# MedlinePlus en Español and Spanish-Speakers

# Sergio A. Leon, MD<sup>1</sup>, Paul Fontelo, MD, MPH<sup>1</sup> <sup>1</sup>Office of High Performance Computing and Telecommunications, National Library of Medicine, Bethesda, MD

### Abstract

We evaluated the access of MedlinePlus in Spanishspeaking countries from 2000 to 2006. There is a progressively increasing usage of MedlinePlus by Spanish-speakers enhanced by the introduction of "MedlinePlus en español". This high use reflects the active role of patients as consumers of health information seen worldwide and illustrates the importance of developing trustworthy health Websites for consumers in their native language.

### Introduction

The Internet is now the single largest source of health information, but there is lack of standardization and not all the health information obtained from the Web is reliable<sup>1</sup>. An increasing number of patients bring Internet-based information to medical consultations that influence physician-patient relations. Yet, only 25% of health seekers in the US "always" or "most of the time" check the source and date of the health information they find online<sup>2</sup>. In response to the growing number of Hispanics in the US looking for online health information, "MedlinePlus en español" was introduced in September 2002. The number of Spanish-speaking Web users has grown 253% in the last six years to over 87 million people and Spanish is the third language most used in the Internet in  $2007^{3}$ .

In this study we evaluated the usage of MedlinePlus in Spanish-speaking countries and the US from 2000 to 2006 and the impact of "MedlinePlus en español".

## Methods

Statistics on the access to MEDLINE/PubMed and MedlinePlus from 1997 to 2006 were obtained from the National Center for Biotechnology Information (NCBI) and the National Library of Medicine (NLM) Websites to evaluate utilization by countries.

### Results

The usage of MedlinePlus has been continuously growing worldwide over the years. In 2001, the five main users were the United States, Canada, Australia, United Kingdom and Japan while Spain and Mexico were the only Spanish-speaking countries among the top 20 users. The introduction of "MedlinePlus en español" in September 2002 (Figure 1) increased the usage in Spanish-Speaking countries to the point that six of them were among the top ten users of MedlinePlus in the world in 2006. Visits to the Spanish version were 27.7% of the MedlinePlus visits during the 4<sup>th</sup> quarter of 2006 and the US was among the top four users of "MedlinePlus en español" with an increase of 230% since 2004.



**Figure 1.** MedlinePlus visits from the top six Spanish-speaking countries in 2002 and 2003.

## Conclusion

The progressive increase of usage of MedlinePlus by Spanish-speakers reflects the dynamic involvement of people in their health care. "MedlinePlus en español" has filled the needs of information in many countries short of resources and its high usage illustrates the importance of developing dependable and accurate health Websites for patients in their native language since people usually prefer to perform searches and access Websites in their own language. It is important for health professionals not only to recognize the patients' needs of information but also to educate and guide them to select updated and authoritative Web-based health resources.

## References

- 1. Lindberg DA, Humphreys BL. Medicine and health on the Internet: the good, the bad, and the ugly. *JAMA 1998 Oct 21;280(15):1303-4*
- 2. Pew Internet & American Life Project, 2006 Survey. http://www.pewInternet.org
- 3. Internet World Stats. Top ten languages usage. http://www.Internetworldstats.com/stats7.htm