

INTEGRATION OF THERAPEUTIC MEDICINE, PERSONALIZED APPROACH, AND PREVENTIVE TECHNOLOGIES

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Abstract. *The article examines modern trends in the development of internal medicine therapy, with particular emphasis on the integration of evidence-based principles, personalized approaches, and preventive technologies. The specific features of clinical reasoning in internal medicine, the necessity of comprehensive examination and patient monitoring, and the importance of multidisciplinary collaboration in the treatment process are analyzed. The role of early diagnosis, rational selection of pharmacotherapy, and non-pharmacological interventions, including lifestyle modification, is highlighted. It is noted that the effectiveness of therapeutic interventions depends on the quality of medical communication, adherence to the principles of continuous professional education, and the active involvement of the patient in the treatment process.*

Keywords: *therapy, internal medicine, evidence-based medicine, prevention, personalized medicine, pharmacotherapy, diagnostics.*

Introduction. Internal medicine is a fundamental discipline of clinical medicine aimed at the diagnosis, treatment, and prevention of diseases of internal organs. The systemic nature of the therapeutic approach is ensured by a wide range of knowledge on the pathogenesis of diseases, mechanisms of action of drugs, principles of functional diagnostics, and clinical monitoring [3, 5].

Over the past decades, significant progress has been made in diagnostics and pharmacology, leading to a revision of patient management strategies [1, 3, 6]. Evidence-based medicine has become the key guideline in the choice of therapeutic tactics, while the personalized approach has become an essential component of

clinical practice. Preventive measures aimed at modifying risk factors and improving the quality of life of patients are of particular importance [2].

Modern internal medicine requires physicians not only to have profound clinical knowledge, but also to develop analytical skills, understand the biopsychosocial model of disease, apply advanced diagnostic technologies, and be able to design individualized treatment plans [3, 4]. The interaction between the internist and specialized medical professionals plays an important role, particularly in the context of comorbidity typical of most patients.

The effectiveness of therapeutic care directly depends on timely, comprehensive, and accurate diagnostics, as well as on a well-organized system of clinical monitoring of the patient [1, 5]. In internal medicine, the diagnostic process is based on the principles of evidence-based medicine, combining clinical assessment, instrumental and laboratory methods of examination, and dynamic interpretation of data throughout the entire observation period [6].

A detailed medical history forms the foundation of the diagnostic process and includes:

- patient complaints (character, intensity, duration of symptoms);
- history of the present illness (provoking factors, course, results of previous examinations);
- life history (occupational and lifestyle factors, harmful habits);
- family history (genetic and hereditary risks);
- medication history (current and long-term medications).

The quality of the doctor–patient interview determines the completeness of the collected information, which directly affects diagnostic accuracy.

Physical examination methods remain the foundation of therapeutic diagnostics:

- Inspection: assessment of general condition, body type, skin color, respiratory movements, edema, deformities, and other objective signs.

- Palpation: detection of tenderness, pathological indurations, organomegaly.
- Percussion: determination of organ boundaries, detection of fluid or air in cavities.
- Auscultation: assessment of breath sounds, heart tones, pleural friction rub, and others.

Proper application of physical examination methods allows the identification of up to 60–70% of pathologies at the initial stage of assessment.

Laboratory diagnostics include both basic and specialized studies:

Group of studies	Examples
General clinical tests	Complete blood count (CBC), urinalysis, blood biochemistry, coagulation profile
Specific tests	Hormones, immunological panels, genetic testing
Markers of inflammation and organ damage	CRP, procalcitonin, troponins, BNP

Interpretation of laboratory results is carried out in conjunction with the clinical presentation.

Instrumental diagnostics include both traditional and advanced imaging modalities:

- ECG and 24-hour ECG monitoring (Holter);
- Echocardiography;
- Ultrasound of abdominal organs and kidneys;
- X-ray and CT;
- MRI and MR-angiography;
- Endoscopic methods (EGD, colonoscopy);
- Functional tests: spirometry, stress tests.

The modern approach aims to minimize invasive procedures while maintaining a high diagnostic standard.

Clinical Observation. Clinical observation is a continuous and systematic process of monitoring the patient's condition to assess disease dynamics, treatment effectiveness, and prevention of complications.

Main objectives of clinical observation:

- Analysis of clinical symptoms over time;
- Monitoring vital signs (blood pressure, heart rate, temperature, oxygen saturation);
- Control of laboratory and instrumental parameters;
- Evaluation of treatment tolerance and adverse effects;
- Adjustment of therapeutic strategy;
- Development of patient adherence to treatment.

Forms of observation:

- Inpatient observation - intensive examination and treatment
- Outpatient follow-up - regular visits and therapeutic monitoring
- Dispanserization - scheduled systematic health assessment
- Telemedicine support - remote monitoring, especially for chronic diseases

Dynamic Assessment of the Patient's Condition. In chronic diseases, the internist uses individualized monitoring plans, including:

- Blood pressure monitoring in hypertension - daily/weekly;
- Glycated hemoglobin assessment in diabetes - every 3 months;
- Lipid profile monitoring in coronary artery disease – 1-2 times per year;
- Echocardiography in heart failure - once every 6-12 months.

The modern model of clinical observation implies a partnership between the physician and the patient:

Role of the physician	Role of the patient
Education, treatment planning, and therapy adjustment	Self-monitoring and adherence to recommendations
Risk assessment and prevention	Lifestyle modification
Use of clinical protocols	Timely seeking of medical assistance

High treatment adherence increases the effectiveness of therapy by 30-50%.

Diagnosis and observation in internal medicine represent a multilevel process based on sequential clinical analysis, systematic evaluation of data, and an individualized approach. The quality of diagnostics and regular patient monitoring determines the timeliness of therapeutic interventions, reduces the risk of complications, and improves patient prognosis.

Conclusion. Modern internal medicine represents an integration of scientific evidence, clinical experience, and active patient involvement in the therapeutic process. The key factors determining treatment effectiveness include early diagnosis, rational pharmacotherapy, comprehensive prevention, and the individualization of therapeutic strategies. The success of therapy depends not only on the quality of medical technologies but also on the professional competence of the physician, the effectiveness of medical communication, and the patient's adherence to treatment. Thus, the development of therapeutic practice is associated with the further improvement of clinical reasoning, the standardization of clinical protocols, and the introduction of innovative approaches to diagnosis and treatment.

References:

1. World Health Organization. *Evidence-Based Medicine: Principles and Practice*. Geneva: WHO Press, 2020.
2. Goff D. C., Lloyd-Jones D. M., Bennett G., et al. 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease. *Journal of the American College of Cardiology*, 2019; 74(10): e177–e232.
3. Fauci A. S., Braunwald E., Kasper D. L., Hauser S. L., Longo D. L., Jameson J. L., Loscalzo J. *Harrison's Principles of Internal Medicine*, 21st ed. New York: McGraw-Hill Education, 2022.
4. Epstein R. M., Street R. L. *Patient-Centered Communication in Health Care: An Evidence-Based Guide*. New York: Oxford University Press, 2011.

5. Kumar P., Clark M. *Kumar and Clark's Clinical Medicine*, 10th ed. Edinburgh: Elsevier, 2021.
6. Guyatt G., Rennie D., Meade M. O., Cook D. J. *Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice*, 3rd ed. New York: McGraw-Hill Education, 2015.