The Opioid Crisis: First Responder Impact

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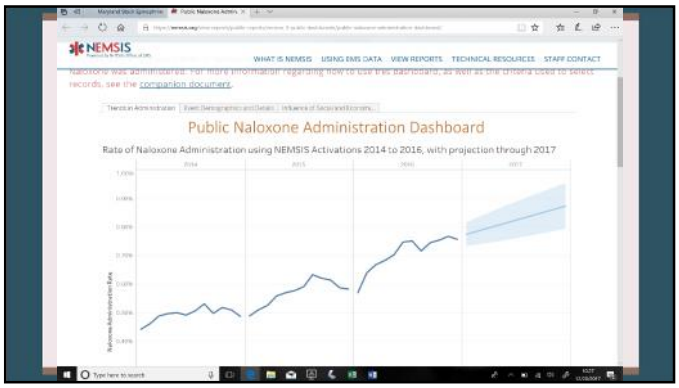
National Highway Traffic Safety Administration

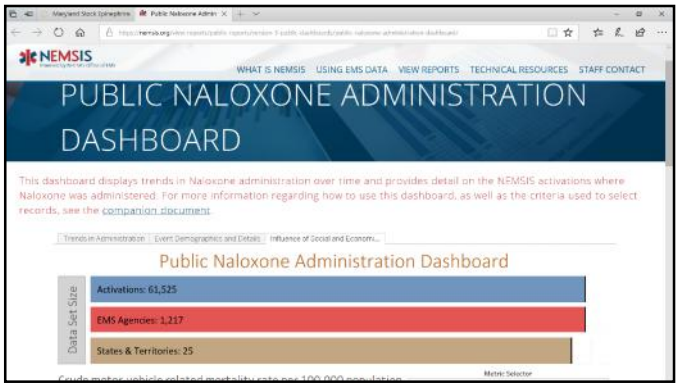
No Conflicts to declare other than NHTSA and Caroline County EMS

NAEMSP® Annual Meeting | January 8-13, 2018 | Manchester Grand Hyatt | San Diego, CA

Objectives

- Describe the magnitude of the opioid crisis to EMS responders (in view of risk)
- Identify clues to assist in categorizing the potential risk to EMS responders
- Outline the appropriate PPE tiered response based on potential risk factors at the scene


NEMSIS
WHAT IS NEMSIS
USING EMS DATA
VIEW REPORTS
TECHNICAL RESOURCES
STAFF CONTACT
Public Naloxone Administration Dashboard
Rate of Naloxone Administration using NEMSIS Activations 2014 to 2016, with projection through 2017


