

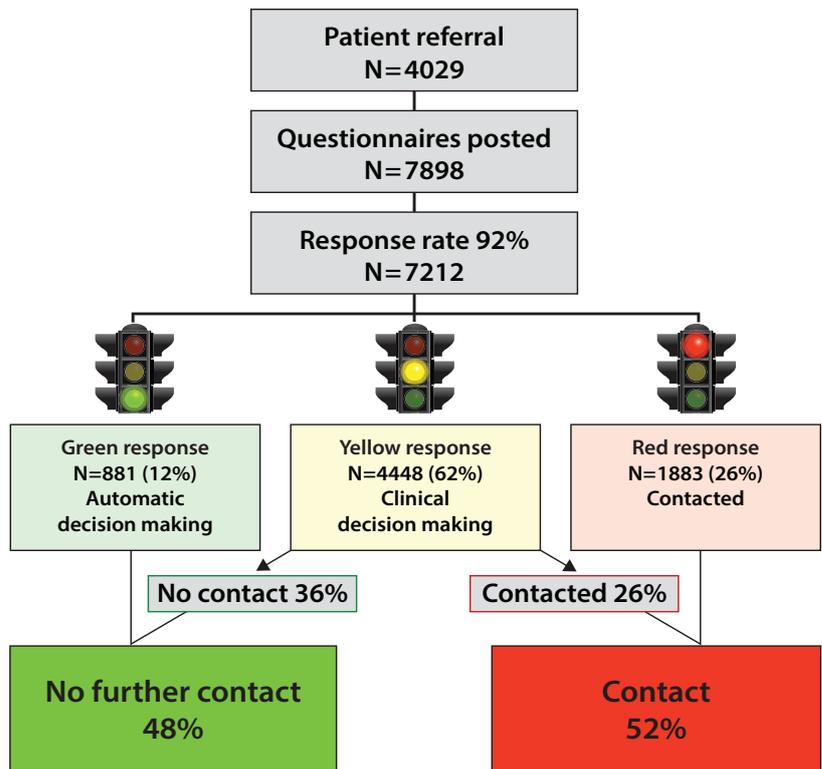
Success with Tele HealthCare at scale in Central Denmark Region

Often telemedicine and remote management of chronic diseases are only applied in small scale and have not become an integral part of daily practise. In Central Denmark Region we have, however, succeeded in implementing telemedicine at a larger scale and into daily practise. This article highlights a few examples of successful large scale interventions and their reasons for success.

One of the reasons for success is that health care professionals are combining new ways of working with the use of standardised eHealth care solutions. Furthermore, we aim at using generic technological solutions that can be used for different patient groups.

The patient as an active co-player

The key to successful implementation of telemedicine at a larger scale is intense focus on other factors than the technology itself. Attention is brought to new care models with extensive patient engagement and personalisation of services. We have succeeded in engaging patients in their own health management by systematically using patient reported outcome on health status and by applying home monitoring combined with educating our patients in better understanding their own health. The result is high quality in treatment, high patient security and empowerment of the patients.



Patient Reported Outcome in AmbuFlex reduces the number of face-to-face consultations for outpatients by 48%

Outpatient visits according to needs

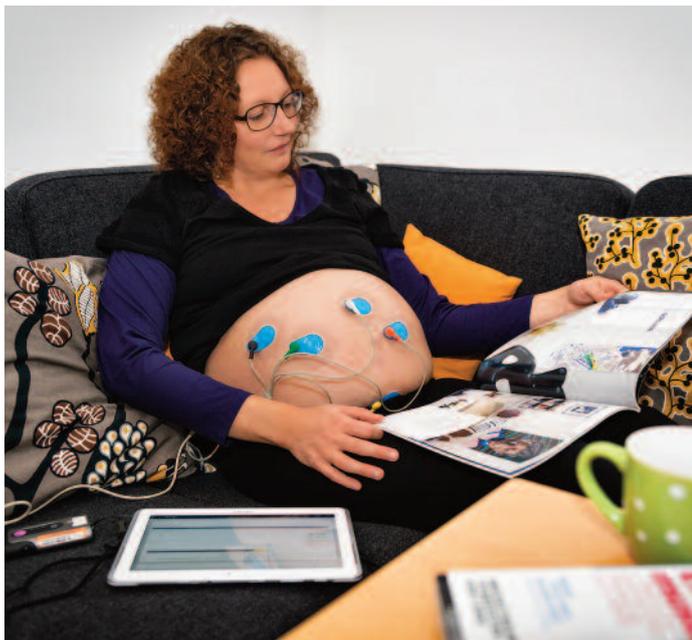
Traditionally, control of outpatients is part of a standardised treatment programme. However, often the consultation proves unnecessary and could be avoided if the health professionals had had access to few essential data on the state of the patient prior to a consultation.

Knowledge of the state of the patient is provided via questionnaires answered by the patients at home without causing extra time consumption for the health professionals involved. The questionnaires, in the system called AmbuFlex, are used to assess the patient's needs

for a physical consultation. The data from the questionnaires provide clinical decision support in terms of allocating which patients should be seen in the outpatient clinic.

More than 4,000 patients diagnosed with epilepsy use the generic system AmbuFlex for reporting on the status of their health. Data reveals that close to every second outpatient visit can be replaced by a new questionnaire instead of a face to face consultation. The same system is in use for a wide range of patient groups. Furthermore it has recently been decided to deploy the use of patient reported outcome nationwide.

Image: © Tonny Foghmar, Aarhus University Hospital, Denmark



Women with complicated pregnancies monitor the health of their unborn child at home, thus avoiding long term hospitalisation



Digital photos and cross sectional care plans improve treatment of diabetic foot ulcers and venous leg ulcers

Home monitoring of complicated pregnancies

Another example of tele healthcare at a larger scale is home monitoring of women with complicated pregnancies for example the risk of pregnancy toxemia or when the water brakes before due date. By monitoring clinical key indicators and using customized electronic questionnaires in the system called OpenTele, hospitalizations can often be avoided or shortened.

The patients obtain a sense of security and reduced uncertainty due to the fact that the frequent remote monitoring is followed by a close dialogue with the hospital via phone or the built-in secure messaging system. The patients learn more about their health condition and in some cases the costs have been reduced with 77% compared with traditional patient treatment that can involve hospitalization for several weeks.

Generic solution

OpenTele is flexible and can be used to combine a number of different clinical values thus being suitable for a wide

range of different diseases. The solution was developed in a national context involving three different regions. More than 1,500 patients have used the platform for monitoring diabetes, chronic obstructive pulmonary disease, inflammatory bowel disease and complicated pregnancies.

Focus on coordination across sectors

Telemedicine has a high level of attention, to ensure high quality in patient flows across sectors and timely treatment of patients with chronic health conditions.

We have obtained valuable knowledge from the large scale project telemedical assessment of ulcers. The project targets patients with diabetic foot ulcers or venous leg ulcers, where digital images and shared care plans are accessed by healthcare staff in hospitals, community nurses and patients.

The goal is to reduce outpatient consultations, provide easier access to specialists at the hospitals, improve patient safety and enable patients to

save time for transportation. Approximately 1,000 patients have been included.

The next large scale initiative is proving cross sectional tele healthcare for patients with chronic obstructive pulmonary disease.



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