



## Technology and Healthcare

*With Professor Tim Shaw, Professor of eHealth at the University of Sydney*

### 1. Tell us about your career and your current role as Professor of eHealth

- Professor Shaw was involved in the digitisation of the Wilson Museum of Anatomy as a PhD student and has also created online resources for the Royal Australasian College of Surgeons
- His current role is more substantive and aims to guide the University of Sydney in eHealth across research, education, and practice
- eHealth involves collaborating with colleagues in other departments, such as information technology and engineering

### 2. How do you define eHealth?

- Three main domains
  - Health enhancing consumers: the use of apps and devices
  - “Telehealth”: transforming the way healthcare providers and consumers interact and communicate
  - Data storage and management: how do we incorporate data into our practice?
- These three domains overlap and influence each other

### 3. What are your main research interests currently?

- Oncology: how do we develop better rehabilitation programs for oncology patients?
- Data: how do we make health data meaningful for clinicians?
  - We are at the beginning of a new Reformation – much of our data is inaccessible currently, and in the future, it will be much more accessible

### 4. Many other industries have embraced technological advances. What are some of the challenges to implementing technologies in the health system?

- As a result of real and perceived challenges, healthcare systems have been resistant to changes in technology compared to other industries
- Privacy is a concern: most organisations outside of healthcare are interested in sharing information, and in healthcare we are concerned with preventing the dissemination of private information
- Healthcare is complex: relationships between lots of different systems
- Devices: devices designed for health are often designed to get the best possible healthcare outcome, rather than maximum usability. As a result, many junior doctors complain the devices at work are less advanced than those they use at home

### 5. Does Australia have particular challenges in eHealth?

- Complexity of our system: State and Federal Governments, primary care and hospital care with different government funding, lack of coordination between specialist services
- New organisations are being created to address these issues, such as the Australian Digital Health Agency. This agency is responsible for MyHealth Record: the challenge is to drive change in the way care is delivered, rather than creating “filing cabinet in the sky”

## **6. How will eHealth impact on junior doctor's practice?**

- Exciting time for junior doctors – in the next five years, there will be different ways of working
- A key area of research currently is understanding the outcomes of the healthcare you are delivering
- There will be massive connection of information systems – removing the need for manual entering of data
  - One of the major criticisms of our current system is that junior doctors spend a lot of time away from patients, at the computer
  - Ultimately, the value you get out of electronic medical records depends upon the value of the data that is put in: currently we have the stereotype of the junior doctor cutting and pasting data, and seeing it as meaningless

## **7. How can junior doctors get involved in eHealth?**

- It's vital that junior doctors get involved in eHealth
- Consider how you can incorporate technology into your healthcare delivery
- Consider a Masters of Innovation in Health Technology
- Many doctors are looking for something different, and this is an area where you can really make a difference

## **8. Challenges with technology**

- Healthcare is littered with poor implementations of technology
- It is easy to complain about technology. It's important to give feedback and recognise ways to influence change

## **9. What is the "blue sky" of digital medicine?**

- Fixing basic issues, such as the accessibility of information between hospitals: this will hopefully be fixed within five years
- Personalised health care
  - Using analytics to help prognosticate, for example in oncology
  - Genomics
- Enhancing collaboration and empowering patients with a shared care model: we still use faxes to communicate between acute care and primary care currently! Technology will enable patient empowerment

## **10. Should junior doctors be worried about technology making them redundant?**

- Technology cannot replace healthcare workers, however, it may replace healthcare workers who do not engage with it
- It has the capacity to change people's roles: ideally, technology will liberate doctors and allow them to use their time more efficiently

## **11. Take home messages**

- Get involved, be active in this process
- If you see areas for change, give feedback
- Consider specialising in this area: we need young doctors in this field
- Consider how you will incorporate technology (apps, devices) into your care