ABSTRACT

This thesis explores the development and sustainability of telehealth services in Australia and Brazil. A telehealth service is defined as a "healthcare activity supported at a distance by information and communication technology service(s)". Policymakers expect that telehealth services will improve healthcare access and increase system efficiency, and providers seek to ensure that healthcare is effective and safe. However, stakeholders exhibited a range of underlying views over the role of technology in healthcare, prompting the question, "Does the technology used by telehealth services shape our healthcare, or do we, as humans, collectively change and shape the technology and services used in healthcare?" This enquiry seeks to identify the real influences on telehealth services in the context of the Australian and Brazilian universal healthcare systems.

These systems were chosen because they provide public and private healthcare within politically federated systems, to geographically dispersed populations, from healthcare facilities concentrated in metropolitan and coastal conurbations. For telehealth services within these systems the processes advocated in practice guidelines were identified. Then, in an effort to uncover the rationale for these guidelines, a literature review considered explanations of the processes influencing the development of telehealth services. It found that organisational and professional contexts were key to understanding these processes. Using these findings, a conceptual model of enquiry was built to guide field research using realist methods to explore the underlying processes and mechanisms of telehealth service development. This field research comprised four interlinked phases commencing with exploration and enquiry phases, during which evidence was collected across Australia and Brazil which included 135 semi-structured participant interviews, followed by analysis and comparison phases, in which the themes in participant interviews were identified and compared using iterative, theoretically grounded processes.

Telehealth services in Australia and Brazil were found to face similar challenges. Healthcare systems, medical culture and practices have changed to support healthcare activities across places supported by technology. Political, organisational, economic, and regulatory reforms have significantly influenced the organisational and professional contexts of telehealth services. Despite differences in the structure of the Australian and Brazilian health systems, the underlying mechanisms influencing telehealth services and their contexts were found to be similar.

The principal conclusions of this research are that continued operation, development, or sustainability of telehealth services is never guaranteed, but is contingent on and sustained by interactions between contexts and telehealth services through four key mechanisms, which:

- legitimise practice based on explicit and implicit sociotechnical codes including strategies, guidelines, and clinical routines;
- build confidence through accepting technology, management of the risks, and creation of trust in practice;
- build relationships between stakeholders; and
- acquire resources, such as information and communications technology, human resources, and funding.

The relationships between these contexts and mechanisms is described by a new meta-theoretical model of how organisational and professional contexts influence telehealth services over time, and how, under the influence of mechanisms, new contextual states become the "new normal". In other words, as human agents, we collectively change and shape the technology and services used in healthcare.