

TRANSLATING MEDICAL TERMINOLOGY: STRATEGIES FOR TRANSLATING COVID-19 TERMS FROM ENGLISH INTO MACEDONIAN

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The purpose of this paper is to analyse the vocabulary used to talk about the COVID-19 situation in the Macedonian public space. For the purposes of this study a corpus of 130 Covid-19-related terms in English and their Macedonian counterparts was compiled. The English terms were extracted from the COVID-19 and SARS-CoV-2 Multilingual Terminology Collection found in the European Union terminology database (IATE), as well as other relevant COVID-19 glossaries. Their Macedonian counterparts were extracted from various public sources of information. The analysis is based on Vinay and Darbalnet's (1958/1995 in Venuti 2000) model of translation strategies, complemented by some of Molina and Hurtado Albir's translation techniques (2002). The analysis shows which translation strategies are used to convey COVID-19-related terms into Macedonian and how the terms relate to different audiences. The results stress the importance of conscious and effortful control over terminology adoption and creation.

Keywords: coronavirus, terminology, translation strategies, medicine

ПРЕВЕДУВАЊЕ МЕДИЦИНСКА ТЕРМИНОЛОГИЈА: СТРАТЕГИИ ЗА ПРЕВЕДУВАЊЕ ТЕРМИНИ ВО ВРСКА СО КОВИД-19 ОД АНГЛИСКИ НА МАКЕДОНСКИ ЈАЗИК

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Целта на трудот е да се направи анализа на вокабуларот што се користи за опишување на состојбата со КОВИД-19 во македонскиот јавен простор. За таа цел составивме корпус од 130 термини во врска со КОВИД-19 на англиски јазик и нивните македонски еквиваленти. Англиските термини ги извлековме од Повеќејазичната термилошка збирка за КОВИД-19 и САРС-КоВ-2, што е дел од Темилошката база на податоци на Европската Унија (ИАТЕ), како и од други релевантни поимници за КОВИД-19. Македонските еквиваленти ги извлековме од различни извори на јавно достапни информации. Анализата се заснова врз моделот на преведувачки стратегии од Вине и Дарбалне (Vinay and Darbalnet's (1958/1995) во Venuti 2000), кој е дополнет со некои од преведувачките техники предложени од Молина и Хуртадо Албир (Molina and Hurtado Albir 2002). Анализата покажува кои преведувачки стратегии се користат за пренесување на термините во врска со КОВИД-19 на македонски јазик и како термините комуницираат со различна публика. Резултатите ја истакнуваат важноста на свесната и намерна контрола врз усвојувањето и создавањето терминологија.

Клучни зборови: коронавирус, терминологија, преведувачки стратегии, медицина

1 Introduction

The COVID-19 crisis has had an enormous impact on the lives of millions of people worldwide and as such has created an urgent need for fast and accurate communication and information dissemination within and beyond national borders. Smooth and correct communication is crucial not only for medical researchers, who gain and share new knowledge, for medical and pharmaceutical professionals, who are in the front lines of the fight against the corona virus, but also for the general public and community members who need to understand the danger posed by the virus, the social distancing protocols and what they need to do if they feel sick. In view of the fact that the outbreak of the COVID-19 pandemic has also introduced specific terms and phrases, such communication is possible only if relevant terminology is translated effectively and used consistently. To help achieve timely and consistent information to experts and ordinary people in this time of crisis, a number of international, governmental and independent organisations have compiled COVID-19-related glossaries in different languages. This, however, has not been the case with North Macedonia. So far no official glossary of COVID-19-related concepts has been compiled for Macedonian. It seems that most of the language used to talk about COVID-19 in Macedonian is developed “on the go” rather than in a conscious effort to facilitate accurate, effective and efficient communication for everyone involved (healthcare authorities and staff, the media, translators and the general public).

The purpose of this paper is to make a descriptive analysis of the vocabulary used to talk about the COVID-19 situation and the translation strategies used to convey it in the Macedonian public space. Terms are extracted from relevant international COVID-19 and SARS-CoV-2 termbases and glossaries. Their Macedonian counterparts are extracted from various public sources of information such as the websites of the Ministry of Health and the Public Health Institute of the Republic of North Macedonia as well as news reports and interviews or articles of relevant healthcare authorities. The analysis aims to show which translation strategies are used to convey COVID-19-related terms into Macedonian.

2 Medical translation

The translation of medicine-related content has been present since the beginning of human history. According to Fischbach (1986: 16) medical translation “is the most universal and oldest field of scientific translation because of the homogeneous ubiquity of the human body”. As universal as it is, medical translation presents challenges.

