

TARGETED LEARNING OUTCOMES FOR LICENTIATES OF MEDICINE

Jointly approved by the deans of Finnish medical faculties on 3 June 2020

Medical students are the doctors of tomorrow. Doctors strive to provide the best care for their patients in all their activities. They apply their knowledge and skills appropriately and ethically in their professional practice, taking responsibility in complex and uncertain situations.

TARGETED LEARNING OUTCOMES 1 – Professional values and activities

1 Professional and Ethical Responsibility

Doctors are committed to professional values and take ethical responsibility for their actions.

Licentiates of Medicine are able to

- 1.1 Identify ethical issues in medicine and healthcare both generally and in their working environment, and apply ethical principles in practice
- 1.2 Maintain confidentiality
- 1.3 Respect patients' dignity and privacy
- 1.4 Show professional empathy
- 1.5 Consider patients' basic needs
- 1.6 Act with integrity, consideration and trustworthiness
- 1.7 Manage their time effectively and prioritise their duties
- 1.8 Recognise the limits of their competence and consult more experienced colleagues as necessary, especially as pertains to potential risks to patient safety
- 1.9 Identify risks to patient safety and their own performance stemming from their own health:
 - a. Exhaustion and illnesses
 - b. Drug and substance abuse
- 1.10 Acknowledge that their (unconscious) personal values, beliefs, experiences and views may affect the care of patients, and reflect on ways to avoid bias
- 1.11 Make decisions in cooperation with patients and, if necessary, their family members
- 1.12 Obtain informed consent from their patients, their legal guardians or other legal representatives
- 1.13 Provide information on various treatment or diagnostic options, their likely benefits and possible adverse effects in such a way that patients can make informed decisions on their care
- 1.14 Assess patients' ability to make decisions on their care and follow the appropriate procedures for when patients' decision-making ability is impaired either temporarily or permanently
- 1.15 Admit any mistakes openly and honestly to patients, supervisors and other medical professionals

- 1.16 Engage in constructive dialogue with colleagues and follow official procedures for raising issues related to
- Patient safety and the quality of care
 - Bullying, harassment or disparagement

2 Responsibility for Personal Wellbeing

Doctors acknowledge the significance of personal physical and mental wellbeing, and care for themselves with compassion in both private and professional life.

Licentiates of Medicine understand the necessity to

- 2.1 Observe their personal wellbeing, take care of themselves and ask for help as necessary by seeking medical assistance and committing to a doctor–patient relationship that supports both physical and mental wellbeing
- 2.2 Process challenges stemming from work, workload, uncertainty, and change
- 2.3 Try various coping and management strategies, including self-assessment, asking for assistance, peer support, debriefing and transferring patients to the care of other colleagues

Legal Responsibility

3 Doctors are familiar with key Finnish legislation related to their work and know where to search for additional information.

Licentiates of Medicine are able to

- 3.1 Explain when and on what grounds medical legislation requires restricting an individual’s rights for their own safety or the safety of others.
- 3.2 Outline the principle of equality set out in patient legislation
- 3.3 Support patients’ decision-making as necessary, taking into considering relevant legislation and ethical guidelines

Patient Safety and Quality Management

4 Doctors ensure patient safety and the quality of care in their work.

Licentiates of Medicine are able to

- 4.1 Prioritise the needs and safety of the patient in all care
- 4.2 Support and promote health and safety in all care environments
- 4.3 Anticipate and identify care-related risks and hazards, discuss them openly, understand various methods of reacting to mistakes and learn from their mistakes and those of others
- 4.4 Apply infection prevention and control principles
- 4.5 Outline the principles of quality management and their application, as well as the significance of quality registers and treatment outcome comparisons.

