Statistics show that there is a constant scarcity of medical practitioners in Norway. This excessive demand seems to be impossible to solve by an increase of medical students. A qualitative study was performed to develop an understanding of how mechanisms in the health services create the ever-larger demand for doctors. By using interviews of doctors and medical administrators an analytical model of the extensive need for medical doctors was developed. In this paper this qualitative empirical work is presented and the results discussed.

Based on empirical results together with the degrees of system dependence and defacto-dejure definitions, four types of "scarcity of medical practitioners" are characterised. First, traditional scarcity of medical doctors, the non-existence of a local doctor, for example because of a community's geographical unavailability; second, expansive demand-driven scarcity of doctors, because of the development of new treatment for previously untreatable patients; third, locally constructed scarcity of doctors in the municipalities that has practically no excessive demand for physicians although they have vacant positions; and fourth, the professionally driven scarcity of doctors, because of medicine's development of higher specialisation and professionalisation.

The model of four categories of scarcity of doctors is discussed to develop a more general understanding of medicine's position in the health services and society during a period of experienced scarcity of physicians.

INTRODUCTION

For the last ten years, Norwegian hospitals and municipal administrators have had problems getting enough medical practitioners to hospitals and primary health services. The most applied solution to this problem has been to attract deputy doctors from our neighbour countries, especially Sweden and Denmark. The situation is somewhat strange since Norway has more physicians in relation to the population than other Northern European countries, among them Denmark and Sweden, as shown in Table 1.

---

1 Norwegian University of Science and Technology (NTNU), Department of Sociology and Political Science, N-7491 Trondheim, Norway, e-mail: akselht@svt.ntnu.no.

2 The study, on which this paper is based, was supported by the Norwegian Association of Local and Regional Authorities (Kommunenes Sentralforbund) and SINTEF Unimed Norwegian Institute for Hospital Research. It was managed by researcher Lars Erik Kjekshus. The full report (Kjekshus and Tjora 1998) is available in Norwegian from SINTEF Unimed Norwegian Institute for Hospital Research, N-7034 Trondheim, Norway.
It has so far not been seriously questioned why Norway needs significantly more doctors than our neighbour countries. Quantitative studies (or really countings) have been performed from time to time, but with varying results. Typically one has measured each municipality’s and each hospital’s vacant physician posts, and summarised the counts. In the hospital sector the results has shown that during the last years there has been from 10 to 30 percent vacancies on a national basis, varying with speciality. In psychiatry, the situation is especially difficult in most parts of Norway, with 26 percent vacancies on a national basis in youth psychiatry (1996 numbers). It is repeated now and then that the problems with getting enough personnel stems from Norwegian topography, the steep mountains, the deep fjords and the many small islands along the coast. All Norwegians are supposed to have the same availability of medical services, independent of where they live. Some of the differences will of course be explained by such topographical factors, but for example Finland has also got large sparsely populated areas, but a significantly lower coverage of physicians.

However, differences between the population per physician rate in Norway and other Nordic countries have been background and motivator, rather than the topic for this study, which is the first qualitative study of employment of medical doctors in Norway. With a phenomenological approach we have focused on the experiences and strategies of physicians in hospitals and primary health care rather than numbers. The main questions in the study are: How real is the scarcity of medical practitioners? How is excessive demand for physicians created? We are particularly interested in how the organisation of the medical profession and the health services are related to the development of demand for medical services.

Based on interviews of physicians in hospitals and primary health care, four categories of explanation are provided. The study represented here has resulted in an alternative understanding of the Norwegian scarcity of medical practitioners.

**Methodology: From Numbers to Experience**

The aim of our research project was, as mentioned above, to look for alternative ways to explore and in some way measure the scarcity of medical doctors in Norway. A qualitative explorative approach was chosen to develop concepts on the experience of lacking physicians. As noted by Lupton (1995) public health research has tended to undervalue the more humanistic, critical, theoretical and interpretative approaches. Instead, positivistic forms of inquiry based on the gathering of empirical quantifiable data have been favoured, due to a close link with biomedicine. Our methodological strategy in this research project was therefore met with some wonder and scepticism, maybe even suspicion, not at least from our respondents. However, the publication of the results has been met with great positive interest, from media, the Norwegian Medical Association and others.

Ideally, we would have liked to explore the experiences of patients, health personnel and administrators. However, because of limited time and resources, we have chosen to use health personnel, namely doctors, as respondents in the study. A good reason for this is, that it is doctors, the departments’ chief physicians (avdelingsoverlegene), that is the actual executive employer in the hospitals, as well as the employees. Also in the primary health care, it is the head of the municipal health department, in most cases a physician, who is responsible for the local coverage of general practitioners.

