# Medical terminology in an audiovisual product: Voice-over translation

#### Rūta Nushtaeva & Ramunė Kasperė

#### Abstract

Translation of an audiovisual product is a challenging task for a translator who has to take into account not only the differences between two languages involving translation issues in lexical items, grammatical constructions, culture specific items, etc., but also the constraints that an audiovisual product may impose. The aim of the paper is to analyse translation strategies of medical terminology in an audiovisual product. The study is based on medical terms found in the drama TV series "Grey's anatomy" and determines the most frequently used translation strategies. To achieve the aim set, the following research questions are addressed: what are the most frequent translation strategies used by the translator in translation of medical terms in an audiovisual product and does voice-over translation cause any difficulties in terms of rendering medical terminology? The study shows that there has to be a lot of sound creativity on the translator's part since rendering medical terms in the most obvious and direct way might be too complicated in an audiovisual product. Studying these issues may provide helpful practical and theoretical implications and insights.

**Key words:** voice-over translation, audiovisual translation, medical terminology, translator, source language, target language

## Introduction

Since until the 1950s when audiovisual translation (AVT) was an unknown field, many significant changes have been achieved making AVT one of the major scholarly topics within the Translation Studies field with a fast growing interest of many researchers in many languages (Díaz-Cintas, 2009). Along with subtitling and dubbing, voice-over translation has received some attention of researchers in a number of research studies (Díaz-Cintas, 2004, 2009; Díaz-Cintas & Orero, 2010; Díaz-Cintas & Baños Piñero, 2015; Gambier, 2013; Matamala & Orero, 2013; Pérez González, 2014; Sepielak, 2014, 2016). Medical terminology causes a number of issues for translators overall, due to a lack of equivalent terms in the target language. The mode of voice-over adds other issues that may make the translation process even more challenging and the translation product quality in cases obscure.

Inappropriate use and/or translation of medical terms as well as expert jargon may cause a particular concern in the processes of communication and comprehension. There have been studies analyzing translation of medical terminology in dubbing and subtitling modes (Puddu, 2016). However, voice-over, as a translation mode that is relatively free of many restrictions that are apparent in other AVT modes, has been understudied (Grigaravičiūtė and Gottlieb, 1999). The aim of this work is to analyse the strategies used in voice-over translation of medical terminology, as based on an English-to-Lithuanian translated TV series. This work may have relevance in the field of translation studies, especially in terms of medical terminology translation.

#### Theoretical background and literature overview

Issues in voice-over audiovisual translation

Three main conventional forms of AVT are subtitling, dubbing and voice-over. Subtitling involves the transfer of a spoken to the written mode (Pérez González, 2014). Since normally people speak faster than they read, the subtitled text has to be shorter than the audio because of the necessity for the viewer to read the subtitles and at the same time not to think about the fact that he or she is actually reading (Chiaro, 2009). Subtitling provides an opportunity for the audience to hear original dialogues and gives a prospect of using subtitles as a language-teaching tool (Chiaro, 2009).

Dubbing gives credit to the target audience and its language. According to Chiaro (2009), dubbing makes "the target dialogues look as if they are being uttered by the original actors" (Chiaro, 2009). This is achieved by replacing the original soundtrack with a target language recording which reproduces the original message of the source language. Actors' lip movements and target language sounds have to be synchronized. Dubbing creates an illusion that actors who are on screen speak the viewers' language. The choice to dub a product is supported by the fact that it is easy to follow dubbed programmes and target audience does not have to read while watching or follow any redundant information because everything is put in place (Koolstra, Peeters & Spinhof, 2002).

Voice-over is an AVT method that records the soundtrack over the original voice, which is also heard. This AVT technique does not require reading and allows a target audience viewer to enjoy a movie, TV series or any other audiovisual product without worrying about extra information. This method is linked to the translation of documentaries, interviews or news (Franco, Matamala & Orero, 2010). However, certain norms have been formed. For example, voice-over is considered very accurate and authentic and is a dominant mode for the translation of various movies and TV series in countries in Central and Eastern Europe like Poland, Latvia, Russia or Lithuania (Franco, Matamala & Orero, 2010; Koverienė & Satkauskaitė, 2014).

