

eHealth and health Internet domain names

Report by the Secretariat

1. This report covers three related subjects: an update on eHealth, health Internet domain, and the protection of domain names of intergovernmental organizations.

eHEALTH TRENDS AND PROGRESS

2. In May 2005, the Fifty-eighth World Health Assembly adopted resolution WHA58.28 on eHealth. Since that time, information and communication technologies have become central to health security, health services delivery, and the transformation of health systems worldwide. The use of the Internet in health has far-reaching implications for public health including for the quality of information, data security and privacy, and the promotion and sales of medical products and services.

3. In 2006, the Regional Committee for the Eastern Mediterranean adopted a resolution on the regional strategy for knowledge management to support public health 2006–2013.¹ The resolution requested the Regional Director, inter alia, to provide technical support to Member States to formulate their national policies, strategies and plans for knowledge management and sharing, use of information and communication technologies for health, human resources, and knowledge translation. In addition, an international taskforce was formed to support eHealth development in the Region.

4. In 2010, the Regional Committee for Africa adopted an eHealth resolution that urged Member States to promote, inter alia, national political commitment to and awareness of eHealth; and to develop a conducive policy environment by conducting a national needs assessment for eHealth, developing national policies, strategies, norms and appropriate governance mechanisms, and drawing up long-term strategic plans or frameworks for eHealth. It also urged Member States, inter alia, to build infrastructure and establish services for eHealth; to systematically develop human capacity for eHealth by introducing an information and communication technologies curriculum in health training institutions; and to establish monitoring and evaluation systems to measure progress in the implementation of the national eHealth strategic plans.²

5. In 2011, PAHO's 51st Directing Council adopted a resolution on eHealth, which endorsed the strategy on eHealth and approved the plan of action.³ The plan of action focuses on improving health

¹ See resolution EM/RC53/R.10 and document WHO-EM/HIS/016/E/F.

² See resolution AFR/RC60/5.

³ See resolution CD51:R5.

services access and quality, based on the use of information and communications technology, the development of digital literacy, and access to information and training.

6. In addition to resolutions adopted by the Executive Board and the regional committees, global initiatives have encouraged countries to integrate the use of information and communication technologies in health. For example, the Commission on Information and Accountability for Women's and Children's Health makes recommendations, of which the third, on eHealth and innovation, states that by 2015, all countries will have integrated the use of information and communication technologies in their national health information systems and health infrastructure.¹ Globally, 72 national eHealth strategies and plans have been developed.

7. The WHO Global Observatory for eHealth has studied the evolution and impact of eHealth in Member States with the aim of providing information on trends and developments in effective practices in eHealth.² The first global survey focused on the needs of Member States and on the status of building foundations for eHealth. The second global survey (2010–2012) brought together evidence on trends in eHealth policies and strategies, mobile health, telemedicine, eLearning, management of patient information, legal frameworks, safety and security on the Internet, and the organization and support for eHealth in countries.³ The global survey for 2013 will focus on the use of eHealth for women's and children's health.

8. *Building the evidence base for eHealth* has continued. The aim is to show the impact of eHealth towards its integration into country cooperation strategies supporting health systems development and universal health coverage. The Secretariat conducted an evaluation of eHealth interventions and published a special theme issue on eHealth of the *Bulletin of the World Health Organization*, which also focused on partnership with WHO Collaborating Centres and nongovernmental organizations in official relations with WHO.⁴

9. *Technical support to Member States* underpins the development of eHealth and health information systems, including through multisectoral collaboration. All regional offices are supporting countries to develop or revitalize their national eHealth strategies and the deployment of mobile health, health information systems and telemedicine services. In addition, regional offices are supporting the evaluation in selected countries of such strategies, systems and services.

10. *The National eHealth Strategy Toolkit* is a resource to support Member States, published jointly by WHO and the International Telecommunication Union in 2012.⁵ It provides governments with a method for the development and implementation of a national eHealth vision, action plan and monitoring framework, capturing the national context and priorities, building on available capabilities and taking advantage of opportunities to complement development projects.

¹ The report of the Commission on Information and Accountability for Women's and Children's Health, *Keeping promises, measuring results*, is available at: http://www.who.int/topics/millennium_development_goals/accountability_commission/en/ (accessed 23 November 2012).

² The web site provides background on the Global Observatory for eHealth, see <http://www.who.int/goe/en/> (accessed 28 November 2012).

³ Selected reports are available in Arabic, French, Portuguese and Spanish, with other language versions under way. All publications can be found at <http://www.who.int/goe>.

