

The winds from Maastricht

Some personal reflections on teaching medicine at the University of Oslo¹

Michael 2011;8: 329–43.

When looking into the history of medical teaching at the University of Oslo, it is quite clear that it has steadily been subjected to modernisation and upgrading according to international standards. This must be highly appreciated. However, as such, it is not so clear to what extent the University has had the upper hand in this development. External forces have exerted a strong influence.

In the theory/practice balance, practice has won. Evidence-based medicine provides a good foundation for medicine, although other forms of knowledge have been pushed more into the background. The focus on the individual patient is good for medical work in consultations and hospitals, but has contributed to leaving, e.g. many public health issues to professions outside of medicine. It seems that the influence by the medical faculty staff itself on its own medical teaching, at least in Oslo, has to a certain degree been blown away by the winds from Maastricht.

During the last half of the 20th century medical teaching at several universities was put under pressure. This pressure for change came from both health authorities and bodies representing the medical profession, as well as internally from within the medical faculties. Parts of the teaching staff were in accordance with students who felt some of the teaching was old-fashioned. An important common denominator was the quest for making the curriculum more practice-oriented and directed towards problem-solving in day-to-day medicine. These practice-versus-theory discussions were in no way new, but by now they started to appear with a greater intensity.

¹ Revised version of a paper presented at the University History Conference, Humboldt University, Berlin, November 2010 and at the 23. Nordic conference for medical history in Oslo in May 2011.

At the same time, the base of knowledge regarded as essential for good medical practice was ever increasing. One of the contributing factors was that new information technology had made medical literature increasingly accessible to everyone, leaving no excuse for not consulting papers written by experts.

So-called *evidence-based medicine* became the standard when medical procedures were to be implemented. In a way, the entire knowledge base for medical work was gradually redefined. Hard facts from what was perceived as *evidence*, which was collected by means of, e.g. controlled clinical trials, came to the forefront.

In Norway, the scope of medicine has traditionally been quite wide. Leaning towards the principles of 18th century state medicine, medical teaching at the new medical faculty, which opened in 1814, had hygiene and social responsibility as integrated parts. So also was the build-up of health services. Prevention, cure and care went hand in hand. Admittedly, this framing of medical work was a necessity in times of epidemics, class differences and poverty. However, these basic principles are valid to this day, despite a tilt towards curative work.

When medical teaching was to be revised in the latter part of the 20th century, ideas from Maastricht University in the Netherlands met the criticism, which reflected local argumentation in many places, and became widely popular. The Maastricht principles were implemented at several universities, among them the University of Oslo, where a new curriculum was put into force in 1996, following a long period of preparation.

This reform, named «Oslo – 96», based on the Maastricht ideas, remains to be discussed in relation to four dimensions: 1) theory versus practice, 2) evidence versus other types of knowledge, 3) the patient versus society balance and 4) who really decides what the curriculum should be like.²

What have the reforms since the 1980's done to the knowledge and skills of the doctor, to the knowledge basis which is perceived as necessary, to the role of the doctor, and to the freedom of a faculty in tailoring its teaching?

2 This paper is called «personal reflections», as to a great extent it leans on the author's personal experiences as a member of the medical teaching staff at the University of Oslo since 1964, with a one-year break at the University of Tromsø in 1976-77, and as a part time teacher at NTNU, the University of Trondheim.

The case of Oslo – what was new?

The teaching principles in the Oslo – 96 curriculum are centred on *problem-based learning*.³ As a basic teaching procedure, groups of students are given a medical problem which they were supposed to shed light on or solve within a week, supported by literature, internet information and other sources.⁴

The number of traditional lectures is cut to a minimum, which means that selecting priorities for the formal teaching has become a tough process.

In a university history setting, these changes give reason for reflections. In the curriculum, increasing requirements for knowledge were met by reducing the amount of teaching. By strongly focusing on singular problems, the training in long-sighted thinking and general principles simply had to be weakened.

However, during this transformation of teaching, contents and methods had been set to a considerable degree by forces outside the university proper. In particular, the needs of the health authorities, the demands by the profession and the preferences of the students should be mentioned. Ties to academic ideals were loosened. Thus, the study of medicine, at least as it has developed at the University of Oslo, poses an interesting question about what the balance should be between vocational, hands-on training and academic reflection at a university.

