



«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТИҢ
ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

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АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR
ACCREDITATION AND RATING



WORLD FEDERATION FOR
MEDICAL EDUCATION

STANDARDS

OF PROGRAM ACCREDITATION
OF HIGHER EDUCATION ORGANIZATIONS

EDUCATIONAL PROGRAMME FOR THE SPECIALTY
560005 «PHARMACY»



Astana 2016



Independent agency for
accreditation and rating

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GENERAL PROVISIONS

Foreword

1. DEVELOPED AND INTRODUCED by the Non-Profit Institution "Independent Agency for Accreditation and Rating."

2. APPROVED AND PUT INTO EFFECT by the order of the Director of the Non-Profit Institution "Independent Agency for Accreditation and Rating" as of October 17, 2016 no. 39-16-1-OD.

3. This standard implements the norms of the Law of the Kyrgyz Republic "On Education" as of April 30, 2003 No. 92.

4. INITIALLY INTRODUCED

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STANDARD

Standards of program accreditation on speciality 560005 “Pharmacy”

General provisions

1 Applicable scope

This standard determines the regulatory requirements to the main provisions of standards of the program accreditation of the educational program on the specialty “**Pharmacy**” of medical educational organizations.

This standard is used during the accreditation procedure of educational program on the specialty “**Pharmacy**” of a medical educational organization regardless of its status, legal corporate form, institutional subordination and form of ownership.

This standard may also be used:

- a) by a medical educational organization for the internal self-assessment and external evaluation of the educational program;
- b) for the development of relevant regulatory documentation.

2 Regulatory references

This standard contains references to the following regulatory documents:

2.1. The Law of the Kyrgyz Republic “On Education” as of April 30, 2003, No. 92 (as amended on January 16, 2015 № 15).

2.2 The concept of development of education in the Kyrgyz Republic until 2020, approved by decree of the Government of the Kyrgyz Republic as of March 23, 2012 No. 201.

2.3 The strategy for the development of education in the Kyrgyz Republic for 2012–2020, approved by decree of the Government of the Kyrgyz Republic as of March 23, 2012 No. 201.

2.4 Resolution of the Government of the Kyrgyz Republic as of September 29, 2015 No. 670 “On approval of acts on independent accreditation in the education system of the Kyrgyz Republic”.

3 Terms and definitions

This standard applies the terms and definitions in accordance with the Laws of the Kyrgyz Republic "On Education", International standards of the World Federation of Medical Education to improve the quality of basic medical education (WFME, University of Copenhagen, 2012), Standards and guidelines for Accrediting professional programs on pharmacy (Accreditation standards and guidelines for the professional program in pharmacy leading to the doctor of pharmacy degree, Adopted: January 23, 2011, Effective: February 14, 2011).

In addition to these, the following definitions are established in this standard:

3.1 Accreditation - a procedure by an accreditation agency to evaluate the quality level of an educational organization as a whole or its individual educational programs, during which it is recognized that the educational organization or educational program meets certain criteria and standards;

3.2 Accreditation Agency - a non-governmental, non-profit organization registered in accordance with the procedure established by law, the main purpose of which is the accreditation of educational organizations and educational programs;

3.3 Program accreditation - a procedure for assessing the compliance of individual programs of an educational organization with certain criteria and standards;

3.4 Standards (regulations) of accreditation - documents of accrediting body, establishing requirements to the accreditation procedure;

3.5 Educational program - educational content of a specific level, direction or specialty;

3.6 Competencies - written statements describing the level of knowledge, skills and values, which are acquired by students who have completed the educational program;

3.7 Competence - the integrated ability of a person to independently apply various elements of knowledge and skills in a certain situation (educational, personal and professional);

3.8 Quality of education - compliance of the level of knowledge of students and graduates with the requirements of the State Educational Standards and the additional requirements established by the university;

3.9 Mission - a brief description of the key characteristics of the higher education institution, philosophy and psychology of an educational organization;

3.10 Procedure - an established way to carry out an activity or a process;

3.11 Efficiency - the ratio between the achieved result and the resources used.

4 Designations and abbreviations

In this standard, abbreviations are used in accordance with the regulatory documents specified in item 2.

In addition, the following designations and abbreviations are used in this standard:

- HEI - higher education institution;
- MH KR – Ministry of Health of the Kyrgyz Republic;
- MES KR – Ministry of Education and Science of the Kyrgyz Republic;
- KR – Kyrgyz Republic;
- CPD - continuous professional development;
- CME - continuous medical education;
- SRI– scientific research institute;
- OSCE – objective structured clinical examination;

- TS – teaching staff;
- MM – mass media;
- SED –state educational standard.

5 General provisions

5.1 Program accreditation is carried out on the basis of this standard Basic provisions; Standard “Mission, planning and administration”; Standard “Educational Program”; Standard “Evaluation of students”; Standard “Students”; Standard “Academic staff/teachers”; Standard “Educational resources”; Standard “Evaluation of an educational program”; Standard “Continuous Improvement”.

Standards are comprehensive and reflect the process of implementation of an educational program in the specialty “Pharmacy”, applicable to all institutions that offer pharmaceutical education programs.

Standards of program accreditation of the educational program “Pharmacy” of medical educational organizations are developed on the basis of the International Standards of the World Federation of Medical Education (Copenhagen, 2012) on improving the quality of basic medical education and North American model of accreditation of educational programs on dentistry, with the introduction of national features of the healthcare and medical education of the Kyrgyz Republic.

5.2 There are the following forms of accreditation:

1) by structure:

5.2.1 institutional accreditation;

5.2.2 program accreditation;

2) by territorial recognition

5.2.3 national accreditation;

5.2.4 international accreditation.

5.3 The decision on accreditation is made by the Accreditation Council.

5.4 The Accreditation Council consists of representatives from the MES KR, MH KR, medical institutions of education, scientific organizations, health organizations, professional associations, employers, the public, students and international experts.