⁴ *Bulletin of the World Health Organization*, **90**(5), Geneva, 2012.

⁵ WHO's web site on national eHealth strategies provides links to the National eHealth Strategy Toolkit, see <http://www.who.int/ehealth/en/> (accessed 23 November 2012).

11. *Technical resources for eHealth solutions.* In 2012 WHO published the second compendium of innovative health technologies and eHealth solutions for low-resource settings.¹ In collaboration with the International Telecommunication Union, WHO is making available a collection of eHealth best practices. A database of best practices and lessons learnt in eHealth implementation has been launched.

eHealth for health systems and services

12. *Access to the world's health information* is a priority, and is being achieved through the use of information and communication technologies. Access to health literature, knowledge and research was the basis of HINARI, now the world's largest collection of online biomedical and health literature.² As of 2013, HINARI makes available 9000 journals and 7000 books to 5200 institutions in 115 countries and territories. An external, formal evaluation has provided evidence that the availability of health literature through information and communication technologies has improved health in Member States, showing that researchers and health-care providers are better able to introduce evidence-based policy, publish in international journals, develop treatments, research local health challenges, and contribute to meeting the health-related Millennium Development Goals.

13. The *ePORTUGUESe Programme* supports Portuguese-speaking countries to improve access to health information in their own language, using information and communication technologies.³ The development of a Virtual Health Library in each country was based on a model created by the Latin American and Caribbean Centre for Health Sciences Information and adapted to local conditions. It has been used in Latin America for more than 15 years with an interface in English, Portuguese and Spanish. A WHO online course on Research for Patient Safety in Portuguese attracted more than 15 000 subscriptions.

Technical resources on eHealth standards and interoperability

14. *Interoperability is essential* to achieve the full potential of information and communication technologies and medical devices in support of health systems development. Lack of data interoperability within and between systems hinders care and leads to fragmentation of health information systems. Effective and timely transmission of personal data or population data across information systems requires adherence to health data standards and related technology standards. WHO has established a forum on health data standardization and interoperability⁴ that brings together stakeholders from the public and private sector to raise awareness, build capacity and promote the adoption of standards at all levels of health systems. A WHO handbook on health data standardization and interoperability is being developed to support Member States in the identification and use of appropriate eHealth standards. Capacity building at country level to enable national staff to contribute to and use standards is under way.

eLearning, capacity building and networks

15. WHO uses eLearning technologies to increase the outreach of educational and training materials on health. The Health Academy has provided young people with access to information that promotes

¹ See <http://www.who.int/ehealth/resources/compendium2012/en/index1.html> (accessed 28 November 2012).

² See the HINARI Research in Health web site at <http://www.who.int/hinari/en/> (accessed 23 November 2012).

³ For more information about ePORTUGUESe, see <http://www.who.int/eportuguese/en/> (accessed 23 November 2012).

⁴ See <http://www.who.int/ehealth/en/> (accessed 28 November 2012).

health, helps prevent disease and encourages healthier lifestyles.¹ The WHO-validated content can be adapted to official and local languages and cultures. The Health Academy has expanded its courses and activities in most of the regions.

16. The use of information and communication technologies in education and training is also used to address critical shortages and gaps in the training of personnel in public health matters. Examples of resources available for the target audiences (such as policy-makers, researchers, health personnel, the public, and other agencies) include training on the Integrated Management of Childhood Illness;² reproductive health; evidence-based medicine and research; violence and injury prevention; management of disrupted health sectors and the International Health Regulations.

17. eLearning Networks: A Virtual Campus of Public Health in the Pan American Health Organization and the Regional Office for the Americas is a decentralized network of institutions in the Americas sharing courses, resources, services and education for the public health workforce. The Pacific Open Learning Health Network in the Regional Office for the Western Pacific provides online and hybrid courses, course materials and health information to health professionals in the Pacific Island countries.

18. The Asia eHealth Information Network, launched by the Regional Office for the Western Pacific and the Regional Office for South-East Asia in 2012, uses a peer-assist and knowledge sharing approach to support better quality and more timely health information for improving service delivery and the management of health systems.

HEALTH INTERNET DOMAIN: UPDATE AND OPTIONS FOR WHO

19. This section provides an update on the “.health” Internet domain and options for consideration by the Executive Board in advancing public health objectives through the Internet domain name process. In 2000 WHO proposed to the Internet’s technical coordinating body, the Internet Corporation for Assigned Names and Numbers (ICANN),³ the creation of the “.health” Internet domain. When the issue was discussed by the Executive Board at its 112th session in 2003, concerns were expressed about the implications of an international organization owning and managing a domain name from a legal, financial and operational standpoint.⁴ At the time, it was decided not to pursue the matter. Since then, the Universal Postal Union has created the “.post” domain following the approval of its governing bodies, setting a precedent for an international organization in owning and administering a domain name. UNICEF is now proposing to create a “.unicef” domain to improve its visibility.

