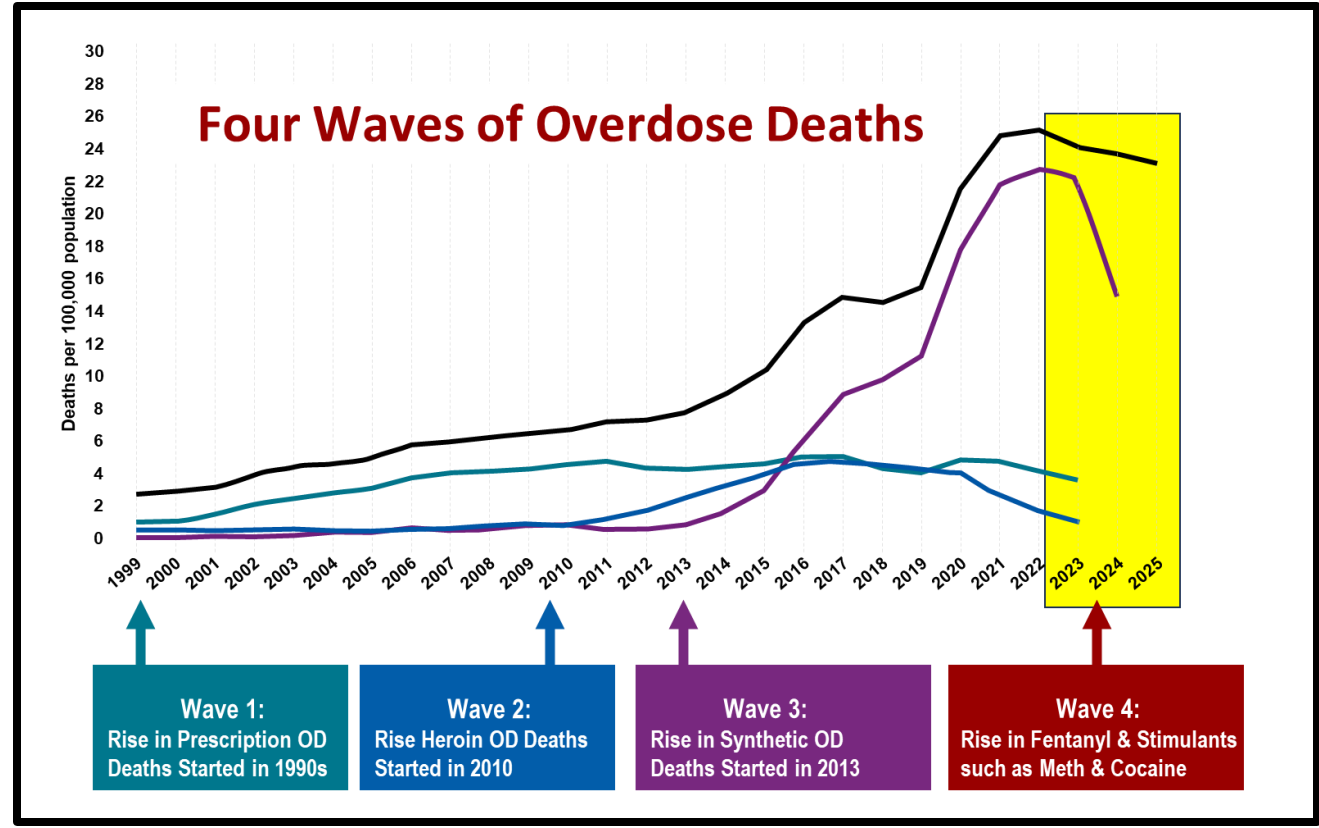
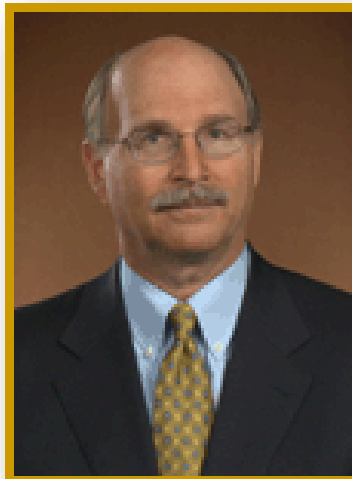


Opioid Overdose Crisis A 2025 Update



Welcome



Charles Denham, MD

Chairman, TMIT Global

TMIT High Performer Webinar
August 21, 2025

Webinar 231

Xylazine and Nitazines: Lethal Threats



Xylazine a Veterinary Sedative: Street Name “Tranq”

Refractory to Narcan



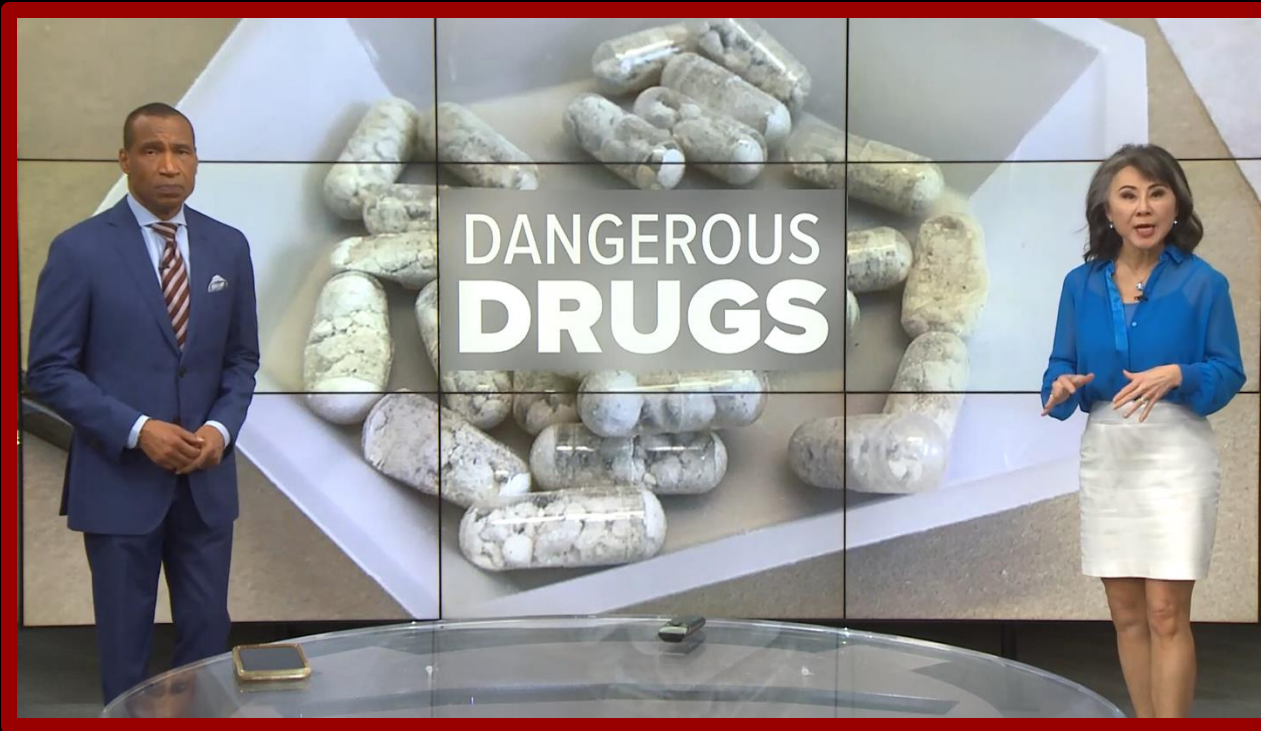
Xylazine a Veterinary Sedative: Street Name “Tranq”

Refractory to Narcan,
However Use
Incase of Mixtures



Nitazine – Even MORE Potent than Fentanyl

Claiming Lives Today



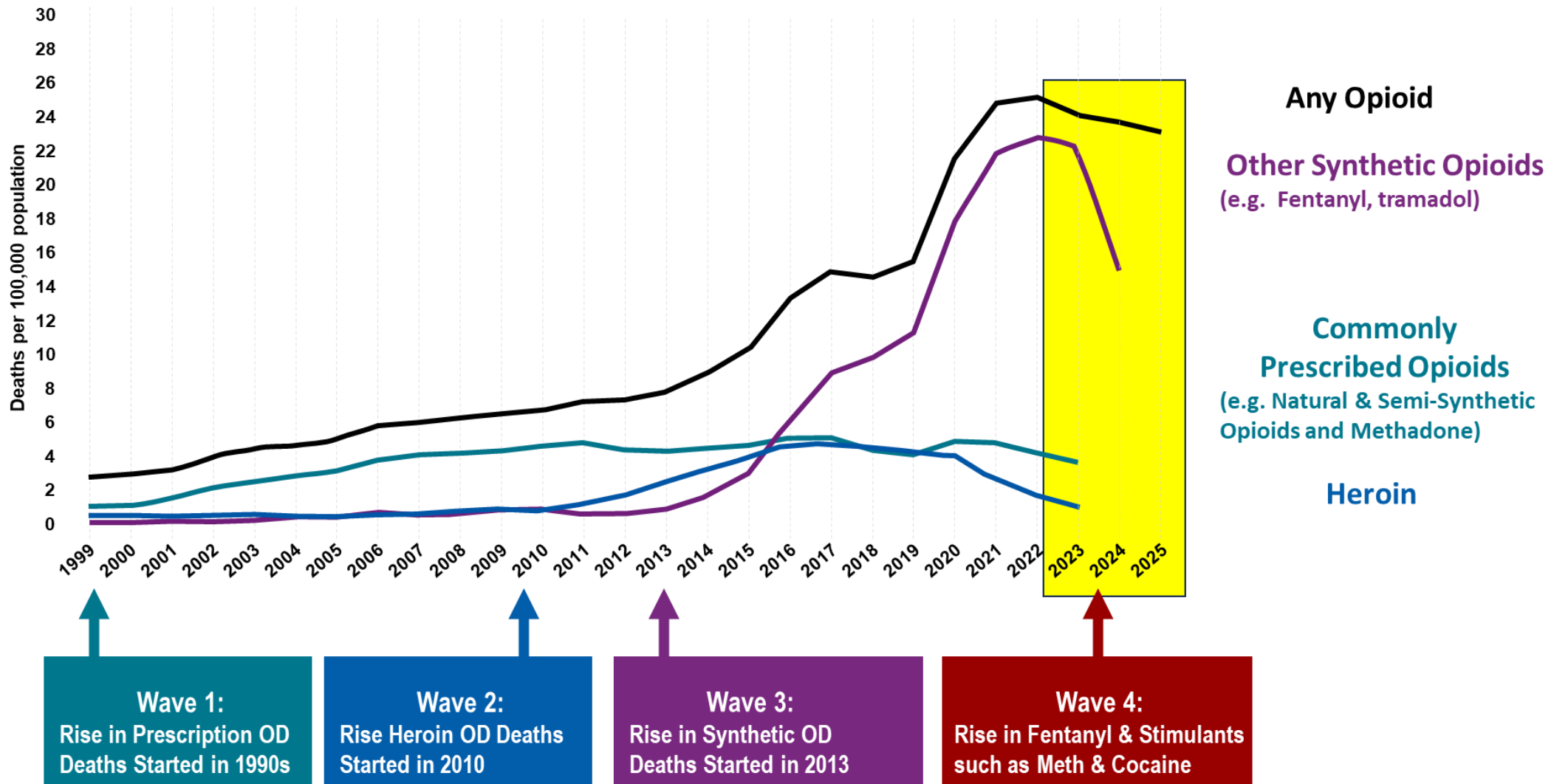
Nitazine Synthetic Opioid in Vape Liquid



A Deadly New Threat

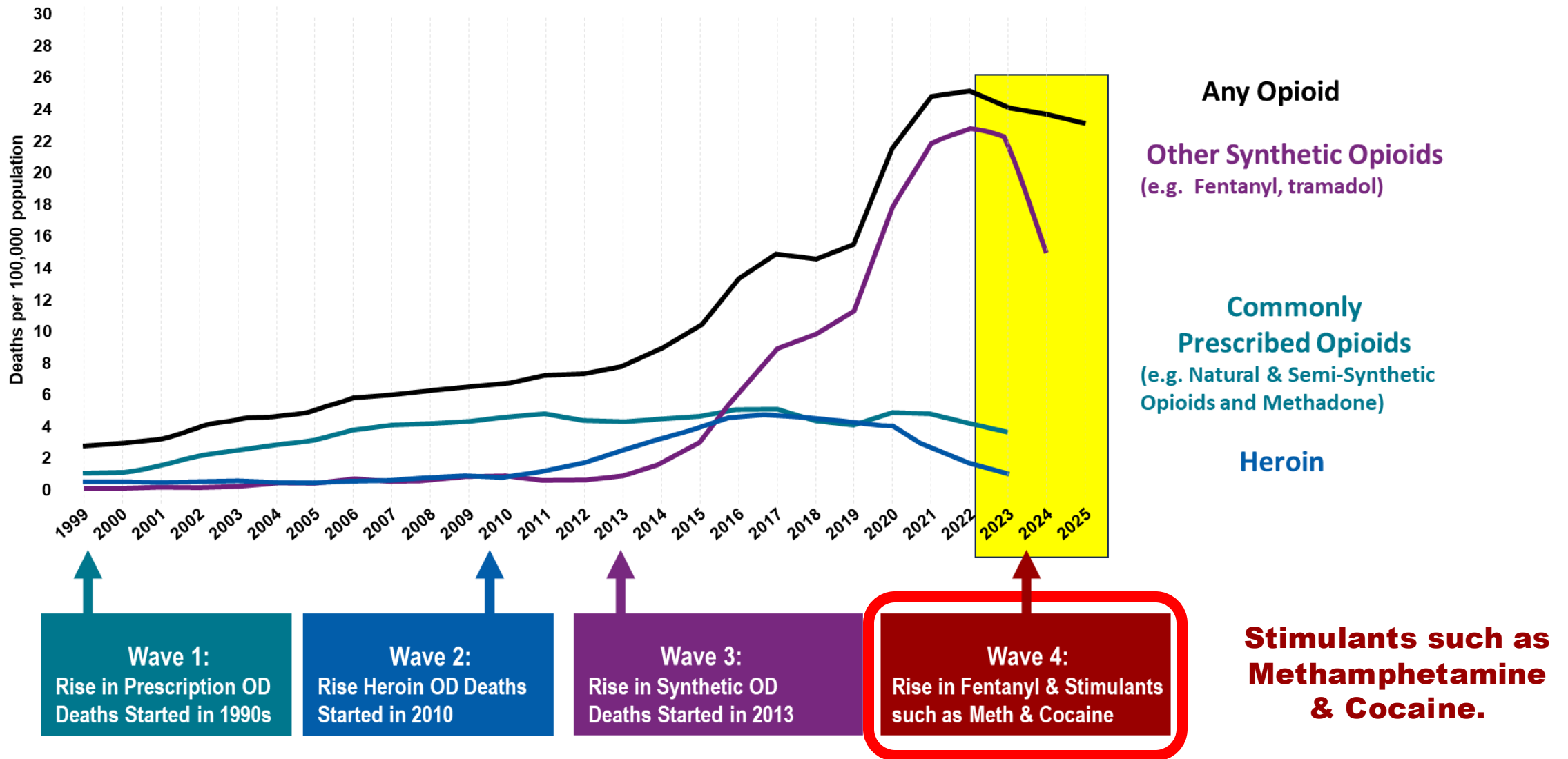


Four Waves of Overdose Deaths



SOURCE of Waves 1-3: CDC/NCHS, National Vital Statistics System 2024

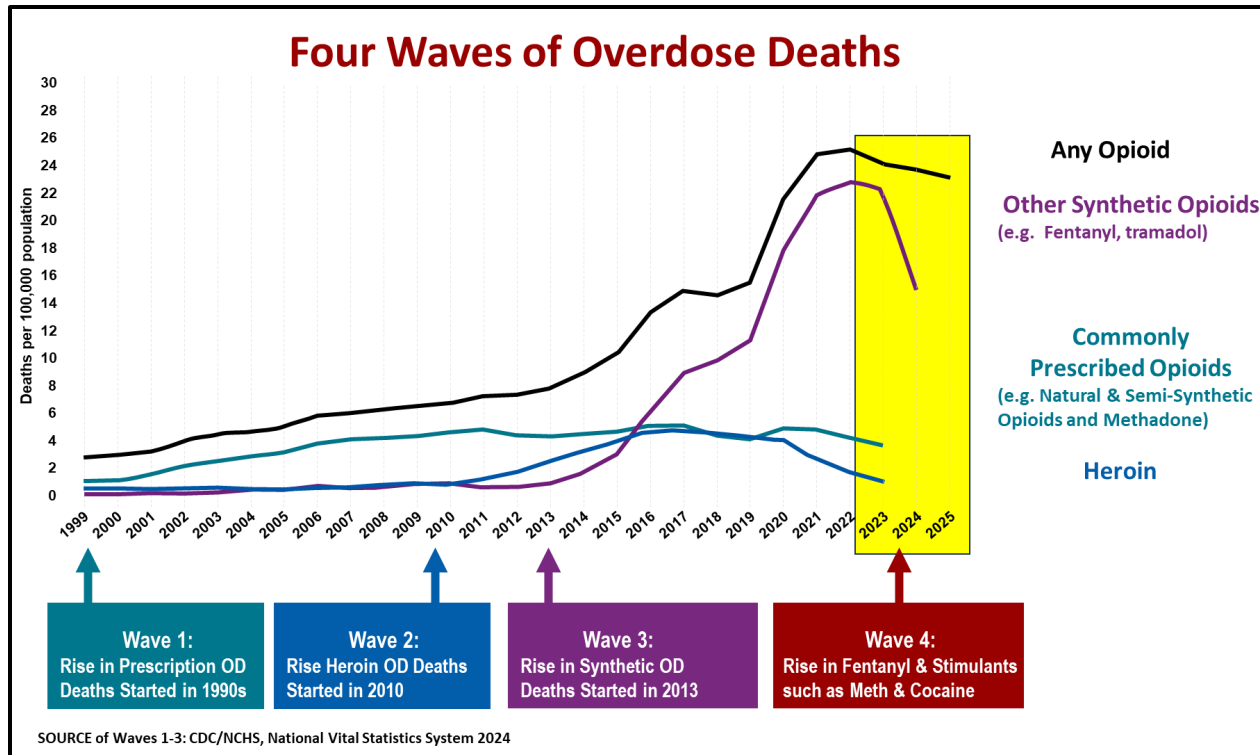
Four Waves of Overdose Deaths



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Xylazine & Nitazenes

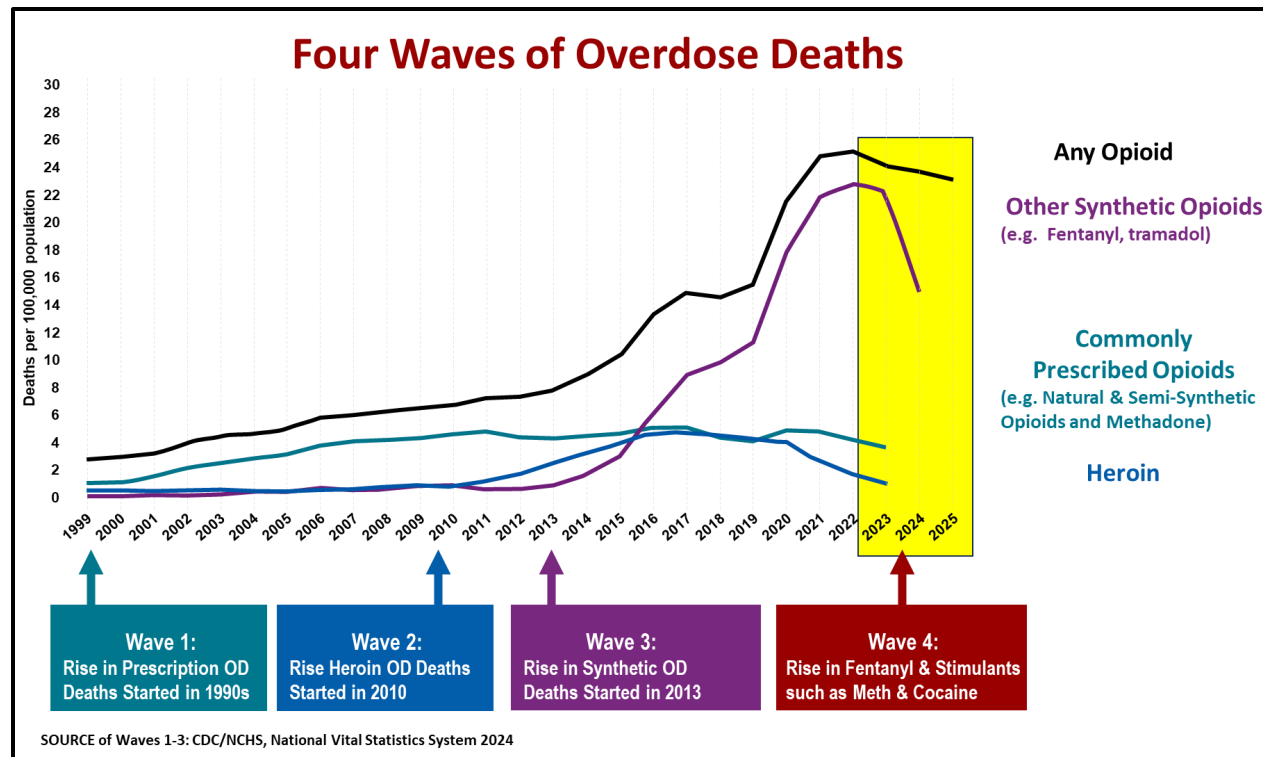
Xylazine & Nitazenes



Xylazine or Tranq:

- A non-opioid veterinary sedative. Users use it to lengthen their high. It worsens overdoses, not reversed by Narcan.