By developing the phenomenological method, Schütz (1967) has shown how the social sciences may concentrate their studies on how our life world is produced and experienced by people. Schütz’s strategy was to bracket the taken for granted conditions, by which those we study live. That way the researcher may focus on how the members of society by their own interpretation
The recognisable and intelligible form they know as reality (Holstein and Gubrium 1994). It should be noted, as pointed out by Atkinson (1995), that in the phenomenologically inspired sociology, like that of Schütz (1967) and Berger and Luckman (1967), reality is not to be viewed as a mere construct. Rather “[t]he everyday social actor […] engage with a material universe in acts of explorations” (Atkinson 1995:43). To grasp these explorations our study applies an interpretivist perspective:

“People are seen to act towards things in terms of the meanings they hold for those objects, but the meanings people attributed to objects are seen as socially constituted. Meanings of objects derive not from the objects themselves, but in the manners by which people act towards, and interact with respect to, those objects” (Prus 1996:48).

In the field study we have used semistructured, or ethnographic (Hammersley and Atkinson 1983), interviews to develop an understanding on how the scarcity of medical practitioners is experienced by our respondents and how these experiences may be socially produced.

The empirical study was limited one of the Norwegian counties, Møre og Romsdal. We have interviewed chief physicians and management in all the four hospitals in this county. In five of the 38 municipalities we have interviewed the municipal head physician. These five municipalities were chosen because they made up extremes, either with high or low physician coverage, high or low consumption of resources to GP services, or because they were close to or far from the nearest hospital. Municipal head physicians and head of municipal health departments of the other 33 municipalities were interviewed by using telephone.

**Findings from the field study**

The findings from our field study reveal a number of problems, challenges and strategies connected to the task of covering the demand for physicians. In this section I will briefly outline some of the most important of these conditions, as presented by our respondents.

**The upbringing of patients in primary health care**

Municipal problems in primary health care are often believed to have a basis in topography and demography. However, there seems to be no significant relation between "outsirtness" and scarcity of medical practitioners. What is regarded most important in the municipalities is the stability of the staff of general practitioners, rather than whether there are vacant posts or not.

The general practitioners put great emphasis on the "upbringing" of their patients, that is on learning their patients to differentiate between problems that the doctor should deal with and problems that the patients could manage to solve by the help of others or by themselves. The doctors tell their patients to call only in office hours if there is no acute problems, and to get to the office themselves instead of expecting the GP to come to them. As most of the patients respect their GPs suppositions, the doctor's workload decreases quite a lot. Some of the municipalities have had serious problems getting GPs to stay. Typically these municipalities use Swedish deputy GPs on two-week terms to maintain the primary health service. The problem with this solution is that the deputy doctors take these short-term appointments because of extra income, which increases with more visits to patients. One of the municipal head physicians put it out frankly that he was not at all happy with such solutions:

"Deputy GPs are like tumours. They are only in it for the money and […] educe the patients to seek the doctor more – even if the patient’s need is rather doubtful. When posts are vacant we rather keep them that way until there is a candidate who wishes to stay here for good" (municipal head physician).

The GPs will rather work extra than to have deputy doctors assisting their work. But the municipalities that have no GPs at all have no choice. In addition to having to pay a lot for an
often indifferent primary health service, they develop a basis of patients that are demanding and little tempting for a permanent GP to take over. The scarcity of medical practitioners is for these municipalities partly a result of topography, demography (for example the size of the municipality), and partly history (accidental happenings). Additionally, some municipal GPs are able to do something about the demand for the GP, by bringing up the patients, rather than struggling to fill all the posts uncritically.

**Medical Differentiation in Small Hospitals**

There are about 80 hospitals in Norway. Many of these are small local hospitals, among them two, which were studied in this research project, Volda with only about 20 physicians and Kristiansund with 38 physicians. Even with such small number of doctors, these hospitals tend to copy the medical speciality structure of the larger university hospitals. The speciality associations of the Norwegian Medical Association dictate minimum requirements to manning the departments. As for example specified by the Norwegian Association of Anaesthetists:

“All anaesthesia departments have to be manned so that there at any time is at least three doctors available that can take independent duty” (Brattebø and Wisborg 1995:1620).

