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The pharmacists' contribution against opioid addiction

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Abstract

Objectives The aim of this study was to investigate pharmacists' willingness to consider suggesting a non-narcotic NSAID medication instead of an opioid for patients requiring pain relief. Specifically, the study aimed to extend the vital role of the pharmacist in helping to alleviate the opioid crisis.

Methods A cross-sectional survey was conducted by a University Continuing Pharmacy Education Office (response rate = 66%).

Key findings Although 84.1% of respondents were willing to suggest NSAID replacement to patients, they appeared to be a bit less optimistic to patient's response, and only 13.5% of them felt that more than half of their patients would go along with the NSAID suggestion. There was no statistically significant difference in the responses of female and male pharmacists. The relatively older pharmacists tended to be more likely to consult their patients about this issue compared with younger pharmacists. This may be due to greater confidence that accompanies greater experience or the fact that they had longer relationships with their patients.

Conclusions While opioid addiction occurs from numerous sources, the partial elimination of opioid prescriptions by pharmacists could possibly reduce in some modest way the total number of persons exposed to opioids.

Keywords substitution of opioids; pharmacist suggested NSAIDS; addiction prevention

Introduction

It is said that we cannot discuss a topic if we are unable to describe it in quantitative terms. So, let us explore the numbers associated with opioid substance disorder (opioid addiction.). More than 130 people die in the United States every day from an opioid overdose.[1] Over 42 000 people died from an opioid overdose in 2017, and 2.1 million Americans suffer from an opioid use disorder. Last year, 11.4 million people misused opioids, with 17 000-plus deaths from commonly prescribed opioid products. About 40% of opioid overdoses involved prescribed opioids.[2]

In the late 1990s, drug companies assured physicians that the new prescription analgesic opioid products were less addictive than morphine and the previously used drugs, but it was soon recognized that this claim was faulty. We now know that between 21 and 29% of patients prescribed opioids for chronic pain misuse them; 8–12% develop an opioid use disorder and 4–6% transition to heroin use. 80% of heroin users began by using legally prescribed opioids.[3-6] This is not only a medical problem, but also a serious public health crisis. Opioid addiction is often responsible for neonatal health problems, infectious diseases such as HIV and hepatitis C, loss of job, crime and family breakups and poverty. The economic consequences are similarly distressing. It has been estimated that in 2013, the cost of medical care and substance abuse treatment for opioid addiction and overdose was $78.5 billion.[7] Given this background information, it is clear that any and all strategies that might reduce the exposure to opioids must be beneficial. It is also fairly routine and commonplace for a dentist to write a prescription for a small quantity of an opioid drug product for a patient having a tooth extraction or related procedure. For some patients, an opioid may be necessary, but for many others, it is likely that an over-the-counter NSAID might be adequate. A recent study found that the pain severity of patients from an NSAIDs-treated group decreased in comparison with the patients of the opioid group. The opioid group also experienced more side effects and treatment-related issues than the NSAIDs patient group. Further, patients in the opioids group were no better than

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the NSAIDs group at reducing pain during daily routine activities including sleeping, working and walking.[8]

In this study, we hypothesize that patients of community pharmacists prescribed opioids for expected pain following a tooth extraction or other medical or dental procedure might be able to get by with an alternative therapeutic choice, such as an NSAID. It is our hope that this study report can illustrate the path for pharmacists to undertake such a drug choice substitution to switch patients to a less addictive and safer non-opioid alternative for pain management.

Methods

Study design

A cross-sectional survey research was conducted for the study. Approximately 229 questionnaires were distributed to Florida licensed pharmacists at a live Continuing Pharmacy Education session in South Florida in 2018. Of these, 151 (66%) were completed and included in the study. The study survey included three major sections. The first section gathered general demographic information of study participants. The second section was designed to determine whether there is a pharmacist's willingness to convince his/her patients to use OTC NSAIDS instead of opioids. The last section is designed to investigate a pharmacist's perception of whether his/her patient would accept such suggestions.

Descriptive statistics including frequency distribution were used to summarize the basic features of the data in the study. The chi-square or Fisher exact statistics were applied to compare different variables such as age and gender to observe their effects on the professionals' willingness to switch to non-opioid analgesics. A two-tailed statistic with a *P*-value <0.05 was considered statistically significant. All data management and analysis were performed using IBM-SPSS Statistics 25 (IBM Corporation, Armonk, NY, USA).

