



EVALUATION OF UNDERGRADUATE MEDICAL EDUCATION

Project plan 13 March 2017

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1. Introduction

In May 2016, the Higher Education Evaluation Committee (HEEC), which is part of the Finnish Education Evaluation Centre (FINEEC), made a decision to carry out a nationwide evaluation of undergraduate medical education in Finland. The decision was made on the basis of a proposal submitted by the Ministry of Education and Culture. The evaluation will be carried out between 2017 and 2018. The evaluation will cover the degree programmes offered at Finnish universities that lead to the Licentiate Degree in Medicine. Programmes leading to the Licentiate Degree in Medicine are offered at five Finnish universities: the University of Helsinki, University of Eastern Finland, University of Oulu, University of Tampere and the University of Turku.

This project will be the first nationwide evaluation of undergraduate medical education in Finland. The evaluation will be carried out at a time when major changes are taking place in medical education and in the operating environment for medical doctors in Finland.

In October 2016, HEEC appointed a group tasked with the planning of the evaluation. The group's task was to prepare a proposal for the evaluation project plan to HEEC. The requirement was that the plan should lay out the objectives of the evaluation, the areas to be evaluated, the evaluation questions, the evaluation methods and a preliminary timetable for the project. The composition of the planning group was as follows:

Katrina Nordström, Professor, Aalto University, Member of HEEC (Chair)

Teppo Heikkilä, Senior Medical Officer, Ministry of Social Affairs and Health

Henni Hiltunen, Medical student, Finnish Medical Students' Association

Jussi Huttunen, Professor Emeritus, Duodecim

Risto Huupponen, Vice-Dean, Professor, University of Turku

Jyrki Mäkelä, Professor, University of Oulu

Tiina Paunio, Vice-Dean, Professor, University of Helsinki

Jukka Pelkonen, Head of Department, Professor, University of Eastern Finland

Kati Hakkarainen, Director of Education, University of Tampere.

Kirsi Hiltunen, who served as the evaluation project manager, and **Hannele Seppälä**, evaluation expert, from FINEEC supported the work of the planning group (Seppälä from 2 January 2017).

The planning group held four meetings between November 2016 and March 2017 and prepared this project plan for HEEC. During the preparation of the project plan, the planning group consulted the Finnish Medical Association on issues concerning the research material in possession of the association and its projects.

At the start of the planning stage (September 2016) the universities and stakeholders were provided with information about the launch of the planning process. Each of the universities providing medical education were also asked to appoint an evaluation contact person who would be responsible for project-related communications and collection of information at the university during the evaluation and for other evaluation-related practicalities at the university. Each university was also asked to appoint a representative to the planning group, which means that all units providing medical education in Finland were represented in the planning group. By engaging all units in the evaluation planning process, HEEC wanted to ensure that the units would be able to use the evaluation results in the development of their medical education and thus also strengthen the impact of the evaluation.

The project planning and implementation will be organised in two stages. In spring 2017, HEEC will appoint an international evaluation team to carry out the evaluation.

The provision and operating environment for medical education in Finland, placement of graduates in the labour market and the changes taking place in the operating environment for Finnish medical professionals are described in sections 2 and 3 of the project plan. The objectives of the evaluation, areas to be evaluated and the evaluation data are described in sections 4 and 5, and the organisation and timetable of the evaluation project and project-related communications are described in sections 6 and 7.

2. Provision of medical education in Finland

2.1 Provision of undergraduate medical education

Medical education is provided at five Finnish universities: the University of Helsinki, University of Eastern Finland, University of Oulu, University of Tampere and the University of Turku. For the students, the purpose of their undergraduate medical training leading to the Licentiate Degree in Medicine is to obtain the right to practice medicine as a licensed doctor. The degree is a higher university degree and provisions on its overall objectives and structure and the studies required for the degree are contained in the Government Decree on University Degrees (794/2004)¹. As self-governing entities, Finnish universities have extensive powers to decide on the content of their training and on the organisation of their teaching. No unified nationwide learning objectives have been specified for the training.

In the medical sector, a university may provide the training leading to a higher university degree so that it does not include a lower university degree. The scope of the studies required for a Licentiate Degree in Medicine are 360 ECTS credits if the university provides the training leading to a higher university degree so that it does not include a lower university degree. The university must provide training so that the student can complete the studies in six academic years when studying on a full-time basis. The studies include a practical training period. Each unit providing medical education is linked with a university hospital where most of the clinical teaching provided as part of the medical education takes place.

The Faculty of Medicine of the University of Helsinki is the only place in Finland with a Swedish-speaking study line for medical education. The number of students admitted to the Swedish-speaking study line accounts for a maximum of five per cent of the students admitted to medical education. About half of the teaching in this line is in Swedish. Finnish-language students that have passed a Swedish-language test may also be admitted to the study line.

Student admission and student selection procedures are at the discretion of the individual universities. Each applicant to a programme for a Licentiate Degree in Medicine has taken part in an entrance test,

¹ Council Directive 93/16/EEC to facilitate the free movement of doctors and the mutual recognition of their diplomas, certificates and other evidence of formal qualifications must also be observed in the provision of the training leading to the Licentiate Degree in Medicine.

which is jointly organised by the Universities of Helsinki, Eastern Finland, Oulu, Tampere and Turku each year. However, this is not a joint selection procedure even though there has been talk of changing over to a joint selection procedure. At the moment, an individual may only apply for admission to one university and to one degree programme. The entrance test is held at all universities at the same time. An applicant may be admitted on the basis of the entrance test results or the combined score of the entrance test and their matriculation examination certificate. The aim has been to admit students who are talented in a broad range of areas. Student selection to universities is in the process of being reformed on a nationwide basis in accordance with guidelines issued by the Ministry of Education and Culture. Under the universities' performance agreements for the period 2017-2020, Finnish universities should, by the year 2018, introduce a student selection procedure that does not require lengthy preparation. In the future, the selection should mainly be on the basis of study performance at upper secondary level. The reform will also have an effect on student selection for undergraduate medical education.

