Orange on:

ICT in Healthcare
better care, sustainable costs

Understanding the issue

Technology is providing ever more ways of storing and processing medical data. The increasing processing power of portable devices in particular has lead to the development and linking together of services that would have been hard to imagine only a few years back.

New information technology systems (ICT) allow varied information sources to be monitored or combined in ways that provide better, more seamless, care while freeing up staff time and resources. For example, a heart rate monitor can provide 24 hour data from home and so reduce the number of visits needed by - or to - a professional while offering prompt warning of any need for medical reaction.

But the benefits of these kinds of services are more difficult to assess than those of simple devices or medicines. Moreover it has not been easy, so far, to fund large scale experimental studies into HIT (Healthcare Information Technology).

We argue that if the potential of these services is ever to be fully realised then a change of perspective is needed among those who commission and procure healthcare systems.

HIT should be seen from the perspective of value rather than of cost. HIT investments should be evaluated in terms of how well they help the healthcare system to meet their strategic objectives of better care at sustainable cost while ensuring the social needs of patients are met. It is also likely that in order to achieve these objectives there needs to be better common benchmarks and standards by which procurement managers can compare industry offerings for value and performance.
Strategic value brought by HIT investments:

Many HIT investments can provide clear quantifiable benefits that produce a measurable financial impact. However, some of them provide benefits that are not so easily quantifiable and not monetizable.

Quantifiable monetisable impacts:

- **Patient safety**: mainly due to the reduction of medical error: adverse drug event and related admissions, surgical error, transfusion mistakes, malpractice, expenses…

- **Quality of care**: benefits from improved health professional collaboration. HIT enables clinicians to spend more time with their patients since they are released from paper work, searches for document, planning management etc. The performance indicators of improved quality care can be: reduced length of stay in hospital, physician time with patient, complication reductions…

- **Patient access to care**: HIT improves access to care by streamlining inefficient processes and therefore increasing clinician and staff productivity. It has particular value when it comes to optimisation of the use of scarce resources. Main success indicators are: response time to patient inquiries; waiting time for surgery; waiting time for outpatient appointment; lab results report time, chronic disease self management and increased number of health professionals per day consultations…

  Sensors connected to home alert systems improve safety and prevent deaths among the aged through accidents. In addition mobile technology can regularly check vital signs and allow at home recovery.

- **Physician and staff efficiency** HIT improves health professionals work satisfaction, increases ‘face time’ with patient and conversely reduces time spent performing administrative work.

- **Improved resource utilization** can be measured in bed turnover per month, length of stay at hospital…

- **Cost optimization**: HIT can reduce medical errors and equally reduce average length of stay. Another issue is a better utilisation of expensive resources such as diagnostic equipment. The financial impact of these is: cost per day per patient and overall administrative cost of healthcare systems.

Non-monetizable impacts:

- **A seamless patient/clinician relationship** will improve outcomes but only in a general rather than specific way. According to accounts given by patients followed for chronic diseases remote monitoring reduces anxiety since the constant upload of medical data allows reactive decision when alerts occur.

- **When it comes to empowering citizens:**
  - HIT can, through content, offer a means of delivering public education, improving a citizen’s lifestyle (diet, physical activities, addictions management…) and aiding disease prevention.
  - Because they can be used to remind patients with chronic disease to take their drugs or make appointments mobile phones become powerful tools of compliance.
The precedent of UK ‘Whole System Demonstrator’:

The project was launched in May 2008 and is a tele-health trial encompassing 6191 patients and 238 GP’s. It focuses on three conditions: diabetes, Chronic Obstructive Pulmonary Disease (COPD) and coronary heart diseases. Early headline findings show that if used correctly, tele-health can deliver:

- 15 per cent reduction in Accident & Emergency (A&E) visits,
- 20 per cent in emergency admission
- 14 per cent reduction in bed days
- 14 per cent in elective admission
- 8 per cent reduction in tariff costs.

More strikingly they also demonstrate a 45 per cent reduction in mortality rates. If confirmed, these early findings will provide evidence base to support investment decision helping people to live independently and take control of their own health and care.

Current barriers to HIT adoption:

- Decision makers view IT as a cost rather than a value generator. Facing the choice between funding innovative and efficient medical equipment or an HIT initiative, whose impacts seem uncertain and whose deployment often involves hard work or changed working practices, many healthcare decision-makers choose the equipment.

- Generally those who pay for health information technology do not receive the related savings. Patients benefit from better health while payers (insurers for example) have lower costs; however the healthcare providers pay in both higher costs to implement HIT and lower payment-triggering activity – visits treatments etc - (and revenue) after implementation. For example:
  - HIT used by a hospital to reduce drug event, reduces admissions and therefore reduces activity and income.
  - Remote chronic disease management reduces GP or specialist consultation and its related revenue.

Five conclusions about the use of ICTs in the health sector

- Involve users in design by demonstrating benefits and foster experience sharing among patients and health professionals
- Keep it simple and evidence-based
- Strengthen organisational and health professionals awareness skills and leadership in order to champion the further development of ICT use in health sector.
- Share learning about successes and failures.
- Move from proof of concept to large scale experimentation or implementation and evaluate systematically the impact of the use of HIT.
Some policy options:

- **Continue current efforts:** continue support for the development of uniform HIT interoperable standards, regulation progresses, common HIT certification process, and common performance metrics, standardize GP information systems and, in order to allay fears regarding confidentiality, expand liability protection for hospital using HIT networks.

- **Accelerate market forces:**
  - Tele-health will widespread if it is led by a sound business strategy. Many industries are ready to invest in this area. This will generate growth and employment. EU and national governments should develop targeted investments and incentives to promote HIT.
  - Create a European performance reporting framework to receive and report comparative performance data.
  - Educate consumers about the value of HIT in improving their ability to manage their own health.

- **Subsidize change to speed up HIT adoption.**
  - Direct subsidies would help selected health providers to acquire HIT solutions.

**Conclusion:**

Widespread adoption of HIT could greatly improve healthcare in Europe while yielding significant savings. EU and local governments’ action is needed in connection with health industry to draft a wide range of policy options.

**For questions or additional information**

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