

ORIGINAL RESEARCH

Forty years of allocated seats for Sami medical students - has preferential admission worked?

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A B S T R A C T

Introduction: This article examines the effects of a special admission policy for Sami medical students in Norway. In the 1960s, public health and health care were found to be poorer in Sami communities than in the rest of Norway. There were few doctors and none of them spoke Sami. Sami school leavers found it difficult to gain admittance to medical schools. In response to this situation, the medical faculty at the University of Bergen adopted a special admissions policy for Sami students in 1963. The University of Tromsø did the same in 1991. In this study we have analyzed whether the allocated Sami seats produced the desired outcomes. In assessing the outcomes, the study takes into account the considerable improvements in public health and health care in the last 40 years, wider use of the Sami language and generally higher educational achievements among the Sami.

Methods: This retrospective study was set in two medical schools in Norway. The study population is students admitted to medical school on allocated Sami seats, in the two periods 1963-1986 at the University of Bergen, and 1991-2000 at the University of Tromsø. After a question identified the Sami students, whether they had practised or were practising medicine was determined.

Results: In total 38 students were admitted on the allocated Sami seats, and 32 graduated. Of the candidates, 93% had practised medicine in one of the two northernmost counties in Norway. Graduates during the 1960s and 1970s were more likely to have worked as GPs in the main areas of Sami habitation than the Sami physicians who graduated later.

Conclusions: The Sami doctors admitted to medical school on allocated Sami seats have practiced in Finnmark or Troms, counties where most of the Sami people live. However, this study was unable to establish whether admission on these grounds led to more Sami doctors working in the main areas of Sami habitation. Regarding the workplace location variable, there were no differences between Sami and other physicians from the northern part of Norway who were educated at the University of Tromsø.

Keywords: affirmative action, Indigenous people, medical education, Norway, rural recruitment, Sami physicians.



Introduction

The Sami people are recognized as Indigenous people who live in the northern parts of Norway, Sweden, Finland and Russia. We have chosen to define the main areas of Sami habitation in Norway (MASH) as the five municipalities of Finnmark county (Nesseby, Tana, Karasjok, Kautokeino, and Porsanger), the northernmost county in Norway; and one municipality in Troms county (Kafjord) (Fig1). Our definition matches that of the *Sami Language Act*.

Because ethnic categories have been ignored in official population statistics in Western Europe since World War II, Norway has no official statistics on the Sami people. It is not known how many Sami live in Norway today; however, estimates suggest there are approximately 35 000¹. The first medical training institution to adopt a special admissions policy for Sami medical students was the University of Bergen in 1963. The policy sought to provide a physician workforce for the Sami people that was familiar with Sami language and culture.

Health, language and education in the 1960s

Early in the 1960s a political and professional concern emerged about a persistent difference in health gradients between Northern Norway, especially Finnmark, and the rest of the country. This concern is reflected in the preparatory work on a preferential admission policy for Sami students at the medical schools. Finnmark was thinly populated, with long distances between doctors. Of the few doctors in Finnmark none spoke Sami. Health status was poorer in Finnmark than anywhere else in Norway². In the period 1961 to 1964, infant mortality in Finnmark was 24.5 per 1000 (the same as the poorest countries in Europe) compared with 17.1 per 1000 in the rest of the country³.

Although many Sami in this part of the country were monolingual, the official language was Norwegian. School

achievements among Sami were considerably below the minimum requirement⁴, making admission to medical school difficult. In 1959 the Norwegian government appointed Sami Commission recommended reversing the policy of assimilation and Norwegianization, and adopting a more positive attitude towards the Sami people. Based on equity arguments, a few allocated Sami seats were offered in studies with restricted admission. In 1962-1963 only 6.3% of Finnmark youths finished senior high school, compared with the Norway average of 19.7%⁵.

The idea behind the allocated Sami seats in medical school

One of the government's strategies to improve the situation in the MASH was preferential admission to higher education for Sami students. Although the government argued on equity grounds, the medical school in Bergen used ethnicity as a criterion for admission for purely utilitarian reasons. The aim was to educate Sami-speaking physicians who were also familiar with Sami culture, and were thus most suitable for work in Sami communities. Sami language skills had not been ground for admission to medical school before⁶.