Xylazine & Nitazenes



Xylazine & Nitazenes

Xylazine or Tranq:

- A non-opioid veterinary sedative. Users use it to lengthen their high. It worsens overdoses, not reversed by Narcan.

Nitazenes:

- Are synthetic opioids that are even stronger than fentanyl. They can be reversed by Narcan but many doses are often needed.

TMIT National Research Test Bed High Performer Webinar SafetyLeaders.org

Welcome to

***The Opioid Patient Safety Crisis:
Actions and Reactions***

For resource downloads go to:
www.safetyleaders.org

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April 28, 2016

TMIT National Research Test Bed High Performer Webinar SafetyLeaders.org

***5 Rights of Pain Care:
Opioids and Diversion Update***

Mass Casualty Update

April 18, 2019
Webinar Month 125

For resource downloads go to:
www.safetyleaders.org

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April 18, 2019

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***The Opioid Crisis: Drug Diversion,
the Public, and the Public Safety Net***

September 16, 2021

For resource downloads go to:
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September 16, 2021

**The Opioid Crisis:
Survive and Thrive Guide**

Any Opioid

Other Synthetic Opioids

Heroin

Natural & Semi-Synthetic Opioids

September 15, 2022

Grant Opportunities

Patient Safety Documentaries

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Patient Programs

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The Opioid Overdose Crisis: A 2025 Update

August 21, 2025

MORE INFO

Surfing the Healthcare Tsunami Hospital Leaders Toolbox

The Surfing the Healthcare Tsunami Hospital Leaders Toolbox has been released online! Go deeper into the subject matter of the documentary by exploring the 5 Rights of Imaging™, the Boardroom, Racing & Aviation, and much more. [Click here](#) for more details.

[Click here](#) to watch the entire 58-minute documentary online.

Med Tac Bystander Rescue Care Program

Join us at Med Tac Global to learn from our experts how the public can battle failure to rescue of friends and loved ones from the most common emergencies. [Click Here](#)

High Performance 5 Rights Collaboratives

We are undertaking high impact research activities in the fields of Imaging of Adults and Children, Pain Care, Back Care, Testing, and Surgery to convert Waste to Value and Harm to Healing. For more information on each collaborative, click [Imaging](#), [Imaging Children](#), [Back](#), [Pain](#), [Testing](#), [Cancer](#), or [Surgery](#).

[Click here](#) to view our grassroots program to help parents Save Lives, Save Money, and Build Value in their Communities.

Trademarks and Tools

The Information Power Grid™ is a repository and continuously updated decision support system that provides network partners and customers with the information they need to make good decisions. Information obtained through TMIT National Research Test Bed surveys, expert presentations, interviews, and data pertaining to specific topics allow HCC Global and its affiliates to continuously improve the data and evidence that its network partners and customers use for optimal decision-making. Such affiliates include TMIT Global and CareUniversity®. Such projects include the Med Tac Certificate advanced first aid program and communities of practice including a Threat Safety R&D Community. Information Power Grid™ is a registered trademark of HCC Global.

External Sources

AHRQ PI Safety Network (PSNet)
 Assoc. for Prof. in Infection Control
 American Hospital Association
 AHRQ
 Centers for Medicare & Medicaid Services
 WHO Collaborating Centre for Patient Safety Solutions
 Governance Institute
 National Patient Safety Foundation
 ECRI Institute
 Institute for Safe Medication Practices
 Veterans Admin. Patient Safety Center
 Joint Commission Resources
 World Health Organization
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TMIT Global Research Test Bed High Performer Webinar

August 21, 2025

The Opioid Overdose Crisis: A 2025 Update

Session Overview

Although we have seen the total number of opioid overdose diminish, we must remain vigilant as the number of preventable deaths are still enormous. And there are new drugs on the market that demand our understanding to delivery the best bystander rescue care and training.

Join us to address the past, present, and future of opioid related threats.

Our Med Tac Bystander Rescue Care Program team will help you through the discussions necessary to make sure you, your family, and your organization are in a state of readiness.

We offer these online webinars at no cost to our participants.

Webinar Video, and Downloads

The webinar video will be available within five (5) business days after the webinar.

Speaker Slide Set:

The slides will be posted here before the webinar begins.

Learning Objectives:

- **Awareness:** Participants will become aware of the latest issues and new street drugs related to the opioid overdose crisis.
- **Accountability:** Participants will learn who can be accountable to learn best practices in reducing the harm related to opioid overdose.
- **Ability:** Participants will learn about the latest approaches to reduce harm from the opioid overdose crisis.
- **Action:** Participants will learn about line of site actions that can be taken immediately to improve bystander rescue care for victims of opioid overdose.

Session Speakers and Panelists

C. R. Denham, II, MD

William Adcox, MBA

Gregory H. Botz, MD, FCCM

Randy Styrer

David Grinsfelder

Kimberly New

David Marx

John Nance

Gladstone McDowell

Daniel Policicchio

David Morris

Jennifer Dingman

Emerging Threats Community of Practice Application

Name *

First Last

Email * Phone *

Organization * Position at the Organization *

Important Topics of Interest

Submit

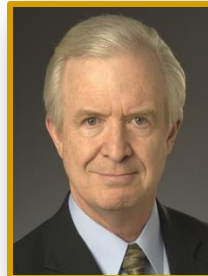
Emergency Response Speakers and Reactors



Jennifer Dingman



David Morris



John Nance JD



Randy Styner



David Marx



Danny Policicchino



David Grinsfelder



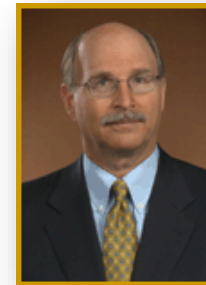
Chief William Adcox



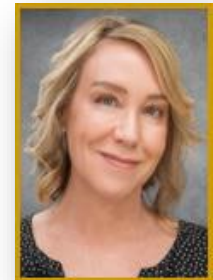
Gregory Botz MD



Dr. McDowell MD



Charles Denham MD



Kimberly New



Voice of Patient and Family



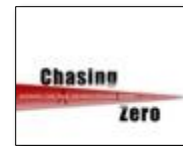
Jennifer Dingman

**Founder, Persons United Limiting
Substandard and Errors in Healthcare
(PULSE), Colorado Division
Co-founder, PULSE American Division
TMIT Patient Advocate Team Member
Pueblo, CO**

If you wish to follow us on Twitter,
go to: <http://twitter.com/TMIT1>
or use **#safetyleaders** hashtag



Also, go to:
www.facebook.com/SafetyLeaders
and related sites





Our Purpose, Mission, and Values



Our Purpose:

We will measure our success by how we protect and enrich **the lives of families...patients AND caregivers.**

EMERGING THREATS
COMMUNITY OF PRACTICE

Our Mission:

To accelerate performance solutions that **save lives, save money, and create value** in the communities we serve and ventures we undertake.

CAREUNIVERSITY®

Our ICARE Values:

Integrity, Compassion, Accountability, Reliability, and Entrepreneurship.

Disclosure Statement

The following panelists certify that unless otherwise noted below, each presenter provided full disclosure information; does not intend to discuss an unapproved/investigative use of a commercial product/device; and has no significant financial relationship(s) to disclose. If unapproved uses of products are discussed, presenters are expected to disclose this to participants. None of the participants have any relationship medication or device companies discussed in their presentations.

John Nance JD has nothing to disclose

Randy Styner has nothing to disclose

Chief William Adcox has nothing to disclose

Dr. Botz has nothing to disclose

Charlie Denham III has nothing to disclose

Jeni Dingman has nothing to disclose

David Grinsfelder has nothing to disclose

Dr. McDowell has nothing to disclose

Charles Denham, MD, is the Chairman of TMIT; a former TMIT education grantee of CareFusion and AORN with co-production by Discovery Channel for *Chasing Zero* documentary and Toolbox including models; and an education grantee of GE with co-production by Discovery Channel for *Surfing the Healthcare Tsunami* documentary and Toolbox, including models. HCC is a former contractor for GE and CareFusion, and a former contractor with Siemens and Nanosonics, which produces a sterilization device, Trophon. HCC is a former contractor with Senior Care Centers. HCC is a former contractor for ByoPlanet, a producer of sanitation devices for multiple industries. HCC has served as advisors to COVID His current area of research is in threat management to institutions including conflict of interest, healthcare fraud, and continuing professional education and consumer education including bystander care. Dr. Denham has been a collaborator with the late Professor Christensen at Harvard Business School.

TMIT Global Research Test Bed

3,100 Hospitals in 3,000 Communities

500 Subject Matter Expert Pool Developed for more than 40 Years



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CareUniversity®

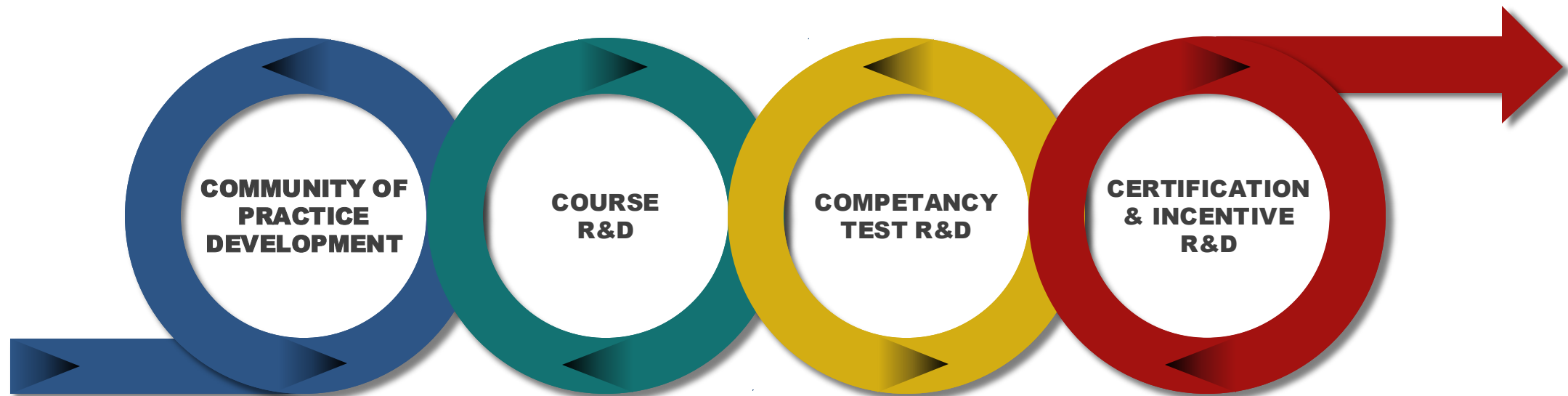


**TMIT Global
Research Test Bed**



SafetyLeaders®

Learning Management System



Youth & Young Adult Team



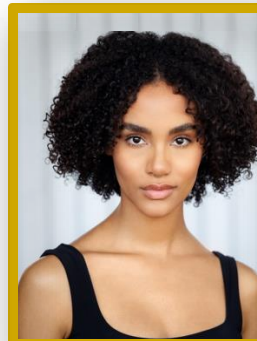
D Contreras EMT
Harvard



Ivy Tran EMT
Harvard



Nick Scheel
UCSB Alum



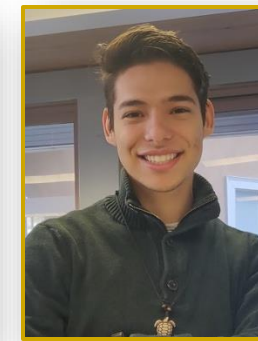
Sophia McDowell
California Inst. of Arts



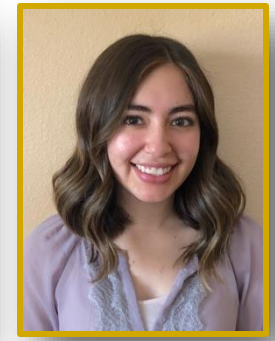
Audrey Lam EMT
USC



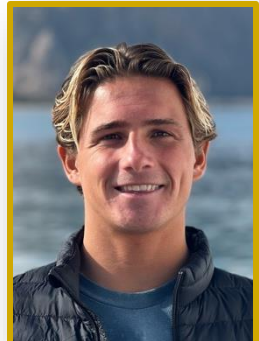
Jacqueline Botz
Johns Hopkins



Luis Licon
UCI Alum



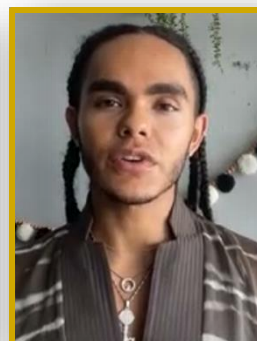
Melanie Rubalcava
UCSD



Charlie Denham III
UCSD



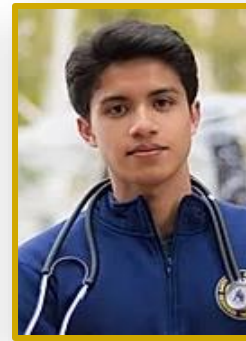
Charlie Beall
Stanford Alum



Marcus McDowell
U of Cincinnati



Jaime Yrastorza MD
Loma Linda EMT



Paul Bhatia EMT
U of A Med School



D Policichio
NYU Film



Manue Lopez
Berkeley Alum



Preston Head III
UCLA Alum



Family Rescue R&D



The 5 R's of Safety



UNIVERSITY OF CALIFORNIA
SANTA BARBARA



Emerging Threats

Community of Practice



0:00:02

0:09:08





Global Patient Safety Forum

Global Patient Safety Forum

The GPSF is a convening alliance with a mission to save lives, save money, and build value in the community it serves. The Forum was expressly founded to make available important content that the collaborators want to share more broadly. This website is not intended to compete with any other initiative and will meet its objectives if collaborators and those interested in the topics share the information with their communities. There are no financial requirements of users of the site. Certain communities are private in order to protect those we serve and those who serve. Those we serve are patients and their families. Those who serve are the caregivers, administrators, researchers, educators, and staff in the healthcare industry.

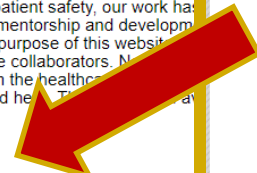
Global Innovators Network

We are a global network of leaders from academia, industry, NGOs, philanthropy, and faith-based organizations who are best practices in leadership of innovation. Spawned to meet the needs of innovators in healthcare and patient safety, our work has multiple sectors with a focus on mentorship and development. There is no specific commercial purpose of this website. There is no financial relationship between the collaborators. No financial support of any type from the healthcare industry or communities of practice served here. This website is entirely free.



The private community of practice addresses a number of sensitive topics and subject matter that should not be made public for security reasons.

- **Brand Damage** from Outside, Inside, and or Mixed Outside-Inside Threats including cyberterrorism.
- **Workplace Violence** including physical, verbal, sexual, or emotional harassment, bullying or harm to caregivers, staff, students, or patients.
- **Active Shooter, Violent Intruder, and Deadly Force Incidents** including events causing physical harm to staff, caregivers, students, or patients.
- **Domestic Terrorism** such as organized attacks using chemical, biologic, radiologic, nuclear, and explosive weapons as well as weaponization of transportation & vehicles (CBRNET)
- **Violent Acts Against Leadership** where administrative, clinical, or governance leaders are specifically targeted by insiders or outsiders.
- **Intentional Harm of Patients** by caregivers who commit harmful acts against patients with or without enablers who do not report such harm.
- **Unintentional Patient Harm** through errors of omission from systems failures such as those identified by mortality reviews including diagnostic errors or NQF Never Events.
- **Failure to Rescue** in pre-hospital, hospital, and post-hospital continuity of care.
- **Preventable Death or Severe Injury** of staff or students on or off campus or site.
- **Financial Harm** to patient families by aggressive payment policies and actions.
- **Hospital Optimization & Flow** with overcrowding & boarding/transfer issues.
- **Readiness for Epidemics** including preparedness for volume care need surges.
- **Sexual Misconduct** including sexual harassment, abuse of power, and or harm to caregivers, staff, students, or patients.
- **Racial and or Sexual Discrimination** against those we serve including patients and their families and or those who serve in the organization.
- **Cybersecurity Patient Records Issues** including breach, theft, and contamination of medical records leading to patient and caregiver harm.
- **Cybersecurity Operation Issues** including breach, theft, and contamination of operational records, invasion of data systems, and ransom crimes.
- **Insider Threats** of intentional clinical, operational, or financial harm.
- **Theft of Intellectual Property** by insiders, outsiders, or nation-states.
- **Sabotage** of service, information systems, clinical care, and property.
- **Employee Fraud** including false identity/credentials, testing/vaccinations, attestations of truth, or false witness against patients or staff.
- **Patient Fraud** including false identity, testing/vaccinations, attestations of truth, or false witness against other patients or staff.
- **Nation State Influence** through academic espionage, financial conflicts of interest, or other means.
- **Drug Diversion** by staff including caregivers and pharmacists who divert medications for themselves or others.
- **Conflict of Interest** of staff including physicians, researchers, staff, or administrators including undisclosed as well as disclosed financial relationships.
- **Conflict of Interest of Governance** including undisclosed financial as well as disclosed financial relationships.
- **Academic Fraud** including fabrication, falsification, or plagiarism in publications or dishonest grant documentation including applications or reports.
- **Defamation or Unfair Press** by investigative reporting, false whistleblowers, or harm due to misinformation, disinformation, or mal-information publicized.
- **Burn-out** of caregivers, leadership, and staff.
- **Critical Drug and Supply Shortages** such as I.V. fluids, medications, and key supplies.
- **Regulatory Compliance Issues** including evolving risks of non-compliance.



