

## 5 STRESZCZENIE W JĘZYKU ANGIELSKIM

Evidence-Based Medicine (EBM) is recognized as the gold standard in contemporary clinical practice. According to EBM principles, patient care should be based on the best available scientific evidence while integrating clinical knowledge with patients' needs and preferences. The ever-expanding range of pharmacotherapeutic options means that the share of drug expenditures in total medical costs is increasing, surpassing the affordability of patients and state budgets. Available data indicate that pharmaceutical product expenditures usually constitute the largest component of costs in ambulatory care, with these costs rising faster than other types of expenses in this area. In light of emerging changes and new therapeutic possibilities, promoting evidence-based clinical practice is of paramount importance. Providing current, best-available information on medicinal products can help achieve better patient health outcomes and optimize expenditures. A key component of the healthcare system in Poland is primary healthcare (PHC), and fully leveraging its potential translates to the efficient functioning of the entire healthcare system. The goal of PHC is to provide comprehensive and coordinated healthcare services in the areas of prevention, diagnosis, and treatment of diseases. Given the nature of their work, primary care physicians face the particular challenge of needing to have up-to-date knowledge across a wide range of diseases. Hence, it is especially crucial for them to rely on credible and current information sources. The process of making therapeutic decisions using EBM principles is time-consuming, requiring the tracking of emerging reports and reconciling them with existing knowledge. Given these needs and limitations, clinical practice guidelines play a significant role in the decision-making process in patient care. They are a collection of recommendations developed by a team of experts in a given field. These guidelines take into account scientific research results, as well as clinicians' opinions and experience, patients' preferences and values, community priorities and needs, available resources and costs, and the organization of the healthcare system. Their aim is to support the medical community in making diagnostic and treatment decisions in specific clinical situations. Through critical evaluation of old and new technologies, assessing the benefit-to-risk ratio, and synthesizing information about various interventions, they serve as a credible source of information on drugs. For clinical guidelines to fulfil their role, they must be of high quality. Appropriate methodology and rigorous strategy during the development of clinical guidelines significantly impact their quality, including their currency and credibility of recommendations. However, the

development of high-quality recommendations alone is not sufficient. Efforts to disseminate guidelines and strive for their implementation in daily medical practice are also necessary. An important factor affecting the feasibility of applying recommendations in practice is tailoring the guidelines to the preferences and needs of the target group. Identifying appropriate implementation methods, barriers in the implementation process, and developing ways to overcome potential difficulties are also crucial aspects. Scientific data indicate that recommendations are often not applied in practice, leading to discrepancies between EBM recommendations and actual clinical practice. As a result, medicinal products may be used inappropriately, increasing the risk of therapy failure, adverse reactions, and inefficient use of available resources. Improving this situation can be achieved by implementing high-quality clinical guidelines into daily medical practice. Striving to fully utilize the potential of clinical practice guidelines as a source of information supporting therapeutic decision-making aligned with EBM principles requires a comprehensive approach, including analyzing the current situation, evaluating the actual preferences and behaviors of the target group, ensuring high-quality recommendations, and applying effective implementation methods.

Therefore, the primary objective of the conducted research was to examine the information needs and preferences of primary care physicians regarding the acquisition of information on medications and to assess the significance of clinical guidelines against other available information sources. An additional aim of this study was to determine which information sources are perceived by physicians as the most credible and which have the greatest impact on the choice of prescribed medication, as well as to investigate the reasons for the limited access to the latest knowledge on medicinal products. Given that attention to methodological aspects is a crucial factor in aiming to obtain diagnostic and therapeutic recommendations consistent with the best available scientific data, the research also included an analysis of the quality of Polish clinical guidelines on the management of asthma for family doctors, developed in accordance with internationally recognized standards, compared with clinical guidelines from other countries and international organizations. Domains of guidelines that met methodological requirements to the highest degree and areas in need of improvement were identified. The study allowed for the assessment of the quality of clinical guidelines intended for family physicians providing services within the PHC framework in Poland. In the pursuit of fully leveraging the potential of clinical guidelines,

their proper implementation is also crucial. Therefore, the final objective of the conducted research was to analyze methods of implementing clinical guidelines, barriers encountered in the implementation process, and ways to overcome them.

