

Chapter 4

Improving Patient Safety with Telemedicine: Exploring Organizational Factors

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ABSTRACT

The patient safety and quality problem in health care are considerable. To err is human, but primum non nocere (first, do no harm) means work against the adverse events and work for good quality. The purpose of the chapter is to explore the potential role for patient safety of a telemedicine network organization with centralization and decentralization taken into consideration. Network organization is of importance for strengthening of professional communities and competence complementation. For the building of strong professional communities, some size can be necessary, and this can be promoted by centralization. In the telemedicine era, a new way of organizing can be network organization, combined with centralization and decentralization. Not to do anything with the significant patient safety and quality problem is fundamentally wrong and morally indefensible. To err is human, to continue to err is diabolic, and to forgive is divine.

INTRODUCTION

To Err is Human and *Primum Non Nocere*

The interest for quality in medicine goes far back in time. Roger Bacon's essay 'De Erroribus Medicorum' was authored in the 13th century and treats the issue errors made in medical treatment

(Aas, 1991a). In the mid 1980ies, increase in malpractice claims in the US lead to talk about a malpractice crisis and malpractice claims were considered to represent only the tip of the iceberg (Aas 1991, a;b).

To err is human, but patients have a moral right to freedom from unnecessary harm. It is necessary to address the problem of how to improve patient safety. The phrase *primum non nocere* is well known from medical ethics. Today, an increasing

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number of healthcare organizations investigate adverse events (Nicolini et al., 2011). The belief is that by learning from the incidents, future adverse events can be avoided. Not surprisingly patient safety has become an own research area. Root cause analysis is a tool for investigation of adverse events (Nicolini et al., 2011). It includes collecting the facts, study of the work process, analysis, search for causes, reporting of the adverse events, work for change and evaluation of made changes.

Quality and Organization

Patient safety is a part of the quality problem. Health service quality can have three aspects: professional quality, quality as perceived by patients and management quality. In continuous quality improvement, both health personnel and leaders participate in the process, have a basis in reliable information, are actors in a quality promoting culture and quality promoting organizations, for example, multidisciplinary teams and learning organizations (Moumtzoglou 2003; Ovretveit, 1992). Organizational culture can be focused on flexibility for change to improve quality and less on a bureaucratic culture focused on keeping power by top down policies, for example by inspection and standard setting for lower levels (Ovretveit, 1992).

Organizational interventions are argued to be especially promising for providing solutions to the patient safety problem (Benning et al., 2011a).

Organization and Telemedicine

For realizing benefits from e-health, the importance of the organization should be explored. From Norwegian telemedicine projects, numerous publications have shown many organizational consequences and many types of organizational consequences (Aas, 2007a;b). For some years, we

have seen that the work of several authors, based on samples from different countries, confirm and corroborate the findings of the Norwegian projects. We are dealing with verification of the findings from Norway (Aas, 2011a). Organizational consequences of telemedicine seem quite independent of country. For the future of telemedicine, organizational factors are fundamental.

Organizations implementing telemedicine should plan for organizational changes. It is important to be aware that organizational problems are not just problems, but problems to which solutions can be designed (Aas, 2007a;b).

Purpose of the present chapter: To explore the potential role for patient safety of a telemedicine network organization with centralization and decentralization taken into consideration.

BACKGROUND

Telemedicine and E-Health

In the 1990ies, telemedicine was associated with a considerable optimism. Some seemed to believe in the death of distance. The term telemedicine has been given a number of definitions (Aas, 2007a), like ‘medicine at a distance’ and ‘the use of telecommunication technology to assist in the delivery of health care’. Around the change to a new century, the collective term e-health was coined. E-health encompasses all applications of ICT in health care (telemedicine, electronic patient records, health information on the Internet, e-referrals, medical decision support systems, computerized hospital stay information for statistical purposes, etc). Among the most studied and convincing applications of telemedicine, we find telepsychiatry, teledermatology and teleradiology, but telemedicine has many applications:

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