- Featured Leaders
- Global Webinars & Summits
- Patient Safety Community Of Practice
- Med Tac Bystander Care Program
- Emerging Threats Community Of Practice**
- CareUniversity & Continuing Education



Thomas Zeltner, MD
Expert leader in Public Health
Former Special Envoy of the WHO
Former Secretary of State for Health
Swiss Federal Office of Public Health, Bern, Switzerland

[Read bio...](#)

[View video clip](#)



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- **Intentional Harm of Patients** by caregivers who commit harmful acts against patients with or without enablers who do not report such harm.
- **Unintentional Patient Harm** through errors of omission from systems failures identified by mortality reviews such as diagnostic errors.
- **Failure to Rescue** in pre-hospital, hospital, and post-hospital continuity of care.
- **Hospital Optimization & Flow** with overcrowding & boarding/transfer issues.
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- **Racial and or Sexual Discrimination** against those we serve including patients and their families and or those who serve in the organization.
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- **Cybersecurity Operation Issues** including breach, theft, and contamination of operational records, invasion of data systems, and ransom crimes.
- **Theft of Intellectual Property** by insiders, outsiders, or nation-states.
- **Sabotage** of service, information systems, clinical care, and property.
- **Employee Fraud** including misrepresentation of identity or qualifications, safety related issues such as vaccination and testing status, and attestations of truth.
- **Patient Fraud** including misrepresentation of identity, safety related issues such as vaccination and testing status, and attestations of truth.
- **Nation State Influence** through academic espionage, financial conflicts of interest, or other means.
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Inside & Outside Threats and Resilience Building

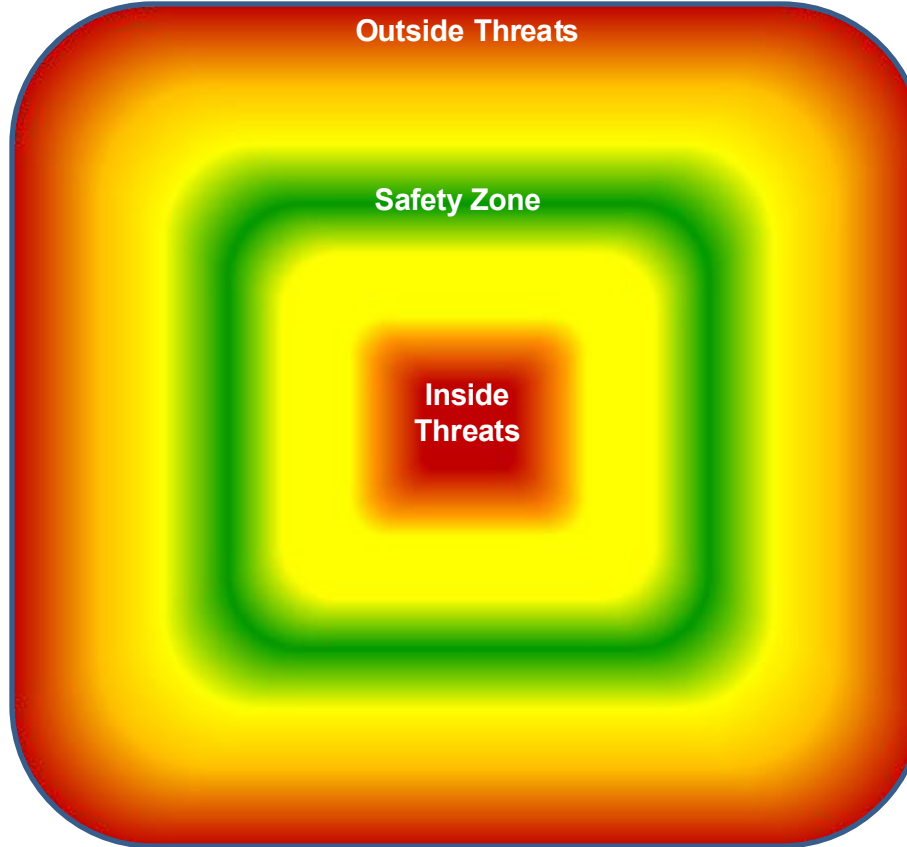
Cybersecurity
Operation Issues

Workplace Violence

Brand Damage

Cybersecurity
Patient Records Issues

Active Shooter, Violent
Intruder, and Deadly
Force Incidents



Hospital
Optimization & Flow

Theft of
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Violent Acts
Against Leadership

Failure to Rescue

Sabotage

Intentional Harm
of Patients

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Preventable Death
or Severe Injury

Nation State Influence

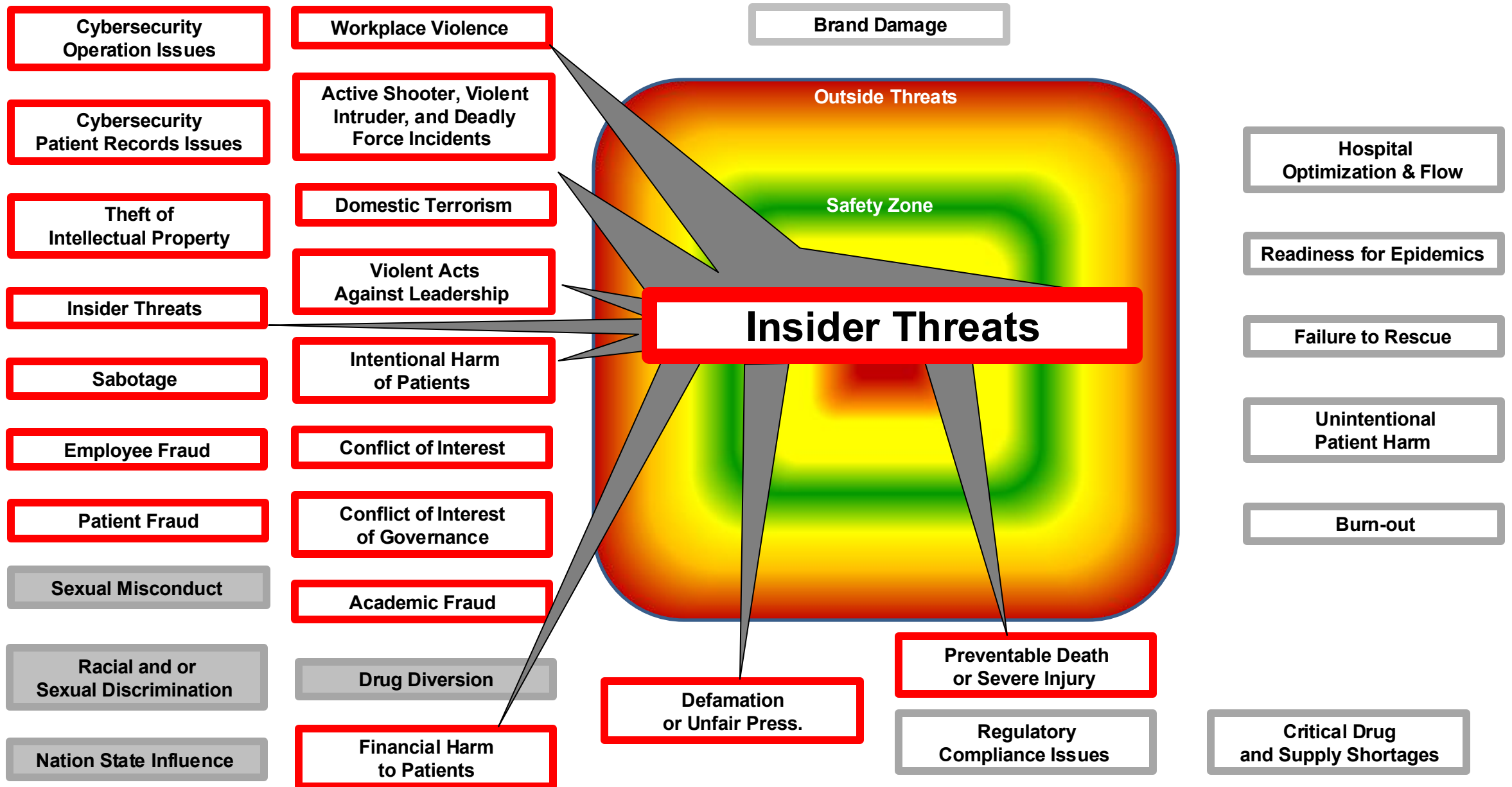
Financial Harm
to Patients

Defamation
or Unfair Press.

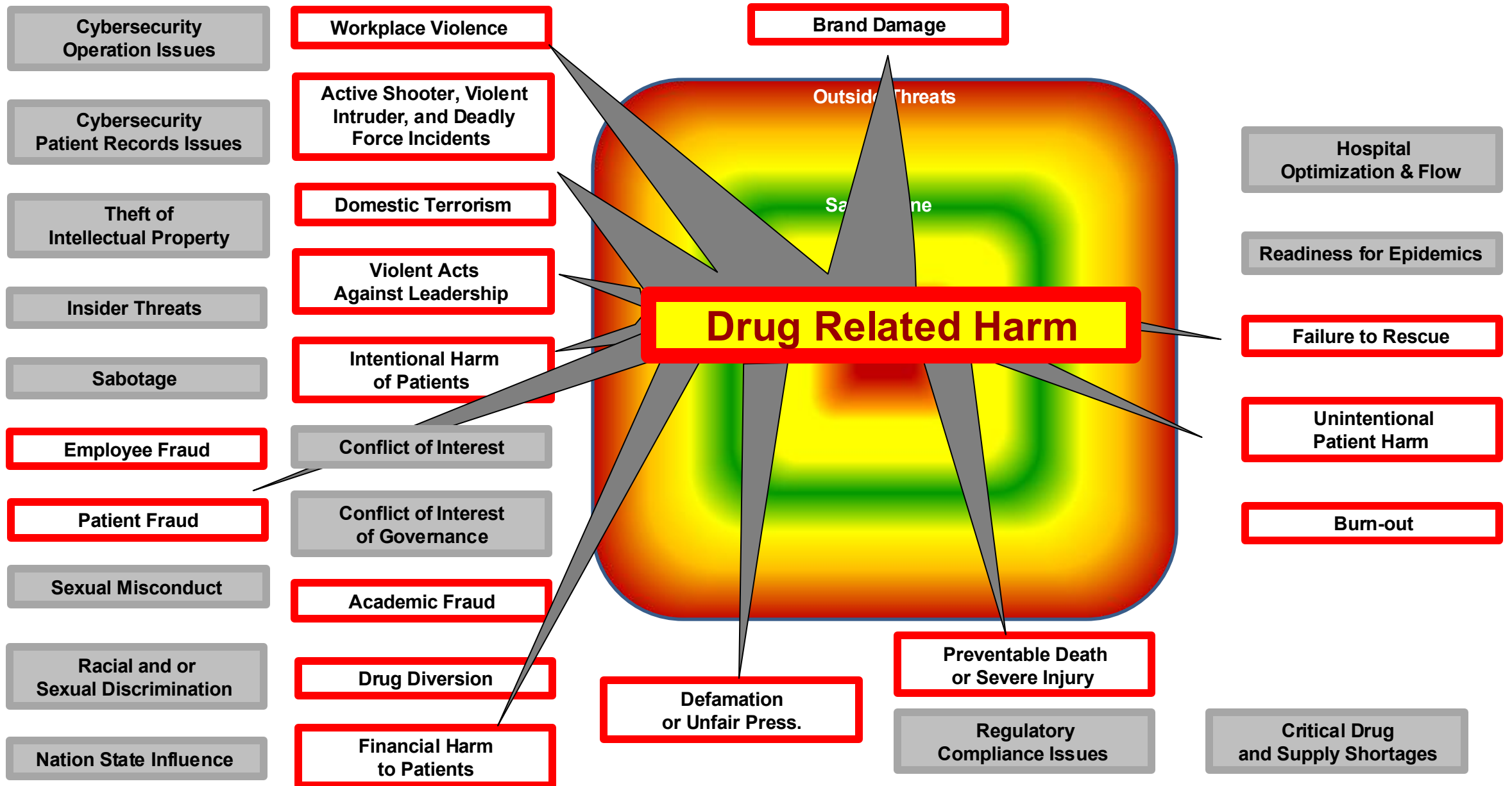
Regulatory
Compliance Issues

Critical Drug
and Supply Shortages

Inside & Outside Threats and Resilience Building



Inside & Outside Threats and Resilience Building



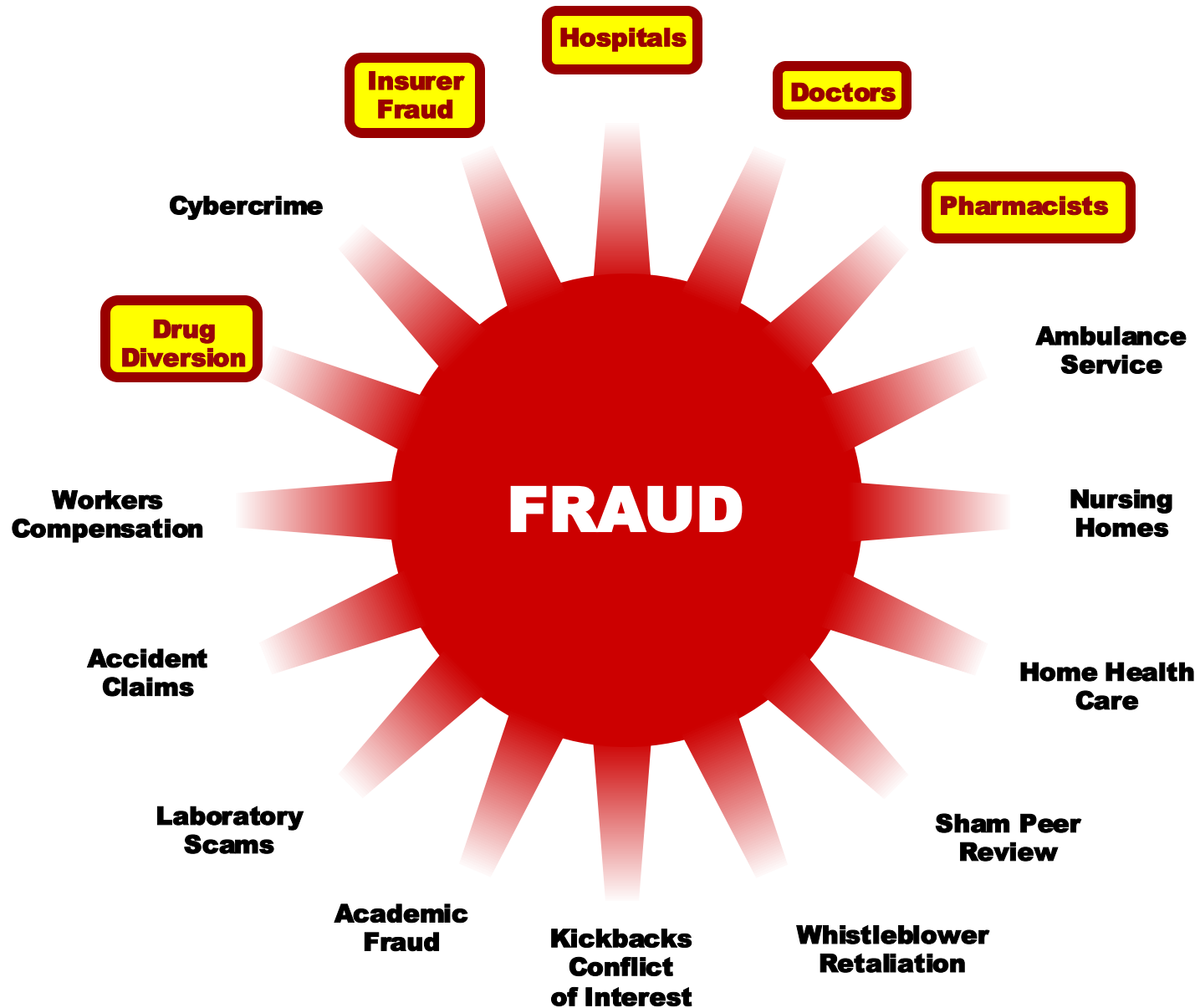
Emerging Threats: The Fraud Factor



TMIT High Performer Webinar October 21, 2021
<https://www.safetyleaders.org/webinaroctober2021/>

The Fraud Factor & Pain Care





Fraud Definition

In law, fraud is intentional deception to secure unfair or unlawful gain, or to deprive a victim of a legal right. Fraud can violate civil law (e.g., a fraud victim may sue the fraud perpetrator to avoid the fraud or recover monetary compensation) or criminal law (e.g., a fraud perpetrator may be prosecuted and imprisoned by governmental authorities), or it may cause no loss of money, property, or legal right but still be an element of another civil or criminal wrong.

Source: <https://en.wikipedia.org/wiki/Fraud>



Med Tac Bystander Rescue Care

Med Tac is short for “Medical Tactical” and is an advanced first aid platform to battle failure to rescue. We train all ages critical bystander care skills that can save lives before EMS arrives during the most common life threatening emergencies. To enquire about participating with Med Tac [click here](#).

In response to the enormous threats to our youth and young adults, we have launched a call to action and programs to educate our rising freshmen to college and high school. [Click here to see the view the evolving program.](#)

In response to the Coronavirus pandemic we have asked our panel of experts to produce a series of free webinars to help the public, professional first responders, security and medical volunteers, and families deal with the critical issues. [Click here for all Coronavirus Content & Video Summaries.](#)

Video Library

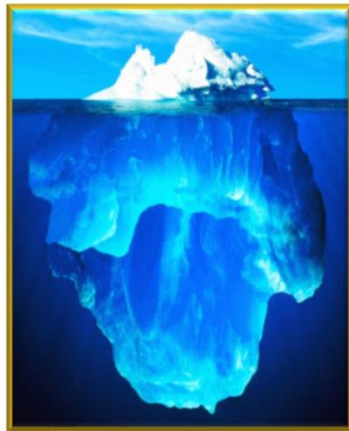
Med Tac Story	Adopt a Cove Program	Lifeguard & Surf Program
3 Minutes & Counting Broadcasts	AED & Bleeding Gear Placement	Water Safety Message
5 Rights of Emergency Care	Opioid Overdose Briefing 2025	Drowning Prevention of Toddlers

Med Tac Story	Adopt a Cove Program	Lifeguard & Surf Program
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The Battle Against Failure to Rescue

Our team originally focused on active shooter events. There is no other integrated program to train the public to prevent "failure to rescue" before EMS arrives for the 8 leading causes of preventable death from emergencies. It has been funded by philanthropy through TMIT Global, a 501c3 medical research organization that leads a global patient safety community of practice found at www.SafetyLeaders.org. We have published multiple articles and have developed pilot programs in five states. [Click here](#) to download a PDF of our articles.



Cardiac Arrest

Choking & Drowning

Life Threatening Allergies

Major Trauma

Opioids & Poisoning

Infections

Transportation Accidents

Bullying

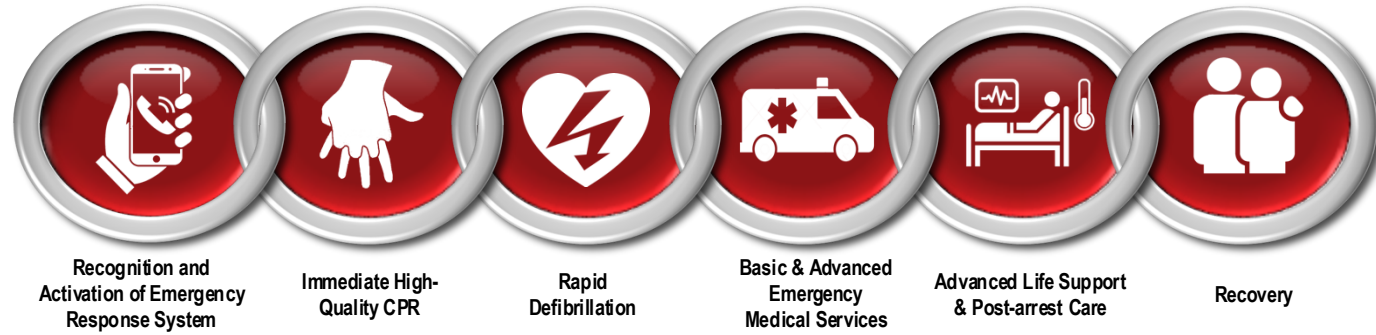
Bystander Care Training is a critical need in all communities. The preventable deaths we see in the news are the tip of the iceberg. Our program is a Good Samaritan support system to help everyone learn life-saving actions that will save lives.

High Impact Care Hazards are conditions that are frequent, severe, preventable, and measurable. We have identified the leading causes of death that strike children, youth, and those in their workforce years. We provide evidence-based bystander care training that can have the greatest impact.

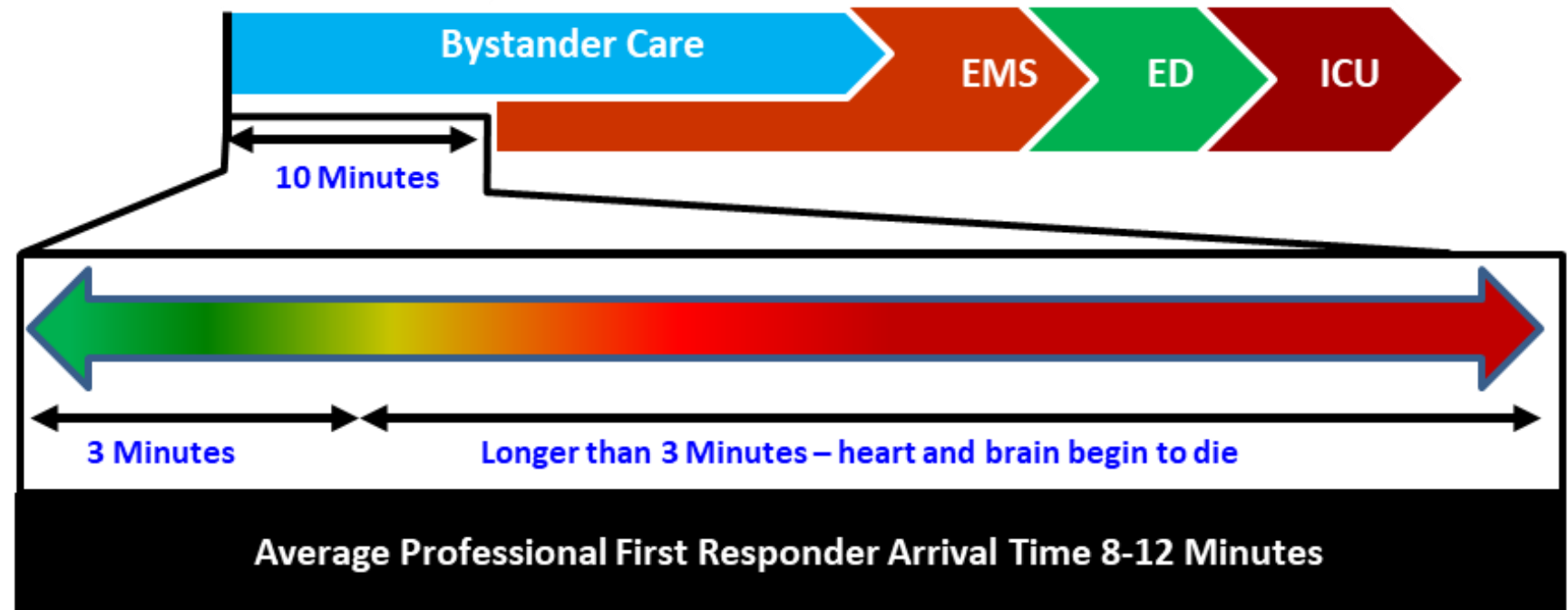
Bystander Rescue Skills are the competencies that bystanders can learn that will save lives in the few precious minutes before the professional first responders arrive. Such behaviors can be learned by children, adults, and entire families. We have programs for children, adults, law enforcement, educators, lifeguards, and caregivers.