The changes also represent international trends in medical practice, in both the inside and outside perception of what a medical doctor should be and of what medical science is really comprised of. The changes additionally reflect cultural factors such as general anti-authoritarian waves and increased attention to health care and well-being. These issues are important because they pose the unpleasant question about who really decides how a medical faculty should work.

Although murmurs about content and scope in medical teaching, e.g. in Norway, had been heard for more than a century, the late 1960s and the 1970s became a sort of a watershed – not least because of what happened when Maastricht University in the Netherlands attained a special position in our development.⁵ In a way, the winds from Maastricht came as a sort of culmination, and set the stage for the decades to come.

3 In addition to other teaching commitments, the author has also worked as a PBL teacher in Oslo since 1996, supervising groups in the first semester.

4 A detailed overview of the curriculum can be found in the so-called semester books, which are issued on paper and on the Faculty's homepages in updated versions, see www.uio.no.

5 Many of the issues addressed here are covered in more detail in Larsen Ø. *Legestudent i hovedstaden – medisin på stadig nye måter*. Oslo: Gyldendal Akademisk, 2002.

An old story

In 1899, a quite spectacular book was published in the Norwegian capital of Kristiania (Oslo). It dealt with the University, the only one in Norway, which also had the only medical school in the country. The author was a young physician, Johan Scharffenberg⁶ (1869-1965), who had graduated as a medical doctor in 1897. His book was entitled *Reform af den medicinske Undervisning* (translated to mean *Reform of the medical teaching*). Admittedly, the text by Scharffenberg mostly reads as a heavy criticism of the medical teachers as persons, especially one of the surgeons, more than a contribution to the design of a new curriculum.⁷ But it reflected prevailing frustrations about the training of doctors. The setup of the medical teaching was a permanent issue for discussion in medical circles at the turn of the 19th century.⁸

What was the struggle about? When the new Norwegian University was founded in 1811, its clear objective was to build up a national academic elite: priests, lawyers and physicians. From 1814 onwards, Norway was to

6 On Scharffenberg, see e.g. *Norsk Biografisk Leksikon* (NBL) for more information and references to biographies. In the in-depth biography by Søybye E. *En mann fra forgangne århundrer, overlege Johan Scharffenbergs liv og virke 1869-1965 – En arkivstudie*. Oslo: Forlaget Oktober, 2010, the author documents that there were also other aspects in this case. Maybe the behaviour of some faculty teachers was simply unacceptable by any standards, but on the other hand, the tension between the academic approach to medicine and the needs of the grassroots practitioner were strong at the time, and were also part of the process leading to the founding of the Norwegian Medical Association in 1886 as a counterweight to the faculty and the old Norwegian Medical Society (Det norske medicinske Selskab). See e.g. Larsen Ø, Berg O, Hodne F. *Legene og samfunnet*. Oslo: Den norske lægeforening, 1986.

7 During his long life, Johan Scharffenberg became an influential person in Norwegian culture and society, and his brilliant pen was already evident in the 1899 book. This book had the author himself as the publisher (*Reform af den medicinske Undervisning*. Kristiania: Forfatterens forlag, 1899. 151 pp). The subtitle is remarkable: *Vore lærere, især professor dr. med. J. Nicolaysen*. And there is a citation from Voltaire on the title page: *Écrasez l'infâme*. The book is written from a strong anti-authoritarian perspective and is filled with invective. The author hit from all directions, but his main target was the famous surgeon Julius Nicolaysen (1831-1909). About the book, see: Selman FT. «*Thi jo mindre der fordres, des mindre vindes*» – *Johan Scharffenberg og striden om den medisinske undervisningen ved Det kongelige Frederiks universitet i Kristiania*.: Forum for universitetshistorie, Unipub, Oslo 2002 (MA thesis). The book cost Scharffenberg his academic career. He was qualified in medical history, but his application for a vacant position had been turned down – not by the faculty, which he had offended so seriously, but by the senate of the University.