- 4.6 Outline how human factors affect the use of healthcare systems, identifying opportunities to improve risk management strategies.
- 4.7 Outline measures for the effective use and prioritisation of resources

Coping with Uncertainty and Complex Situations

- 5 Doctors understand that illnesses are complex by nature, which is why the care and treatment of many patients is also complex and uncertain. Collegial support helps doctors operate in uncertain situations and react to changes.**

Licentiates of Medicine are able to

- 5.1 Identify patients' goals, priorities and medical needs and the psychological and social factors affecting their health and wellbeing
- 5.2 Apply clinical guidelines to practice, taking into consideration the patient's overall situation
- 5.3 Plan care and treatment in cooperation with patients, their families and guardians, providing necessary information and supporting self-care
- 5.4 Cooperate with other healthcare professionals and sectors, especially in the care of patients with chronic, multiple illnesses, psychiatric conditions, and other vulnerable groups.
- 5.5 Identify tests and treatment options that cause unnecessary strain to patients and strive to avoid them, especially in end-of-life care or care of patients with multiple conditions
- 5.6 Manage the clinical challenges associated with successful or unsuccessful diagnostics and treatment, uncertainty and emotions, and discuss these openly and delicately with patients and their families or representatives

Care of Vulnerable Patients

- 6 Doctors are able to detect and identify particularly vulnerable patients and act accordingly.**

Licentiates of Medicine are able to

- 6.1 Identify signs and symptoms of abuse, violence or neglect
- 6.2 Interview patients with consideration for their potential vulnerability
- 6.3 Assess the special needs and support requirements of vulnerable patients
- 6.4 Adopt a professional stance toward nonmedical invasive procedures, such as (female) genital mutilation
- 6.5 Describe the effects of harmful addictions and other risk factors on health and intervene accordingly, supporting the patient and consulting other professionals as necessary

Leadership

- 7 Doctors understand their role in the management and administration of health services.**

Licentiates of Medicine are able to

- 7.1 Outline the principles of efficient and effective teamwork, management, leadership, and administration
- 7.2 Work in various team positions, including supportive and leadership roles
- 7.3 Act professionally and understand the effect of their behaviour on others

8 Teamwork and Interprofessional Cooperation

Doctors learn and work efficiently in multiprofessional teams. They are proficient in face-to-face, written and electronic communication in different care environments.

Licentiates of Medicine are able to

- 8.1 Provide safe and high-quality care as members of multiprofessional teams consisting of experts in different fields and medical specialties
- 8.2 Identify the roles and competence of different specialists and other healthcare and social services professionals respecting their expertise
- 8.3 Cooperate with colleagues efficiently for the benefit of their patients by:
 - a. Communicating information safely through clear and professional language; orally, in writing or via electronic communication channels
 - b. Ensuring the continuity of care when transferring responsibility
 - c. Consulting other experts or asking for advice
 - d. Addressing problems, such as medical errors
 - e. Questioning colleagues' actions as necessary
 - f. Sharing experiences and problems that foster learning
 - g. Participating in the care of patients at a colleague's request
 - h. Using flexible problem-solving methods for joint decisions

9 Lifelong Learning

Doctors improve their professional skills and expertise.

Licentiates of Medicine are able to

- 9.1 Outline the significance of lifelong learning and demonstrate commitment by
 - a. Participating in orientation and clinical supervision
 - b. Searching for up-to-date clinical studies and guidelines from reliable sources, assessing the quality of the information and applying it in practice
 - c. Learning from experience and feedback, taking a constructive stance toward assessments and reviews
 - d. Learning and teaching in multiprofessional teams
- 9.2 Outline the significance of continuous learning and maintaining a professional portfolio, including reflections on improvement opportunities and feedback from colleagues or patients.

TARGETED LEARNING OUTCOMES 2 – Professional Skills

Doctors have the knowledge and skills required to care for patients.

Interaction skills

10 Doctors engage in effective, open and honest discussion with colleagues, patients and their families or representatives, ensuring confidentiality.

Licentiates of Medicine are able to

- 10.1 Ask about patients' and their families' native language, use Finnish or Swedish at their request and use an interpreter as necessary
- 10.2. Communicate clearly, efficiently and tactfully, including
 - a. Listening, sharing thoughts and answering questions
 - b. Showing empathy and compassion
 - c. Skilfully using both verbal and nonverbal communication
 - d. Adapting to accommodate sensory defects or insufficient language proficiency
 - e. Asking colleagues for help as necessary
- 10.3 Speak, write and use electronic communication methods/tools (including patient records) clearly, efficiently and considerately, for example, in situations like:
 - a. Giving bad news to patients or family members
 - b. Informing others about a patient's death
 - c. Conflicts or disagreements
 - d. Discussing sensitive issues such as alcohol consumption, smoking, excessive weight, or sex life
 - e. Children and adolescents
 - f. Addressing patients hesitant about treatment or insufficiently informed about their illness
 - g. Communicating with patients with hearing, visual, or speech impairments
 - h. Engaging with patients with impaired cognition or learning difficulties
 - i. Communicating with patients of different native languages and cultural backgrounds needing an interpreter
 - j. Advocating for patients unable to communicate their needs or make informed decisions
 - k. Drawing up referrals
 - l. Using telemedicine (appointments or consultations by telephone, video, or chat)
- 10.4 Ensure the confidentiality of patient data and conduct themselves professionally using online communication platforms