MedTac is the only integrated program addressing the leading causes of death of otherwise healthy children, youth, and adults. Med Tac partners with terrific local trainers from great organizations already in the community. The entire program can be delivered remotely by Zoom.

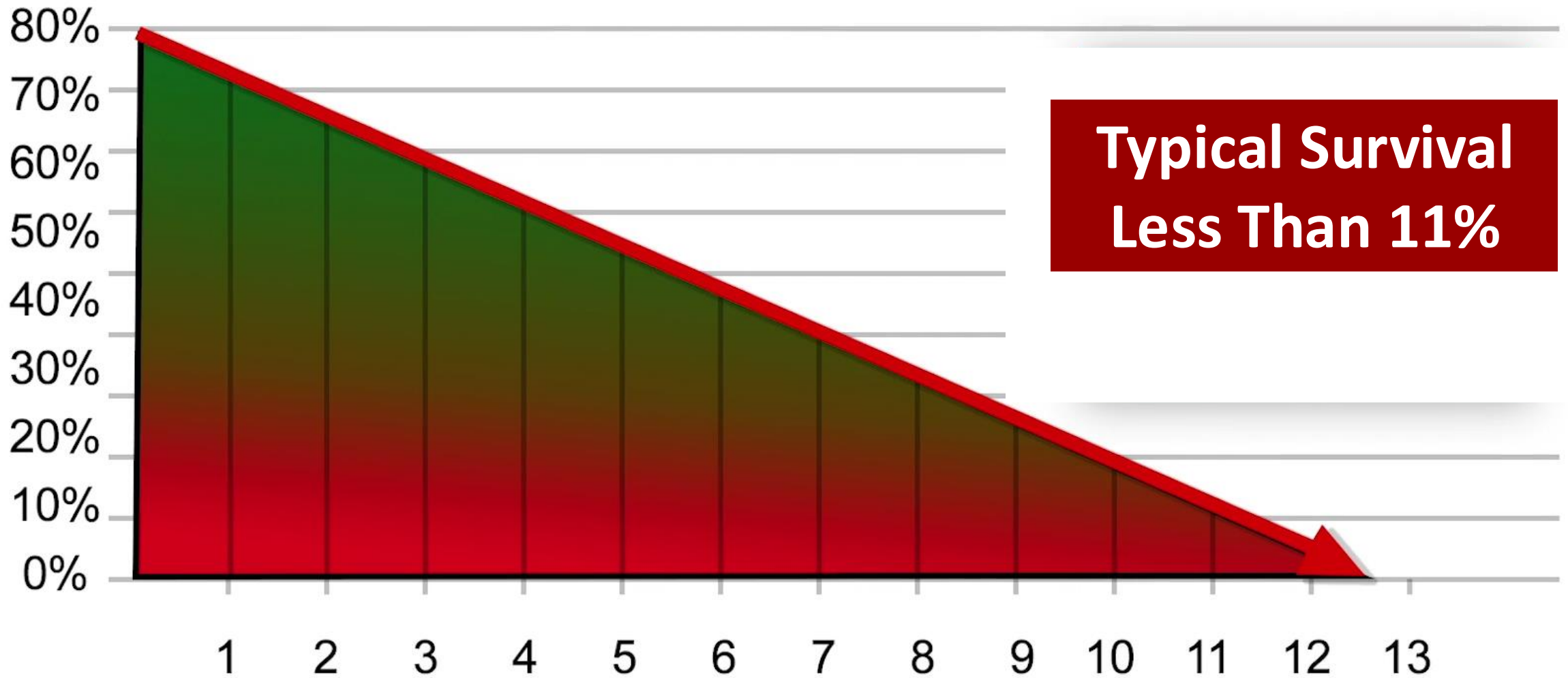
The Problem: ***FAILURE TO RESCUE***



The Solution: ***Bystander Care***

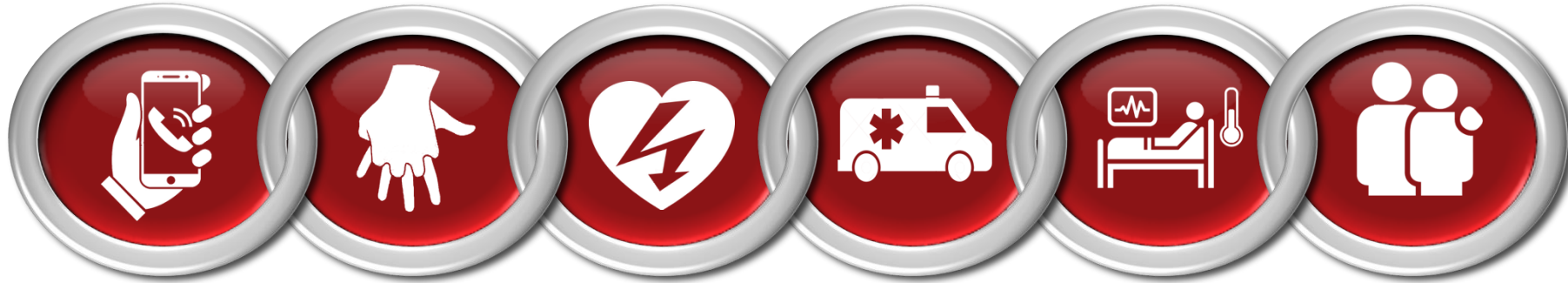


Survival Loss Over Time for Sudden Cardiac Arrest



Minutes Until CPR and AED Use

Cardiac Arrest Chain of Survival



Recognition and
Activation of Emergency
Response System

Immediate High-
Quality CPR

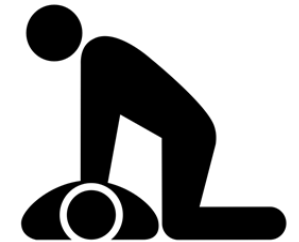
Rapid
Defibrillation

Basic & Advanced
Emergency
Medical Services

Advanced Life Support
& Post-arrest Care

Recovery

Bystander Care

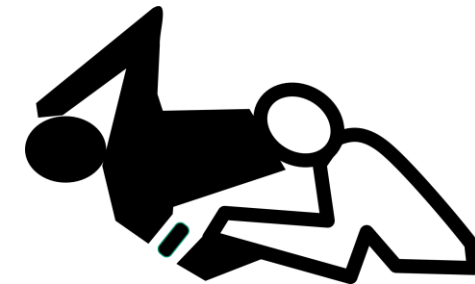


3 Minutes from Drop to Shock

Trauma Chain of Survival



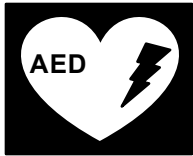
Bystander Care



3 Minutes from Gun Shot to Stop the Bleed

The Problem: Failure to Rescue

Cardiac Arrest



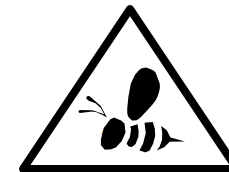
Choking & Drowning



Opioid OD & Poisoning



Anaphylaxis



Major Trauma



Infection Care



Transportation



Bullying



The Solution: Bystander Rescue Care

Cardiac Arrest



Sudden Cardiac Arrest: There has been an ongoing epidemic of nearly 1,000 SCA a day. One quarter of the SCA events in children and youth occurring at sporting events. CPR and AED use have a dramatic impact on survival.
Possible Lives Saved in the US: 2 every hour and 3 children per day at a sporting event – 25% of SCA deaths in children occur at such events.

Choking & Drowning



Choking: More than 100,000 lives have been saved with the Heimlich Maneuver. Most choking deaths are preventable.
Possible Lives Saved in the US: 15 per day

Drowning: By population, drowning and near drowning events are very common. It is one of the leading causes of death of children and the leading cause in toddlers.
Possible Lives Saved in the US: 12 per day

Opioid OD & Poisoning



Opioid Overdose and Poisoning: An exploding opioid OD crisis is still gripping our nation with a great toll on families. Narcan opioid reversal agents, rescue breathing and positioning, and rapid EMS response saves lives. Awareness drives prevention.
Possible Lives Saved in the US: There are 150 OD deaths per day. Up to 6 lives may be saved per hour.

Anaphylaxis



Anaphylaxis & Life Threatening Allergies: Many events are unreported; however, 22% occur in children without a prior diagnosis of allergies. More than one in twenty adults will have an anaphylactic event in their lifetime. Epinephrine auto-injectors save lives within minutes.
Possible Lives Saved in the US: 1 per day

Major Trauma



Major Trauma & Bleeding: Bystander care especially for major bleeding using Stop-The-Bleed techniques of wound pressure, bandages, and tourniquets can have an enormous impact on survival.
Possible Lives Saved in the US: 3 per hour

Infection Care



Infection Care: Epidemics, pandemics, and seasonal infections are a leading cause of death. Prevention, preparedness, protection, and performance improvement strategies and tactics are critical to save lives and inform all Med Tac efforts. They are a feature of all Med Tac Bystander Rescue Care.
Possible Lives Incalculable

Transportation



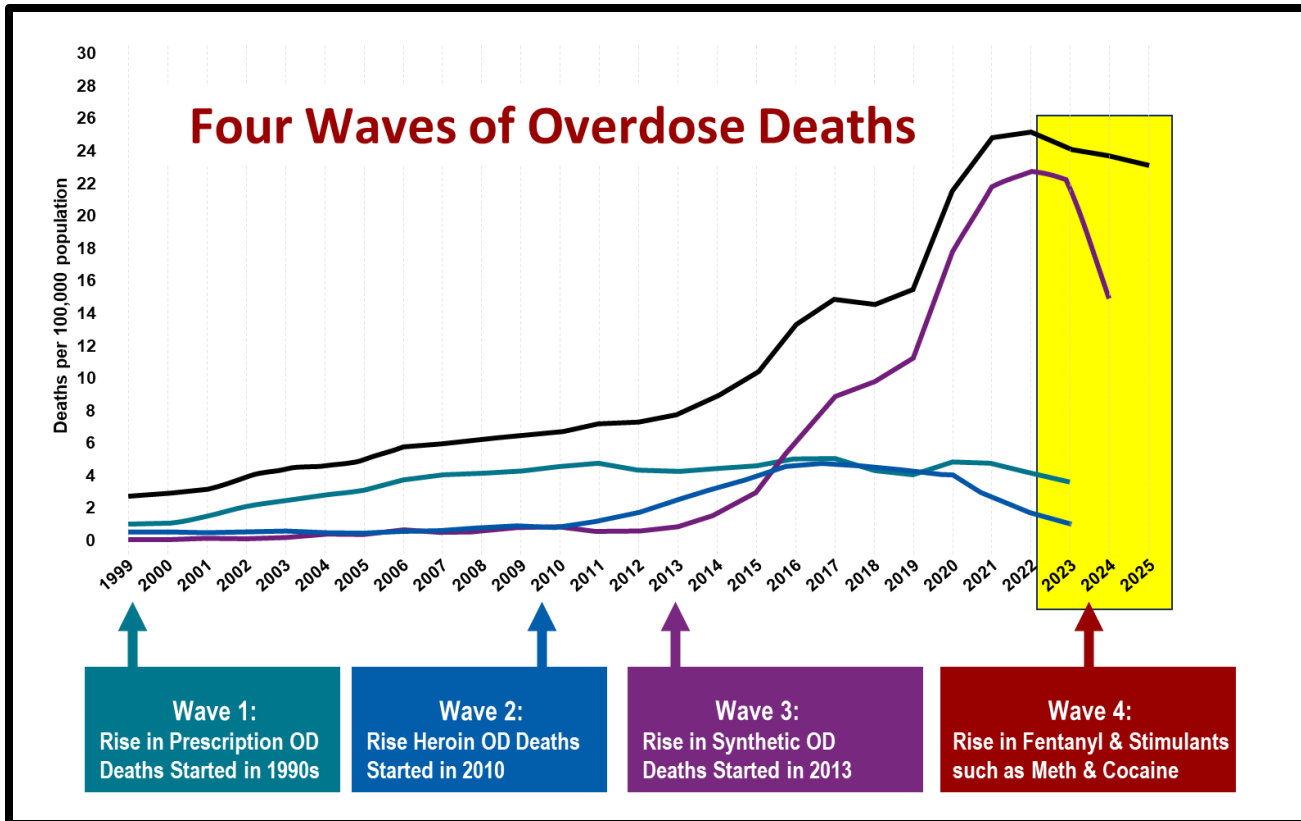
Non-traffic Related Vehicular Accidents: The incidence of non-traffic related drive-over accidents near schools, in parking lots, and at home is greater than 100 per week. More than 60% of the drivers are a parent or friend.
Possible Lives Saved in the US: Including adults, there are 1,900 deaths per year; many are preventable.

Bullying



Bullying & Workplace Violence: Bullying and abuse of power in schools and at work can lead to suicide, workplace violence, violent intruders, and active shooter events.
Possible Lives Saved in the US: Difficult to estimate, however the consensus is that they are likely to be very significant.

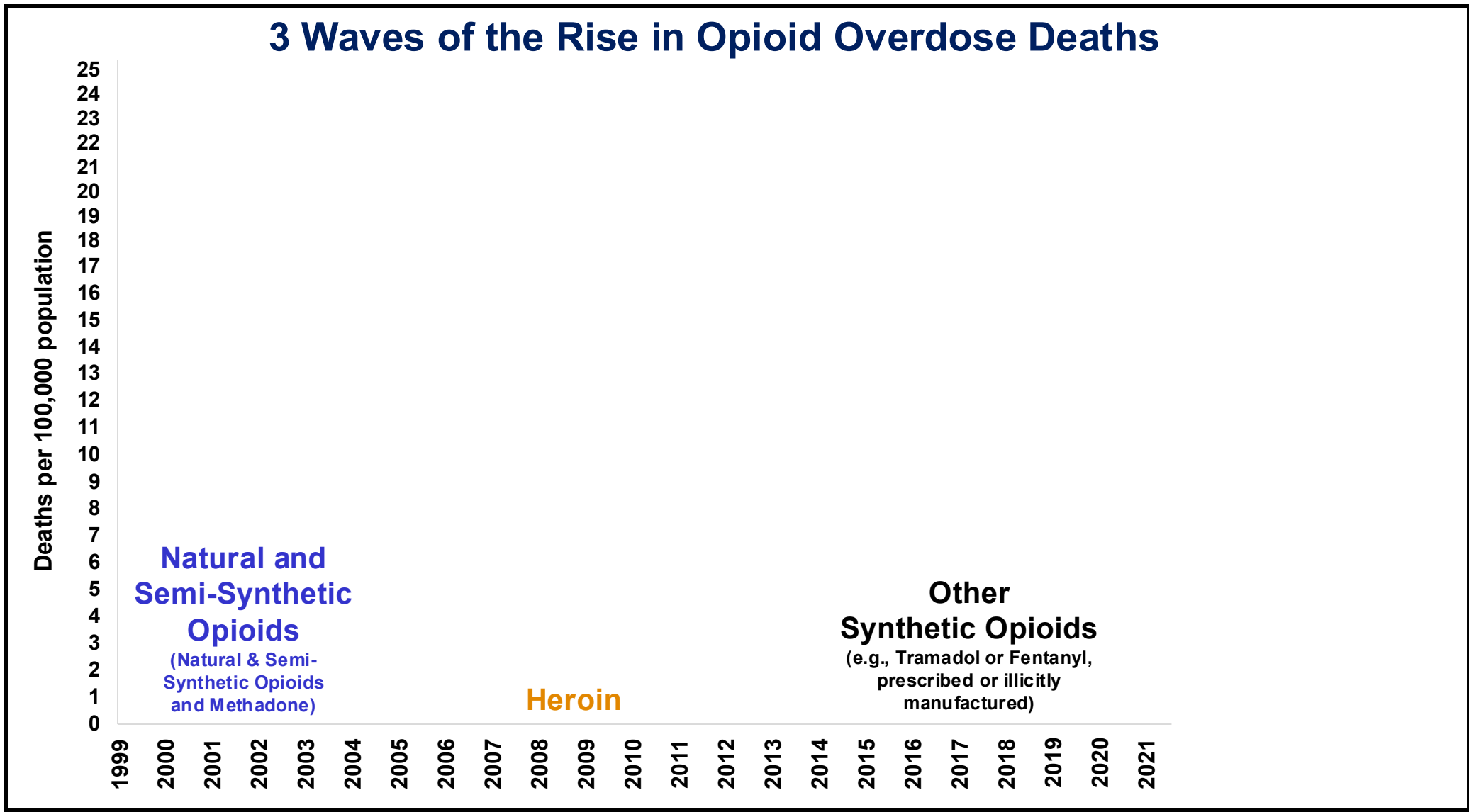
The Opioid Crisis: *Survive and Thrive Guide*™





January 2022

3 Waves of the Rise in Opioid Overdose Deaths



Wave 1:
Rise in Prescription Opioid Deaths Overdose Deaths

Wave 2:
Rise in Heroin Overdose Deaths

Wave 3:
Rise in Synthetic Opioid Overdose Deaths



January 2022

3 Waves of the Rise in Opioid Overdose Deaths



Any Opioid

Other Synthetic Opioids
(e.g., Tramadol or Fentanyl, prescribed or illicitly manufactured)

Heroin

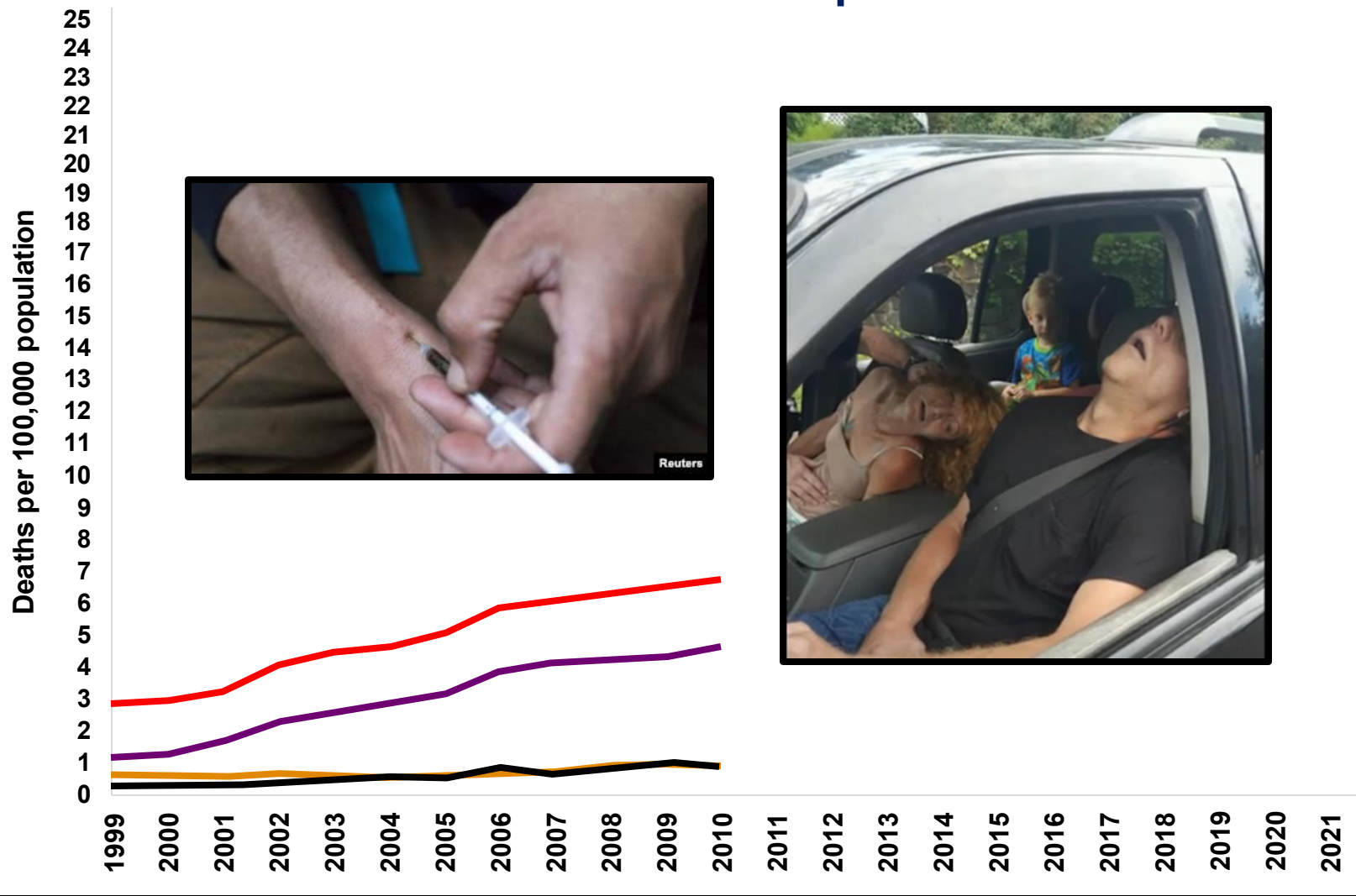
Natural and Semi-Synthetic Opioids
(Natural & Semi-Synthetic Opioids and Methadone)