When the specialist structure of large hospitals is applied on small hospitals an excessive demand for physicians is created, that is independent on both actual work load or patient basis. On the smallest hospital in this study, Volda, they use the term “generalist-specialist”, meaning the specialist that has competence and practice in other areas than his or her speciality only. In the medical department in Volda, they have eight physicians, one in each sub-speciality. However, for the department to function, all these doctors must be able to treat patients across the sub-specialities. The generalist-specialist, however, seem to be a dying breed. Specialisation is an important part of the development in medicine, and the education of doctors reflects the positivistic reductionism of medical science. Moreover, there is a growing fear of large claims for compensation for maltreatment. Such claims are more likely to succeed when the patient is treated by a generalist-specialist instead of the hospital’s best available competence in that particular treatment.

In addition it is important for the small hospitals to preserve a high level of specialisation to attract the good doctors. Many physicians have a stronger identity connected to their speciality than with their hospital\(^3\), and the hospitals have to arrange opportunities for the good doctors to practice and to develop their speciality. The doctors stay with the small hospitals because they get the chance to work with and develop their own special interests, as well as meet a great variety of working tasks. As one of the doctors elegantly put it:

“You may stand there planing prostates in central hospitals, but you can’t do that in a peripheral hospital like this one” (chief physician).

It is important for the small hospitals to act expanding, that is to attract new doctors and develop new services even for small-scale special treatment. The cost of the local strategies of the small hospitals is an accidental division of services between the hospitals, an excessive demand for medical practitioners and a regional suboptimalisation. This excessive demand for medical practitioners is partly rooted in professional standards, education and motivation.

**Flexible Recruiting Strategies**

The employing of medical physicians in Norway is based in a system of governmental approved posts. This means that there is a limited number of posts for physicians in Norway and that

---

\(^3\) A form of cosmopolitanism, as it is applied by Gouldner (1957).
municipalities, which are responsible primary health care, and counties, that are responsible for the hospitals, have to apply to a committee (ULS) for establishing new physician’s posts. This committee is constituted of representatives from the Norwegian Medical Association, the Association of Local and Regional Authorities (KS) – the employers, and the Ministry of Health.

In our study in the county Møre og Romsdal there are however vacant posts in several municipalities and hospital departments. So to employ a physician, there is usually no need to apply to the above-mentioned committee. However, as the recruiting is limited by approved posts, it is important that doctors that are recruited are likely to function well in the department. This leads to a situation where posts are kept vacant until the right candidate is found. Vacant posts that are approved by the committee make possible a more flexible recruiting strategy. Long term planning is also made possible, for example for a small hospital to wait for a candidate who is finishing his education to specialist in one of the university hospitals. Several of the chief physicians we interviewed mentioned the very long education of the specialists as a planning problem:

"It takes almost ten years to plan a post. One have to headhunt people at very long

As vacant posts represent available resources to greater flexibility, many hospitals and municipalities apply for approval of more posts even though there is no need for more doctors in the department, nor available candidates for the post or budget for the salary. As one chief physician of a small hospital department told us:

"We have three approved posts at the department, but two doctors are sufficient. There
would not be enough work for three doctors in normal working weeks” (chief
physician).

The job of recruiting physicians is difficult in Norwegian hospitals and primary health care, especially in rural areas far from the city centres. It is of great importance to employ doctors that seem to become stable employees. The small hospitals have been criticised for a laissez-faire recruiting policy, where employment is personal rather than formal, and less systematic. However, the candidates’ personality, their local attachment and family situation may be as much important as his or her formal qualifications. A chief physician had been looking for his successor several years, and had a clear idea of what kind of person that had to be:

"I don’t want someone that is a laboratory physician because he is shy and eccentric, misadapted or never functioned in consultation with patients, but may someone that is old in the game, someone with seniority and authority” (laboratory chief physician).

This need for a flexible recruiting policy, especially in small rural hospitals, leads to a number of vacant physician posts, but that does not necessarily imply that this doctor is needed. The scarcity of medical doctors is locally constructed.

**Increased Demand for New Medical Technology**

The development in medical technology has firstly made possible treatment of disease and injuries that previously had no cure, and secondly found effective, but physician demanding rather than care demanding. The use of laparascopia for appendicitis is an example of the latter. With this form of treatment there is no need to cut in the patient, and the recovery time is drastically reduced. The increased demand for this treatment leads to an increased demand for surgeons that have this special competence. Moreover, as patients know about this form of treatment they expect to find it in any hospital.

A more drastic consequence of new medical methods are those where totally new large patient groups are established. When implantsates were developed for the neck of the femur, suddenly 10.000 elderly patients were waiting for surgery. Of course this operation would increase the
The quality of life tremendously for those people, and therefore a sound development. However, it is important to see how new medical technology may involve a shift from care intensive to physician intensive services. Such shifts have a great impact on the demand for medical practitioners.