6 The main objectives of implementing program accreditation standards

Quality assessment in educational programs is the basis of accreditation standards and includes the following objectives:

6.1 The main objectives of the implementation of program accreditation standards are:

6.1.1 introduction of the accreditation model, harmonized with international practice of quality assurance of education;

6.1.2 assessment of the quality of vocational and educational programs to improve the competitiveness of the national higher education system;

6.1.3 encouragement of the development of quality of culture in higher education institutions, medical educational organizations, scientific organizations;

6.1.4 promotion of development and continuous improvement of the quality

of educational programs of medical educational organizations in accordance with the requirements of a rapidly changing external environment;

6.1.5 accounting and protection of the interests of society and the rights of consumers by providing reliable information about the quality of educational programs;

6.1.6 use of innovations and research;

6.1.7 public announcement and distribution of information on the results of the accreditation of the educational program on the specialty “Pharmacy” of a medical educational organization;

6.1.8 In addition to the above, the accreditation standards of pharmaceutical education programs are designed to fulfill the following objectives:

- protection of public welfare and public health;
- facilitation of the development of an educational environment conducive to innovation and continuous improvement;
- providing institutional support and guidance for the development of educational programs;
- providing students with confidence that the educational program will achieve its goals.

7 Principles for the formation of standards for program accreditation

7.1 The presented standards for ensuring the quality of educational programs of higher professional education are based on the following principles:

7.1.1 voluntariness - the procedure for the accreditation of educational programs is carried out on a voluntary basis;

7.1.2 honesty and transparency - internal and external evaluation is conducted in an extremely honest and transparent manner, ensuring the availability of information for all participants in the ongoing accreditation process;

7.1.3 objectivity and independence - internal and external evaluation is carried out objectively, regardless of third parties (state bodies, university administrations and public opinion) and the obtained results;

7.1.4 responsibility of medical educational organizations - primary responsibility for the quality of higher education rests with medical educational organizations;

7.1.5 confidentiality - the information provided by higher education institutions is used by the accreditation body in confidence;

7.2 The external evaluation is conducted independently from third parties (state bodies, medical educational organizations and public organizations).

7.3 Information awareness of the country public and abroad about accredited educational programs is carried out in the mass media, incl. the presentation off the information on the website of the accreditation body.

8 Stages and procedures for the implementation of program accreditation

8.1 University applies for program accreditation with copies of constitutive and authorized documents.

8.2 Consideration by IAAR of the application of medical educational organization.

8.3 The decision of IAAR to start the program accreditation procedure. Conclusion of an agreement between the agency and the university on program accreditation.

8.4 The management of the educational organization and IAAR organizes training to clarify the criteria and procedure of program accreditation to internal experts of medical educational organization at special seminars on the theory, methodology and technology of program accreditation process.

8.5 Conducting self-assessment by medical educational organization in accordance with the requirements established by IAAR, and sending a self-assessment report (in Russian and English) to IAAR in electronic version and in the amount of 1 copy on paper for each language.

8.6 Based on the analysis of the report on the educational programs of the university, IAAR is entitled to make the following decisions:

- to develop recommendations on the need to refine self-assessment materials;
- to conduct an external expert evaluation by the external expert commission of the agency;
- to postpone accreditation due to the inability to carry out the program accreditation procedure because of inconsistency of the self-assessment report with the criteria of these standards.

8.7 In case of continuing accreditation, IAAR forms an external expert commission, which is approved by the Director of IAAR to conduct an assessment of the university. It includes representatives of the academic community, employers and students of the Kyrgyz Republic, as well as foreign experts.

8.8 In the case of continuing accreditation, IAAR coordinates with a medical educational organization the timing of program accreditation and the visit program of the EEC.

8.9 The duration of the visit of the commission is 3-5 days. During the visit, the university creates conditions for the work of the EEC in accordance with the Service Agreement:

- provides an electronic and paper version of the self-assessment report for each member of the commission;
- provides the necessary office equipment to the members of the EEC;
- organizes an inspection of infrastructure and resources, meetings, questionnaires, interviews and other types of the EEP work in accordance with the EEP visit programme;
- provides the requested information;
- organizes photo and video shoot of the EEC work;
- prepares a video for the meeting of the Accreditation Council of IAAR containing a brief description of the medical educational organization and information on the visit of the external expert commission.

8.10 At the end of the visit, the external expert commission prepares a report on the evaluation of educational programs and a presentation on the progress of the EEC visit.

8.11. The report contains a description of the visit of the EEC, a brief assessment of the compliance of educational programs in the context of the criteria of IAAR standards, recommendations to the university for improving performance and quality assurance, recommendations to the Accreditation Council. Recommendations to the Accreditation Council contain information on the status of the educational program and the recommended period of accreditation.

8.12 The EEC report, including recommendations, is developed by the EEC members collectively.

8.13 The basis for the decision making on program accreditation of the Accreditation Council is the EEC report on the evaluation of educational programs and the report on the self-evaluation of educational programs of educational organizations.

8.14 The Chairman of the external expert commission speaks to the Accreditation Council on the results of the visit of the external expert commission. If there is an objective reason, the Director of IAAR appoints a member of the external expert commission to participate with the report at the meeting of the Accreditation Council. The replacement of the Chairman of the external expert commission is executed by the order of the Director of IAAR.

8.15 The exclusive competence of the Accreditation Council of IAAR includes making decisions on accreditation or refusal to accredit the educational program of a higher educational institution. The composition of the Accreditation Council is determined in accordance with the Regulations on its activities. The meeting is held in the presence of a quorum. The Accreditation Council has the right to make an informed decision that does not comply with the recommendations of the external expert commission.

Accreditation Council makes decisions

- to accredit:

- 1 year – in compliance with the criteria as a whole, but with some drawbacks and opportunities for improvement;

- 3 years - with positive results in general, but with some minor drawbacks and opportunities for improvement;

- 5 years - with positive results in general.

- not to accredit.

Upon the expiration of the accreditation of the educational program for a period of **5 years** and with the successful completion of post-accreditation monitoring of the educational program, the educational organization is entitled to apply for re-accreditation. In case of re-accreditation of the educational program and with positive results, the educational organization has the right to apply for a period of **7 years**.

