The general aim of ethics in dental education is to provide an introduction to ethical reasoning and a methodology for ethical analysis to enable students to justify their moral choices. How this aim is pursued from a Nordic perspective is discussed in the present paper by giving a description of the teaching of ethics in dental education in Denmark, Norway and Finland. An account is given of the teaching at the pre-clinical level as well as the clinical level with a focus on the specific aim, topics, extent, methods of teaching and whether the courses are mandatory with final exams. It is concluded that a common factor is that the teaching encompass lectures as well as sessions devoted to case-studies as an important element. Furthermore a characteristic and common perspective in the three countries is the primacy of respect for the patients’ autonomy and informed consent in the relationship between the dentist and his/her patient.

Denmark
The teaching of ethics in dental education is part of the mandatory courses Studium Generale at the Universities of Aarhus and Copenhagen. Here the concentration will be on the course at The Faculty of Health Science, University of Copenhagen, where the course was first established in 2004, until recently on the third semester, now on the fourth semester. Studium Generale encompasses general philosophy of science, concepts of health and disease, the history of dentistry – and ethics. The extent of the course is 12 lectures for all dental students (app. 90) and 14 classroom session (app. 24 students) with 5 lectures and 6 classroom session devoted to ethics. During the course the students in groups of 3 – 4, have to do a piece of written homework in order to enrol for the 2 hours final written examination.

The aims of the teaching of ethics
The aims of the teaching of ethics are 1) that the students should master basic ethical concepts and be able to carry through a consistent and coherent ethical argumentation and 2) should be able to identify, analyse and discuss important ethical problems in daily clinical practice and research.

In order to enable the students to fulfil these aims they are introduced to basic relevant distinctions, concepts and nor-
The distinction between technical norms and ethical norms
Examples of technical norms are methodological norms for doing good clinical research. The point of drawing the distinction between technical norms and ethical norms in this respect is to emphasise that good science, in the purely technical sense of «good», is only a necessary condition for that piece of research to be ethically justifiable not, however, a sufficient reason. As an example of a case for discussion in the classroom sessions the students are presented with the Vipeholm Dental Caries Study (1). This was a surely a good scientific study in the purely technical sense of «good», but even though it was «good» in this sense, one can question whether it was/is acceptable from an ethical point of view. When you present the students with this example a typical response will be: «Okay, maybe today we would not accept such a study, but back in the 40ties this research was in accordance with the then prevailing ethical norms» echoing Bo Krasses´ remark: «It is easy to be wise after the event.»(1). Such a response is an invitation to a discussion of an ethical relativism prevailing among not only dental students, but medical students as well, pointing out that the Nuremberg Code was formulated in 1947 with its requirement of voluntary consent as an absolutely necessary condition for research on human beings to be morally justified. This case also exemplifies different positions in normative ethics. In (1) Bo Krasse writes: «The end sometimes justifies the means» which echoes Kant’s formulation of the categorical imperative: «Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end» (2).

The distinction between legal norms and ethical norms
This distinction is important for at least two reasons. First, although it might be desirable that there is an agreement between legal norms and moral reasons, this is not always the case. A case will be presented in the section «Basic ethical concepts and principles». The other reason is that the law is not (always) unambiguous in the sense that within the framework of the law it might be possible to act in very different ways. For example, if one has a patient who is HIV-positive and also his or her partner, and the patient refuses to inform his/her partner about this status the choice is open, within the framework of Danish law, to respect the duty of confidentiality but also to breach the confidentiality. Real life examples as this are important, because there is a tendency among students, physicians and dentists to confine themselves to just not being in conflict with the law. Examples like this may be used to demonstrate that laws may not be unambiguous in the above sense, and in consequence, one has to engage in ethical reasoning.

Meta-ethics and ethical reasoning
Here the relationship between facts and values and the logical gap between «is» and «ought» is discussed i.e. that one cannot derive a normative statement about what one ought to do from a description purely of the facts. The point is to emphasise that normative questions and statements are different from factual questions and statements.

Next the logical requirement in form of consistency in moral reasoning is introduced as the most essential part of the lecture – the principle of universalizability in this form: If on the one hand A is good, ought to be done etc. and if on the other hand B is not good, ought not to be done etc. then – as a matter of logic – there has to be some morally relevant differences that can explain and justify why A is good, ought to be done etc. and B is not good, ought not to be done etc. This follows from the principle of universalizability: Because if A and B in all morally relevant aspects is the same, then they have to be judged in the same way.

This, of course, sounds pretty abstract, but it is exemplified in many ways. Here is a relevant example. Are there morally relevant differences between diseases in the stomach and the mouth that can justify treatment of diseases in the stomach to be fully covered by the public health care system but not with dental treatment and care?

