

The MovingLife Project

Simulation in an
innovation context

Susie A. Ruff

Head of Innovation and Technology
Transfer,

***Centre for Innovation and Research
The Capital Region of Denmark***



Healthcare in the Capital Region of Denmark

- Centre for Innovation and Research, the Capital Region of Denmark (Capital and surroundings)
- 40,000 employees, 10 hospitals
- Innovation Policy/Strategy for healthcare launched in 2012 – eHealth & mHealth are focus areas

Simulation in the MovingLife project – why?

- Assess the realism of the Vision Scenarios, developed in the project - *There must be an app for that.*
- Assess the potential impact of the gaps identified in the Consolidated Road Map.
- Methodology: by acting out the scenarios using real hospital equipment, surroundings, healthcare professionals, patients, mock-ups of mHealth together with experts with different professional backgrounds.

Traditional Simulation in Healthcare

- Training of professionals
 - Simulation involves acting out a specific workflow scenario using real hospital equipment and surroundings, but using advanced computerized mannequins instead of real patients. It has been used to train healthcare professionals in specific clinical situations and in the more complex training of non-technical skills, and – not least – as a research tool into the field of human factors.
 - Examples of well-known simulation centres: Stanford School of Medicine (California), Lund University (Sweden), Herlev University Hospital (Denmark).



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Simulation as a tool in the innovation process

- An ***Explorative method*** to
 - systematically explore a new topic or *trialling new functions* in product, process or service development
 - promote dialogue about innovation in situations where there are significant barriers to development and implementation
 - generate new ideas to problem-solving
 - investigate specific issues with iterations of sequences
 - Simulation can not stand alone



▶▶▶ The Simulation Film about Laura, COPD patient



Self monitoring device

Reactions from the simulation

Patient Empowerment and Individualisation:

“Why do I need a device to judge my well-being when I am perfectly capable of judging myself? Why do I need numbers? I know when something is wrong. I have had this illness for years”. Laura, patient.

“My patients can not feel when they are in really poor conditions e.g. asthmatic patients don’t notice their lung function is reduced by 50%”, Philip Thønnesen, Specialised doctor.

Reactions from the simulation

Patient-Doctor interaction:

"I assume that patients who are used to apply mHealth will understand their own data and values much better than the traditional patients. (...). They will expect and ask for a new interaction with the healthcare professional because they will be self-managing and will ask for a consultant rather than a traditional doctor", Jacob Nielsen, Doctor and Patient Safety Manager.

Reactions from the simulation

User Acceptance:

"What do I do if I spill a cup of coffee on my tablet or device? Or if I forget the tablet in the taxi on my way to the local clinic?", Healthcare Innovation Leader.

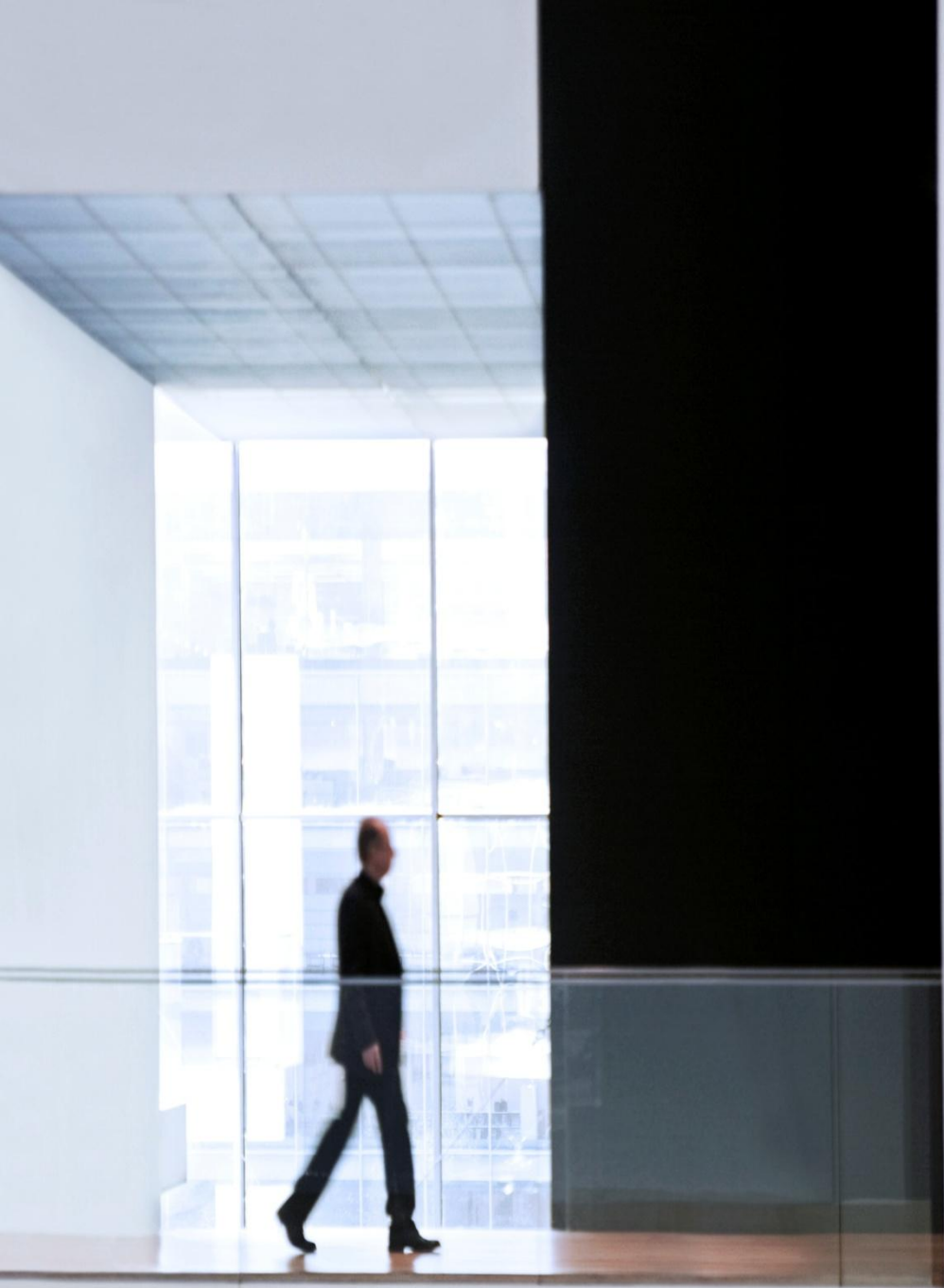
Reactions from the simulation

Medical Guidelines:

"Sometimes we meet patients who do not receive the most basic care from their own doctor, even Danish patients. In these cases I immediately prescribe what is needed no matter what. I could fear what would happen if guidelines are conflicting across countries. What kind of legal consequences would that have for me, the patient and the other doctor? And what if the patient is instructed in an app with specific guidelines to follow, which are in conflicts with our recommendations?", specialised doctor.

New perspectives from the simulation

- How can Laura be sure of getting online emergency assistance? Do we need call centres with specialised nurses or reserved time slots for foreign patients?
- How do we train healthcare professionals to become consultants rather than authorities?
- What if Laura's Italian doctor does not agree with the Danish doctor's prescription? Do we need EU guidelines on the major chronic diseases?
- Do we need secure Internet spots in the same way as we already have defibrillators deployed in strategic locations?



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Questions and discussion

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