Results

The vast majority of participants were aged 50–59 years old followed by 40–49 (23.3%), 60 or above (20.2%), etc. There was relatively similar distribution of the participants between male and female pharmacists (56.6% versus 43.4%) (Table 1). Although 127(84.1%) of respondents were willing to suggest NSAID replacement to patients (Figure 1), they appeared to be a bit less optimistic to patient's response. In fact, 135 (86.5%) pharmacists expected that no more than 30% of those patients offered this alternative would go along with the suggested NSAID substitution. Only 4 (2.6%) respondents felt that they could expect more than 80% of their patients to go along with the NSAID suggestion (Figure 2).

Table 1 Subjects demographics and measures

Characteristics	Valid Percentage (%)
Pharmacists (N = 151)	
Age	
Less than 30	2.5
30-39	12.3
40-49	23.3
50-59	41.7
60 or Above	20.2
Gender	
Female	43.4
Male	56.6

Upon further analysis, there was no statistical significance between male and female pharmacists in the willingness to consult their patients ($P = 0.476$) (Figure 3) and estimated patient acceptance rate for NSAID replacement ($P = 0.590$) (Figure 4). The relatively older pharmacists tended to be more likely to consult their patients about this issue compared with younger pharmacists. However, no statistically significant difference was found among different age group ($P = 0.181$) (Figure 5). The relatively older pharmacists were less confident in patient's acceptance rate of NSAID replacement than younger pharmacists. However, no statistical significance was found among different age group ($P = 0.178$) (Figure 6).

Discussions

It seems that through one endeavour or another, that perhaps many opioid prescriptions could be substituted for an OTC NSAID product through either the dentist, or

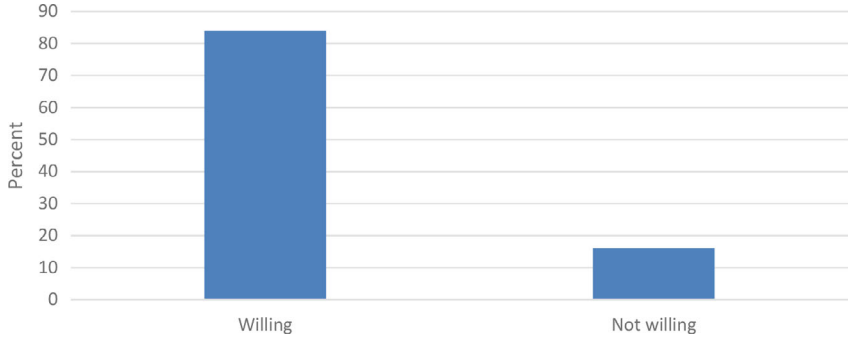

Figure 1 Pharmacists willingness to suggest NSAID.

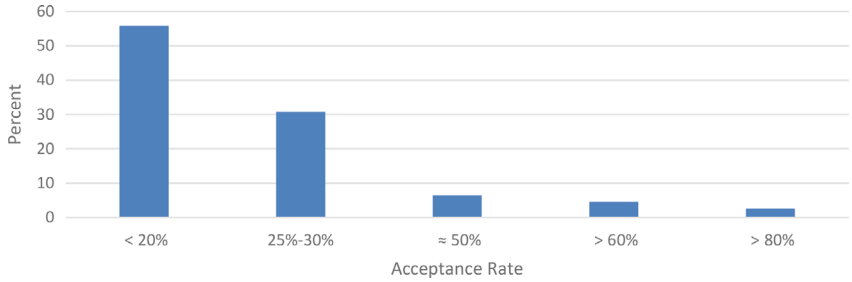

Figure 2 Estimated patients acceptance rate for opioid_NSAID replacement.