8.16 IAAR sends an official letter with the results of the decision and a certificate of program accreditation of educational programs signed by the Director of IAAR to the educational organization. Next, the decision on the accreditation of the EP is sent to the MES KR and is posted on the IAAR website. Also the report of the external expert commission is posted on the website.

After receiving a certificate of accreditation of the educational program, the organization of education places a self-assessment report on its website.

8.17. In case if the Accreditation Council makes a negative decision, IAAR sends a letter to the educational organization with the decision made.

8.18 The educational organization in the prescribed manner in accordance with the Service Agreement and the Regulation on the Commission for the Review of Appeals and Complaints may appeal to IAAR on the decision of the Accreditation Council. In case of doubt about the competence of the external expert commission and representatives of the Agency, or a gross violation committed by members of the external expert commission, the educational organization may send a complaint to IAAR.

9 Follow-up procedures

9.1 In case of a positive decision made by the Accreditation Council of IAAR, the educational organization provides IAAR with a Plan of measures to improve and refine quality in the framework of recommendations of an external expert commission (hereinafter - Plan), which is signed by the head and sealed by IAAR, and also Service Agreement is concluded with IAAR. The Agreement and Plan are the basis for post-accreditation monitoring.

9.2 In accordance with the Regulations on the procedure for post-accreditation monitoring of educational organizations and (or) educational programs, accredited educational organizations shall prepare interim reports in accordance with the Plan. Interim reports are sent to IAAR before the expected date of post-accreditation monitoring.

9.3. Post-accreditation monitoring of the EP is carried out as follows:

Validity of the accreditation certificate	3 years	5 years	7 years
Interim report submission frequency	Once in 1.5 years	Twice every two years	Three times every two years

9.4. In the event of non-compliance with the Plan and the requirements put forward by IAAR in relation to the HEI, as well as the lack of information about changes made at university, the Accreditation Council has the right to take one of the following decisions:

- temporarily suspend the accreditation status of the educational program;
- withdraw the accreditation of educational program of the educational organization, which may entail the cancellation of all previously achieved accreditation results.

9.5 In case of failure of the educational organization to conduct post-accreditation monitoring, expressed in not signing the Service Agreement with IAAR, according to item 9.4 the Accreditation Council of IAAR has the right to decide on the termination and revocation of the accreditation status.

9.6 In case of early termination and revocation of accreditation, the educational organization has no right to apply for accreditation to IAAR within one year from the date of the decision to revoke the accreditation of the educational organization.

10 Procedure for introducing amendments and additions to accreditation standards

10.1 Amendments and additions are made to the current accreditation standard in order to further improve it.

10.2 Amendments and additions to the standard are made by Independent Agency for Accreditation and Rating.

10.3 In the event of initiating amendments and additions to the current standard by educational organizations and other interested organizations, proposals and comments are sent to Independent Agency for Accreditation and Rating.

10.4 Independent Agency for Accreditation and Rating studies and examines the proposals and comments received from the initiators for their validity and appropriateness.

10.5 Amendments and additions to the current accreditation standard after their endorsement are approved by an order of the Director of Independent Agency for Accreditation and Rating in a new edition with amendments or in the form of a brochure-leaflet to the valid standard.

STANDARDS OF ACCREDITATION

STANDARD “MISSION, PLANING AND ADMINISTRATION”

1.1 Mission statement

1.1.1 Medical educational organization **shall** determine the mission and bring it to the attention of the stakeholders and the healthcare sector.

1.1.2 The mission statement **shall** contain objectives and an educational strategy that will allow to train a qualified pharmacist at the level of undergraduate education:

- with an appropriate basis for further career in any field of pharmacy, including all types of pharmaceutical services, pharmaceutical production, administration and research;
- able to perform the role and functions of a pharmacist in accordance with the established requirements of the health and pharmacy sector;
- prepared for postgraduate education, including magistracy, specialization
- with a commitment to lifelong learning, including professional responsibility to support the level of knowledge and skills through performance assessment, auditing, researching own practice and recognized activities in the CPD/CME.

1.1.3 Medical educational organization **shall** ensure that key stakeholders are involved in the development of the mission.

1.1.4 The mission and objectives of the medical educational organization **shall** correspond to the available educational resources, the possibilities of the medical educational organization, the market requirements and ways to support them, access

to information about the mission, the goals of the medical educational organization for the public (availability of information in the media, on the university website) shall be determined, the mission and goals of the medical educational organization are approved by the consultative and advisory council of the IPO / HEI.

1.1.5 The activities of the medical educational organization **shall** be based on the values that ensure the implementation of the educational program on pharmacy in terms of adherence to the humanistic culture of the learning environment, by:

- ensuring cooperation, mutual respect, harmonious relations between administrative staff, staff, teachers, students, graduates;
- maintaining and cultivating professionalism and ethical behavior, promoting open communication, showing leadership among teachers, students and staff.

1.2. Planning

1.2.1 Medical educational organization **shall** have a strategic plan, including issues of improving the quality of pharmaceutical education, the development of science and practice in the field of pharmacy and technology of pharmaceutical production, approved at the consultative and advisory council of the medical educational organization/university.

1.2.2 The planning **shall** take into account all the resources (including teachers, staff, mentors, technical staff, finance, etc.) necessary for the qualitative implementation of the educational program in pharmacy, as well as making changes if required.

1.2.3 Medical educational organization **shall** establish permanent mechanisms for monitoring, evaluating and documenting progress in achieving the goals and objectives of the strategic plan, in general, and in particular with regard to pharmaceutical education.

1.3 Administration and financing

1.3.1 Medical educational organization **shall** have in its composition an independent unit responsible for the implementation of educational programs in pharmaceutical specialties and reflected in the organizational structure of the medical educational organization/university.

1.3.2 The unit responsible for the implementation of the educational program in pharmaceutical specialties **shall** have a vision of pharmaceutical education, practice and research, corresponding to the profession of a pharmacist in modern conditions of development of medicine and healthcare.