NEMSIS
WHAT IS NEMSIS
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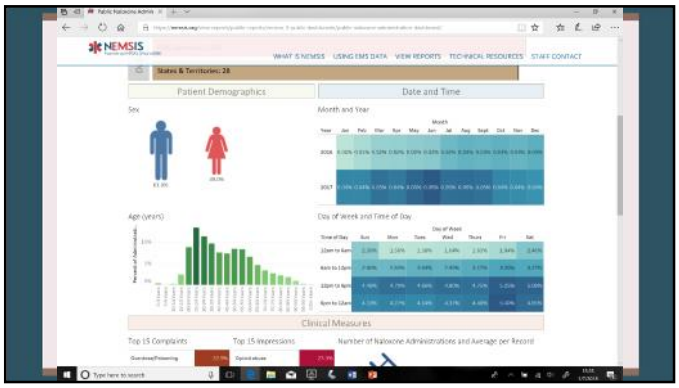
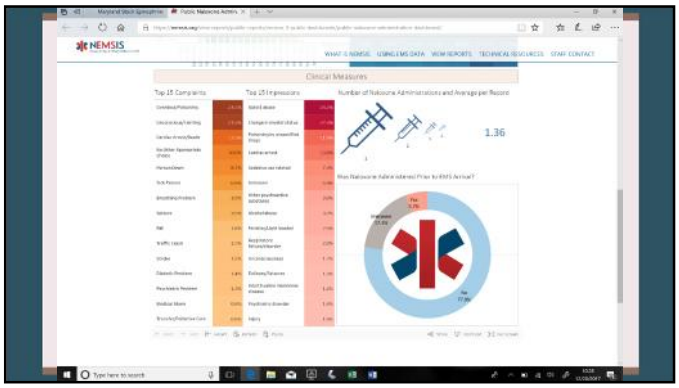
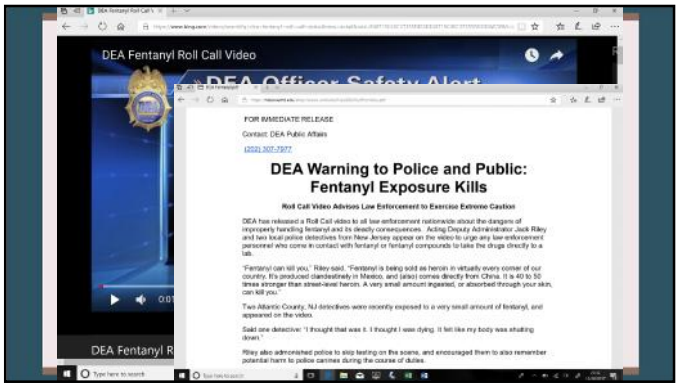
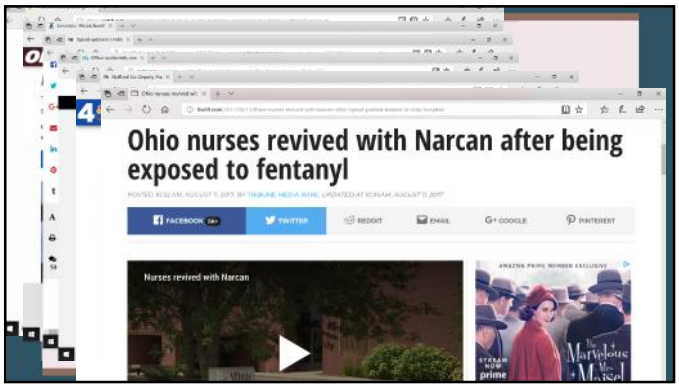
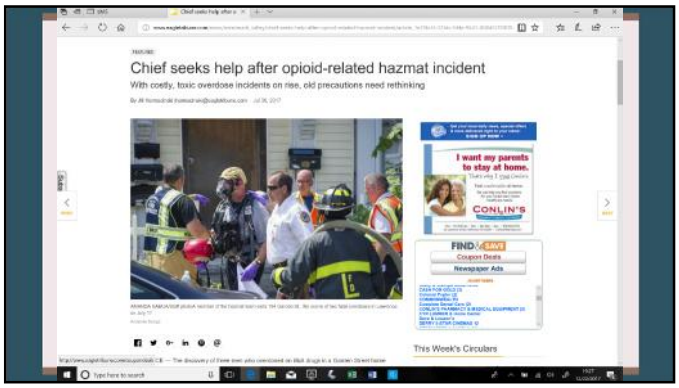
PUBLIC NALOXONE ADMINISTRATION DASHBOARD
This dashboard displays trends in Naloxone administration over time and provides detail on the NEMSIS activations where Naloxone was administered. For more information regarding how to use this dashboard, as well as the criteria used to select records, see the companion document
Public Naloxone Administration Dashboard
Data Set Size
Activations: 61,525
EMS Agencies: 1,217
States & Territories: 25


NEMSIS
Patient Demographics
Date and Time
Clinical Measures


NEMSIS
Clinical Measures
1.36


DEA Fentanyl Roll Call Video
FOR IMMEDIATE RELEASE
DEA Warning to Police and Public:
Fentanyl Exposure Kills
Roll Call Video Advises Law Enforcement to Exercise Extreme Caution





Risks of Exposure to first responders on scene

- Injection
  - IV / IM / SQ
- Inhalation
  - Vapor
  - Powder
- Ingestion
- Dermal
  - Skin
  - Mucous membranes




Appropriate PPE

- Gloves
- Mask
- Goggles
- Suit
- SCBA







ACMT and AACT Position Statement: Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders

The position of the American College of Medical Toxicology (ACMT) and American Academy of Clinical Toxicology (AACT), is as follows:

Fentanyl and its analogs are potent opioid receptor agonists, but the risk of clinically significant exposure to emergency responders is extremely low. To date, we have not seen reports of emergency responders developing signs or symptoms consistent with opioid toxicity from incidental contact with opioids. Incidental dermal absorption is unlikely to cause opioid toxicity. For routine handling of drug, nitrile gloves provide sufficient dermal protection. In exceptional circumstances where there are drug particles or droplets suspended in the air, an N95 respirator provides sufficient protection. Workers who may encounter fentanyl or fentanyl analogs should be trained to recognize the signs and symptoms of opioid intoxication, have naloxone readily available, and be trained to administer naloxone and provide active medical assistance. In the unlikely event of poisoning, naloxone should be administered to those with objective signs of hypoventilation or a depressed level of consciousness, and not for vague concerns such as dizziness or anxiety. In the absence of prolonged hypoxia, no persistent effects are expected following fentanyl or fentanyl analog exposures. Those with small subclinical exposures and those who awaken normally following