Over the past seven years, about 600 students have graduated from Finnish universities with a medical degree each year. In 2015 a total of 625 Licentiate Degrees in Medicine were awarded by Finnish universities (Vipunen 2016). Under an agreement between the universities and the Ministry of Education and Culture, the number of study places was increased by 150 between 2014 and 2016. According to the ministry, medical education should be expanded because the ageing of the Finnish population will increase the need for care and a large number of doctors are retiring in the next few years. The intake was increased from 600 to 750, which was an increase of about 25 per cent. The universities were able to decide themselves at which stage they would increase the student intake. Traditionally, most Finnish medical students complete their studies: Between 93 and 95 per cent of all students admitted to faculties of medicine at Finnish universities graduate with a Licentiate Degree in Medicine (Vipunen 2016). The number of Finnish students studying abroad for a medical degree has doubled over the past five years: During the 2015-2016 academic year, a total of 760 Finnish students were studying for a medical degree in a foreign country and 25 per cent of them were studying in Sweden (Source: Kela).

In Finland, medical students may temporarily work as doctors under the direction and supervision of a licensed doctor. A medical student who has completed at least the studies pertaining to the first five years of study and who has on the basis of their studies completed sufficient qualifications for attending to the tasks concerned, may on a temporary basis pursue the activities of a doctor, emergency services included, under the direction and supervision of a licensed doctor. A medical student who has completed at least the studies pertaining to the first four years of study and those courses in the specialty in undergraduate medical training in which he or she intends to work, and who has sufficient qualifications, on the basis of the studies completed, for attending to the tasks concerned, may pursue the activities of a doctor under the direction and supervision of a licensed doctor in a specialised medical care unit or health centre ward. A further requirement for working as a doctor on duty is that the work must be carried out directly under the direction and supervision of a licensed doctor (Decree on Health Care Professionals 564/1994).

Universities cooperate in the planning of medical training even though there are differences between them with respect to the implementation and priorities of the training contents. According to the final report of a project coordinated by Universities Finland UNIFI in which the strategy and effectiveness of medical education in Finland was examined, there is potential for more cooperation and division of work in small and narrow specialist fields (Universities Finland UNIFI 2015). It was also recommended in the project that the core curriculum development work should continue. In this work the aim is to harmonise curricula and learning objectives and to develop the teaching so that it can meet the needs

of the future (for example by introducing more optional subjects). It was also recommended that there should be closer cooperation between universities and other local institutions (other universities, universities of applied sciences, state-owned research institutes, etc.) as well as closer research and teaching cooperation between universities and university hospitals.

2.2 Continuing training

Upon application, the National Supervisory Authority for Welfare and Health (Valvira) will grant a health care professional who has received training in Finland or in a foreign country, the right to practise as a doctor in Finland (Act on Health Care Professionals 559/1994). Under the Act on Health Care Professionals, doctors must maintain and improve their professional knowledge and skills required to carry out their professional activity and familiarise themselves with the provisions and regulations concerning them.

Continuing training is provided at workplaces in the form of in-service training (usually about two hours each week) and training provided outside the workplace. The Finnish Medical Association recommends that doctors should take part in continuing training provided outside the workplace for at least ten days each year (Finnish Medical Association 2014). Most of the training provided outside the workplace is arranged by scientific and professional associations in the medical sector. Finnish doctors also take part in international medical conferences. In addition to providing medical specialist training, universities and university hospitals also have supplementary training programmes for medical specialists in different fields. The Finnish Medical Association also has its own special competence system. In order to ensure that doctors are able to receive adequate continuing training, the Finnish Medical Association, the Finnish Medical Society Duodecim and the Finska Läkaresällskapet have jointly established the association Pro Medico, which provides doctors with tools allowing them to plan and assess their professional development and the association supplies information on continuing and supplementary training events intended for doctors.

2.3 Provision of medical specialist training and its reform

A large proportion of Finnish doctors acquire specialist competence in certain fields during their careers. About 80 per cent of all Finnish doctors aged 50 are specialists. According to a questionnaire survey conducted among Finnish doctors who had obtained their right to practice medicine between 2002 and 2011, nearly all of them had acquired specialist competence, were in specialist training or intended to take a specialist medical degree. Only one per cent of the respondents had decided not to become specialists and four per cent of the respondents had not yet made any decision on the matter (Ministry of Social Affairs and Health 2015).

Nowadays, medical specialist training is provided as continuing professional training. Training is provided in 50 fields of specialism. The universities are responsible for the content and quality of the training and award the participants a certificate for completing the training. The National Supervisory Authority for Welfare and Health (Valvira) grants the medical specialist a licence to practice medicine on the basis of the certificate granted by the university. Provisions on medical specialist training and training for specialists in general medical practice are contained in the legislation drafted by the Ministry of Social Affairs and Health (Act on Health Care Professionals 559/1994) and the Ministry of Social

Affairs and Health Decree on the Training for Medical and Dental Specialists and Training for Specialists in General Medical Practice (56/2015). Under the decree, the duration of medical specialist training is between five or six years, depending on the field.

The training of medical specialists is in the process of undergoing major changes and there has been a lively debate on the development of the training in Finland in recent years. The nationwide steering of medical specialist and dental specialist training was transferred from the Ministry of Education and Culture to the Ministry of Social Affairs and Health at the start of 2015. The aim is to provide the Ministry of Social Affairs and Health with better opportunities to steer the specialist training and to ensure that the number of study places is in accordance with the needs. The purpose is to have better tools for ensuring an adequate supply of medical specialist in different special fields. The aim is also to improve the quality, efficiency and working-life relevance of medical specialist training by strengthening the national coordination of the training and by ensuring that there is a closer link between the development work and international development. (See Ministry of Social Affairs and Health 2013 and 2016a).