Voice-over can be a demanding AVT mode. A successful delivery of a translated target text is inherently related to three different yet connected factors: the acoustic balance between the original soundtrack and the text delivered by the reader; the quality and the quantity of the translated text; and the timbre and intonation of the reader's voice, as well as the way in which the reader synchronizes the reading with the original sound (Wozniak, 2012). These factors show the essence of the voice-over translation, although the effect on the audience, which can be caused by the reader's voice, remains a relatively subjective matter. If one of these factors renders poor quality, the whole translation becomes unsuccessful, e.g., if an audience can only barely hear the original soundtrack, there is no compensation for condensations or reductions made in the target language translation (Wozniak, 2012). Thus, the time limit, which is essentially related to synchronisation, is the most tangible restriction in voice-over translation.

For analysis of audiovisual translation, the following strategies established by Gottlieb (1997) have been employed in some research studies: expansion (expanded expression, adequate rendering); paraphrase (altered expression, adequate rendering); transfer (full expression, adequate rendering); imitation (identical expression, equivalent rendering of proper nouns, international greetings, etc.); transcription (anomalous expression, adequate rendering); dislocation (differing expression, adjusted content); condensation (condensed expression, concise rendering); decimation (abridged expression, reduced content); deletion (omitted expression, no verbal content); resignation (differing expression, distorted content).

Gottlieb and Grigaravičiūtė (1999) acknowledge that voice-over translation is relatively lacking any constraints, but the freedom that it offers for a translator should be wisely exploited. In a study of four random episodes of a Danish TV series, they compared the original soundtrack and the target language translation – Danish to Lithuanian – of dialogues. The analysis was performed at the level of the structure, i.e., in terms of words, phrases and sentences (Gottlieb and Grigaravičiutė 1999), and at the level of translation quality. For analysis, the researchers used three categories: full translation, reduction and elimination. Full translation means that a translator intended to convey the whole meaning of an utterance or a sentence and all elements are clear for the target language viewer as they are clear for the source language audience. Reduction implies that a translator decides to cut part of a sentence or merge several elements (e.g., redundant elements, false starts, pragmatic particles, or slang), thus leaving some text untranslated. Elimination indicates that a whole clause or even a sentence is left untranslated and never presented to the target audience (Gottlieb and Grigaravičiūtė, 1999). The researchers claim that their intention was to examine the semantic content of the source language text, which can be preserved or reduced in a performed translation (ibid.).

Gottlieb (1997) has established the conventional classification of translation strategies that originally should be used for the subtitling. However, no particular model for meaning rendering strategies in voice-over translation has been established. Some researchers have interpreted and used Gottlieb's strategies for the analysis of voice-over translation. Garcarz (2007) has conducted analysis of slang in fiction movies translated using the voice-over mode. This analysis enabled the researcher to narrow down Gottlieb's strategies and establish a model of seven translation techniques for voice over: omission, substitution, functional equivalent, literal translation, description, neologisation and compensation.

#### Issues in categorisation of medical terms

The discussion on what counts as a medical term and their proper categorisation into groups is considered to be outside the scope and focus of this paper. However, certain characteristics of a lexical item or unit categorised as a term have to be mentioned. The level of technicalness (Nation, 2001), i.e., the extent to how which a word is restricted to a particular area or speciality, may define a word or a unit as term. The closer the connection between the term and its field, the more technical the term. Dahm (2012) presents a good example of technicalness in a medical field, e.g., the term *migraine* is closely related to the medical field, but when it is compared with another medical term *progeria* (a genetic condition which causes symptoms of ageing at a very early age), it seems that the term *migraine* can appear in everyday use as much as in medical terms, like *migraine*, do not have a level of fixed technicalness. Therefore, categorisation of medical terms into specifically defined categories is somewhat complex.

Hoffmannová and Müllerová (2000) distinguish the following categories of medical terms: diseases and their symptoms, methods of examination, surgical interventions, medical specialities and hospital departments (p. 77). This classification is considered quite ambiguous. In Černy's argumentation, for example, symptoms are often of a subjective evidence and, thus, may be deemed outside the definition of terms (Černy, 2008, p. 41). Therefore, the distinction into (1) diseases and illnesses (e.g., *laryngitis*), (2) medications (e.g., *aspirin*), (3) medical tools (e.g., *otoscope*) and (4) procedures and methods (e.g., *HRT*) is proposed by Černy as a less subjective and disambiguous way of categorizing medical terms (ibid.).