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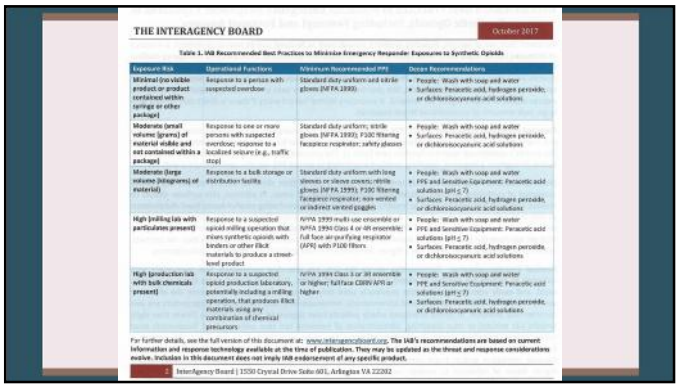
Recommended Best Practices to Minimize Emergency Responder Exposures to Synthetic Opioids, Including Fentanyl and Fentanyl Analogs

Increased illicit use of opioids, including synthetic opioids such as fentanyl and its analog carfentanil, is a source of increased risk to responders. Most routine encounters between patients or detainees and emergency medical services (EMS) or law enforcement personnel do not present a significant threat of toxic exposure. Synthetic opioids are highly toxic organic solids that have been found as powders, pills, liquids, and nasal sprays. While specific exposure standards do not exist, the pharmaceutical industry uses an estimated occupational inhalation exposure limit of 0.0001 mg/m³ for fentanyl. A secondary dermal hazard exists if there is direct skin contact with large, bulk amounts of concentrated threat materials.



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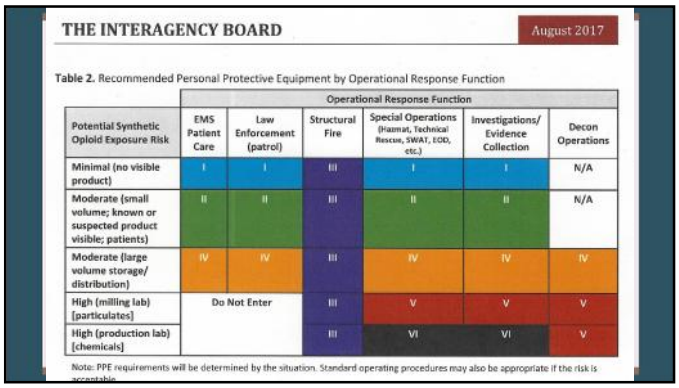
October 2017

Table 1. IAB Recommended Best Practices to Minimize Emergency Responder Exposures to Synthetic Opioids

Exposure Risk	Operational Functions	Minimum Recommended PPE	Decon Recommendations
Minimal (no visible product or product contained within syringe or other package)	Response to a person with suspected overdose	Standard duty uniform and nitrile gloves (NFPA 1999)	• People: Wash with soap and water • Surfaces: Peracetic acid, hydrogen peroxide, or dichloroisocyanuric acid solutions
Moderate (small volume [grams] of material visible and not contained within a package)	Response to one or more persons with suspected overdose; response to a localized seizure (e.g., traffic stop)	Standard duty uniform; nitrile gloves (NFPA 1999); P100 filtering facepiece respirator; safety glasses	• People: Wash with soap and water • Surfaces: Peracetic acid, hydrogen peroxide, or dichloroisocyanuric acid solutions
Moderate (large volume [kilograms] of material)	Response to a bulk storage or distribution facility	Standard duty uniform with long sleeves or sleeve covers; nitrile gloves (NFPA 1999); P100 filtering facepiece respirator; non-vented or indirect vented goggles	• People: Wash with soap and water • PPE and Sensitive Equipment: Peracetic acid solutions (pH ≤ 7) • Surfaces: Peracetic acid, hydrogen peroxide, or dichloroisocyanuric acid solutions
High (milling lab with particulates present)	Response to a suspected opioid milling operation that mixes synthetic opioids with binders or other illicit materials to produce a street-level product	NFPA 1999 multi-use ensemble or NFPA 1994 Class 4 or 4R ensemble; full face air-purifying respirator (APR) with P100 filters	• People: Wash with soap and water • PPE and Sensitive Equipment: Peracetic acid solutions (pH ≤ 7) • Surfaces: Peracetic acid, hydrogen peroxide, or dichloroisocyanuric acid solutions
High (production lab with bulk chemicals present)	Response to a suspected opioid production laboratory, potentially including a milling operation, that produces illicit materials using any combination of chemical precursors	NFPA 1994 Class 3 or 3R ensemble or higher; full face CBRN APR or higher	• People: Wash with soap and water • PPE and Sensitive Equipment: Peracetic acid solutions (pH ≤ 7) • Surfaces: Peracetic acid, hydrogen peroxide, or dichloroisocyanuric acid solutions