In Denmark for historical reasons this is so – it is a fact (an «is»). But the normative question is whether it ought to be so. And if there are no morally relevant reasons that can justify this state of affair, this is not only inconsistent but fundamentally unfair in the sense that some patients cannot afford optimal dental care and treatment.

Basic ethical concepts and principles
A trend in health care ethics starting approximately 30–40 years ago has been a criticism and rejection of paternalism in the relationship between the patient and the provider of health care. Instead, informed consent has been emphasised as basic for this relationship and this requirement has in the literature mostly, if not exclusively, been seen as grounded in a principle of respect for the autonomy of the patient. It is a trend that is reflected in health care law in Denmark as in other Nordic countries.

In the course we find conceptual clarity especially important with respect to the nature of the ethical principles that can justify the requirement of informed consent. As it has been argued elsewhere
the principle of respect for autonomy sounds so beautiful that it
tends to bewitch the intellect (3). What informed consent means in
the context of health care is that the provider has to get the consent
on the basis of adequate information to do something with his/her
patient – whether diagnostic, prophylactic and therapeutic interven-
tions. To put it crudely, as such it protects the patient against inter-
ventions in his/her body and person, however well intentioned. The
basic principle underlying the requirement of informed consent thus
seems, it has been argued (3), to be respect for autonomy as a nega-
tive right. But now in more and more contexts it is used to express
a positive right: If a patient on reflection wants or demands a certain
intervention the professional has an obligation to respect this wish
or demand in order not to violate the patients’ autonomy. But this
is clearly absurd! A concrete example is the patient who wants teeth
extracted despite the dentist cannot find pathological changes that
can justify the extraction. The patient is persistent in his wishes
because he has the opinion that headache and pain in the joints
stems from the teeth. Of course a dentist is under no obligation to
respect this wish in order not to violate the patients’ autonomy. If
this were the case, the logical consequence would be that there were
no limits to the ways in which a professional could violate the pati-
ents’ autonomy. Furthermore, as a consequence it might imply a de-
professionalization of the practise of medicine and dentistry (4).

Another way in which the principle of respect for autonomy tends
to bewitch the intellect is that it is applied where for logical reasons
it cannot be applied (3, 4). To respect the autonomy of the patient
presupposes that there is an autonomy to be respected. This is a con-
ceptual point. That is, the patient has to have the capacity for well
considered decisions with respect to proposed diagnostic, prophylac-
tic and therapeutic measures. If not, there is no autonomy to be
respected and the question arises whether or not a paternalistic inter-
vention might be justified.

As an example the following case has been the subject for an exa-
mination paper and the case also exemplify the distinction between
legal and ethical norms and principles

Case study
A 35 year old mentally handicapped patient presents with a major
attack of caries on minus 36, possibly with communication to pulpa.
There is a need for excavation of the tooth and perhaps root canal tre-
ment. The relatives of the patient give their consent to the treatment
but the patient refuses to be drilled and resists attempts of invasion
into the mouth. Missing treatment might involve dental abscess, swel-
ling of the bottom of the mouth and in the last event respiratory pro-
blems. The treatment can be carried out, however, if the patient,
against her wishes, is pre-medicated and local anaesthetic is applied.

The students are then asked to give an account of the concept of
«autonomy», an ethical principle of respect for autonomy, the con-
cept of «paternalism» and the distinctions between technical, legal
and ethical norms. On the basis of their accounts they are then asked
to give a well reasoned answer to the question as to whether the pro-
posed intervention is a form of morally justified paternalism.

This case presents a dilemma in clinical practice in Denmark
because it is against the law to treat a patient against his/her will
even in case of a proxy consent from a legal guardian or the patients
relatives. It is illegal but from a moral point of view it can very well
be argued that a concern for the patients’ dental health and wellbe-
ing makes the proposed intervention a justified form of paternalism.

The students also have to answer the question of whether the law
ought to be changed for ethical reasons. Here the requirement of
consistency in moral reasoning is brought into play. According to a
piece of social legislation in Denmark it is legal for a social worker
to use force to brush a mentally handicapped persons’ teeth and rem-
ove food debris despite the persons’ resistance. In other words it is
legal to act in a paternalistic way in these situations. The question
then is whether there are morally relevant differences that can justify
that a social worker is entitled to act in this way but not for a dentist
to provide the patient with a necessary treatment. If not, then this is
clearly a case where anti-paternalism has run amok (5). And the pati-
ent pays the price.