Wave 1:
Rise in Prescription Opioid Deaths Overdose Deaths



January 2022

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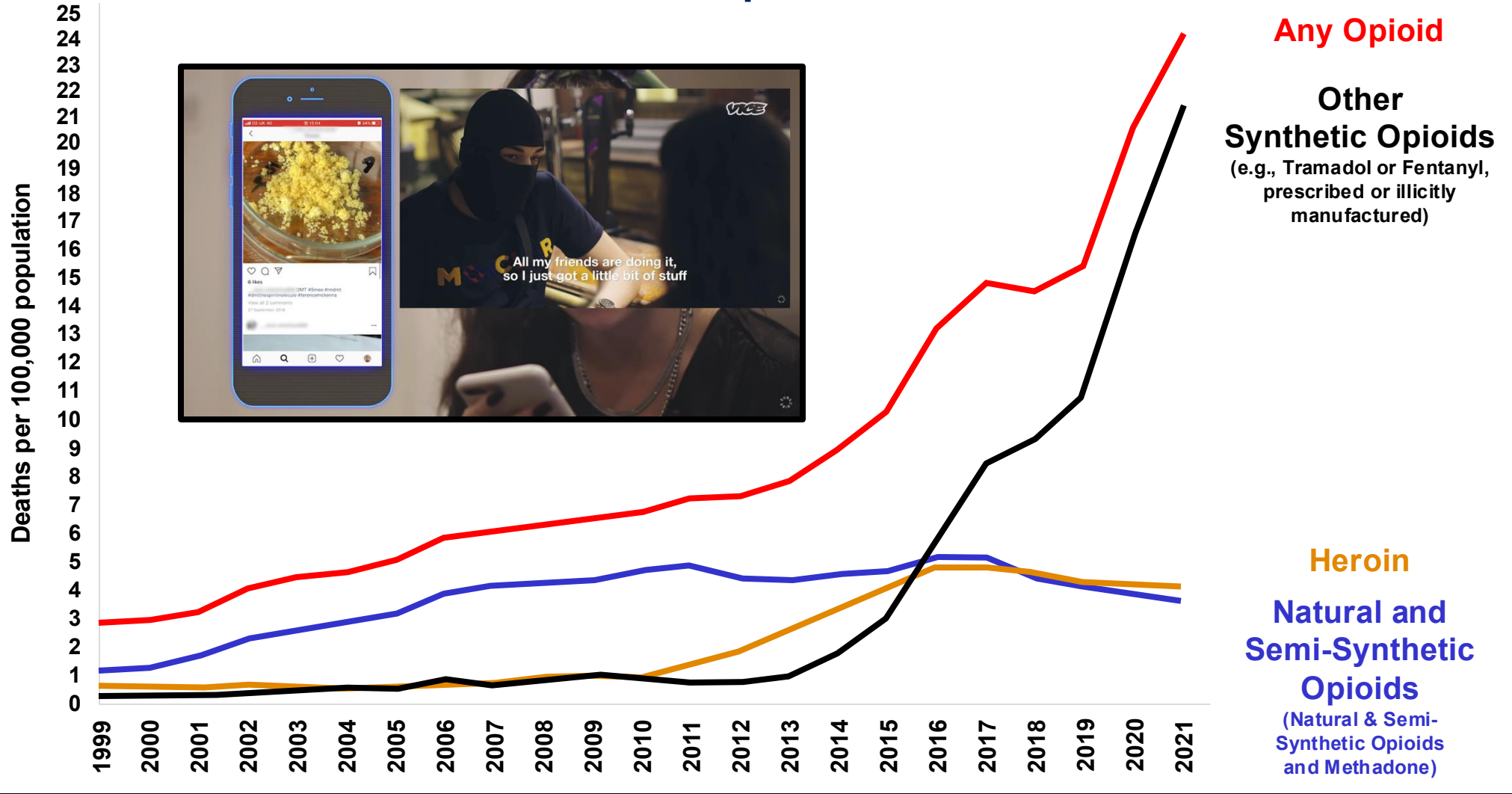
Wave 1:
Rise in Prescription Opioid Deaths Overdose Deaths

Wave 2:
Rise in Heroin Overdose Deaths



January 2022

3 Waves of the Rise in Opioid Overdose Deaths



Wave 1:
Rise in Prescription Opioid
Deaths Overdose Deaths

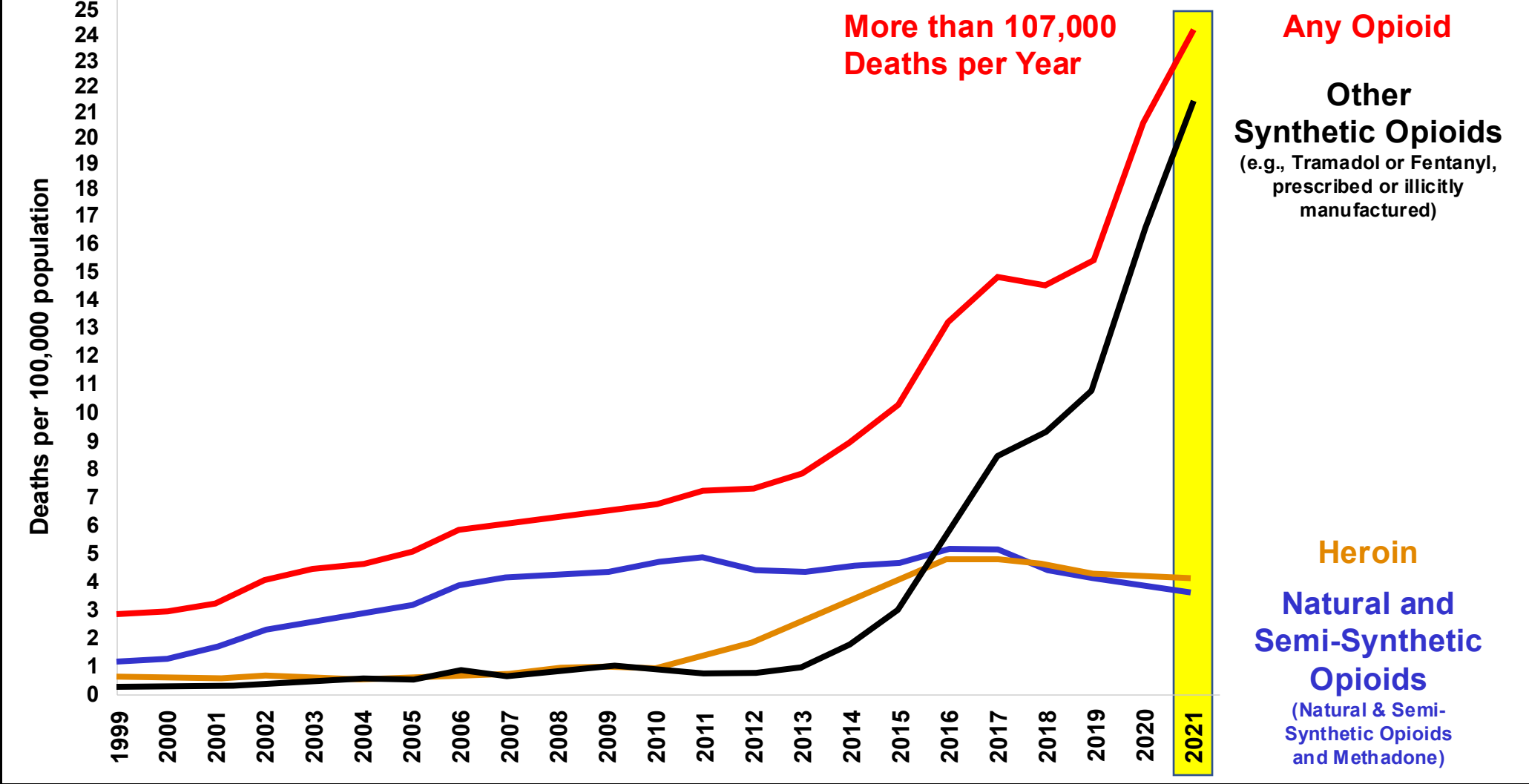
Wave 2:
Rise in Heroin
Overdose Deaths

Wave 3:
Rise in Synthetic
Opioid Overdose Deaths



January 2022

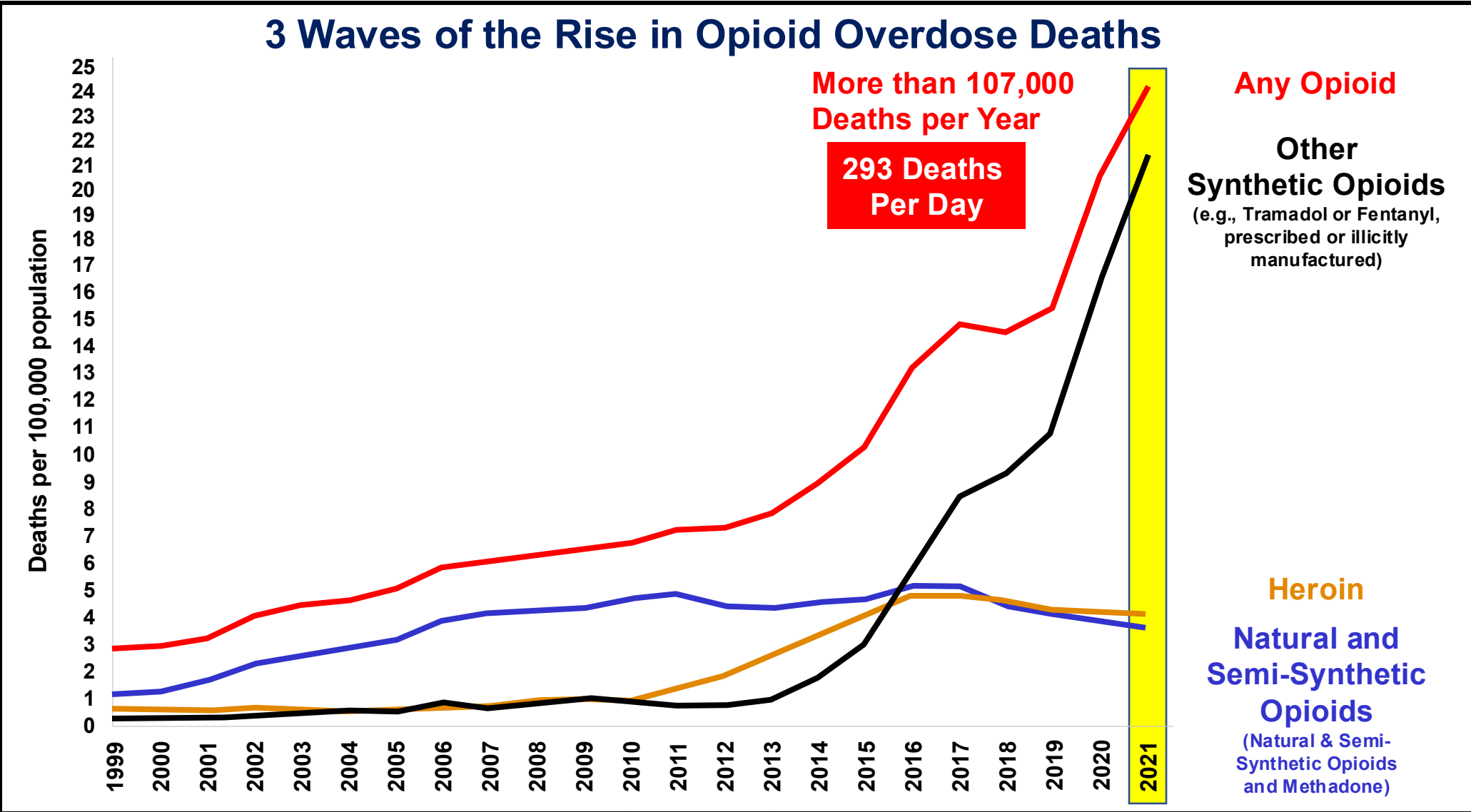
3 Waves of the Rise in Opioid Overdose Deaths





January 2022

3 Waves of the Rise in Opioid Overdose Deaths



Wave 1:
Rise in Prescription Opioid Deaths Overdose Deaths

Wave 2:
Rise in Heroin Overdose Deaths

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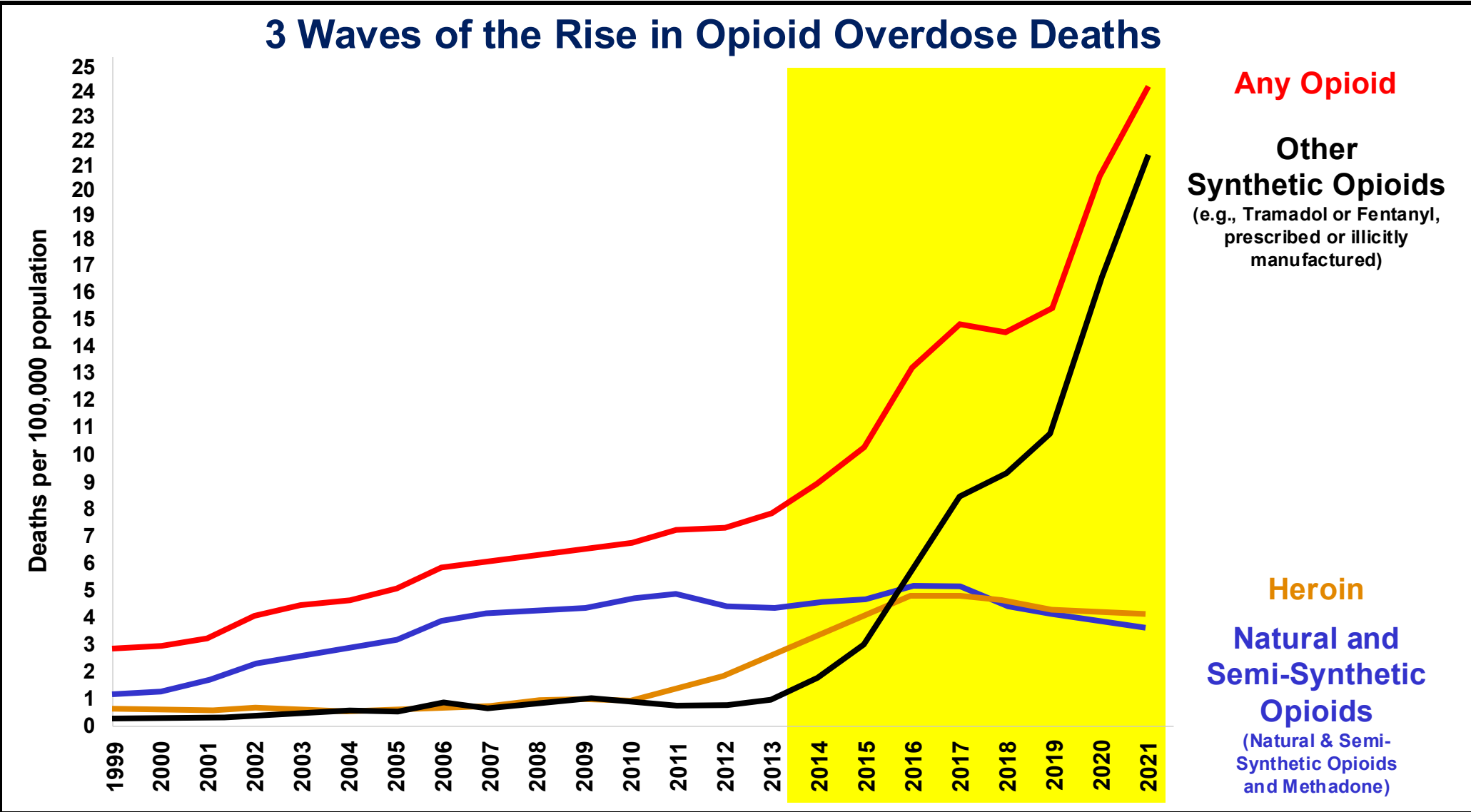
Heroin

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January 2022

3 Waves of the Rise in Opioid Overdose Deaths



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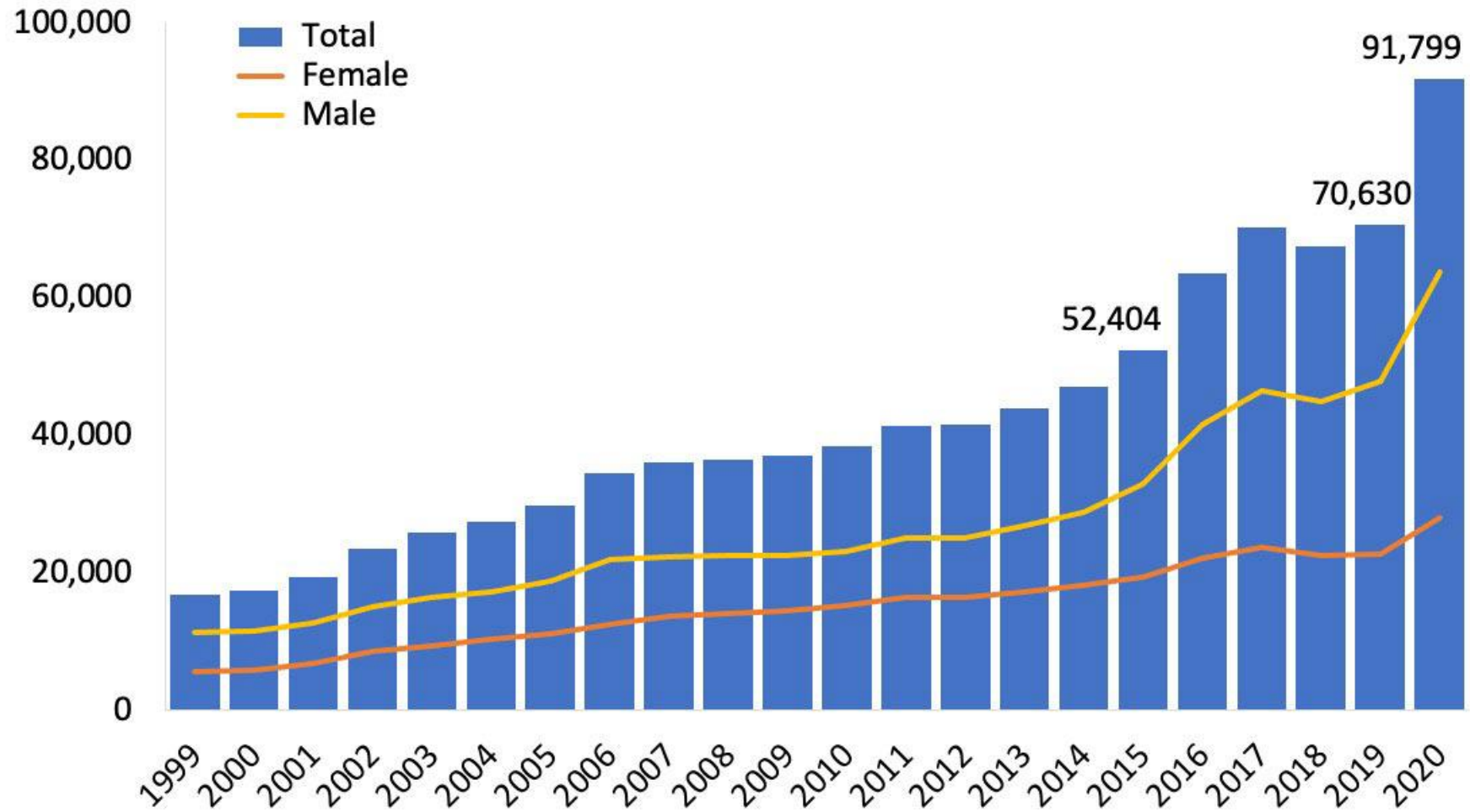
Natural and Semi-Synthetic Opioids
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Wave 1:
Rise in Prescription Opioid Deaths Overdose Deaths