8 See e.g. the proceedings from The Norwegian Medical Society from this period, printed in *Norsk Magazin for Lægevidenskab*. Internationally, there was also a need for a closer look into how medical teaching was set up in different societies. The Carnegie Foundation funded comprehensive investigations into this field, and reports authored by Abraham Flexner were issued in 1910 (on the US and Canada), in 1912 (on Europe). Flexner also published comparative university studies in 1925 and 1930.

operate as an independent country, despite the looser link to Sweden that replaced the close ties to Denmark. On the one hand, by being Norwegian and being trained in Norway, the new elite should also contribute to the build-up of a national identity, which was to take place when they filled positions in the local society. The physicians who were trained in increasing numbers should still work in the few hospitals. Moreover, many of them should practice in the districts, which was a really tough job that also included substantial requirements for practical skills and a broad understanding of the local culture.

The curriculum, or more correctly, the teaching which was offered at the outset by the new University, was more or less a blueprint of the teaching at the Royal Surgical Academy in Copenhagen, founded in 1785. As such, it was a compromise between theory and practice. Before surgical academies were established in Vienna and Copenhagen during this year, surgery was a handicraft⁹, holding the training traditions of a handicraft, while medicine was a university discipline.

However, 18th century society needed academically trained surgeons for daily practice, and the physicians needed hands-on skills in order to cope with the medical demands. On the other hand, medicine as a science still needed new recruits, and the setup of the still diminutive health services and the fight against ravaging diseases required broad insights into society.

Hence, a conflict which has lasted ever since deals with the balance between theory and practice. In medical school, how much of the teaching should be theory, background topics and academic in-depth reflection? And how much should be training for the working day among the patients? And lastly, who should be the main target, the sick patients or the healthy population? The book by Scharffenberg represented a preliminary climax in Norway in relation to these controversies, although the discussions continued.

The Maastricht model – an international climax three generations later

Here, we have given Maastricht University a special place in the development, both internationally in general and for Oslo in particular. The Limburg region of the Netherlands, where the city of Maastricht lies, is a former mining district. Here, new activities had to be set up when the industry declined in the latter half of the 20th century. Rallying for a new medical

⁹ The young surgeons were traditionally trained by older surgeons. In Copenhagen, a vocational school for surgeons had been opened 1736, but was still not enough to fill the need for competence.

school to meet the demand at the time for medical students was one of the efforts launched.¹⁰

However, over the course of the preparation process for the new medical school, the shortages in medical teaching capacity gradually became less appalling. In order to maintain the upper hand in its competition for students, the university launched a medical curriculum in 1974, even before the legal basis for it had been settled. The formalities were in place in 1975, and Maastricht University¹¹ was able to open its doors in 1976.

Maastricht's profile in medical teaching was cleverly reflecting old and new criticism against medical teaching. The principles were provoking and went directly into the roots of, e.g. the discussions about theory and practice, and about cathedral or bedside teaching.

The hallmark of Maastricht is: *a) the so-called Problem Based Learning (PBL)*, where to a large extent systematic discussions in student groups of seven to nine participants on assigned topics replaced traditional courses and lecture series. A profound *b) integration of medical disciplines* is intended from the very first day. The integrated knowledge presented should *c) increase in width and depth throughout the years of study in a sort of helix*. For each year, the achieved knowledge is to be deepened.

The teacher-intensive PBL model was perceived as «democratic», «grassroots-oriented», and as a rule, having the individual patient in focus.¹² The students are supposed to have a special responsibility for their own learning.

When the Maastricht-inspired curriculum was introduced in Oslo in August 1996, the time chosen also had a practical background, as new premises for medical teaching were built during these years. This was part of the erection of a new National Hospital, which opened in 2000. The medical teaching had previously taken place in the old buildings from 1852 in the city centre, in the building for preclinical disciplines (opened in

10 See www.maastrichtuniversity.nl

11 Previously named *State University of Limburg*.

12 The PBL model is «democratic» in the sense that it shifts responsibility for one's own learning more to the students than in traditional teaching. The PBL model is «realistic» because the assigned topics mimic practical medical problems. Furthermore, the model meets students who are used to group work from their basic schooling. The PBL model is «grassroots-oriented» in the way that it takes up practical situations, often case stories; as a consequence, the time perspective is «here and now» and the scope is the individual patient, not the group or the population. Because of its integrated structure, the model makes the students feel like doctors from the very beginning. But its profile may also give them the impression that medicine consists of a series of separate problems which, bluntly said, can be solved by talking about them. A curriculum centred on PBL groups of, e.g. 7–9 students, requires a great number of teachers as supervisors. It also becomes very static because the integration of disciplines is so complicated that changes are difficult to make. So even if the PBL model has definite paedagogic advantages, there also are drawbacks.

