Research management in healthcare informatics — experiences from Norway

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background (1 of 2)

- healthcare informatics now is recognized as a research field in its own,
- the field intersects with, and is shaped by research in computer sciences, social sciences, biomedicine and healthcare.
- The field is also influenced by a trend towards making health-IT development and implementation programs important components of healthcare modernizing efforts
background (2 of 2)

- 1990’s: program for healthcare informatics research at NRC.
- 2002: NTNU established a research program for health informatics
- 2003: NTNU was awarded a grant to establish a national centre for research on electronic health records
our experiences
the research domain

• lies at the intersection between healthcare research, computer sciences and social sciences
• Health-IT systems can inform hospital leaders, healthcare professionals and patients
• Health-IT systems can provide data for healthcare services research, and health technology assessments
• intersections to bioinformatics, cognitive science, workflow management, knowledge representation and guideline systems
The breadth of the research domain and the large number of stakeholders makes it hard to decide on which particular sub-field to engage.

A multidisciplinary healthcare informatics research community must lay the ground for researchers with a broad spectrum of interests.

Further, the research should be organized so that the groups learn from each other.
creating an environment for multidisciplinary research

- began as a series of open meetings that created an arena for fostering discussions about healthcare informatics
- researchers, representatives from industry, hospital managers, health-care professionals and students attended
- this led to an arena for networking, and for developing a language for sharing and discussing problems related to healthcare and information technology
creating an environment, contd

• when NTNU was awarded the grant for establishing a National EHR research centre, the university could offer PhD students and their supervisors a shared office environment at the university hospital campus.

• since the establishment the centre has become a place where PhD students and faculty can choose to do their work

• however, all researchers at the centre are also affiliated to, and have office space, at another department at the university
creating an environment, contd

• by organizing the research centre this way, we provide a second office to researchers, while the researchers at the same time keep their connection to their “mother department” and research domain

• keeping the connection the different university departments makes it easy to recruit PhD and Master students to the healthcare informatics field.

• at the same time unnecessary tensions between the “mother department” and the research centre is avoided since the researcher always primarily belong to the latter.
Securing access to healthcare institutions and personnel

• good access to the domain also requires an engagement of the leader of the department that is to participate.
• Based on our experiences, we believe that researchers should interact with these leaders, and invite and encourage them to present health-it related problems from their own perspective.
• Researchers should also be able to recruit healthcare personnel for participation in usability experiments, design workshops and other activities at the healthcare informatics laboratory at the centre
Create fruitful interactions with healthcare informatics industry and consulting companies

• necessary to foster interaction between researchers and healthcare informatics industry.
• can participate by providing the researchers with working versions of their systems
• can co-sponsor research projects
• representatives from the industry should be encouraged to participate in networking events.
• The industry should also recruit from our students. As alumni, these could strengthen the network between the healthcare informatics researcher environment and the industry.
Establishing laboratory facilities

• having a healthcare informatics laboratory creates novel opportunities for healthcare professionals and patients to participate in experiments where new health-IT prototypes and concepts are tested
• our laboratory has also been used during workshops and in focus group interviews.
• our laboratory has been used to assess health-IT technologies that already are in use
Secure funding of healthcare informatics research

• One of the challenges faced by health informatics researchers is finding appropriate grant programs to apply for research funding.
• There are three types of programs to choose from: informatics oriented, medical science oriented and social science oriented.
• All three pose very different requirements and expectations to project proposals, which must be taken into account when developing the proposals
What might go wrong?

• A project fails to balance research and development tasks evenly. So, either the project becomes mere development or consultancy, focused at solving local problems, or the project becomes a fundamental research project without sufficient relevance for the domain.

• Researchers coming from different research traditions fail to understand each other and/or don't respect each other’s research approach. As a result the collaboration is poor or even absent.
what might go wrong II

• Tension and conflict between different stakeholders due to poor coordination and ambiguous vision.
• There are many stakeholders in the multidisciplinary healthcare informatics environment, both internal (at the university) and external (i.e. health institutions and industry).
• A minimum of staff is necessary to coordinate, and mediate between, different stakeholders.
• Further, a clear vision and strategy may function as a powerful tool to create a transparent and eclectic culture were people pull in the same direction.
what might go wrong III

- Industrial partners have their own agenda, not so much geared towards knowledge development but more to product development. This can make them disinterested in the research part of a project.

- Health care partners mindful of their day-to-day clinical work responsibilities may limit the opportunity for experimentation and innovation in a project. Although the intention is to involve these partners in a project as providers of a so-called 'work place' practice, this work place role may be very limited.
now for comments and questions 😊