

Introduction:

The misuse and abuse of controlled medications by young people is an increasing problem in the United States (U.S.) with annual rates for nonmedical use approaching 8% for adolescents of 12-17 years (SAMHSA, 2010). Approximately 5% of 12th graders reported using OxyContin® and 8% reported Vicodin® in the previous year (Johnston, et al 2010). It is not only pain medications that are abused, stimulants such as Ritalin® and Adderall® are also misused, with approximately 3% of 12th graders using Ritalin® and 6% using Adderall®. Focusing on 12- to 17 year olds is important because it is the age when controlled medications often are prescribed and concomitantly, when users are least likely to be aware of legal and health risks associated with their diversion and/or nonmedical use.

In this testimony, the term “nonmedical use” is used to mean the use of a controlled (schedule CII-CV) medication in a manner unintended by the prescriber. Typically these medications fall into one of several drug classes including: pain, stimulant, anti-anxiety and sleep. And as we know, many of the medications in these classes carry an increased risk of abuse and addiction. Likewise, when diversion of controlled medications is used here, it refers to the exchange of controlled medications that leads to their use by people other those intended by the prescribing clinician or the use under conditions associated with doctor shopping/ misrepresentation of medical problems or by theft (Boyd et al 2007).

Availability and Diversion:

Over the past 15 years, prescriptions for controlled medication have nearly doubled in adolescent and young adult U.S. populations. Fortuna and colleagues (2010) reported that between 1994 and 2007, controlled medications were prescribed in a greater number of doctor visits (and in increasing proportions). For adolescents, in 1994 approximately 6% of the doctor’s visits resulted in a prescription for a controlled medication; however, by 2007 it was 11% of the visits. This was also true for young adults, in 1994 approximately 8% of the visits resulted in a prescription for a controlled medication and by 2007 it almost doubled to approximately 16%. This increase was seen in male and female patients, in office and emergency visits, and in injury related as well as non-injury visits. Fortuna and colleagues reported that the most commonly prescribed were pain medications.

National and regional data show that most nonmedical users get their pills from peers and/or parents and siblings (Boyd, et al, 2007; McCabe et al, 2004; SAMHSA, 2010). Our data show that although most adolescents use their medications correctly, some adolescents divert their own medications to friends and family members (Boyd et al 2007). Approximately 10% of adolescents have diverted pain medications and 15% stimulant medications. Like other researchers (Daniel et al 2003), we found that girls, when compared to boys, reported higher lifetime rates for giving or loaning medications (27.5% vs. 17.4%) and they were significantly more likely to divert to their girlfriends (64.0% vs. 21.2%). In contrast, boys were more likely to divert their controlled medications to their male friends (45.5% vs. 25.6%). Approximately 10% divert their pills to their parents. Overall, 13% of adolescents in our most current studies divert their controlled medicines and approximately 16% of adolescents with legal prescriptions are asked to divert, it is usually stimulants that are requested.

Case Examples:

Motives to divert as well as to use diverted medications are wide ranging and it should not be assumed that all motives involve “getting high” (Boyd & McCabe, 2008; Boyd et al 2009). Indeed, motives are one of the reasons that nonmedical use of controlled medications is so difficult to prevent. Below are several scenarios that come from our research, with each scenario addressing a specific type of diversion.

CASE 1: A 16-year-old teen, an honor student, is planning to attend “Homecoming” with her new boyfriend. Four hours before the event, she develops a severe migraine headache. In tears, she asks her mother for help. Her mother gives her a hydrocodone tablet (left over from her own surgery). The teen went to the event and “had a great time.”

CASE 2: A 15 year old at an elite high school is having trouble getting his school work done and he wants to do well on his final exams. His best friend has a prescription for a stimulant to treat ADHD and his friend keeps the pill bottle on his bedroom dresser. When his friend leaves the bedroom, the 15 year old takes several of the Adderall®, justifying it by saying “everyone uses them to study”.

CASE 3: A young man works as a line-cook in a restaurant. During work, he slices-off the upper part of his finger. The manager takes the young man to the nearest ED; on the drive to the hospital the manager gives him a Vicodin® saying, “you will be waiting a long time, you will need this”. The young man takes it. The ED surgeon gives him a prescription for Vicodin® and tells him to see his primary care provider in one week.

CASE 4: A high school girl is given an oxycodone tablet by her girl friend; she wants to experiment to see “what it does”. She crushes the pill and snorts it and finds herself continuing to purchase the “Oxy” from a friend when she wants to party.

These cases represent what research has shown about diversion and all of the scenarios represent illegal behavior: 1) Diversion usually occurs among family and friends (Boyd, et al 2007; McCabe et al 2004); 2) It usually involves one primary prescription (SAMHSA, 2006); 3) Diverted medicine is often used for the purpose for which it was developed (e.g. pain medicines to treat pain) (Boyd, et al 2006^a; Boyd et al 2006^b); and 4) controlled medications are readily available to the adolescent because they are neither stored properly nor are they disposed of in a timely manner. And finally, for the adolescents such as the girl in the 4th case, the risks are even higher. These young people are using for recreational purposes, mixing the pills with alcohol and seeking more and more pills (Boyd, et al 2009; McCabe et al, 2007) and the adolescents sensation-seek most often develop other problem behaviors including drug abuse (Boyd 2009; McCabe et al, 2007).

Conclusion:

Most social scientists end their papers by noting more research is needed to understand diversion and nonmedical use. The national studies funded by the NIH do not ask detailed enough questions about diversion. We glean little from them. And while the regional studies provide greater details, they lack generalizability. Researchers also conclude that the problem lies with

doctors, dentists and other prescribers. Failing to adequately educate patients and their parents, as well as evidence of over-prescribing are issues that need further professional attention. However, policy makers also have a role. Recently, a new Federal Regulation (21CFR1302) was established, mandating among other things, that prescription bottles that contain controlled medications be clearly labeled with a symbol designating its schedule (e.g. CII-CIV) along with a special sealing requirement. This is an important first step but it is not enough. The bottles should include information about proper storage, proper disposal and the risks associated with allowing others to use the medication.

If all it took was symbols on bottles or lecturing adolescents, the problems of nonmedical use and diversion could be solved. However, educating adolescents about the dangers of these medications is unlikely to be effective because they see too many of their friends with prescriptions. The solution to this problem lies in the recognition that it is far more complex than street drug use and involves all aspects of our society – our pharmaceutical companies, our health care providers, our families, our young people and equally as important, our policy makers.

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