As a specific type of scientific and technical translation focusing on medicine and other related fields, it is performed in a variety of contexts and situations (Montalt 2011: 79). The traditional view of medical translation is that it is restricted to highly specialised texts and difficult medical terminology. However, in recent years it has come to cover other communicative events too, including clinical practice, patient communication, education and popularisation of medical knowledge (ibid.).

This year's COVID-19 pandemic has proved this to be the case. Following Bowker and Pearson (2002: 28), specialised communication, medical communication included, embraces three levels of communication: expert to expert (e.g. publication in research journals); expert to semi-expert (e.g. coursebooks/handbooks written for students) and expert to non-expert (texts written to educate/inform the public). Löning (1981 in Herget & Alegre 2009) adds a fourth level of communication, which seems very relevant in these times of COVID-19 pandemic: non-expert to non-expert (e.g. a journalist writing a newspaper article on COVID-19). The different levels of communication and the different contexts make room for modes of communication other than the written one, including audio-visual and digital communication (Montalt 2011: 79). In the current coronavirus context, this is evident in the variety of video clips and infographics aimed at informing the general public about the symptoms of COVID-19 and ways to protect oneself.

The complexity of medical translation is also due to the different genres used in different medical and other settings. Montalt (*ibid.*) mentions four general categories of medical genres: research (e.g. original scholarly articles), professional (e.g. clinical guidelines), education (e.g. patient information leaflets) and commercial (e.g. drug advertisements). All these genres perform different functions, create participants' expectations and needs, have a typical structure, conventions and make specific use of terminology. Those dealing with translation for medical purposes must be familiar with the different demands of genres and have the skills to deal with them.

Medical language, and particularly medical terminology, is yet another area of special interest to the translation profession. Depending on the setting and the genre, medical language varies in terms of technicality, formality and channel of communication (Pilegaard 1997: 159). It is abundant in words of Greek and Latin origin which very often have counterparts in ordinary everyday language (e.g. haemorrhage vs. bleeding; aedema vs. swelling). Such synonymy may be a source of concern for the medical translator due to the asymmetries between different languages (Montalt 2011: 80). Medical language is also open to everyday words which in a medical context acquire different meanings (e.g. discharge; history). The highly dynamic nature of medical research and the constant discoveries and innovations are reflected in neologisms, too. According to the World Health Organisation, several thousand new terms are created annually as a result of new discoveries, theoretical reorientations or duplications of existing medial concepts (Pilegaard 1997: 162).

In view of the above considerations, a sociolinguistic approach to medical language describing and analysing it in terms of speakers and communicative situations (Pilegaard 1997: 159) seems to be the best way forward when dealing with medical translation. Regarding medical terminology, the sociocognitive approach is also the most relevant one as it takes into consideration the level and type of specialisation of sender and receiver in communication, what is more essential and less essential information, when defining the units of understanding (what is in traditional terminology known as the concept) (Temmerman 2000: 223). This is particularly valid in the current pandemic situation when communication of medical knowledge takes place on different levels where experts and non-experts are both senders and receivers in different contexts and settings. However, before discussing

strategies for translating medical terminology, a more detailed account of the challenges posed by medical terminology, and COVID-19 terminology in particular, is in order.

3 Challenges posed by medical terminology, including COVID-19 terminology

The transfer of medical terminology from one language to another is challenging for a number of reasons. In this section we present the main elements of medical language that are the cause of difficulties for medical translators¹: acronyms, collocations, culture-specific terms, idiomatic expressions, terminological variation, neologisms and false friends. We limit our discussion only to those relevant to our corpus providing examples related to COVID-19 only in both English and Macedonian.

3.1 Acronyms

Medical language, English and Macedonian included, often uses shortenings in the form of acronyms. These shortenings which are usually composed of the initial letters of words which make up long phrases are not inherently meaningful, even for non-medically trained speakers (Peters, Qian & Ding 2018: 107). To be able to choose a strategy of how to deal with them, the translator must first be able to “unpack” them and recover their meaning. As it happens, some may be well known and may not pose a problem, whereas others may be non-transparent and may require research efforts. Depending on the communicative context (whether the acronym is widely known or not; who the audience is), the translator may choose to keep it as it is, translate the phrase and derive an acronym from the translated phrase, “unpack” the acronym and convey the translated multiword phrase or a combination of the different strategies. The following are some acronyms used in the current COVID-19 pandemic from publicly available COVID-19 glossaries²:

- (1)
 - a. *2019-nCoV* (used as such in both English and Macedonian) - 2019 novel coronavirus
 - b. *SARS-CoV-2* (used as such in both English and Macedonian) - severe acute respiratory syndrome coronavirus 2
 - c. *IFN* (in Macedonian ‘ИФН’) – interferon
 - d. *COVID-19* (in Macedonian used as ‘COVID-19’ and ‘КОВИД-19’³) – Coronavirus Disease 2019

¹ Another possible cause of difficulty in translation are eponyms - words used to name anatomical parts, procedures, signs and symptoms, fractures, medical devices and diseases after their discoverers, celebrity patients, fictitious characters or geographical places (Karwacka 2015: 74-275). An example from the glossaries we use would be ‘Ebola virus’, named after the river where it was first discovered.

