CHAPTER 5

Health and Healthcare Policies and Strategies for E-Health

Health and healthcare strategies and plans should look about five years ahead to:

- Increase equitable access to health services
- Improve service quality and responsiveness
- Improve efficiency and effectiveness
- Foster partnerships to improve health and healthcare delivery
- Improve healthcare financing.

These goals help to specify the outcomes that are required, the investment needed to achieve those outcomes and their relative priorities, and they can help you to identify achievable action plans for e-health. For example, improving access to healthcare may need more qualified and trained health workers with new ideas. E-health projects, such as telemedicine and e-learning, can help with this goal, so could be part of your e-health strategy. These types of projects may help to strengthen team working in healthcare delivery. Developing ICT infrastructure and capacity may also be essential to support these types of e-health initiatives.

Health ministries can take on an advocacy role in e-health by engaging with all types of stakeholders, especially through awareness campaigns and information sharing. These actions could describe a government's long-term plans to connect all health and healthcare activities and documents, extending from patients' appointments to public health exercises such as disease surveillance. These links are important so that e-health investment can fit into your country's overall health strategy, a concept sometimes called 'mainstreaming e-health'. Such mainstreaming is essential in setting the benefits to be gained from e-health and avoiding wasted investment with no, few or low-priority benefits. During the workshops, you and your colleagues should identify the benefits and objectives of e-health as part of the overall investment.

As a guide, Table 7 sets out some questions and some examples of answers for you to use as prompts to come up with your own answers. You will probably have to ask more specific questions than these to complete your e-health polices and strategies.

Your answers will provide you with the basis for the desired benefits. These in turn should drive your e-health policies, strategies and plans. They assemble into a simple template shown as Table 8.1. The information is complex and sophisticated, as it fans out across the columns as the number of answers increase. Table 8.2 is for you to expand by inserting the relevant rows from Table 8.1 below, and by changing the

columns too if you want a different emphasis. You can then prepare a draft example using your country's health strategy to use with your colleagues in workshops.

This analysis identifies and connects the information needs and priorities of strategic health and healthcare initiatives, the benefits and the beneficiaries. This is essential information for successful e-health. Where information in the table is unclear, this can reveal the need to improve health and healthcare policies and strategies before e-health investment should proceed.

Table 7. Examples of links to health strategies

Some requirements from health policies and strategies	Examples of answers and information needed	Your answers
What are the high-priority diseases and conditions in communities?	Responding to high-priority diseases such as HIV/AIDS, malaria and tuberculosis as part of the MDG initiatives should include identifying the clinical, operational and management information and benefits needed from e-health.	
What is the plan to prevent ill health and promote good health?	Activities that prevent or reduce the incidence of diseases and conditions, including avoidable maternal deaths, epidemics and new diseases, should include identifying the public health information and benefits needed from e-health.	
What is planned to improve the quality of and access to healthcare and related services?	Initiatives such as improved patient safety, streamlined care and services available for communities previously denied them. all need clinical, operational and management information.	
What is planned to improve the efficiency of healthcare resources and activities?	Cutting waste by improving supply chains for drugs and medical and surgical supplies should include identifying the information needed in this respect.	
What are the planned links to social care, education, FBO and NGO activities?	Services that integrate with healthcare, such as aid, social workers, schools and housing, and provided by public and private entities and NGOs need to share information.	
What are the priorities for general investment and expansion in healthcare and other resources and activities?	Extra doctors, more nurses and midwives, more pharmacists, more drugs, more medical and surgical supplies, more clinics and more hospitals all increase demand for information to be help to achieve objectives.	
What are the links to general development initiatives?	Improving education, business and economic activity in communities can have requirements that integrate with health and healthcare activities.	

Some requirements from health policies and strategies	*Examples of answers and information needed*	*Your answers*
Who are the stakeholders and beneficiaries of e-health?	Citizens, patients, carers, doctors, nurses, midwives, therapists, pharmacists, healthcare support staff, healthcare provider organisations, FBOs, NGOs, charities, healthcare suppliers and third party payers.	
What are the different health goals and resources for short-term, medium-term and long-term horizons?	A short-term goal could be expanding ICT capacity; a goal for the medium term could be improved departmental information; and a long-term health goal could be individual patient records.	
What are the requirements and developments needed to e-health to support these health goals?	For example: generic communication networks, information and ICT standards and policies, telehealth and telemedicine, computerised physician order entry (CPOE), picture archiving and communications systems (PACS), e-prescribing, electronic patient records (EPR), radio frequency identification (RFID), shared information between appropriate healthcare professionals for health surveillance and direct patient care, health information for citizens, changes in clinical and working practices.	