In defining a term it is important to draw a line between simple words and terms, in this particular instance, medical terms. Medical terminology can be divided into two types: technical and semi-technical (Fage-Butler and Nisbeth Jensen, 2016). Technical terms often come from Latin or Greek languages or are related to the names of medications and can be found and

identified in medical dictionaries. Semi-technical terms can be determined by using examples and definitions and include words that have a minimal relation to the medical field, *e.g. part; pairs; neck; eye* (ibid). Cabré (2003) claims that pragmatic context plays an important role when recognizing whether a word is a term and suggests that any lexical unit can be a terminological unit. Consequently, subcategorization of technical and semi-technical terms into dictionary defined medical terms and co-text defined medical terms is relevant. Dictionary-defined medical terms cover those medical terms that can be found in the dictionary as well as terms that derive from Latin or Greek, e.g., *papillary carcinoma thyroid*. Co-text-defined medical terms are the terms that cannot be found in medical dictionaries, but they carry a specialized meaning when used in medical settings, e.g., *uptake* and *replacement* (Fage-Butler and Nisbeth Jensen, 2016). Along with dictionary-defined medical terms and co-text-defined medical terms, Fage-Butler and Nisbeth Jensen (2016) add three more categories, i.e., medical initialisms, medication brand names and colloquial technical terms, and establish a taxonomy consisting of five big groups of medical terms.

The categories of medical terms by Hoffmannová and Müllerová (2000), Černý (2008) and Fage-Butler and Nisbeth Jensen (2016) are taken as the basis for the analysis in the work. The classifications are summarised and the categories are established for the purposes of this study as follows: (1) diseases, signs, symptoms and injuries; (2) medications; (3) medical tools; (4) procedures, treatments and actions; (5) medical abbreviations; (6) healthcare occupations; (7) human body parts; (8) common terms in medical context.

## Difficulties in terminology translation

The main terminological challenges that are usually encountered in performing a translation of the source and target language terminology are as follows:

- Challenges in the source language terminology: to specify the meaning of the term from the source language text; to confirm the specialised nature of the terminological unit; to know the denominative alternatives of the term and the conditions in which it can be used in texts;
- Challenges in the target language terminology: to know whether there is an equivalent term in the target language; if there is, to know what sources have to be used in order to adapt or create the name needed and then how it can be indicated that is a neologism; to know the most adequate equivalent after considering the topic and approach; to know whether a term has either specific or restrictive grammatical usages; to know the prototypical combination of terminological units; to know the customary phraseology in the particular field; to know the denominative alternatives which can be applied for the single concept; to make sure whether the denominative unit which was selected corresponds strictly to the concept (Cabré, 1999).

The challenges outlined by Cabré (1999) show the complexity of terminology translation. It includes many different tasks starting with the source language terminology when the meaning of the term has to be specified and then confirmed. The translator has to pay attention to many details when performing a translation to the target language and at first he/she has to find out whether there is an equivalent term and how it can be adapted. The translator has to know all features related to the particular term in order to present an accurate translation that would be understandable to the target audience.

Matamala (2010) also delineates terminological difficulties in translation, among which are the following: identifying a term when it also has a general meaning, *e.g. sequence*;

understanding a term; finding the right equivalent; absence of (or failure to find) an adequate equivalent resulting in creation of new terms, paraphrasing, use of loanwords or language mechanisms such as pre-fixation, analogy and blending; dealing with denominative variations in certain languages, *e.g.* Spanish *detritus* and *detrit* for English *debris*; dealing with transcriptions that might result in mistranscriptions, *e.g. route* and *root* (Matamala, 2010).

Translation challenges are even more demanding when the source and target languages belong to different language families, which results in essential differences in syntax. To add more, this also means that the source and target languages do not share a common word stock with comparable semantics.

Paying attention to the semantic issues in the translation of medical terminology, it has to be pointed out that polysemy is fundamental when examining terminology which appears in life sciences (Temmerman, 2000). It affects almost all medical terminology which comes from the general language, as well as terminology taken from other science disciplines when it is differently applied in both medicine and health management. Everyday words that have the function of a verb mostly are polysemous and have multiple meanings which make their use as terms complicated, *e.g.* the verb *screen* and a verbal noun *screening*. Both these words are used as medical but in more abstract ways in comparison with their everyday application, e.g., *window screen* refers to the protective shield against the sun. In medicine, *a medical screening* refers to the filtering process when tests to diagnose diseases and dangerous health conditions are involved (Peters, Qian and Ding, 2018; Antia, 2007). It is clear that the identification and translation of words with abstract meanings can be problematic when they become terms.

