

Agency for Toxic Substances & Disease Registry/American College of Medical Toxicology's
Chemical Weapons of Convenience/Opportunity Course

University of Washington Huskies Union Building (HUB) Auditorium

Friday September 16th, 2005; 8:00 a.m. – 4:00 p.m.

Overview:

The horrible tragedy, which resulted when terrorist crashed a hijacked commercial airliner into the World Trade Center on September 11, 2001, demonstrated the lethal potential and our tremendous vulnerability to weapons of convenience or opportunity (WOC/O). Many now believe that terrorist attacks in the US are more likely to involve WOC/O than conventional nuclear, biological or chemical warfare agents. This one day course provides an awareness-level training of the potential medical and psychological consequences of chemical WOC/O. WOC/O may be toxic industrial chemicals (TICs), toxic industrial materials (TIMs), agricultural chemicals or other locally stored chemicals, which may be used by terrorists against our community. An understanding of the hazards and vulnerabilities to WOC/O agents is essential for adequate emergency preparedness. Conventional nuclear, biological or chemical warfare agents will not be included in this course.

Sponsors:

1. [American College of Medical Toxicology \(ACMT\)](#)



2. [Agency for Toxic Substances and Disease Registry \(ATSDR\)](#)



3. [Washington Poison Center \(WPC\)](#)



4. [Emergency Medicine Department, Madigan Army Medical Center](#)



5. [Environmental Protection Agency \(EPA\)](#)



6. [Department of Health & Human Services](#)



Course Objectives:

By attending this one day course the participant will be able to:

- * Describe the potential routes of exposures to WOC/O.
- * Describe the major medical effects of WOC/O.
- * Describe the psychological impact of toxic and perceived WOC/O exposures.

- * Describe the role of regional poison centers and medical toxicologists in WOC/O and hazmat incidents.
- * Use EPA Risk Management Plan (RMP) data to assess local chemical hazards and vulnerabilities.

Target Audience:

The information presented will be valuable to professionals involved in chemical terrorism preparation and response including emergency response and on scene coordinators, first responders (fire, EMT, HazMat, paramedic team members), first receivers (emergency department care providers), hospital emergency preparedness staff, occupational medicine care providers, public health officials, law enforcement agencies, administrative agencies, toxicologists and industrial hygienists.

Course Agenda:

8:00-8:30 **Registration**

8:30-8:45 **Welcome & Opening Remarks**

William O Robertson, MD

8:45-9:00 **Introduction**

Thomas G. Martin, MD, MPH, FACMT, FACEP, FAACT

An introduction of the concepts of Weapons of Convenience/Opportunity (WOC/O), TICs and TIMs, the sponsoring organizations and speakers for this session. An overview of the role of poison centers and medical toxicologists in WOC/O and hazmat incidents.

9:00-9:30 **Assessing Hazards and Vulnerability to WOC/O in Your Community**

Thomas G. Martin, MD, MPH, FACMT, FACEP, FAACT

This talk will discuss the use of US EPA mandated SARA Title III Tier I & II reports and Risk Management Plans (RMP) with Off-site Consequence Assessment (OCA) of worse and alternate (more likely) case scenarios in emergency preparedness for industry, communities and vulnerable receptacles (schools, day care, nursing homes, hospitals, etc.)

9:30-10:10 **Toxic Warfare: Looking Beyond Conventional Chemical Weapons**

William Hurley, MD

This talk will provide an overview of toxic warfare, describe emerging “less than lethal” technologies, and discuss current hypotheses regarding the 2002 Moscow Theatre event.

10:10-10:30 Break

10:30-11:10 **Toxic Gases in your Community**

Major Melissa L. Givens, MD

Chemical compounds are produced in massive quantities as part of America's industrial complex. Many of these compounds are amenable to use as large scale terrorist weapons. This talk will address a number of chemicals, such as phosgene, chlorine, and anhydrous ammonia, which can be disseminated as inhalational threats. Their manifestations, treatment, and sources in the community will be discussed.

11:10-11:50 Why Are Cyanide and Fumigants So Worrisome

Suzan S. Mazor, MD

Of the numerous poisons that impair cellular respiration, cyanide is probably the most likely to be used in a chemical terrorism event, given its availability and the ease with which it can be generated. Cyanide and fumigants such as methyl bromide, sulfuryl fluoride, chloropicrin and the phosphides are among the most toxic TICs.

11:50-1:00 Lunch

1:00-1:40 Food and Water as Vehicles for WOC/O Attacks

Major Melissa L. Givens, MD

This presentation will cover the vulnerability of the food and water supply as a vehicle for chemical terrorism. Specific groups of toxicants such as solvents, pesticides and natural toxins and their characteristics that make them potential toxic threats when consumed will be discussed.