An action programme for developing medical specialist and dental specialist training was announced in December 2016. The programme lays out the guidelines and timetables for the development of medical specialist and dental specialist training for the years 2017-2019 (Ministry of Social Affairs and Health 2016b). In order to ensure a specialist training system that supports the development of a high-quality service system², an open selection process will be introduced and students who have not yet chosen their special field will be provided with up-to-date information on training in different special fields and job prospects in them. The role of the universities as training coordinators and in providing quality assurance will also be strengthened. A joint theoretical training framework³ will be created for specialist training, learning objectives for each special field will be determined and the contents of the training will be harmonised on a nationwide basis. According to the targets set by the coordination division that is responsible for the coordination and strategic steering of the nationwide medical specialist and dental specialist training, 85 per cent of all doctors should obtain specialist qualifications. The overall need for undergraduate medical education and specialist training will be jointly assessed in the near future by the coordination division, Ministry of Social Affairs and Health, Ministry of Education and Culture and the universities.

The Ministry of Social Affairs and Health provides the public service system with compensation for the costs arising from general medical and dental education, as well as medical specialist and dental specialist training. Provisions on the compensation are contained in the Health Care Act (1326/2010) and in the following Ministry of Social Affairs and Health decrees: Ministry of Social Affairs and Health Decree on the Criteria for Compensation for Medical and Dental Training in 2016 (349/2016) and the Ministry of Social Affairs and Health Decree on the Service Providers eligible for Compensation for Medical and Dental Education and Funding for University-level Research (1125/2013).

² The service system refers to the system under which social welfare and health care services are provided.

³ The training framework serves as a definition of the learning objectives for medical and dental specialists and the achievement of the targets during specialist training. It provides the basis for specialist training.

2.4 Medical research environment in Finland

There have been a large number of reforms in Finnish higher education in recent years and the sector has also undergone budget cuts. A long-term, well-planned personnel strategy is becoming an increasingly important instrument in individual faculties because this is essential for ensuring high-quality and research-based teaching in the future.

Individuals serving in important clinical and expert administrative tasks in the health care sector must possess both clinical and research competence. As research resources are being cut, the role of the universities and their faculties of medicine are assuming an increasingly important role in medical researcher training and medical research. At the moment, all faculties of medicine at Finnish universities provide doctoral training in their doctoral schools. The University of Helsinki has four doctoral schools, one of which is the Doctoral School in Health Sciences. All other universities have one doctoral school each and the schools have a doctoral programme in clinical research or a similar programme and a number of other biomedical and translational doctoral programmes. All faculties of medicine are closely linked with the university central hospitals. In fact, most of the research is jointly carried out by hospitals and researchers working in the faculties of medicine and in state-owned research institutes. In addition to the faculties of medicine and hospitals, biomedical, pharmacological and medical technology research is carried out in other faculties (mainly in the faculties of biosciences and pharmacy), in Åbo Akademi University, Aalto University and Tampere University of Technology. The Top Ten index measuring the quality of Finnish medical research stands at 1.09, which is the at the same level as in other EU15 countries (Academy of Finland 2016).

3. Graduates' employment prospects and changes in the operating environment for medical doctors

3.1 Placement of graduates in the labour market and in the service system⁴

The number of doctors in Finland has grown steadily since the year 2000. According to the annual statistics published by the Finnish Medical Association, on 1 January 2016 there were a total of 28,600 licensed doctors in Finland of whom 54 per cent were women. Of the licensed doctors, 21,000 lived in Finland and were in working age (below the age of 65). Finland has 262 people for each doctor of working age. Many doctors from other EU countries also apply for the right to practice medicine in Finland. Not all of them seek work in Finland, which means that the number of doctors working in Finland is lower than the number of licensed doctors. In 2016, 59 per cent of all doctors of working age were specialists. There were a total of 12,300 medical specialists in Finland possessing 15,000 specialist licences. Women accounted for 60 per cent of all medical specialists (Finnish Medical Association 2016).

Most medical graduates in Finland find work after completing their studies. According to a questionnaire survey of the universities' career and recruiting services in 2014, conducted by the Aarresaari

⁴ The Finnish health care system is described in Appendix 1.

network, only four per cent of graduates who had received their Licentiate Degree in Medicine in 2009 had been out of work at any point after graduation (Aarresaari 2015). Graduates with a Licentiate Degree in Medicine proved to be among the most satisfied when the respondents were asked how beneficial their degrees had been in working life and whether their careers had developed in accordance with their objectives. According to the Physician 2013 survey carried out by the Finnish Medical Association, the University of Eastern Finland and the University of Tampere, young doctors (those licensed between 2002 and 2011) are also highly satisfied with their career selection: In 2013, about 90 per cent of them said that they would still go the faculty of medicine at the start of their studies (Ministry of Social Affairs and Health 2015).

In 2014, 70 per cent of all Finnish doctors in working life were employed in the public sector: 68 per cent were working for local government and 3 per cent for central government. Thus, 30 per cent of all doctors in Finland worked in the private sector. A total of 65 per cent of the doctors worked in hospitals or health centres, 17 per cent in private clinics, 5 per cent in other locations (such as the pharmaceutical industry or for temporary employment agencies), 4 per cent in universities, 4 per cent in other municipal locations than hospitals or health centres, 3 per cent for central government agencies and 2 per cent worked in foundations, associations or organisations (Finnish Medical Association 2015).

