

HRWeb Americas: a tool to facilitate better research governance in Latin America and the Caribbean

Introduction

Major progress has been made in improving health in Latin America and the Caribbean and life expectancy has increased considerably in the Americas. However, major concerns still exist since this progress has not reached all members of society and inequality remains high in the region¹.

Research can address this problem and fortunately there is growing international recognition that quality research can improve health, reduce health inequities and foster development^{2,3,4,5,6,7,8,9,10,11,12,13}.

Research enables countries to address complex health problems and find innovative solutions. Notwithstanding, a 2002 assessment of progress regarding the eleven Essential Public Health Functions (EPHF) in the Americas found that "research in public health" (one of EPHF) remains amongst the weakest of these functions despite being essential to attaining more functional and efficient health systems².

A number of events led a multidisciplinary and intersectorial working group in the Americas to recognize that a national health research system (NHRS) with good governance is essential for research to play an effective role in advancing health and creating a robust health system that improves the health of the population with equity. This group also defined the components of this system^{2,3,6,7,8,9,13}.

After the Follow-up Meeting to the First Latin American Conference on Research and Innovation for Health (Havana, Cuba, 2009), the Pan American Health Organization (PAHO) and the Council on Health Research for Development (COHRED) joined forces to focus on strengthening NHRSs⁷ and to this end the HRWeb Americas was created and is the focus of this article.

National health research systems

Countries interested in utilizing research to improve the health of their populations need a well governed health research system^{2,14}. The first step in this direction is a clear understanding on how a research system is constituted and how it operates. Understanding the governance of a research system facilitates the identification of available resources, guides decisions to improve the functionality of the system and maximizes its impact on the population's health^{2,3,4,5,6,7,8,9}. Moreover, this understanding enables countries to allocate responsibilities, foster accountability, provide stewardship and implement processes to make the best use of research and research investments for the betterment of society. On the other hand, lack of good governance

may lead to the waste of scarce resources and may not respond to national priorities.

A study published in 2009 analyzed the situation of NHRSs in Latin America and provided insight into the difficulty and utility of gathering comparable data especially in low and middle income countries (LMIC)¹⁴. Collecting comparable data is costly and complex. For example, terms used to refer to components can vary and the same term may refer to two different components. The results of this study prompted PAHO and COHRED to jointly develop HRWeb Americas as a tool to facilitate countries to systematically collect data and make systems comparable. In the long term, this system is expected to improve research governance in the respective countries.

Description of HRWeb (<http://www.healthresearchweb.org/en/home>)

The Health Research Web is an interactive web platform that facilitates the collection of essential information that characterizes health research systems. This data corresponds to components of national health research systems defined, by consensus, in accordance with the World Health Organization's definition of Health Systems^{2,3}. Existing, scattered information on components of research systems can be organized and made easily retrievable through this one integrated portal.

The platform allows the creation and editing of any number of interlinked web pages where parties interested in research for health can learn what is available and what is lacking in a country's health research system. It allows for the development of baseline data, as a first step for understanding the status of the research system, and the validation of information on health research activities and, at the same time, streamlines the collection and dissemination process, thus minimizing duplication. The platform is a management tool that functions like a *Wiki* where information owners upload and update their information. As such, it serves as a basis of comparison and is a useful tool for analysis. It allows mapping of data, and produces some basic analyses that swiftly show what is available and what is lacking in terms of research governance.

HRWeb has the potential to become an online community of people interested in developing high-quality research information and a management system in a spirit of mutual respect. At the same time, it promotes the pursuit of 'health for all' by enabling all those who work to promote health, equity, and development to be connected. It is a reference tool for those willing to establish partnerships and develop collaborative research.

The HRWeb platform is hosted by COHRED and its further development, use, and spread is promoted by PAHO and COHRED. Other allies have joined in sup-

porting improvements and new developments and many others are starting to use the HRWeb as a “cloud-based” national research management and information system.

The unique contributions of HRWeb (<http://www.healthresearchweb.org>):

- a) It organizes vital data on a country's health research system,
- b) It enables countries to identify needs to improve health research management and governance,
- c) It offers built-in predefined analysis tools that are customizable to fit the user's own development indicators,
- d) The entire database can be downloaded for further analyses,
- e) The platform can be used for internal institutional management or for sharing institutional, national or regional data with the rest of the world,
- f) It is maintained by stakeholders so the more users there are the better the tool becomes and the higher the quality of the information,
- g) It is open to the public but stakeholders' information is protected,
- h) It is available in the four official languages of the region: English, Spanish, Portuguese and French.