11 Doctors are able to carry out consultations efficiently.

Licentiates of Medicine are able to

- 11.1 Find out and record patients' medical and family history from the patient(s), their family members or other representatives
- 11.2 Encourage patients to ask questions and discuss their situation and relevant treatment options, considering patients' views, concerns, expectations, values and wishes
- 11.3 Consider and use information provided by patients regarding their symptoms and overall situation

- 11.4 Assess patients' ability to understand and absorb information and make decisions, explaining, advising, and supporting patients according to their needs and understanding
- 11.5 Agree with the patient or their representative on ways for the patient to participate in decision-making related to their care
- 11. 6 Outline the principles of assessing fitness for work and functional capacity, such as various social, psychological and somatic factors, and apply this in clinical practice

Diagnostics and Treatment

- 12 Doctors cooperate with patients and colleagues in examining and treating various illnesses and health issues. Whenever possible, doctors enable patients to participate in care-related decision-making.**
- 13 Doctors perform necessary examinations and procedures safely and efficiently, seeking additional guidance when needed to ensure patient safety.**
- 14 Doctors collaborate closely with patients and their family members or guardians. All decisions are based on a patient-centred, comprehensive assessment that considers the patient's needs, concerns, and expectations. Individual psychological, emotional, religious, social, and cultural factors are respected, and their relevance to the patient's medical condition is carefully taken into account.**

Licentiates of Medicine are able to

- 14.1 Form a comprehensive view of the patient's situation, taking into consideration biological, psychological and social factors
- 14.2 Safely and respectfully examine or assess the patient's
 - a. Physical health in the presence of an accompanying person or support person
 - b. Psychiatric and cognitive status and whether the patient is a danger to themselves or others
 - c. Development in the case of children or adolescents
- 14.3 Interpret their findings regarding patient history and physical and psychiatric status
- 14.4 Compile a clinical summary, formulate a provisional diagnosis and differential diagnosis; compile a list of the patient's health issues; and assess their functional capacity
- 14.5 Suggest diagnostic options, weighing potential risks, benefits, cost-effectiveness and adverse effects, consulting colleagues as necessary
- 14.6 Interpret test results, consulting colleagues as necessary, and combine this information with the patient history and physical examination findings to draft an assessment regarding the pathology and its aetiology
- 14.7 Understand the differential diagnostic process and describe their clinical decision-making to others
- 14.8 Make clinical conclusions and decisions in collaboration with patients and colleagues, based on the available information and within the limits of one's education and experience, while acknowledging that some uncertainty may remain

- 14.9 Consider patients' concerns, beliefs, choices, and preferences, respecting their right to be involved in care decisions, including the right to decline treatment or some forms of treatment
- 14.10 Obtain informed consent from patients for proposed tests, examinations and treatments
- 14.11 Collaborate with the patient and relevant healthcare professionals to draft a treatment plan based on the best available information and clinical guidelines, including preventive measures, treatment, termination, follow-up, and rehabilitation
- 14.12 Support and provide motivation for self-care, helping patients to identify the benefits of a healthy lifestyle, providing support for behavioural changes and integrating preventative measures into treatment plans
- 14.13 Identify the potential consequences of overdiagnosis and overtreatment

End-of-Life and Palliative Care

15 Doctors are familiar with the principles of end-of-life and palliative care.

Licentiates of Medicine are able to

- 15.1 Identify the need for palliative care, draft the necessary treatment protocols and end-of-life care plans in cooperation with patients and their family members, consulting colleagues as necessary
- 15.2 Alleviate patients' suffering and support their family members at the end of life and the progress toward it

Emergency Care

16 Doctors are able to administer first aid to patients of all ages in emergencies and take necessary measures if their condition worsens.