² All examples presented in this paper are taken from these glossaries.

³ For a more detailed discussion of the new corona and COVID-19-related words in the Macedonian standard language, see Janusheva (in print).

3.2 Collocations

Collocations are combinations of words that usually occur together in different contexts. Due to the intrinsic differences between languages a word combination in one language is not necessarily the same in another language. This can be a challenge for translators. If they are not careful enough, translators can sometimes be so engrossed in the source text that they may produce a very odd collocation in the target language. The COVID-19 crisis has brought some typical collocations that may not work the same way in all languages. In Macedonian they certainly do not as can be seen in the following examples.

- (2)
- a. *to lift lockdown measures* (Macedonian: literal rendering ‘*крева карантински мерки*’; a more natural rendering ‘*укинува карантин*’)
 - b. *to tighten lockdown measures* (Macedonian: literal rendering ‘*сѝеѓа карантински мерки*’; a more natural rendering ‘*заосѝрува карантин*’)
 - c. *herd immunity* (Macedonian: literal rendering ‘*имуниѝеѝ на сѝаго*’; a more natural rendering ‘*колекѝивен имуниѝеѝ*’)
 - d. *to break quarantine* (Macedonian: literal rendering ‘*крши карантин*’; a more natural rendering ‘*не ѝочѝува карантин*’)

3.3 Culture-specific terms

As in all interlinguistic communication, the transfer of culture is important in healthcare too. There are cases when the understanding of cultural elements is essential for health decisions and treatment. The challenges of medical translation and terminology due to cultural differences are evident, perhaps, the most when there are medical conditions which are endemic to certain geographical areas (Trecedor Sánchez & López-Rodríguez 2012: 249). Nevertheless, culture-specific terms pose difficulties even when they are not directly related to medical conditions, but to the broad institutional setting. Differences in the organisational structure and institutional setup of different countries account for such difficulties. For instance, in some European countries there are so-called Centres for Disease Control and Prevention, for which there is no identical structure in the Macedonian healthcare system. The Macedonian Public Health Centre is, perhaps, the institution that performs a similar function. Another example is the UK’s NHS (United Kingdom National Health Service), whose closest Macedonian counterpart is the Health Insurance Fund (the cornerstone of the Macedonian public healthcare system). Which strategy to choose when conveying such terms would depend on the purpose of the translation and the target audience.

3.4 Idiomatic expressions

Idiomatic expressions are notorious for presenting difficulties in interlanguage transfer because word-for-word translation usually distorts the meaning or yields odd results. The difficulties are usually due to the lack of one to one correspondence between idiomatic expressions. The translation of the COVID-19-related expres-

sion “to flatten the curve” is a case in point. If translated literally ‘израмнување на кривата’, it would be unintelligible to the ordinary person. To convey its meaning of “to take measures to slow down the increase in the number of cases of a disease to avoid overwhelming the health care system at the peak of an epidemic” (TERMIUM Plus 2020), a different translation strategy would have to be used.

3.5 Terminological variation

Terminological variation refers to the multiple ways of designating a concept through different lexical manifestations (Trecedor Sánchez & López-Rodríguez 2012: 252). As translators have been typically trained to embrace terminological standardisation, terminological variation presents a challenge (Bowker and Hawkins 2006: 80). This is particularly true in the field of medicine where lexical variation depends on the facet of the concept being underlined, the particular domain, the particular interest of the sender and the communicative setting with its geographic features and register (Trecedor Sánchez & López-Rodríguez 2012: 253). The ranges of variation in medical language are due to the level of technicality, formality and channel of communication (Pilegaard 1997: 159). In interlingual communication of medical knowledge involving English, variation is often due to the so-called doublets formed by technical names (usually of Greek and/or Latin origin) and their popular equivalents, because languages are not symmetrical in the use of such synonyms (Montalt 2011: 80). Thus, the success of health promotion in an intercultural setting depends very much on the terminological variants chosen (ibid.). For example, depending on the particular context, the speaker may choose to use either ‘sputum’ (in Macedonian ‘спутум’), ‘phlegm’ (in Macedonian ‘шлајм’) or ‘expectoration’ (in Macedonian ‘исплювок’) to talk about “the material expelled from the respiratory tract through the mouth by coughing or clearing the throat” (TERMIUM Plus 2020). The difference between the technical term ‘dyspnea’ (in Macedonian ‘диспнеа’) and the popular term ‘shortness of breath’ (in Macedonian ‘тешко дишење’) is another example of the terminological choices that need to be made. The translator who is skilled enough should be able to determine which terminological variant to use depending on the social relation between the participants in the communication and the knowledge shared by them: the specialized term (when an expert is addressing experts) or the lay term (when an expert is addressing non-experts) (Trecedor Sánchez & López-Rodríguez 2012: 255).