The allocated Sami seats in practice

Currently, in 2008, two of the four medical schools in Norway have each two allocated Sami seats students. Bergen University (UiB) in south-western Norway has had two seats since 1963. The University of Tromsø (UiT) in northern Norway followed suit in 1991. Between UiT's establishment in 1973 and 1990, admission points for medical school were awarded for knowledge of the Sami language. The criterion for qualifying for allocated Sami seats continues to be Sami language skills, and/or a personal declaration of Sami ethnicity. Sami applicants may elect to compete against a pool of Sami candidates, rather than the larger pool of general applicants. The allocated Sami seats are not specially funded.

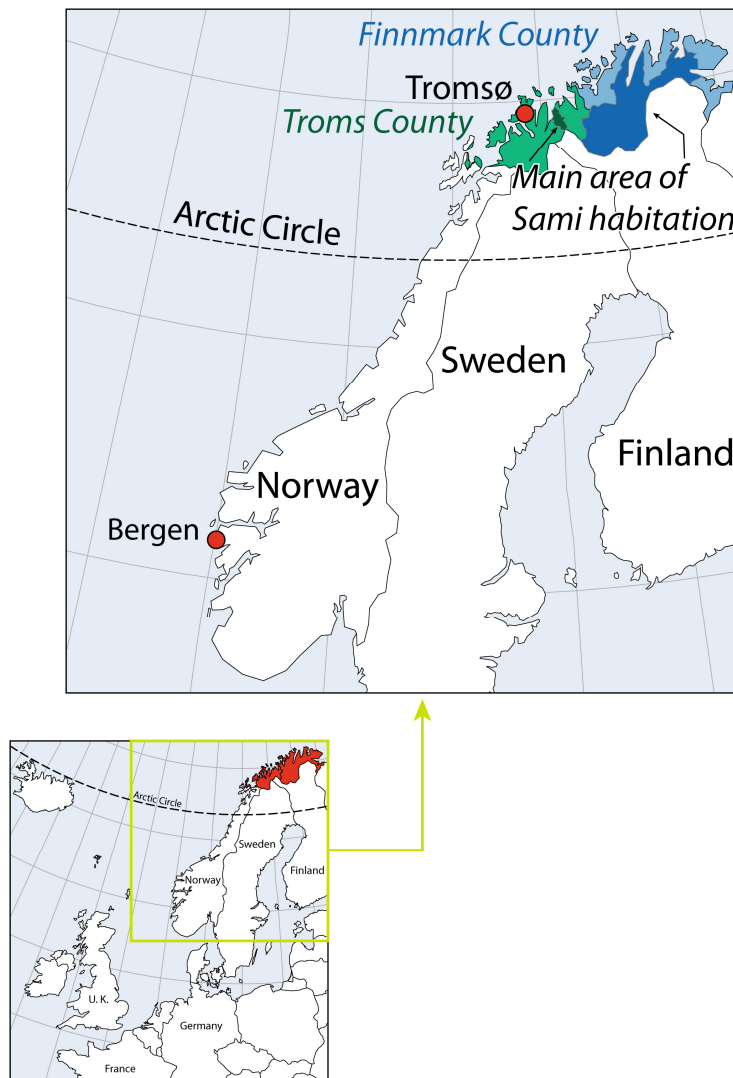


Figure 1: Map of the main areas of Sami habitation in Norway and the counties of Finnmark and Troms.

The question of duty

In 1966, UiB and the Ministry of Health decided to require students admitted on Sami allocated seats to work for 2 years in Finnmark or Troms after their internship. However, this was always regarded as a moral duty and no sanctions were applied to physicians who refused to comply. Currently no expectation of duty is attached to these allocated seats but it is unclear when UiB reversed the policy. Allocated Sami seats at UiT have never been bonded to specific areas of work.

Research questions concerning the impact of the allocated Sami seats

When studying the impact of allocated Sami seats on the number of qualified Sami physicians in the relevant areas it is necessary to take into consideration the huge changes in Sami society during the last 40 years. During this period improvements in public health and in the Norwegian health service in general and in the MASH have been considerable. In 1992 Sami became an official language in Norway. Educational levels in Sami municipalities have improved.



Strategies outside this article's scope for recruiting and retaining physicians with Sami language skills to jobs in primary health care in Sami areas include: rural student recruitment; changes to the curriculum; and gaining experience of rural practice⁷. Although Sami language skills, knowledge in Sami culture and multicultural understanding are important in the delivery of health care to the Sami population, they too fall beyond the scope of this article⁸.