The ethics of clinical research
The third lecture in ethics (and classroom session) is devoted to the
ethics of clinical research, especially randomized clinical trials
(RCTs). Apart from being introduced to the Declaration of Helsinki,
current legislation and ethical committees, the focus is on the ethical
justifications of RCTs. In centre of he discussion is the moral relevant
differences between ordinary practice on the one hand and RCTs on
the other. Following Robert Levine the term «practice» is defined:
«The «practice» of medicine or behavioral therapy refers to a class of
activities designed solely to enhance the well-being of an individual
patient or clients (6). A morally relevant difference between ordinary
practice and a RCT is that a RCT is not «designed solely to enhance
the well-being of an individual patient or client» but to obtain gene-
ralizable knowledge for the benefit of future patients i.e. a utilitarian
justification, usually under the constraint of informed consent.

Of course it is emphasized that a RCT comparing, for example, a
new therapy with a standard therapeutic method contains therapeu-
tic components intended to benefit the participants. What is essen-
tial, however, is that a RCT contains not only therapeutic compo-
nents but also research components that differentiate it from the
ordinary doctor-patient relationship. Randomization and blinding
are such research methodological procedures designed to evaluate
the therapeutic components and to ensure that the study fulfills the
requirements of generalizable knowledge for the benefit of future
patients. RCT’s thus contain non-therapeutic as well as therapeutic
components that set it apart from the ordinary doctor-patient rela-
tionship in morally relevant ways. In enrolling a patient in a RCT the
professional then takes on an additional role.

On the basis of such conceptual clarifications it is discussed
whether it makes sense at all to talk about paternalism if a profes-
ional enroll a patient/research subject in a RCT suspending the requi-
tement of informed consent – again taking some concrete research
projects as the starting point.

Norway
Students at Norwegian universities must pass an examination (exa-
men philosophicum) before being admitted and permitted to register
for a university exam. Through the Examen Phil., the student gets an introduction to philosophy and its history, the practice of logic, the philosophy of science (epistemology), ethics and scientific method. Although such classical education is useful, whether it is sufficient to provide moral guidance and function as an evaluation tool for practical implications is uncertain. Several years ago, the Norwegian press strongly criticized the Norwegian universities for not facing up to real ethical challenges (7). The absence of a considered attitude to today’s ethical issues, including globalization, new media and society’s view of the relationship between academic institutions and industry, was viewed negatively. It was emphasised that the university educates decision-makers, and to make good decisions, one must be able to weigh different considerations and interests against each other. Moreover, lack of professional and ethical knowledge makes a person’s professional integrity more vulnerable to external influences.

As a result of the above, ethics teaching at universities was strengthened and dental students, along with medical students, now undertake at preclinical level a course the overall goal of which is to provide an introduction to medical ethical thinking and to provide a methodology for the ethical analysis of difficult dilemmas.

The course includes topics such as normative analysis and ethical theories, resource allocation and prioritization, genetics and stem cell research, the relationship with the pharmaceutical industry, global health issues and ethics, human rights and multiculturalism (8).

After completing the course, students should be able to analyse ethical dilemmas, be able to justify ethical choices concerning patients and society, understand the norms and values that govern medical and health activities and be able to reflect critically on their own clinical practice and future professional activities.

The course is mandatory and includes 16 hours of lectures, case studies, role playing, dial groups and plenary discussion. Then the students have a home exam involving consideration of an ethical issue. This examination assessed on a pass/fail basis.

Later in their dentistry training, the students participate in 6–8 hours of training in professional ethics in a community dentistry and behavioural sciences context. In this training, the norms and guidelines for an optimal and ethical practice of dentistry are considered, including the following aspects

**Aspects covered in dental education in Norway as well as in Finland**

* Within his field of activity, a dentist’s task is to look after his patients’ health;
* Treatment should respect patient autonomy and be in accordance with informed consent. The patient should be informed about symptoms and their cause, actual therapy, treatment options, possible risks, side effects, prognosis, and, in consultation with the patient, therapy should be adjusted to the individual’s needs;
* One should act considerably and tactfully towards patients and offer similar treatment to all patients, regardless of their religious and personal beliefs. For example, people with infections have the same rights to treatment as the rest of the population
* One should understand and respect the patient’s right to confidentiality;
* A dentist should conduct his work as in accordance with scientific and practical experience. The dentist must maintain and increase his skill levels and keep stay up-to-date with professional and scientific developments;
* A dentist should recognize his professional limitations and not exceed the limits of his skills and competence. If examinations or treatment require additional knowledge or skills, he must ensure that the patient is referred to others with greater expertise in the field;
* All dentists have an obligation to be familiar with relevant laws and regulations, and to practice their profession in accordance with these (Health personnel law, the Patient’s Rights Act, regulations on medical recordkeeping, the Dental Health Services Act, Regulations on social security benefits for dental treatment, etc.);
* The dentist must assist patients to avail themselves of their rights and entitlements as defined by law;
* Superfluous or unnecessarily expensive treatment should not be proposed not undertaken, nor should advertising be misleading;
* The dentist should respect colleagues, and encourage cooperation in the health sector, but not in such a way that the patient’s health is given low priority.

