Securing long-term sustainable health services - the need to re-invent eHealth

- Session topic: Is sustainability of healthcare possible without eHealth? -

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My thesis:

***eHealth* in its present instantiations is part of the problem of health system sustainability**

My objective: stimulate an engaged, evidence-guided discussion, not to be right or wrong

"Work in progress"

Evidence I

- **"We identified ... 8,666 studies ... The review included 68 randomized controlled trials (69%) and 30 observational studies with 80 or more participants (31%). Almost two-thirds (64%) originated in the US ... *The cost-effectiveness of these interventions was less certain.*"**

  J Telemed Telecare. 2007 ;13 (4):172-179

- **"Since the late 1960s, the U.S. federal government has invested billions of dollars in various efforts intended to automate medical information and promote telemedicine"**

  P. G. Goldschmidt (2005): HIT and MIS: Communications of the ACM, October (48)-10:70

- **"Interoperable EHRs and ePrescribing systems are beneficial socio-economic investments in better healthcare, but, except in very specific circumstances, need net cash injections."** *EHR-Impact study, 2009*

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Evidence II

- ***Failures*** **of eCard in Germany, DMP in France**
- **EC: "A *'lead market'* can be defined as a market for innovative products and services or technological solutions with high growth potential" – *growth means HIGHER health service expenditures***

  Accelerating the Development of the **eHealth Market** in Europe, 2007

- **Reimbursement: fee-for-service approaches may lead to higher costs when telehealth applications require an additional reimbursement payment which is not compensated by a reduction in other fees.**

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But *where* is the issue?

"As people get richer and consumption rises, the marginal utility of consumption falls rapidly. Spending on health to extend life allows individuals to purchase additional periods of utility. The marginal utility of life extension does not decline.

As a result, the optimal composition of total spending shifts toward health, and the health share grows along with income."

(The key issue here is how to finance this – not our topic)

HALL / JONES (2007)

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Defining Sustainability

Sustainable development describes the potential for humanity to "meet the needs of the present without compromising the ability of future generations to meet their own needs"

Brundtland Report United Nations Commission on environment & Development, 1987

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An example:
Methodist Le Bonheur Healthcare Network

Sustainability vision: "Ensure the ongoing health of our associates, our patients, and our community"

ØTranslated into:

- **§ "Building green": environmental & energy efficiency**
- **§ "Saving green": economic efficiency**
- **§ "Living green": community focus & social responsibility**

healthcare design magazine 05/11/2009

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Corollary

- **eHealth cannot be instrumental in defining in what type of health system we want to operate,**

BUT

- ***once a "better" health system paradigm has been established*, eHealth can deliver much help and support**

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Health services as “The Commons”?

Adapting the concept of “Common Pool Resources”

“Natural [or Health ?] resources that are difficult to divide up or to fence in and where what one user of the resource does can affect what is available to another user.”

Elinor Ostrom, Nobel Laureate 2009

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“The Tragedy of the Commons"

- **“Open Access Natural [Health] Resources” where there is no clear ownership of rights to a resource, and consequently with no restrictions on their use, likely lead to overexploitation**
- **This is the basis of the idea of "the tragedy of the commons“**
- **Do our present health systems face this “tragedy”?**

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Solution: "Common Property Resources"

- Natural resources [health] accessed through social and legal institutions that ensure sharing of benefits from the resources but that may also impose regulations on their use
- Such common property institutions emphasize the importance of community-based management and co-management

Carolyn Raffensperger, 2009

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First re-invent Health

- Re-invent our health systems: render them more responsive to present and future generations' holistic health needs (WHO definition includes psycho-social-economic)
- Assure *sustainability* at the right level, the health system level
- Mandate rests with politicians, society, community
- 95%-99% of health services are delivered at the local and regional level
- Analyse alternative options, including "The Commons" approach
- Focus on the 1%, 20% of patients causing perhaps 30%, 80% of all costs

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Then re-invent eHealth

What eHealth can do:

- **Support and facilitate the realisation of clearly defined health policy and health system (sustainability) goals**
- **Meet system needs and objectives, not that of individual interest groups ("The Commons" approach)**
- **Enable new organisational models and processes**

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Drive towards integrated care

- **In *integrated care*, professionals from different organisations work together in a team-oriented way towards a shared goal, with shared resources to deliver, via an integrated service delivery process, all a person's care requirements.**
- **Offers overall efficiency through better coordination**
- **This, in turn, needs supportive ICT infrastructural arrangements such as shared workflow support and, as a by-product, patient records. (Dynamic integrated care information systems [ICIS], not EHR systems)**
- **Provides for integrated data resources –evidence generation beyond clinical trials**

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Support health delivery *processes*

- Focus on process ***efficiency*** enhancing software (workflow; clinical and other pathways)
- **Dynamic** ICT-enabled **process support**, not static EHR systems
- Allows collection of patient data already in their **proper context**
- Permits context sensitive **decision support**
- Facilitates process mining and **knowledge generation** "on the go"

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Support a *holistic* approach

The present health focus is eclectic:

- **"Our diseases are corollaries of our civilization. Our bodies reflect the interaction of our genes with the manifestations of our civilization — the *built, social and natural environments*"**

Carolyn Raffensperger

- **"The present health approach is severely reductive, almost fanatically individualistic."**

Wendell Berry

The eHealth infostructure of the future - supporting integrated health services – must provide individual (psychic, genes), social (family, work) and chemical/physical environment data & knowledge [nature, nurture]

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Outlook: Are HMOs a potential solution?

- Similarity between "The Commons" and HMOs
- Integrated systems, with **excellent eHealth infrastructures**, in Europe: *Andalucia*, *Scotland*, regions in *Finland* and *Sweden*
- In the USA: *Kaiser Permanente, Intermountain Healthcare*
- Recent discussions in Germany: >10 year time horizon to move towards HMOs

Extent towards *integrated care*

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