The impact of allocated Sami seats has never been evaluated systematically. The aim of this study was to discover to what extent Sami physicians admitted to training on allocated Sami seats actually worked or are working in Sami communities. (There are other Sami physicians in Norway who were admitted as ordinary students or educated abroad. However there is no registry of students or physicians in Norway which records ethnicity.) Unless indicated otherwise, the terms 'Sami graduates' or 'Sami doctors' in this article refer to graduates trained on the allocated Sami seats. The research questions to be answered are: What is the rate of graduation of students admitted on allocated Sami seats? Do Sami graduates go on to work in Sami communities? How long do Sami physicians work in Sami communities?

Methods

Setting

This study has a retrospective design. The setting was the two medical schools at UiB and UiT. The study population was Sami students admitted on allocated Sami seats in the period 1963-1986 at UiB, and 1991-2000 at UiT.

Data collection

Data were gathered on 18 graduates from UiB (admitted 1963-1986), and 20 from UiT (admitted 1991-2000). Step one of the data collection was to identify students admitted on the allocated Sami seats. While the Faculty of Medicine

at UiT has kept records of all such students, the UiB presented a complex challenge. The Faculty of Medicine at UiB has records of the high school and final grades of all students. As there were only two Sami students who performed significantly poorer at high school than fellow medical students in the same year, it was possible to identify the Sami students by checking grades. In addition, records of students admitted to allocated Sami seats in 1963 and 1976-1986 included the term 'Allocated Sami seats' or 'Sami language' in the register. This assisted with identification considerably because the records for 1983-1986 do not contain grades. The total number of students admitted to allocated Sami seats at UiB was confirmed in 1986 (letter dated 10 June from AB Sviggum, Medical Faculty UiB to I Ytrehus Medical Faculty UiT). In 1987, UiB stopped using this register, and is unable to provide any information on students admitted on allocated Sami seats between 1987 and 2000. According to the Faculty of Medicine, an insignificant number of such students were enrolled in Bergen between 1987 and 1999, mainly because Sami students prefer the medical school in Tromsø (pers comm, G Larsen, Faculty of Medicine, UiB, 30 November 2006). From that time, UiT seems to have taken over the commitment to enroll Sami students.

Step two of the data collection was reviewing the graduation rate among the students admitted on allocated Sami seats. The Sami students' graduation rates at the two universities were first compared, and then the rates of all medical students in the same cohorts at UiT for the period 1995-2000 were compared (UiB did not provide any graduation rates for the 1970s and 1980s).

The third step of the data collection was to scrutinize the careers of the 27 Sami graduates after internship. This information was gathered from several sources, such as pharmaceutical companies' address lists, and books about the careers of doctors in Norway⁹⁻²³. A limitation was that employment data only recorded the main employer, giving no information about other possible employers. However in each instance practice location, type of practice and duration



of employment measured in person-years (a measure which excludes overtime) was recorded.

A second limitation was the quality of employment data; however, a variety of data sources was used to compensate for any shortcomings. Pharmaceutical industry records of place of employment were available only for the period 1996-2007, and only on 50% of the subjects. Career books' employment data were recorded only yearly. The doctor career book of the National Medical Association was consulted, but while information about careers prior to 1996 was complete, some of the doctors were missing. Combining these data with CVs on webpages, obituary notices and practice history, the information was obtained. Where employment information was missing for one year, information on the previous and following year was used for half a year each.

Geographical borders

Like other Indigenous people, the Sami people are hard to define. Because of the lack of ethnic categories in official population statistics in Norway, Sami populations tend to be described according to their geographical location. In the preparatory work for the allocated Sami seats in medical school, the geographical unit was Finnmark County. However the MASH consists of six municipalities in Finnmark and Troms. Therefore two different geographical units are used to present the results: the MASH; and the counties of Finnmark and Troms.

Results

Education of Sami physicians

In total 38 Sami students had been admitted to allocated Sami seats since 1963; 32 of these qualified as doctors. Five were still in their internship in February 2007. There are 24 men and 14 women. Between 1963 and 1983 all were male. Both UiT and UiB have offered Sami seats,

conditional on there being qualified candidates. At UiB 37.5% of the allocated Sami seats were filled between 1963 and 1986. At UiT, 100% were filled between 1991 and 2000 (although one student was admitted in two of the years, three students were admitted in other years). Of the Sami students, 84% graduated, 80% at UiT and 89% at UiB. The graduation rate among students on regular admission was 94.5% at UiT, 1995-2000.

Recruitment of Sami physicians

Almost all of the physicians in question (93%) had worked in primary health care or hospitals in Finnmark or Troms. One in three physicians had worked in primary health care in the MASH, and for almost all of these it was their first job after graduation.