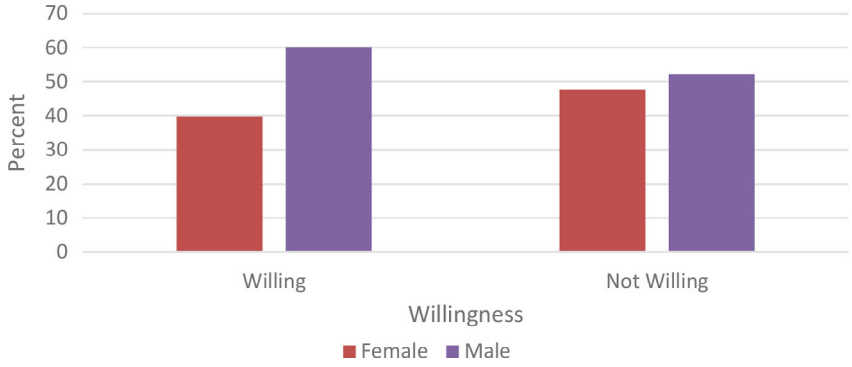

Figure 3 Willingness to suggest NSAID by pharmacist gender.

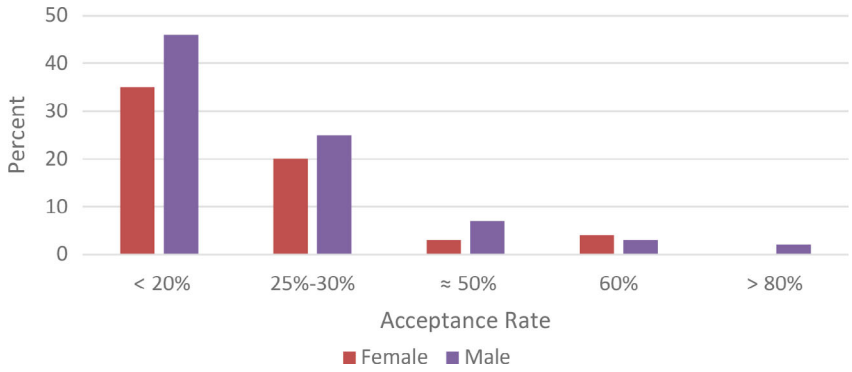

Figure 4 Estimated patients acceptance rate by pharmacist gender.

pharmacist intervention, or perhaps even from interventions from other healthcare providers. Since many addictions begin from legitimate use of prescribed opioid-containing pharmaceutical products, it is likely that some unknown, but substantial amount of opioid use, may be eliminated from these simple steps. It is likely that younger pharmacists either did not have the sufficient self-confidence or experience to attempt to change the opioid for an NSAID. Perhaps older and more experienced pharmacists and dentists have seen more of the horrible consequences of addiction and are therefore more motivated to try to nip it in the bud. This may be a product of maturity or years of experience. It is impossible to avoid hearing about what has come to be called the opioid epidemic, about persons who become addicted to prescribed drugs to ease pain and then use that drug or other opioids far longer than medically required due to the formation of an addiction. This is mentioned in the news media one way or another daily. Now, it is true that some opioid addictions do not begin with legally prescribed medications, but rather start through recreational use of street drugs. This report only focuses on the narcotic drugs prescribed by dentists and physicians. It was postulated that, perhaps, some prescriptions for analgesic drugs might not be required. As we understand, addiction can be very difficult. As drug experts, it is important for pharmacists to take the lead on this issue and serve as mediators between patients, drugs and potential policy changes. It is the role of pharmacists to apply such implementations to ensure their

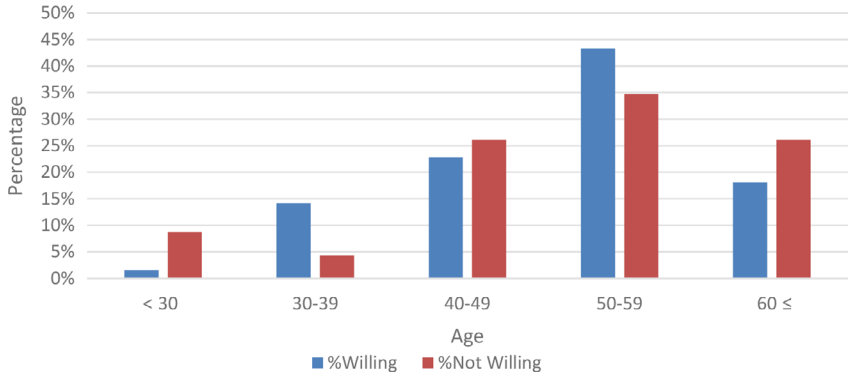

Figure 5 Willingness to suggest NSAID by pharmacist's age.

