

EXECUTIVE SUMMARY

Patient safety and telemedicine: How does telemedicine affect patient safety? International and Danish experiences

One of the areas that the Danish healthcare system has been talking about for years is the use of digital services within the healthcare system. In the hospital system, it is often referred to as telemedicine, while in the municipalities it is referred to as welfare technology. During this COVID-19 pandemic, video consultations in particular have been implemented in earnest. In the Danish Society for Patient Safety, we have over the past two years had a strategic focus on investigating and supporting patient safety when using digital solutions, and it is a significant step that we can now present this report on patient safety and telemedicine, which is the first of its kind.

In line with the Society's strategic focus area of home treatment over the past year, the Society's secretariat has looked at the effect that telemedicine solutions have on patient safety.

The Danish Society for Patient Safety has, in collaboration with the Centre for Innovative Medical Technology (CIMT) and with support from HelseFonden, carried out a major analysis of international and Danish experiences with the effects of telemedicine on patient safety.

The analysis has had three intermediate aims:

- Create an overview of patient safety issues in the use of telemedicine reported in international scientific literature.
- Highlight national experiences with the use of telemedicine in relation to consequences for patient safety.
- Presentation of experience data consisting of points meriting special attention and recommendations based on points 1 and 2.

Summary - What do the international studies show?

The analysis shows that the effect of telemedicine on patient safety is rarely researched in the literature. Thus, there is a lack of knowledge about the effects of telemedicine on patient safety, but there is no sign in the present evidence of widespread problems with patient safety.

The analysis also shows that internationally, there is no standard set of measurements aimed at examining the effects on patient safety in telemedicine trials. Several different types of measurements were identified in the literature, which may have implications for patient safety and can be divided into overall categories that reflect either patient injury or risk of injury. These are:

- clinical effect
- psychosocial effect
- behavior
- technology
- other risks

Most often, the effects (clinical effect and behavior) are examined with a focus on mortality rate, clinical deterioration, unplanned acute contacts with the health service and discontinued participation in telemedicine trials.

Summary - What do the Danish experiences show?

Interviews with Danish informants show that examples can be pointed out that telemedicine can have both negative and positive effects on patient safety. Experiences with the negative effect of telemedicine on patient safety is limited by the lack of a robust infrastructure that supports national data-driven work on the adverse events using digital healthcare as telemedicine.

There is a lack of national standards as to how patient safety is investigated and monitored when using telemedicine in Denmark.

The informants said that most of the challenges and risks described included unintended negative effects on the users' (patients and/or staff) behavior and/or their communication. Overall, the challenges could be found within seven topics:

- The right patient – telemedicine is not for everyone
- The right organization – there is no room for doubt
- The right service – not all information can be digitized
- Different communication places different demands on patients and staff
- Reactive patient safety culture
- Design of the technology – “One size fits all approach”
- Technology and organization - the one who owns decides

The most frequent reasons for challenges and risks were of an organizational nature, e.g. inappropriate patient safety culture, lack of focus on knowledge sharing, lack of competency development or data collection as well as inadequate incentives that exist in the Danish healthcare system.

The described opportunities for patient safety in telemedicine included potential positive effects as follows:

- Timely treatment
- Competence enhancement for healthcare professionals
- Increased cross-sectoral cooperation
- Opportunities for rehabilitative approach to patients
- Reduction of infection risk when moving tasks outside of e.g. hospitals

Conclusion:

Based on the report's results along with many years of experience with patient safety work, several focus areas are recommended for future initiatives within the digital healthcare system in Denmark, including telemedicine.

5 focus areas for future initiatives withing the digital healthcare system:

- Better data on the effects of telemedicine on patient safety
- Using a systematic method for development and implementation
- Learning what goes wrong and what works well
- Risk stratification of the user and technologies
- Competency development on both sides of the screen.