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Worldwide Research Efforts in the Fighting Against Microbial Pathogens: From Basic Research to Technological Developments

Edited by

A. Méndez-Vilas

BrownWalker Press
Boca Raton

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BrownWalker Press
Boca Raton, Florida • USA
2013

ISBN-10: 1-61233-636-1
ISBN-13: 978-1-61233-636-7

www.brownwalker.com

Researchers, physicians, patients – don‘t be Lost in Translation

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Recognized problem on drugs and diseases terminology is translation from one language to another as well as usage among patients and healthcare practitioners. The aim of this work is to present HRANAFINA project as a part of STRUNA database of Croatian Special Field Terminology.

Keywords antimicrobials; pharmacology; nomenclature; linguistics; terminology

1. Introduction

Over the last decades, scientific research on the pharmacokinetics and pharmacodynamics of antimicrobial agents has increased. Unfortunately, definitions and expressions used by various authors differ in their meaning and various authors use different expressions to indicate the same meaning, so the comparison of the results of various experiments becomes more difficult. Efforts and progress were done on proper use and expression of commonly used expressions in pharmacokinetic and pharmacodynamic research [1]. Another recognized problem on drugs and diseases terminology is translation from one language to another and usage among patients and healthcare practitioners [2,3].

The translation process should ensure that the words have the same meaning as the original, in terms of semantics, either by using a direct equivalent. Grammatical problems associated with idiomatic expressions can hinder the literal translation of certain items. In the context of a linguistic validation, the translation must be applicable to use in the events and experiences of everyday life. Therefore, a literal translation may not be the most relevant kind. Often words do not have quite the same conceptual meaning in different languages. The process of translating and adapting scientific literature, textbooks for students, drug informations, leaflets for physicians or patients, or instruments for evaluating patients – as questionnaires, can be difficult in some circumstances due to the concepts evaluated, the wording of the phrases in the original version or phrasing in the target languages. There are few steps to be followed when translating in new languages [4]. Cultural adaptation is the first step and the second step consists in analyzing the properties of each new language version [5-7]. If the process of adaptation ensures a consistency in content and face validity, reliability and validity have to be confirmed for each new translation and compared to the properties of the previous languages.

The aim of this work is to present HRANAFINA project as a part of STRUNA database of Croatian Special Field Terminology.

2. Methods

The HRANAFINA project as a part of STRUNA database of Croatian Special Field Terminology was officially inaugurated on the web in February 2012 as open-acces database with the aim to gradually make available to the public the standardized Croatian terminology for all professional domains. HRANAFINA project is working on the Croatian terminology in fields of human anatomy and physiology including terms used in pharmacology as well, and grouped in sections like drugs, cell, therapy, receptor, protein, membrane, channel, enzyme. All terms with their definitions include their equivalents in English and are developed following the recommendations of the The Institute of Croatian Language and Linguistics as National Coordinator for Development of Croatian Special Field Terminology. The project supports two basic areas of the National Strategy for Science Development – development of information technology and sociocultural transition.

The Croatian Anatomy and Physiology Terminology Project (HRANAFINA Project) receives a grant from by The National Foundation for Science of the Republic of Croatia. Its lead institution is the University of Zagreb School of Dental Medicine and the main cooperating institution is the Institute of Croatian Language and Linguistics. The project fits into two basic areas of National strategy for Science Development: development of information technology and sociocultural transition from an industrial society to a knowledge-based society. The project has a two-pronged aims: building up of a Croatian terminology in fields of human anatomy and physiology including terms used in pharmacology, and Croatian terminology usage popularization among students of biomedical sciences, dentists, physicians, scientists, patients and all other interested parties.