1978), in the National Hospital from 1883, in addition to other venues. The radical revisions of the teaching required special architectural considerations¹³, so if major changes were to come, they needed to be implemented immediately.

There had also been local and quite vigorous disputes on other topics in medical teaching as well, e.g. on the evaluation system: should *marks* be given, or should only *passed* or *failed* be used? The time was due to also take a decision on such issues.

Medical teaching and the role of the Norwegian doctor

After the Second World War, there was a considerable shortage of doctors in many countries, including Norway. There is a series of reasons for that. One of them was that patient encounters with medicine traditionally occurred in general practitioner or specialist consultations. Much of this had shifted to large-scale hospital medicine, in which the patients meet not only single doctors, but also an integrated, clinical system. Simultaneously, medical research made substantial leaps forward in providing new methods in prevention and cure, and the attitudes to health and disease posed new questions and raised new demands.¹⁴

In Norway, the increasing need for physicians was met by admitting larger numbers of new students, not only in the capital, but also when the University of Bergen (founded as a university in 1946) started to teach medicine, and when the University of Tromsø was established in 1968. In Trondheim, medical teaching started the same year.

From the early 1800s, we have seen that there was an ambition that Norwegian doctors should be trained in Norway. However, this position could not be maintained any longer after the Second World War.¹⁵ Despite considerable resistance at home, scores of students went abroad to study medicine in Germany, Austria, the Netherlands, the UK and other places. This implied a stronger connection to what was taking place in medical teaching abroad.

Internationally, medical teaching was also accused of being old-fashioned, with only a small amount of patient contact and unsatisfactory hands-on

13 See also Natvig JB, Børdahl PE, Larsen Ø, Swärd ET (ed.) *De tre Riker – Rikshospitalet 1826-2001*. Oslo: Gyldendal Akademisk, 2001, and Larsen Ø. *Mangfoldig medisin. Det medisinske fakultet i Oslo 175 år 1814-1989*. Oslo: Det medisinske fakultet, 1989.

14 See Larsen Ø. (ed.) *The shaping of a profession – physicians in Norway, past and present*. Canton MA: Science History Publications/USA, 1996, and Larsen Ø, Berg O, Hodne F. *Legene og samfunnet*. Oslo: Den norske lægeforening, 1986.

15 See especially books and articles by the Bergen ophthalmology professor, Torstein Bertelsen, on this issue.

training. Students with an overruling objective of becoming practicing doctors entered curricula in which they spent weeks, months and even years mostly learning theory, only seldom seeing a patient. Many of the students were forced to learn practice skills mainly on their own, e.g. by means of evening and weekend jobs in hospitals. Often, this type of curricula did not fit into the students' pictures of themselves as doctors to be, and frustrations emerged.

By 1972, the World Federation for Medical Education (WFME) was founded, as well as its European branch, the Association for Medical Education in Europe (AMEE). The modernisation of medical teaching, making it feel relevant to the students, was a common denominator in these and similar organisations.

The medical associations for doctors also had a vested interest in student training and of course in helping to mould the students into the professional roles they represented. In Norway, the influential Norwegian Medical Association (Den norske lægeforening) was deeply engaged in medical teaching. In many of the important after-war years, the secretariat ran as a separate department for medical teaching. In addition, the editor of the *Tidsskrift for Den norske Lægeforening (Journal of The Norwegian Medical Association)*, Ole K. Harlem (1917-2003), personally held a special interest in the field that sifted through to the authoritative medical journal, which is regularly read by all Norwegian doctors and by external actors as well.

The role of the students in Oslo

In Norway, initiatives for the revision of the medical curricula were constantly taking place. In the 1960s and 1970s, the waves of student revolts also reached Norway, although they were not as serious in the medical faculties as elsewhere on the campus, or in many places abroad. Nonetheless, the voice of the students was given more attention than ever before, and also as before, the students were generally demanding more practice and less theory. Teachers wanting to be modern and in accordance with their students, were particularly listening to their arguments.