Other researchers have discussed more difficulties in medical translation, e.g., metaphorical terminology transfer from the source to the target text (Temmerman, 2000) or translation of eponyms (Karwacka, 2015) or compound terms (Karwacka, 2015; Peters, Qian and Ding, 2018). The translation of medical terms is a continuous challenge for the translator when it is essential not only to find the appropriate translation equivalents, but also to keep interest in the progress and advancements made in the field of medical diagnosis and treatment (Montalt, 2011). Translators have to identify or sometimes create new equivalents of medical terms in the target language and know minor differences in words and their meanings between the source and target languages.

## **Material and Methods**

Voice-over translation of medical terminology was analysed in this paper in terms of the distribution of translation strategies over different types of medical terms. Six episodes of medical drama TV series *Grey's anatomy* and the voice-over translation to Lithuanian *Grei anatomija* were chosen for analysis. In total, almost 500 medical terms were found and analysed: first, to find out the frequency of groups of medical terms in the audiovisual product, and second, to identify translation strategies used to render medical terms. The analysis reveals that sometimes the translator is not able to come up with a proper and natural translation, the reasons of which might be the focus of other research studies.

## **Results and Discussion**

The distribution of groups of medical terms found in the voiced-over audiovisual product is presented in Fig. 1, which shows that 29% of the collected medical terms were those referring to diseases, signs, symptoms and injuries, e.g., *hematochezia*, *melena*, *rupture*.

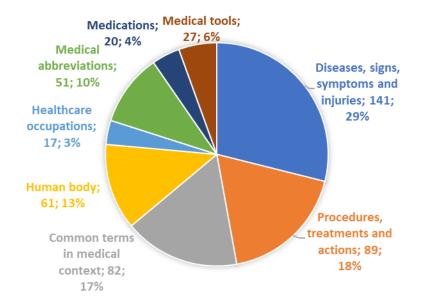


Figure 1 Distribution of medical term groups (n = 488)

Procedures, treatments and actions accounted for 18% of medical terms under analysis, e.g., *harvest surgery, tox screen.* Less than one-fifth (17%) of common terms used in the medical context show that a number of medical terms might not be related to a specific area; they are just part of the lexicon in daily situations of the medical context, e.g., *open* in *open a chest.* Medical terms related to human body comprised 13% of all the selected terminological units, which implies that names of human body parts are a part of the communication context among doctors and their patients, e.g., *chest* in *open a chest.* Medical abbreviations were also found to make up 10% of all the collected medical terms, e.g. *EEG, NSAIDs*, which shows that medical terms are frequently abbreviated in the source language of the chosen audiovisual product. The percentage of the terms referring to medical tools was only 6%, e.g., *scalpel.* Similar frequency was observed for names of medications (4%), e.g., *dexamethasone, phenytoin*, and healthcare occupations (3%), e.g. *radiologist.* The small percentages indicate that these particular groups of medical terminology are less common in the medical TV series.

Figure 2 shows the percentage of the translation strategies used to translate medical terms found in the medical drama TV series.

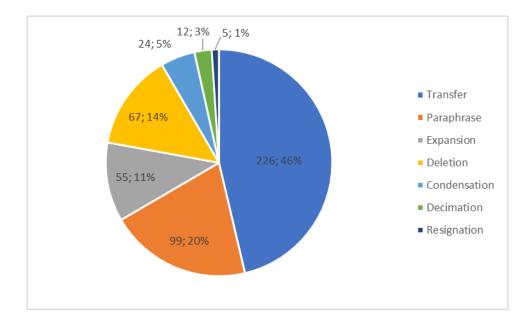


Figure 2 Distribution of translation strategies across all medical terms (n = 488)

The greatest part (46%) of medical terms were translated using the strategy of transfer, e.g.,

(1) $S1E3^{1}$	
EN $OR^2$ :	Oooh – hemipelvectomy!
LT TR <sup>3</sup> :	Pusės dubens šalinimas.
$BT^4$ :	Half pelvis removal.

In Example 1, the source language medical term *hemipelvectomy* derives from the Latin language: hemi- + pelvis + -ectomy. Hemipelvectomy refers to the surgical procedure when a half of the pelvis and the leg of that side are removed. The example indicates that the translator has chosen to render an original structure of the medical term. The transfer strategy might be a non-complicated way of rendering a source language term because it does not require the translator to search for various other options.