In 2013, of the young doctors in employment (those who were licensed between 2002 and 2011), 83 per cent worked for municipalities or joint municipal authorities, 13 per cent in the private sector, and 4 per cent had a full-time job in universities or government agencies. Hospitals remained the most important employers of young doctors: About 60 per cent of them gave a municipal hospital as their workplace and more than half of them were employed by university hospitals. Slightly more than one fifth (23%) of all young doctors worked in health centres: Most of the doctors (86%) were in direct employment relationship with the municipality and the remaining 14 per cent were working through temporary employment agencies. About 6 per cent of all young doctors participating in the survey worked in occupational health care on a full-time basis and most of these were employed by private occupational health care providers. In 2013, one third of all young doctors had a doctoral degree or were working on their dissertation: Of the young doctors participating in the survey, 13 per cent had written a thesis and 17 per cent were working on their thesis. Only 17 per cent of the respondents had decided not to write a dissertation, 41 per cent had not yet made a decision on the matter and 12 per cent planned to write a dissertation. (Ministry of Social Affairs and Health 2015).

3.2 Factors shaping the professional identity of doctors

The decision to become a doctor is often made at a fairly early stage. As many as one in four doctors made the decision to study medicine already before upper secondary school (Knight & Mattick 2006). Social background is one factor influencing the decision to become a doctor. In Finland, an increasing number of doctors come from families where at least one of the parents is a doctor (Sumanen et al. 2015). Factors in the living environment, such as popular TV series also have an impact (McHugh et al. 2011).

Both in the decision to become a doctor and in the selection of a special field, the content of the work plays a major role in the choice (Hyppölä et al. 1998, Heikkilä et al. 2015, Heikkilä et al. 2016). The selection of a specialist field is a process that usually starts during undergraduate studies. The final decision is often made during the first years after graduation. Teachers in the faculties of medicine and the colleagues at the first workplace play a central role in the selection of the special field (Heikkilä et

al. 2016). The personality of the doctor also has an impact on which special field they choose (Vaidya et al. 2004, Hojat & Zuckerman 2008).

Generally speaking, Finnish doctors are quite satisfied with their choices. More than 80 per cent of all doctors would still apply for admission to a faculty of medicine even if they could make a new decision and nearly 90 per cent of all medical specialists would still select the same specialist field (Heikkilä et al. 2015, Heikkilä et al. 2016).

About 75 per cent of all Finnish doctors consider themselves to be helpers, team members and health experts, about 70 per cent as individuals listening to others and about 50 per cent as drug prescribers, health educators, individuals comforting others and doctors for whom the profession is a mission (Sumanen et al. 2015).

3.3 Changes taking place in the operating environment for medical doctors

The Finnish population is expected to reach 5.77 million by the year 2030 (Statistics Finland). At the same time, the proportion of people over 65 is expected to increase from the current 19.9 per cent to 26 per cent by the year 2030 and to 29 per cent by the year 2060. According to some estimates, Finland will have the oldest population in the European Union in 2030 (Nieminen 2005). This means that the Finnish social welfare and health care service system and Finnish society in general will face major challenges in the coming decades.

As specified in the strategic programme of Prime Minister Juha Sipilä's Government (published on 29 May 2015), the Ministry of Social Affairs and Health is preparing a social welfare and health care reform for Finland. In practice the reform will mean the following: The responsibility for providing public social welfare and health care services will be transferred from the municipalities and joint municipal authorities to 18 regions at the start of 2019. Social welfare and health care services will be merged into a customer-oriented system at all levels, multi-channel funding of social welfare and health care will be simplified, service users will have more freedom of choice, and the steering and operating models of the social welfare and health care system will be overhauled. As part of the reform, the Government plans to introduce legislation under which users can choose between the services provided by the public, private or the third sector. There will also be changes in the division of work between hospitals, and in emergency social services and joint emergency services. The most demanding specialist emergency services will become the responsibility of 12 hospitals, which will maintain extensive round-the-clock emergency service units. The most demanding care and treatment will be provided by university hospitals.

Social welfare and health care is undergoing rapid technological change. There is strong support for digitalisation in the Programme of Prime Minister Juha Sipilä's Government. Development of digitalisation is also a central part of the current social welfare and health care reform (Ministry of Social Affairs and Health 2014). In the operating environment for medical doctors, digitalisation and advances in other technologies, such as gene technology, will mean better tools and treatments, better access to information, better research opportunities and changes in the services offered to citizens and patients.

As part of the social welfare and health care reform, the Government also intends to overhaul the operating culture of social welfare and health care in Finland. The intention is to develop the division of work between health care professionals so that they can carry out different work tasks more flexibly within their own competence areas, while at the same time they will be able to concentrate on tasks

that are part of their core competence. From the training perspective, this means that students must be provided with strong core competences and that they must also receive adequate generic skills. At the same time, the focus in training is shifting from basic training towards continuous professional development.

As part of the social welfare and health care reform and especially as a result of technological advances, the relationship between the patient and the doctor is changing. Patients are more aware of their own health and illnesses. They are able to monitor their own health and in the future they will also be able to assess how healthy they are using a broad range of technical aids. This means that the patriarchal status of doctors in relation to the patients is becoming a more equal relationship, in which the doctor is assuming the role of an expert, advisor or a coach. At the same time, the patient is increasingly assuming the role of a customer. Increasing the patient's freedom of choice, which is part of the Finnish social welfare and health care reform, will accelerate this trend.

The operating environment for medical doctors and medical education can be summed up by saying that major changes are taking place which mean that medical education and the competence of medical doctors must be adjusted in accordance with new requirements. There are major changes taking place in the Finnish health care system. Digitalisation is advancing rapidly, the roles of and division of work between health care professional groups are changing. At the same time, patients are assuming a stronger role and they will also have more freedom of choice. In the future, there will be more emphasis within doctors' work on the management of complex information and on interpreting the information to patients, in addition to interactive skills, interprofessionalism and team work. Clinical work is likely to require a broad range of skills and in order to develop competence in these areas, doctors must have the capacity for continuous learning and professional development. Decentralising clinical training to central hospitals is proposed as one solution to the challenges arising from the increase in the number of students.