The medical faculty had a traditional system of examinations and graded marks.¹⁶ The opponents of this system wanted a two-graded scale – approved or not approved. This important change with its obvious effects on factors such as student feedback, student motivation and general teaching level was

¹⁶ The scale of marks ranged from 1 to 12, but you could pass with a 6 and be rewarded for utmost excellence with a 12. The levels from 7-11 were the most frequent, and with a 9 or higher you had a «laudabilis» on your record. This ranking system was very often felt as a burden and attacked by the students as well as some of the teachers.

introduced in Oslo, together with the Maastricht model in 1996, making the reform even more radical.

The anti-authoritarian trends of the time challenged the social role of the doctor since the doctor as a health worker fit into the language of the day. The influential Birmingham professor of social medicine, Thomas McKeown (1912-1988), even questioned the role of medicine in solving health problems, as compared to the role of general social development.¹⁷ Such general trends added to the forces who in those years wanted to downgrade the status of the doctor.

New teaching trends in Oslo

An increasing interest in psychology and mental health raised the demand for a revision in the teaching of psychology for medical students. A new professor in psychology, Arvid Ås, was engaged. This was meant to help up the situation, though his untimely death shortly after his installation in 1969 became a serious setback. Into this void the new and much broader discipline of *behavioural science in medicine* (medisinske atferdsfag), which combined psychology, sociology, social history and practical patient handling skills, was launched and introduced in the 1970s. This reform required a quite substantial reduction in the teaching of traditional basic medical subjects such as anatomy, physiology and the like, and interestingly, this occurred without the marked resistance that might have been expected from the side of the teachers on behalf of their disciplines.

The development within the discipline of *general practice* (allmennmedisin) is also part of this picture. For many reasons, general practice had decayed and gone down in prestige and attractiveness since the Second World War. Responding to an initiative from progressive doctors through the Norwegian medical association, an institute for general practice was established at the University of Oslo in 1968.¹⁸

It can generally be said that the role of the doctor was in transition in the 1960s and 1970. In part, the doctors pursued rapid scientific progress

17 Thomas McKeown (1912-1988). Important books: *The modern rise of population*. London: Arnold, 1976; *The role of medicine: dream, mirage, or nemesis*. London: The Nuffield Provincial Hospital Trust, 1976 (Oxford: Blackwell, 1979.) About his impact and the implications of his ideas, see e.g. Szreter S. Rethinking McKeown: The relationship between public health and social change. *Am J Publ Health* 2002;92:722-5, and Larsen Ø, Falkum E. Helse, medisin og befolkningsutvikling i Norge. *Tidsskr Nor Lægeforen* 1999;119:4482-7.

18 About the development in Oslo, see *Michael* 2009;6:1-126, in which the entire issue is devoted to the introduction of general practice as an academic discipline in Norway, based on a witness seminar in 2008. About the international situation, see e.g. Duffin J. *History of medicine – A scandalously short introduction*. 2nd ed. Toronto: University of Toronto Press, 2010.

in hospitals and academic medicine and in part, the ideals of grassroots health care. In this picture, the Maastricht model gained wide attention in Norway. It responded to a series of different trends and frustrations, and offered pedagogic solutions which seemed obvious and simple. Political decisions to heavily base Norwegian health care on first-line medicine in the communities added to its popularity, although the question may be raised as to what degree the Maastricht model really fit with the prevailing demands for skilled personnel in comprehensive first-line services.

Contents, depth and scope

Given that the objective of a medical faculty at a university is to provide its students with the knowledge needed for medical work with the *health conditions of the population* and the *cure of diseases and casualties*, the faculty should teach on a *science-based level*, and its obligation should be to *contribute to the development of the science* behind the teaching. Nevertheless, the needs for learning depend on *the role of the doctor*, which has a series of aspects that change with time and place.

There are at least two main categories of questions here: What belongs to medicine, and what is outside of its boundaries? What scientific depth is required for a doctor's work?¹⁹ Who should be responsible for the training of practical skills?