20. The Internet domain name system is set up in a hierarchical structure with names separated by dots. A top-level domain follows the last dot, such as “.com” and “.ch”. New domains are introduced in order to segment the Internet and improve retrieval of information. A top-level domain can be strongly associated with a site’s origin, content or quality (e.g. most “.int” sites represent international

¹ See <http://www.who.int/healthacademy/en/> (accessed 28 November 2012).

² See http://www.who.int/maternal_child_adolescent/topics/child/imci/en/index.html (accessed 23 November 2012).

³ The Internet Corporation for Assigned Names and Numbers (ICANN) is a non-profit corporation established in the United States of America. It is responsible for the management of the Internet domain name system, including the attribution of top-level domain names such as “.com” or “.int”. ICANN is governed by a Board of Directors and its governance includes subgroups, such as the Generic Names Supporting Organization, which formulates policies for the Board’s consideration including through a “policy development process”. ICANN also relies on advisory committees, such as the Governmental Advisory Committee, composed, inter alia, of representatives of many national governments, which advises the ICANN Board on public policy, especially where ICANN’s activities touch on national laws or international agreements.

⁴ See document EB112/10.

organizations). The Internet domain name system is managed by ICANN, which is responsible for approving new domains. Each top-level domain is in turn managed by a single organization. In 2012, ICANN opened a new round of applications for top-level domain names, receiving 1930 applications, of which 16 are related to health (e.g. “.doctor”, “.healthcare”, “.med”). For “.health” in particular there are four applications, all of which are commercial in nature.

21. Although health is a highly regulated sector at the national level, the global nature of the Internet makes national laws difficult to enforce. The lack of an overarching international legal framework for the Internet hinders an effective response to fraud and crime, such as identity theft and the illegal promotion and sale of medicines.¹ Quality seals and voluntary codes of conduct are still ineffective after a decade of use. Efforts to educate consumers are insufficient and government actions,² such as accreditation schemes, have had limited impact on a global medium.

22. Due to connectivity through broadband and mobile telephony and an exponential increase in content, the Internet has become an important strategic asset for health. Maintaining trust in the online health environment is critical to health security, health and medical education, and the protection and promotion of public health on a societal scale. It is important to find a balance between realizing the potential of the Internet and protecting its users.

Issues and options for WHO

23. ICANN is currently proceeding with reviewing all applications, including those for “.health” and other domain names related to health, and is likely to award the “.health” domain name to one of the contending applicants. This makes it time-critical for WHO to consider the actions that might be required for the protection of the “.health” domain name, in the public interest.

24. As the ICANN process moves forward, there are several options for WHO:

(a) If ICANN allocates the “.health” domain to one of the contending applicants, options for the Organization would be to: (i) take no further action; (ii) seek to influence the governance of “.health” to protect public health interests through appropriate mechanisms, in particular through consultation with the global public health community.

(b) If the domain is not allocated to any of the current applicants, and a new round of applications is started, the Secretariat will consult with the Executive Board and the World Health Assembly again, to obtain guidance on an appropriate course of action. The questions raised in 2003 by the Executive Board regarding an international organization owning and managing a domain name from a legal, financial and operational standpoint have been addressed. The experience of the Universal Postal Union, as the first United Nations organization to own a top-level domain, will be instructive in this respect.

¹ Including spurious/falsely-labelled/falsified/counterfeit and unapproved medicines.

² See http://www.who.int/goe/publications/ehealth_series_vol5/en/index.html (accessed 22 November 2012).

PROTECTION OF THE NAMES AND ACRONYMS OF INTERGOVERNMENTAL ORGANIZATIONS, INCLUDING WHO, ON THE INTERNET: UPDATE AND FUTURE ACTIONS FOR WHO

25. This section provides an update on the protection of the names and acronyms of intergovernmental organizations, including WHO, from registration by third parties as domain names on the Internet. With the current expansion of the domain name system, there is a vastly increased potential for the unauthorized and misleading registration and use by third parties of intergovernmental names and acronyms. Without appropriate protection, third parties could register the name and acronym of WHO on the Internet (e.g. “xxx.who” or “who.com”), including for commercial purposes. Should that occur, the only recourse for WHO would be to engage in costly litigation in a number of jurisdictions or through the arbitration and mediation facilities established by the World Intellectual Property Organization. The consequences of such use could be prejudicial for public health, both because the name and acronym of WHO are perceived by stakeholders and the general public as a guarantee of high quality, evidence-based information and standards, and the use of WHO’s identifiers by third parties would be misleading.

