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A Resource Guide To Empower Older Adults to Make Informed Health Decisions About Prescription Opioids And The Potential For Misuse

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APPROVAL PAGE

A RESOURCE GUIDE TO EMPOWER OLDER ADULTS TO MAKE INFORMED HEALTH DECISIONS
ABOUT PRESCRIPTION OPIOIDS AND THE POTENTIAL FOR MISUSE

by

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Author's Statement Page

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ABSTRACT

A RESOURCE GUIDE TO EMPOWER OLDER ADULTS TO MAKE INFORMED HEALTH DECISIONS ABOUT PRESCRIPTION OPIOIDS AND THE POTENTIAL FOR MISUSE

By

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INTRODUCTION: In the past two decades, the U.S. has been combating the public health crisis of prescription opioids misuse among older adults. There is an increasing prevalence of older adult misuse and abuse of prescription opioids. However, through greater awareness of proper use and alternatives to prescription opioids, this trend can be reversed.

AIM: To develop a resource guide that will empower older adults to engage their health care providers as it pertains to prescription opioid use in the treatment of pain.

METHODS: A literature review of research articles, review of fact sheets, and interviews with three medical doctors in various fields of medicine was conducted.

RESULTS: A guide was created that included key statistics about older adults, the definition and identification of prescription opioids, reasons for and risks of addiction and abuse, key steps to avoid addiction and abuse, and available resources.

DISCUSSION: Research on the misuse and abuse of prescription opioids was limited and, in many cases, outdated. Furthermore, the information available needed to be made more accessible.

CONCLUSION: The creation of a resource guide containing critical information about opioids was feasible. The guide can serve as a key first step in prompting conversations with health care providers.

KEYWORDS: older adults, prescription opioids misuse, addiction, and abuse

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I. Introduction

Aging population

The aging population is an increasing proportion of the U.S. population (U.S. Census Bureau, 2014). This age group has doubled since 2012, and the number of individuals aged 65 years and older is expected to increase to 83.7 million by 2050 (U.S. Census Bureau, 2014). The baby boomers are responsible for the shift in the aging population (U.S. Census Bureau, 2014). Normal aging is associated with an increased decline in health due to physiological changes, comorbid health conditions that are usually associated with depression and anxiety, and polypharmacy (Chau, Walker, Pai, and Cho, 2008). To understand these physiologic changes that occur in aging, Chau, et al. (2008) noted the importance of understanding drug absorption, distribution, and elimination.

The absorption rate of drugs can change due to decreased gastrointestinal motility and the increase of gastric acid. As people age, the water volume decreases, and the amount of adipose tissue increases (Aging and Drugs, 2018). Furthermore, the drugs reach higher concentrations compared to water and accumulate and stored in fat tissues (Aging and Drugs, 2018). The aging process changes the rate at which the kidneys excrete drugs via urination and causes a reduction in hepatic blood flow and volume, which can lead to a decrease in drug metabolism (Chau et al., 2008). Furthermore, the glomerular filtration rate (GFR) and metabolism is slowed, which reduces the rate of drug excretion, leaving medication to

accumulate which can lead to severe harm (e.g., toxicity) or death; this causes drug potency, and the drug stays longer in the body before elimination (Chau et al., 2008).

Aging and pain

The Centers for Disease and Prevention (2017) asserted that the chief complaint of chronic health conditions among older adults is pain, which includes arthritis, specifically rheumatoid and osteoarthritic pain, especially, in the lower back and neck. Pain has also been attributed to musculoskeletal pain, neuropathic pain (diabetic neuropathy, metabolic syndrome, complex regional pain syndrome, fibromyalgia, Parkinson's disease and multiple sclerosis- MS, etc.), chronic joint and bone pain as other examples of chronic pain that older adults experience (Molton and Terrill, 2014; Castillo, 2016). The Centers for Disease and Prevention (2017) provided examples of the most common prescription opioids that included oxycodone (oxycontin, percocet), oxycodone (vicodin), methadone, and codeine.

