

**The Ohio State University
College of Pharmacy**

**First-Year Success Series:
Generation Rx and the Abuse of Medications in a Drug-Taking Society**

Facilitator's Notes

General Approach to the Workshop: This workshop is designed to be discussion-based. Facilitators will interject pertinent information and statistics, but the most important activity relates to the student participants' personal reflection, interaction with their peers in the workshop, and group discussion.

Procedure for Discussion Blocks: For each of the three discussion blocks, ask the student participants to take a few moments to reflect on each question individually. They may feel free to write notes in the workshop booklet if they wish. After self-reflection on the questions, instruct them to discuss the questions in small groups. Finally, conduct a group discussion and ask students to provide input. At this point additional information/statistics from the facilitator may be interjected as well.

PowerPoint Slides: A set of PowerPoint slides is provided to be used in guiding the discussion sessions. These are animated to allow various components to appear when the facilitator is ready. We feel it is very important to maintain the discussion basis for these workshops. Don't get too carried away with the slides or allow them to become the focus of the program!

Workshop Agenda

1. Introduction of Workshop Facilitators

Introduce each workshop facilitator and provide e-mail addresses for follow-up questions. Facilitators may include faculty members as well as students. Some facilitators may lead parts of the workshop discussions; others may mingle among the participants during their small group discussions to provide input or answer questions.

2. Student Participant Introductions

[Note: A maximum of 25 student participants is recommended in order to allow meaningful group discussions.] Ask each participant to introduce him or herself. Instruct the group to pay particular attention to the names of the persons near them, as they will be asked to gather in small groups during

the discussion blocks. Also ask students to provide any comments (if they wish) as to why they are attending this workshop.

3. Facilitator's Introductory Remarks

The title of this workshop relates to a phrase that is being used to describe us, at every age, in America's drug-taking society – "Generation Rx." For example, Greg Critser, in his book entitled *Generation Rx: How Prescription Drugs are Altering American Lives, Minds, and Bodies*¹, contends that each of us lives within a "tribe" in America's "Generation Rx." We have become more and more pharmaceuticalized at every age level. We have come to expect that there is a quick fix for almost any health-related problem. And we are taking prescription and over-the-counter (OTC)² medications at unprecedented rates.

The use of prescription drugs has increased significantly. For example, in 1994 2.1 billion prescription purchases were made in the United States. That number increased to 3.6 billion in 2005, for total sales of over \$200 billion.³ Factors influencing this trend include the general aging of the American population, the introduction of a growing number and types of medications, and direct-to-consumer advertising of pharmaceuticals in the U.S.

These phenomena have positive and negative implications. On the positive side, we are able to treat diseases and relieve symptoms in ways that were unheard of in the past. We are living longer, and in some cases with a better quality of life, than ever before. Certain diseases that were once fatal are now becoming chronic conditions. However, on the negative side, we are experiencing an alarming rate of adverse drug events, and the abuse of prescription and OTC drugs is increasing significantly.

4. First Discussion Block

Why would college students abuse prescription and OTC drugs?

Students often convey the following reasons for the abuse of these medications:

- Students may abuse prescription and OTC drugs recreationally to get "high." They may also use the products to relax or reduce stress. They may use stimulants in order to stay awake or alert (e.g., to study). A recent national study found that approximately 7-

¹ 2005, New York: Houghton Mifflin Co.

² It may be helpful to differentiate between those medications that require a prescription and those which do not. The latter may also be referred to as "over-the-counter" or "OTC."