A basic course in ethics is important to provide a template for implementation in the different disciplines. In this way, one can reconcile ethical theory and clinical practice in different patient situations and that is the way clinical teaching proceeds in today’s education of Norwegian dentists. Knowledge and skills are necessary factors for the dental profession, but an ethical attitude complements the capabilities of a profession and benefits both the patient and the professional.

**Factors are emphasized in the clinic**

The operator must have his own indicators of quality for the different treatments he undertakes. These should be close to and not compromise the accepted standard for the discipline. Failure to meet the standard must always be explained.

There is probably a balance to be struck between under-treatment (e.g., inadequate diagnosis and treatment of periodontal disease) and over-treatment. The guide line should be to keep the patient’s health in focus, taking account of risks, personal skills, economy and realistic expectations about the result. A treatment should not be imposed on a patient who is not motivated, nor based on professional criteria that are not strongly indicated. Examples could include replacing functional amalgam fillings with a crown in a tooth that actually has enough retention to repair a filling (because the payment system favours this treatment); filling tooth gaps which do not bother the patient by costly implants; whitening teeth which the patient does not perceive as a cosmetic nuisance and performing doubtfully necessary additional fillings on the basis that the dentist has time and capacity to do the work, whatever than the patient’s needs.

Treatment should be cause-oriented and not driven by a «drill, fill and bill» principle. Norwegian dental education can probably be criticized for being over-focused on reparative surgery. How do we
assess the value of a healthy tooth surface versus a tooth surface with a filling? It is important to remember the Ulysses syndrome (9) and the «vicious circle of repairs» in which the patient is initially quite healthy, but the treatment causes harm.

Patients, due to their lack of knowledge and insight, are at the mercy of the professional’s recommendation. This requires ethical thinking and moral integrity, for by the advice he provides, the operator can steer the patient’s decision about treatment in a direction that may be more in the interest of the operator than the patient, increasing treatment costs with no benefit for the patient and even, at worst, loss of health. It should be unnecessary for a teacher to have to warn students against enrolling on courses of the type «How to survive on 300 patients»!

Dentists who are interested in a PhD program must complete an intensive two-week course consisting of lectures, group work and examinations. Themes discussed include the use of humans as subjects, misconduct in research, the Declaration of Helsinki, independent research ethics committees, animal ethics and the Vancouver rules for authorship (10–12). The course «Philosophy of Science» («epistemology», includes the philosophy, history and sociology of science) and ethics is an IMPORTANT and mandatory part of all PhD studies. This is required by the PhD Regulations and in correspondence about the National Regulations published by the Norwegian Association of Higher Education Institutions. The primary purpose of the training in «scientific theory» and ethics is simply to strengthen the ability and depth of reflection of the candidates in their education about research. Specifically, the AIMS are:

* to develop the candidates’ knowledge of the characteristic features, strengths and limitations of their own field of inquiry, and how these can affect their encounters with other academic disciplines and sectors of society;
* to develop the candidates’ critical skills and capacity for reflection, including their ability to reflect upon their own academic field and to see their own research from other and external perspectives;
* to help shape researchers who combine academic strength and authority with academic maturity, and who know how to translate into action their understanding of the value of other perspectives and the limitations of their own field.

Finland

In Finland there are four dental schools in the Universities Helsinki, Turku, Oulu and Eastern Finland where the school is situated in Kuopio. The first three have established curricula but Kuopio started taking in students just two year ago. Thus, all sections of curriculum have not been finalized. In general, ethics are covered during different phases of the curriculum. It starts with an introduction in the preclinical phase which is in many universities common with the medical students. Later specific issues related to dentistry are covered in the dental curriculum. Ethics courses are mandatory in all Universities.

At the preclinical phase an introduction to ethical thinking in health care and tools for ethical analysis are given. Topics covered might vary between universities but cover issues such as ethical theories, prioritisation and resource allocation, genetics, relationships between patients and companies, human rights, global issues (13,14) as well as the ethical guidelines of the medical and dental associations (15) are introduced.