3. Results

The project's two aims were well met: the building up of a Croatian terminology in fields of human anatomy and physiology including terms used in pharmacology and its usage popularization among students of biomedical sciences, dentists, physicians, scientists, patients and all other interested parties. The project has received good press: more than 20 doctors of medicine and dental medicine from four medical schools on three Croatian universities-the School of Dental Medicine University of Zagreb, the School of Medicine University of Zagreb, the School of Medicine University of Rijeka and the School of Medicine University of Split were joining the project and actively participating in the development of the Croatian terminology in fields of human anatomy and physiology including terms used in pharmacology. Collaborating with the Institute of Croatian Language and Linguistics, in project were included more than 2500 terms coming from foreign languages (mostly English and German). Terms were analyzed, edited and adopted according to Croatian grammar. In order to realize the aims, a project website with an online database of human anatomy and physiology terms, including terms used in pharmacology as well, was established, terminology manuals were prepared and terminology workshops were organized. As a permanent achievement of this project, and in cooperation with the Institute of Croatian Language and Linguistics and foreign language experts, an online multilanguage dictionary (Croatian, English, German, Italian and Latin) with advice on Croatian grammar will be developed and available. Since Spanish is the second worlds language, it is considered for inclusion in future project plans.

4. Discussion and Conclusion

The project will gradually improve the circulation of knowledge and information in the Croatian language as well as in the broader multilingual environment, facilitate the involvement of Croatian scientists, health care providers and medical students in international projects and become helpful official multi-language tool for international students coming to Croatian universities. In addition, offering medical terminology in the Croatian language, this open-acces database will facilitate physician-patient communication and provide user-friendly manual for informing people with no medical training. From these results, normative data in translating from and to Croatian language should be determined through using this new instrument in relevant populations in cross-national studies.

Community level approaches are less costly than patient-centered or physician-centered approaches, and have the potential to reach a broader population, raise general awareness of the issue, and shape social norms [8]. Access to care, language, literacy, and cultural factors compromise the receipt and acceptance of messages. Sociocultural and economic factors underlie cross-national differences in expectations, access to medications, and prescribing patterns [9-14]. Little is known about the effect of antibiotics related health campaigns on populations that are challenged by less access to care, lower education, low income, low English proficiency, or nonmainstream cultural backgrounds. Recent reports suggest a need to improve the general public's antibiotic-related knowledge, attitudes, and awareness [15, 16]. Limited English proficiency may contribute further to cultural distance from mainstream professionals. Since physicians frequently misinterpret their patients' expectations about antibiotics [17, 18], it is reasonable to assume that this effect may be exacerbated in encounters with patients who are socially and linguistically discordant with them. Providers, researchers, and policy makers, as well as patients, will benefit from a better understanding of the translation problems presented in this study, as well as from translation tool system proposed in Croatia.

Patients need a user-friendly format using straightforward, nontechnical language for what was systemic functional linguistics proposed [3, 19]. It is a theory of language which is concerned with the interaction between text and context [19]. Three dimensions of a situation are identified as having an impact on language: the mode of communication, the relationship between the people involved, and the topic or focus of the activity. This study has provided example that ananalytic linguistic framework for medical information enables a systematic understanding of translation. It can therefore be of use in guiding the production of text translations. Apart from provision of tool for translation, an equally important function of the project HRANAFINA was found to be provision of instructions for translators in organised terminology workshops. For both information and instructions to be clearly understood, the grammar needs to be consistent with the purpose of the term, phrase or text, achieved in supervision of the Institute of Croatian Language and Linguistics.

Although work on the online project database and the editing of terms in fields of human anatomy and physiology including terms used in pharmacology was time-consuming, project team members found enough free time to give their own contributions. They did so for free without any financial compensation. Some of the participants said that they were honoured to be a member of a team working on the development of the language of their profession, and that this was a chance to become "a part of the history". The vast majority of participants of the project considered it important and very important for the development and preservation of Croatian language and national identity. In conclusion, we express the wish that HRANAFINA project, which was

prepared by the long-term strenuous and meritorious work of an enthusiastic team of anatomists, physiologists, pharmacologists and linguists may gain general acceptance and may serve reliably for a long time for communication among experts and non-experts in Croatia, Europe and all over the world. We hope that this project contributes to overcome some terminology shortcomings that, in our opinion, have been avoided by intensive cooperation with linguists. Read more on http://hranafina.sfzg.hr/.