1:40-2:20 Psychological Impact of WOC/O Attacks

William Hurley, MD

Analysis of previous incidents demonstrates that large numbers of patients with psychological distress will impact the emergency response and potentially overwhelm the health care system. It is often difficult to differentiate between symptoms due to psychological harm from those due to physical harm. This goal of this presentation is to provide insight into individual and mass psychological responses to terrorist incidents.

2:20-2:40 Break

2:40-3:20 Terrorism by Fear and Uncertainty

Suzan S. Mazor, MD

This talk will cover the clinical presentations of individuals or groups exposed to agents with long latency (e.g. metals). The toxicity of metals such as thallium and the organomercurials, and of halogenated hydrocarbons like PCBs, PBBs and dioxins, will be discussed with particular reference to how poisoning with these agents presents and how delay in symptom onset complicates response to potential incidents of toxic terrorism.

3:20-4:00 Toxic Caustics as WOC/O

Thomas G. Martin, MD, MPH, FACMT, FACEP, FAACT

The toxic effects of caustic exposures are usually the result of unintentional or accidental exposures. This will cover the use of caustic and the special group of "toxic caustics" as WOC/O against key governmental or political individuals in the community as well as a mass casualty threat.

Cost:

No charge to register.

Online Registration:

Online Registration will be on a first come first serve basis and will close when the maximum room occupancy is reached.

Venue:

University of Washington Huskies Union Building (HUB) Auditorium: Capacity 472

Maps, Driving Directions, Parking and Bus Info:

Main Campus Map: <http://www.washington.edu/home/maps/?HUB>

North Central Campus Map: <http://www.washington.edu/home/maps/northcentral.html?HUB>

Parking space has been reserved in the Central Plaza Parking Garage under “Chemical Weapons”, although overflow parking in other lots may be necessary. Driving directions from [North](#) or [South](#) on I5 or from [East](#) on Rt. 520: <http://www.washington.edu/admin/parking/directions/>

Bus Routes to UW: http://www.washington.edu/upass/getting_here/routes.html

Course Planning Committee:

Thomas G. Martin, MD, MPH^{1,2,3}; Captain Andrew C. Stevermer⁶; Jeffry Rodin⁵, Gregory Thomas², William O. Robertson, MD³

About the Agency for Toxic Substances and Disease Registry (ATSDR)/American College of Medical Toxicology (ACMT) Network

ACMT is the major professional (nonprofit) organization of physicians specializing in medical toxicology in the United States. In 1999 ACMT entered into a 5-year cooperative agreement with ATSDR under the auspices of Program Announcement 99081: Program to Build Capacity to Conduct Environmental Health Promotion Activities. This agreement was designed, in part, to enhance educational outreach to health care professionals on issues pertaining to environmental toxicology. Recognizing the urgent need to improve the capacity of health professionals and public health officials to respond knowledgeably and effectively to chemical terrorism and related mass chemical exposure, the ACMT – ATSDR partnership has considerably expanded during the past year. A national network now links medical toxicologists across the country with the 10 ATSDR regional offices. As part of this growing partnership, ACMT has organized this intensive one-day training course on the medical and psychological consequences from chemical terrorism and mass chemical exposures to weapons of convenience/ opportunity.

Speakers:

Major Melissa L. Givens, MD

Clinical Assistant Professor UWSOM, Emergency Department Attending Physician & Medical Toxicology Consultant Madigan Army Medical Center

William Hurley, MD, FACEP

Associate Director, Washington Poison Center; Emergency Department Attending Physician, Physician Educator & Medical Toxicology Consultant: St. Peter’s Hospital, Olympia, WA.

Thomas G. Martin, MD, MPH, FACMT, FACEP, FAACT
Associate Professor UWSOM; Director: UW-TOX (medical toxicology service); Associate
Medical Director: Washington Poison Center; Consultant: NW Pediatric Environmental Health
Specialty Unit

Suzan S. Mazor, MD
Assistant Professor UWSOM; Associate Medical Director, Washington Poison Center; Emergency
Department Attending Physician & Medical Toxicology Consultant, Children's Regional Hospital
and Medical Center; Consultant: NW Pediatric Environmental Health Specialty Unit

William O. Robertson, MD
Emeritus Professor of Pediatrics UWSOM; Director, Washington Poison Center; Attending
Physician & Medical Toxicology Consultant, Children's Regional Hospital and Medical Center;
Consultant: NW Pediatric Environmental Health Specialty Unit

Revised 8/19/2005