**Analysis: Four Categories of Scarcity of Medical Practitioners**

The analysis of the empirical data from our field studies has led to the development of a model, in which several of the most important dynamics of scarcity of medical practitioners is related to one another. We found two main dimensions of variations between different types of scarcity of medical practitioners, first the degree of system dependence and second, in which degree the scarcity of doctors is result of physical constraints versus mental or social constructs. In the first dimension, by system we mean the medical knowledge, technology and profession. We have labelled the latter dimension with the terms defacto situation and dejure situation. The last dimension varies between factual versus constructed realities of doctor coverage. The defacto – dejure dimension is somewhat problematic because either situation is real in its consequences. However, a situation that is labelled dejure is determined by definition, by law, regulations, tradition and so forth, rather than by physical constraints, like topography and demography.

Four categories of scarcity of medical practitioners were developed in the system made up of these two axes.

**Traditional Scarcity of Medical Practitioners**

In the first quadrant, scarcity of doctors that are system independent and defacto have been labelled traditional scarcity of medical practitioners. This category of scarcity of physicians is especially relevant in primary health services, in small rural municipalities where the population is too small to provide interesting work for a GP, and where communication is too difficult to arrange inter-municipal collaboration. The category is system independent as it is not a result of the policy of the medical profession. It is defacto as it has to do with demography rather than local culture, organisation or politics.

**Expansive Demand-driven Scarcity of Medical Practitioners**

In the second quadrant expansive demand-driven scarcity of doctors is defacto system dependent. New technology in medical treatment creates new groups of patients. Huge numbers of patients may queue up in momentarily when new treatment possibilities are made available and there is no way back. These people have now become patients until they are treated. This category of scarcity of medical practitioners is system dependent as it is a result of development in medicine.

**Locally Constructed Scarcity of Medical Practitioners**

Third, a scarcity of doctors that is system independent and dejure is termed locally constructed, and has first of all to do with the organisation of medical services. There are several different sources of this category. First, the hospitals need to maintain some degree of flexibility in the recruiting policy, as mentioned before. To have some approved posts vacant is not only a problem, as generally assumed, but a valuable resource, as well. Second, hospitals may choose

---

4 When the Norwegian government has offered hospitals to take part in programs to recruit foreign doctors, they have surprised the government by not accepting this offer, even if they have vacant posts. These decisions are not so surprising, however, taking into account that they are seen an resources of flexibility, i.e. possibilities to recruit fresh doctors that is believed to get established and stay put for a very long time. Some of the hospitals that has vacancies and has turned the government’s program down, has been accused for ethnocentrism. Although this
not to look for candidates for vacant posts, not to seem desperate and in decline. The fright of announcing the need for physicians may in some cases extend the period of vacancy. Third, scarcity of medical practitioners is produced because the municipal borders have administrative function, but do not necessarily give useful regions for effective use of GPs. Three GPs in a small municipality may be too many to the ordinary patient consultations, but necessary for maintaining a continuous duty.

**Professionally Driven Scarcity of Medical Practitioners**

Fourth, scarcity of doctors that is dejure and system dependent has been labelled professionally driven. Standards of the proper manning and specialisation are to a large degree defined by medical specialist associations, with the larger hospital departments in mind. However, small local hospitals tend to adopt these standards, which they struggle hard to cope with. Moreover, professional ambitions of individual physicians make a great difference in these hospitals. The management will often give good physicians free hands to develop services of special interest, to keep the physicians at the place. The small hospitals, which was supposed to treat the most common medical problems, are partly developed into hospitals of varying medical differentiation and specialisation, in a fragmented and accidental manner. A scarcity of medical practitioners increases as the physicians in these local hospitals develop highly specialised services, rather than to treat the common patient as it was intended.

**Discussion**

One of the most important contributions of the model is the introduction of a dejure scarcity of medical practitioners, the locally constructed and professionally driven scarcity of medical practitioners. These forms of scarcity of physicians are closely related to the progressive medicalisation of modern society, as hypothesised by Zola (1975) and that has later become an important topic in medical sociology. Zola’s main argument is that there is a tendency to include within the health care system more and more problems that were traditionally located in other cultural systems. Further he claims that the reason for this phenomenon is the "increasingly complex technological and bureaucratic system – a system which has led us down the path of the reluctant reliance on the expert" (1975:171). The scarcity of medical practitioners that is locally constructed and professionally driven represents a significant portion of the total scarcity because we tend to believe that we need all the experts we can get. Further, as noted by Freidson, "the medical profession has first claim to jurisdiction over the label of illness and anything to which it may be attached, irrespective of its capacity to deal with it effectively" (1970:251).

