DESIGNING AN IMPROVED COMPETENCY DEVELOPMENT MODEL FOR FUTURE PHYSICIANS IN THE PROCESS OF TEACHING CARDIOLOGY

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Abstract: *This thesis addresses the issue of designing an improved model for developing the professional competence of future physicians in the process of teaching Cardiology. The study analyzes the content, methods, and assessment tools of cardiology education on the basis of competency-based, integrative, and practice-oriented approaches. The proposed model consists of target, content, procedural, and evaluative components and is aimed at developing clinical reasoning, diagnostic analysis, communicative approach, and reflective skills. The thesis substantiates the role of interactive methods, clinical cases, simulation-based training, and competency-based assessment tools in the educational process. The findings show that this model serves as an important pedagogical framework for improving the quality of cardiology teaching, integrating theoretical knowledge with practical activity, and strengthening the professional preparedness of future physicians.*

Keywords: *future physicians, professional competence, cardiology, competency-based approach, pedagogical model, clinical reasoning, medical education.*

Introduction.

The modernization of medical education requires a shift from knowledge-based instruction to competency-oriented training that ensures the professional

readiness of future physicians. In this context, cardiology occupies a special place in undergraduate medical education due to its strong integration of theoretical knowledge, clinical reasoning, diagnostic decision-making, and patient communication. Traditional approaches to teaching cardiology often emphasize memorization of clinical information rather than the systematic development of professional competencies. This creates a need for an improved model that combines pedagogical innovation, clinical relevance, and student-centered learning strategies. The present study aims to design an improved competency development model for future physicians in the process of teaching cardiology.

Materials and Methods.

The study was based on a competency-based, integrative, and practice-oriented approach. The methodological framework included analysis of pedagogical and medical education literature, comparative review of existing approaches to competency formation, modeling of educational components, and synthesis of effective instructional strategies used in cardiology teaching. The proposed model was developed through the identification of core professional competencies required in cardiology training, including clinical thinking, diagnostic interpretation, communication, decision-making, and reflective practice. The structure of the model incorporated target, content, procedural, and evaluative components. Special emphasis was placed on interactive teaching methods, case-based learning, simulation, clinical scenario analysis, problem-based tasks, and formative assessment tools.

Results.

The designed model demonstrated a structured and logically interconnected system for developing professional competencies in future

physicians through cardiology instruction. The target component defined the expected outcomes of training in terms of professional readiness and clinical competence. The content component integrated theoretical cardiology knowledge with practical clinical tasks and professional values. The procedural component included interactive lectures, simulation-based practice, ECG interpretation exercises, case discussions, bedside-oriented reasoning tasks, and reflective learning activities. The evaluative component was focused on competency-based assessment through practical assignments, situational analysis, structured observation, and feedback mechanisms. The model created conditions for active student participation, independent clinical reasoning, and the application of cardiology knowledge to realistic medical situations. It also strengthened the connection between academic preparation and future professional activity.

Discussion.

The findings suggest that improving competency development in cardiology education requires not only updating the content of instruction but also redesigning the pedagogical logic of the teaching process. The proposed model differs from traditional teaching by focusing on the integration of knowledge, skills, attitudes, and professional behavior within clinically meaningful contexts. Its educational value lies in the balanced combination of cognitive, practical, communicative, and reflective dimensions of training. The model also supports the transition from passive learning to active participation, where students become subjects of clinical analysis and decision-making rather than simple recipients of information. This approach increases motivation, promotes deeper understanding of cardiological problems, and contributes to the formation of sustainable professional competence. In addition, the model

provides a methodological basis for adapting cardiology teaching to the broader goals of contemporary medical education.

Conclusion.

An improved competency development model for future physicians in the process of teaching cardiology should be built on competency-based, integrative, and practice-oriented principles. The inclusion of interactive methods, clinical simulations, problem-solving tasks, and competency-based assessment enhances the effectiveness of professional training. The proposed model can serve as a pedagogical framework for improving the quality of cardiology education and for strengthening the professional preparedness of medical students in future clinical practice.

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