During the first 10 years of the allocated Sami seats, the graduates started their careers with at least 2 years in primary health care in Finnmark. Half had worked in the MASH. Less than half went on to work in primary health care in Finnmark or Troms after this initial period, and only a quarter in the MASH.

Retention of Sami physicians

It is estimated that 60% of the work performed by Sami physicians was carried out in Finnmark or Troms. Only 4.6% of post-graduation work was in primary health care in the MASH (Table 1). Post-1980 graduates were less likely to have worked in frontline health in MASH than pre-1980 graduates.

As of February 2007, 67% were working in Finnmark or Troms and 79% in the northern part of Norway; 24% were working in primary health care and 68% in hospitals.



Table 1: Total years of medicine practiced in different areas by the fully trained doctors admitted on allocated Sami seats at the University of Bergen 1969-1986 and University of Tromsø 1991-1998. Person-years performed between 1971 and February 2007 ($n = 27$)

Place of practice	Years of medicine practised					
	By all candidates CM 1969–2004 [†]		By candidates CM 1969–1979 [†]		By candidates CM 1980–2004 [†]	
	Person years	%	Person years	%	Person years	%
Primary care in main areas of Sami habitation	18.7	4.6	11.0	4.8	7.7	4.2
Primary care or hospitals in Finnmark and Troms	244.6	60.0	146.6	64.5	98.0	54.0
Elsewhere	162.9	40.0	80.7	35.5	83.7	46.0
Total	407.5	100.0	227.3	100.0	181.7	100.0

CM, Cand. Med. (medical undergraduate).

[†]Year of graduation.

Discussion

The demand for allocated Sami seats increases with educational level

In the 1960s, there were few senior high schools in Finnmark, and affirmative action was taken to address this deficit. The fact that only one in three allocated Sami seats was filled in the 1960s and 1970s is not surprising, because few youths from Sami municipalities attended high school. The percentage of people with a university degree in Norway has been increasing rapidly since the 1960s, and this is true of Sami people. Currently the education level in the MASH is higher than in other rural municipalities in Troms and Finnmark. This may explain the increased demand for allocated Sami seats, and why almost all allocated Sami seats have been utilized since 1991.

Introduction of geographical policy instruments - important for educating Sami physicians

Since its founding, the UiT has followed a strategy to encourage Sami research and education. The Storting (Norwegian Parliament) decided in 1968 to locate the university in Tromsø because northern Norway offered fewer opportunities in higher education for students and

academics²⁴. Today, UiT is committed to the education of the Sami. Admitting students on allocated Sami seats among other policies has affected the education of Sami physicians. Since the 1980s, there has been progress in affirmative action based on geography, ethnicity and language. In 1973, 25% of UiT medical school admissions were reserved for students from northern Norway; and the figure was increased to 60% in 1998. In 1985, 6 seats were reserved for students from Finnmark. By 2007, 10 seats were reserved for residents of Finnmark or northern Troms (the medical school has a total of 100 seats).

The 'drop-out' rates for the allocated Sami seats is significantly higher than for ordinary places and other studies have had similar findings²⁵. This may be due to the rural background of most of the Sami students. A study from the University of Zagreb found that students from rural and remote areas had the poorest academic performance²⁶. This may be due to their having to adjust to a new lifestyle and urban setting as well as a demanding study regime.

Sami physicians choose like other physicians today

The allocated Sami medical school seats were created due to a lack of physicians, especially in primary health care in the



MASH. This shortage of physicians, particularly in primary health care and outside the major cities in the northernmost part of Norway that includes the Sami area, could be viewed both as an ethnic and a rural issue. Previous studies, mainly from the USA, have indicated that physicians from underrepresented minority groups are more likely to serve minority patients, patients with economically disadvantaged backgrounds, and to practise in areas with a physician shortage^{25,27-30}. Although 93% of the Sami physicians had been working in Troms or Finnmark counties, this does not mean that they returned to the MASH. Despite the fact that most of the Sami candidates had worked in Finnmark, it is estimated that only 4.6% of the candidates' person-years through their career were used in primary health care in the MASH. That is in average 0.7 person-years per candidate. The former system that required a 'duty year' could explain why Sami physicians were found in primary health care in Finnmark as their first job after residency, during the first 10 years. In 2007, 24.7% of the Sami physicians were working in primary health care, which is the same as for physicians in Norway in general³¹.

