

Summary of the report *Ethical assessments at the border between health and medical care and research, 2016:1.*

Introduction

In the report *Ethical assessments at the border between health and medical care and research, 2016:1*, the Swedish National Council on Medical Ethics analyses ethical issues concerning ‘clinical innovation’ in the borderline area between health and medical care and research.

A method that is used without an evaluation of its effects and risks in clinical trials and without tried and tested experience is described in this report as ‘innovative’. An innovative method can be investigated in a clinical research project for which there is a clear legal and ethical framework. Innovative methods may, however, sometimes also be used outside of research projects. An innovative method can be used as part of an early stage in a clinical development project, or an established method may be used for an illness other than the one it was originally developed and tested for.

There are indications that innovative methods are currently used or offered in a relatively unethical and unordered way within Swedish health care.¹ This may cause ethical problems, such as patients not being correctly informed about the risks and the available options, a lack of proper risk and benefit assessments, and even the risk of individual patients being injured. This may also risk confidence in medical care being damaged. An additional problem is that a method is perhaps not developed and evaluated so that it can be of benefit to other patients.

During the Council’s project on clinical innovation, Professor Paolo Macchiarini’s transplants using synthetic windpipes attracted a great deal of attention in Sweden and internationally.² Macchiarini’s transplants have been the subject of intense debate among researchers and the general public. One of the questions in this case was whether the surgical procedures carried out should have been considered medical care or research. According to the Karolinska University Hospital, the procedures should have been regarded as medical care carried out on vital indications, whereas many others (including the Swedish Research Council, the Karolinska Institutet’s external investigator, the Karolinska University Hospital’s external investigator and the Health and Social Care Inspectorate) have suggested that they should have been evaluated as research experiments.

Some debaters believe that the question of whether the surgical procedures should be regarded as research or medical care is irrelevant, as the procedures were unacceptable from an ethical point of view, regardless of whether they were carried out as care or research. However, the fact that the hospital and the authorities involved have not been in agreement about how the procedures should be regarded³ indicates that there are problems that need to be resolved.

Thus, the subject of clinical innovation raises several questions that are discussed in the report. For example, should it be permissible at all to use new and untested methods outside research projects? If so, does a special ethical assessment need to be carried out in these cases and who should have insight into the process? How should the risk-benefit assessment be done before using an innovative method and how can informed consent be obtained from the patient?

The report looks at the ethical value conflicts that can arise when innovative methods are used in health and medical care. The Council also raises the problem of distinguishing innovative

¹ This has emerged during the Council’s knowledge-gathering and dialogue meetings within the framework of this project.

² See, e.g. Lövtrup M, 2015.

³ Asplund K, 2016.

medical practice from research and describes a number of conditions that need to be met before an innovative method can be used in health and medical care.

Ethical problems: value conflicts and conflicts of interest

The question of whether the use of innovative methods should be allowed in medical care raises the conflict between, on the one hand:

- the interest in giving patients the possibility of individually designed treatment or one final possibility (hope) of survival, and a reasonable quality of life for patients with serious illnesses;
- and the interest of society in promoting medical development and innovation, and on the other hand:
- the interest in ensuring that patients receive tested and safe care, where the risks can be properly assessed in advance.

In issues concerning patient autonomy, a conflict can arise between on the one hand:

- respect for the patient's self-determination in choice of treatment, and on the other hand:
- the major difficulties for the patient to give their fully informed consent when the effects and possible risks are not completely understood.

For individual doctors or treatment providers, a conflict can arise between, on the one hand:

- the desire to offer an individually tailored and potentially life-saving treatment, and on the other hand:
- the obligation to only offer tested and safe treatment methods.

In other cases, a conflict can arise between, on the one hand:

- the career interest in being the first to carry out a particular method;
- the personal incentive to make new discoveries relevant to future research; and
- the moral duty to develop health and medical care, and on the other hand:
- the moral duty to protect the patient and comply with ethical and legal rules.

The Swedish National Council on Medical Ethics believes that it is possible to balance the various interests in an ethically acceptable way.

Arguments and considerations

The arguments presented in the debate in favour of allowing innovative methods outside the framework of a research project are:

- Individual tailoring of a treatment method when other effective treatment methods are lacking.
- Respect for the patient's right to self-determination.
- A medical development, which may benefit other patients in the long run.
- Research projects involve a delayed process, with the risk of the patient's condition deteriorating or the patient dying.

The arguments presented in the debate against allowing innovative methods outside the framework of a research project are:

- Patients are subjected to unknown and potentially unacceptably serious medical risks.
- Without secure knowledge of the risks and benefits, patients cannot make fully informed choices.
- Attending doctors (or other medical care staff) may apply innovative methods as a fast track instead of conducting more demanding and time-consuming research projects.
- If an innovative method is not evaluated in a research project, this can result in delayed medical development, with negative consequences for future patients.
- The risk is that the confidence of the public and patients in both medical care and clinical research is weakened.

Considerations

The Council's fundamental approach is that the treatment methods offered by medical care should be safe, have scientific support, and be tried and tested. Irregular experimentation within medical care can involve unacceptable risks for patients and a risk of the actual innovation not being developed and reported in the right way. In the majority of cases, a planned, methodical and ethically tested research project is preferable when developing new treatment methods.