The current social welfare and health care reform will mean changes in undergraduate medical education and medical specialist training. As the education takes place in the service system, the changes also force the parties involved to think about what impacts the changing service system will have on the practical implementation of the education. The reforms will probably also require new areas of competence, which must be taken into account in the education. The education must also be able to adjust itself more flexibly to the rapidly changing operating environment. The reforms now in progress will also require closer cooperation between the universities and the service system (Ministry of Social Affairs and Health 2016b).

4. Objectives of the evaluation and areas of evaluation

4.1 Objectives of the evaluation

The evaluations conducted by FINEEC are based on the principle of enhancement-led evaluation (Government Decree on the Finnish Education Evaluation Centre 1317/2013). Enhancement-led evaluation emphasises participation as well as trust between the party implementing the evaluation and the evaluation participant, as well as the responsibility of higher education institutions (HEIs) in enhancing the quality of their operations; evaluations of education are organised so that they support the evaluation process and its results and decision-making at local, regional and national level (National Education evaluation plan 2016-2019). This means that the evaluation is also expected to provide information for education-policy decision-making and steering. In enhancement-led evaluation, the emphasis is also on considering the views of different stakeholders and encouraging interaction between the different parties.

The main aim of the evaluation of undergraduate medical education is to produce an overall picture and information on the state as well as strengths of the education as well as development recommendations in relation to the changing competence requirements in doctors' work and their future operating environment. The information produced by the evaluation can be used in the development of undergraduate medical education, and, when applicable, in the development of medical specialist training.

To obtain a comprehensive picture of undergraduate medical education, the education is examined from three perspectives: 1) from the perspective of the universities providing the education; 2) from the perspective of medical students; and 3) from the perspective of working life and various actors in working life. In accordance with the principles of enhancement-led evaluation, the purpose of the evaluation is to produce information about the strengths of the education and its development recommendations. The aim is also to collect and convey good practices in the evaluated areas to units providing medical education in order to support their development work.

4.2 Areas of evaluation and evaluation questions

The best way to meet the aims of the evaluation is to assess undergraduate medical education in a comprehensive manner and to examine the following areas: 1) Examining the *planning of the education* provides information about the pedagogic framework of the education and the curriculum preparation process, how changes in the operating environment and future competence requirements are considered in the planning of education, as well as the objectives laid out for the education and the degree structure. 2) Evaluation of the *implementation of the education* provides a picture of the learning environments, teaching and supervision methods, assessment of learning and learning outcomes, competence of the teachers and its development, and the well-being of the university community. 3) Internship, career guidance and career paths, the basis for continuous professional development provided by the education, cooperation with working life and the management of its quality in future operating environments are the areas of evaluation for the *competence and working-life skills pro-*

duced by the education. 4) Evaluation of the *continuous development and renewal of education* produces information about forecasting competence and renewal needs, and the use of evaluation and feedback information as well as cooperation between universities.

The areas of evaluation and the evaluation questions structuring them are shown in Table 1.

Table 1. Areas of evaluation and evaluation questions

1. Planning of education	
The evaluation produces information:	Evaluation questions
<ul style="list-style-type: none"> • on the pedagogic framework of the education and the curriculum preparation process • on the consideration of changes in the operating environment and future competence requirements in the planning of the education • on the objectives set for the education and the degree structure. 	<ul style="list-style-type: none"> • What are the pedagogic premises and learning approaches guiding medical teaching and learning? What are their impacts on teaching and learning? • How can the process shaping the curriculum be described? How is working life (clinical work and the research environment) involved in the preparation and development of the curriculum? What kind of cooperation is there with social welfare services? • How are changes in the operating environment and future competence requirements (such as interprofessionality, interpersonal and digital skills) considered in the planning of the education? • What are the objectives laid out for undergraduate medical education? • How are the learning objectives and educational contents (such as the core content analysis) defined? • How is the achievement of the objectives set for the education supported by the degree structure?
2. Implementation of education	
The evaluation produces information:	Evaluation questions
<ul style="list-style-type: none"> • on learning environments and teaching and supervision methods • on assessment of learning and learning outcomes • on teachers' competence and how to develop it • on the well-being of the university community. 	<ul style="list-style-type: none"> • How do the learning environments support the achievement of the objectives set out for the education and student learning? Does the learning environment support work in increasingly advanced digital health care systems? • How do the teaching and learning methods support the achievement of the learning objectives? Do the teaching and learning methods activate students, and do they support students in their learning process and communal knowledge building? Do they provide a basis for lifelong learning? • How functional are the student supervision practices? • How are learning and learning outcomes assessed? Do the assessment methods and practices support gradual development of competences? How is assessment developed? • How is teachers' competence developed? What type of pedagogic training is offered to teachers? • How do changes in the operating environment impact teacher recruitment and their competence development? How are teachers' teaching

