

Mobile X-ray services

Lillebaelt Hospital in Kolding, Denmark

Solutions for tomorrow was created to take X-ray wherever patients are located. For many years, premium quality X-ray imaging was limited to hospitals, but with digital detectors and wireless technology, old limitations are gone. An aging population requires a new approach to healthcare, one which is patient-centred. We believe that decentralised and patient-oriented care brings many benefits to both patients and hospitals. Transferring some of the functions of secondary care into the primary sector, not only saves money but also improve the wellbeing of patients. In aging population, more and more people are living with long term and complicated conditions. Travelling to hospitals to receive X-ray scan requires many services, but importantly can be very stressful to fragile patients.

Premium imaging is now fully mobile

Our unit incorporates the latest detector technology and imaging acquisition software in an exceptionally light and portable frame. The unit slips easily into the van where it is quickly and safely locked into place and ready to roll. Patients no longer have to compromise by accepting risky travel to get the best possible imaging. Now, it can come to them.

Lillebaelt Hospital in Kolding, Denmark

One of hospitals that decentralized its operations and delivers mobile X-ray services to patients is Lillebaelt hospital in Kolding, Denmark. In 2018 this service was run as a pilot project, but it quickly showed many benefits for the patients. Nowadays Kolding's radiographers bring the service to nursing homes and to frail, vulnerable or disabled patients.

X-ray examinations performed in comfort of patients homes show positive impact on their reactions and prevent them from unnecessary exposure on stress factors as a visit to a hospital can be a frightening experience for vulnerable patients, especially for patients with dementia or other neurological disorders. Research conducted by Kolding hospital shows that patients experience an increased quality of life and lower needs for sedation medication due to anxiety. Mobile radiography services provide more accurate diagnosis. That helps in tailoring better treatment and care, which at the end results in reducing the burden on hospital resources and improving the wellbeing of patients. It is important to add that the patient-centred care services save up to 30 % of cost per patient (*Cost analysis of mobile radiography services for nursing home residents in Southeast Norway, E.Kjelle*).

Quick facts about the !Mx

- Strong drive motors
- High ground clearance and soft front wheels for improved manoeuvrability
- Safety brackets for car transport
- Built-in 4/5G router
- Rain cover
- Detector lock

Same imaging capabilities -
multiple usage



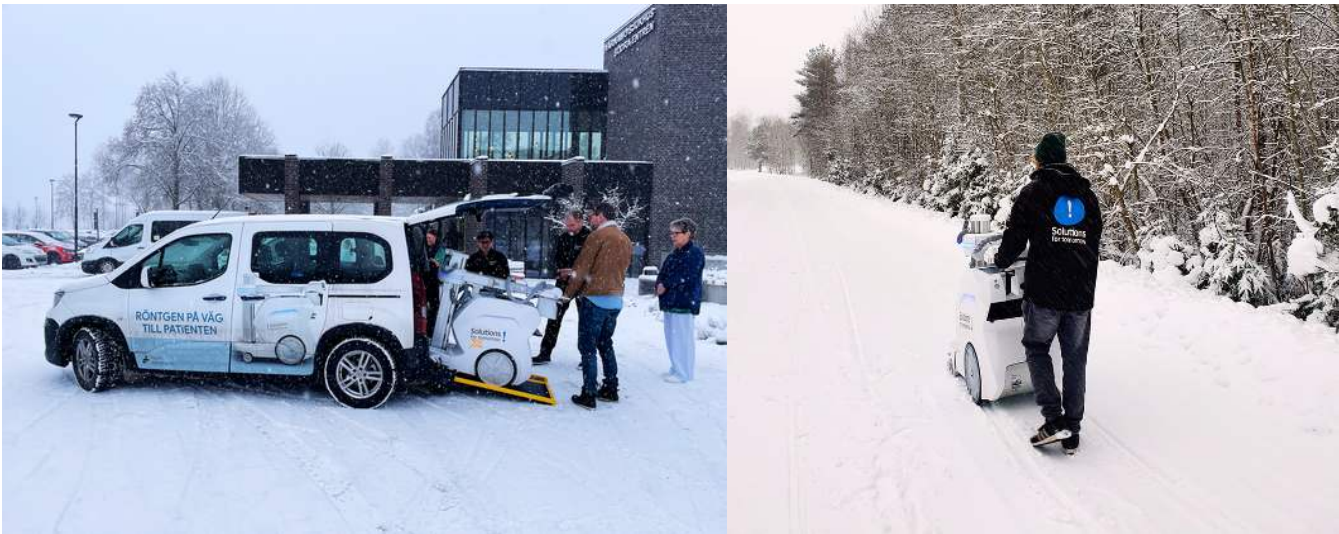
Severe dementia patients were the driving force of the project

"I was often called by staff when they had problems with unassisted patients from carehomes. These patients had dementia and were scared, very distressed and confused. They were crying for help and tried to escape. It was heartbreaking to watch them suffering", says Pica Andersen, chef radiographer of Lillebaelt hospital. "These patient are my driving force and the sole reason I came up with the idea of keeping them safely at homes. My goal is to expand this service to all patients with severe dementia in Denmark. We collaborate with research department in Ireland to see what are the cost benefits in a higher society perspective. The main reason we are doing this it to provide the information to other leaders that want to start this service in Denmark and Europe."

Don't let anything to stop you!

We can see the raising interest around mobile X-ray services, but many people express difficulties in establishing it and gathering financing. Therefore, we ask Pica Andersen if she has any advices for others that would like to start the service.

"Come and visit us!", she says. "Create the vision and don't let anything to stop you. Be prepared to do the hard work, but this is so rewarding in the end. The mobile radiography setup benefits vulnerable patients and provide meaningful work for radiographers."



Patient-centered award

At the end we would like to add that Pica Andersen and whole X-ray team from Lillebaelt hospital has won the EFRS patient-centered award for their work and research within mobile X-ray services. The EFRS Patient-Centred Care Awards aim to recognise, celebrate, and promote the work of radiographers in improving care through a patient-centred approach. We are very proud that our equipment is used in this project and we hope that by bringing this very successful example of forward-thinking solution that puts patient care first, we can inspire others to start up mobile X-ray services in their regions. As we said before, our aging population needs a new healthcare approach.

(https://connect.myesr.org/?esrc_course=the-efrs-patient-centred-care-awards)

Our recommendations on further reads within mobile X-ray services research:

- *How to set up a mobile X-ray unit in the community: Implementation initiatives for patient-centred care*, P.A.B, Andersen, H.Precht, M.F. McEntee, M. R. V. Pedersen, Mar 2023
- *Exploring radiographers' experience with mobile X-ray of patients in their homes*, M. Bisgaard, P.A. B. Andersen, A.T. Jensen, C. B. Sorensen, T.S. Larsen, J.M. Jensen, H. Precht, Feb 2022
- *Exploring the patient perspective of mobile X-ray in nursing homes: A qualitative explorative pilot study*, J.M. Jensen, P.A.B. Andersen, L. Kirkegaard, N. Larsen, W. Most, D. Nielsen, H. Precht, May 2021
- *Cost analysis of mobile radiography services for nursing home residents in Southeast Norway*, E. Kjelle, L. Kleven, H. Merete, H.O. Melberg, Oct 2018
- *Mobile x-ray services; outcome for nursing home residents and society - a literature review*, E.Kjelle, Dec 2016