Acknowledgements The support of the Croatian Science Foundation is gratefully acknowledged.

References

[1] Mouton JW, Dudley MN, Cars O, Derendorf H, Drusano GL. Standardization of pharmacokinetic / pharmacodynamic (PK/PD) terminology for anti-infective drugs. *International Journal of Antimicrobial Agents.* 2002;19:355-358.
[2] Corbett KK, Gonzales R, Leeman-Castillo BA, Flores E, Maselli J, K Kafadar K. Appropriate antibiotic use: variation in knowledge and awareness by Hispanic ethnicity and language. *Preventive Medicine.* 2005;40:162-169.
[3] Hirsh D, Clerehan R, Staples M, Osborne RH, Buchbinder R. Patient assessment of medication information leaflets and validation of the Evaluative Linguistic Framework (ELF). *Patient Education and Counseling.* 2009;77:248-254.
[4] Le Gal M, Mainguy Y, Le Lay K, Nadjar A, Allain D, Galissié M. Linguistic validation of six patient-reported outcomes instruments into 12 languages for patients with fibromyalgia. *Joint Bone Spine.* 2010;77:165–170.
[5] Acquadro C, Conway K, Giroudet C, et al. *Linguistic validation manual for patient-reported outcomes (PRO) instruments.* Lyon, Mapi Research Institute; 2004.
[6] Guillemin F, Bombardier C, Beaton D. Cross-cultural adaptation of healthrelated quality of life measures: literature review and proposed guidelines. *Journal of Clinical Epidemiology.* 1993;46:1417–1432.
[7] Beaton DE, Bombardier C, Guillemin F, et al. Guideline for the process of cross-cultural adaptation of self-report measures. *Spine.* 2000;24:3186–3191.
[8] Sorensen G, Emmons K, Hunt MK, Johnston D. Implications of the results of community intervention trials. *Annual Review of Public Health.* 1998;19:379– 416.
[9] Avorn J, Solomon DH. Cultural and economic factors that (mis)shape antibiotic use: the nonpharmacologic basis of therapeutics. *Annals of Internal Medicine.* 2000;133:128– 135.
[10] Branthwaite A, Pechere JC. Pan-European survey of patients' attitudes to antibiotics and antibiotic use. *Journal of International Medical Research.* 1996;24:229– 238.
[11] Cars O, Molstad S, Melander A. Variation in antibiotic use in the European Union. *Lancet.* 2001;357:1851– 1852.
[12] Harbarth S, Albrich W, Brun-Buisson C. Outpatient antibiotic use and prevalence of antibiotic-resistant pneumococci in France and Germany: a sociocultural perspective. *Emerging Infectious Disease.s* 2002;8:1460–1467.
[13] Pechere JC. Patients' interviews and misuse of antibiotics. *Clinical Infectious Diseases.* 2001;33:S170–173.
[14] Okeke IN, Lamikanra A, Edelman R. Socioeconomic and behavioral factors leading to acquired bacterial resistance to antibiotics in developing countries. *Emerging Infectious Diseases.* 1999;5:18–27.
[15] Hong J, Philbrick J, Schorling J. Treatment of upper respiratory infections: do patients really want antibiotics? *American Journal of Medicine.* 1999;107:511– 515.
[16] Vanden Eng J, Marcus R, Hadler JL, et al. Consumer attitudes and use of antibiotics. *Emerging Infectious Diseases.* 2003;9:1128–1135.
[17] Stivers T. 'Symptoms only' and 'candidate diagnoses': presenting the problem in pediatric encounters. *Health Communication.* 2002;14:299–338.
[18] Butler CC, Rollnick S, Pill R, Maggs-Rapport F, Stott N. Understanding the culture of prescribing: qualitative study of general practitioners' and patients' perceptions of antibiotics for sore throats. *British Medical Journal.* 1998;317:637–642.
[19] Halliday MAK. *An introduction to functional grammar*. 2nd ed. London, Edward Arnold; 1994.