completely (without omitting any part of the original text or adding anything to the target text). In translation, we do not translate a word, sound, style or grammar but meaning. Meaning can be defined as a knotty arrangement or a product of different linguistic elements such as vocabulary, grammar, style, phonology and usage. Usually, anything irrelevant to meaning is not considered a translation, but sometimes, we may have some exceptions where sounds are more important than meanings, such as poetry. Meaning can be made out from a single word or a group of words so that something can be understood independently. Hence, a word is the smallest, and a sentence is the largest unit of meaning. Translation needs to be viewed as an act of communication governed by consideration of comprehensibility and readability rather than a prescription informed by dogmatic and obsolete views about correctness. So, translation is the exchange of the meaning of a source-language text through an equivalent target-language text.

Furthermore, translators of medical texts should consistently use specific terms and stylistic elements of the language–specific norms in all parts of the target documents. In order to enhance the quality of the translated documents, the medical translators have to use a lot of tools for translation, such as Monolingual dictionaries in English /English like Oxford and Merriam Webster and Bilingual dictionaries in English/Arabic in order to select the appropriate medical terms in the Arabic language. As an example of a bilingual dictionary - Mounir Baalbaki Dictionary.

A translator's knowledge of the subject matter behind the text is critical. Translators are required to have a good understanding of the source language (SL) and proficient use of the target language (TL). The more knowledge a translator possesses about the subject that he/she translates, the more accurate a translation he/she produces.

Translators usually rely on technical dictionaries, computer-aided translation tools (CAT, translation memories, term bases, terminology management systems, cloud-based and server-based translation systems) and websites besides their own knowledge. However, these resources often do not help Arabic translators as many new technical terms cannot be found in English-Arabic dictionaries or technological translation supports. On the other hand, because of the co-ordinational problems between Arab countries, some technical terms have more than one equivalent in Arabic (inconsistencies), which can confuse translators and the TL reader.

In light of the analysis, translating medical terms from English into Arabic is the main problem in medical texts. The present study attempted to determine how translators can overcome and tackle such translation difficulties. Understanding the meaning of affixes used with medical terms will help a translator tackle the problem of translating medical terms which include affixes. Neologism, non-equivalence, polysemy and terminological inconsistency pose serious translation problems; therefore, the study aims to draw up some strategies to help a translator to deal with these problems. The need for updated English-Arabic medical dictionaries negatively influences the work of Arabic translators in the medical field, as most consult such dictionaries to look for the meanings of medical terms.

Based on the present study's findings, translators need to be trained to work in the medical field before starting their job. The following recommendations are also helpful:

- Medical specialists and Arab expert translators could produce an English-Arabic dictionary that includes medical compounds and abbreviations, which would be a valuable reference for Arabic translators.
- Using medical dictionaries and other resources to find the definition of a term is an integral part of mastering the correct use of medical terms.
- Medical translation is a sensitive area, and a translator should make sure that he/she chooses an equivalent for the English term in Arabic.
- Solving the problem should continue beyond the dictionary rather than exceed the written word to lectures, conferences, and even the medical media.
- Medical terminology is not static; it always has new terms that may not have direct equivalents in Arabic.
- Arab expert translators and linguists could set up a special committee. This committee could meet regularly to discuss and create an Arabic equivalent for each new medical term.
- Further study is needed to investigate how medical terminology in Arabic and English works. Hopefully, this study will provide a good resource for Arabic translators who work in the medical field.

Medical specialists and Arab expert translators could produce an English-Arabic dictionary that includes medical compounds, terms, and abbreviations which would be a valuable reference for Arabic translators.

The discussion of the data analysis of this work shows that the study tries to translate some medical terms as it was likely that they could not find them in medical dictionaries, and CAT tools could have been more helpful. This study has highlighted the translation of medical terms as a problem that causes translation challenges. The study focuses on the translation of medical terms in general. Therefore, the researcher suggests some recommendations for future research on medical translation.

- As this study only attempted to cover the problem of translating medical terms in general, further research is needed to focus on the problem of translating medical compounds and abbreviations in particular.
- This study talked about neologisms and the problem of non-equivalence as one of the challenges of translation. A deeper study is needed to investigate these problems in particular.
- Further comparative research is needed to show the importance of experience and training for translators to work in the medical field. The study could involve more inexperienced and experienced professional translators working in the medical field.
- Further study is needed to investigate how medical terminology in Arabic and English works. Hopefully, this study will provide a good resource for Arabic translators who work in the medical field.
- This study presents some information on terminology inconsistency in Arabic medical terms. A deeper study on terminology inconsistency and standardization would be helpful.

## Conclusion

This research paper investigated the mechanisms for translating English medical terms into Arabic, medical terms and their elements, and highlighted some problems of translating those terms into the target language. Moreover, we attempt to ascertain the procedures employed to translate those terms. The practical part of this research helps us understand the mechanisms used by professional medical translators to render English medical terms into Arabic. The results of this study indicated that most medical translators use paraphrasing as the main mechanism to find the accurate equivalence of English medical terms into TL to make communication between doctors and patients more understandable. Also, the results show that there is usually more than one equivalence for the same English medical terms due to the non-standardization of Arabic medical terms. On the other hand, the need for an update in medical terminology creates difficult problems for doctors and translators. Eventually, the efforts and contributions of the Arab Academy to revive Arabic Medical terms and to unify them in all Arabic countries are undeniable. The Unified Medical Dictionary is considered one example of these efforts. This dictionary helps translators to find the accurate and appropriate equivalent of the medical terms in both the SL and the TL. It also helps to enhance the quality of translation products, which is one of the purposes of scientific translation.

### Disclosure Statement:

We (the authors of this paper) hereby declare that research ethics and citing principles have been considered in all the stages of the investigation. We take full responsibility for the content of the paper in case of dispute.

### Conflict of interest:

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