3.6 Neologisms

Due to the rapid progress in medicine, there is also rapid change in medical terminology. New phenomena give rise to new concepts which need to acquire new names. The need for exchange of information makes these neologisms travel to new linguistic environments. The current COVID-19 pandemic has given rise to neologisms in English such as: elbow bump, fist bump and foot shake to indicate alternative ways of “greeting each other without shaking hands” (TERMIUM Plus 2020) or “social bubble” to indicate “a closed group of people not necessarily from the same household who agree to create a group in which physical distancing meas-

ures are not mandatory (TERMIUM Plus 2020). How to translate these in another language, in this case Macedonian, is a serious translator's dilemma. Examples of neologisms from Macedonian include: 'инфодемија', 'бустер-доза', 'ковид-болница' (Janusheva in print).

3.7 False friends

As in other areas of language, medical language also contains a number of false friends, i.e. words which are similar in form and pronunciation in the two languages, but, in fact, have a different and often unrelated meaning. The COVID-19 terminology contains such false friends between English and Macedonian. We provide a few examples in Table 1 below:

Table 1. English-Macedonian COVID-19 false friends

English term	Meaning of the English term	Macedonian false friend	Transliteration of the Macedonian term	Meaning of the Macedonian term
drug	medicine	<i>дрoгa</i>	'droga'	illegal substance
viral	related to virus	<i>виpалeн</i>	'viralen'	popular on social media
theatre	operating room	<i>тeaтap</i>	'teatar'	stage where plays are performed

4 Characteristics of COVID-19 terminology

To gain a better insight into the nature of COVID-19 terminology, we present below its main characteristics in terms of content domains and word-formation strategies.

4.1. Content domains

Most of the COVID-19-related terminology falls within the field of medicine. Nevertheless, there are some terms which belong to the general language vocabulary. According to the Chinese COVID Term (Ma et al. 2020: 4), COVID-19 terminology can be classified into 10 broad content domains, as follows: disease, living organism, clinical manifestation, diagnosis and treatment technique, qualifiers, demographic and socioeconomic characteristics, epidemic prevention and control, medical equipment, instruments and materials, psychological assistance and anatomic site. Some examples are presented in the Table 2 below. The examples are provided in English, but the classification is universal and it equally applies to the Macedonian terms as well.

Table 2. Content domains of COVID 19 terminology

Domain	Examples
Disease	2019-nCoV acute respiratory disease, acute interstitial pneumonia, bilateral interstitial pneumonia, COVID-19 infection, upper respiratory infections, comorbidities and complications, pre-existing condition, underlying health condition, ventilator-acquired pneumonia
Living organism	2019 novel coronavirus, Severe Acute Respiratory Syndrome Coronavirus 2, enterovirus, pathogen, Ebola Virus
Clinical manifestation	dyspnea, myalgia, fever, dry cough, nasal congestion, difficulty breathing, shortness of breath
Diagnosis and treatment technique	adaptive clinical trial, antigen test, antibody test, bedside testing, convalescent plasma, extracorporeal life support, interferon, LVP solution, serological test, test negative twice consecutively, saturation of blood oxygen, ECMO (extracorporeal membrane oxygenation), mechanical ventilation, peripheral oxygen saturation
Qualifiers	community transmission, route of transmission, droplet transmission, air-borne transmission, mechanical vector, acute, chronic, close contact, intubated patient
Demographic and socioeconomic characteristics	suspected cases, confirmed cases, imported case, asymptomatic carrier/case/patient/individual, serious patients, those with mild symptoms, welfare institutions, CFR (case fatality rate), morbidity rate
Epidemic prevention and control	active immunisation, epidemiological survey, self-quarantine, civil confinement, cluster, confinement/containment measures, contact tracing, corporate sector purchase programme, de-escalating measures, de-escalation strategy, full-fledged screening mechanism, home isolation, lift lockdown measures, acquired immunity, adaptive immunity, COVID-19 outbreak, epidemic curve, first responder, flatten the curve, frontier worker, herd immunity, epidemic map, staff rotation, daily testing capacity, incubation period, infrared thermal screening, social/physical distancing, protocol, virulence, peak
Medical equipment, instruments and materials	anaesthetic, critical care unit, disposable respirator mask, examination glove, eyewear protection, surgical mask, face mask/shield, hazardous materials suit, hazmat suit, lung ventilator, alcohol-based hand rub, alcohol-based hand sanitiser, decontamination suit, test kit, hand gel
Psychological assistance	emotional response, mental health, social disruption, social stigma
Anatomic site	interstitium, respiratory mucosa, nasal mucosa, mucous membrane

4.2 Word-formation

As far as word-formation is concerned, COVID-19-related terminology follows typical word-formation rules for medical terminology. Terms derived through the processes of affixation, compounding, shortening and clipping can be identified. Below are some examples⁴.