However, situations may arise in individual patient cases where the attending doctor or the patient themselves considers that an innovative method may be used to try and save their life or improve a considerably impaired quality of life. This could be a patient with a serious illness for which effective treatment methods are lacking and where the attending doctor has reason to assume, on the basis of theoretical reasoning and previous experimentation (animal testing or experience from other patient groups), that an innovative measure could help.

During the Council's knowledge-gathering and dialogue meetings with people who have good insight into the clinical realities, it emerged that innovative methods are used in health and medical care. The Council considers that the use of innovative methods in these cases must take place in an orderly and ethically acceptable way. The crucial question is when innovative treatment can be given, in which situations and in which way it can be given to avoid the risks stated above under 'arguments against'.

A key ethical problem involves the informed consent and the risk-benefit assessment in a treatment situation where there is a great deal of uncertainty about the outcome of the treatment. The Council considers that the risks involved in using innovative methods in medical care must never be ignored. The current regulations for protecting patients in both care and research must be followed in every individual situation.

However, in the Council's view it should be possible to offer innovative methods in medical care under certain narrowly defined conditions. One fundamental premise is that the patient must always be treated for their own sake and not as a means to achieve other purposes (such as obtaining new knowledge).

In the report, the Council discusses the following areas in particular:

- The patient's self-determination versus protection of the patient
- Informed consent and risk assessment
- A scientific basis and tried and tested experience
- Patient compensation for damages in the event of clinical innovation use
- Distinguishing clinical innovation within health and medical care from research
- Organisation, leadership, responsibility and training needs

- Methods that have been tested to a certain extent but that lack scientific support

The Council's viewpoints

The Swedish National Council on Medical Ethics considers that innovative methods should, as a rule, be used and developed within the context of research studies, in accordance with the regulations that apply to research. For methods that can be regarded as development on scientific grounds, the Ethical Review Act and its requirements for examination by the ethical review board apply.

In the Council's view, innovative methods should also be offered within health and medical care outside a research project and under certain narrowly defined conditions. One fundamental premise is that the patient must always be treated for their own sake and not as a means to achieve other purposes. The purpose must only be to help an individual patient who is suffering a great deal or has a pronounced reduction in their quality of life.

The Swedish National Council on Medical Ethics considers that a solid ethical set of values with clear guidelines means that the patient and the attending doctor can feel secure and can help to maintain confidence for health and medical care. The Council therefore proposes conditions in seven areas that should be met before innovative methods can be applied in health and medical care:⁴

Basic conditions. Innovative methods may only be used in exceptional cases when the patient is suffering greatly or has a pronounced reduction in their quality of life and there are no effective and tried and tested methods. The innovative treatment must, on the basis of scientific reasoning, have the potential to be effective. The expected benefit for the patient must be proportionate to the risks. Moreover, there must be a theoretical scientific basis as well as previous animal trials and/or human trials on other patient groups or indications.

Written plan. An appropriate written plan must be drawn up in the patient's medical records. Here, the planned procedure must be described, along with the options available, the expected effects and risks, and other important aspects. The plan should also describe the current state of art and include a contingency plan for how to deal with complications (including psychological complications), as well as long-term follow-up.

Decision by head of operations. If there are plans to use an innovative method, the head of operations must have been informed and must have approved it.

Ethical examination. Before an innovative treatment is used, independent examiners should assess the method in view of possible health benefits in the short and long term, potential risks and other ethical aspects. The examiners should have ethical and legal knowledge as well as specialist medical knowledge from another hospital or another medical institution. When reviewing the area, it should be considered whether a national actor should be instructed to establish a central system for review and coordination of ethical examination of innovative methods.

Emergencies. In emergencies or acute situations when an ethical examination, as above, could mean delays that risk worsening the patient's condition, it should be possible to use the innovative method without a prior external examination. Even in acute situations, an ethical assessment and risk-benefit analysis should be carried out and documented. The responsible doctor should consult the head of operations and other people with adequate skills who are available. However, this procedure should only be used in extreme situations. In the majority of

⁴ Concerning patients over the age of 18. In this report, the Swedish National Council on Medical Ethics has not discussed in particular the conditions for the use of innovative methods on minors or people with a reduced decision-making capacity.

cases there is time for an external ethical examination prior to use of an innovative method, and the emergency category must not be misused as a way of bypassing this principle.

Informed consent. Before using a clinical innovation, it is particularly important to obtain informed consent from the patient. The patient must be made aware of the knowledge gaps that exist concerning effects and risks, and which treatment options are available. It should be considered whether the patient's consent to the use of an innovative method should, as a basic rule, be given in writing.

Reporting results. The results of the use of the innovative method should be reported, for example through publication in a scientific journal. It is also important for less successful results to be reported. If an innovative method is used at several hospitals, a joint quality database should be created.

In connection with the work on this report, many related issues have been discussed. The Swedish National Council on Medical Ethics has chosen to highlight the following:

- Ethics training for health and medical care staff needs to be strengthened.
- Special training initiatives are needed to increase knowledge about and respect for existing regulatory frameworks.
- When innovative methods are used, the division of responsibility at the institution must be completely clear.
- The Swedish National Council on Medical Ethics proposes the introduction of a basic rule to ensure that pilot studies also go through a research ethical examination when a new method is to start being applied on humans.