Wave 2:
Rise in Heroin Overdose Deaths

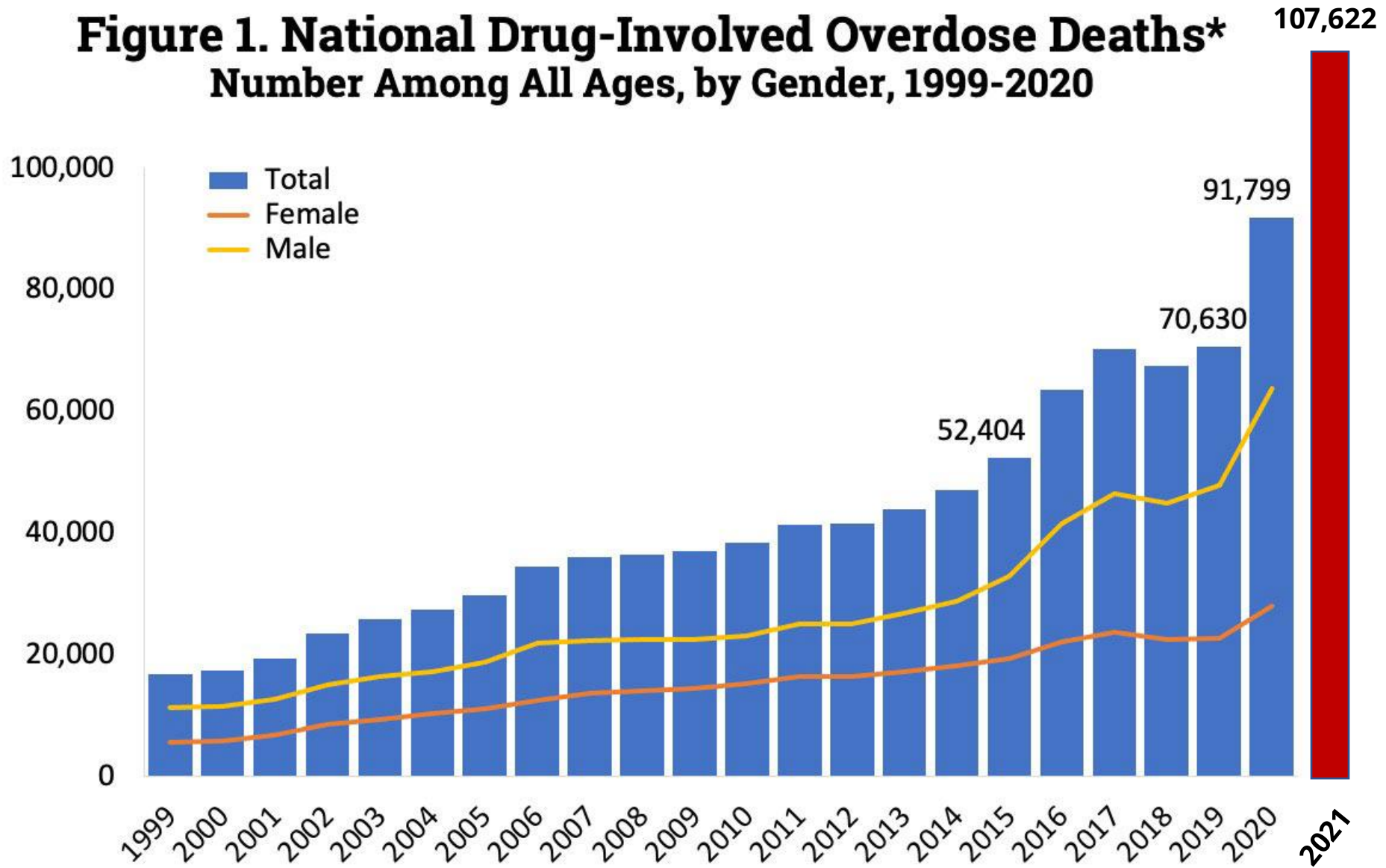
Wave 3:
Rise in Synthetic Opioid Overdose Deaths

Figure 1. National Drug-Involved Overdose Deaths* Number Among All Ages, by Gender, 1999-2020



*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2020 on CDC WONDER Online Database, released 12/2021.

**Figure 1. National Drug-Involved Overdose Deaths*
Number Among All Ages, by Gender, 1999-2020**

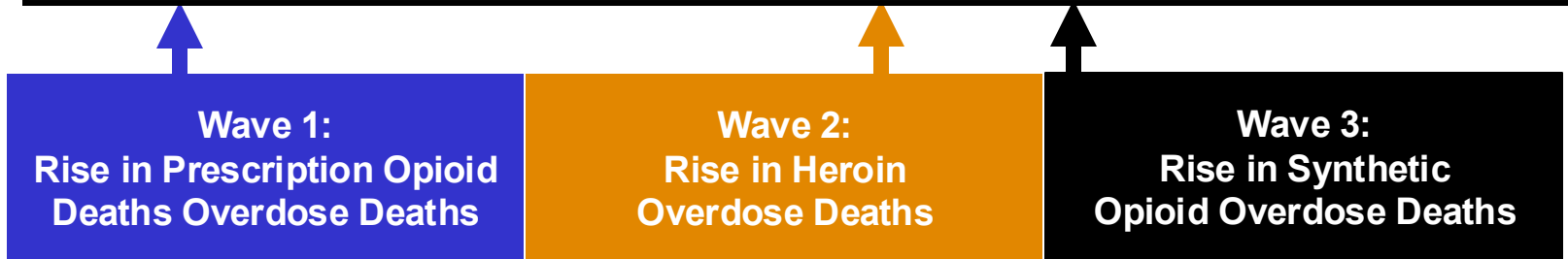
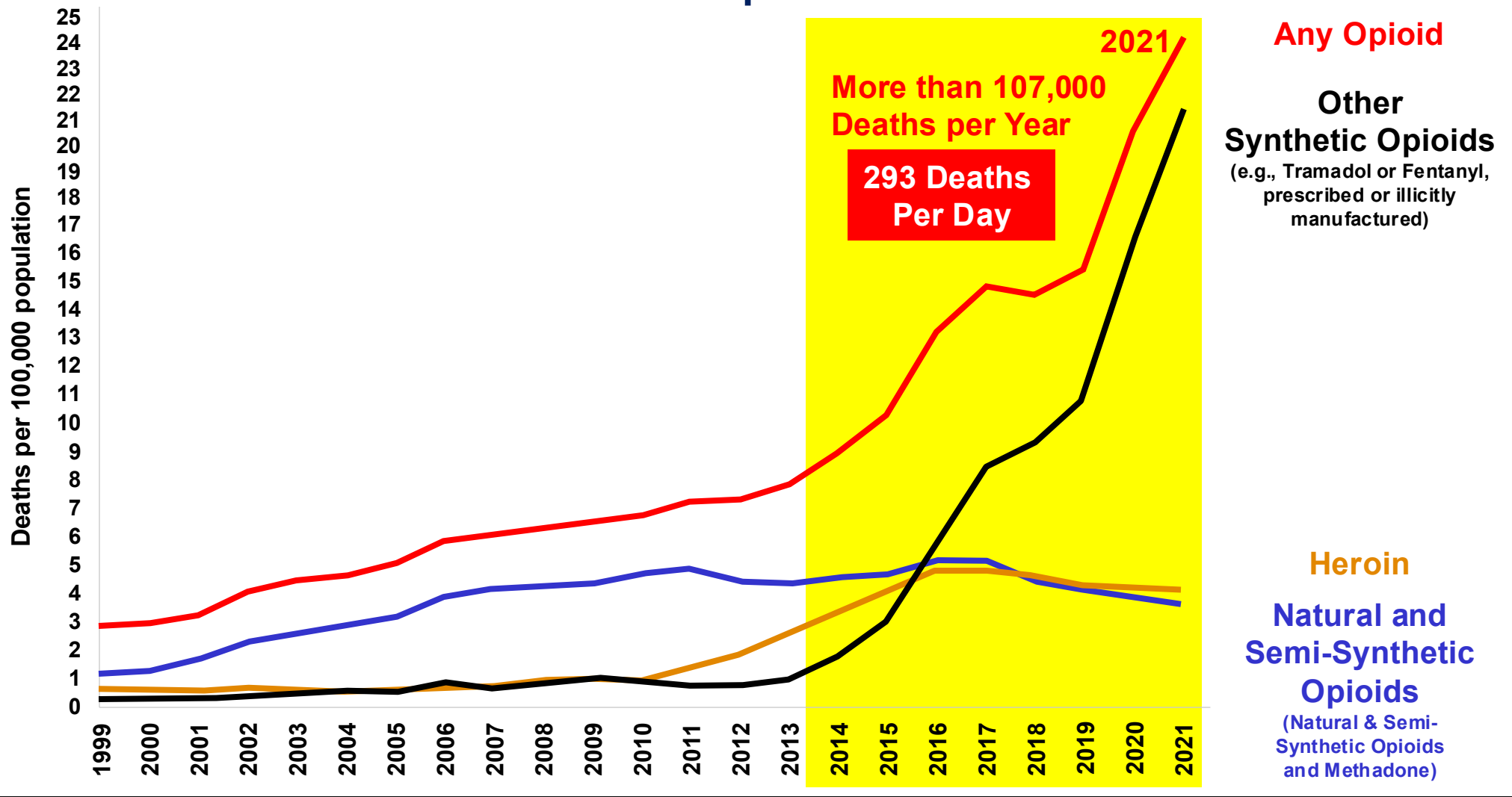


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Heroin
Natural and Semi-Synthetic Opioids
(Natural & Semi-Synthetic Opioids and Methadone)



Popular Emoji Drug Codes

Oxycodone



Xanax®



Percocet®



Adderall®



W
C
a
DEA
num
leas
dea



Other Emoji Drug Codes

Cocaine



Meth



Heroin



Marijuana



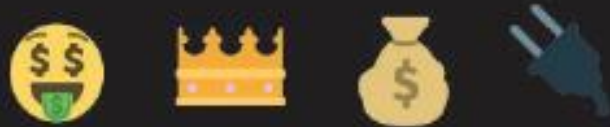
MDMA and Mollies



Cough Syrup



Drug Dealer Adverting that they Sell/Dealer



High Potency



Mushrooms



Universal for Drugs



Large Batch/Amount



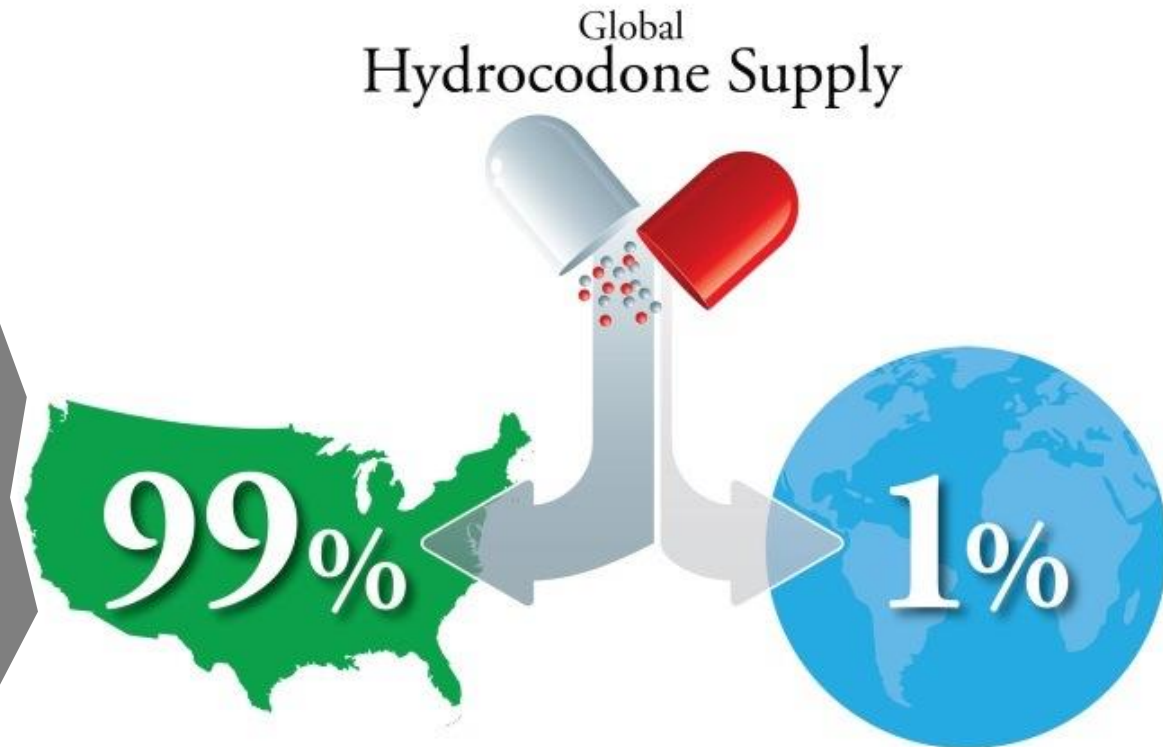
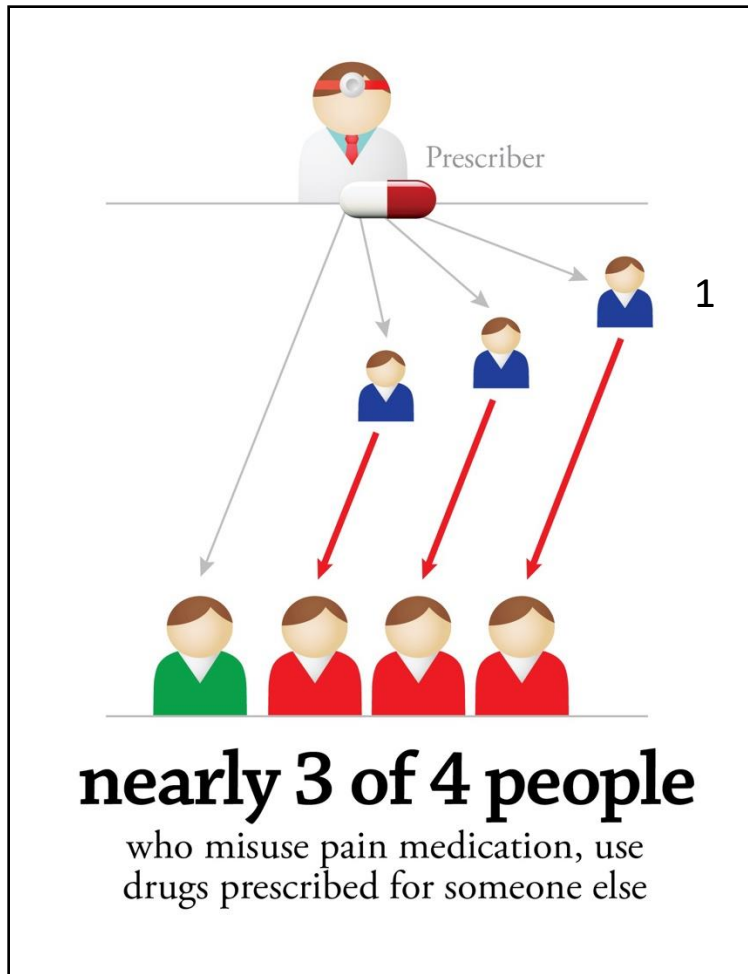
Combination Emoji Drug Codes

 = Package Arrived

 = Mobile / Delivery

100pk = 100pk = 100 pills

W
C
a
DEA
num
leas
dea



1. International Narcotics Control Board 2008.

http://www.incb.org/documents/Publications/AnnualReports/AR2009/AR_09_English.pdf. Accessed June 15, 2013.

2. *Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings*, NSDUH Series H-41, HHS Publication No. (SMA) 11-4658. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011.

Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least **3** other drugs.

Heroin is a highly addictive opioid drug with a high risk of overdose and **death** for users.

People who are addicted to...



ALCOHOL

are

2x



MARIJUANA

are

3x



COCAINE

are

15x



Rx OPIOID PAINKILLERS

are

40x

...more likely to be addicted to heroin.

SOURCE: National Survey on Drug Use and Health (NSDUH), 2011-2013.

Centers for Disease Control.

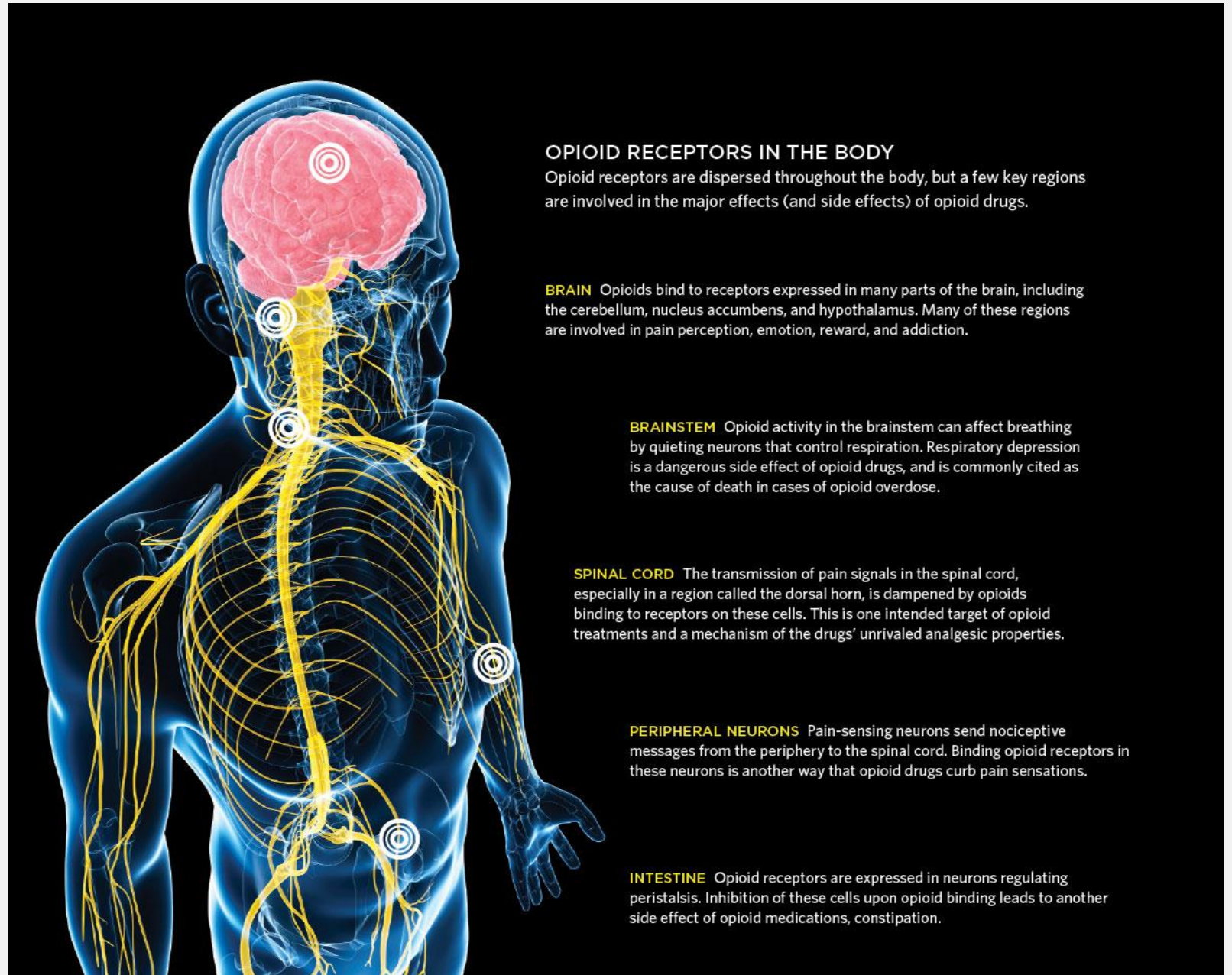
Available at <http://www.cdc.gov/vitalsigns/heroin/infographic.html#responding>.