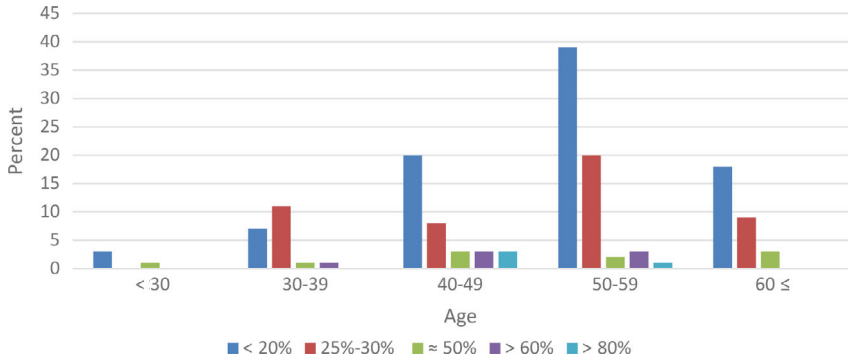

Figure 6 Estimated patients acceptance by pharmacist age.

efficiency and effectiveness.[9] According to the American Society of Health-System Pharmacists (ASHP), "Pharmacists have the unique knowledge, skills, and responsibilities for assuming an important role in substance abuse prevention, education, and assistance. Pharmacists, as health care providers, should be actively involved in reducing the negative effects that substance abuse has on society, health systems, and the pharmacy profession"[10] The importance of pharmacists to strengthen their presence in the opioid initiative was recently demonstrated in the state of Ohio, where a regulatory level intervention was taken which granted pharmacists the ability to carry out consult agreements with healthcare providers to better achieve successful patients' medication therapy. This increased role and responsibility in pain management allowed pharmacists to have a direct effect on opioid management. In Florida, pharmacists are allowed to prescribe various medications on the formulary that was developed by the state Board of Medicine, Osteopathic Medicine, and Pharmacy, including prescription-strength NSAIDs. Other states are moving towards increased pharmacist involvement in addressing the opioid crisis because such integrations have proven to have positive patient outcomes due to pharmacists' comprehensive therapeutic knowledge and advanced clinical understanding.[11] Therefore, the acknowledgement of different causative agents and the proactivity of pharmacists is crucial to the success of any intervention intending to combat the opioid epidemic.

It is noted that one reduction of opioids strategy will not provide a total solution to our opioid epidemic. However, there are several avenues that might demonstrate some beneficial results. One of these is the reduction of opioid prescriptions via scheduled medications therapy management from healthcare providers. The related area where opioid use might be reduced is when a patient comes to a pharmacy with an opioid medication prescription. In such cases, the pharmacist would be in a position to explain to the patient that the prescribed medication is a powerful narcotic agent and that they might want to consider trying an OTC NSAID drug, which also reduces pain. If the NSAID did not provide adequate relief of the pain, could be reduced with the narcotic prescription originally prescribed. In this study, we hypothesize that that some patients visiting a pharmacy with a prescription for a small quantity of an opioid medication could be convinced to try a non-opioid product first with the understanding that if the NSAID or other non-opioid did not fully provide adequate analgesia, that they could have the opioid prescription dispensed for them subsequently.

It is our hope that this study can disclose the willingness of healthcare professionals to switch to the less addictive, safer non-opioid alternative for pain management.

Conclusions

We are able to conclude that while not an overwhelming force, the community pharmacist has the possibility to make a modest positive impact in reducing future possible opioid addiction. Since many substance use disorders originate from the use of legally prescribed opioids, the pharmacist who successfully counsels patients towards a non-addictive product for pain relief, such as NSAIDs, has the ability to reduce the number of persons exposed to such addiction-producing opioid pharmaceutical products.

Declarations

Conflict of interest

The authors independently conducted all analyses and wrote the manuscript. The authors controlled the decision to write and submit the manuscript for publication.

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Authors' contributions

All Authors state that they had complete access to the study data that support the publication. Both authors conceptualized the project, designed and administered the instrument, analyzed the data and wrote the manuscript.

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