



eHealth Capacity Building

From Silos to Systems

Chapter 3

Capacity building is defined broadly by the United Nations Development Programme (UNDP) as “the creation of an enabling environment with appropriate policy and legal frameworks, institutional development, including community participation, human resources development and strengthening of managerial systems.”¹ There is a shortfall of 4.3 million health care workers worldwide. And capacity needs are often felt more acutely in those countries that have the greatest health disparities and that are less economically viable. Sub-Saharan Africa and Southeast Asia are unduly affected, plagued by workforce development issues, inadequate numbers of qualified health workers, the migration and departure of skilled personnel, weak infrastructure and a lack of resources.

As health service capacity deficits widen, eHealth tools are increasingly employed to address capacity shortfalls. These technologies provide electronic information and training links to rural and underserved areas and robust clinical data for informed decision making.

The American Medical Informatics Association (AMIA), in conjunction with the International Medical Informatics Association (IMIA), convened *eHealth Capacity Building*, part of the Rockefeller Foundation’s *Making the eHealth Connection: Global Partnerships, Local Solutions* Bellagio Center conference series. Participants focused on visionary solutions to boost the global health workforce and informatics capacity in the developing world.

Informatics and Capacity Building: Key Issues

Informatics is a scientific field that draws upon the information sciences and related technology to improve health care, biomedical and clinical research, education, management and policy. Global experts agree that significant capacity-building hurdles must be scaled in the developing world and that informatics and eHealth can be utilized to support these efforts. In taking action, however, key questions must also be addressed across nations and disciplines:

- ▶ What is the current health service capacity and workforce situation in developing countries?
- ▶ Who is the workforce? Are they frontline workers, nurses, laypersons, community health workers, physicians, nurses, midwives, librarians or other individuals?
- ▶ Do any particular technologies—handheld devices, cell phones, computers with auxiliary memory or the Internet—hold the key to a capacity leap? If so, what incentives can be employed to increase the use of these technologies?

- ▶ What sectors need the highest level of capacity-boosting aid?
- ▶ How can eHealth be integrated into degree-granting public health programs and other medical training opportunities?
- ▶ How should capacity-building opportunities and collaborative partnerships be targeted and prioritized in the developing world?

Informatics, eHealth and Capacity Building: A New Vision

A new model for capacity building in the developing world is emerging that leverages informatics and eHealth. Key building blocks for this new paradigm include the imaginative use of beneficial technologies in resource-constrained environments, the involvement of local health professionals in shaping workable solutions and the inclusion of workforce development imperatives into overarching strategic plans and policies. Executing this vision involves work by an international consortium of eHealth informatics specialists who can 1) support practice, education, training, policy and research; and 2) educate governmental

and national leaders about the importance of eHealth capacity and informatics.

A detailed road map for attaining this breakthrough capacity-building vision, recommended by *eHealth Capacity Building* conference participants, follows (page 22).

1. Create an international network of eHealth informatics practice, education, training, policy and research. Fervent pockets of eHealth and informatics activity exist throughout both the developed and the developing world, but experts often do not engage in valuable discourse and skills-sharing that is needed to harvest lessons and wisdom across experiments. Strategically growing an eHealth informatics network worldwide—but particularly in the developing world—will advance both thinking and practice. At the macro level, conversations between donors and funders about developing coordinated initiatives and collaborative work are critical, as are innovative avenues to create a resource bank of informatics experts who can be called upon. Health care standards organizations are also