Legal considerations

26. The use of WHO’s name, acronym and emblem by third parties is governed by resolution WHA1.133. The First World Health Assembly resolved that appropriate measures should be taken to prevent the use, without authorization by the Director-General of, inter alia, the emblem, official seal and name of the World Health Organization, and of abbreviations of that name through the use of its initial letters. In most Member States, measures have been taken in compliance with that resolution to protect the name, acronym and emblem of the Organization.

27. The name and acronym of WHO and other intergovernmental organizations are furthermore protected from registration as trademarks by third parties at the international level through Article 6ter of the Paris Convention for the Protection of Industrial Property (in force in 174 States), and extended by Article 16 of the Trademark Law Treaty and Article 2 of the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).

28. WHO and other intergovernmental organizations within and outside the United Nations system have followed with concern the position of the ICANN Board on the protection of the names and acronyms of intergovernmental organizations from third-party registration as domain names in the context of the 2012 round of applications for top-level domain names. Currently, there is a temporary moratorium on the use of the names, of the emblems or of other identifiers of only three organizations (the International Olympic Committee, the International Committee of the Red Cross (ICRC), and the International Federation of Red Cross and Red Crescent Societies (IFRC)), pending a decision by the ICANN Board on whether they should be afforded permanent protection. Protection from third party registration occurs in practice by placing protected names and acronyms on an ICANN Reserved Names List. ICANN has approached protection on the basis of a “two-tier test”, that is, an organization’s name, acronym or emblem must be protected through both international treaties and national laws in multiple jurisdictions, in order to be considered for protection from third party registration as domain names. Despite the fact that most intergovernmental organizations meet this test, the ICANN Board has not yet determined whether these organizations merit the same protection as the International Olympics Committee and the International Committee of the Red Cross, and is waiting for advice from the Governmental Advisory Committee and the Generic Names Supporting Organization before taking a final decision.

29. Intergovernmental organizations have expressed their concerns in communications with relevant ICANN constituencies. The United Nations and the OECD have taken the lead in this respect, and several intergovernmental organizations, including WHO, have become observers to the Governmental Advisory Committee.

30. At the 45th ICANN Meeting in Toronto in October 2012, a number of intergovernmental organizations (including WHO) reiterated their position in support of a general ICANN policy of protection of their names and acronyms. The Governmental Advisory Committee communiqué of 17 October 2012 recognized that the protection of the names and acronyms of such organizations against inappropriate third party registrations must be accomplished in the public interest and that:

- the criteria for registration under the “.int” top-level domain name¹ provide a starting point for protecting intergovernmental organization names and acronyms from registration by third parties on the Internet;
- building on these criteria, the Governmental Advisory Committee and concerned intergovernmental organizations will develop a list of relevant organizations whose names and acronyms should be protected; and
- pending further work with ICANN on specific implementation measures, the Governmental Advisory Committee recommended that the list of intergovernmental organizations registered under the “.int” top-level domain be approved for interim protection through a moratorium against third-party registration prior to the attribution of any new top-level domain names.

31. The next step is the elaboration by intergovernmental organizations and the Governmental Advisory Committee of eligibility criteria for such organizations to be afforded protection in the domain name system, as a basis for Governmental Advisory Committee advice to the ICANN Board on which intergovernmental organizations should be included on the ICANN Reserved Names List.

32. WHO and other intergovernmental organizations will participate in the possible development of the Policy Development Process, for example, the Generic Names Supporting Organization, on the matter with a view to establishing a stronger basis for an appropriate ICANN policy on the protection of the names and acronyms of intergovernmental organizations on the Internet.

33. The Director-General will report to the Executive Board at its 134th session on progress in this respect, in particular on the achievements and challenges in WHO’s interactions with ICANN.

ACTION BY THE EXECUTIVE BOARD

34. The Executive Board is invited to take note of the report on eHealth trends and progress, and to provide further guidance.

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¹ These criteria are that: (i) the applicant must be an intergovernmental organization established by an international treaty, including the United Nations and its Specialized Agencies, and organizations having observer status at the United Nations General Assembly, (ii) it must be widely considered to have independent international legal personality, and (iii) must be the subject of and governed by international law.