With the stated goals in mind, a three-stage analysis was conducted. The first stage consisted of a survey among 316 primary care physicians in the Masovian Voivodeship. The questions asked in the questionnaire related to self-assessment in terms of knowledge about medicinal products and the frequency of using information sources about medications and their types, over the last six months. The survey also collected information on the reasons that hinder access to the latest information on medications, the perceived credibility of the used sources, and their impact on the choice of medication prescribed to patients. The next stage of the research involved assessing the quality of available clinical guidelines. The analysis compared the quality of Polish clinical guidelines developed according to internationally recognized standards ("Management of Asthma Exacerbations in Adults - Guidelines for General Practitioners", Supreme Medical Chamber) with eight guidelines developed in other countries and by international organizations ("Global Strategy for Asthma Management and Prevention", The Global Initiative for Asthma; "Asthma and Respiratory Foundation NZ Adolescent and Adult Asthma Guidelines 2020: a quick reference guide", Asthma and Respiratory Foundation New Zealand; "Australian Asthma Handbook V2.0", National Asthma Council Australia; "National Clinical Guideline: The Diagnosis and Management of Asthma in Adults V2.1", Ministry of Public Health Qatar; "SIGN 158 British guideline on the management of asthma", Scottish Intercollegiate Guidelines Network / British Thoracic Society; "Management of Asthma in Adults", Malaysian Health Technology Assessment Section; "Asthma: diagnosis, monitoring and chronic asthma management", National Institute for Health and Care Excellence; "The Spanish Guideline on the Management of Asthma", Spanish Guideline for Asthma Management). The evaluation was performed using the internationally recognized AGREE II (The Appraisal of Guidelines for Research and Evaluation) tool for assessing clinical practice guidelines. In the final stage of the research, a systematic literature search was conducted in the PubMed database for systematic reviews and literature reviews analyzing strategies for implementing clinical practice guidelines, barriers encountered in the implementation process, and methods to overcome them. The secondary literature review allowed for a broad analysis of the studied issues, enabling the comparison and compilation of results from various

publications and identifying potentially most effective implementation methods, common barriers, and proposed ways to overcome them.

The survey analysis revealed that the majority of primary care physicians (88%) use available sources of information on medications at least several times a week, with nearly half of them doing so several times a day. Only 22% of respondents identified a lack of information on medications as a problem in their daily practice. Although physicians considered clinical guidelines to be the most credible source of information, having the greatest impact on the choice of prescribed medication, they were not the most frequently mentioned source of information on medications by doctors (ranking fifth out of ten available options). The most commonly cited difficulty by physicians in accessing the latest information on medicinal products was the lack of time. This could also be a reason for the underutilization of the clinical guidelines. Meanwhile, the quality analysis of selected clinical guidelines showed that the Polish guidelines for asthma management for family doctors were of high quality compared to the other eight guidelines evaluated (ranking fourth best). In the analyzed guidelines, the highest-rated areas were clarity and presentation of recommendations (all guidelines scored 100% or close to 100%), scope and purpose of the guidelines, and editorial independence. The domains that received the lowest ratings were related to stakeholder involvement and applicability (79.3% and 69.2%, respectively). The greatest differences were observed in the area of editorial independence - ranging from 100% (the maximum possible score) to 16.7%. The Polish guidelines received the maximum number of points in areas related to scope and purpose, clarity and presentation of recommendations, and editorial independence. In the final stage of the research, which was a systematic review of the literature, an analysis was conducted on four publications concerning methods of implementing clinical practice guidelines and two articles describing barriers in the guideline implementation process and methods to overcome encountered difficulties. The analysis concluded that methods actively engaging healthcare workers showed the best effects. Identified barriers were divided into the following categories: personal factors (lack of knowledge about the guidelines, lack of confidence in their effectiveness, and negative attitudes towards them), guideline-related factors (lack of evidence on the effectiveness of guideline application and the level of complexity when using them in practice), and external factors (lack of time and excessive workload). Proposed solutions included increasing healthcare

workers' knowledge about guidelines, access to high-quality and easy-to-implement guidelines, and better organization of healthcare facilities' work.

Summarizing, the conducted research provided insight into the information needs and preferences of primary care physicians regarding sources of information on medications, including assessing the significance of clinical practice guidelines. The results indicate a need to develop strategies and tools to support PHC physicians in accessing and utilizing clinical guidelines in practice. Considering the main barrier to accessing new medication information is the lack of time, potential solutions could include education and the development of accessible, concise materials based on clinical guidelines, facilitating physicians' use of information sources perceived as credible, and having a significant impact on the choice of prescribed medication. Furthermore, the research emphasizes the need to focus on the quality of available guidelines. Engaging experts and adhering to methodological standards during the development of clinical practice guidelines allows for high-quality recommendations that can successfully serve as tools to support therapeutic decision-making. The full potential of clinical practice guidelines can be realized through the application of appropriate implementation methods. The analysis of identified barriers and proposed solutions showed that guidelines should be developed in a clear, simple, and easily implementable manner in practice. The results highlight the need for organizing training for physicians to eliminate barriers in using guidelines in practice. Additionally, it is crucial for healthcare facility managers to pay more attention to work organization, which can help evenly distribute work and allow for greater engagement of healthcare workers in the implementation process of recommendations. The data obtained in this research can serve as an important source of information when designing actions aimed at supporting PHC physicians in making therapeutic decisions consistent with EBM principles by providing accessible, current, and high-quality clinical practice guidelines.

*Keywords:* primary care physicians; drug information sources; clinical practice guidelines; information-seeking behaviors; evidence based medicine; quality assessment; AGREE II; strategies; barriers; clinical practice guideline implementation.

*Title:* CLINICAL PRACTICE GUIDELINES AS A SOURCE OF INFORMATION ON MEDICINAL PRODUCTS IN THE PRIMARY CARE PHYSICIANS' PRACTICE.