Chapter 7
Socio-Economic Impact Assessment and Business Models for Integrated eCare

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ABSTRACT

Putting into place ICT-supported, integrated health and social care services means that a multitude of stakeholders are affected by changes to their working process and often to their economic performance. In this chapter, the authors describe their approach to assessing integrated eCare services to enable care integrators in making strategic decisions during development and early operation. The approach is founded on cost-benefit analysis. It stands out from other assessment frameworks in that it 1) allows identifying and addressing stakeholders that lose through the service and thus may become strong veto players, 2) allows monitoring of the actual and prospective service development over time, 3) includes non-financial factors that in many cases have a major impact on the behavior of a stakeholder, and 4) provides probabilistic methods for achieving rigorous results from data of varying quality. Following an exemplary integration case developed from one of their pilot projects, the steps of the assessment process are described, including an exemplary interpretation of the analytic results and their application in practice. The chapter concludes with an outlook on future work.

INTRODUCTION

Putting into place ICT-supported, integrated health and social care services means that a multitude of stakeholders are affected by changes to their working process and often to their economic performance. The information technology itself adds another degree of complexity and often even further stakeholders. Project managers aiming to improve the situation of care recipients and their professional and informal carers are faced with transferring one situation into another, improving working practice without leaving anyone behind. And usually they will do so under conditions of

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varying uncertainty, both as a direct consequence of the complexity of the tasks and also due to a lack of established models for integrated eCare.

In this article we describe our approach to assessing integrated eCare services during their development and early operation, as a way to support care integrators in their task. Over several years we have developed tools and methods to improve service design through an iterative assessment of its socio-economic impacts. The final aim is to transfer pilot applications into sustainable routine services.

BACKGROUND

The assessment framework presented in this chapter is based on a method and approach called ASSIST - Assessment and evaluation tools for telemedicine and telehealth (empirica, 2012). The approach was originally developed for use in the context of telemedicine and telehealth services, specifically to assess the economic viability of telemedicine pilot projects. A core aim of ASSIST is to facilitate the transposition of a pilot project into routine service operation and to support service providers in achieving a sustainable economic model where service benefits are higher than service costs.

In summary, the ASSIST framework consists of a methodological approach, a service assessment model and a software toolkit. The methodological approach covers the basic characteristics of the framework as well as descriptions of the empirical and economic methods used. The service assessment model consists of a generic set of stakeholders that can be involved in a service (divided into service users, service provider organizations and their staff, payers and IT industry), and of a set of cost and benefit indicators for each of these stakeholders. As a first step of an assessment, the service assessment model is adapted to the actual conditions set by the service. The software toolkit supports the adaptation of the service assessment model, the collection of data, the analysis and the presentation of results. Depending on its configuration it can be used as a self-assessment tool without expert support or as part of a moderated assessment process, as further described below. A more in-depth description of the ASSIST framework and its elements follows later on in this chapter.

ASSIST was developed in the context of a project funded by the European Space Agency which ran from 2010 to 2012. The project contained a systematic review and valuation of existing approaches, development of an own assessment framework making use of the most valuable approaches, a software toolkit implementing the assessment framework and a validation phase. During the validation phase ASSIST was successfully applied by five telemedicine projects. It is now available under open source licences from http://assist-telemedicine.net/.

In the course of two EU-funded pilot projects that dealt with ICT-supported, integrated social and health care services (CommonWell, 2012a) and ICT-supported integrated social, health and informal care (INDEPENDENT, 2013), respectively, the original ASSIST framework was expanded to be applicable also in the domain of integrated eCare. Basic assumptions on service models and market structures were adapted to cover a much wider area than the original domain of telemedicine.

In its practical application, the expanded ASSIST framework was embedded in the wider concept of a deployment cycle for ICT-supported services for care and independent living (Meyer, Müller, & Kubitschke, 2011). This cycle encompasses a series of iterative steps leading from requirements analysis and service design to development and eventual implementation, first under pilot and later under real-life conditions. Empirical evidence plays an important role in this cycle, supporting decision making on all levels, from the overall service configuration and its placement in a governance framework down