Studies have established that rural background is a factor in the probability of a doctor entering rural practice³²⁻³³. Norwegian studies have concluded that physicians are more likely to stay in the northern part of Norway if they have their roots there^{6,34-37}. Three of these studies have examined practice location 2-10 years after graduation from UiT³⁵⁻³⁷. The results are consistent: 72-83% of physicians whose background is in the northern part of Norway work in this area; and 69% of physicians whose background is from Finnmark and Troms, work in Finnmark or Troms³⁶. This indicates that the candidates admitted on allocated Sami seats have behaved very much like other candidates educated in Tromsø since 1979. Of the candidates, 67% work in Finnmark or Troms, and 79% work in the northern part of Norway as a whole.

Do the allocated Sami seats work?

As to the utility-arguments for the allocated Sami seats, which were to educate physicians who had Sami language

qualifications and knew the Sami culture and thus would be more suitable than other physicians for work in Sami communities, the results indicated that the allocated Sami seats had not been successful in this respect. However, in this study, we have not adjusted for the labor market. A tight labor market for physicians in primary health care could be a barrier to obtaining a job in primary health care in the MASH. However, statistics from the years 1980 to 2000 show that there has been a continuous lack of physicians in Norway, although the rest of the Nordic countries have had periods with a surplus of physicians. There have been vacancies both in primary health care and in hospitals, although the growth in jobs in hospitals has been stronger than in primary care, except for the period 1990-1995³⁸. The rural districts of northern and western Norway traditionally lack physicians, even when the labor market tightens. Therefore the labor market has probably not been a notable barrier to Sami physicians choosing to work in small Sami communities.

The need for allocated seats today

The equity arguments for allocated Sami seats are not as strong today as they were in the 1960s. Health indicators have improved, for example infant mortality in Finnmark has improved from 24.5 of 1000 in the 1960s to 5.05 in period 1996-2000, although this is still slightly above the Norwegian average. Longevity is still on average 1.8 years lower in Finnmark compared with Norway (for children born 2001-2005)³⁹. The density of physicians in the MASH has grown, as it has in the rest of the country. Today 8% of the positions in this area are occupied by a locum. One in four physicians in the MASH is able to use the Sami language with patients ((R Utsi, V Siri, H Nicolaysen, A Varsi, B Hansen and J Olsen, pers comms, 2007).

Many people with Sami roots or with mixed Norwegian and Sami roots speak Norwegian as their first language. The number of Sami-speaking people in Norway is not known. The Sami Parliament uses an estimate of 23 000. Based on the Saminor study in 2003-2004, the number of people with Sami language skills is considerably lower, with 48% of the



population between 36 and 79 years in the MASH using the Sami language at home, alone or with other languages⁴⁰, resulting in an estimate of 7736 Sami speaking people in this area (the estimate is based on the assumption that the share of the population 0-34 years and above 79 years who speak Sami is the same as the 35-79 year old population).

Health personnel with Sami language skills are necessary for elderly Sami people who speak Sami as their first language, or are monolingual. A study from the Porsanger municipality in the MASH concluded that language problems in primary health care are rare, occurring most often with people older than 75-80 years⁴¹. Health authorities also identify patients with chronic illnesses as having the most urgent need for patient-physician communication in the Sami language⁴². Traditionally the Norwegian language has been used for contact with public authorities and healthcare providers. Patients may bring an interpreter or use the clerical staff as interpreters⁴³. Since 1992 *The Sami Language Act* had provided MASH inhabitants with the legal right to use the language they prefer, Sami or Norwegian, in contact with civil servants and health personnel. This indicates a continuing need for Sami-speaking physicians, although the number of Sami-speaking patients has probably decreased considerably since the 1960s.

Conclusions

The allocated Sami seats system is one way to secure the education of physicians with Sami language skills, but this arrangement does not distribute physicians to serve in primary health care in the MASH. In 2007 the impact of the allocated Sami seats is similar to the impact of the geographical policy measures in terms of recruiting and retaining physicians to primary health care in the MASH. Special admission rules based on ethnicity could then be viewed as an arrangement generating unnecessary administrative costs. They can also create more conflict than admission rules based on geography, especially due to the fact that both the health and the educational situation among Samis today is dramatically changed compared with the

situation 40 years ago. Even if the impacts of the special admission rules are limited in the MASH, there are positive impacts in other parts of health care that benefit from having Sami speaking physicians, although they serve fewer patients who want to speak Sami language outside the MASH..

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