1.3.3 The structural unit responsible for educational programs **shall** be responsible and empowered to plan and implement an educational program, including the allocation of given resources to plan and implement teaching and learning methods, assess students and evaluate an educational program and academic courses, in order to achieve final learning outcomes.

1.3.4 The head of the unit responsible for the implementation of educational programs in pharmaceutical specialties **shall** be a dean (or other head) who has pharmaceutical education and has appropriate qualifications, practical and scientific experience to ensure the management of pharmaceutical education, practice and research.

1.3.5 The dean (or other manager) **shall** be responsible for ensuring that the

educational program in the specialty “Pharmacy” complies with the accreditation standards.

1.3.6 Medical educational organization **shall** have sufficient financial resources to implement the goals and objectives of the educational program on "Pharmacy".

1.3.7 Medical educational organization shall provide adequate financial, material and technical, resource (research, teachers, staff, students, practice, website, mentors, library, technology) and administrative support to the unit responsible for the implementation of the educational program in pharmacy.

1.4 Institutional autonomy and academic freedom

1.4.1 Medical educational organization **shall** have institutional autonomy for the development and implementation of policy for which teaching staff and administration are responsible, especially in relation to:

- educational program development;
- recruitment and development of teachers and staff;
- development of internal procedures for assessing the quality of education;
- use of allocated resources necessary for the implementation of the educational program

Medical educational organization **should** guarantee academic freedom to its employees and students:

1.4.2 in relation to the existing educational program, in which it will be allowed to rely on different points of view in the description and analysis of questions on medicine.

1.4.3 providing the ability to use the results of new research to improve the study of specific disciplines/issues without expanding the educational program.

1.5 Medical educational organization *should* direct the update process to the following questions:

- adaptation of the position of the mission and final learning outcomes to the scientific, socio-economic and cultural development of society;
- initiate procedures for regular review;
- revise structures and functions;
- allocate resources for continuous improvement;
- ensure that the process of renewal and restructuring leads to a revision of its policy and practice in accordance with previous experience, current activities and future prospects;
- improvement of the organizational structure and management principles to ensure effective operations in contexts of changing circumstances and needs, as well as in the future, to meet the interests of various groups of stakeholders.

STANDARD “EDUCATIONAL PROGRAM”

2.1 Objectives of the educational program

2.1.1 The educational program in the specialty “Pharmacy” **shall** have a clear goal and objectives consistent with the mission of the medical/pharmaceutical educational organization, corresponding to the needs of potential users of the

program and aimed at formation and development of professional knowledge, skills, attitudes and values of students, based on the best practice and research.

2.1.2 The educational program in the specialty “Pharmacy” **shall** include compulsory and optional (elective) courses, the goals and objectives of which are aimed at the development of the student and the achievement of professional competencies.

2.1.3 Medical educational organization shall systematically study the needs of potential consumers of the educational program (students, applicants and their parents, employers, teachers, including partner universities) and use them in developing and improving the educational program.

2.1.4 Medical educational organization **shall** have an effective mechanism to ensure the achievement and adjustment of the objectives of the educational program.

2.1.5 Medical educational organization **shall** ensure that the educational program develops the ability of students to learn throughout life.

2.1.6 Medical educational organization **shall** ensure that the educational program is implemented in accordance with the principles of equality.

2.1.7 Before the start of each course of study, medical educational organization **shall** provide students with information on the goals, objectives and requirements for each course of the educational program, including course content, methods and forms of assessment.

2.1.8 Medical educational organization **should** use the educational program and teaching methods based on modern principles of education that stimulate, prepare and support students and ensure that students are responsible for their learning process.

2.1.9 Medical educational organization **should** apply teaching methods aimed at developing students' critical thinking, decision-making skills related to their future profession.

2.2. Final learning outcomes

Final learning outcomes or competencies include knowledge, skills and attitudes that students must demonstrate at the end of the learning period.

2.2.1 Medical educational organization **shall** determine the level of competence required for the graduate to begin practice in the field of pharmacy, including:

- provision of pharmaceutical services in the field of medicine circulation, including planning and organization of pharmaceutical activities, wholesale and retail sales, research, development, production, quality control, standardization, certification, state registration, advertising, use and destruction of medicines that have become unusable;
- ensuring quality control and standardization of medicines and medicinal plants at the stages of their development, production, storage and use;
- providing the population with effective, safe medicines used for the prevention, diagnosis and treatment of diseases, rehabilitation and hygiene;
- organization and implementation of the production of medicines of intra-pharmaceutical manufacturing and industrial production;
- organization and implementation of medicine supply and first aid to patients

and victims in extreme situations;

- development of innovative programs and measures for their implementation;
- effective use of information and communication technologies to access reliable information, improve the provision of medicines to the population, work in a single information network of the healthcare system;
- introduction of innovative technologies in the field of medicine circulation.
- implementation of scientific and scientific-educational activity in the field of pharmaceutical education and science.

2.2.2 Medical educational organization **shall** determine the expected final learning outcomes that students must show upon completion, regarding:

- their achievements at a basic level in terms of knowledge, skills and attitudes;
- an appropriate basis for a future career in any field of pharmacy;
- their future roles in the healthcare and pharmaceutical production;
- their subsequent postgraduate training;
- their commitment to lifelong learning;
- medical and sanitary needs of public health, needs of healthcare system and other aspects of social responsibility.

2.2.3 Medical educational organization **shall** ensure that a student fulfills obligations regarding doctors, pharmacists/dispensing chemists, technologists, teachers, patients and their relatives in accordance with the Code of Conduct.

Medical educational organization **should**:

2.2.4 identify and coordinate the interconnection of the final learning outcomes required on completion with those required in postgraduate studies.

2.2.5 determine the results of the involvement of students in conducting research in the field of pharmacy.

2.2.6 pay attention to the final outcomes associated with global health.