*Affixation*⁵

- (5) a. *asymptomatic (carrier): a – symptom – atic (prefix + root + suffix)*
асимптоматски: а – симптом – аски
 b. *myalgia: my – algia (root + suffix)*
мијалџија: миј - алџија

Compounding

- (6) a. *enterovirus: enter + o + virus (root + linking vowel + root)*
ентеровирус: ентер + о + вирус
 b. *coronavirus: (root + root)*
корона-вирус: корона + вирус
 c. *air-borne (transmission): (root + root)*
ковиџ-шесџ: ковиџ + шесџ

Shortening

- (7) a. *CRP: C-reactive protein*
In Macedonian used as both CRP and 'ЦРП'
 b. *PCR: polymerase chain reaction*
In Macedonian used as both PCR and 'ПЦР'

(8) *Clipping*

- a. *corona: corona + virus*
корона: корона-вирус

5 Strategies for translating medical terminology

Our literature review has shown that there are very few studies that have addressed the issue of medical terminology in terms of translation strategies.⁶ Those that do tackle the issue base their analysis on a wide and, rather heterogeneous range of translation strategies.

⁴ For more examples of other medical terms, please see Merriam-Webster's Medical Dictionary (2016) for English and Micevski, B. (1985, 1988), Mitevski (1987) and Nikodinovski, J. (1987, 1988), Doncev (2006) for Macedonian.

⁵ Ivanovska and Ilieva (2011: 142) note that affixation, i.e. adding prefixes and suffixes to a word, is a common word formation process when it comes to deriving new medical terms (e.g. *хипер-тонус* ('hypertonus'), *пери-кард-ит* ('pericarditis'), etc.).

⁶ In translation theory there is some confusion over the use of the terms translation 'strategy', 'method', 'technique', 'procedures'. Whereas some use them interchangeably, others make theoretical distinctions between them (Molina and Hurtado Albir 2002). In this paper the term 'translation strategy' is used as a synonym of 'translation technique'.

Discussing the challenges of medical translation, Montalt Resurrecció and González Davies (2007) provide a comprehensive list of the main translation problems and suggest possible translation strategies and procedures. The translation procedures they mention are the following: paraphrase, exoticism, cultural borrowing, calque, transliteration, communicative translation, cultural transplantation, addition, deletion, illustration, omission, compensation, rewording, explicitation, footnote, generalisation, neutralisation, loan words and explanation.

Lozano & Matamala (2009) base their analysis of the medical terminology in the Spanish dubbed version of an E.R. episode on an extended version of Molina and Hurtado Albir's classification of translation techniques (2002 in *ibid.*: 76), as follows: adaptation, linguistic amplification, amplification, borrowing, calque, compensation, linguistic compression, discursive creation, description, elision, established equivalent, generalization, modulation, particularization, substitution, literal translation, transposition, and variation.

Analysing the translation of AIDS terminology in Ivorian languages, Yao (2017: 21) identifies five main translation techniques to deal with unknown concepts: using a generic term, using a specific term, using a descriptive phrase, cultural substitution and transliteration.

In her analysis of the Nurofen drug instructions, Gapparova Azimbayevna (2020: 7) identifies the following translation techniques: existing lexical equivalent, tracing, explication, transcription and transliteration.

In view of the variation between the translation techniques used in the literature, to make the task manageable, for the purposes of our analysis we use Vinay and Darbelnet's general methodology for translation (1958/1995 in Venuti, 2000), complemented by some of Molina and Hurtado Albir's translation techniques (2002). A summary of the methodology is presented in the section on methodology below.

6 Purpose and methodology

6.1. Aims

This paper aims to identify the translation strategies used to convey COVID-19-related terminology into Macedonian. The purpose of the analysis is to show which translation strategies are used and how they relate to different audiences.

6.2 Corpus

The corpus of the study consists of 130 terms taken from relevant international COVID-19 and SARS-CoV-2 termbases and glossaries. More specifically, terms are extracted from the COVID-19 and SARS-CoV-2 Multilingual Terminology Collection found in the European Union terminology database (IATE), COVID Term of the Chinese Academy of Medical Sciences, as well as other relevant COVID-19 glossaries, such as TERMIUM's Glossary on the COVID-19 pandemic and the Translators without Border's COVID-19 Glossary. Their Macedonian counterparts were extracted from various public sources of information such as the websites of the Ministry of Health and the Public Health Institute of the Republic of

North Macedonia as well as news reports and interviews or articles of relevant healthcare authorities published in the dailies *Nezavisen* and *Večer*, and the online portal *MakPress*.

