U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEE ON RESEARCH

HEARING CHARTER

Methamphetamine Addiction: Using Science to Explore Solutions

Wednesday, September 18, 2013
10:00 a.m. - 12:00 p.m.
2318 Rayburn House Office Building

Purpose

On Wednesday, September 18th, the Research and Technology Subcommittee will hold a hearing to understand the methamphetamine (commonly known as "meth") addiction problem, and how science can inform and provide possible solutions. Witnesses will give a general background to this growing problem, and then discuss the latest research on meth addiction including prospective technologies to prevent large-scale unauthorized purchases of pseudoephedrine (PSE). They will also discuss the latest social science research to inform both prevention and treatment for meth addiction. The Science, Space, and Technology Committee has a legislative and hearing record over several Congresses on this problem, resulting in the Methamphetamine Remediation Research Act of 2007 (P.L. 110-143).

Witnesses

First Sergeant Niki Crawford, Indiana State Police, Meth Suppression Section Commander

Dr. Edythe London, The Thomas and Katherine Pike Professor of Addiction Studies, Director of the UCLA Laboratory of Molecular Neuroimaging at the David Geffen School of Medicine, University of California at Los Angeles

Dr. Jane Maxwell, Senior Research Scientist, School of Social Work, University of Texas at Austin

Dr. T. Celeste Napier, Professor, Departments of Pharmacology and Psychiatry and Director, Center for Compulsive Behavior and Addiction, Rush University Medical Center

Hearing Overview

Methamphetamine (or "meth") is a highly addictive stimulant that affects the central nervous system. Meth can be easily made in small clandestine laboratories, with relatively inexpensive over-the-counter ingredients, making it a drug with high potential for widespread abuse. Meth is a Schedule II stimulant, meaning that it has high potential for abuse and may lead to severe psychological or physical dependence. Meth is available only through a prescription. While it has some limited medical use, the dosage for meth used in medical treatments is much lower than those typically used by drug abusers.

The method of meth production depends primarily on the availability of the chemical ingredients and creating a laboratory (commonly referred to as "meth lab") to produce it. The meth "cooking" process continues to adapt as producers find ways to work around the constraints in getting the necessary chemical ingredients. Meth is relatively easy to make today, and individuals with little formal knowledge of chemistry, laboratory skills or equipment can start a meth lab. The number of meth labs has increased significantly, due to growth in the "one pot" or "shake and bake" method in which it can be manufactured in a small containers.

Scientific research to understand the relation between the brain and meth would be informative towards treatment. Long-term effects of meth abuse include addiction, which is a chronic relapsing disease; this disease is characterized by compulsive drug seeking and use, accompanied by changes in brain function and chemistry. Other symptoms include insomnia, mood disturbances, violent behavior, and psychotic episodes including hallucinations and delusions.[1]

National Institute for Drug Abuse (NIDA) funded research aims to apply the basic science of meth research to develop new treatments in addition to enhancing existing approaches, with the goal of bringing these treatments to the communities that need them. Chronic meth abuse has been shown to significantly change brain chemistry. Medical imaging studies have shown significant changes in the neurological areas responsible for motor skills and verbal learning. These changes are also the cause of many of the emotional and memory problems observed in meth abusers.[2] Various research approaches to understanding the role of meth in brain addiction are ongoing. In 2012, NIDA spent $64.5M on meth related research, while the overall NIH budget for meth research was $68.4M.

Meth abuse leads to devastating medical and social consequences, infusing whole communities with new waves of crime, unemployment, child neglect or abuse, increased incidences of infectious diseases (e.g., HIV and hepatitis) due to the re-use of contaminated syringes and needles, and other negative social consequences. Children raised in households where meth labs are operated are at increased risk to physical and sexual abuse by their own family, or other adults. In addition, children exposed to residences with meth labs increase the likelihood of exposure to toxic chemicals and contaminated food; they may also inhale the secondhand smoke of adults who are smoking meth. During a four-year period from 2007 to 2011, the state of Tennessee spent over $70 million to place 1,625 children removed from meth lab homes into foster care. [3]

Scientific research could also better inform law enforcement on how to clean up the hazardous materials found in meth labs that may result in propane tank explosions. In addition to the negative medical and social consequence, meth labs also pose a serious health risk to law enforcement officers who come across or respond to them. Since 2002, the Drug Enforcement Agency (DEA) has spent over $142 million to help state and local agencies with meth lab cleanup.

[1] Meth Drug Fact Sheet found at http://www.justice.gov/dea/druginfo/factsheets.shtml
[2] http://www.drugabuse.gov/publications/research-reports/methamphetamine-abuse-addiction
[3] http://www.gao.gov/products/GAO-13-204

Recent Legislation

In 2005, Congress passed *The Combat Methamphetamine Epidemic Act* (CMEA) which requires retailers of non-prescription products containing pseudoephedrine (PSE) and associated derivatives to place these products behind the counter or in a secure location. Furthermore, consumers must show identification and sign into a logbook for each purchase. However, these restrictions led to a rise in the use of *smurfing*, which refers to the practice of hiring individuals to purchase PSE in multiple locations in order to exceed legal purchase limits. Some state legislatures have passed even more stringent laws to regulate the sale of PSE. In particular, Mississippi, Oregon and 63 Missouri cities and counties now only allow the obtaining of PSE by prescription only. Comparisons between those states that have legislatively instituted PSE blocking and tracking systems versus those states that have returned PSE to a prescription-only drug are now underway.

Congress then passed *The Methamphetamine Production Prevention Act* in 2008 to enable electronic data collection. This act allows retailers to use an electronic logbook to comply with the requirements of CMEA. The act aimed to monitor the sale of over-the-counter PSE related medication, and to stop purchases by individuals who exceeded the federal limits. Thirty states have now enacted laws to implement real-time stop sales systems, in an effort to move to a nationwide electronic system to enforce illegal purchases of PSE product; such a system allows retailers to block illegal sales that exceed daily and monthly limits. The National Precursor Log Exchange (NPLEx) is a real-time electronic logging system used by pharmacies and law enforcement in 29 of the 30 states to track sales of over-the-counter (OTC) cold and allergy medications containing precursors to the illegal drug, methamphetamine. According to a 2013 GAO report, the NPLEx system was used to block the sale of more than 576,000 boxes and 1,412,000 grams of PSE products in 17 states last year.[4]

The Methamphetamine Remediation Research Act of 2007 provided for a research program for the remediation of closed meth production laboratories. This act also required the Environmental Protection Agency (EPA) to develop guidelines for decontaminating and remediating meth labs, based on the best currently available research.

Issues for Consideration

This hearing aims to build on the July 31st, 2013 "Frontiers of Human Brain Research" Research and Technology Subcommittee Hearing by discussing the brain's role in meth addiction. The hearing also will emphasize the importance of inter-disciplinary research towards understanding the meth addiction problem. In addition, the role and application of sound social science research to understand the spread of this drug, in addition to informing public policy to address this problem, will be discussed by the witnesses.

[4] http://www.gao.gov/products/GAO-13-204