Prescribing Trends: Not a Pretty Picture

The harsh reality of the prescription drug crisis is outlined in a must-read paper for all health care clinicians and patients.

By Editorial Staff

From the *Annals of Family Medicine*[1] comes one of the most **important studies** to date in the effort to define and understand how drug companies are influencing both the practice of medicine and the health of patients who seek care from medical providers. Conducted by a pair of anthropologists from Michigan State University, the study examines the impact of lower diagnostic thresholds, clinician rewards systems and the prescribing cascade on the health of patients diagnosed with diabetes and hypertension.

The authors lay the foundation for their study by noting, "Spending on prescription drugs in the Unites States has risen nearly 6-fold since 1990, reflecting substantial increases in treatment of chronic conditions and subsequent polypharmacy. As many as 45% of Americans have at least 1 diagnosed chronic condition, and 60% of the most prescribed medications were for hypertension, high cholesterol levels and diabetes. The Centers for Disease Control and Prevention estimates that 11% of the US population and 40% of people older than age 60 take 5 medications or more."

In conducting the study, the authors focused "on the sociocultural aspects of clinical interactions and communication, and were less concerned with the specific content of treatment approaches." They studied primary care clinicians and their patients over a two-year period (2009-2010), with specific emphasis on management of type 2 diabetes and hypertension, two of the most common chronic health conditions. As the study progressed, the authors realized the overwhelming prevalence of prescription drug use in managing these two conditions and thus focused on their influence more closely.

Lower Diagnostic Thresholds

Lower diagnostic thresholds mean that more people are diagnosed with a disease they didn't previously have. The authors point to changes in the diagnosis of **diabetes**, hypertension and their "pre-" conditions as increasing the number of people subjected to intense prescription management, suggesting that an estimated 10 million additional people are being treated for diabetes, and an additional 22 million for hypertension, due to these lower thresholds.

In 1998, the fasting plasma glucose level that defined a person as diabetic was lowered from 140 to 126. This resulted in an additional 10.3 million people being medically defined as diabetics. The prediabetes fasting glucose level was established at 110 in 1998 and changed to 100 in 2003, resulting in many more pre-diabetics.

In 1993, the blood pressure definition for hypertension was lowered from 160/95 to 140/90 in non-diabetic patients. In 1998, the hypertension blood pressure definition for diabetics was established at 130/80, lower than that of non-diabetics. These changes resulted in an estimated 22 million additional hypertension diagnoses. The prehypertension definition was also established in 1998 at 120/80.

Clinician Incentives

Medical doctors are monitored and rewarded for keeping their patients below certain standards that stem from established guidelines. But "the committees and organizations setting the standards often have substantial pharmaceutical industry support and include many individuals with industry ties."

According to the authors, "many insurance companies assess individual clinicians on the basis of whether their patients meet these standards, often paying substantial bonuses that encourage clinicians to respond to marginal test results with aggressive use of pharmaceuticals."

The Prescribing Cascade

Prescription drugs can have **adverse impacts** on patients, producing symptoms that prompt the prescribing of additional drugs. This is particularly true for patients of clinicians who fail to recognize these adverse reactions. Two-thirds of patients "reported experiencing symptoms they attributed to their diabetes medications, hypertension medications, or both," with several patients hospitalized because of symptoms, prompting a medication change.

In this study, 89% of the patients "reported taking multiple medications, averaging 4.8 prescriptions with more than half (51%) taking 5 or more." In many cases, the patients were expected to continue taking these medications "permanently."

Real People, Real Problems

One of the things that makes this paper so interesting is the approach taken by the authors. They interviewed 58 clinicians and 74 patients for about an hour each, providing insightful clinician comments and patient vignettes that are included in the study:

- A 61-year-old man is taking "3 medications for hypertension, 2 for diabetes, 2 for high cholesterol levels, 1 for acid reflux, and daily doses of aspirin and ibuprofen, and uses an inhaler for chronic bronchitis, for a grand total of 11 medications. ... Since starting the hypertension and diabetes medications, he has developed severe indigestion and breathing problems."
- A family practice physician stated, "I tell most new diabetics the sad news is that they're going to be on 5 meds."
- A 54-year-old woman is "currently taking 8 prescription medications: 3 for hypertension, 2 for diabetes, 1 for high cholesterol levels, and 2 for depression. She also had 5 visits to the emergency department in 1 month for excruciating headaches before they were determined to be an adverse effect of the additional hypertension medication she had been prescribed."
- Another clinician noted, "I've got patients on 4 different medications and their blood pressure is still uncontrolled. We try sending them to the cardiologists, and they say, 'Just keep adding stuff because there's really nothing we can do about this.' Some people whose blood pressure that we get normal again, they don't function very well at all. I'm not sure why."

A Chance to Change

In their concluding remarks, the authors call for a reform on how much influence the **pharmaceutical industry** has on the practice of medicine: "At a minimum, we urge policies excluding individuals or organizations with financial conflicts of interest from involvement with guideline-writing panels. The presumption that mere disclosure resolves such conflicts must be rejected." They also suggest that physicians "be discouraged from seeing drug representatives."

Reference

1. Hunt LM, Kreiner M, Brody H. The changing face of chronic illness management in primary care: a qualitative study of underlying influences and unintended outcomes. *Ann Fam Med*, September/October 2012;10(5):452-460.