HRWeb Americas

HRWeb Americas is a sub portal of the HRWeb developed by PAHO and COHRED as a tool to help countries improve research system governance. The tool was developed as a result of several international consultation meetings where the importance of NHRS in improving the health of a population was recognized together with the difficulty of collecting comparable data^{6,7,14}. Special efforts have been geared towards making the HRWeb a management tool for national health research managers in LMIC.

HRWeb Americas is structured to display information that is relevant to the whole Region (<http://www.healthresearchweb.org/en/americas>) and to individual countries, e.g., Argentina (<http://www.healthresearchweb.org/en/argentina>). A similar sub-portal has been developed for the Caribbean region (<http://www.healthresearchweb.org/en/caribbean>) and for each individual country, e.g., Guyana (<http://www.healthresearchweb.org/en/guyana>).

Content of the HRWeb Americas

Figure 1 shows the structure of the regional page and individual country pages.

- Governance and policies (http://www.healthresearchweb.org/en/esearch_governance_and_policies): Entities and regulations, including national research policy frameworks, laws and regulations, and links to sites of institutions engaged in governance, management and the development of research for health. See for example entities in Paraguay (<http://www.healthresearchweb.org/en/paraguay/policies>) and also Paraguay's national policy on research for health (http://www.healthresearchweb.org/files/Politica_Nac_Inv_Salud_Paraguay_20101206_pr.pdf).
- National research for health priorities (http://www.healthresearchweb.org/en/national_priorities_for_health_research): Documentation on national research

priorities that have already been established or ongoing efforts to prioritize research. See for example the priorities of Guatemala (<http://www.healthresearchweb.org/en/guatemala/national>).

- Key institutions /networks (http://www.healthresearchweb.org/en/key_institutions-networks): Websites and descriptors of research councils, science academies, national research committees, directorates of research in the ministry of health and/or ministry of science and technology, and any other relevant body. See for example key institutions in the Americas (<http://www.healthresearchweb.org/en/americas/institution>).
- Regulation and ethics review of research (http://www.healthresearchweb.org/en/regulation_and_ethics_review_of_research): Research Ethics Committees (RECs), also referred to as Institutional Review Boards (IRBs), and high quality guidelines or “standard operating procedures” for RECs/IRBs. See the 1,000 research ethics committees in Latin America through the link (http://www.healthresearchweb.org/en/regulation_and_ethics_review_of_research).
- Research financing and partnerships (http://www.healthresearchweb.org/en/finance_for_research_for_health): financial information is often difficult to obtain. Through HRWeb interested parties can share and post information on current and potential financial resources, donors, research sponsors, especially in low and middle income countries. HRWeb has the potential to channel information on funding and resources. See for example opportunities in the Americas (<http://www.healthresearchweb.org/en/americas/financing>).
- Civil society organizations (http://www.healthresearchweb.org/en/civil_socities_organisations): civil society organizations (CSOs), including non-governmental organizations (NGOs), serve or represent community groups and are often guided by the principle of social justice, in line with PAHO's focus on health and equity. These organizations are an important element because they can add impact to HRWeb. Through this sub portal, CSOs can create networks with other stakeholders to discuss research issues. See, for example, the Foro Latinoamericano de Comités de Ética en Investigación en Salud (FLACEIS); <http://www.healthresearchweb.org/en/americas/cso>.
- Health research projects and publications (<http://www.healthresearchweb.org/en/americas/projects>): this section is under development and will include research projects and their outcomes (publications, patents, products and “other”). It will also include links to different kinds of regional and global databases and meta-registers such the International Prospective Register of Systematic Reviews (PROSPERO) (National Institute for Health Research. <http://www.crd.york.ac.uk/prospéro>), Health Systems Evidence (McMaster University. http://www.mcmasterhealthforum.org/healthsystemsevidence_en), and WHO's International Clinical Trial Registry Platform (ICTRP; <http://apps.who.int/trialsearch>). This section will be interactive and used by countries to upload their research projects.
- Information resources (<http://www.healthresearchweb.org/en/americas/resources>): this section hosts publications, other resources and useful links to the national and international research community that can be accessed and downloaded by users.
- Blackboard/announcements (<http://www.healthresearchweb.org/en/blackboard>): this space is where

Figure 1

HRWeb of Americas.



conferences, courses, grants and training opportunities are announced.

EVIPNetAmericas (<http://www.healthresearchweb.org/en/americas/evipnet>): This space contains links to the Evidence Informed Policy Network (EVIPNet) and provides information on how to join the network and how it can help to improve health-decision making.