	<p>credentials and skills considered in the recruitment process?</p> <ul style="list-style-type: none"> • How are teachers' career paths promoted and how is good teaching rewarded? • How is the well-being of students and personnel promoted?
3. Competence and working-life skills produced by the education	
The evaluation produces information:	Evaluation questions
<ul style="list-style-type: none"> • on internship • on career guidance and career paths • on the basis provided by the education for continuous professional development • on cooperation with working life and its quality management in the future operating environment. 	<ul style="list-style-type: none"> • How is internship carried out in clinical work? • How functional are the supervision practices applied in internship? • How functional is career guidance as students move into working life? • Does undergraduate medical education also support students to achieve competence in non-clinical jobs (such as for expert, teaching and research career, as well as administrative or managerial duties)? Are students supported in the construction of a long-term and versatile expert's career path? • What is the basis provided by undergraduate medical education for continuous professional development? • How do medical education units engage in working life cooperation? How do medical education units cooperate with units carrying out medical research? • How is the quality of working life cooperation ensured in a changing operating environment?
4. Continuous development and renewal of education	
The evaluation produces information:	Evaluation questions
<ul style="list-style-type: none"> • on forecasting competence and renewal needs • on the use of evaluation and feedback information • on cooperation between universities. 	<ul style="list-style-type: none"> • How do medical education units forecast competence requirements and react to education renewal needs? • How is education developed and renewed on the basis of information (evaluation and feedback information, international references)? How does feedback information impact the education development process? • How is a continuous renewal process ensured? • How are students and stakeholders involved in the development of education? • How is the need for continuous development and renewal of education considered in the personnel strategy? • How does cooperation between universities promote the quality of the planning and implementation of education?

If necessary, the evaluation team may focus more closely on specific areas and put forward new areas and evaluation questions provided that they are in accordance with the objectives of the project.

5. Evaluation data, collecting and analysing the data

5.1 Data collection methods

The evaluation data will be collected using more than one collection method. The evaluation data will be collected in stages. Collection and assessment of the data will proceed in a cumulative manner so that each information collection stage is based on the evaluation data collected during the preceding stage. When evaluation methods are selected, consideration will be given to the workload arising from the information collection process. Units providing medical education, students, working life as well as actors responsible for nationwide development of the education will be involved in several stages of the information collection process.

The following methods and data are central to the production of the evaluation information and carrying out the evaluation:

- Summaries of the curricula, containing: objectives laid out for the education; degree structure so that all study units and ECTS credits granted for them are listed as headings; two descriptions of study units from each year (including learning objectives, teaching and learning methods and assessment methods); description of internship and its objectives
- Hearings of stakeholders by means of thematic interviews or at workshops: Finnish Medical Association, Finnish Medical Students' Association, Nuorten Lääkärien Yhdistys (Young Doctors' Association), Ministry of Education and Culture, Ministry of Social Affairs and Health, working life (hospital districts, primary health care and private sector), National Institute for Health and Welfare, and the Finnish Institute of Occupational Health
- Self-evaluations of the units providing medical education (in a manner specified at a later date); it would be useful to involve a multifaceted group of key actors in the self-evaluation
- Unit-specific student self-evaluations providing a student perspective on the most important areas to be evaluated (to be carried out in a manner specified at a later date); it would be useful to involve a group of students extensively from different courses in the self-evaluation process
- One-day evaluation visits to the units providing medical education (to be carried out in a manner specified at a later date). The purpose of the visits is to collect information from the following parties: unit management, teaching staff, students, alumni and stakeholders; other data collection methods may also be used during the visit.
- A national seminar (to be held before the reporting of the results) where the preliminary evaluation results and conclusions of the evaluation team will be discussed with the representatives of the evaluated units and stakeholders.

Earlier research and reporting data on medical education and the operating environment will also be utilised in the evaluation.

The project plan may require a small number of clarifications to be made during the carrying out of the evaluation, for example in such areas as data collection and timetables. It has not been possible to consider all details during the planning stage and some of the decisions have been left to the implementation stage. If necessary, the project plan will be updated and made more specific during the project.

The evaluation will be carried out in English and for this reason the units providing medical education should deliver the data requested by FINEEC in English. The collection of all other data will also be in English.

5.2 Analysing the data and reporting the results

The evaluation team will be responsible for analysing the data and it will produce a final report on the basis of the analysis. The report, which will be in English, will be presented at the concluding seminar in spring 2018. All members of the evaluation team are jointly responsible for the report. The report and the conclusions of the evaluation must be based on the information produced, collected and documented during the evaluation.

All members of the evaluation team must take part in the analysis of the data and the writing of the report. Editing and finalising the report will be the responsibility of the chair of the evaluation team and the representatives of FINEEC supporting the work of the evaluation team.

