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*“Warning: The Growing Danger of Prescription Drug Diversion”*

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Chairman Bono-Mack, Ranking Member Butterfield, Members of the Subcommittee, other distinguished guests and members of the audience: thank you for highlighting the seemingly intractable problem of prescription drug abuse in the United States— and for the opportunity for me to lend my voice to the others invited here today.

Today I testify on the problem as it manifests among our nation's youth, college age and even younger. And I come at this issue from my perspective as a researcher at the University of Maryland and the Treatment Research Institute in Philadelphia. Since 2003, with my dedicated staff, I have led the College Life Study, a NIDA-funded investigation of the health risk behaviors, including drinking and drug use, of more than 1200 young adults who were originally enrolled as college students. For eight years, on an annual basis, we have gathered a large amount of data from this cohort of young adults, whether or not they continue attending college. These data tell a compelling story that is consistent with the work of several others in our field.

The first major finding is that nonmedical prescription drug use among our nation's youth is a symptom of a much larger problem. It does not occur in isolation—individuals who use prescription drugs nonmedically are very likely to be heavy drinkers and/or users of illicit drugs. Although the prescription drug problem receives a lot of visibility because of some unique features, it is tightly linked to the larger drug abuse problem in the United States. We can and must deal with this “symptom”—because it is real, potentially dangerous, and threatens the futures of the youth of this nation. But even if policy makers, or practitioners, researchers, parents, or others—are successful in alleviating this manifestation of the problem, we must also address the root issue or in five years you will be calling another hearing to discuss a new manifestation of the same problem.

Consider the following findings from the College Life Study:

- By the fourth year of college, 13% of college students used a prescription tranquilizer nonmedically, that is, without having a legitimate prescription.
- By the same point, 23% had used prescription analgesics - again, non-medically;
- And, finally 30% nonmedically used prescription stimulants.

Importantly, the overlap with other drug use was significant. In the past year prior to being assessed, 88% of nonmedical stimulant users had used marijuana, 30% had used hallucinogens, and 15% had used cocaine.

Other findings from the College Life study show that nonmedical use is fueled by sharing or selling of prescription medications, usually between friends or acquaintances. More than one third of students in our study who had been prescribed any type of psychoactive medication diverted it to someone else at least once in their lifetime. The most commonly diverted class of prescription medications on college campuses are prescription stimulants, medications prescribed for ADHD, such as Adderall<sup>®</sup>, Ritalin<sup>®</sup> and Concerta<sup>®</sup>, with an estimated 61% of students with ADHD in our study diverting their medications to another person.

Let me sharpen the focus on this particular aspect of this problem—nonmedical use of prescription stimulants. We know that these drugs are widely available on college campuses for nonmedical use, owing in part to their ability to increase wakefulness. This particular class of drugs is attractive to college students with high task demands, and especially to those experiencing academic difficulties. There is a popular assumption—widely believed by the young adults themselves, and sometimes reinforced by the media—that taking stimulants non-medically confers an “academic edge,” and is therefore beneficial for passing exams and writing

papers. With headlines referencing “smart drugs” and “smart doping,” the popular media have perpetuated the general notion that nonmedical use of prescription stimulants increases academic performance and that stimulants are used nonmedically by the best students.

Scientific evidence tells us quite the opposite, however. Nonmedical prescription stimulant use is associated with lower academic performance; it is not primarily the academically successful students who use prescription stimulants nonmedically, but the academically unsuccessful students.

Compared to non-users, our data show that nonmedical users of prescription drugs are more likely to meet criteria for dependence on alcohol and marijuana, skip class more frequently, and spend less time studying. And digging even deeper to the root of this issue, we see that these academic performance problems are linked to heavy drinking and marijuana use. In summary, what the research shows is that nonmedical prescription stimulant use is an unsuccessful shortcut—an attempt to compensate for declining academic performance—and is really a “red flag” for a underlying alcohol and/or drug problem in a college student.

Although stimulant medications—when used safely under proper medical supervision for the treatment of ADHD—can be instrumental in achieving therapeutic goals related to academic performance, there is no basis for making the assumption that similar benefits are attained through nonmedical use.

It is necessary to dispel the powerful myths that parents, students and the media use to rationalize the nonmedical use of prescription stimulants. Prescribing physicians and college health centers need to emphasize why this behavior should be of concern, rather than a benign or normative behavior. In fact, the non-medical use of prescription stimulants should trigger an

assessment for possible underlying drug use, academic problems, and possible mental health issues.

Table 1 of my supplementary materials shows the relationship between non-medical prescription stimulant use and alcohol/illicit drug use—data taken from 15 separate studies. On the point of prescription drug diversion, research findings consistently show that individuals who divert prescription drugs share characteristics with individuals who use prescription drugs for nonmedical purposes, and often times are nonmedical users themselves. Again, we are not dealing with separate issues—they are tightly linked to one another and represent similar problems.

What can policy makers do to address this “symptom” of the issue? The single best thing is to help tighten the “chain of custody” that ultimately governs supply of prescription drugs. Putting better prescription monitoring programs in place is one critical thing policy makers can do.

But physicians also have roles to play—to reform their dosing practices, and be vigilant about underlying alcohol and drug issues when they prescribe psychoactive drugs to their adolescent and young adult patients.

Moreover, patients and parents need to do their part in tightening the supply chain by curtailing sharing of prescription medications among adults and becoming more aware of the whereabouts of leftover medication.

However, because the prescription drug problem has complicated the landscape of existing drug threats to our nation’s youth and young adults, we need to redouble our efforts to develop innovative solutions to the public health problem of drug abuse and addiction. What

specific strategies should be proposed? Today, I recommend two things related to prevention and early intervention:

1. Modernize the nation's infrastructure for early detection to address drug problems in youth and young adults. Decades of research tell us that we can identify those who are at highest-risk for drug problems, just like knowing who is at risk for other chronic health conditions. Youth who develop drug problems share certain identifiable characteristics. With an approach that involves standardized assessments, early intervention, and promotes teamwork between parents, physicians and educators, we can put these young people back on track to fulfill their potential. To this end, NIH research has yielded valuable information about the risk and resiliency factors involved in the various stages of youth drug involvement, the interplay between genetics and environment on the escalation of drug problems, and the natural history and course of addiction. Finding effective solutions to this enormous threat to public health will require continued funding for NIH research.

2. Connect the dots between drug use and academic problems. The link between drug use and educational outcomes cannot be ignored any longer. Making this connection loud and clear will get the attention of parents who want more than anything else to see their child succeed. Tacit approval by parents and students of underage drinking as normative and college as a "five year party", especially when there are stimulant drugs as a last-resort pathway to "success", is a completely misguided but, regrettably, an all too-common notion. Parents must be empowered to recognize a myth when they see one and respond with appropriate communication, emphasizing that attending class, completing assignments and using the time in college constructively is the best strategy to achieve superior academic performance.

Similarly, we must engage the leaders of our nation's education system who are concerned about the high school dropout crisis and less than optimal college graduation rates. With full recognition that academic problems can sometimes place a child at risk for drug use, we must also recognize the very real and contributory role of drug problems to poor academic achievement. Sustaining our economy and navigating future challenges will require a clear mind and sharp focus, which is inconsistent with underage and excessive drinking, and illicit and non-medical use of prescription drugs, among our nation's secondary school and college students.

Again, I thank the Chair, ranking member, and all other members of this Subcommittee for shedding light on this continuing public health problem and allowing me to contribute to the discussion on solutions.