³ Kaiser Family Foundation (www.kff.org)

8% of college students had used prescription stimulants for non-medical purposes.⁴

- Students may abuse these drugs because they are relatively easy to obtain. Avenues to obtain prescription drugs for non-medical purposes include the family medicine cabinet, friends who may have prescriptions for desired medications, and the Internet.⁵

What types of prescription medications are most prone to abuse?⁶

- Opioids – commonly used to treat pain (e.g., Oxycontin, Vicodin, Percodan, Dilaudid)
- Central nervous system depressants – commonly used to treat anxiety and sleep disorders (e.g., Valium, Xanax, Nembutal, Seconal)
- Stimulants – commonly used to treat sleep disorders (e.g., narcolepsy) and attention deficit hyperactivity disorder (ADHD) (e.g., Dexedrine, Adderall, Ritalin, Concerta)

Would you consider the abuse of prescription or OTC medications to be a safe alternative to using illicit street drugs?

“The Partnership Attitude Tracking Study (PATS): Teens in Grades 7 Through 12, 2005” reported the following with regard to teen attitudes about prescription medicine abuse:

- 56% agreed strongly or somewhat that prescription drugs are easier to get than illegal drugs.
- 40% agreed strongly or somewhat that prescription drugs, even if they are not prescribed by a doctor, are much safer than illegal drugs.
- 31% agreed strongly or somewhat that there is nothing wrong with using prescription drugs without a doctor’s prescription once in a while.

⁴ McCabe, *et al*, Non-medical use of prescription stimulants among US college students: Prevalence and correlates from a national study. *Addiction*, 2005, 99:96-106.

Teter, *et al*, Illicit use of specific prescription stimulants among college students: Prevalence, motives, and routes of administration. *Pharmacotherapy*, 2006, 26(10):1501-1510.

⁵ This may present an opportunity to discuss the potential dangers in obtaining prescription medications via the Internet. For example, the National Center on Addiction and Substance Abuse at Columbia University (“You’ve Got Drugs!” V: *Prescription Drug Pushers on the Internet: 2008 Update*) identified 365 web sites offering controlled prescription drugs. Of the sites which sell controlled prescription drugs on the Internet, 85% did not require a prescription. Only two of these 365 sites were certified by U.S. Boards of Pharmacy. Obtaining pharmaceuticals in this manner often circumvents U.S. regulatory control. Medical evaluation is fundamental to rationale drug therapy, and (conservatively) 10% of pharmaceutical products worldwide are known to be counterfeit.

⁶ See Office of National Drug Control Policy (www.whitehousedrugpolicy.gov)

- 29% agreed strongly or somewhat that prescription pain relievers, even if they are not prescribed by a doctor, are not addictive.

5. Second Discussion Block

What types of over-the-counter medications are most prone to abuse?

- Students have mentioned pain relievers, sleep aids, diet aids, laxatives, cough and cold preparations, and stimulants (e.g., caffeine).
- Of particular concern is the precipitously rising abuse of dextromethorphan, a cough suppressant found in products like Robitussin, Drixoral, Vicks 44D, and Coricidin HBP. If taken in higher than recommended doses, this drug produces euphoric or hallucinogenic effects. One recent study found that abuse of dextromethorphan by 9-17 year olds increased ten-fold between 1999 and 2004.⁷ The Substance Abuse and Mental Health Services Administration (SAMHSA) estimates that 3.1 million young people age 12-25 (5.3%) have used non-prescription cough and cold medications to get high at least once in their lifetime; one million have done so in the past year (2008).

What are the consequences of abusing prescription or OTC medications?

- Health effects relating to the pharmacological actions or side effects of the drug in the body (e.g., respirator depression, nausea, constipation, addiction, unconsciousness with opioids; irritability, anxiousness, paranoia, addiction, respiratory failure, stroke, seizures, reduced appetite, heart failure for stimulants; lowered blood pressure, confusion, fatigue, addiction, respiratory depression, depression, gastrointestinal disturbances, dizziness, memory loss for depressants).
- Physical harm due to accidents, sexual or physical abuse, organ damage.
- Social/emotional effects involving changes in relationships, depression, isolation, etc.
- Legal effects due to the fact that it is against federal laws to obtain prescription medications without a prescription.

6. Third Discussion Block

⁷ Bryner, *et al*, Dextromethorphan Abuse in Adolescence. *Archives of Pediatrics & Adolescent Medicine*, 2007;160:1217-1222.