2.3 Scientific method

2.3.1 Throughout the entire academic program, medical educational organization should teach students:

- principles of scientific methodology, including methods of analytical and critical thinking;;
- scientific methods of research in pharmacy;
- evidence-based medicine, which requires the appropriate competence of teachers and will be a mandatory part of the educational program and involve students in conducting or participating in small research projects.

2.3.2 Medical educational organization **should** include in the educational program elements of basic or applied research that include compulsory or elective analytical and experimental research, thereby facilitating participation in the scientific development of medicine as professionals and colleagues.

2.4 Basic biomedical disciplines

2.4.1 Medical educational organization **shall** in the educational program determine and include the achievements of basic biomedical disciplines for the formation and understanding of students of scientific concepts and methods in the

field of basic biomedical sciences, which are fundamental for the acquisition of scientific knowledge and its application in practice.

2.4.2 Medical educational organization **shall** ensure the inclusion in the educational program of basic biomedical disciplines that are necessary for the formation and development of professional competence in the field of pharmaceutical practice of graduates.

2.4.3 Medical educational organization **shall** ensure that graduates of the educational program are competent in the application of biomedical scientific knowledge in the organization of pharmaceutical production and pharmaceutical assistance to the population.

2.4.4 Medical educational organization **should** adjust and introduce new achievements of basic biomedical disciplines in the educational program for students in order to better understand the classification of medicine, the general patterns of pharmacokinetics and pharmacodynamics of medicine, the fundamentals of pharmacological prophylaxis and pharmacotherapy, toxicology issues and environmental hygiene.

2.5 General educational disciplines, medical ethics

2.5.1 Medical educational organization **shall** define and include in the educational program achievements of the behavioral sciences, medical ethics, ensuring that students can demonstrate the application of the principles of ethical thinking, decisions and actions, and professional responsibility towards patients and medicine consumers.

2.5.2 Medical educational organization **shall** ensure that graduates of the educational program are competent in applying the fundamental principles of the behavioral sciences that contribute to the implementation of a patient-oriented approach and to the improvement of public health and the organization of medicine assistance to the population.

2.5.3. Graduates of the educational program in the specialty “Pharmacy” **shall be** competent in the application of the principles of ethical decisions and professional responsibility.

2.5.4 Medical educational organization **shall** determine and include in the educational program achievements of social sciences, medical jurisprudence, which will provide: knowledge, concepts, methods, skills and attitudes necessary for understanding socio-economic, demographic and cultural conditions of causes, the spread of various diseases, what will be contributed to the analysis of public health problems, effective communication, clinical decision making and ethical practice.

2.5.5 Medical educational organization **should** adjust and introduce new achievements of behavioral and social sciences and also medical ethics for scientific, technological and clinical developments, current and expected needs of society and the healthcare system, as well as changing demographic and cultural conditions in the educational program.

2.6 Pharmaceutical disciplines

Medical educational organization **shall** in the educational program define and implement the achievements of pharmaceutical disciplines and ensure that students:

2.6.1 acquire sufficient knowledge and professional skills, including:

- basic principles of the organization of medical assistance to the population;
- fundamentals of pharmacy economics;
- marketing management processes in pharmacy, conducting and analyzing marketing research, fundamentals of pharmaceutical management;
- basic principles of the organization of the technological process of production and manufacture of medicine products for extemporaneous and industrial production, phytopreparations, medical and cosmetic, parapharmaceutical and veterinary medicines, dietary supplements and natural products;
- basic principles and regulations governing the quality of medicines;
- general principles of pharmaceutical analysis, basic methods and techniques for the study of the quality of medicines;
- nomenclature of medicinal plants, issues of harvesting medicinal plants on botanical features;
- basic principles of macro- and microscopic, merchandising analysis and standardization of medicinal plant materials.

2.6.2 Medical educational organization **shall** ensure that students spend at least one-third of the program in laboratories, in production, in order to develop professional practical skills.

2.6.3 Medical education organization **shall** organize practical training with appropriate attention to the safety of a patient and a consumer of medicines, including monitoring of the activities performed by a student in the conditions of clinical bases, laboratories and industries.

2.6.4 Medical educational organization **should** adjust and introduce new achievements of pharmaceutical sciences for scientific, technological and clinical developments, as well as the current and expected needs of society and the healthcare system in the educational program.

2.6.5 Medical educational organization **should** structure the various components of practical skills training in accordance with the specific stage of the training program (training in the laboratories of the university, research institutes, pharmaceutical production, pharmacies, etc.).

2.7 Structure of the educational program, content and duration

2.7.1 Medical educational organization **shall** give a description of the content, scope and sequence of courses and other elements of the educational program in order to ensure compliance with the appropriate correlation between the basic biomedical, behavioral and social and pharmaceutical disciplines.

Medical educational organization **should** in the educational program:

2.7.2 provide horizontal integration of related sciences and disciplines;

2.7.3 provide vertical integration of pharmaceutical sciences with basic biomedical, behavioral and social sciences;

2.7.4 provide the possibility of electoral content (elective disciplines) and determine the balance between the obligatory and optional part of the educational program, including a combination of mandatory elements and electives or special components on choice.

2.8 Program management

2.8.1 Medical educational organization **shall** have an education program

committee or an equivalent that provides a systematic review, design, evaluation, and modification of the program.

Medical educational organization should ensure that the structural unit responsible for the educational program:

2.8.2 takes into account the particular conditions in which graduates will have to work and modify the educational program accordingly.

2.8.3 considers the modification of the educational program based on feedback from the public and society as a whole.

2.8.4 Medical educational organization **shall** guarantee its representation formed from teachers and students in the structural unit responsible for educational programs.

2.8.5 Medical educational organization **should**, through the structural unit responsible for educational programs, plan and implement innovations in the educational program.

2.8.6 Medical educational organization **should** include representatives from other relevant stakeholders in the structural unit of the medical educational organization responsible for educational programs, including other participants of the educational process, representatives from clinical sites, pharmaceutical industries, graduates of medical educational organizations, healthcare professionals, involved in training or other faculty teachers of the university.

