



University  
of Glasgow | Department of  
Computing Science

## **SICSA Socio-Technical Systems Meeting**

Tuesday 20<sup>th</sup> April

Level 5 Sir Alwyn Williams Building, University of Glasgow

# Wrap Up

Chris Johnson, Marilyn McGee-Lennon, Karen Renaud

The SICSA meeting on Sociotechnical Issues in Security and Healthcare resulted in some excellent presentations and some great discussions. Together the four keynotes, the panel on electronic health records, and the poster session generated some common themes in the areas of security and healthcare that we as researchers are currently looking at individually and have come together to share ideas and results on. The following document outlines very briefly the things we as a group identified as the main sociotechnical issues and challenges common to security and healthcare as well as some possible ways forward in addressing these challenges.

## **Michele Burman**

A criminologist's take on Security

## **Paul Cockshott**

The Handivote Accessible Voting System

## **Panel (Ishbel Duncan, Alistair Stewart, Ian Ricketts)**

*Privacy and Security of Health Records*

## **Chris Johnson**

The failure of IT systems in the NHS

## **Andrew Eccles**

Ethical Considerations around the implementation of Telecare technologies

# Issues and Solutions

- (1) **We need to investigate how to achieve the balance between ease of use (8) and rigid security (9).**
- (2) **Politics plays a large role in the fields of security and healthcare.**
- (3) **There is a need to establish a common language** in the areas of health and security technology implementation. For example, why do many people mix the terms telecare, telemedicine, telehealth etc.....**do we need new definitions** to differentiate?
- (4) **There is a common move away from reactive models towards more preventative models in both healthcare and security.** In security, crime prevention becomes the central theme and in healthcare, technologies and care processes are all directed towards identifying conditions and changes in conditions before the person is at risk or already in hospital or residential care. This explains why telecare and telehealthcare have become such an important area in healthcare for example.
- (5) **There is an ongoing debate over how much health and security related records and data should be centralised and how much should be stored on peer-to-peer networks.** There is also a question over ownership – does the patient own their own medical records? Do they have the right to prevent healthcare organisations from passing on their medical records to third parties (eg Universities? Insurance Companies? Drugs manufacturers?) to support research that might improve the public good?
- (6) **Should the stored data be partitioned to offer different views by different users with different priorities and privileges?** How will this be implemented and managed?

- (7) **There is a move towards security and health ‘partnerships’** heavily involving citizens, service users, and other stakeholders in the whole process of technology implementation and policy formation. This is introducing the idea of ownership (see 3) of ones own care and security rather than depending wholly on it being state driven.
- (8) **Ownership of our own health and our own safety are becoming key themes**, particularly in healthcare where there is movement towards self management of care. There is an increasing tension between security as a social good to be provided through the State and as a commodity that is delivered through commercial companies, private security firms etc. There is also an increasing tension between healthcare as a social good to be delivered by the State and as a commodity to be delivered through commercial companies such as telemonitoring applications for the elderly.
- (9) **The public users’ perceptions are often more important and more difficult to disentangle than the actual privacy and security of health and security systems.** So in addition to research that focuses on hardware and software to ensure security and integrity of health and security data, research needs to seek to understand what minimum and optimum levels of security and privacy users would be satisfied with.
- (10) **Users and system developers often don’t have a shared understanding of the aims/objectives/functionality and likely benefits of a system.** For example, Users and systems developers often lack an understanding of the ethical implications of surveillance both in the security arena, through automated face recognition and CCTV but also in healthcare – for instance, the intrusive nature of some monitoring systems for the elderly.
- (11) Establishing what people actually want from healthcare and security services and technologies is crucial – **the best methods for eliciting requirements and capturing attitudes and expectations of the public need to be explored.** In addition, we may also need to address conflicts and disagreements between those stakeholders.

- (12) **Education and awareness raising should not be underestimated.** They play a big part in the acceptability of healthcare and security related technologies in the public's eyes. Even with sophisticated hardware and software measures in place to maintain the security and integrity of the data, the human element means that these can always be breached. For example, simply by leaving yourself logged on, selecting poor passwords, etc etc.
- (13) **Usability of the products is crucial** – familiar interfaces and interaction can often be as good or better than novel methods that require learning to take place.
- (14) **There are a variety of ongoing ethical issues** in the areas of healthcare and security. Informed consent, authentication, authorisation, ownership and control over the data. One example - what are the ethical considerations when the choice is to provide some care or no care at all?
- (15) **We need to consider how systems affect actual work processes and work flow.**
- (16) **Greater collaboration is needed between computing and healthcare professionals.** Especially when information systems are used by healthcare management to monitor and thereby control clinical interventions.
- (17) **Overall there is a need to focus on methodologies that bridge the theory and practice between the different disciplines....computing science, sociology.....**