Should we be concerned about medication-related problems (or “adverse drug events”) if we are using drugs for legitimate purposes?

Yes! The Institute of Medicine estimates that (very conservatively) medications harm at least 1.5 million people per year in the United States.⁸ Many other reports have also demonstrated that medication-related problems constitute a staggering burden in our healthcare system in terms of health outcomes and financial costs. In fact, studies indicate that we spend more in our healthcare system on drug-related problems than on drug products. Other significant statistics include the following:

- U.S. deaths due to unintentional drug poisoning increased 68% from 1999 to 2004 to become the second leading cause of accidental death.⁹
- U.S. deaths due to medication errors increased 2.57 times between 1983 and 1993.¹⁰
- Adverse drug reactions constitute the fourth to sixth leading cause of death in U.S. hospitals.¹¹
- It was estimated that we spent over \$177 billion on drug-related problems in the community sector of our healthcare system alone in 2000.¹²
- A recent study of over 1200 patients in four outpatient clinics found that 25% of these patients experienced adverse drug events.¹³

What are some general guidelines that you should consider as a health-care consumer for using medications safely?

The workshop booklet includes a reference to a publication from the U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality (*Your Medicine: Play It Safe*, AHRQ Pub. no. 03-0019). This publication can be downloaded at www.ahrq.gov and contains many helpful hints for consumers relating to medication safety. It outlines “4 Ways To Play It Safe With Medicines”:

⁸ Institute of Medicine. Preventing medication errors: Quality chasm series. Washington, DC: National Academy Press, 2006.

⁹ Centers for Disease Control. Unintentional poisoning deaths – United States, 1999-2004. *MMWR Weekly*, 2007;56(05):93-96.

¹⁰ Phillips, *et al.* Increase in US medication-error deaths between 1983 and 1993. *The Lancet*, 1998;351:643-644.

¹¹ Lazarou, *et al.* Incidence of adverse drug reactions in hospitalized patients. *Journal of the American Pharmacists Association*, 1998;279(15):1200-1205.

¹² Ernst & Grizzle. Drug-related morbidity and mortality: Updating the cost-of-illness model. *Journal of the American Pharmacists Association*, 2001;41(2):192-199.

¹³ Gandhi, *et al.* Adverse drug events in ambulatory care. *New England Journal of Medicine*, 2003;348(16):1556-1564.

1. Give your healthcare team important information
2. Get the facts about your medicines
3. Stay with your treatment plan
4. Keep a record of your medicines

Student participants and facilitators may also suggest many different ideas on safe medication practices. For example:

- Take an active role in your medical care.
- Read medicine labels carefully and take only recommended doses as directed.
- Use the same pharmacy when purchasing prescription and over-the-counter medications so that the pharmacist will have a complete record of your drug therapy.
- Use aids (e.g., daily pill boxes) to help you remember to take your medication regularly.
- Store medications in a safe, dry, cool place.
- Be aware that prescription drugs and over-the-counter products can interact in ways that may be harmful (e.g., they may contain similar active ingredients or ingredients that produce a negative interaction). Talk to your pharmacist if you have questions.
- Don't use other people's prescription drugs.
- Don't crush, chew or cut medications unless directed to do so.
- Keep your medications in their original container.
- Turn on a light and read drug labels before taking medications at night.
- Be thoughtful in how you model medication-taking behaviors to children.

7. Resources for Students

The Generation Rx Initiative Website (www.pharmacy.ohio-state.edu/outreach/generation-rx) provides resources for students, teachers and parents relating to medication safety.

Ohio State's Counseling & Consultation Services provides free confidential professional counseling service for students. This includes substance abuse counseling.

8. Reflection Papers and Evaluations

Ask student participants to complete the FYE reflection papers and submit the white copy, keeping the yellow copy for their records.

Also ask students to complete the one-page evaluation instrument for this workshop so that we might continually improve the program.

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