For further details, see the full version of this document at: www.interagencyboard.org. **The IAB's recommendations are based on current information and response technology available at the time of publication. They may be updated as the threat and response considerations evolve. Inclusion in this document does not imply IAB endorsement of any specific product.**



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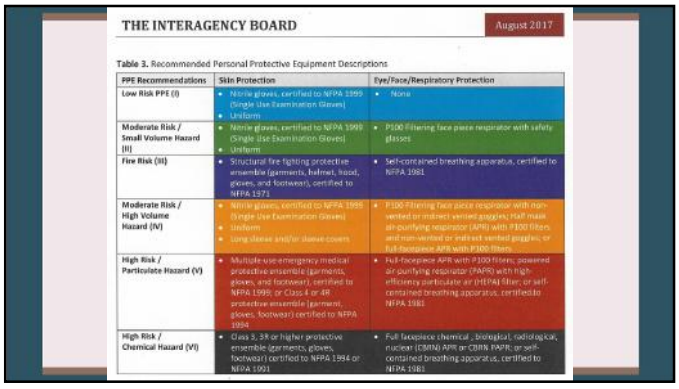
August 2017

Table 2. Recommended Personal Protective Equipment by Operational Response Function

Potential Synthetic Opioid Exposure Risk	Operational Response Function: EMS Patient Care	Law Enforcement (patrol)	Structural Fire	Special Operations (Hazmat, Technical Rescue, SWAT, EOD, etc.)	Investigations/ Evidence Collection	Decon Operations
Minimal (no visible product)	I	I	III	I	I	N/A
Moderate (small volume; known or suspected product visible; patients)	II	II	III	II	II	N/A
Moderate (large volume storage/ distribution)	IV	IV	III	IV	IV	IV
High (milling lab) [particulates]	Do Not Enter		III	V	V	V
High (production lab) [chemicals]			III	VI	VI	V

Note: PPE requirements will be determined by the situation. Standard operating procedures may also be appropriate if the risk is acceptable.



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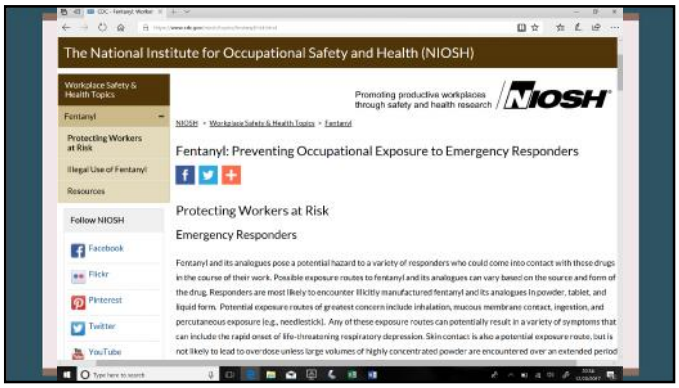
August 2017