Table 8.1 Illustrative requirements and benefits from health and healthcare strategies for e-health strategies

Key requirements from health and healthcare policies and strategies	Information needed for health policies and strategies	Information priorities for health policies and strategies	Benefits and beneficiaries
Reduce child mortality	Vaccination	Recording	Knowledge for nurses Fewer children at risk
		Scheduling	Knowledge for nurses Fewer children at risk
		Supply chain	Knowledge for nurses, efficient supply, nurses supported Fewer children at risk
	Community case mix	Patient locations	Knowledge for nurses, children, families and nurses
		Patient conditions	Knowledge for nurses, children, families and nurses
		Care plans	Knowledge for nurses, children, families and nurses
	Nutrition programmes	Supply chain	Knowledge for nurses, children, families, nurses, NGOs and suppliers
	Information for citizens	Knowledge bases across public networks	Knowledge for citizens, patients, carers, communities and vulnerable groups
	Medical records	Recent conditions, diagnoses and treatments	Knowledge for professionals, children, families, doctors and nurses
Improve maternal health			
Combat HIV/AIDS			
Combat malaria			
Combat tuberculosis			
Improve access to services			
Strengthen quality management			
Enhance ministry regulation			
Enhance health research			
Support scientific, diagnostic, analytic and forensic services			
Co-ordinate continuing medical education (CME) and continuing professional development (CPD)			
Legal changes for policies	Confidentiality	Integrated legislation for a unified health sector	
	Security		
Unique citizen identifiers	National unique codes	EPR and national and regional access	Compile all health information into unique records
Capacity building	ICT infrastructures	Integrate with expanded public networks	Cost sharing
	Training		

Table 8.2 Actual requirements and benefits from the country's health and healthcare strategies for the e-health strategy

Key requirements from health and healthcare policies and strategies	Information needed for health policies and strategies	Information priorities for the health policies and strategy	Benefits and beneficiaries

It is essential to engage effectively with doctors and other healthcare professionals and their professional groups from the start of e-health strategies and projects. E-health can have a significant effect on the way they work. Some people see ICT (Yunkap Kwankam and Richardson, 2007) as the 'third pillar' of the healthcare sector. The first was chemistry in the nineteenth century, which led to the pharmaceuticals industry. The second was physics in the twentieth century, which created imaging systems. This idea of the third pillar is consistent with the findings from e-health impact studies (Stroetmann et al., 2006), which show that e-health is an investment in the resources for healthcare professionals. It helps them to improve the services they provide, and so benefits patients and communities directly. These are similar to the goals for increasing the healthcare professional workforce, new drugs, new medical and scientific technologies and health initiatives such as nutrition programmes. From this perspective, the right types of e-health are essential tools to provide information and knowledge for doctors and other healthcare professionals.

Patients are often keen to engage with the health service through information and communications technologies to help to reduce the intrusion of health services on their lives. Explaining these new opportunities to patients often leads to positive responses. Hence, effective engagement with patients and patient groups about e-health plans and projects is essential to success. There are several ways that you can approach this.

In Scotland, the health service sent a leaflet to every household to advise and consult on changes proposed for the Emergency Care Summary (Dobrev et al., 2009). It also engaged nationally with patient groups from the outset of the project. Other arrangements that you may consider are to link with patients directly at each healthcare facility. Here, professionals can advise patients about e-health proposals. Their collective ideas and concerns will form valuable contributions to collect and transfer into the projects. These discussions must be part of the e-health project and consistently organised, not just general conversations. Patients in each location must have consistent information about the e-health initiatives and be able to offer comments freely. Common topics are data confidentiality and security. They may also want to know how the e-health project will benefit them, their families and communities, especially where patients are direct users, as with e-health projects that provide web-based access to health information and services. It is a good idea to let patients know what has happened to their contributions, as this is courteous and reinforces their role.

Good e-health policies are also essential for success. However, there is a dilemma. It is extremely challenging to compile effective e-health policies in the absence of e-health, due to the lack of practical details. Without e-health in place, some policies can be rather theoretical, excessive and may even constrain progress on e-health. As a result, policies developed in parallel with the e-health strategy and projects are sometimes better. However, you will need a step-by-step approach to e-health so that policies do not fall too far behind. Examples of policy topics for e-health identified during e-health workshops could include:

- Confidentiality
- Security
- Unique national patient numbers
- A national patient master index
- Technical interoperability:
    - Procuring open source systems
    - Procuring web-based systems
- Semantic interoperability, such as Health Level (HL) 2 to HL 7, for interoperability standards of electronic interchange of clinical, financial and administrative information between computer systems used in healthcare
- Clinical coding, such as the WHO's International Statistical Classification of Diseases (ICD) and Related Health Problems (10th Revision Version) and the Systematised Nomenclature of Medicine Clinical Terms (SNOMED)
- Procurement and partnerships
- Capacity building.

You can start work on these topics immediately with a single, or a few, working groups integrated into your e-health initiative. The working groups could report to your workshops, so you colleagues can discuss the ideas, options and proposals before the final versions are included in the e-health policies and strategy documents. Proposal finalisation should take place after engagement with appropriate stakeholders as part of sustained stakeholder relationships.