

## STATEMENTS

### Medication Insecurity and the Need for More Involvement

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The state of medication use in the United States is at a precipitous cliff not unlike what was observed in the late nineteenth and twentieth centuries with the patent medicine debacle in place at that time.<sup>1</sup> As a result of the abuses of patent medicines, the 1906, 1938, and 1962 Food and Drug regulations were instituted. We are at a juncture now with 3 components of drugs use that are alarming to say the least. The 3 components that have led to medication insecurity in the United States are: deficient economic and therapeutic medication outcomes; Internet access to illegal prescription medications without prescriptions; and counterfeit medications prevalence.

#### Deficient Economic and Therapeutic Medication Outcomes

In the past summer, a superbly written assessment of the current state of prescription drug use was published, *Avoidable Costs in US Healthcare*.<sup>2</sup> This edited work by Aitken and Valkova from the IMS Institute for Healthcare Informatics is analytic, comprehensive, and proscriptive. We in the academia need to analyze, digest, and put into play so much to address what the report identifies.

The report suggests that responsible use of medicines can eliminate at least \$213 billion in avoidable costs through addressing 6 key opportunity “levers”<sup>2(p3)</sup>:

- (1) Medication nonadherence, avoidable cost \$105 billion, with a range of \$68 billion to \$146 billion.
- (2) Delayed evidence-based treatment practice, avoidable cost \$39 billion with a range of \$19 billion to \$64 billion,
- (3) Antibiotic misuse, avoidable cost \$35 billion with a range of \$27 billion to \$42 billion,
- (4) Medication errors, avoidable cost \$20 billion, with a range of \$15 billion to \$28 billion,
- (5) Suboptimal generic use, avoidable cost \$12 billion, with a range of \$10 billion to \$13 billion,

- (6) Mismanaged polypharmacy, avoidable cost \$1.3 billion, with a range of \$900 million to \$1.7 billion.

The authors note that in 2012, more than \$2.7 trillion was spent on healthcare in the United States, so this \$213 billion they suggest represents almost 8% of total spending on health care. As they point out, this amount would enable 24 million patients currently uninsured to be covered for health expenses. Consider that about 30 million Americans will still be uninsured, even with the rollout of the Affordable Care Act, this amount is even more significant. The issue of not obtaining prescription medications because of cost, after they have been prescribed by physicians, has been estimated by the National Center for Health Statistics to be 8.3% of all patients in 2010, with 12% of the total being 25-34 years of age, and 4.7% being 65 years or older. Our practicing pharmacists, and future pharmacists now in our colleges and schools, should have addressing these issues as a paramount concern. There are detailed success stories of impacting these problems with structured solutions in the final component of the IMS report.

#### Internet Access to Illegal Prescription Medications

Internet access to prescription medications without prescriptions is an increasing problem within the US and elsewhere with few if any successful solutions in play. One cannot listen to online news shows, or Internet radio sources, without being bombarded by offers from purveyors of these illegal compounds.

The extent of the problem is significant, in a study of illegal Internet access to drugs with narrow therapeutic indices (NTIs); Liang and colleagues<sup>4</sup> with a Google search term of “buy DRUG no prescription” found that 13 of 14 NTI drugs could be obtained without prescriptions from sources not recommended by the National Association of Boards of Pharmacy (NABP). In a study authored by Mazer et al<sup>5</sup> of potential online pharmacy prescription drugs purchase in a large sample of emergency department (ED) patients, 57% of close to 2,000 patients reported awareness of online pharmacies. Approximately 5.4% of the patient sample used such online pharmacies regularly. The authors found that patients on

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multiple medications used the online pharmacies more regularly. This access, which has been available to long and is so easy and affordable, is now a significant problem that must be addressed.

### **Counterfeit Medications Prevalence**

The presence of a counterfeit cancer drug replicating Avastin (bevacizumab) in the US chain of drug distribution was perhaps a wake-up call for how serious the drug counterfeit problem has become in the United States.<sup>6</sup> For a fake cancer drug to be sold and used by unknowing patients is unthinkable. The major source countries of counterfeit drugs are China, Hong Kong, and India. Chaudry and Stumpf also note the virtual “sea of fake online pharmacies.”<sup>6(p192)</sup>

This problem is global; Jackson et al<sup>7</sup> discovered in a study that a total of 5% of Europeans feel they may have received counterfeit medications and 1% feel they definitely have. The authors note: “Although many consumers acknowledge some degree of risk with purchasing medications via the Internet, speed, convenience and cost often prompt these purchases.”<sup>7(p241)</sup>

### **Summary**

Concerted action, proper legislation, and education of patients and families on the falsehood of Internet purchase of prescription drugs is now crucial. There needs to be an increased emphasis on education in health professions schools on the problem and potential for harm incumbent with Internet trafficking of prescription drugs.

There is a desperate need for education and outreach from our faculty and students to numerous community segments to better educate all on the pitfalls of Internet access to prescription medications from unapproved sources.

All in the health professions need to support and encourage the US Food and Drug Administration to continue to pursue identification via electronic means of the presence of counterfeit medications so prevalent in our health system in many forms. The US FDA has used portable handheld devices to identify counterfeit medications and packaging, too. Legislative action by the US Congress is a necessity for many reasons to enable and

empower the FDA to become much more assertive in the oversight of new dangers in the drug use process in the United States.

The identification and illumination of the proper medication-use problems, and opportunities for solving drug-related unintended costs and lack of proper therapeutic outcomes, by the IMS report noted in this paper should be a vibrant and exciting wake-up call to us all that things need to change in our educational offerings to deal with solving these problems that are so prevalent in our medication-use processes.

In my opinion, until and unless there is a focus on providing proper patient care in all types of pharmacies with proper therapeutic and economic outcomes, most of our pharmacy graduates in all settings will come nowhere close to fulfilling their professional responsibilities that we in academia strive to instill in them while they study in our colleges and schools. These pharmacists need to provide patient care that is ever-increasingly outcomes based and focused. The patients we serve deserve much better in outpatient and institutional settings than most of them obtain at present. The problems are evident, but so too are some tangible means to solve these fixable problems.

### **References**

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