Aging and prescription opioids

Experiencing pain is not a novel event. In the early 1990s prescription drugs flooded the market as patients were demanding relief of pain (L. Murphy, personal conversation, December 3, 2018). The consensus at the time among practitioners was to treat pain by any means necessary. Ms. Murphy elaborated that not treating the pain seemed counterintuitive to a specific part of the Hippocratic Oath, which states: "First, do no harm." There was traction for some time; however, the idea was reconciled, and pain was treated as the fifth vital sign. Therefore, if a patient communicated that he or she was in pain, the pain had to be addressed. Today, this is still the case (L. Murphy, personal conversation, December 3, 2018).

The United States continues to surveil the staggering cases of prescription opioids misuse and abuse among older adults (Administration on Aging and Substance Abuse and Mental Health Services, 2012). An estimated 32% of older adults 65 years and older use prescription opioids. Also, rates of hospitalization increased among adults ages 65-74 years that are due to opioid-related overdoses (Administration on Aging and Substance Abuse and Mental Health Services, 2012). In 2002-2013, there was a 66% increase among older adults ages 50-64 misusing prescription opioids and had doubled for adults over the age of 65 (Schepis & McCabe, 2016).

Prescription opioids work in the portions of the brain the portions the are responsible for pain regulation, emotional responses, and pleasure (Volkow & McLellan, 2016). Therefore, there is a learned relationship between receiving the drug and sensing physiological responses (Volkow & McLellan, 2016). Prescription opioids are effective methods of treatment that help individuals maintain independence and minimize the risk of debilitation; however, prolonged use can increase the risk of abuse and addiction (Kaiser Health News, 2017).

Study Aim

Existing literature indicates that there is an increasing prevalence of older adult misuse and abuse of prescription opioids. However, through greater awareness of proper use and alternatives to prescription opioids, this trend can be reversed. Through the process of identifying gaps across available sources and pinpointing the types of information best suited to inform older adults, the framework for a resource guide can be developed. This project aims to develop a resource guide that will empower older adults to engage their health care providers as it pertains to prescription opioid use in the treatment of pain.

II. Methods

For this project design, there were a variety of measures utilized. A literature review was conducted utilizing the following resources: PubMed, Google Scholar, and the OASIS database, the Georgia DPH morbidity and mortality registry (MMR). Fact sheets and critical information were obtained and reviewed from the following websites: Georgia Department of Public Health (DPH), Centers for Disease Control (CDC), Drug Enforcement Administration (DEA), Federal Drug Administration (FDA), and National Institute of Health (NIH). An attempt was made to focus on material that was no older than ten years, however, with the limited number of materials available that was specific to older adults some exceptions were made. Research material that was older than ten years were excluded. Phone interviews were conducted with three health care providers: Drs. Jeff Schultz, Pamela Vick-Bope, and Ann Marie McKenzie-Brown. Dr. Schultz specializes in oral and maxillofacial surgery as a practicing dentist and both Drs. Pamela Vick-Bope and Ann Marie McKenzie specialize in anesthesiology. Examples of questions are provided below:

1. How many times have you prescribed opioids in the last month?
2. When you prescribe opioids, do you provide your patients with information about the opioid, for example, the name of the opioid, how much or how often to take medication, and potential side effects?
3. Do you even mention that you are prescribing an opioid?
4. What message would you like to share for the purpose of the project?

III. Results

Across findings, there was a varied number of models used to analyze the data and was not included in the project. Twenty-six articles were gathered; however, only 19 were used based on the criteria set forth. The majority of the findings indicated that the prevalence of prescription opioids would increase as the American population continues to age. This population is particularly vulnerable to analgesics due to the physiological changes associated with aging. Moreover, as the number of people aging increases, there will be an increase in comorbidities; thus, increasing the likelihood of prescription opioids misuse.

Two articles mentioned the psychosocial impact that pain has on older adults: debilitating pain that worsens with movement and disability.

Depression and anxiety were also conveyed as contributing factors to pain and the lasting physiological effects of pain. Based on the literature, there were several examples of risk factors that increase the likelihood of an older adult misusing and abusing opioids (American Society on Aging, 2018; Food and Drug Administration, 2013) (See Table 1). A search was conducted OASIS (Georgia DPH MMR data registry) on older adults and opioids misuse. Federal websites (e.g., NIH, CDC, FDA, DEA, etc.) were also explored by using the following key words: older adults, prescription opioids misuse, addiction, and abuse

The FDA and DEA provided more useful information than their CDC and NIH counterparts. Both websites offered information on various ways to dispose of unused and unwanted prescription opioids.