Overdose Comparison



The extremely low volume of Fentanyl and Carfentanyl required for a life threatening overdose **poses an enormous threat to the public and caregivers.**

Opioid Receptors



The Opioid Crisis: A Reaction from Young Adults



David Grinsfelder

**TMIT Global Opioid Team
Berkley Alum
Former Amazon Media Staff
MBA Student UCLA 2025**



The Opioid Crisis: **A Message From the Frontline**



Gregory H. Botz, MD, FCCM

**Professor of Anesthesiology and Critical Care
UT MD Anderson Cancer Center, Houston, TX
Adjunct Clinical Professor, Department of
Anesthesiology
Stanford University School of Medicine,
Stanford, CA**

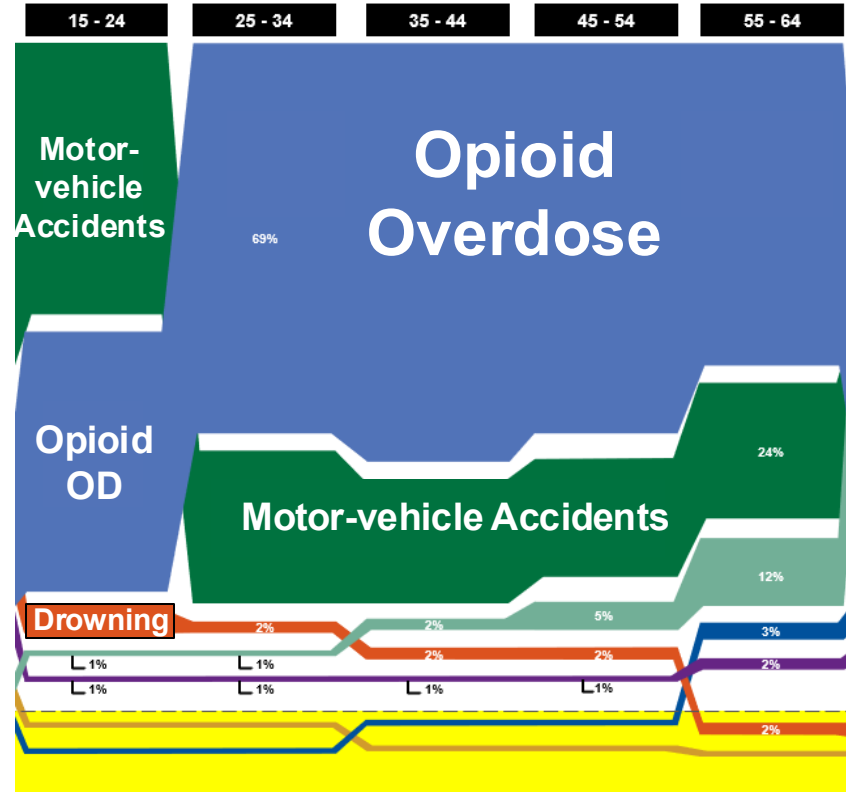
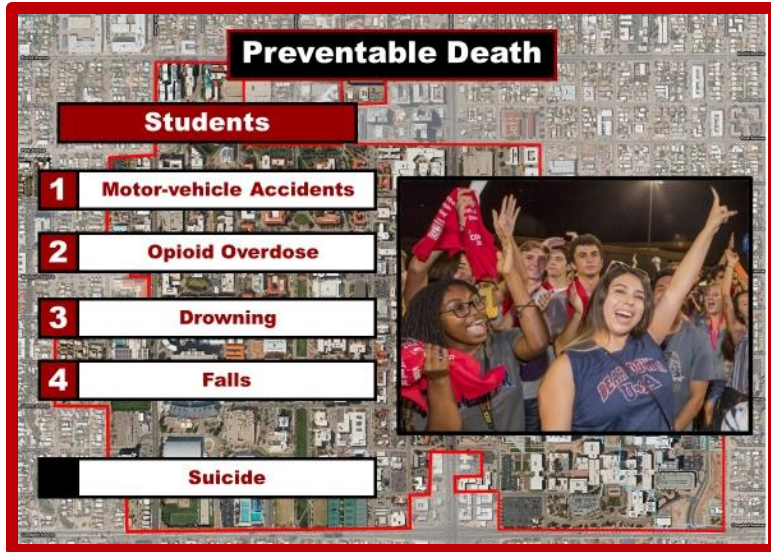
Safety of Rising Freshmen: Battling Failure to Rescue



Top Causes of Unintentional Death By Age - 2020

2020 Data

Students

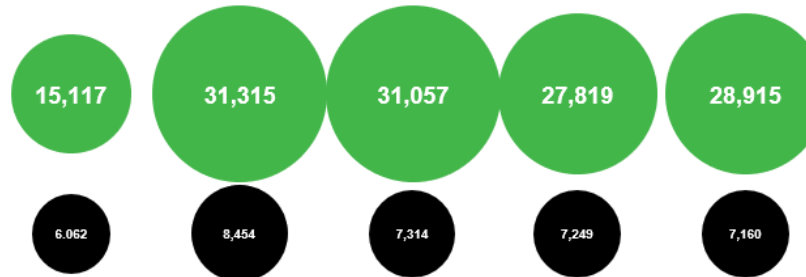


Faculty & Staff



Total unintentional deaths by age group

Total Suicide Deaths: 44,298



Source: Adapted from the National Safety Council Injury Facts, 2020 Edition

Freshmen Survive & Thrive™ Checklists

High School Freshmen:

Basic Actions:

- Phone 911 – Automatically call ICE Parents
- Know Local Hospitals – Level 1 Trauma Centers
- Review Family FEMA Checklist for Disasters

Sudden Cardiac Arrest:

- Consider Cardiac Screening – EKG & Ultrasound
- Get CPR-AED Certified

Choking & Drowning

- Learn Heimlich Maneuver & Rescue Position

Life Threatening Allergies

- Venom, Meds, Food Allergies and Epinephrine Auto-injectors

Opioids and Poisoning

- Counterfeit Pills, Fentanyl, THC, and Nicotine Poisoning
- Vaping Dangers
- Narcan and Rescue Skills

Major Trauma

- Stop the Bleed Training
- Understanding Concussions

Infections

- Clean a Cut Save a Life
- COVID, Flu, and Pandemics

Transportation Accidents

- Non-traffic Drive-over Accidents
- Traffic Accidents, Risk Taking, and Substance Impairment

Bullying & Suicide

- Physical, Emotional, and Cyber-bullying
- Suicide Risk and Rescue

College Freshmen:

Basic Actions:

- Medical Power of Attorney – college, home, and recreation US States
- Phone 911 – Automatically call ICE – Parents or Another Adult
- Know Local Hospitals – Level 1 Trauma Centers near College

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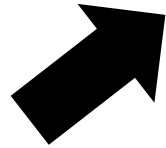
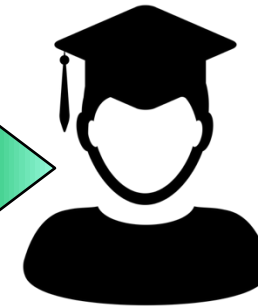
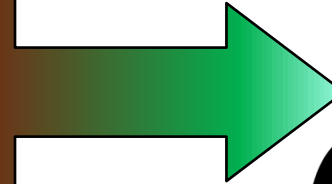
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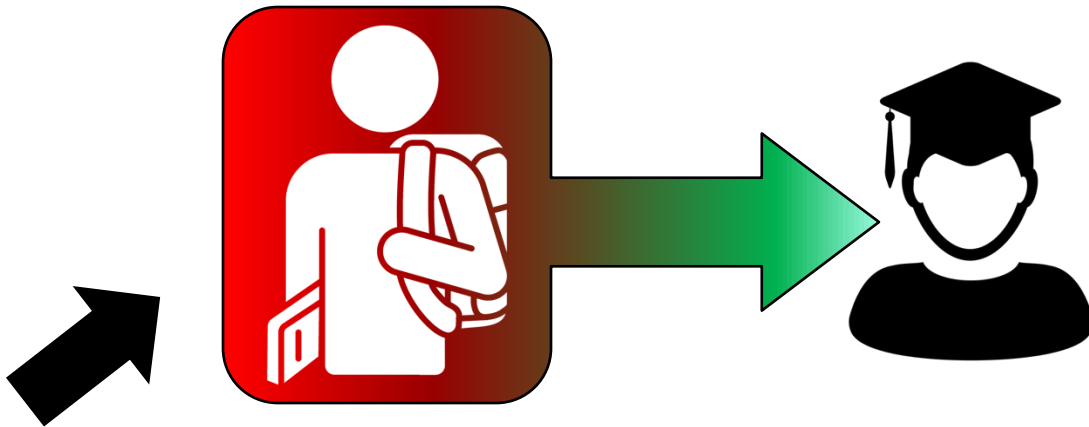
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High School Freshmen



College Freshmen



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The Opioid Crisis: **A Message To Rising Freshmen**



Gregory H. Botz, MD, FCCM

**Professor of Anesthesiology and Critical Care
UT MD Anderson Cancer Center, Houston, TX
Adjunct Clinical Professor, Department of
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Stanford University School of Medicine,
Stanford, CA**



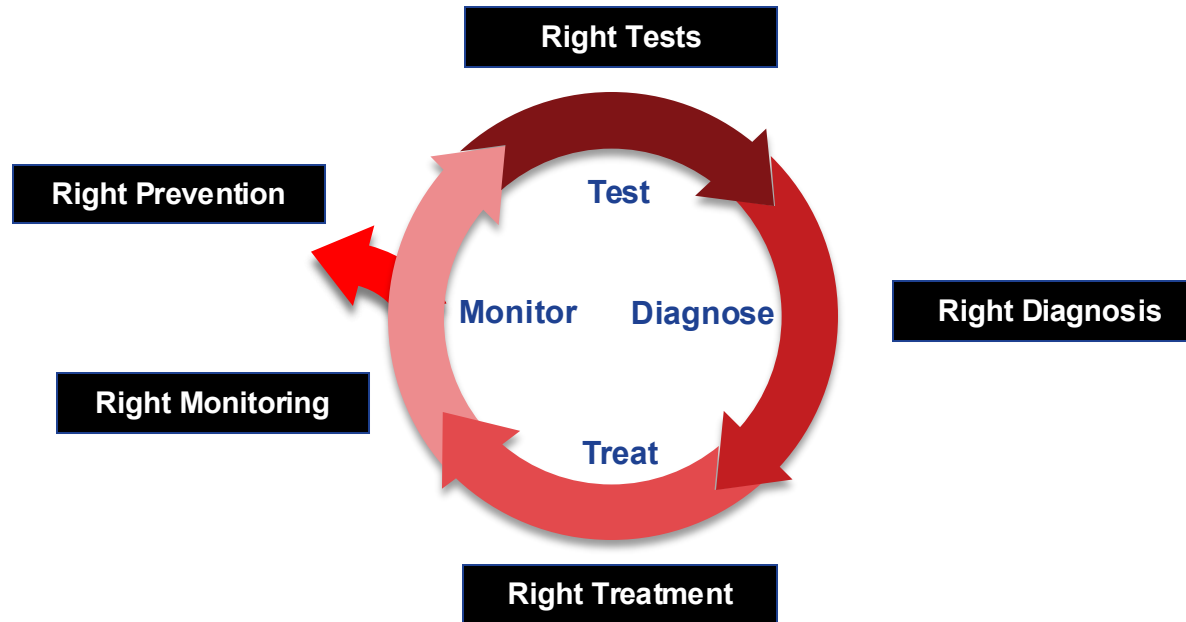
The 5 Rights of Pain Management



Gladstone C. McDowell, II, MD

Medical Director, Integrated Pain Solutions
Columbus, OH
Director, Task Force Leader
Texas Medical Institute of Technology (TMIT)
Austin, TX

The 5 Rights of Pain Care[®]



Right Tests: Caregivers and patients need to make sure that the right tests are undertaken to make the right diagnosis of the sources of pain.

Right Diagnosis: Pain often has causes, requiring a thoughtful approach to understanding the pain generators in order to undertake the right treatment.

Right Treatment: Optimal pain relief often requires an integrated strategy of multiple tactics. The right combination with a team-based approach has enormous potential.

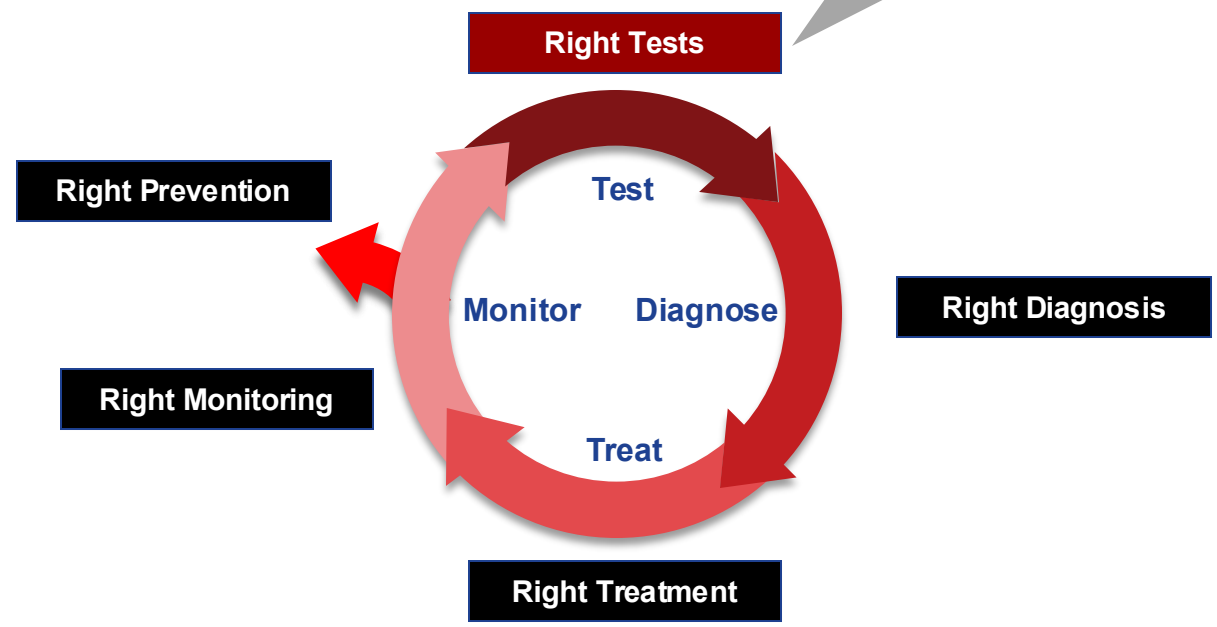
Right Monitoring: When caregivers, patients, and families record the impact of pain care, the tactics can be fine-tuned to the patient and an integrated approach can be taken.

Right Prevention: Certain pain scenarios are related to what patients are doing in their daily lives. For instance, back pain can be impacted by safer ways of doing work and exercise can strengthen muscular support and a reduction in pain generation.

Source: Denham, CR; McDowell, GM CareUniversity CME Program

The 5 Rights of Pain Care[®]

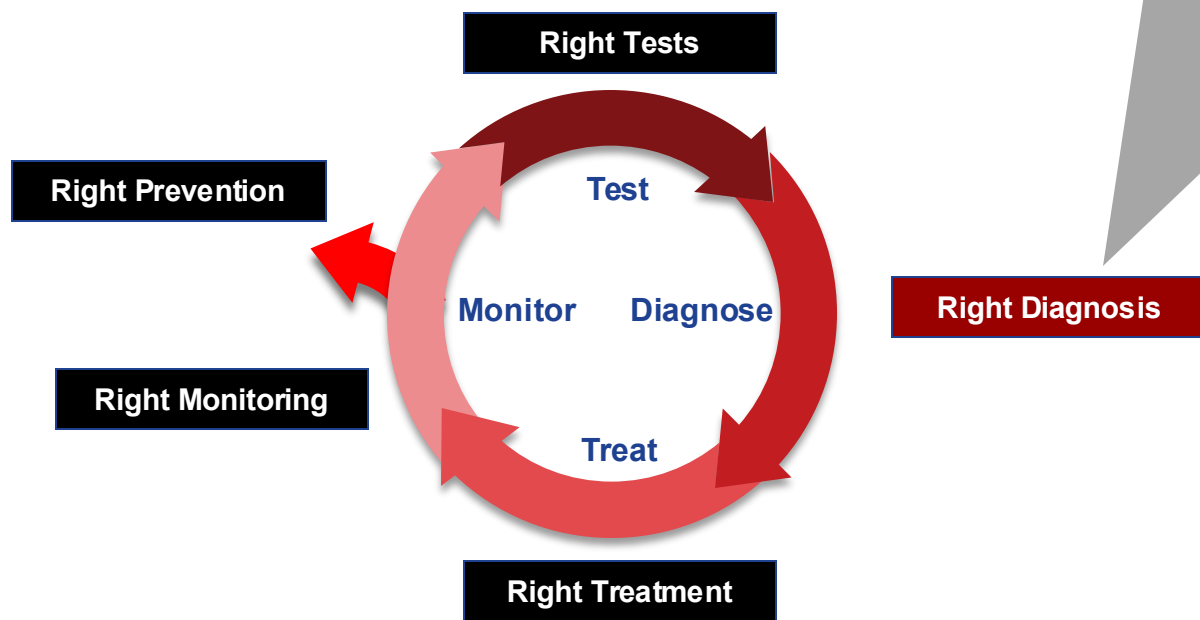
Right Tests: Caregivers and patients need to make sure that the right tests are undertaken to make the right diagnosis of the sources of pain.



- **Pain is Subjective:** Many factors can impact pain age, gender, culture, communication, experience, and genetics are all important factors.
- **What are the Pain Generators:** The most important factor here is the history and physical exam.
- **Imaging is Important:** MRI, CT, ultrasound, PET, bone scans, and plain films may all be important.
- **Lab Work:** Such as Vitamin D, renal function, hepatic function, and urine drug screen, and pharmaco-genomics. Metabolism is important and structures involved in processing pain are important.

Source: Denham, CR; McDowell, GM CareUniversity CME Program

The 5 Rights of Pain Care[®]

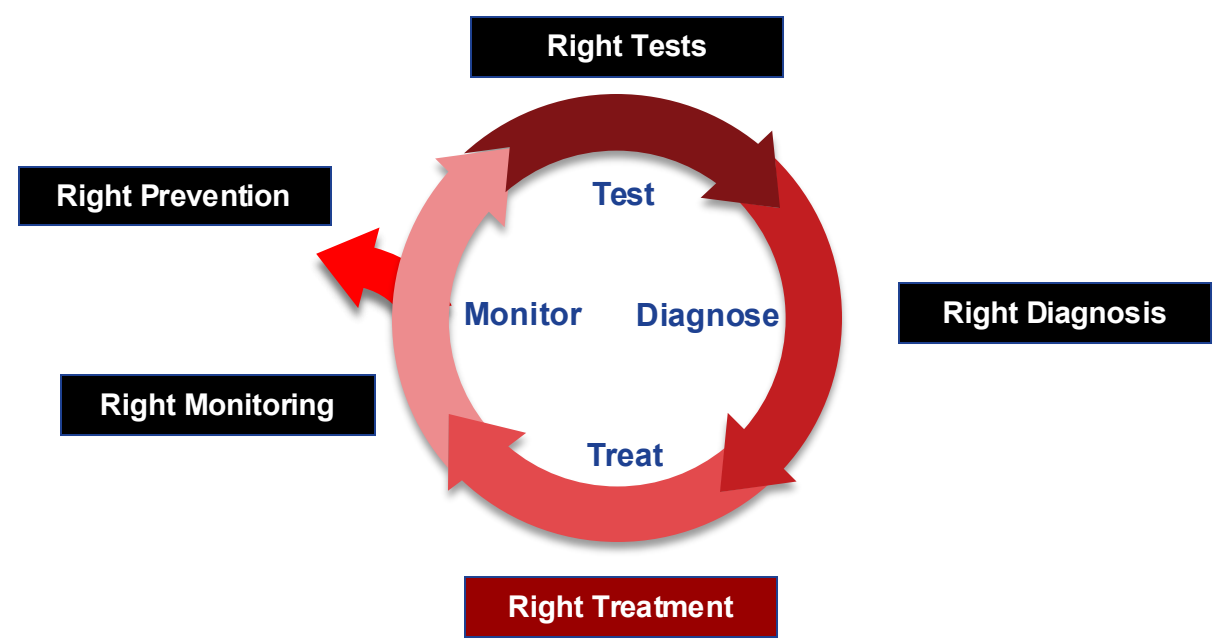


Right Diagnosis: Pain often has causes requiring a thoughtful approach to understanding the pain generators in order to undertake the right treatment.

- **Causes Must Be Understood:** The pain generators are important to be fully understood.
- **Look Beyond Global Pain Approach:** When we understand the pain generators, we can much more effectively map the proper pain solutions against those generators rather than a global approach using opioids.
- **Fine Tuned Solutions:** We can much more effectively care for our patients over time if we have a solid grasp of the evolution of the pain scenarios that are negatively impacting their lives.