In Norway, the image and role of the doctor is probably slightly different from that in many other countries.²⁰ Although the main objective is to understand and treat diseases and other medical malfunctions, a social consciousness should be maintained. The doctor should not only *serve the sick*, but also *serve society*. As an academic person, the doctor should *serve science* through her or his work. So the obvious objective to *serve oneself*; to look upon the physician's work primarily as one profession among other professions and as a way to earn a living, is only one of many objectives.²¹

A highly respected position for Norwegian doctors was to work as a district physician. With a legal basis in the 1860 Sanitation Act²², most of these physicians were simultaneously working as both general practitioners

19 The issue 4/2009 of *Michael Quarterly*, entitled *Medisinsens randsoner* (The borders of medicine) is entirely devoted to these delineation problems. However, a scholarly discussion of what medical knowledge is really like still seems to be lacking.

20 See Nylenna M, Larsen Ø. Finnes det en egen norsk medisinsk identitet? *Tidsskr Nor Lægeforen* 2009;125:1813-6.

21 This is discussed in detail in Larsen Ø. (ed.) *The shaping of a profession – physicians in Norway, past and present*. Canton MA: Science History Publications/USA, 1996.

22 See: Sundhedsloven 150 år – Lov og forarbejder med innledning av Øivind Larsen. *Michael* 2010;7:Suppl 8. 124 pp.

and civil servants, thereby carrying the responsibility for the health conditions in their district.²³ This dual responsibility for society and individuals is still present, although in weaker forms, e.g. in family medicine, in medical counselling or when prescriptions and sickness certificates are issued.

The other objectives are also balanced, although there are fluctuations based on politics, economy, professional preferences and the like. For example, in the liberal period in the latter part of the 19th century, economic interests attracted special interest by at least a portion of the doctors. The Norwegian Medical Association always made it a point to carefully guard the economy of the private practitioners as long as this group was dominant, adding the interests of hospital doctors and others especially after the Second World War.

The «lifelong learning» principle in medicine was mainly reinforced and put into practice in the system from the 1960s through courses arranged by the Norwegian Medical Association. Additionally, the approval of specialists had been delegated to the Norwegian Medical Association until the Directorate of Health took over in 2011.²⁴

And how should academic work be ranked in doctor's careers? For a long time this was disputed, creating difficulties for those among the hospital staff who were eager to serve science and felt committed to do more out of their clinical work. On the other hand, the gradually increasing quest for clinical evidence to underpin personal experiences and judgments in clinical work should encourage a scientific approach admittedly taken in the wake of the State takeover of the hospital system in 2002. An increasing number of PhDs in medicine is also an interesting development here.²⁵

Such shifting objectives and images of a doctor strike back at medical teaching. But who decided what the curriculum should be?

Who rules the medical faculties?

The picture hinted at here of how an allegedly independent faculty like Oslo is influenced from the outside needs some commentary. An important fact for a small country is obviously that the same persons are often found in positions both inside and outside the University, and in both health services and professional organisations. The Norwegian Medical Society (*Det norske medisinske Selskab*) was started as a reading circle for physicians in 1826, which was the same year as the teaching hospital, The National

23 This system was abandoned following new legislation on community doctors in 1984.

24 See extensive work by the historian Per Haave on this topic.

25 In recent decades, formalised PhD training in medicine has attracted many young researchers, though a great part of them do not have an MD background.

Hospital (*Rikshospitalet*), was opened. After its formalisation in 1833, the Society became a very important arena for medical discussions, as well as for discussions on medical education, for at least a century. And the persons participating here were often University teachers. The same applied to The Norwegian Medical Association when it was established in 1886.

Double roles could often be rather heavy. For instance, the influential professor Axel Strøm (1901-1985), who was dean of the faculty from 1956 to 1963, held a series of positions in the medical organisations, most important among them as president of The Norwegian Medical Association from 1948 to 1951, and in the health services.

The daughters of Aesculap

The Greek god of medicine, Aesculap, had two daughters who cared for health, well-being and cure. One of them, Panakeia, had the curing of diseases as her responsibility. The other one, Hygieia, was the goddess of health and the prevention of disease.

The winds from Maastricht blew in over Norway just at a decisive moment, and may be accused of having preferred Panakeia. We do not know if attracting students was the most important factor in this case or a deep consideration for the nature of medicine in the future. With her attention to physical and social health factors and the prevention of disease, Hygieia was whisked more into the shadow.