In the collected corpus, as much as 20% of medical terms were paraphrased, which implies that the translator was looking for some other options that could result in being clearer for the target audience reader and possibly better quality of the translation, e.g.,

(2) S1E5

EN OR:	Look at the wall <b>rupture</b> .
LT TR:	Sienelė <b>smarkiai pažeista</b> .
BT:	[The] wall [is] significantly ruptured.

<sup>1</sup> Series and episode

<sup>&</sup>lt;sup>2</sup> English original spoken text

<sup>&</sup>lt;sup>3</sup> Lithuanian translated version

<sup>&</sup>lt;sup>4</sup> Back translation (word for word)

The source language term *rupture* indicates the tearing or disruption of a particular tissue. This medical term can be used in various contexts and that is why it may have different translations. Originally, the word rupture can be translated as *trūkimas*, *trūkis*, *lūžimas* or *išvarža*. These translations cannot be applied in this particular case since such expressions as *sienelės trūkimas* or *sienelės lūžimas* would hardly make sense to the target audience. In this case, the translator has made the decision to paraphrase the whole sentence and the source language term *rupture* was translated as *smarkiai pažeista*.

There were 14% of deletion cases, which refer to the omitted expressions when the translator most probably had no other choice but to eliminate a particular medical term, e.g.,

(3)	S1E2	
	EN OR:	You have a disorder called <b>multinucleate cell</b> angiohistiocytoma.
	LT TR:	Jūs sergate angiohistiocitoma.
	BT:	You [are] sick [with] angiohistiocitoma.

In certain cases, the use of deletion strategy helps to avoid the surplus of words; however, considering the case of elimination of a medical term, the translator has to be sure whether this strategy could be applied since it might result in losing the meaning of a sentence. Also, there are limitations to the target language soundtrack and this could affect the translator's decision to use this strategy. Then again, the usage of deletion strategy is arguable because it should be the last option chosen by the translator.

Another 11% of medical terms were translated by using the strategy of expansion, which indicates that some elements were added when performing the translation, e.g.,

(4) S1E5

EN OR:	We need to <b>open</b> her up.
LT TR:	Teks <b>atvert krūtinės ląstą</b> .
BT:	[It will be] needed to open [the] chest.

The original sentence implies that someone called *her* has to be opened up. However, the literal translation to Lithuanian *ją atverti* or *ją atidaryti* would not sound like a logic or natural expression. The need to add some elements appears when more clarity is necessary for the users of the translated version to fully understand the text.

There were 5% of condensation cases, which tells that more concise language was used in order to avoid unnecessary elements that might have possibly raised questions to the target audience, e.g.,

(5) S1E4	
EN OR:	Oh, and you are hoping they're gonna give me a whipple
	pancreaticoduodenectomy.
LT TR:	Tikies, kad operuos. <b>Pašalins kasą</b> .
BT:	You hope that [they] will operate. Will remove the pancreas.

In some cases, the original name of the medical term cannot be preserved and directly transferred because it would be too complicated in the target text. Thus, a particular element is adapted or

transformed which may result in the condensed version of a translated terminological unit (Example 5). In other cases, it is also possible that the translator does not come up with an adequate equivalent to the medical term and has no other choice but to produce a concise version which would still render the meaning of the sentence.

In the collected corpus, 3% of all cases were translated by using the decimation strategy, which, in contrast to the condensation strategy, reduces certain elements and an abridged expression is rendered to the target audience language. This particular strategy may also be called an extreme form of the condensation strategy since even supposedly significant references might be deleted and only the most general idea of the source language term expressed. Thus, the translator has to be extremely careful if he/she decides to remove a part of the meaning told by the original reference and make sure that the information which reaches the viewer will not give a distorted view of the original text, e.g.,

(6) S1E5

EN OR:	A <b>bullectomy procedure</b> . Remove the bullae. Reduce the pressure.
LT TR:	<b>Operuočiau.</b> Pašalinčiau pūlinius, sumažėtų spaudimas.
BT:	I would operate. I would remove bullae, pressure would reduce.