2.9 Connection to medical practice and healthcare system

2.9.1 Medical educational organization **shall** provide an operational connection between the educational program and the subsequent stages of vocational training (internship, specialization, CPD / CME) or practice, that student will begin after graduation, including the definition of health problems and the definition of the required learning outcomes, a clear definition and description of the elements educational programs and their relation at various stages of training and practice, with due regard to local, national, regional and the global conditions, and also feedback to/from the healthcare sector and the participation of teachers and students in team work of specialists in delivery of health care.

2.10 Medical educational organization should direct the update process to the following questions:

- adaptation of the model of educational program and methodological approaches to ensure that they are relevant and appropriate and take into account modern theories in education, methodology of adult education, the principles of active learning;

- adjustment of the elements of the educational program and their interrelation in accordance with achievements in the field of biomedical, general educational, clinical and pharmaceutical sciences with changes in the demographic situation and health status/morbidity structure of the population and socio-economic and cultural conditions. The adjustment process will ensure the inclusion of new relevant knowledge, concepts and methods and the elimination of obsolete;

- modification of final learning outcomes of graduates in accordance with the documented needs of the postgraduate training environment, including clinical skills, training in public health issues and participation in the process of providing

medical care to patients in accordance with the duties that are assigned to graduates after graduation.

STANDARD “EVALUATION OF AN EDUCATIONAL PROGRAM”

3.1 Mechanisms for program monitoring and evaluation

3.1.1 Medical educational organization **shall** have a program for monitoring processes and results, including routine data collection on key aspects of the educational program in order to ensure that the educational process is carried out appropriately, and to identify any areas that require interventions. Data collection is a part of the administrative procedures in connection with student enrollment, student assessment and completion of training.

Medical educational organization **shall** establish and apply mechanisms for the educational program assessment that:

3.1.2 are directed to the educational program and its main components, including the model of the educational program, the structure, content and duration of the academic program, the use of compulsory and elective components (standard “Educational program”);

3.1.3 aimed at the student's progress;

3.1.4 identify and consider problems that include the lack of achievement of expected learning outcomes, and will involve the process of gathering information on final learning outcomes, including identified deficiencies and problems. It will be used as feedback for activities and corrective action plans to improve the educational program and curriculum disciplines.

Medical educational organization **should** periodically conduct a comprehensive evaluation of the educational program, aimed at:

3.1.5 the context of the educational process, which includes the organization and resources, the learning environment and the culture of medical education organization.

3.1.6 special components of the educational program, which include a description of the discipline and methods of teaching and learning, clinical rotations and assessment methods.

3.1.7 general outcomes that will be measured by national licensing exams, benchmarking procedures, international examinations, career choices and results of postgraduate studies.

3.1.8 its social responsibility.

3.2 Teacher and student feedback

3.2.1 Medical educational organization **shall** systematically collect, analyze and provide feedback to the teachers and students, which includes information on the process and products of the educational program, and also includes information about unfair practices or inappropriate behavior of teachers or students with and/or legal consequences.

3.2.2 Medical educational organization **should** use feedback results to improve the educational program.

3.3 Academic achievements of students and graduates

Medical educational organization **shall analyze** the educational achievements of students and graduates in relation to:

3.3.1 its mission and learning outcomes of the educational program, which includes information on the average duration of studies, grades, the frequency of passing and failures in examinations, cases of successful completion and expulsion, reports of students on the conditions of teaching in completed courses, the time spent to study areas of interest, including optional components, as well as interviews with students of repeated courses, and interviews with students who have left the educational program.

3.3.2 educational program.

3.3.3. provision of resources.

3.3.4 Medical educational organization **should** analyze academic achievements of students regarding their previous experience and conditions, including social, economic, cultural conditions, as well as the level of training at the time of admission to medical educational organization.

3.3.5 Medical educational organization **should** use the analysis of students' educational achievements to provide feedback to the structural units responsible for the selection of students, planning of the educational program, consulting students.

3.4 Involvement of stakeholders

3.4.1 Medical educational organization **should**, in its monitoring program and evaluation activities of the educational program, involve the teaching staff and students, its administration and management.

3.4.2 Medical educational organization **should** involve other stakeholders in the evaluation process, including representatives of academic and administrative staff, members of the public, authorized education and healthcare bodies, and professional organizations, as well as those responsible for postgraduate education:

- provide access to the results of the course evaluation and educational program;

- collect and study feedback from them on the pharmaceutical practice of graduates;

- collect and study feedback from them on the educational program.

Medical educational organization **should:**

3.4.3 provide access to the evaluation results of the educational program;

3.4.4 collect and study feedback from graduates on clinical practice;

3.4.5 collect and study feedback from graduates on the educational program.

3.5. Medical educational organization should base the update process on:

- prospective research, analysis and results of own research, literature on medical/pharmaceutical education;

- improving the process of monitoring and evaluation of the educational program.

STANDARD “STUDENTS”

4.1 Admission and selection policy

4.1.1 Medical educational organization **shall** define and implement admission policy, including a clearly defined position on the student selection process, which includes rationale and selection methods, such as secondary school learning outcomes, other relevant academic experience, other entrance examinations and interviews, assessment of motivation to become a pharmacist/pharmaceutical manufacturing technologist, including changes in needs related to a variety of medical and pharmaceutical practices.

4.1.2 Medical educational organization **shall** have a policy and introduce the practice of admission of students with disabilities in accordance with the laws, legal and regulatory documents of the country in force.

4.1.3 Medical educational organization **shall** have a policy and implement the practice of transferring students from other programs and medical institutions of education.

Medical educational organization **should**:

4.1.4 establish a connection between the selection of students and the mission of the medical education institution, the educational program and the expected quality of graduates.

4.1.5 periodically review admission policy based on relevant data from the public and professionals in order to meet the health needs of the population and society as a whole, including consideration of the recruitment of students based on their gender, ethnicity and language, and the potential need for a special admission policy for students from low-income families and national minorities.

4.1.6 use the system to appeal decisions on admission.