Table 3. Recommended Personal Protective Equipment Descriptions

PPE Recommendations	Skin Protection	Eye/Face/Respiratory Protection
Low Risk PPE (I)	• Nitrile gloves, certified to NFPA 1999 (Single Use Examination Gloves) • Uniform	• None
Moderate Risk / Small Volume Hazard (II)	• Nitrile gloves, certified to NFPA 1999 (Single Use Examination Gloves) • Uniform	• P100 filtering face piece respirator with safety glasses
Fire Risk (III)	• Structural fire fighting protective ensemble (garments, helmet, hood, gloves, and footwear), certified to NFPA 1971	• Self-contained breathing apparatus, certified to NFPA 1981
Moderate Risk / High Volume Hazard (IV)	• Nitrile gloves, certified to NFPA 1999 (Single Use Examination Gloves) • Uniform • Long sleeves and/or sleeve covers	• P100 filtering face piece respirator with non-vented or indirect vented goggles; Half mask air-purifying respirator (APR) with P100 filters and non-vented or indirect vented goggles; or Full-facepiece APR with P100 filters
High Risk / Particulate Hazard (V)	• Multiple-use emergency medical protective ensemble (garments, gloves, and footwear), certified to NFPA 1999; or Class 4 or 4R protective ensemble (garment, gloves, footwear) certified to NFPA 1994	• Full-facepiece APR with P100 filters; powered air purifying respirator (PAPR) with high-efficiency particulate air (HEPA) filter; or self-contained breathing apparatus, certified to NFPA 1981
High Risk / Chemical Hazard (VI)	• Class 3, 3R or higher protective ensemble (garments, gloves, footwear) certified to NFPA 1994 or NFPA 1991	• Full facepiece chemical , biological, radiological, nuclear (CBRN) APR or CBRN PAPR; or self-contained breathing apparatus, certified to NFPA 1981


The National Institute for Occupational Safety and Health (NIOSH)
Workplace Safety & Health Topics
Fentanyl
Protecting Workers at Risk
Illegal Use of Fentanyl
Resources
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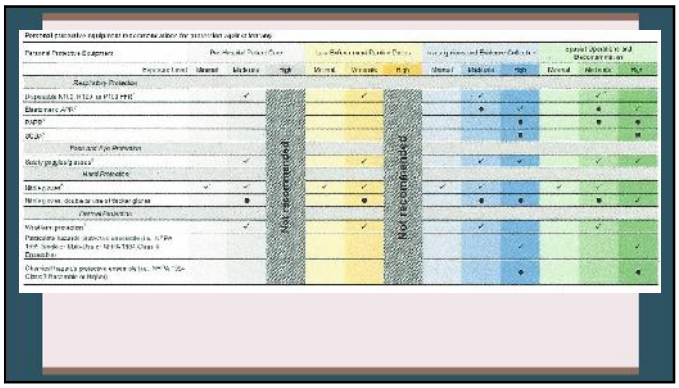
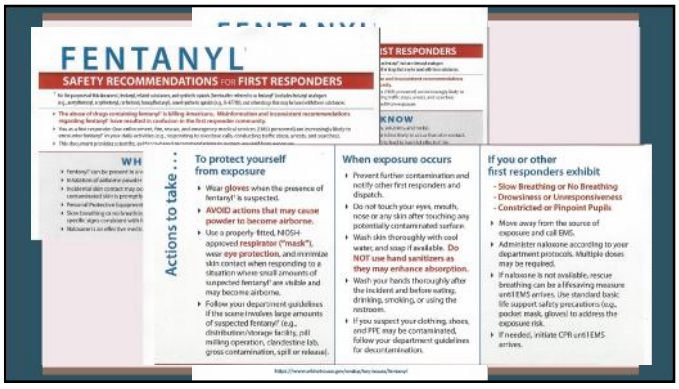
YouTube
Promoting productive workplaces through safety and health research
NIOSH
Fentanyl: Preventing Occupational Exposure to Emergency Responders
Protecting Workers at Risk
Emergency Responders
Fentanyl and its analogues pose a potential hazard to a variety of responders who could come into contact with those drugs in the course of their work. Possible exposure routes to fentanyl and its analogues can vary based on the source and form of the drug. Responders are most likely to encounter illicitly manufactured fentanyl and its analogues in powder, tablet, and liquid form. Potential exposure routes of greatest concern include inhalation, mucous membrane contact, ingestion, and percutaneous exposure (e.g., needlestick). Any of these exposure routes can potentially result in a variety of symptoms that can include the rapid onset of life-threatening respiratory depression. Skin contact is also a potential exposure route, but is not likely to lead to overdose unless large volumes of highly concentrated powder are encountered over an extended period


