Chapter 11
Evaluating Integrated eCare:
Discussions and Guidance of a Diverse Field

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ABSTRACT

Evaluation of projects on integrated eCare is key to implementation and widespread use. The evaluation must, though, be thorough and include research methods from multiple different research traditions simultaneously. This implies a necessity of knowledge from all research paradigms and understanding of proper reporting. In this chapter, guidance for evaluation of integrated eCare is provided, along with discussions of advantages and disadvantages related to certain decisions that must be made during the research process. As an aid for understanding, real-life examples of evaluation are provided to illustrate challenges and possible solutions throughout the chapter.

INTRODUCTION

Resource scarcity combined with the interest in always doing what serves the community best, are the primary drivers of both implementation of and research within integrated eCare. Integrated eCare is aiming to solve problems for those of us who use both health and social care, i.e. most of us during the period of a lifetime. It is well known, that across health and social care systems in different countries, the simultaneous use of both kinds of services imply problems and barriers for the end users (Kodner & Spreeuwenberg, 2002).

Current demographic developments with decreasing workforce and increasing number of frail elderly people further challenges the health care delivery as of today, so part of the solution is sought within better integration of systems combined with eCare. The aim of enhanced integration supplemented by eCare is to improve effectiveness while increasing quality and decreasing costs (Kodner & Spreeuwenberg, 2002).

Meanwhile, it is important to make sure that the attempts at increasing effectiveness and quality and lowering costs, does not imply decreased level of care for the individual or impose a huge

risk for adverse events. Thus, scientific methods are used to follow up the changes made along with the outcomes of the changes.

The trend in health care has, since primo the 1970ies developed in direction of so called evidence-based health care. The idea is that if treatment A in scientific studies has proved more efficient than treatment B, doctors should prescribe treatment A, unless good causes are presented against that choice (Mar, Glasziou, & Mayer, 2004). Good causes could be patient values or ethical objections or unclarity in the scientific studies, such as the impact of co-morbidity. In these cases, the clinical judgment, which is still informed by the evidence and patient values, will be the guide.

In recent years, this trend towards evidence in decision making has spread to decision makers outside of health care. Evidence is becoming a prerequisite for political decisions to change or implement new technologies, routines and interventions. And for a good cause: all citizens are interested in ensuring that health and social care services are indeed helpful and not inducing unnecessary risks. Also, integration of services can be quite resource demanding, and it is in the best interest of our populations that resources are spent wisely on interventions with known consequences.

In this chapter, challenges and requirements for producing reliable evidence for the consequences of integrated eCare is discussed. The discussion is illustrated with current examples of the challenges and solutions from real life scientific work within the field of integrated eCare. The objective of the chapter is to provide guidance on evaluating integrated eCare in the process of developing evidence for decision makers.

BACKGROUND

Due to differences in organization and reimbursement of health and social care in different countries, definitions are necessary to ensure a common understanding. In this section central terms are defined for use throughout the chapter.

Integrated Care

Integrated eCare is usually designed in order to solve different types of problems in overall health and social care provision simultaneously.

Examples of problems that are thought solved through implementation of eCare include duplication of work (e.g. GP and hospital making the same blood tests), or communication across sectors (e.g. ensuring that home care service providers are informed on a patient being discharged from hospital). In line of this thinking, Leichsenring et. al. (2013) defined integration of care as:

"Integration is usually conceptualized as a process through which new methods of working together bring actors and/or things closer to one another and allow them to become more tightly bound to each other. In this perspective a care system is integrated when dysfunctional barriers are overcome and smoother system function is attained".

The aim of providing ICT supported integrated care thus comprises the aspects of collaboration that causes problems in health service provision.

Complex Intervention

Integrated eCare as a solution to problems on collaboration or duplication of efforts consists of several components, i.e. a database of tests performed, diagnosis, medication etc. along with a communication system. The scientific community regards such interventions consisting of "*multiple interconnected parts*" (Collins, 1979) as complex interventions.

Craig et al. (2013) define an intervention as complex, if it includes:

- [A] number of interacting components within the experimental and control interventions.
- [A] number and difficulty of behaviors required by those delivering or receiving the intervention.

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