Source: Denham, CR; McDowell, GM CareUniversity CME Program

The 5 Rights of Pain Care[®]



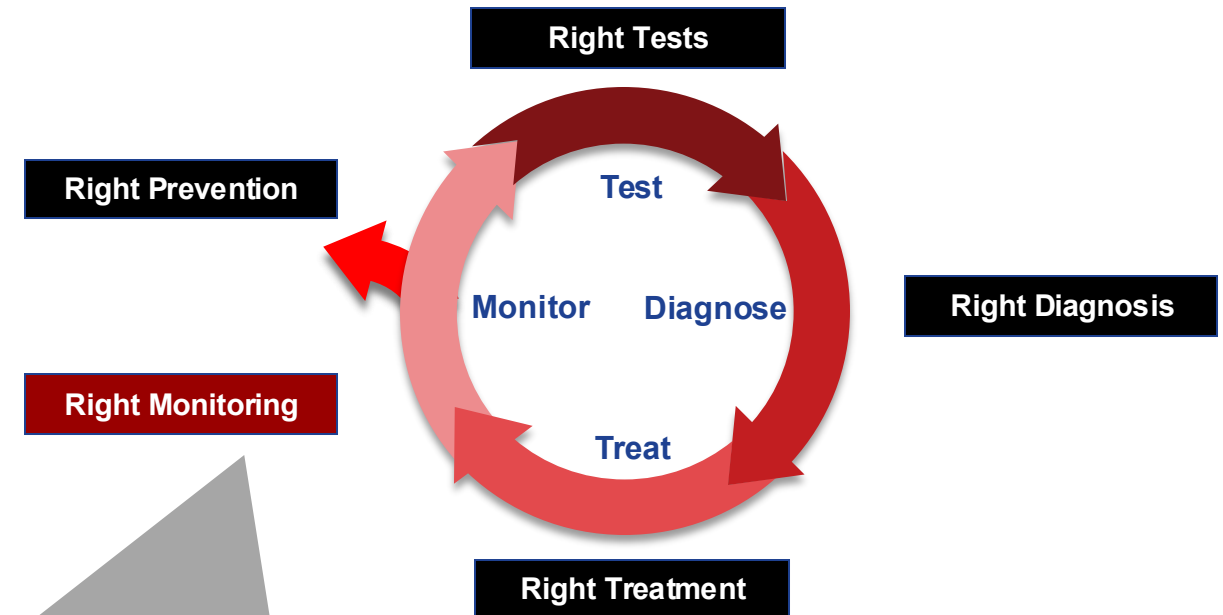
- **Right Combination:** An integrated team based approach with the right caregivers providing the proper interventions at the right time..
- **Comprehensive Medical Management:** Non-opioid approaches and comprehensive approaches that use them targeting the pain generators with carefully laid plans.
- **Integrative Care Tools:** Acupuncture, chiropractors, healing touch, physical therapy, water aerobics, healing touch, and yoga have great value.
- **Minimally Invasive Procedures:** Injections of steroids, spinal cord stimulators, targeted drug delivery with non-opioids may be much better than opioids. These can prevent surgery in some patients.

Right Treatment: Optimal pain relief often requires an integrated strategy of multiple tactics. The right combination with a team-based approach has enormous potential.

Source: Denham, CR; McDowell, GM CareUniversity CME Program

The 5 Rights of Pain Care[®]

- **Historically Poor Monitoring:** In the past we probably did not monitor patients well enough during and after treating them.
- **Carefully Study Baseline Pain Control:** We need to carefully monitor patients through initial interventions and use the baseline to compare against their evolution over time.
- **Lab Work:** Metabolic panels, CBC, testosterone, estradiol, and comparisons to initial lab work.
- **Compliance and Adherence:** Key to make sure patients are following directions properly.
- **Pain Agreements:** We hold patients to them to keep their commitments.

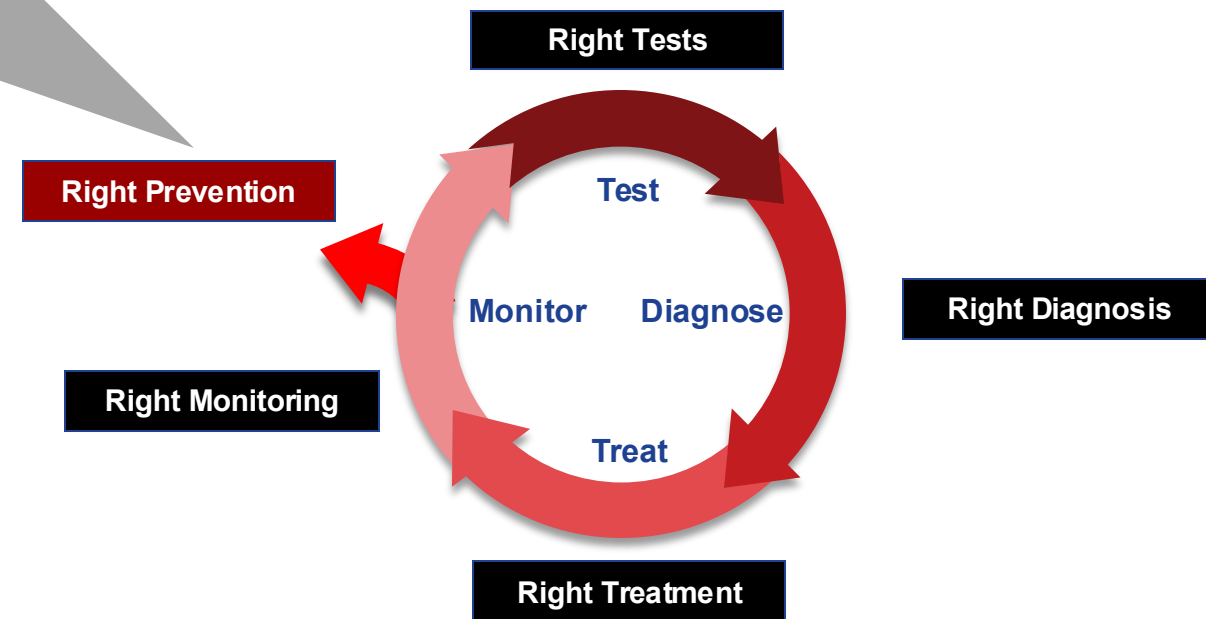


Right Monitoring: When caregivers, patients, and families record the impact of pain care, the tactics can be fine-tuned to the patient and an integrated approach can be taken.

Right Prevention: Certain pain scenarios are related to what patients are doing in their daily lives. For instance, back pain can be impacted by safer ways of doing work and exercise can strengthen muscular support and a reduction in pain generation.

- **Back Pain:** How daily work and physical movement is undertaken can have real impact on back pain.
- **Exercise:** Can strengthen the core and reduce the risk for pain generation to occur.
- **Sit – Stand Desks:** Allow patients to get up more often, maintain better posture, and reduce risk for pain over time.
- **Movement and Stretching:** Regular movement and stretching can prevent pain scenarios.
- **Physical Therapy:** We often have patients see such therapists to help them reduce the risk for the pain scenario to return.

The 5 Rights of Pain Care®



Source: Denham, CR; McDowell, GM CareUniversity CME Program



The Opioid Crisis: Security Leader Perspective



Chief Bill Adcox

**Chief Security Officer
MD Anderson Cancer Center
Chief of Police – UT Health Science Center
Houston Texas**



"AMERICAN CARTEL"

INSIDE THE BATTLE TO BRING DOWN THE OPIOID INDUSTRY

Sari Horwitz | Pulitzer Prize-winning reporter, Washington Post/Co-author, "American Cartel"

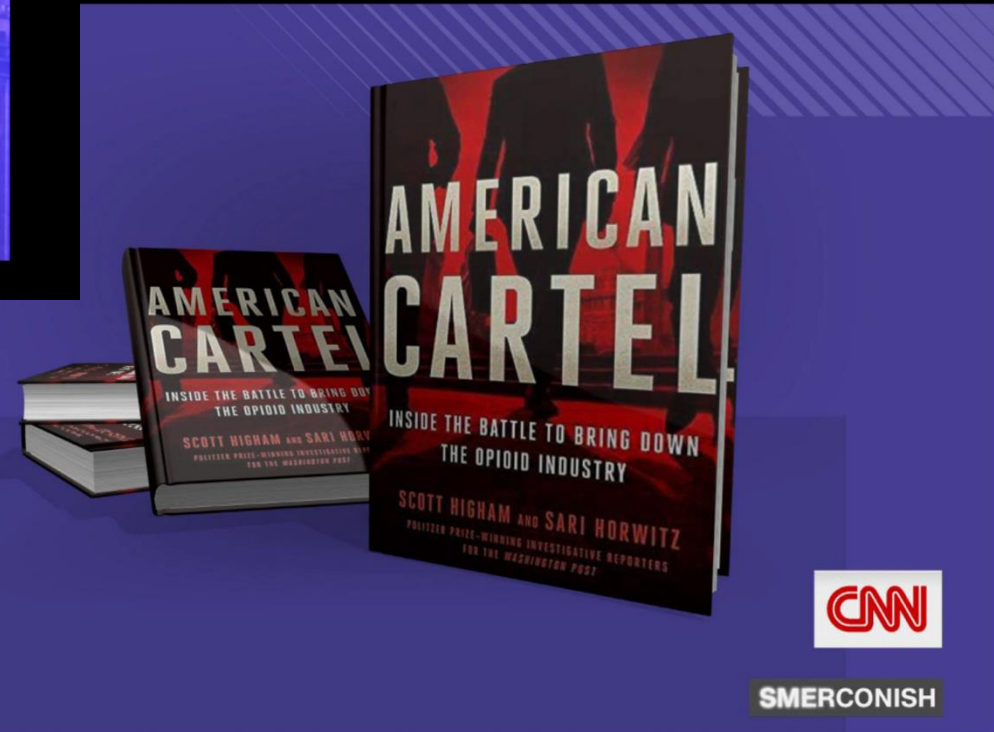




Michael Smerconish
@smerconish



SMERCONISH



SMERCONISH





Voice of Patient and Family



Jennifer Dingman

**Founder, Persons United Limiting
Substandard and Errors in Healthcare
(PULSE), Colorado Division
Co-founder, PULSE American Division
TMIT Patient Advocate Team Member
Pueblo, CO**

Fight the Good Fight...

Finish the Race...

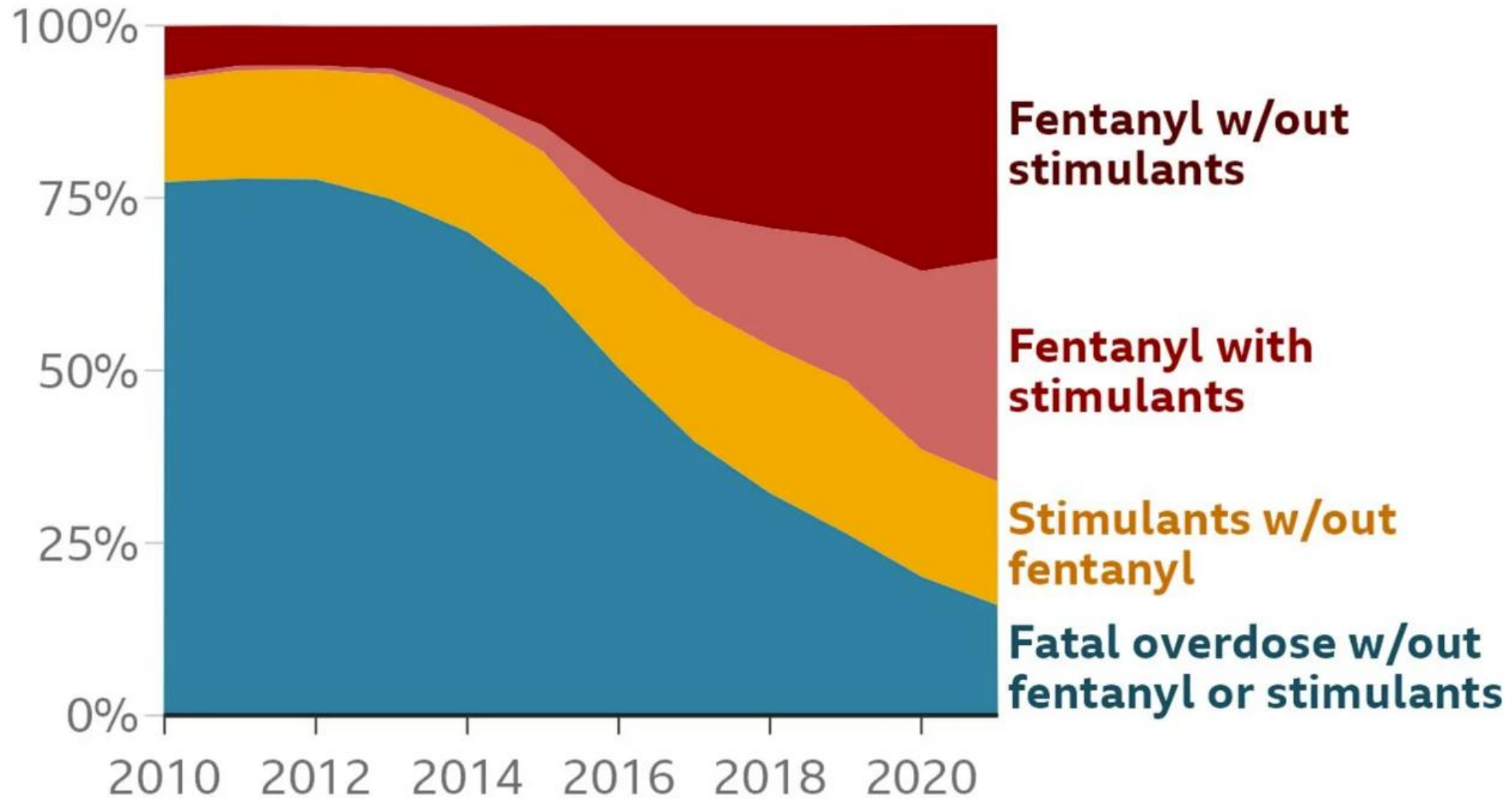
Keep the Faith...

Everyone is a Patient

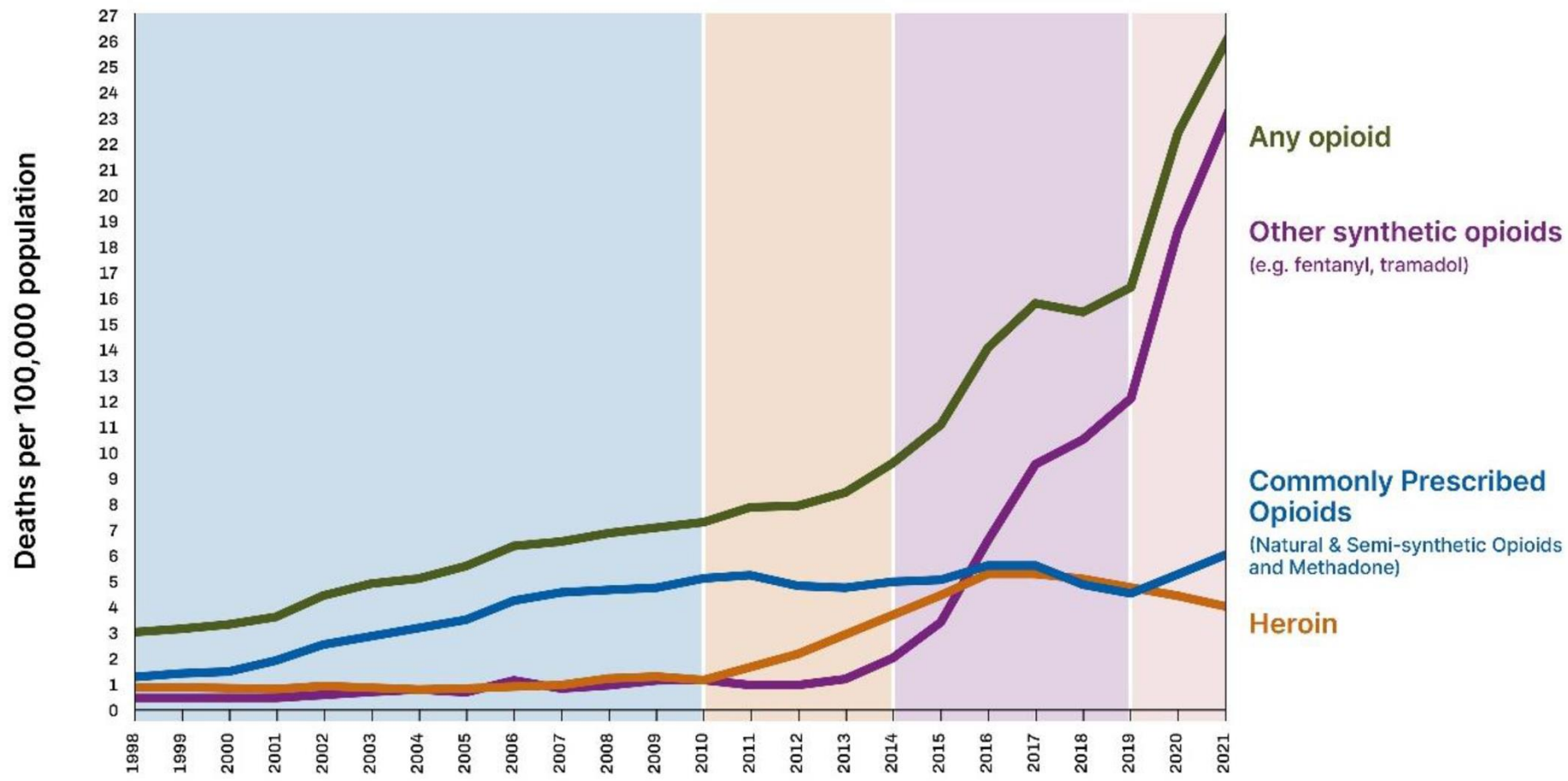
and

Everyone CAN BE a Caregiver

Additional Resources



Source: Charting the fourth wave, Friedman/Shover 2023



FIRST WAVE (1988–2010)

Rise in Prescription opioid overdose deaths

SECOND WAVE (2010–2014)

Rise in heroin overdose deaths

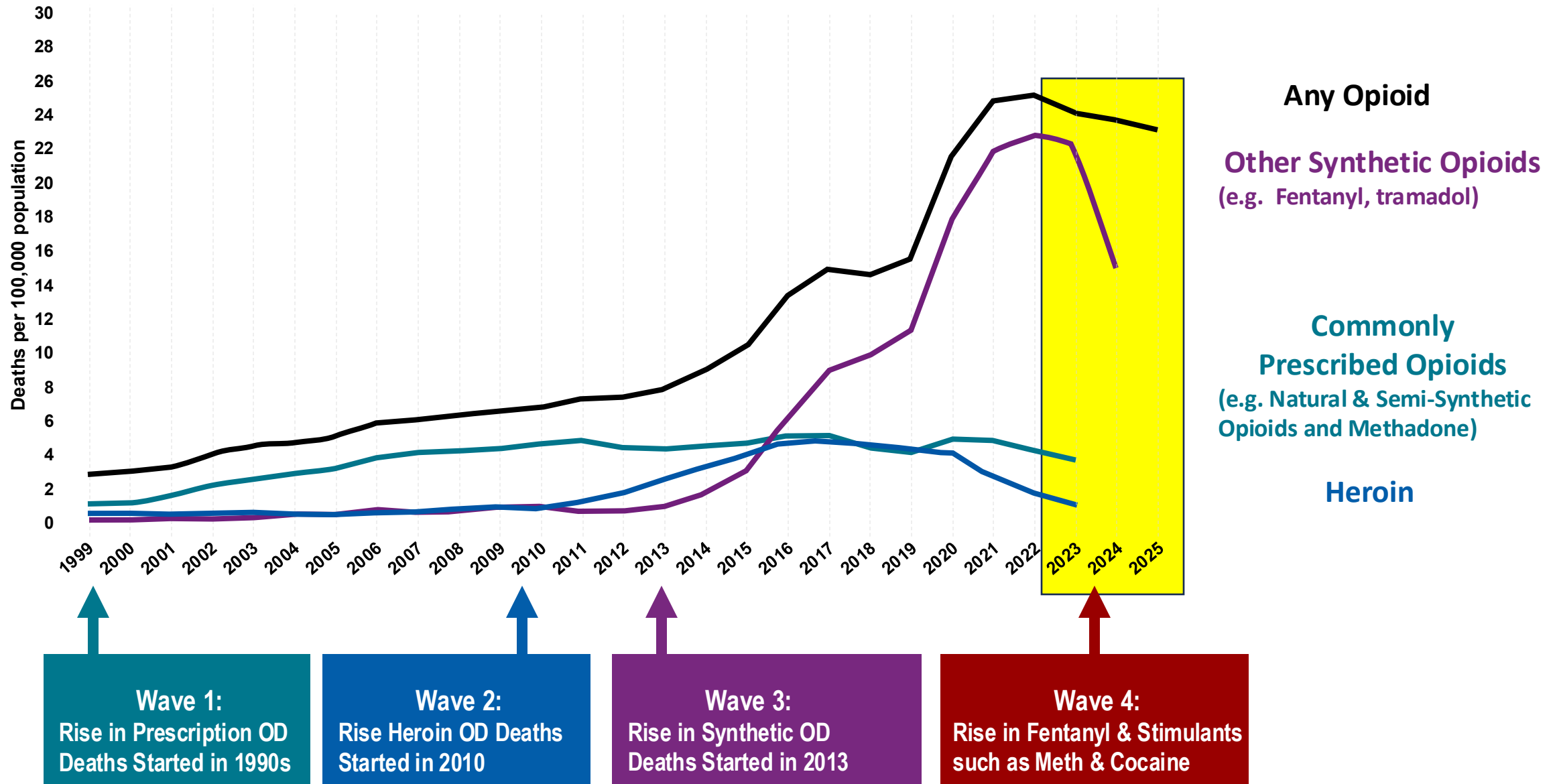
THIRD WAVE (2014–2019)

Rise in strong synthetic opioid (e.g. fentanyl) overdose deaths

FOURTH WAVE (2019–)

Rise in combination of psychostimulant drugs and strong synthetic opioids

Four Waves of Overdose Deaths



SOURCE of Waves 1-3: CDC/NCHS, National Vital Statistics System 2024