The interviews were conducted one or two days apart from each other. Dr. Schultz was adamant that the dentistry community was unfairly treated about overprescribing opioids.

Examples of some of the questions that were posed included, Dr. Schultz also stated that dentists were presumed to be the cause of the problem since they prescribe the most opioids in any given year. He noted that the accusations were unfounded and untrue. He also reported that stricter measures were in place for dentists when prescribing opioids. Since its implementation, the rate at which dentists prescribed has decreased. Drs. Vick-Bope and McKenzie-Brown did not prescribe opioids as their jobs are tailored differently from other medical professionals. Dr. McKenzie-Brown recommended that the resource guide serves as a medium for public awareness and education.

Table 3.1 Key Terms for Medication Addiction and Abuse

Term	Definition
Dependence	This stage occurs after prolonged use of a drug, and the drug is withdrawn, there can be a physiological reaction
Tolerance	A point at which the body becomes less responsive to a particular drug, so more of the drug is taken to achieve the initial therapeutic effect
Addiction	The inability to control how a drug is used
Abuse	Taking a drug for any reason other than the purpose for what it was intended

Terms referenced Food and Drug Administration, 2013

Table 3.2 Risk Factors for Medication Addiction and Abuse Among Older Adults

Health Risk	Definition
Sedation	The feeling of calmness, lightheadedness and the need to sleep. Sedation comes before respiratory depression
Respiratory depression	The occurrence of breathing complications if the dose is too much or given too quickly (as when using a syringe), and one opioid is taken with another or some other drug that elicits the same effect (e.g., benzodiazepines).
Drug interaction	When taking two or more drugs that react with each other for unwanted adverse effects (Food and Drug Administration, 2013). Polypharmacy and comorbidities increase the risk of drug-drug interaction
Polypharmacy	Taking multiple medications can cause difficulty remembering to take all of your medications at the correct time and dosage
Falls	Combined medications that are active in the central nervous system may lead to impaired balance and falls, which can cause fractures
Vision problems	Can impact the ability to read instructions correctly on the prescription bottles

Terms referenced from American Society on Aging, 2018

IV. Discussion

Most of the research on the misuse of opioids among older adults is limited and dated. However, there was a consensus that, as older Americans continue to age and suffer from chronic pain and other comorbidities, there will be a need for more pain medicines. Prescription opioids have its benefits but should not be the first method to defend against chronic pain, especially for older adults. The aging body is slow to absorb, distribute and eliminate drugs, giving rise to many adverse effects. The resource guide provides information that is necessary and easily accessible. There was limited research specifically on older adults and opioids addiction and abuse. The research that was readily available is generally outdated.

There is limited data on older adults and opioid misuse at the state and county level. Though there are noted methods for medication disposal the resources are limited.

There are continued efforts to end opioid misuse, abuse, and addiction; unfortunately, there are no efforts that focus on older adults and the unique attributes that make them more prone to abusing prescription opioids (AARP Public Policy Institute, 2017).

prone to misuse or abuse prescription opioids. Key steps were provided to prevent addiction and abuse. Older adults are urged to know about their medications, alternatives to pharmacologic therapy, and the different resources available. There were options for the disposal of unused or unwanted medications, along with the contact information for desired services.

The information that is presented in the resource guide was planned and executed in great length. However, other factors were in the forefront when designing the guide; for instance, the script was simple and legible, the color of the text was a great contrast to the background of the paper, and the font was large enough for easy viewing. The information layout was widely spaced and written at an eighth-grade level.