Not recommended
Not recommended


FENTANYL
SAFETY RECOMMENDATIONS FOR FIRST RESPONDERS
Actions to take . . .
To protect yourself from exposure
Wear gloves when the presence of fentanyl* is suspected.
AVOID actions that may cause powder to become airborne.
Use a properly-fitted, NIOSH-approved respirator ("mask"), wear eye protection, and minimize skin contact when responding to a situation where small amounts of suspected fentanyl* are visible and may become airborne.
Follow your department guidelines if the scene involves large amounts of suspected fentanyl* (e.g., distribution/storage facility, pill milling operation, clandestine lab, gross contamination, spill or release).
When exposure occurs
Prevent further contamination and notify other first responders and dispatch.
Do not touch your eyes, mouth, nose or any skin after touching any potentially contaminated surface.
Wash skin thoroughly with cool water, and soap if available. Do NOT use hand sanitizers as they may enhance absorption.
Wash your hands thoroughly after the incident and before eating, drinking, smoking, or using the restroom.
If you suspect your clothing, shoes, and PPE may be contaminated, follow your department guidelines for decontamination.
If you or other first responders exhibit
- Slow Breathing or No Breathing
- Drowsiness or Unresponsiveness
- Constricted or Pinpoint Pupils
Move away from the source of exposure and call EMS.
Administer naloxone according to your department protocols. Multiple doses may be required.
If naloxone is not available, rescue breathing can be a lifesaving measure until EMS arrives. Use standard basic life support safety precautions (e.g., pocket mask, gloves) to address the exposure risk.
If needed, initiate CPR until EMS arrives.

Scene Safety and Force Protection in the Era of Ultra-Potent Opioids

Michael J. Lynch, MD, Joe Suyama, MD, Francis X. Guyette, MD, MPH

Abstract

Ultra-potent opioids (fentanyl, carfentanil) are now widely available and fueling an epidemic of overdose. First responders are increasingly exposed to these potent narcotics necessitating guidance for scene safety and force protection from medical directors. Reports in lay media have sensationalized accounts of exposure and warn that may end providers to fear providing care to patients suspected of opioid overdose. The likelihood of prehospital providers suffering ill effects from opioid exposure during routine emergency medical services (EMS) operations is extremely low. We propose recommendations to assist medical directors in providing guidance and education to their providers minimizing the risk of provider exposure while allowing the delivery of prompt and appropriate care to patients with suspected overdose.

Key words: overdose; scene safety; carfentanil; EDS.

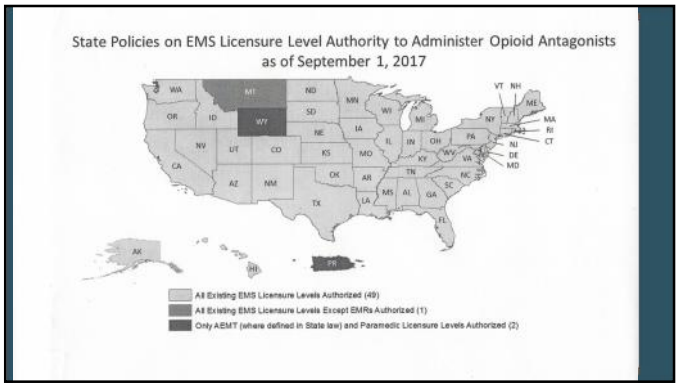
PREHOSPITAL EMERGENCY CARE 2017; Early Online:1–6

resenting the first year in which illicit opioid overdose deaths surpassed prescription opioid deaths.[2] Representative of many communities in the United States, Pennsylvania's Allegheny County, reported fentanyl related deaths surpassing heroin deaths for the first time in 2016[3] (Figure 1). The 2016 DEA Emerging Threat Report identified 15 synthetic opioid and fentanyl analogues including carfentanil and U-47700. Of those 15, nine were reported for the first time in 2016.[4] These findings demonstrate the rapid evolution of available opioids and the surge of potent fentanyl analogues with an associated increase in mortality (Figure 2).

Medical and law enforcement first responders have anecdotally reported observations related to the increasing variety and potency of synthetic opioids which they have encountered. First, it has been widely, though anecdotally, reported that higher doses of


INDICATION: OPIOID OVERDOSE
NALOXONE HCl
ANTIDOTE: NALOXONE


NALOXONE HYDROCHLORIDE


State Policies on EMS Licensure Level Authority to Administer Opioid Antagonists as of September 1, 2017
All Existing EMS Licensure Levels Authorized (49)
All Existing EMS Licensure Levels Except EMRs Authorized (1)
Only AEMT (where defined in State law) and Paramedic Licensure Levels Authorized (2)

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