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Time to expand decentralisation of medical education in Norway

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Will decentralising medical education in Norway enhance learning, reduce the burden on university hospitals and increase recruitment in rural areas?

The conditions for educating doctors have changed. As the demand for doctors has increased, the annual intake of students at Norway's four medical education programmes has gradually crept up from 367 in 1973 to 636 in 2019 (1). The Grimstad Committee has recommended adding a further 440 study places, with the aim of educating 80 % of Norway's doctors domestically (1). Eighty new study places have recently been allocated to the four universities that offer education in medicine (2). The Grimstad Committee also recommends to expand the number of locations – throughout Norway – where medical students can carry out their clinical practice.

Educating doctors to work in northern Norway was one of the main arguments for

establishing UiT The Arctic University of Norway in 1973 (3). In 2009, 24 medical students in their fifth and sixth year of study took up places in Bodø. UiT then extended the decentralisation in 2017, giving up to 12 students in years five and six the opportunity to study in Finnmark. In 2018, NTNU established NTNU Link in the county of Nord-Trøndelag for third and fourth year students (4). There are currently three decentralised study models in Norway:

The Bodø model

One of the preconditions for introducing a decentralised programme of medical studies at Nordland Hospital in Bodø – known as the Bodø model – was that the students had to follow the same timetable as the students in Tromsø, but with teaching staff from the local hospital and primary care clinics in the area. Twelve years later, the programme is still highly similar to Tromsø. At the start of their sixth year, the students are taken to a rural municipality with more than 50 years' experience of running a local infirmary, where the students' main learning activity is deciding which (hypothetical) patients need to be hospitalised and which can be treated in a municipal emergency day care unit. The core activities are theme-based full-day simulations in emergency medical care for trauma, sepsis, cardiac arrest and patients who deteriorate, ultrasound training, courses in emergency internal medicine and full-scale exercises of a major car accident that have taken place many miles from a hospital in freezing temperatures (5).

The Finnmark model

In Finnmark, the secondary health service is spread over a large area and the fifth and sixth year medical students therefore rotate between Alta, Karasjok and Hammerfest. The students hold patient consultations in both the specialist health service and in the primary health service at all three locations. The learning objectives are nevertheless the same as in Bodø and Tromsø. As in Bodø, the students receive extensive training in emergency medicine. They are also taught about general cultural factors and the rights and health challenges of the Sami population. There is a stronger focus on good patient care pathways and interaction between health service actors, and a number of simulated exams are held. The local hospital in Hammerfest is the main base the Finnmark model and also for the nursing study programme in the county.

NTNU Link

NTNU Link applies to the third and fourth years of study and is designed to accommodate up to 16 students per year of study. The students are based at Levanger Hospital, and Namsos Hospital Trust and the primary health services in the region are also learning arenas for the students. Geographical proximity means that the students can easily travel to Trondheim and St. Olav's Hospital when required. A collaboration in emergency medical simulation has been established with the nursing education programme at Nord University in Levanger. After the fourth year of study, students are encouraged to undertake their clinical placement and to work on their thesis in hospitals and in general practice in the same region.

Decentralisation opens up opportunities

Since start-up, 216 students from the Bodø model and 33 from the Finnmark model have graduated. At NTNU, the first students will complete their studies in the spring of 2022. The benefits not only mean that these students gain extensive experience in patient contact and learning in small groups, but the study programmes in Tromsø and Trondheim will also be less crowded and will have smaller groups of students.

The three models largely reflect the potential benefits of decentralisation

The three models largely reflect the potential benefits of decentralisation. In 2009, the Bodø model was designed as a blueprint of Tromsø, while in 2017 the Finnmark model was introduced with a focus on the local community engagement, both in the education model and in student involvement. Its aim was also to increase students' cultural understanding and use generalists as role models – inspired by the Canadian model (6). NTNU Link adopted the pedagogical principle of longitudinal integrated clerkship, with an emphasis on continuity for the students in terms of care, curriculum and supervision (7).

The local hospitals are still the main clinical learning arenas in all three models, but the primary health service is also an important contributor as it provides general practitioners to act as group supervisors. It also enables students to gain practical experience at nursing homes, A&E departments, child health centres and in general practice. Among the first eight cohorts that studied in Bodø, a significant impact on local recruitment can be seen, not only at Nordland Hospital, but also in general medicine, particularly in rural municipalities (as described in an article by Åsa L. Westlie, Margrete Gaski, Birgit Abelsen, Hilde Grimstad and Eirik H. Ofstad – *Leger utdannet i Bodø: hvem er de og hvor blir de av?* – currently under peer review for publication in this journal).

More research needed

The smaller a specialist community, the less research that will be conducted. A closely integrated collaboration between the university hospitals and the decentralised models is therefore vital. Such collaboration can help teaching staff – both in decentralised and centralised areas – to develop their clinical skills and knowledge, and stimulate their professional and academic development. Several of the instructors at Bodø have completed a PhD as part of their part-time position at the university, while in Finnmark a new research group has just been established.

Centralisation and specialisation, shorter hospital stays and technology advancements have led to changes in the patient population at university hospitals. The most common diagnoses and typical patients are more often found in local hospitals, decentralised medical centres and in the primary health service. People incur injuries and become acutely ill in their local community. The educational institutions need to keep pace with the changes in where, how and from whom patients receive health services, and medical education programmes need to be designed accordingly. Medical students can gain valuable experience in all sorts of scenarios well beyond the walls of university hospitals.

Stronger international focus

It takes a village to raise a medical student (8). Calls have been made to transfer more of the learning in the four university cities and associated university hospitals to local hospitals and municipalities. International literature clearly shows the benefits that such a move could bring (9, 10).

Exposing students to variety in everyday clinical issues will ensure that newly qualified doctors are well equipped for the medical profession, regardless of which branch of medicine they choose to work in

In other words, there are many good reasons why decentralised study models in medical studies must be welcomed. Exposing students to variety in everyday clinical issues will ensure that newly qualified doctors are well equipped for the medical profession, regardless of which branch of medicine they choose to work in. If decentralised study programmes also improve recruitment in rural areas, this represents a clear boost to the universities' social mission.

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