6.3 Methods

The analysis of the translation strategies is grounded in Vinay and Darbalnet's (1995[1958] in Venuti 2000) model of translation strategies, complemented by some of Molina and Hurtado Albir's translation techniques (2002). A combination of the two was deemed more appropriate because some occurrences in our corpus could not be accounted for by Vinay and Darbalnet's classification only.

According to Vinay and Darbalnet (1995[1958] in Venuti 2000: 128) translators can choose between two methods of translating: direct (or literal) and oblique translation. When the source language (SL) message is based on parallel categories or parallel concepts, i.e. when the two languages are structurally, lexically and morphologically equivalent, it is possible to transpose it into the target language (TL) element by element by so called direct (literal) translation procedures: borrowing, calque and literal translation. When there are structural or metalinguistic differences between the two languages, the syntactic order or the lexis of the target language must be 'upset' by oblique translation methods, such as transposition, modulation, equivalence and adaptation (ibid.). Table 3 presents Vinay and Darbalnet's translation procedures with examples.

Table 3. Vinay and Darbalnet's translation procedures

Translation procedure	Description of procedure	Example
Borrowing	A word taken directly from SL incorporated directly into TL	English 'dollar' – Macedonian <i>долар</i> 'dollar'
Calque	A foreign word or phrase translated and incorporated into another language	English 'Bank of Commerce and Development' – Macedonian <i>Банка за трговија и развој</i> 'Trade and Development Bank'
Literal translation	Word for word translation	English 'I hurt my leg' – Macedonian <i>Ја повредив мојата нога</i> 'I hurt my leg'
Transposition	A shift of word class, i.e., verb for noun, noun for preposition	English 'before she goes away' – Macedonian <i>преди нејзиното заминување</i> 'before her going away'
Modulation	A shift in point of view	English 'It is easy' – Macedonian <i>не е тешко</i> 'it's not difficult'
Equivalence	This accounts for the same situation using a completely different phrase	English 'He went bananas' – Macedonian <i>полуше</i> 'he went crazy'
Adaptation	A shift in cultural environment, i.e., to express the message using a different situation	English 'pound' – Macedonian <i>денар</i> 'denar'

Molina and Hurtado Albir (2002: 510-511) develop Vinay and Darbalnet's model further and add other translation techniques, as follows:

- Amplification—to introduce details that are not formulated in the ST: information, explicative paraphrasing, e.g. to add *the Muslim month of fasting* to the noun *Ramadan*.
- Compensation – to introduce a ST element of information or stylistic effect in another place in the TT because it cannot be reflected in the same place as in the ST.
- Description – to replace a term or expression with a description of its form or/and function, e.g., to translate the Italian *panettone* as *traditional Italian cake eaten on New Year's Eve*.
- Discursive creation – to establish a temporary equivalence that is totally unpredictable out of context, e.g., the Macedonian translation of the film *Jaws* as *Ајкула* 'shark'.
- Established equivalent – to use a term or expression recognized (by dictionaries or language in use) as an equivalent in the TL, e.g., to translate the English expression *They are as like as two peas* as *Ko jajce na jajce ce* 'they are like an egg to an egg' in Macedonian.
- Generalization – to use a more general or neutral term, e.g., to translate the Macedonian *жолта* 'yellow' (referring to a hard drink) as *brandy* in English.
- Linguistic amplification – to add linguistic elements. This is often used in consecutive interpreting and dubbing.
- Linguistic compression – to synthesize linguistic elements in the TT. This is often used in simultaneous interpreting and in sub-titling.
- Particularization – to use a more precise or concrete term, e.g., to translate *brandy* in English as *жолта* 'yellow' in Macedonian.
- Reduction – to suppress a ST information item in the TT, e.g., *the month of fasting* in opposition to *Ramadan*.
- Substitution (linguistic, paralinguistic) – to change linguistic elements for paralinguistic elements (intonation, gestures) or vice versa.
- Variation – to change linguistic or paralinguistic elements (intonation, gestures) that affect aspects of linguistic variation: changes of textual tone, style, social dialect, geographical dialect, etc.

7 Results

The analysis brought to the surface the strategies used to translate COVID-19 terms into Macedonian. Out of the 19 strategies we started off with, 10 turned out to be relevant in our corpus. These are the following: borrowing, calque, literal translation, linguistic amplification, transposition, description, established equivalent, generalisation, particularisation and reduction. The quantitative analysis shows that the most dominant translation strategy is established equivalent (34.3%), followed by borrowing (22.4%), calque (12.6%) and description (11.9%). The use of the other strategies in our corpus is insignificant (see Figure 1).