HRWeb Americas users

Typical HRWeb Americas users include health researchers, health managers, government officials, research funders and members of ethics committees, civil society organizations, development agencies and global health initiatives. HRWeb Americas is also a reference site for technical officers and policy makers involved in research governance and in promoting the production and use of research for health. Only registered users can comment on the information published and contribute to discussions, propose corrections, add information, or request missing information in country and/or regional pages.

Uploading information

A basic principle of the HRWeb is that information owners are the countries and stakeholders within countries. Both are in a privileged position to upload and update information, provided they are properly registered. The content of country pages depends on stakeholders uploads. Official country information, however, is the sole responsibility of the Ministries of Health and/or Science and Technology or the person designated by these ministries. Registration is a user friendly process through a password protected mechanism that keeps a log of who uploads information ensuring that only authorized people upload and update information. At the time of registration, the user establishes the sections to which he/she will contribute, and in what capacity: for example a national official can upload the country's research priorities. Other users are country editors (responsible for quality control of uploaded contents) and country and/or regional reviewers that represent different points of view on research: governmental, researcher or academia, civil society, the media, and informed citizenry. Country and regional reviewers must demonstrate an in-depth knowledge of their country's/region's health research system.

When developing the system in 2010, PAHO and COHRED also engaged and trained key stakeholders in every country and invited them to populate the system. User-friendly tutorials in Spanish were produced at that time to assist stakeholders in uploading information (<http://www.healthresearchweb.org/tutorials/>). General instructions and guidelines in English are also available on the site.

Status and future of the HRWeb Americas

The site was launched in July 2010 and updated with the following information as of 15 February 2012: governance and policies 33 countries; national priorities 10 countries; key institutions 22 countries; research ethics committees 17 countries; civil society organizations 17 countries; no country had yet uploaded information on research regulations or research funding.

The site had received 40,500 visitors up until February 2012 with 67% of new visits coming from countries in the Americas. The majority of the remaining 33% of visits came from Europe and Africa. PAHO and COHRED continue working to engage key users to populate HRWeb Americas and upgrade its appearance and functionality, avoid duplication and respond to users' needs.

In 2012, it is expected that countries and stakeholders will add and enhance their relevant NHRS information to further populate HRWeb. PAHO and COHRED will continue to offer training resources and support and will focus communication efforts on raising awareness and increasing the use of the site and maintaining the momentum needed to keep it up to date. The ability to build and define groups that interact on specific issues in research for health in and between countries and continents will be another step forward as HRWeb becomes populated with quality data and comprehensive descriptors.

Other forthcoming advances include the development of a specific research ethics domain to enhance collaboration in multi-center and multi-country research¹⁵. Progress regarding this development is outlined at <http://www.researchethicsweb.org>.

Plans to move to HRWeb "3.0" are also underway. The next steps in 2012 are the development of interactive and social networking tools that enable cross-country analysis and sharing of successful experiences, agendas, and resources for research, progress in implementation, operational and health systems research, among others. In 2013, steps will be taken to develop a component that allows sharing of financial flows. A key motivator for a move in this direction is to enable a more rational review of multi-centre and multi-country research.

Beyond the Americas, Senegal and Tanzania have decided to use the Health Research Web and are working with the HRWeb Web team to customize the platform to operate through of the Tanzanian Commission for Science and Technology (COSTECH) and the Directorate of Research of the Ministry of Health in Senegal. Furthermore, COSTECH is using the platform to issue its public calls for research proposals. The platform will allow COSTECH to monitor which studies have been supported, how these respond to national research priorities, the public resources allocated to research, and the resulting research outputs. In Senegal, very similar information will become available

as more research institutions familiarize themselves with the platform.

Conclusions

Several international events have recognized that well structured and governed NHRs contribute to ensuring that research informs actions to advance health with equity. Furthermore, these systems ensure that national research responds to the national research agenda thus respecting national priorities. A first step in building a system with good governance is the existence of systematized data that allows a clear understanding of the status of system mapping, who is doing what and how one institution can collaborate with another. Collecting the needed data is complex and costly.

HRWeb offers an online platform where countries and interested parties can systematically collect their data very easily and at no cost. The ultimate goal of this tool is to help countries improve governance and stewardship of research for health.

HRWeb is already functional. The use of this tool is open to all interested stakeholders and support for uploading and updating information is offered by PAHO and COHRED. Countries will benefit more from this tool the more comprehensive information is uploaded and updated, enabling the identification and sharing of resources and opportunities to advance research and provide accurate indicators to monitor and evaluate progress. This tool is a continuously evolving “work in progress” and HRWeb will evolve as users increase their use and contribute to this platform.

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