V. Recommendations

The takeaway from the resource guide is for older adults to know their medications, the alternatives to prescription opioids, and know their resources. The resource guide could be distributed by physicians, dentists, physical therapists, occupational therapist, physician's assistants, and nurse practitioners in various health care settings. When referring to an

alternative to mainstream opioid analgesics, know what the different options, for example, relaxation techniques, meditation, and non-steroidal anti-inflammatory drugs- NSAIDs like Ibuprofen, Acetaminophen, and Naproxen. The Drug Enforcement Administration (DEA) and The Food and Drug Administration (FDA). It is important to know that there are resources available. The DEA provides information on drug-take-back events. Both agencies offer alternate locations to drop off unused or unwanted medications. Additionally, Walmart manufactured a solution for medication disposal that is free of cost at both Walmart and Sam's Club.

VI. Conclusion

The U.S. is an aging nation, and efforts to address chronic pains, pain management, and the prevention of prescription opioid addiction and abuse must be addressed. There is an increasing prevalence of adults aged 65 years and older having multiple health conditions and are the largest consumers of prescription opioids. For efforts to be sustainable, there is an increased need for more research, spread awareness, provide more education to the public, and arm older adults and caregivers to self-advocate. The resource guide is the first step to prompt a conversation between physicians and their patients, to empower older adults to become involved in their plan of care and to make informed decisions about their health and wellbeing.

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**A Resource Guide
for Older Adults:**



**MANAGING YOUR
PAIN WHILE AVOIDING
PRESCRIPTION OPIOID
ABUSE AND ADDICTION**

In the past 2 decades, the United States has been battling a public health crisis that involved prescription opioids misuse among older adults.

About 32% of older adults, 65 years and older, use prescription opioids. Increased rates of hospitalization are among adults ages 65-74 years and are due to opioid-related overdoses.

WHAT ARE PRESCRIPTION OPIOIDS?

Opioids are usually prescribed to treat moderate-to-severe pain after surgery, injury, non-cancer, and chronic pain commonly in the back and hip or due to osteoarthritis.

**WHAT ARE SOME EXAMPLES OF
PRESCRIPTION OPIOIDS?**

- Oxycodone (e.g., Oxycontin, Percocet)
- Hydrocodone (e.g., Vicodin)
- Codeine
- Methadone



**WHY ARE OLDER ADULTS AT RISK
FOR PRESCRIPTION OPIOID
ABUSE AND ADDICTION?**

- Older adults who take multiple medications may experience difficulties remembering to take all of their medication at the correct time and in the correct dosage
- Vision problems can impact the ability to read prescription instructions correctly
- Metabolism slows with age resulting in medication taking longer to leave the body, and this can result in medication build-up that could lead to severe harm or death

MANAGING YOUR PAIN WHILE AVOIDING PRESCRIPTION OPIOID ABUSE AND ADDICTION



WHAT ARE THE POTENTIAL HEALTH RISKS OF PRESCRIPTION OPIOID USE?

- Increased risk of breathing problems, drowsiness, and falls
- Use of multiple medications can have adverse drug interactions
- Misuse of medication can result in overdose and, potentially, death

WHAT CAN YOU DO TO PREVENT OPIOID ABUSE AND ADDICTION?

KNOW YOUR MEDICATIONS:

- Make sure you know the name of the opioid you are taking
- Understand potential risks and side effects
- Know how much and how often to take your medication
- Ask about follow-up appointments and when to stop using the medication

KNOW YOUR ALTERNATIVES:

- Talk to your health care provider about technology to help manage care
- Talk to your provider about alternative treatment options:
 - ◆ NSAIDs (e.g., naproxen, ibuprofen, acetaminophen)
 - ◆ Physical therapy and exercise
 - ◆ Learn coping skills to effectively manage pain such as breathing techniques or meditation

KNOW YOUR RESOURCES:

Websites to Visit

- United States Drug Enforcement Administration (DEA)
www.DEAtakeback.com or call (800) 882-9539
- U.S. Food & Drug Administration (FDA)
www.fda.gov/drugs/resourcesforyou or call (855) 543-3784 or (301) 796-3400

MEDICAL DISPOSAL OPTIONS:



DisposeRx Walmart-manufactured disposal solution that allows unused and leftover opioids to be thrown away safely at no cost found at Walmart and Sam's Club.

Participating Walgreens and CVS Pharmacies offer drop-off kiosks for unused medication

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