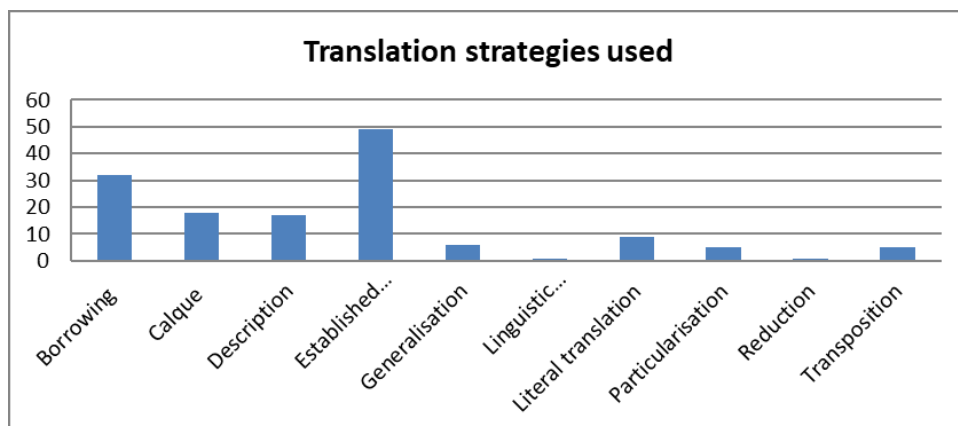


Figure 1. Translation strategies used

In Table 4 below, we present some examples of the strategies identified.

Table 4. Translation strategies used

Translation strategy	English term	Macedonian term
Borrowing	covalescent (<i>plasma</i> ⁷)	ковалесцентна (<i>плазма</i>)
	cluster	кластер
	peak	пик
	protocol	протокол
	suspect (<i>cases</i>)	суспектни (<i>случаи</i>)
	screening	скрининг
	face visor	визир
	(<i>local</i>) transmission	(<i>локална</i>) трансмисија
Calque	pre-clinical trials	претклинички истражувања
	epidemiologic curve	епидемиолошка крива
	physical distancing	физичко растојание
	self-isolation	самонизолација
	home isolation	домашна изолација
Literal translation	flattening the curve	израмнување на кривата
	contact tracing	следење на контактите
	frontline (<i>staff</i>)	(<i>здравствени работници на</i>) првата борбена линија
	bedside testing	тестирање покрај болнички кревет
	corona crisis	корона криза

⁷ The words in brackets are provided for context only.

Transposition	to test negative for corona-virus	тестот за коронавирусот му е негативен
	difficulty breathing	отежнато дишење
	to test negative twice consecutively	е со два последователни негативни теста
	to overwhelm the health system	притисокот врз здравствениот систем се зголемува
Description	reproductive rate	стапка на ширење на вирусот
	fist bump	поздрав со тупаница
	foot shake	поздрав со нога
	index case	првиот случај со коронавирус
	peripheral oxygen saturation	кислородна сатурација на артериска крв
	de-escalation strategy	стратегија за олабавување на мерките
Established equivalent	virulence	вирулентност
	herd immunity	колективен имунитет
	decontamination suit	скафандер
	air-borne transmission	пренесување по воздушен пат
Generalisation	coalescent plasma	крвна плазма
	screening point	контролен пункт
	lockdown measures	рестриктивни мерки/ограничување на движењето/мерки
Particularisation	(frontline) staff	здравствени работници (на првата борбена линија)
	droplet (transmission)	(пренесување преку) респираторни капки
Reduction	pre-existing conditions	коморбидитети

The analysis also brought to the fore another important observation. Macedonian COVID-19 language is marked with terminological variation. We have identified a not insignificant number of terms which occur in at least two variants, such as: *асимптоматски случаи* 'asymptomatic cases' vs. *пациенти без симптоми* 'patients without symptoms'; *ковалесцентна плазма* 'coalescent plasma' vs. *крвна плазма* 'blood plasma'; *локална трансмисија* 'local transmission' - borrowing vs. *локален пренос* 'local transmission' - calque; *миалгија* 'myalgia' vs. *мускулна болка* 'muscle pain'; *скрининг* 'screening' vs. *масовно тестирање* 'massive testing'; *суспективен* 'suspect case' – borrowing vs. *сомнителен* 'suspect case' – translated, to mention but a few. A detailed analysis of how and when they are used is outside the scope of this paper. Still, we present some initial findings and considerations on this issue below.

