

## CHAPTER 8

# Affordability and Finance

Affordability (Jones *et al.*, 2008) is a big constraint on investment. Rather than wait until e-health policies and strategies are complete to test them for affordability, and then discover that they are unaffordable and need resetting, it is better if you begin affordability and related financing analysis at the outset. You should include extra and redeployed resources from existing activities in your review, and pick a timescale that extends across the whole policy, strategy and e-health lifecycle.

E-health spending must be sustainable over the medium term. Typical ICT spending in a developed country can be about 2 per cent of total healthcare spending (EC ISMDG, 2007) – very roughly about US\$55 per person per year. For a developing country, this can be the equivalent of about 25 per cent of current healthcare spending, so is not a realistic option. At the other end of the spectrum, a provision of 2 per cent to 7 per cent of healthcare spending is about US\$4 per person for e-health in developing countries. This is not sufficient to make much of a long-term impact across whole countries. However, it may offer a realistic and foreseeable position for a sustainable e-health investment programme that enables affordable projects and capacity building; this in turn can lead to a longer-term, larger-scale e-health investment picture – like a jigsaw.

The financial and economic position of healthcare in developing countries is extremely stringent. Exposing it to risk, waste or delay directly diminishes the value of resources and increases the opportunity costs to other programmes. Consequently, the maximum net benefits from e-health measured as the difference between costs and benefits over time, must be realised over the shortest feasible, but not rushed, timescales. This may require e-health projects that rely on proven and commercially available solutions that only require relatively modest local development and implementation. These may increase the chances of realising net benefits over shorter timescales, so your benefit realisation plans can use the experience of previous users. Proven e-health investments also tend to carry lower risks than projects that need significant local development. However, all e-health carries risks.

In mixed-health economies – where governments, charities, NGOs and private healthcare organisations all operate – affordability is complex. Each healthcare provider in each sector can have affordability challenges to bring an e-health investment to fruition. In this setting, stakeholder engagement should include development of an explicit, integrated affordability and financing plan.

E-health policies directly affect affordability, both adversely and beneficially, and may improve overall, long-term affordability. Examples are:

- Reliance on open source and web-based applications

- Capacity building, especially integrated ICT regional and national communications networks and an expanded technical staff to support open source and web-based applications
- Effective semantic and technical interoperability and interfacing
- Online health management information systems
- Step-by-step implementation.

Affordable financing must be in place for the whole e-health life cycle. These financing arrangements also affect affordability directly, through for example:

- Conditions for loans and repayments
- Conditions for leases
- Public-private partnerships (PPPs)
- Business process outsourcing (BPO)
- Government grants
- Increased budgets by stakeholders
- Commitments to redeploy resources already financed, especially doctors' time
- New healthcare reimbursement tariffs
- Cash released from activities, especially ICT legacy systems.

You may be able to use some of these financing arrangements to convert initial short, high-investment peaks into regular annual payments. Achieving this will almost certainly require you to include the financing and procurement arrangements together, especially where leases and PPPs are used. For example, if you buy ICT solutions directly, they can have high expenditure levels in the earlier years and so have a different affordability and financing profile compared to leasing ICT, where expenditure evens out over several years, but will be higher in the later years.

PPPs are fashionable for ICT. They are often complex, with unclear risks and risk sharing. E-health is a complex activity, and adding complex financing and risk models increases this complexity. As a general principle you may want to avoid complex PPPs in favour of simpler models, where effective partnership between all types of stakeholders is easy to understand and at the core of the e-health projects. Nonetheless, a good example of a simple PPP is where ICT vendors agree to finance the whole cost of development in line with users' requirements, and then provide you with the solution at a monthly or annual fee linked to utilisation. These types of arrangements can be easy for all parties to understand and manage.

Table 12 shows a way for you to assess affordability and potential sources of finance for your e-health projects. You may find this table easier to use if you copy it into a spreadsheet. As with all the tables, you can change this one to match the needs of each of your e-health projects. You can also produce a summary table showing the totals for all your e-health projects.

**Table 12.** Illustrative assessment of affordability and finance

<i>Finance topic</i>	<i>Type of finance</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>	<i>Year 6</i>	<i>Year 7</i>	<i>Year 8</i>	<i>Year 9</i>	<i>Year 10</i>	<i>Total</i>
		US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$
<i>Sources of finance</i>												
Government grant	Capital	1,00,000										
	Revenue	500,000	500,000									
Total												
Annual income from better billing	Revenue				100,000	150,000	200,000	200,000	200,000	200,000	200,000	200,000
Total												
Private sources	Leases		1,00,000									
	PPP		1,00,000									
Total												
Internal sources	Capital											
	Revenue											
Total												
Total budget												
Payments for finance												
Leases				100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
PPP				100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Upgrades and obsolescence								50,000	50,000	50,000	50,000	50,000
Total												
Total budget												

