



Biographical

Michael Gray is the CEO of Actus Analytical, Inc., which develops spectroscopy solutions for public safety compliance, illicit drug detection, agricultural productivity and other applications. Nancy Gray has spent the bulk of her adult life – and the Gray's 32 years of marriage – dedicated to the loving care of her family and has now joined with Michael in support of Actus Analytical.

The Grays are the parents of Declan Gray, 25, and Amanda Gray, who was killed by a poisoning of straight Fentanyl on January 11, 2018 at the age of 24. The Gray family battled with acute mental illness throughout Amanda's life, and her intermittent substance abuse in the last 2 years before her passing.

Michael and Nancy founded The Actus Foundation, a 501(c)(3) charitable organization, in 2018. The Foundation advocates treating the *entirety* of the illicit drug death epidemic in America, including the largely forgotten constituency of *intermittent* users. Most notable are the acutely mentally ill, who abuse opioids or other drugs (prescription and non-prescription) in a search for symptom relief from tragically under-treated diseases.

The introduction of Synthetic Opioid Chemicals (a.k.a. Fentanyl) into the illicit drug supply stream is nothing less than a *paradigm shift*¹ to the decades-long "Opioid Crisis" in the USA. This means all aspects of illicit drug use must be considered to save lives, since any single instance of illicit opioid use may lead to death. The time to see the threat as related only to "addicts" and "overdose" is long past; indeed, it is the old paradigm.

Michael is a popular speaker, offering unique analyses and suggestions for creative solutions to a new problem, i.e., an old problem with a recently altered *paradigm*¹. Michael walks participants through the murky world of the drug problem clarifying the threat and dispelling myths. He is advisor to numerous Congressional Members and a close partner to the Chairs and Ranking Members of key committees. He has testified before Congress and has three times been a guest of the White House. The Director of the Office of National Drug Control Policy (the "Drug Czar") and its Director, Mr. James W. Carroll, is a close partner.

The Actus Foundation also advocates for the mentally ill, striving to deliver the message that mental illness is a disease the entire family suffers, and suffers in isolation; there are no well-worn paths to solutions available to those in chronic states of mental illness, as there are for medical patients. For all our success in *medical* science – diagnostic practices, treatment/care and patient advocacy – our nation has left *behavioral* science in the stone age. Our practice of *psychiatric* care – diagnostic practices, treatment/care and patient advocacy – is the ugly stepchild hidden in the attic as the country proudly displays her *medical* science wonders to the world.

¹ [Thomas Kuhn, *The Structure of Scientific Revolutions* \(1962\):](#) A *paradigm shift* is "a fundamental change in the basic concepts and experimental practices of a scientific discipline"

Lectures

In addition to advocacy, Michael Gray is offering his 30 years of professional expertise in the world of scientific instrumentation as another element of his work on behalf of the victims of overdose. As the *Interdict Law* and other legislative activity considers nascent technological advances in the ability to detect illicit drugs at the street level, Michael Gray adds his professional expertise to that debate. With experience in the areas of Infrared Spectroscopy and Mass Spectrometry, Michael will be participating in the deployment of portable testing for narcotics at the field level as a means of confirming suspected illegal substances, in a manner which protects the safety of First Responders.

In a 30, 45 or 60-minute lecture, Michael walks participants through the following topics:

- The paradigm-shifts which occurred in 2010 and 2013 in our battle to control opioid abuse and death
- A look at similar “business” models to determine a trend for this problem
- Statistical analysis based upon “business” model
 - Historical death-rates and predictive models are discussed
- How big is the problem, and how does it compare to other historical problems?
- Is there a difference between addiction, abuse and pseudo-legitimate uses?
 - What is the impact of each on death rates?
- What can we do to help?
 - Who can we help?
 - How can we help?
 - Several examples given will form a view of the problem’s varied sources and manifestations

This lecture is ideal for all stakeholders in the effort to eradicate drug death. Counselors, Law Enforcement professionals and other first responders, medically assisted treatment (MAT) clinicians, priests and family members; all will be better friends to, and protectors of, potential drug victims after hearing Michael’s call to action.

In an additional 30 or 45-minute lecture, Michael will review the state-of-the-art in portable scientific instrument

- Portable scientific instruments aid interdiction efforts in any situation from ports of entry to street-buys
- A full review of available technology is reviewed
 - Raman
 - FTIR
 - Colorimetric
 - Mass Spectrometry
- The benefits and challenges of each are discussed
- A deployment strategy is suggested

This lecture is also ideal for all stakeholders. The technical level of discussion is highly accessible to anyone who wants to understand the methods and concepts behind the tools available for drug interdiction efforts.