The values that commonly apply to medical ethics discussions are covered in the theory part. These include 1) autonomy – the patient has the right to refuse or choose their treatment, 2) beneficence – a practitioner should act in the best interest of the patient, 3) non-maleficence – «first, do no harm», 4) justice – concerns the distribution of scarce health resources, and the decision of who gets what treatment (fairness and equality) (13). The ethical guidelines of the dental association cover dentist-patient relationship, dentist and the society, dentist’s relationship to the dental profession and collegialism (15).

The main aims of these preclinical courses are to introduce the students to the significance of ethics in medicine and dentistry and give them tools to analyse their own ethical thinking. Methods of teaching at this phase are introductory, with interactive lectures which are followed by group discussions and/or written self-reflection. In Oulu and Turku ethics are integrated also to the tutoring. During the first year special emphasis in ethics is given in tutoring and ethical issues are also covered throughout the studies. These include different cases ranging from patient problems to behavior in social media. The extent of these preclinical courses varies from half-day sessions to 1 ECTS points. In Oulu written self-reflection is used as a method of assessment while in Turku participation in tutor-meetings is mandatory. In Helsinki no assessment is made on preclinical phase.

Later in the dental curriculum the ethical teaching is usually integrated to the several disciplines and is covered both in the theoretical teaching provided by dental schools and clinical practice undertaken at municipal dental clinics. Departments of community dentistry or oral public health usually take care of the teaching which is often integrated with the teaching of legal aspects, dentist-patient relationship and public health care such as prioritisation and resource allocation.

At this phase ethical theories and principles are put into dental practice. Students should learn to analyse ethical dilemmas, be able to justify their ethical choices concerning taking into account the aspect of patient and the society. In addition they should understand the relationship of ethics with communication and legal aspects. Additionally, they should be able to reflect critically on their own ethical thinking and how it is put in to practice in clinical and other professional activities.

The aspects covered include the same aspects as covered in ethics in dental education in Norway (see above)

Methods of teaching at the clinical phase are similar to those in the preclinical phase. They include introductory and interactive lectures which are followed by group discussions covering patient cases. An example of a patient case (see below) is one that is similar in Oulu and Turku. In Oulu the case is integrated with the teaching of pediatrics.

Teaching material varies between the Universities and includes for
example FDI Dental Ethics Manual (16), book on medical ethics (14) and publications of the National Advisory Board on Social Welfare and Health Care Ethics ETENE (17). The extent of these preclinical courses varies from half-day sessions to 1 ETCS points. Methods of assessment include learning diaries and usually an essay question in the final exam in Oulu and Turku, the latter also in Kuopio while in Helsinki no assessment is required.

Case study

Students are provided with a following short patient history: A 5-year-old child comes to the clinic with a guardian but resists treatment. She has been suffering with dental pain in molar section for two days. From previous patient records several missed or cancelled appointments are seen as well as caries needing filling two years ago. Additionally, the records show that information about these as well as about the need for prevention has been given to the guardian.

Information is the same for all groups but in addition the information about the guardian’s gender and behaviour varies. The guardian can for example be an exhausted mother bursting into tears, an aggressive father blaming the dentist from neglecting the child, a mother insisting on general anaesthesia or a father asking the dentist to treat the child even holding the child still by force.

Students are advised to discuss in groups what the following ethical guidelines mean for this case, to present their decision and especially the justification for it.

* Autonomy – the patient has the right to refuse or choose their treatment,
* Beneficence – a practitioner should act in the best interest of the patient,
* Non-maleficence – ‘first, do no harm’,
* Justice – concerns the distribution of scarce health resources, and the decision of who gets what treatment (fairness and equality).

All groups then present their results and others are encouraged to critically evaluate them. Finally, the feelings of guardian’s behaviour and whether it affected their decision are discussed.

A Nordic perspective – some conclusions

The aims of the teaching are very much the same in the three countries and can be summarized as being to enable the students to identify and analyze ethical aspects and dilemmas and be able to reflect critically on issues that arise in dental clinical practice and research. It seems, however, that in Denmark there is more focus on consistency in ethical reasoning as a formal requirement.

As to topics taken up at the pre-clinical level the focus in Denmark is on the ethical issues in the healthcare provider-patient relationship and ethical issues in clinical research, whereas in Finland and Norway the scope is broader to include prioritization and resource allocation, for example, genetics and global health issues.

In all of the countries, methods of instruction includes as an important element lectures as well as sessions devoted to case-studies. A difference between Denmark and the other countries is, however, that in Finland and Norway the teaching of ethics is also part of the clinical training. Furthermore, the topics dealt with at that level are, as seen, identical in the two countries – thus with a shared Nordic perspective. Finally, a characteristic and common perspective in the three countries is the primacy of respect for the patients’ autonomy and informed consent in the relationship between the dentist and his/her patient.

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