ABSTRACT

Creating a shared epidemiologic vocabulary: lessons from the former Soviet Union

A Grigoryan¹, C Clarke², T Chumachenko³, and B Smoak²

¹Office of Surveillance, Epidemiology and Laboratory Services, Centers for Disease Control and Prevention, Atlanta, GA, USA; ²Division of Preventive Medicine, Walter Reed Army Institute of Research, Silver Spring, MD, USA; and ³Kharkiv National Medical University, Kharkov, Ukraine E-mail: AGrigoryan@cdc.gov

Objective

The objective of this study is to describe the development of a multilingual lexicon of epidemiology, which is needed for improved communication in public health surveillance internationally.

Introduction

As part of the United States Department of Defense strategy to counter biological threats, the Defense Threat Reduction Agency's biological threat reduction program is enhancing the capabilities of countries in the former Soviet Union (FSU) to detect, diagnose, and report endemic and epidemic, manmade or natural cases of especially dangerous pathogens. During these engagements, it is noted that Western-trained and Soviet-trained epidemiologists have difficulty, beyond that of simple translation, in exchanging ideas.

Before 1991, infectious disease surveillance in the FSU was centrally planned in Moscow. The methodologies of infectious disease surveillance and data analysis have remained almost unaltered since this time in most nations of the FSU. Vlassov¹ describes that FSU physicians and other specialists are not taught epidemiology as it is understood in the West. The Soviet public health system and the scientific discipline of epidemiology developed independently of that of other nations. Consequently, many fundamental Soviet terms and concepts lack simple correlates in English and other languages outside the Soviet sphere; the same is true when attempting to translate from English to Russian and other languages of the FSU. Systematic review of the differences in FSU and Western epidemiologic concepts and terminology is therefore needed for international public health efforts, such as disease surveillance, compliance with International Health Regulations 2005, pandemic preparedness, and response to biological terrorism. A multi-language reference in the form of a dictionary would greatly improve mutual comprehension among epidemiologists in the West and the FSU.

Methods

Following an extensive search of the Russian and English literature by a working group of Western and FSU epidemiologists, we created a matrix containing English and Russian definitions of key epidemiologic terms found in FSU and Western epidemiology manuals and dictionaries, such as *A Dictionary of Epidemiology*² and other sources. Particular emphasis was placed on terms relating to infectious disease surveillance, analysis of surveillance data, and outbreak investigation. In order to compare the definitions of each term and to elucidate small or large differences in usage, all definitions were translated into English and Russian so that the definitions could be compared side by side and discussed by the working group.

Results

Three hundred and fifty-four terms from 13 English and 12 Russian sources were chosen for inclusion. Review of the definitions showed that many terms used in biosurveillance and infectious disease public health practice by FSU and Western-trained epidemiologists are used differently, and some concepts are lacking altogether in the Russian or English literature.

Conclusions

Epidemiologic concepts and definitions significantly differed in the FSU and Western literature. To improve biosurveillance and international collaboration, recognition of these differences must occur, and where possible, agreement on standard definitions. Where agreement is not possible, precisely worded definitions illuminating differences in meaning and usage are essential. Implications for biosurveillance and public health practice will be discussed in the presentation and paper. This bilingual dictionary is expected to form the basis for trilingual dictionaries (Russian, English, and other languages

open Oraccess This is an Open Access article distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/2.5) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

of the FSU, such as Armenian, Azeri, Georgian and Ukrainian).

Acknowledgements

This paper was presented as a poster at the 2010 International Society for Disease Surveillance Conference, held in Park City, UT, USA, on 1–2 December 2010.

The views expressed are those of the authors and should not be construed to represent the positions of the Department of the Army or Department of Defense.

References

- 1 Vlassov V. Is there epidemiology in Russia? J Epidemiol Community Health 2000;54:740–4.
- 2 Last JD. A Dictionary of Epidemiology, 4th edn. Oxford University Press: NY, 2001.