4.2 Student recruitment

4.2.1 Medical educational organization **shall** determine the number of enrolled students in accordance with the material and technical capabilities at all stages of education and training in accordance with the national requirements for human resources of healthcare. In the case when medical educational organizations do not control the number of enrolled students, it should demonstrate its commitment by explaining all relations, paying attention to the consequences of the decisions made (disbalance between student recruitment and the material and technical, academic potential of the medical educational organization/university).

4.2.2 Medical educational organization **should** periodically review the number and contingent of students enrolled in consultation with relevant stakeholders responsible for planning and developing human resources in the healthcare sector, with experts and organizations on the global aspects of human healthcare resources (such as insufficient and uneven distribution of human resources of healthcare, migration of specialists, opening of new medical educational organizations).

4.3 Student counseling and support

Medical educational organization **shall**:

4.3.1 have a system of academic counseling for its students (advisers), which

includes issues related to the selection of elective disciplines, preparation for residency training, career planning, the appointment of academic mentors (tutors, supervisors) for individual students or small groups of students;

4.3.2 offer a student support program that addresses social, financial and personal needs, including support for social and personal events and problems, health and financial issues, access to healthcare, immunization programs and health insurance, as well as financial assistance services in the form of material assistance, scholarships and credits;

4.3.3 allocate resources to support students;

4.3.4 ensure confidentiality regarding counseling and support.

Medical educational organization **should** provide counseling that:

4.3.5 based on monitoring student progress and addressing students' social and personal needs, including academic support, support for personal problems and situations, health problems, financial issues;

4.3.6 includes counseling and career planning;

4.3.7 includes a procedure for acceptance, consideration and responding to student complaints.

4.4 Representation of students

4.4.1 Medical educational organization **shall** define and implement a policy of students' representation and their participation in the development, management and evaluation of the educational program and other issues relevant to students (student self-government, participation of student representatives in faculty and university councils, other relevant bodies, in public activities and local healthcare projects).

4.4.2 Medical educational organization **should** provide assistance and support to student activities, student organizations including the provision of technical and financial support.

4.5 Graduates

4.5.1 In medical educational organization there **shall** be a system for studying employment, demand, career support and continuous professional improvement of graduates.

4.5.2 Data obtained using this system shall be used to further improvement of the educational program.

4.6 Medical educational organization *should* direct the update process to adapt student recruitment policy and student selection methods to meet changing expectations and circumstances, human resource requirements, changes in pre-university education and the needs of the educational program.

STANDARD “EVALUATION OF STUDENTS”

5.1 Evaluation methods

Medical educational organization **shall**:

5.1.1 identify, approve and publish the principles, methods and practice used to assess students, including number of examinations and other tests, balance between written and oral examinations, use of criteria-based assessment and reasoning methods, special examinations, as well as to determine the criteria for

determining the passing scores, grades and the number of allowed retakes.

5.1.2 ensure that the assessment covers knowledge, skills and attitudes.

5.1.3 use a wide range of assessment methods and formats depending on their “utility evaluation”, which includes a combination of validity, reliability, impact on learning, acceptability and effectiveness of methods and format of assessment.

5.1.4 ensure that assessment methods and results avoid conflicts of interest.

5.1.5 ensure that the evaluation process and methods are open (available) to expertise by external experts.

Medical educational organization **should**:

5.1.6 document and evaluate the reliability and validity of evaluation methods, which requires an appropriate process to ensure the quality of existing evaluation practices;

5.1.7 introduce new assessment methods in accordance with the need;

5.1.8 use the system to appeal the results of the evaluation.

5.2 The interconnection between assessment and learning process

5.2.1 Medical educational organization **shall** use the principles, methods and practice of assessment, including the educational achievements of students and the assessment of knowledge, skills, professional values of relationships that:

- clearly comparable with teaching methods, teaching, and final learning outcomes;
- ensure that students achieve final learning outcomes;
- encourage study process;
- provide an appropriate balance between formative and summative assessment to manage study process and evaluate student’s academic progress, which requires the establishment of rules for assessing progress and their relation to the evaluation process.

Medical educational organization **should**:

5.2.2 regulate the number and nature of examinations of the various elements of the educational program in order to facilitate the acquisition of knowledge and integrated learning, and to avoid negative effect on the learning process and eliminate the need to study excessive amounts of information and overload of the educational program;

5.2.3 guarantee the provision of feedback to learners based on the results of the assessment.

5.3 Medical educational organization *should* direct the update process to the development of assessment principles, and the methods of conducting and the number of examinations in accordance with changes in the final results of training and teaching and learning methods.

STANDARD “ACADEMIC STAFF/TEACHERS”

6.1 Recruitment and recruitment policy

6.1.1. Medical educational organization **shall** provide the educational program with a sufficient number of teachers and staff to meet the stated goals and objectives.

6.1.2 The educational program **should be** formed from teachers who have the right to teach and train in pharmaceutical specialties, have practical and/or scientific experience in the pharmacy/technology of pharmaceutical production included in the program.

Medical educational organization **shall** determine and implement a policy of selection and admission of employees, which:

6.1.3 determines their category, responsibility and balance of academic staff/teachers of general education, basic biomedical and major subjects for the adequate implementation of the educational program, including the proper correlation between medical and non-medical teachers, teachers working full-time and part-time and the balance between academic and non-academic staff.

6.1.4 contains criteria on the scientific, pedagogical, and clinical merits of applicants, including the proper correlation between pedagogical, scientific, and clinical qualifications.

6.1.5 identifies and monitors the responsibilities of academic staff/teachers of basic biomedical sciences, behavioral and social sciences and pharmaceutical sciences

Medical educational organization **should** in its policy on the selection and admission of staff to consider such criteria as:

6.1.6 related to its mission, the importance of local conditions, including gender, nationality, religion, language and other conditions related to medical educational organization and educational program

6.1.7 economic opportunities that take into account the institutional environment for financing employees and efficient use of resources;

6.2 Development policy and staff activity

6.2.1 Medical educational organization **shall** demonstrate the process of continuous development of employees and teachers, implementing the educational program on “Pharmacy”, including:

- carrying out and participation in activities for the development of educational and pedagogical activities;
- participation in regional and national education meetings related to education;
- mentoring the development of new teachers in this professional direction;
- scientific productivity;
- maintaining existing, and development of new and/or developing clinical skills.