There is a paradox which is only partly understood here: In the years when health and society were in focus, as in the radical 1970s, medical teaching was supported and strengthened. But despite this, a professional role for the doctor with the patient as the sole focus developed, even when the cause of the disease was obviously found in the context of the patient.²⁶ The result was inevitable: Many of the experts on health and the physical and social environment were now found outside of medicine, as were the responsible institutions.²⁷

26 A multidisciplinary approach in medical teaching was tried at the new and radical University of Tromsø in the 1970s. An example from the author's experiences as a teacher there: A quite well planned clinical presentation of a fireman with lung problems caused by dust and fumes, in which specialists from many fields talked quite shortly and gave highlights about the problem from different angles, ended up with the students eagerly taking notes on the treatment of lung failure. And when (in my case) dust hazards were to be presented more in depth, the students said no, we have already heard about that (!).

27 After the Second World War, important parts of hygiene and preventive medicine, which were previously core issues in any medical curriculum, had been moved out, e.g. food hygiene and air pollution, despite the fact that the public interest in food safety and environment issues had been growing. In Norway, such issues have even moved out of the universities and over to other institutions.



Figure 1: Teaching PBL in the first semester at the medical faculty in Oslo is most often a real pleasure for the supervisor. The students are highly motivated and as a rule have wide interests and likings for a broad approach to medical problems. (Photo: Øivind Larsen in the spring semester of 2011 for the University history project)

Even so, it is a paradox that the timetable for public health issues in the 1st and 10th semesters of the curriculum for «Oslo – 96», offers quite good overviews of central topics, but the outcome of the teaching depends to what extent such topics engage the students, e.g. as measured through teaching attendance²⁸. There is an appalling difference between teaching young students in their 1st semester (Figure 1) and in their 10th semester, when they have been seasoned for patient care in the outplacement periods in general practices and hospitals, and are less motivated to attend formal teaching²⁹. An example shown in Figure 2: In the spring semester of 2011, only less than 10% of the 10th semester students gave priority to taking part in a four-hour excursion to a showcase plant for waste recycling at Dal outside Oslo. In their tight curriculum, this demonstration was a quite

²⁸ This impression is based on own teaching experiences.

²⁹ Here, the impact of the Maastricht profile of «Oslo -96» is unclear. However, own experiences by teaching medical history, mainly public health topics, for more than a decade in the fifth year of study at NTNU, the University of Trondheim, are that attendance there is very good.



Figure 2: Five years later in the curriculum, the interest for the surrounding society has very often been considerably narrowed, despite the fact that the community health services place a wide responsibility on its first-line doctors. As compared to the students in the first semester, something has happened to the students. Have the winds from Maastricht even formatted their minds? (Here the small group of 10th semester students who chose to participate in the excursion to the waste plant in the spring semester of 2011.) (Photo: Øivind Larsen)

important part of the teaching in environmental medicine. As early as in their first jobs in the community health services, the young doctors may be asked to handle environmental health problems, e.g. related to waste.

Medical students are intensively taught how to communicate with patients, but only a little about how to communicate with society, and when doing so, their command of social and environmental issues often does not match their counterparts in society.

On the paedagogic side it may be said that the group oriented teaching of the Maastricht model weakens the individuality of the students, a trend which is counteracted by the intended responsibility for one's own learning.

An inherent possibility exists for stimulating false impressions of one's skills. There might be a false sense of self-confidence following a helix learning, in which the depth *required at the end* may become blurred. This may lead the student to skip the few and carefully selected formal lectures and overviews because they do not think the topic is relevant to them, according to the interests they hold at the moment. In Oslo the passed/not passed marking system adds to the unclear feedback.

Could not changes be made when experiences call for it? In a way, the winds from Maastricht have sealed the situation so that changes are made difficult, and for practical reasons adjustments are not easy to make. With its heavy integration of topics and teachers, the curriculum model is too complicated. Even small steps in some disciplines often have considerable implications for others.

The role of the doctor has been settled and is nowadays seldom subject to discussion any more. However, medicine and health is in the minds of everyone in society, e.g. in the political debate. What a doctor should be, seems clear, even if it is not. In the wake of the developments described here, in which the Maastricht winds are important elements, it seems that we have quietly accepted certain issues: Practice has won over theory, evidence-based medicine has been allowed to dominate other forms of knowledge, the cure and care of individual patients have pushed prevention and public health thinking into the background, and demands from outside have a substantial influence on the faculty.

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