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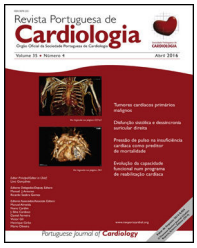

EDITORIAL COMMENT

Prescribing patterns as a quality measure for hypertension treatment in Portugal

Padrões de prescrição como medida de qualidade para o tratamento da hipertensão em Portugal

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Monitoring medical practice has become a major area of intervention for quality assurance programs in modern health systems.

Among various methods of measuring quality in health, drug prescribing is one of the most important metrics. Prescribing patterns give access to important information such as patient adherence to therapy (for example for highly complex regimens), financial burdens for the system and for patients, identification of equally effective and safe but cheaper alternative options, and detection of variations in care practices.

Variation in clinical practice – different clinical approaches (diagnostic tests, treatment choices, etc.) to the same type of patients with the same baseline risks – is difficult to overcome everywhere. In Portugal, OECD data show large differences across the country in various healthcare activities and procedures, for example in hospital medical admissions, cardiac catheterization rates, and age-standardized rates of knee replacement and Cesarean section.[1]

Such variation is especially important with regard to overuse of resources, defined as ''the provision of medical services that are more likely to cause harm than good.''[2] A typical case is the inappropriate use of antibiotics, which has important consequences for antimicrobial resistance. In Europe there is a significant degree of variation in cardiac care, sufficient to be a concern for the European Society of Cardiology (ESC).[3]

Reducing variation in care requires a systematic approach that should include decreasing heterogeneity and gaps in clinicians' knowledge, removing economic incentives for undesirable clinical behaviors, reducing the need for defensive medicine, improving communication between payers and physicians, and the use of decision support tools.[4] There are of course limits to the extent to which practice variation can be reduced: patients' specific diseases and their different characteristics, social limitations and biological conditions all contribute to justifiable variations in practice patterns (for example, a different drug must used if a patient is allergic to the most frequently recommended first-line medication).

Another important use for information on prescribing patterns is in analysis of the implementation of clinical practice guidelines (CPGs).[5] In this context, what is required is a match between evidence-based recommendations from

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CPGs and the patterns of everyday clinical practice. Given that carefully selected, appraised and presented evidence that is ready to be applied to individual patients provides better results in care, a direct comparison makes sense.

Hypertension is a major cardiac risk factor across all regions of the globe and in every population ever studied.[6] Appropriate treatment of hypertension reduces the rate of major cardiac events including stroke, acute coronary disease, and cardiac and renal failure,[7] and this effect is especially noticeable in high-risk patients.[8]

Several CPGs and other sources recommend a series of management steps, starting with lifestyle modifications, increased exercise, diet modification and, if these interventions fail, drug treatment.[5,9,10]

In terms of the choice of drugs for initial treatment, the ESC guidelines point out that the large number of randomized trials of blood pressure (BP)-lowering therapy, both those comparing active treatment vs. placebo and those comparing different compounds, confirm that the main benefits of BP lowering treatment are due to lowering of BP per se and are largely independent of the drugs employed, and that thiazide and thiazide-like diuretics (chlorthalidone and indapamide), beta-blockers, calcium antagonists, angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs) can adequately lower BP and reduce the risk of cardiovascular (CV) death and morbidity.[5]

Given that the decision to start BP-lowering treatment depends on the patient's absolute BP levels and total CV risk, and that in most patients combination treatment is needed to control BP, an overall analysis of the quality of antihypertensive treatment constitutes a clear metric for quality of care.

In their paper in this issue of the *Journal*,[11] Pinto et al. looked at the use of antihypertensive medication in primary care, aiming to determine patterns of first-line drug prescriptions and the physicians responsible for initiating treatment (family physicians or other specialists), and to compare prescribing patterns between these physicians.

The study showed that, in a sample of 681 patients, the initial prescription was issued by the family physician in 87% of cases. The most commonly prescribed drugs were ACE inhibitors in 51% of cases, thiazide and thiazide-like diuretics in 32%, and ARBs in 21%. Compared to other physicians, family physicians used less beta-blockers (20.4 vs. 5.9%) and loop diuretics (8.2 vs. 0.8%). In 12% of cases primary care physicians altered prescriptions initiated by other specialists.

The authors' conclusions were that ACE inhibitors were the most prescribed antihypertensive class and that most diagnoses were made by the patient's own family physician. The proportion of cases in which prescriptions initiated by other specialists were altered was small, presumably because prescribing patterns were similar, except for lower use of beta-blockers and loop diuretics by family physicians.

The present study is a useful contribution to evidence in the field of health services research. It looks at a clinically relevant cardiac risk factor – high BP – and analyzes treatment patterns at primary and secondary levels of care. The authors took care to ascertain responsibility for diagnosis and drug information through direct physician reporting, backed by the patient's national record if needed. This approach provided more accurate drug information at the individual patient level.

The results are an encouraging example of high-quality care and guideline-based practice. They show that the ESC guidelines for the initial treatment of hypertension are being followed for recommended first-line drug classes and also for subsequent drug combinations.

A limitation of the study – acknowledged by the authors – is that the physicians selected belong to the Sentinel Practice Network, and their practices may thus not be representative of those of other primary care physicians. In addition, the sample was rather small (less than 700 patients), and the specialties of the non-primary care physicians were not disclosed. The authors also point out that the study did not collect data on disease severity, or the presence of comorbidities and contraindications to specific medicines, factors which could have influenced prescribing patterns. There was also no information on variations in practice between physicians or regions of the country.

These minor considerations apart, this is an important study that can help elucidate the practice of treating hypertension in the Portuguese National Health System, and the authors should be commended for their work in providing these data.

Conflicts of interest

The author has no conflicts of interest to declare.

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