Kleinman (1980) has a slightly different approach to how medicine and other cultures of society differentiate between what is and what is not a problem that is medically relevant. Based on a comparative anthropological study of Chinese and Western medicine, Kleinman defines three different sectors within health care, the popular, the professional and the folk sectors (1980). It is in the lay, non-professional, non-specialist, popular sector in which illness is first defined and health care activities initiated. Kleinman suggests that between 70 and 90 per cent of all illness episodes are managed within the popular sector. In Norway it is suggested that about 80 per cent of people's health problems are solved without involving the doctor (Grimsmo 1988). In other

---

5 The introduction of nurse operated telephone services ("LV centres") has not helped the doctors as supposed, to answer irrelevant calls, so a normal duty may consist of a lot "unnecessary" telephone answering (Tjora 1997).

6 Especially Conrad and Schneider (1992) present a respectable elaboration of the concept.
words, the popular sector is the more important sector, both when it comes to treatment and decisions on when to contact the doctor.

“The customary view is that professionals organise health care for lay people. But typically lay people activate their health care by deciding when and whom to consult, whether or not to comply, when to switch between treatment alternatives, whether care is effective, and whether they are satisfied with its quality” (Kleinman 1980:51).

The interviews concerning primary health services show, as mentioned, that it is stability rather than the number of GPs that is regarded most important for the quality of the services. One of the GPs that was interviewed in our study said that his most important job was to educate or bring up his patients, to not call for the doctor unnecessarily. Applying Kleinman’s (1980) terminology we would say that the GP interferes with the popular sector, to try to adjust the lay understanding of illness, through patients that come to consultations. However, it would be naive to expect such an interference to be unproblematic, as lay knowledge may represent a growing challenge to the authority of professionals to determine the way in which problems are defined (Williams and Popay 1994). Still, a preliminary conclusion of this study is that, at least in primary health care, a closer relationship between lay and professional knowledge may be needed to strengthen the efficiency of physician’s work, and decrease the demand for professional medical services.

The growing specialisation is an implicit part of the expansive reductionist medical science (Berg 1982). However, as basis for a decentralised hospital structure it is not very efficient. As Mechanic has noted, the abundance of specialists and sub-specialists tends to encourage the application of a highly technological and expensive approach to many ordinary problems” (1978:348). Moreover, as most of the patients have diffuse illness complaints, it is often a form of generalist, or generalist-specialist competence that is needed for initial diagnosis and treatment, not only in primary care but also in hospitals. The specialist, who will have a particular orientation and will look for a particular cluster of symptoms and signs, sees the disorder differently form a specialist with another orientation (Helman 1985:300). One patient may therefore have to consult various physicians of different specialities during his or her hospitalisation.

In addition there is a constant conflict of interests between departments about resource distribution. As claimed by Turner, “specialisation has undermined, or at least threatened the professional coherence and solidarity of medicine as a whole” (1995:186). In our study, many of the chief physicians give their speciality and department higher priority than anything else, which gives good conditions for sub-optimal use of resources, in one hospital, as well as regionally. The somewhat orthodox form of specialisation that is found in medicine produces what we have termed professionally driven scarcity of medical practitioners. Specialisation, which is an important part of the technological development in medicine, exceeds beyond the level that is appropriate for the majority of patient diagnosis and treatment. What is medical rational is not necessarily rational for the organisation of the health services.

**CONCLUSION**

The main result of the study, on which this paper is based, is that a qualitative approach to studying scarcity of medical doctors is appropriate and useful. By analysis of ethnographic interviews it is possible to develop an alternative understanding of the phenomenon.

The title of the paper, ”The Patientification of a Nation” reflects the problem that may arise in a wealthy nation that has the economic opportunity to develop efficient health services. However, excessive expectations among both patients and health personnel lead to difficulties: Patients expect health services that can deal with any problem effectively. Physicians expect the
opportunity to develop their own speciality in any hospital, regardless of size and geographical location.

In a wealthy nation like Norway, the production of patients is huge. So is the production of health services. However, they do not necessarily match each other. Medical science produces diagnoses and partly solutions to ever more problems, and produces new groups of patients according to those. However, the patients that are produced tend to stay patients for an unreasonable long period of time. That is what we have meant by patientification.

REFERENCES
