

# eHealth in Low Resource Settings: the Path to Sustainability

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# eHealth in low resource settings: sustainability issues

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# Introduction

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- A word of thanks and appreciation to the organizers.
- WHO is the United Nations specialised agency that coordinates programmes aimed at solving health problems and the attainment by all people of the highest possible level of health.
- Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.



# WHA58.28 eHealth resolution

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- Called for the "Use of low-cost information and communication technology (ICT) to improve the quality of service delivery and to build up health worker's capacity especially at the primary healthcare (PHC) level".



# Definitions

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## *Sustainability*

*Wikipedia defines sustainability as the ability to maintain a certain process or state.*

## *eHealth*

*eHealth has been defined as the use of information and communication technologies in health.*



# Wide range of eHealth applications

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- Simple store and forward messaging, short messaging services, information sharing on CD-ROM, asynchronous mode communication, web publishing and searching, database to collect, monitor and report health related data, etc
- Interactive, online, synchronous, real time communication, etc
- Tele-surgery, tele-robotics, etc.



# eHealth (business) models

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- Professional to professional communication e.g. a health professional gives a second opinion to a colleague, e-training of nurses, tele-consultation between teams;
- Professional to client e.g. a physician gives advice to a patient, health educator conducts health literacy programmes, health on the Internet;
- Client to client e.g. patients group shares experience.



# eHealth components

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- Regardless of type, complexity, size and nature of eHealth applications four core components (resources) are required:
  - Human resources: a) people willing to share knowledge, information and experience; b) people able to manage the services;
  - Health data, information and knowledge to share;
  - Information and communication technology infrastructure to carry content (data, images, graphics, information, voice, video, multimedia, et).
  - Governance structure to set and monitor policies, strategies, plans and procedures.



# Why health ICT projects fail?

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- Lack of proper needs assessment.
- Lack of vision, strategy, and national plans.
- Lack of information and awareness about ICT applications.
- Computer illiteracy.
- Insufficient resources to meet costs.
- Limited experience in medical informatics.
- Weak information and telecommunications infrastructures.
- Absence of legislative, ethical, and constitutional frameworks

WHO, 2004.



# Why health ICT projects fail?

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- Short term focus of international implementers.
- Disconnection from the social, culture and linguistic setting of the community they are supposed to serve.
- Misalignment between international development strategies and local realities in developing countries.
- Lack of institutional support due to disintegration of ICT projects from health systems.



# Making eHealth a Success in Developing Countries: SURVEY FINDINGS

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The three key areas addressed were as follows:

- 1) design and development of eHealth technologies.

**most people strongly agree on the need for simple, practical, maintainable and reliable solutions for eHealth in developing countries.**

# Making eHealth a Success in Developing Countries: SURVEY FINDINGS

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The three key areas addressed were as follows:

2. implementation of eHealth initiatives

**most people strongly agree that workforce, funding, basic health infrastructure and management are critical to successful implementation of eHealth initiatives in developing countries.**

# Making eHealth a Success in Developing Countries: SURVEY FINDINGS

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The three key areas addressed were as follows:

3. establishing the enabling environment for eHealth sustainability

**most people strongly agreed that capacity development, knowledge sharing and local ownership were necessary conditions for sustaining eHealth in developing countries**



# Critical requirements for successful implementation of health ICTs

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- purpose, strategies, and scope of services to be provided;
- audiences, customers, and users (targeted populations);
- value of health and healthcare to the individual and community current ways to assess individual and collective health problems (community health);
- needs of the individual, community, and nation;
- institutional user needs and commitments; and
- competencies of the organization implementing or hosting the ICT system.

*infoDev, Healthlink, AfriAfyra, ISHED, 2006*



# Types of questions to be asked:

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- Is the investment consistent with the ICT strategy of the country or institution?
- Will the investment support the broader goals and objectives of the implementing body?
- Is there a realistic business plan?
- Have the benefits been assessed and has a commitment to achieving those benefits been obtained from those most affected by the change?
- Has consideration been given to achieving those benefits through another route? (What happens if there is no investment? Can current practices be modified to achieve the same change? Are ICTs necessary to achieve the change?)



# Types of questions to be asked:

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- Has a risk assessment been done?
- Is there a clear understanding of the procurement process?
- Has a project manager been identified and is there a robust and structured system for implementing the plan?
- Is there a commitment from senior managers to implement and provide leadership?
- Are there sufficient technical skills?
- Have sufficient resources been devoted to training and capacity development?
- Is there a clear monitoring and evaluation process in place?

PAHO, 1998



# Seven broad conclusions can be drawn about the use of ICTs in the health sector

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- 1) Keep the technology simple, relevant, and local.
- 2) Build on what is there (and being used).
- 3) Involve users in the design (by demonstrating benefit).
- 4) Strengthen capacity to use, work with, and develop effective ICTs.

*infoDev, Healthlink, AfriAfya, ISHED, 2006*



# Seven broad conclusions can be drawn about the use of ICTs in the health sector

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5. Introduce greater monitoring and evaluation, particularly participatory approaches.
6. Include communication strategies in the design of ICT projects.
7. Continue to research and share learning about what works, and what fails.

*infoDev, Healthlink, AfriAfya, ISHED, 2006*



# Conclusion

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- After implementing or contributing to implementation of national eHealth projects in:
  - Countries like Saudi Arabia, Kuwait, United Arab Emirates and Bahrain (money is not a problem);
  - Countries like Egypt, Iran, Jordan, Lebanon, Syria and Tunisia (human resources is not a problem);
  - Countries like Afghanistan, Djibouti, Sudan, Somalia (a combination of problems).



# I have learnt that:

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- Different settings have different sustainability issues: could be funds, infrastructure, people, policies or a combination of these;
- The "one size fits all" model is a total failure. McDonaldization also does not work;
- Need to be frank and tell the donor, sorry "When your only tool is a hammer, every problem looks like a nail". Say it loudly "My problem is not a nail";
- Ignoring local knowledge and expertise is a recipe for disaster;



# I have learnt that:

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- eHealth is about people wanting to share knowledge enabled by technology. Technology is not the sole solution.
- Excluding a stakeholder or a potential partner deliberately or undeliberately may become detrimental factor in eHealth project life.
- Listen carefully to what suppliers tell about their products.



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**Tack sa mycket**  
**Thank you**

**Q & A**