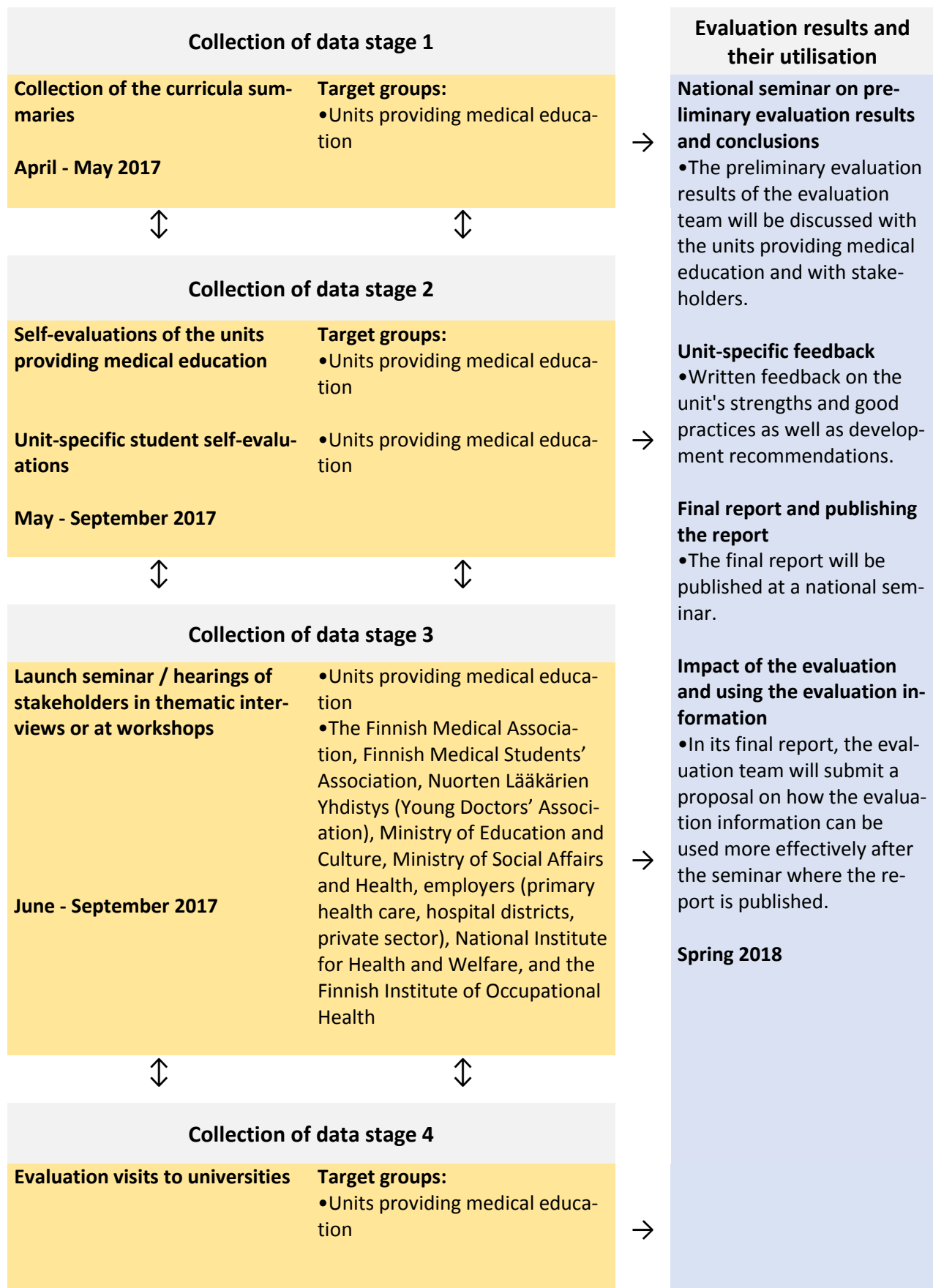
In addition to the final report, the evaluation team will also supply each evaluated unit with written feedback on the strengths of the unit's education, its good practices and development recommendations.

6. Organisation and timetable of the evaluation project

6.1 Stages and preliminary timetable of the evaluation

The preliminary evaluation timetable, stages of the evaluation and the parties taking part in the process are described in Table 2. The data collection methods that are intended to be used at different stages of the evaluation are also described in Table 2. The evaluation team will decide on the practical implementation of the evaluation process and the definite timetable.

Table 2. Stages of the evaluation of undergraduate medical education and preliminary project timetable



November - December 2017

• Unit management, teaching staff, students, alumni, stakeholders.

During the final stages of the project, the impact of the evaluation and the use of the evaluation information will be promoted so that in its final report, the evaluation team will present a proposal on concrete measures, which will be based on the evaluation results. The proposed measures can be used as an instrument for conveying good practices in the evaluated areas to support the nationwide education development work and the implementation of the development recommendations.

For a more detailed timetable of the evaluation process, see Appendix 2.

6.2 Evaluation team

HEEC will appoint an international evaluation team in spring 2017 to carry out the evaluation. The evaluation team will also have Finnish members possessing expertise in the Finnish system of undergraduate medical education. The evaluation team will have between five and six expert members who must possess versatile expertise in the area to be evaluated and in evaluation and research methods. The members of the evaluation team must

- have expertise in undergraduate medical education
- have evaluation expertise and experience
- have pedagogic expertise
- have expertise in the operating environment
- include a representative of working life
- include a student representative.

The evaluators must also be able to carry out the evaluation in an independent and objective manner, be willing and able to fully commit themselves to the evaluation work and be able to carry out the evaluation in English.

The evaluation team will decide on the practical implementation of the evaluation (application of evaluation methods, division of work between team members, etc.). The evaluation team will be responsible for the interpretation of the evaluation information and the preparation of unit-specific feedback and the final report. All members of the evaluation team will take part in the tasks listed above.

6.3 FINEEC project organisation

Two experts from FINEEC will be responsible for the practical implementation of the project in close cooperation with the evaluation team. The main task is to ensure the implementation of the project plan, provide the universities and stakeholders with information on the evaluation project and other project-related issues, organise the collection of the data and to take part in the preparation and editing of unit-specific feedback and the final report.

7. Communications

The principles laid out in FINEEC's communications plan will be applied to the evaluation project. Units providing medical education, teachers, students, Ministry of Education and Culture, Ministry of Social Affairs and Health and a broad range of different stakeholders are the beneficiaries of the evaluation project. The contact persons in the universities will be kept up to date on the evaluation project and information will also be available on FINEEC's website. National-level events will be held at different stages of the project (launch seminar, stakeholder hearings and a workshop on the preliminary evaluation results). Information on the implementation of the evaluation and its results will also be presented at various events.

The final report on the evaluation results will be presented at the concluding seminar to which a broad range of different stakeholders will be invited. The report will be in English and it will contain Finnish and Swedish abstracts of the most important evaluation results. The evaluation results will be made available to the units providing medical education, parties responsible for steering the education and stakeholders. In addition to the final report, each unit evaluated by the team will be provided with written feedback. The evaluation team will prepare a proposal for concrete measures, which will be based on the evaluation results and included in the final report. The proposed measures will allow the evaluation information to be used for strengthening the impact of the evaluation.

Feedback from the units taking part in the evaluation and the evaluation team will be collected during the final stages of the project.