In Example 6, the translation partially renders the meaning; however, the text that follows, namely, *Remove the bullae*, is an explanation in the original text, but when translated it becomes a compensation for the lost meaning in the first part of the

Only 1% of medical terms were rendered by using resignation, which may distort the content. The use of this particular strategy implies that the translator has no other choice but to produce a different expression which results in the essential changes of the meaning, e.g.,

(7) S1E5

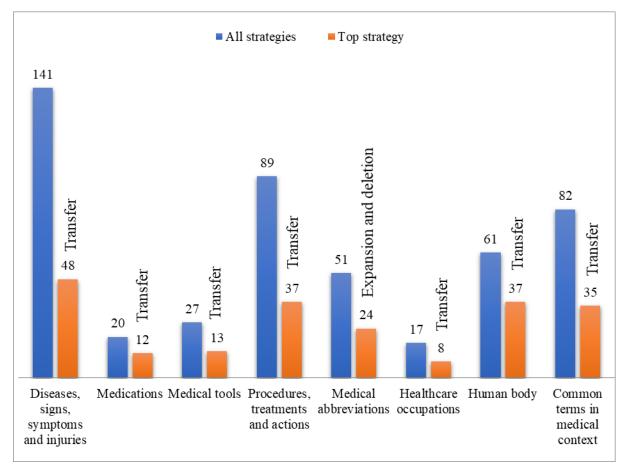
EN OR:	The patient has a three-lumbar fusion.
LT TR:	Jis <b>negali gulėt ant nugaros</b> .

BT: *He cannot lie on [the] back.* 

In Example 7, the original medical term *three-lumbar fusion* refers to the common procedure which helps to treat many types of spinal pathology such as scoliosis and other types of deformity. The term is a specific reference which indicates a lumbar fusion of three or more low back levels treatment. *negali gulėt ant nugaros*. This translation gives somewhat different information in comparison with the original term since it suggests that a patient is not able to lie on his back. Even though it seems that the translator has distorted the content by rendering this particular translation, the transferred information indicates the condition of a patient implying that a particular procedure was performed and because of it the patient feels discomfort in the back. This example of shows distortion of the original meaning even though the reference of the source language content is rendered to the target language translation.

Strategies of dislocation and transcription were not found in the voiced-over audiovisual product.

Fig. 3 illustrates the number of cases when particular translation strategies were used in translation of medical terms as represented by separate groups. The blue column indicates the total number of cases in each group, which were found in the corpus of the examples collected



from the audiovisual product (see Fig. 2). The orange column represents the number of cases which refer to the most frequent strategy employed.

Figure 3 The most common translation strategies employed in different groups of medical terms

Fig. 3 indicates that transfer is the most popular strategy in translation of groups of medical terms separately, which is in line with the result obtained overall (see Fig. 1). Except for the group of medical abbreviations that were translated by using expansion (12 cases) and deletion (12 cases) strategies, the most common employed strategy was that of transfer.

## **Conclusions and Final Implications**

According to different researchers, audiovisual translation is highlighted as one of the most significant translation areas of this era due to the growing number of people who use this kind of production. As it was clarified, the AVT has three conventional modalities: subtilling, voice-over and dubbing, and in this study, the voice-over mode receives a thorough focus due to the characteristics of the selected product (medical drama TV series). The study and analysis of the voice-over translation allowed confirming that the conventional classification of translation strategies, proposed by Gottlieb and originally applied for the subtilling, can be also adapted for the analysis of voice-over translation as it has been previously carried out by several other researchers.

Voice-over translation causes many difficulties in terms of rendering medical terminology. The most common problem is when the medical term does not have the appropriate equivalent in the target language or when the translator does not have enough information about a particular medical term. This implies that the translator has to be creative and sometimes rely on a new translation equivalent of a medical term.

Different translation strategies were found in the selected audiovisual product. The most common solution was the transfer strategy, i.e., leaving the original structure of medical terms. It may be a safe option requiring no alterations and changes in the original structure of the term. However, there are cases when the translator has to delete the medical reference or remove the original meaning by replacing it with a completely new element. These are risky choices which should be performed only when there is no other option, i.e., the source language term does not have an adequate equivalent in the translation language or a particular element will not be clearly comprehended by the target audience.

This paper contributes to the other research on improvement of the audiovisual translation quality by unveiling the essential strategies used for the translation of medical terminology. Further studies are needed as AVT of medical terminology is an under-researched domain. As the world is slowly recovering after global pandemics, there will be likely more movies and TV series where translation of medical terminology will be crucial and the translator's task even more complicated.

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Rūta Nushtaeva Master of Arts Institute of Social Sciences, Arts and Humanities Kaunas University of Technology Lithuania ruta.nushtaeva@gmail.com

Ramunė Kasperė Professor Institute of Social Sciences, Arts and Humanities Kaunas University of Technology Lithuania <u>ramune.kasperaviciene@ktu.lt</u>

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