Human Health and Food Information Language Preferences in online SearchesSciences

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INTRODUCTION

The World Wide Web has more than 15 billion pages and has become an important source of health-related information. In the United States, for example, it has been reported that 82% of female users and 77% of male users used the Internet to obtain medical information on a routine basis. Google searches have even been shown to assist physicians in the correct diagnosis of medical ailments. However, two thirds of the pages on the Web are published in English, even though the world has over 5 billion non-English speakers, including approximately 700 million non-English-speaking Internet users. In fact, the vast majority of the world's 6900 living linguistic groups have little Web content available in their language. Adding to this problem, search engines such as Google do not translate search terms into other languages-perhaps a surprise to many users. To overcome linguistic barriers, the World Health Organization (WHO) and the Food and Agricultural Organization (FAO) now publish their websites in six and four major languages, respectively. However, other globally authoritative organizations, such as the Centers for Disease Control (CDC) in the United States, primarily publish online information in only one or two languages of domestic importance [1].

In spite of the significant challenges created by linguistic differences in effectively communicating health information to the world's peoples online, we could find little quantitative data on this issue. Do the world's online users, presumably wealthier and more educated than the general population, primarily search online for health information in their local language, or do they employ Web-prevalent languages such as English? Are current online translation efforts by the world's health and food agencies beneficial, and should these agencies be spending more resources on these efforts? In a world of human migration, which language(s) should domestic governments and international agencies use in order to communicate online health information to target populations? To transmit information to front-line health professionals in developing nations, a group that can include international aid workers from wealthy nations, which language(s) should be employed to target a particular nation? Do indigenous peoples search for online health-related information using search terms belonging to their own language or the colonial language? Real-time, accurate communication of health information might be especially critical during a pandemic infectious disease outbreak or famine. To begin to answer these questions, we have used a case-study approach that examines linguistic preferences in Internet search engine queries [2,3].

Specifically, we measured search patterns on Google for four health- and food-related terms in seven languages in 227 nations. The four search terms we chose for our study were "avian flu," "tuberculosis," "schizophrenia," and "maize" (corn). We chose "avian flu" because it is an ideal model for searching for online information concerning an emerging infectious disease pandemic; as of August 2006, avian influenza (virus subtype H5N1) had killed 141 people in 10 countries in addition to prompting the slaughter of millions of animals. We chose "tuberculosis" because it is a good model for searching an established global infectious disease, as it is a major cause of death for HIV-positive patients and currently afflicts about 15 million people in 207 nations. We chose "schizophrenia" because psychiatric and neurological diseases affect more than 450 million people globally and because online mental health information has the potential to help nations that have few mental health specialists. Schizophrenia afflicts over 24 million people worldwide [4].

CONCLUSION

Finally, because there are currently around 850 million chronically undernourished people in the world, under frequent threat of famine, and because malnutrition is a major underlying contributor to infectious disease susceptibility, we chose "maize" (corn) because it is an important search term for global food security agencies. Maize supplies one third of all human calories in Latin America and Sub-Saharan Africa and, combined with its genetic relatives rice and wheat, supplies approximately 50% of all human calories globally, either directly or via animal feed.

REFERENCES 1. Pandia Search Engine News. The size of the World Wide Web. 2007 Feb 25. Pandia.com.