

Digital care chains in health care – a study of care consumption, care quality, work environment and well-being

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Introduction

Digital healthcare services develops rapidly, but research is limited and often takes place parallel with new digital inventions. Previous studies suggest demographic differences in utilization rate and an increase of care consumption of simpler care matters when digital health care options are offered.

Little is known of medical accuracy of digital triage-tools and of the work environment of working in digital health care.

More research is needed regarding care consumption and the quality of care in digital healthcare as well as of the well-being and work environment for the staff.



The future is here

The county of Gävleborg introduced a digital care platform in 2022. Although already in use, it keeps developing and new features will be added as it progresses. It will be able to offer the population a cohesive digital solution, from first contact on to diagnosis and treatment. The goal is a more accessible and equal care for the population and to provide operational benefits and improved quality of care by sorting the patient's case to the right profession at the right time. No county in Sweden has so far set up a similar digital care chain. The studies described below has been approved by the Ethical Review Agency and are also registered at clinicaltrials.gov.

Study 1 - planned

Purpose

To describe and compare search patterns and effects of care contacts for patients with severe depression previous to admission to round-the-clock care, before and after the introduction of a digital care chain.

Methods

Care search patterns and triage outcomes are investigated via review of medical records before admission to round-the-clock care; before and after the digital care chain has been introduced. Three subgroups will be compared; recurrent depression, major depression and bipolar depression, since these subgroups likely have different search patterns and acuteity.

Two years after discharge, data is collected on the duration of sick leave and if suicide has occurred.

Populational data will be collected on suicide ratio and on the ratio of depression treated with round-the-clock care versus outpatient care.

The study will be supplemented with interviews on the patients' experiences of the digital care chain.

Study 2 – in progress

Purpose

To describe and compare the population in Gävleborg's search pattern for care, use of healthcare resources before and after the introduction of the digital care chain, as well as investigate the patients' satisfaction with and experiences of the digital care chain.

Methods

Care search patterns are obtained before and after the introduction of the digital care chain. Healthcare contacts as well as demographic data are measured longitudinally and retrospectively 12 months from the digital care chain's introduction date. The statistics are supplemented where possible with data on search causes.

The measurements continue longitudinally for at least a year after the introduction of the digital care chain.

Patient satisfaction is studied through a patient survey offered within the digital care app. The survey is supplemented with interviews of patient's satisfaction with and experiences of the digital care chain.

Study 3 – in progress, and Study 4 – planned

Purposes

To investigate how the digital way of working affects the staff's estimates of care quality, work environment and well-being and investigate possible links between these factors.

To investigate how staff working in the digital care chain experience the new way of working.

Methods

Study 3 Stress, collaborative climate, patient safety climate and satisfaction with the given care is investigated with via a questionnaire to the digital and traditional staff, respectively. Surveys are made before and one year after the introduction of the digital care chain.

The survey is supplemented with the county of Gävleborg's annual work environment survey as well as from the digital care chain's regular work shift evaluation.

Study 4 Semi-structured interviews on care quality, work environment and well-being take place two years after the start of the digital care chain with staff from the digital care chain.