8 Discussion and conclusion

According to Temmerman (2000: 235) English is the language of primary word formation for science and technology as conceptualisation and the naming of new categories takes place in English first.⁸ As knowledge is transferred to other language

⁸ Following Montgomery (2009 in Karwacka 2015: 273), scientific papers published in English have an 80% share in the total number of published papers.

communities, terminology is strongly affected by English with many terms simply being borrowed (loan translations). The results of this study seem to prove this to be the case. Many terms used almost daily to talk about the coronavirus pandemic in Macedonian are in fact borrowings from English. In our analysis this is the second most frequently used strategy. To go slightly deeper, we have tried to identify the primary translation strategy in the terms belonging to the established equivalent category. It turned out that 35% of them are borrowings too. This shows that borrowing is a very pervasive strategy indeed. This finding is in line with Ivanovska & Plieva's (2011: 139) claim that the greatest chunk of medical terms in Macedonian are, in fact, borrowings.

Lozano & Matamala's analysis shows that literal translation and established equivalents are the most frequently used techniques in their corpus (Lozano & Matamala 2009: 85). Our study has also demonstrated that established equivalents are used the most often to talk about COVID-19-related issues in Macedonian. As most of the terms used to talk about the pandemic are not altogether new, it is no surprise that Macedonian already has equivalents which are established and used in similar contexts.

As Sager (1990: 81) mentions, the process of finding equivalents for the new scientific terms in other languages is time-consuming and slow, so the 'original' (in this case, English) words can be in use for a long time. As long as communication takes place within the scientific community, which is relatively small and educationally homogenous, this poses no problem, but difficulties occur when the scientists address other groups. It is then that the need is created to find new, more general, words. The example of 'ковалесцентна плазма' (convalescent plasma) vs. 'крвна плазма' (blood plasma) is a case in point. The technical term is unintelligible for the ordinary language user, so when addressing the general audience, the general descriptive term should be preferable.

Jiménez-Crespo and Tercedor Sánchez (2017: 406) point out that due to the increased interest in public health and disease, medical translation is increasingly used in new communicative contexts and genres and there is a growing desire to increase health literacy through lay-friendliness and lower register terminological variants. This is particularly true in the context of the current COVID-19 pandemic, where there is an obvious tendency of medical authorities to address and educate the general public, which is predominantly lay audience. Such an approach accounts for the determinologization⁹ and the present lexical variation in a large number of COVID-19 terms. This is evidenced in our corpus with the lexical variants mentioned above. It might be argued that this is the result of a change of strategy of the medical authorities. Pushed by the urgent need to share information with the public at the outset of the pandemic, medical authorities initially failed to pay attention to the language they used, continuing to use their 'normal' everyday technical medical language. As they became aware of the scale of the situation and its evolving character, with no clear and visible end point, they also became more conscious of the language they use to address the mass audiences and reach each and every one to help protect public health. Such an approach has resulted in the use of terminological variants for the same phenomena.

⁹ Reformulation of specialised terms to adapt the text to a non-expert audience

Following Lee-Jahnke (1998: 82), these considerations on the lexical variation of COVID-19 terms the different audiences it is addressed to can be best accounted for in translation by Reiss and Vermeer's 'skopos' theory. Since receiver-specific approach is the basis of the theory, the different degree/level of knowledge of the receiver must be taken into consideration when transferring an original text into another language. Aspects such as type of text, species and text conventions should also be borne in mind (*ibid.*). This means that whether the COVID-19 audience is expert or non-expert must be considered before choosing the terminology to use. The language used between experts and the language used to address non-experts cannot be the same. Hence, different translation strategies for COVID-19-related terminology are appropriate for different target audiences and purposes. It is no surprise, then, that our analysis has demonstrated both a very strong tendency to use borrowings (typical of technical language) and descriptions (typical of non-technical language) to convey COVID-19 pandemic concepts and terms. The present study has proved Montalt's contention (2011: 80) that translating medical terms is challenging in that one has to keep pace with the advances in medical diagnosis and treatment while finding the right equivalents for a mixed readership of medical writing. Universal access to health is a basic human right and should not be restricted by language barriers.

To conclude, the quick development of scientific knowledge and the need to name properly new devices, diseases, symptoms, etc. is not new in the medical field (Džuganova 2012: 56). However, the abrupt start and the fast spread of the novel corona virus crisis in the past couple of months has brought this to the fore and has forced communities all over the world to face not only a way of life which humanity has not seen for more than a century, but also a strong wave of new concepts and words related to the newly evolving situation. In such a global context translation proved once again to be a crucial factor in disseminating knowledge and new discoveries. However, to be fully efficient, translation should not be done in a hasty and haphazard manner, especially not in such sensitive and high risk situations like the COVID-19 pandemic. Quite the contrary, given the vital role of translation, the translation strategies used in transferring terminology from one language into another should be carefully selected and aligned with the context in which the terms will be used and the recipients they are intended for.

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Glossary resources

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