Licentiates of Medicine are able to

- 16.1 Assess the seriousness of the clinical situation and the need for immediate first aid
- 16.2 Identify and treat acute emergencies, consulting other professionals as necessary
- 16.3 Maintain vital functions
- 16.4 Resuscitate patients

Safe Administration of Pharmaceuticals

17 Doctors prescribe medications safely, appropriately, and economically and are familiar with common errors related to prescribing drugs, their causes, and consequences.

Licentiates of Medicine are able to

- 17.1 Determine patients' medication history and issues related to using different medications
- 17.2 Evaluate the risks and benefits of starting new or discontinuing current drug therapies in cooperation with patients and their family members or other representatives as necessary

- 17.3 Provide the patient and their family members or representatives with reliable and accessible information on drugs in such a way that patients can use it to make informed decisions on drug use
- 17.4 Cooperate with the patient to draw up a pharmacotherapy plan to which the patient is able to commit
- 17.5 Search for reliable information on drugs and relevant prescription protocols
- 17.6 Determine and record the safe and appropriate drug doses
- 17.7 Write safe and legal prescriptions tailored to each patient's individual needs
- 17.8 Provide patients with sufficient information about the purpose, usage, expected benefits, potential adverse effects, and follow-up needs of each pharmaceutical (if any)
- 17.9 Identify and report adverse effects and drug interactions, taking appropriate measures by discontinuing or changing drug therapies
- 17.10 Monitor the efficacy and effects of pharmaceuticals and adjust the dosage accordingly when, for example, a drug proves ineffective or unnecessary or patients want to discontinue the medication – consulting colleagues as necessary
- 17.11 Identify the challenges of safe pharmacotherapy during pregnancy or for very young or old patients, at the end of life, or for patients who are on multiple medications or who have chronic somatic or psychiatric conditions
- 17.12 Respectfully discuss the use of therapies chosen by patients themselves and find out how they may affect the safety of other treatments
- 17.13 Identify the challenges involved in telemedicine (such as chat consultations) as regards care and guidance and high-quality pharmacotherapy
- 17.14 Identify the risks of overmedication and excessive consumption of pharmaceuticals as well as apply this information to prescription practices
- 17.15 Outline the role of pharmacies and pharmacists in the implementation of safe pharmacotherapy

Safe and Effective Use of Patient Records

18 Doctors use patient information systems and record patient data clearly, accurately, and reliably.

Licentiates of Medicine

- 18.1 Are familiar with confidentiality and data protection regulations, recording and storing patient information in accordance with these regulations and local guidelines
- 18.2 Understand their professional and legal responsibility when using various information sources in patient care, research and teaching
- 18.3 Understand their role in collecting patient data for population-level monitoring of diseases and health

TARGETED LEARNING OUTCOMES 3 – Professional Knowledge

Doctors apply their knowledge wisely to patient care. They are able to identify the biomedical, psychological and social factors underlying health and diseases, as well as apply scientific principles to patient care. Doctors understand patients' pathways through various healthcare and social services environments.

National Health Services

19 Doctors describe the implementation of patient care within the healthcare system.

Licentiates of Medicine are able to

- 19.1 Describe various care environments in patients' homes, assisted living units, primary care and specialised care based on their professional experience
- 19.2 Describe cooperation and distribution of labour between healthcare, social services, various organisations and other relevant sectors
- 19.3 Explain and illustrate the importance of multiprofessional cooperation between various care providers in ensuring the successful implementation of patient-centred care
- 19.4 Describe the significance and use of progressive care practices and care pathways
- 19.5 Describe the current trends in different care environments, such as the shift from inpatient to outpatient settings for therapies
- 19.6 Describe regional and socioeconomic differences in the organisation, production and use of health services