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Appendix 1. Finland's health care system

The Finnish health care system is based on health care provided at the municipal level and subsidised by the central government. In addition to the public sector, private companies also provide health care services. Finland has a broad range of health care organisations that provide both free and chargeable services.

Steering The *Ministry of Social Affairs and Health* is responsible for the steering of the health care system: It prepares legislation and steers its implementation, directs and guides the development of health care services and health care policy, defines health care policy guidelines, prepares key health care reforms and steers their implementation and coordination.

Licenses and monitoring *Regional State Administrative Agencies*⁵ steer and supervise health care provided by the municipalities and the private sector and evaluate the availability and quality of the municipal basic services. They also issue private health care providers with licences. In cooperation with the municipalities, Regional State Administrative Agencies promote the development of health care services in accordance with national targets and the implementation of preventive health policy. The National Supervisory Authority for Welfare and Health *Valvira* steers, supervises and manages the administration of licences in social welfare and health care, alcohol administration and environmental health administration. Valvira and Regional State Administrative Agencies prepare joint supervision programmes detailing the division of work between Valvira and Regional State Administrative Agencies.

Municipalities are responsible for organising health care and they also provide most of the health care services. They may provide primary health care services on their own or establish joint municipal authorities with other municipalities. A municipality may also purchase health care services from other municipalities, organisations or private service providers. A *health centre* is the basic unit of the Finnish health care system. It may comprise several branch health centres and hospitals. A health centre has overall responsibility for primary health care. Central government subsidises the provision of the services by providing municipalities with central government transfers. The central government transfers are determined on the basis of the population of the municipality, age breakdown of the population, morbidity and a number of other factors. Municipalities may also charge fees for the use of the services. On 1 January 2017, there were 311 municipalities in Finland (Association of Finnish Local and Regional Authorities 2017a).

The Finnish health centres operate in a broad range of different sectors, which is also reflected in the work of the doctors employed by the health centres. They perform measures that in many other countries are the responsibility of specialists (such as the treatment of wounds and other minor surgical measures, cardiac stress tests, intestinal endoscopy and gynaecological examinations). In addition to medical consultation, health centres also provide wards for patients requiring nursing care, primary health care, maternity and other clinical services, school and student health care services, counselling for the aged, mental health services, screening and vaccinations. A number of health centres also provide specialist medical services.

⁵ There are six Regional State Administrative Agencies in mainland Finland. The State Department of Åland serves as the Regional State Administrative Agency in Åland.

The decisions on the scope, content and organisation of the services laid down in the law are made at the local level. The operations and services are mainly funded through local income tax. The most important public health and specialised health care services that municipalities must provide are specified in the law. However, there are no detailed legal provisions on the scope, content or organisation of the services.

Hospital districts *Hospital districts* comprised of municipalities are responsible for providing specialised health care in their areas. Each municipality must be a member of a health care district. The joint municipal authorities maintaining the hospital districts plan and develop specialised health care so that primary health care and specialised health care constitute a single system. The joint municipal authorities provide the specialised health care services that could not be properly provided as part of primary health care. The services must be based on unified medical and dental criteria. On 1 January 2017, there were 20 hospital districts in Finland (Association of Finnish Local and Regional Authorities 2017a). Highly specialised health care services are provided at five university hospitals on the basis of special responsibility areas across the boundaries of hospital districts. The division of Finland into special responsibility areas and the membership of each health care district in the special responsibility areas are specified by Government decree.

Private services Private service providers (companies, organisations and foundations) may sell their services to municipalities, joint municipal authorities or directly to individual customers. The share of companies and organisations in the provision of health care services has grown steadily in the 2000s. The Ministry of Social Affairs and Health is also responsible for the overall steering of the private services and for the legislation concerning the services.

A municipality may purchase private social welfare and health care services for specific customers. In that case, the customers will pay for the services as laid down in the law. Customers can also pay for the use of private services purchased by the municipality with service vouchers. A municipality or a joint municipal authority may decide whether to introduce a service voucher scheme and determine the services that it covers. Patients are entitled to partial reimbursement for the fees that they pay for using private medical and dental services. The reimbursements are provided under the national health insurance scheme and they are paid by Kela (the Social Insurance Institution of Finland).

Occupational health care Occupational health care supplements the service system of health centres and hospital districts. Finnish employers have a statutory obligation to provide their employees with preventive occupational health care. Employers may also provide their personnel with treatment at general practitioner level. In fact, occupational health care providers are responsible for a large proportion of the primary health care of Finland's working age population. Employers can purchase occupational health care services e.g. from municipal health centres or from private clinics. Under the law, Kela reimburses employers for the necessary and appropriate costs arising from the provision of occupational health care. Employees can use occupational health care services free of charge.

Appendix 2. Timetable of the evaluation process

The preliminary timetable of the evaluation process is as follows:

May 2016	HEEC makes a decision on carrying out the evaluation.
September 2016	Universities and stakeholders are notified of the launch of the evaluation planning process.
October 2016	HEEC appoints the evaluation planning group.
November 2016 - March 2017	Planning group holds a series of meetings.
March 2017	HEEC approves the evaluation project plan.
April 2017	HEEC appoints the evaluation team to carry out the evaluation.
April - May 2017	Curricula summaries are collected.
May - September 2017	Self-evaluations of the units providing medical education and self-evaluations of the students
June - September 2017	Launch seminar / hearings of stakeholders in thematic interviews or at workshops
November - December 2017	Evaluation visits to the universities
Spring 2018	National seminar on the preliminary evaluation results and conclusions
Spring 2018	Writing the evaluation report and the unit-specific feedback reports
Spring 2018	Concluding seminar and presentation of the report
Spring 2018	Feedback questionnaire survey among the evaluated units and members of the evaluation team