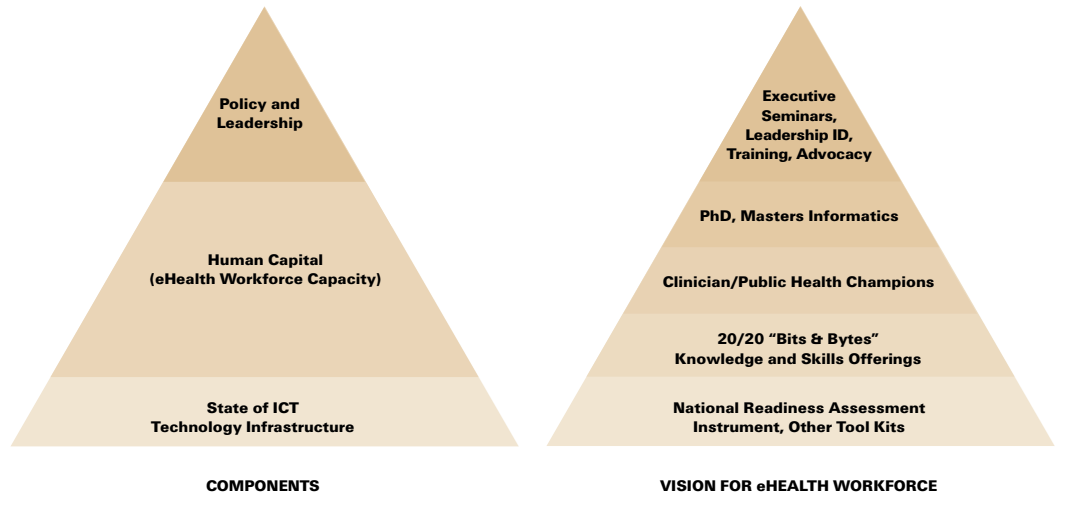




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*“I would take the e
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Global South Components of Needs and 20/20 Vision for Assuring eHealth Capacity From Silos to Systems



key venues for networking, which can provide affordable standards access and invaluable participation in standards activities.

Centers of Excellence are important anchors in international eHealth informatics networks. A Center of Excellence is commonly known as an exemplary academic program that promotes innovative research, teaching and learning practices that distinguish and establish it as a leader in its region and beyond. Because of strategic location and/or the absence of similar programs within a region, Centers of Excellence are uniquely positioned to be leaders in conducting nationally recognized research and in forging partnerships that serve community needs.

In relation to international eHealth informatics networks, Centers of Excellence provide avenues to develop formal and collaborative plans for education, training and research. This will create the next generation of leaders who will spread informatics knowledge, skills and values. In order to leverage these institutions, efforts should be made to accomplish the following:

- ▶ Identify existing informatics Centers of Excellence and facilitate their development as central resources for disseminating informatics knowledge and skills
- ▶ Establish relationships among Centers of Excellence and develop mechanisms for North-South and South-South collaboration and networking to share ideas and resources
- ▶ Develop additional infrastructure and boost the capacity of regional Centers of Excellence in informatics practice as well as applied informatics research

An international network of eHealth informatics can also be helpful in training. Network participants can work to develop core informatics success profiles for use in training, in seeding mentored projects, and in building local capacity as rapidly as possible. This includes identifying people in resource-poor countries who can provide mentoring and basic education in informatics; expert consultation that enables decision makers to make wise policy choices; and acquisition of informatics tools.

Collective networking and group thinking about impact measurement is also an advantage of a global eHealth informatics practice networks. Together, experts can develop and share ways to measure eHealth readiness and impact, using these measures for research in conjunction with implementation projects.

2. Educate government leaders about the importance of eHealth capacity and informatics to national health and economic development goals, cultivating and sustaining support for eHealth capacity and informatics activities. To succeed, eHealth capacity and informatics efforts must be a key national consideration in an atmosphere of competing economic, political and policy priorities. In achieving this, advocates must inform and teach government leaders about the importance of eHealth strategies in reaching national and regional health and economic development goals, while highlighting the overriding value of a trained, well-educated eHealth workforce that builds on what already exists. Political influence to secure eHealth support must be developed in national budgets. There must also be a grassroots advocacy strategy to make the eHealth capacity and informatics case to key stakeholders, politicians, rainmakers and senior health care professionals.

Champions must be cultivated at all levels in a country to support wise policy and strategic decisions. Effective strategies and policies should also be shared across national borders, so that those who have not yet formulated policies and strategies can benefit from the building blocks developed in neighboring countries. Business and industry must play a vital role in cultivating and sustaining high-level government support for eHealth capacity and informatics activities.

3. Develop a blueprint for initiating and executing activities in resource poor countries to rapidly create eHealth initiatives. Clear yet flexible blueprints for individual countries and for global priorities should be developed to jump-start eHealth, capacity, and informatics activity. Health care professionals should be actively engaged in the blueprint process. Blueprints should emphasize demonstrated, scalable solutions and the provision of working tools from which people can derive benefit quickly. Rapid dissemination of lessons learned in other projects and countries, while being sensitive to local needs, values, and personalities, must also be a priority.

Any eHealth, capacity and informatics blueprint should integrate with and add value to current programs directed toward eradicating disease.

Conclusion

The role of eHealth and informatics in addressing serious shortages of qualified health service professionals and in building health system capacity cannot be underestimated. An explicit focus on health informatics and eHealth capacity building is critical for improving health service quality and efficiency. Proper training and leveraging of lessons learned by an international eHealth informatics network and the creation of Centers of Excellence that are linked around the globe will immeasurably advance health care practice, education, training, policy and research.

Notes

- 1 United Nations Development Programme. Available at: <http://www.undp.org/>



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“I envision a day and time in Africa when time and space are irrelevant—when it is possible to deliver health services without silos and address a population exploding at a faster rate than the institutions that are set up to take care of them.”