Application of Biomedical Principles

20 Doctors apply biomedical principles, methods, and information in patient care.

Licentiates of Medicine are able to

- 20.1 Describe the normal structures, functions and physiological processes of the human body, including children, adolescents and the very elderly, and during pregnancy and labour
- 20.2 Explain the key medical principles underlying common and significant disease processes
- 20.3 Justify the choice of appropriate testing and examination methods in common clinical situations and for common illnesses using medical principles and clinical deduction
- 20.4 Select appropriate prevention, treatment and rehabilitation methods for common illnesses and explain the root causes of related risks and effects
- 20.5 Describe various drugs and their mechanisms of action, including pharmacokinetics and metabolism, pharmacogenomics, the responsible use of antimicrobials, and the adverse and combined effects of pharmaceuticals—particularly in the context of multidrug therapies, chronic conditions, and over-the-counter medications
- 20.6 Analyse clinical phenomena, critically assess clinical data, explain clinical deduction in practice, and understand effects on differential diagnosis and care planning

Application of Psychological Principles

21 **Doctors take into consideration the effects of psychological factors on the behaviour of healthy and ill individuals.**

Licentiatees of Medicine are able to

- 21.1 Describe the spectrum of normal human behaviour
- 21.2 Identify psychological factors related to health and illness and take them into consideration in patient care
- 21.3 Identify the ways in which individuals react to major life changes, such as bereavement
- 21.4 Use appropriate procedures in the care of patients with a history of substance abuse or self-harm or who are suicidal

Application of Social Scientific Principles

22 **Doctors are able to apply social scientific knowledge to medical practice and patient care.**

Licentiatees of Medicine are able to

- 22.1 Reflect upon health, wellbeing, illness and disease as concepts and the application of these concepts in patient care
- 22.2 Identify societal effects on individual and group behaviour, applying this knowledge in clinical practice
- 22.3 Reflect upon how social phenomena may explain the different reactions of individuals, groups and communities to diseases
- 22.4 Identify the social factors that influence the onset, progression, and successful treatment of disease—such as health disparities, the relationship between health and work, and the impacts of poverty and affluence—and apply this understanding in clinical practice
- 22.5 Explain sociological perspectives on behavioural changes and treatment adherence, applying this knowledge in patient-centred clinical decision-making.

Health Promotion and Illness Prevention

23 **Doctors apply principles, methods and up-to-date knowledge of public health, health promotion and sustainable healthcare to medical practice.**

Licentiatees of Medicine are able to

- 23.1 Help and support individuals to attain optimal health by encouraging patients to implement lifestyle changes such as quitting smoking, avoiding addictions and maintaining normal weight through diet and exercise
- 23.2 Use basic epidemiological methods and indicators to describe population health
- 23.3 Assess the social, behavioural, cultural and environmental factors affecting the health and illness of population groups
- 23.4 Assess environmental, social, and psychological factors affecting individual patients, identifying ways to influence them
- 23.5 Apply epidemiological data to healthcare for individuals and communities, assessing costs and effects of preventive measures
- 23.6 Outline the use of equality and sustainability principles and health economics methodology in health policy
- 23.7 Apply the principles of primary, secondary, tertiary and quaternary prevention in practice
- 23.8 Identify the ecological, environmental and occupational risks underlying illness and reflect upon ways to alleviate their effects
- 23.9 Apply infection control and surveillance principles in both inpatient and outpatient settings
- 23.10 Discuss the significance of nutrition to the health of individuals and populations
- 23.11 Identify global factors affecting health, illness, health services, and treatment practice differences, outlining local effects on health and wellbeing

Clinical Research and Scientific Principles

24 Doctors apply scientific principles and methods to information from various sources to support clinical decision-making .

Licentiates of Medicine are able to

- 24.1 Explain the concept of strength of evidence and its significance to clinical practice and decisions made jointly with patients
- 24.2 Interpret and intelligibly explain research-based knowledge research-based knowledge to help patients make informed care decisions
- 24.3 Describe the use and significance of quantitative and qualitative methods in scientific research
- 24.4 Interpret common statistical methods used in medical journals
- 24.5 Critically evaluate scientific studies: research designs, methods, results, applicability and the assessment of quantitative and qualitative studies
- 24.6 Formulate simple, relevant research questions from different fields of medicine and participate in the planning of research or experiments to answer these questions

- 24.7 Outline the principles and ethics of medical research
- 24.8 Use evidence obtained from large population-based studies and other public health sources to guide clinical decisions pertaining to individual patients
- 24.9 Apply the principles of personalised medicine and consideration of at-risk groups in tailoring care to meet the needs of individual patients