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Review Article

PATIENT AND PHYSICIAN RELATED FACTORS OF ADHERENCE TO EVIDENCE-BASED GUIDELINES IN DIABETES MELLITUS TYPE 2, CARDIOVASCULAR DISEASE AND PREVENTION

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Abstract

Patients do not always receive guideline-adherent therapy, yet little is known about the underlying causes on the patients' side. This study quantified non-guideline-adherent treatment of chronic diseases (diabetes mellitus, hypertension, cardiovascular disease, heart failure, atrial fibrillation) in primary care and analyzed the causes from the physician's as well as the patient's view.

Keyword: Diabetes Mellitus, Hypertension, Cardiovascular Disease.

Introduction

To decrease the burden of chronic diseases, treatment guidelines have been developed based on current best evidence from large clinical trials. In Austria, the EBM Guidelines [1] are most widely used. However, we know from various studies that guidelines are not always applied and followed [2]. The barriers to guideline-adherence have been studied quite extensively concerning the physician's point of view, mainly in qualitative [3], but also in quantitative studies. A systematic review of studies addressing physicians' barriers to guideline adherence, identified physicians' lack of awareness of a guideline's existence and lack of familiarity with the guideline as the leading causes of deviation from recommended therapy [4]. Thus, ample data exist on the epidemiology of guideline adherence as well as physicians' barriers to guideline implementation, leading to the assumption that physicians are generally responsible for non-adherence. Based on this assumption, the quality and outcomes framework has been designed in the UK and proven to enhance guideline-adherence substantially.

Method:

With the intention to analyze the frequency and causes of non-guideline-adherent treatment of patients with chronic diseases, the author drew a random sample of 124 general practitioners (GP) in Salzburg, Austria, of which 58 (46.8%) participated. In the participating GP surgeries, the authors consecutively recruited 501 patients with at least one of the target-diseases and checked the guideline conformity of treatment using 9 quality indicators. The authors then interviewed the patients as well as the general practitioners regarding factors affecting deviation from guideline recommendations.

Results:

Of the 501 patients, a total of 1224 quality indicators could be analyzed. Non-adherence to guideline recommendations were present in 16.8% (n = 205, 95% CI 14.7 to 18.8%) of all quality indicators. In 61.5% of these cases (n = 126, 95% CI 53.0 to 70.0%) the treatment was wrongly judged as not recommended by the physicians. In 10.2% (n = 21, 95% CI 0 to 23.2%) physicians attributed non-adherence to patient's non-compliance, and in 10.7% (n = 22, 95% CI 0 to 23.7%) to an adverse drug event, whereas only 5.4% (n = 11, 95% CI 0 to 18.7%) of nonadherence was related to an adverse drug event reported by the patients. Patients were unaware regarding the reason for non-adherent therapy in 64.4% (n = 132, 95% CI 56.2 to 72.6%) of the quality

indicators. In 20.0% (n = 41, 95% CI 7.8 to 32.2%) patients regarded a drug as not needed.

Discussion:

The study found obvious deficits in care regarding guideline adherent drug therapy for hypertension, diabetes mellitus type two, heart failure, atrial fibrillation and secondary prevention in cardiovascular diseases. About a sixth of all quality indicators in this study were not fulfilled according to current guideline recommendations. In more than half of these quality indicators the patients did not know why they were not prescribed a particular drug, thus making us look at the physician as the one responsible for nonadherence. The most frequent reason for physicians to deviate from guideline recommendations was that they falsely assumed that a certain prescription was not indicated or necessary There are several possible explanations for the fact that the treatment of patients is not always consistent with evidence-based recommendations.

According to this study, the most important cause appears to be the physician not providing a particular treatment. This may be due to physicians' lack of awareness regarding the existence of a guideline, or lack of familiarity with a guideline, as has been shown by Cabana et al. [4]. However, non-adherence may also be caused by a deliberate decision to counteract the guideline with which the physician may not agree, in general or for a particular patient.

Even though the GP appears to be the main cause of non-adherence to the guidelines, this study clearly shows that other reasons are involved in at least one third of all quality indicators.

Of the non-GP-related causes, adverse drug events and non-compliance appear to be the most important. In chronic care, GPs are confronted with the problem that they have to keep the patient compliant over a long period of time, and that any drug treatment has to match up to other health goals and is influenced by psychosocial problems**.**

Chapman and co-authors found a sharp decline in drug-adherence to lipid and blood pressure lowering drugs to only 36% within one year, with the greatest drop occurring in the first three months [5]. The factors determining compliance are manifold: Health education appears to play a crucial role, but other patient specific factors like race, ethnicity, or education are also important [6]. Sometimes patients do not seem to be aware of their illness, or they accept their chronic disease symptoms as normal, e.g. as a result of ageing. Thus, more than half of the patients with heart failure reported their health to be good even though nearly half of them.

Another problem may be that many drug effects in cardiovascular prevention are hardly noticeable to the patient so that the importance of the medication remains unrecognized. Patients' fears of adverse drug reactions certainly also play a role in non-adherence to recommended treatments. Moreover, insufficient communication including incomplete patient's history taking, conflicting information, neglected disagreements, or a disturbed relationship between the patient and the physician may cause non-adherence or non-compliance

The fact that about two thirds of the patients did not know why they do not receive a recommended drug points out a significant information deficit. While the authors would not expect all patients to wish to be informed about treatment options, there appears to exist sufficient evidence that most patients would prefer to be involved in evidence-based treatment decisions [7]. From this study the authors cannot distinguish whether the information deficit is due to a lack of communication between physician and patient, or to the patient not wanting to be involved. Looking at one of the leading models for shared decision making it takes both the physician's willingness to share information as well as the patient's desire to be informed, and we conclude from this study that it seems unlikely that about two thirds of the patients do not want to know about guideline-adherent, evidence-based treatment choices.

About 20% of the patients in this study stated that they do not need a drug they should in fact receive. This might reflect certain knowledge deficits regarding present diseases or risk factors.

Although this study reveals important insights regarding the causes of non-adherence to guideline recommendations, some limitations have to be considered. A major weakness of this study is that the sample size is fairly small. This especially limits the explanatory power of the detailed analysis of single diseases.

Conclusion:

Guideline adherence in chronic care was relatively good in this study sample, but still leaving room for improvement. Physicians' lack of knowledge and patients' lack of awareness account for about 70% of non-adherence, indicating the necessity to improve physician education, and patient involvement. In about 30% of the quality indicators not fulfilled, non-adherence is due to other reasons like adverse drug events or patients not willing to take a recommended drug.

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