Poster: Increasing Awareness of Proper Disposal Practices of Unwanted Household Medications in Muskingum County, Ohio

Joseph Shaeffer
Otterbein University, brandyjoe10@yahoo.com

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Increasing Awareness of Proper Disposal Practices of Unwanted Household Medications in Muskingum County

Joseph C. Shaeffer MSN, RN, Dr. Brian Garrett DNP, CRNA, RN, Dr. Cindy Zellefrow, DNP, MSED, RN, LSN, APHN-BC
Otterbein University, Westerville, Ohio

Abstract
- Increasing awareness and participation of proper disposal of household medications, including opioids, will not only help to decrease the opioid epidemic footprint, but potentially decreases the number of accidental overdoses in households, decrease the impact of improperly disposed medications on the environment, and decrease the amount of medication involved crime in the community.
- Orthopedic patients have been identified in this mixed method project as those who are more likely to receive an opioid prescription for bone and joint pain.
- A pre-survey of current medication disposal practices of healthcare workers in an orthopedic physicians practice provided a snapshot of current disposal practices. Following an educational event presented to the orthopedic office medical staff, one-month and three-month post-surveys were completed. Additionally, medical staff influence was utilized as a catalyst to increase awareness of proper disposal practices to the orthopedic patients via an informational flyer.
- Results of the pre and post-surveys revealed positive changes in awareness as well as participation of proper household medication disposal.

Introduction
- Unused medications remaining in the household is a significant contributor to the growing rates of prescription drug abuse among Americans (Marketwire, October 15, 2013).
- The amount of unused and expired medications in the U.S. is growing as the population ages and receives a greater number of prescriptions. (Kozak, 2016).
- The Centers for Disease Control and Prevention (CDC, 2016) indicated more than half a million people have died from drug overdoses from 2000 to 2015. (CDC, 2016).
- Unintentional prescription overdoses now kill more Americans than cocaine and heroin combined (HHS, 2016).
- The population hit by the highest overdose rates include whites males, aged 25 to 44 years, living in the Midwest or Appalachian areas. (HHS, 2016).
- Ohio currently has the highest number of opioid overdose deaths in the nation. (Siegel, 2017).
- Unintentional drug overdoses caused the deaths of 4,050 Ohio residents in 2016. This reflects a 32.8 percent increase compared to 2015.
- Fatal and non-fatal poisonings are costing Ohioans $3.6 billion dollars annually (Woodworth, 2013).
- Muskingum County experienced 45 overdose deaths in 2018 as a result of opioids. (Diana Zaat, personal communication, February 19th, 2019).
- Orthopedic healthcare staff and patients were the focus of this project as Orthopedic surgeons prescribe more opioid narcotics than any other surgical specialty. (Koehler, 2018).

Problem Statement & Significance
- Stationary household medications are potential enablers of an opioid epidemic that is present throughout America. On an average day in the United States, 91 people die from an opioid related overdose (CDC, 2016). The CDC further designated that poisoning is the leading cause of injury death in the U.S. (2016). Proper disposal of unused, unneeded, and/or expired medications is an essential part of preventing these unintentional deaths. (Fleming et al., 2016).
- Increasing the knowledge of proper medication disposal methods and opportunities available to Muskingum County residents can potentially decrease the footprint of the opioid epidemic. Consequently, by increasing public awareness of proper medication disposal practices, a decrease in potential negative effects of other concerns such as accidental poisonings, crime rates, and environmental fears can occur. According to Athen, Linnebur, and Fabrisik, (2016) many people surveyed are willing to change their old improper medication disposal habits when they learn that storing unwanted medications can lead to medication diversion, accidental poisonings, and/or adverse environmental effects.
- In Muskingum County, "What is the effect of medication takeback opportunities on decreasing unwanted household medications compared with not utilizing proper medication disposal methods," constituted the PICO question for this project.

Outcomes & Evaluation
- Data synthesis was completed using the most recent statistical package for the social sciences (SPSS) system.
- The project surveys identified “Zero” project participants lock up their household medications.
- A common disposal practice included flushing or throwing away unwanted medications in trash receptacles.
- The practice of hoarding medications for “What-if” scenarios was evident among the medical staff in their own households.
- Post-surveys revealed seventy-five percent of contributors indicated that their medication disposal habits have changed as a result of this project.
- The medical staff appeared to positively influence the Muskingum County community by spreading the projects’ message to the orthopedic patients, family, and friends.

Project Description & Design
- Literature suggests orthopedic patients are more likely to receive an opioid prescription related to bone and joint pain.
- The project utilized a mixed method design approach.
- A cross-sectional pre-survey was deployed to an orthopedic office medical staff at the beginning of an educational event to identify current medication disposal practices, as well as to identify a baseline knowledge level regarding proper medication disposal opportunities offered in the community.
- Utilizing Nola Pender's Health Promotions Model, medical staff influence was used as a catalyst to spread the proper household medication disposal information to orthopedic patients via an informational flyer.
- A one-month and three-month post education survey were completed by the medical staff to establish potential changes in household medication disposal practices.

Conclusion & Recommendations
- The project had a positive change in medication disposal practices for participants.
- This project revealed the need to further increase in awareness and participation of proper household medication disposal practices in Muskingum County, as well as throughout the United States.
- The footprint breath of one DNP’s positive impact on his community was revealed throughout the creation and completion of this project. One person can truly change practice in the community if they only try!
- Additional research is needed into the effects of improper medication disposal related to the influence of the opioid epidemic.

References
- Please see reference sheet provided below.

For more information, please email shaeffer@muskingum.edu