Medical educational organization **shall** determine and implement the policy of the activities and development of employees, which:

6.2.2 allows to maintain a balance between teaching, scientific and service functions, which include the establishment of time for each type of activity, taking into account the needs of medical educational organization and professional qualifications of teachers.

6.2.3 guarantees recognition of the merit of academic activity, with a corresponding emphasis on pedagogical, research and clinical qualifications, and is carried out in the form of awards, promotion and/or remuneration.

6.2.4 ensures that professional activities and research are used in teaching and

learning.

6.2.5 guarantees the adequacy of knowledge of each employee of the educational program, which includes knowledge of teaching/learning methods and the general content of the educational program in the specialty “Pharmacy” and other disciplines, and subject areas in order to stimulate cooperation and integration.

6.2.6 includes training, development, support and activity of teachers, which involves all teachers, not only newly recruited, but also teachers drawn from clinics, laboratories, pharmacies, pharmaceutical industries, pharmaceutical companies.

6.2.7 Medical educational organization **should** apply an assessment process that provides an objective measurement of the performance of each teacher’s activity.

Medical educational organization **should**:

6.2.8 consider the ratio of “teacher-student” depending on the various components of the educational program.

6.2.9 develop and implement policy to promote and motivate employees.

6.3. Medical educational organization *should* direct the update process to adapt the policy of recruitment and the formation of academic staff in accordance with changing needs.

STANDARD "EDUCATIONAL RESOURCES"

7.1 Material and technical base

Medical educational organization **shall**:

7.1.1 have a sufficient material and technical base for teachers and students to ensure the adequate fulfillment of the goals and objectives of the educational program in the specialty “Pharmacy”.

7.1.2 provide a safe environment for staff, students, patients, which includes the necessary information and protection from harmful substances, microorganisms, compliance with safety regulations in the laboratory and in the use of equipment.

7.1.3 provide students with professional and scientific literature with the appropriate content of the educational program that stimulates and supports scientific activities.

7.1.4 Medical educational organization **should** improve the learning environment of students through regular updating, expansion and strengthening of material and technical base, which must be consistent with the development in the practice of teaching.

7.2 Professional training resources

Medical educational organization **shall** provide the necessary resources for students to acquire adequate practical experience, including:

7.2.1 a sufficient number and categories of production bases, which include polyclinics, clinics, research centers, laboratories, manufacturing, development centers of pharmaceutical skills, supplied with the necessary equipment for training and rotation in the main pharmaceutical disciplines;

7.2.2 monitoring the professional practice of students.

7.2.3 Medical educational organization **should** study and evaluate, adapt and

improve resources for professional training to meet the needs of the population served, which will include relevance and quality for professional training programs regarding production sites, equipment, number and category of patients, observation as a supervisor and administration.

7.3 Information technology

7.3.1 Medical educational organization **shall** define and implement a policy that is aimed at the effective use and evaluation of relevant information and communication technologies in the educational program.

7.3.2 Medical educational organization **should** provide opportunities for teachers and students to use information and communication technologies:

- for self-study;
- access to information;
- conducting research;
- work in healthcare system.

7.3.3 The library **shall** contain the necessary materials for training - educational, technical, scientific and reference literature, various medical periodicals, etc.

7.3.4 Medical educational organization/scientific organization **shall** regularly monitor library resources, study and implement strategies to meet the current and future needs of students.

7.3.5 Medical educational organization **should** direct the improvement process to update educational resources in accordance with changing needs, such as students' enrollment, the number and profile of academic staff, the educational program.

7.4 Research in the field of medicine and scientific achievements

Medical educational organization **shall**:

7.4.1 have research activities in the field of medicine and pharmacy, as well as scientific achievements as the basis for the educational program.

7.4.2 identify and implement policy that promotes the correlation between research and education.

7.4.3 provide information on the research base and priority areas in the field of scientific research of medical educational organization.

7.4.4 Medical educational organization **should** ensure that the interconnection between research and education is taken into account in teaching, encourages and prepares students to participate in research in the field of medicine and their development.

7.5 Expert expertise in the field of education

Medical educational organization **shall**:

7.5.1 have access to educational expertise, where necessary, and conduct an expert examination that studies the processes, practices and problems of medical education and can involve doctors with experience in research in medical education, psychologists and sociologists in the field of education. It can be provided by the medical education development department of university or by bringing in experts from other national and international institutions.

Medical educational organization **shall** determine and implement a policy on

the use of expertise in the field of education:

7.5.2 in the development of an educational program.

7.5.3 in the development of teaching methods and assessment of knowledge and skills.

Medical educational organization **should:**

7.5.4 provide evidence of the use of internal or external expertise in medical education field to develop the potential of employees.

7.5.5 pay due attention to the development of expertise in educational evaluation and research in medical education as a discipline, including the study of theoretical, practical and social issues in medical education.

7.5.6 promote the aspiration and interests of staff in conducting research in medical education.

7.6 Exchange in the field of education

Medical educational organization **shall** define and implement a policy for:

7.6.1 cooperation at the national and international levels with other medical educational organizations, universities, pharmaceutical schools.

7.6.2 transfer and mutual offset of educational loans, which includes consideration of the limits of the educational program, which can be transferred from other educational organizations and which can be facilitated by the conclusion of agreements on mutual recognition of elements of educational program, and active coordination of programs between universities and the use of a transparent system of credit units and flexible demands of the courses.

Medical educational organization **should:**

7.6.3 facilitate regional and international staff exchange (academic, administrative and teaching staff) and students supplied with appropriate resources.

7.6.4 ensure that the exchange is organized in accordance with the objectives, taking into account the needs of employees, students, and in compliance with ethical principles.

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