# Lehigh Valley Health Network LVHN Scholarly Works

**Research Scholars Poster Presentation** 

# Drug-Related Deaths: A Slow-Motion Mass Disaster in Pennsylvania

Gabriella Smith Cedar Crest College

Samuel Land MD

Lehigh Valley Health Network, samuel.land@lvhn.org

Barbara K. Bollinger MD

Lehigh Valley Health Network, barbara k.bollinger@lvh.com

Rameen Starling-Roney M.D.

Lehigh Valley Health Network, ram\_s.starling-roney@lvhn.org

Michael W. Johnson MD., PhD

Lehigh Valley Network, Michael W.Johnson@lvh.org

Follow this and additional works at: https://scholarlyworks.lvhn.org/research-scholars-posters

# Published In/Presented At

Smith, G., Land, S., Bollinger, B., Starling-Roney, R., & Johnson, M. (2016, July, 29) *Drug-Related Deaths: A Slow-Motion Mass Disaster in Pennsylvania*. Poster presented at LVHN Research Scholar Program Poster Session, Lehigh Valley Network, Allentown, PA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.

# **Drug-Related Deaths: A Slow-Motion Mass Disaster in Pennsylvania**

Gabriella Smith, Samuel Land MD, Barbara Bollinger MD, Rameen Starling-Roney MD, and Michael W. Johnson PhD, MD

Lehigh Valley Health Network, Allentown, Pennsylvania

# **BACKGROUND / INTRODUCTION**

- Drug-related deaths are gaining notoriety in the headlines
- Commonly detected drugs in these cases:
  - Heroin
    - Previous heroin epidemic in the 1970's as well as current epidemic (1)
    - Schedule I substance (not accepted for medical use)
    - Highly addictive
    - Quickly metabolizes to mono-acetylmorphine and later morphine
  - Oxycodone
    - Clinically used since 1939
    - Equally as potent as morphine (1)
    - Highly addictive
  - Fentanyl/Acetyl Fentanyl
    - Currently legal and FDA-approved, used clinically since 1963 (1)
    - Illegally synthesized fentanyl (e.g. acetyl fentanyl) not used medically and is 5x more potent than heroin (2)
    - Heroin can be laced with fentanyl and will kill rapidly
- Forensic Pathology Associates (FPA) in Allentown, PA, noticed a recent increase in drugrelated deaths

## Objective:

Gain insight on the increasing drug-related death cases covered by FPA

# **METHODS**

- Chart reviews of FPA's autopsy case reports from all of 2014 and January 1<sup>st</sup> to May 2<sup>nd</sup>, 2016 were completed
- Information extracted included: case number, gender, age, race, substances detected, and past medical history (e.g. prior overdose(s), prison, drug rehabilitation)

## **OUTCOMES**

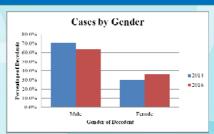


Figure 1. Graph showing gender of decedents in drug-related deaths.

•Local demographics (3):

•50% male/50% female

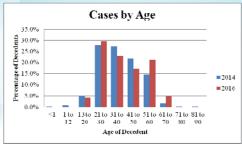


Figure 2. Graph showing age of decedents in drug-related deaths. •Average age:

- •2014: ~37 years old
- •2016: ~39 years old

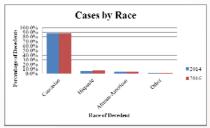


Figure 3. Graph showing race of decedents in drug-related deaths. •Local demographics (3):

• ~93% Caucasian, 4% Hispanic, 3% African-American

## **RESULTS**

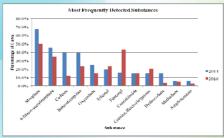


Figure 4. Graph depicting the most frequently detected substances in drug-related deaths.

## **CONCLUSIONS**

In 2014, FPA performed complete autopsies for 306 drugrelated deaths and are expecting to complete roughly 366 drug related death autopsies in 2016. It must also be mentioned that these numbers are an underestimate of the total number of drug-deaths that occurred in this area as they only account for the cases covered by FPA. As the drugrelated death toll continues to increase, the numbers are beginning to be comparable to the death toll of a slow-motion mass disaster. A recent mass disaster, the crash of Malaysian Airlines Flight 17, on July 17th 2014, had a death toll of 283 people. This death toll is comparable, yet still lower than the drug-related death toll that FPA saw in 2014. With this increasing number of drug-related deaths, allocation of funding for autopsies will need to be reconsidered as coroners are exceeding their budgets for the large number of cases they are now investigating. FPA will also need more funding for personnel in order to maintain their high standards.

#### REFERENCES

- Baselt, R.; Disposition of Toxic Drugs and Chemicals, 8th ed.; Biomedical Publications: Foster City, CA, 2008.
- Narconon: Fentanyl Overdoses Making News Headlines: http://www.narconon.org/blog/synthetic-drug-abuse/fentanyl-overdoses-making-news-headlines/ (accessed Jul 21, 2016).
- World Population Review: Pennsylvania Population 2016. http://worldpopulationreview.com/states/pennsylvania-population/ (accessed Jul 13, 2016).

  © 2016 Lehigh Valley Health Network

A PASSION FOR BETTER MEDICINE.TO

610-402-CARE LVHN.org

