Evaluating Patient's Knowledge Regarding Opioid Prescriptions in An Independent Community Pharmacy: A Pilot Study

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Evaluating Patient’s Knowledge Regarding Opioid Prescriptions in An Independent Community Pharmacy: A Pilot Study

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Abstract: This study evaluated patients’ knowledge regarding their opioid prescriptions and identified what resources were used to educate patients on their opioid prescriptions. Patients receiving an opioid prescription from an independent pharmacy were given a link to complete a nine-question anonymous survey about their awareness of their prescription being an opioid, how and what education they received, and from whom. The authors hope that the findings of this research will help to better understand effective ways to combat the opioid epidemic and promote patient safety through effective opioid education.

According to the Centers for Disease Control and Prevention, deaths due to synthetic opioids other than methadone, natural and semisynthetic opioids, and heroin have been increasing from 1999 to 2017.1 Approximately 92 million people in the United States use opioid pain relievers, and 11.5% of these individuals misuse the medications.2,3 Furthermore, over 47,000 opioid-related overdose deaths occurred in the United States in 2017.4 In an effort to curb opioid addiction, dependence, and deaths, many regulations have been enacted regarding opioid prescriptions. On a national level, the Centers for Disease Control and Prevention has published guidelines informing providers on how to prescribe opioids for chronic pain.5 Currently, there is a lack of federal guidance and a scarcity of state regulations requiring patient labeling stating that medications are opioids.6 This is evident in that only five states have passed regulations mandating auxiliary stickers to be affixed to prescription bottles containing opioids.7,12 Education is a key component to patient awareness in regard to opioid medications. In a prior study by de la Cruz et al., palliative care patients were separated into groups where one group received educational materials surrounding safe opioid usage, storage, and disposal with each opioid prescription, whereas the other group did not receive these materials. The group that received the educational materials were more likely to keep their medications protected in a safe place while being more aware of proper opioid disposal methods. Additionally, this group was less likely to share their prescription with others, practice unsafe usage of opioids, or have unused medication at home.13 Medical providers and pharmacists can play a critical role in providing meaningful education through verbal counseling. Moreover, pharmacists can provide written education to patients to enhance the retention of important information. The use of auxiliary labels and medication guides can provide time-saving methods for outpatient pharmacists to distribute information about prescription medications, but the extent of the benefit of these forms of communication remains controversial.14-17 One medication brochure study, Wof et al., shows that of the studied FDA-approved medication guides, all were above the recommended sixth through eighth grade reading level and often failed to provide a summary of the content to help increase understanding of the content in the guide.14 Furthermore, another study by Wof et al. demonstrated that of the participants who read the medication guide and were asked information retrieval or inference questions, the average participant could only recall approximately half of the information in the medication guide.15 Regarding auxiliary labels, results are more positive. In a study by Gryfe-Becker et al., when providing elderly patients with either an auxiliary label and counseling, an auxiliary label without counseling, counseling without an auxiliary label, or no counseling nor auxiliary label, it was found that individuals who received auxiliary labels were better able to correctly and completely recall the information on the label as opposed to the group that received no label or counseling (p=0.018).16 Furthermore, in a study conducted by Brown et al. in patients who received additional auxiliary labels, 13.2% more patients were able to recall questions about their medication compared to subjects who did not receive an additional auxiliary label.17 Our study sought to provide patients who were picking up prescriptions for opioids in an independent community pharmacy setting with additional information regarding their medications. Patients were provided with an auxiliary label on their prescription bottles detailing that a medication was an opioid and an educational opioid brochure. The purpose of this study was to evaluate patients’ knowledge regarding their opioid prescriptions and to assess what resources educated these patients on their opioid prescriptions. A literature search in Google Scholar and PubMed was conducted to find studies similar to that of our design. To the authors’ knowledge, this is the first study to evaluate patient knowledge and to assess the methods by which patients receive education regarding their opioid prescriptions.

Methods
A descriptive analysis study in 2019 was conducted. The development of an anonymous nine question Skip Logic survey on Qualtrics™ (version 2015) was created by the researchers and provided to eight healthcare providers to pilot the survey and provide feedback on content, question understanding, and ease of use. Through examination of responses, questions were refined, removed, or remained for the final survey.

The study was conducted at an independent community pharmacy in spring 2019 and was approved by the Institutional Review Board of Butler University. Patients using this pharmacy who were at least 18 years old and received at least one opioid prescription during this time period were eligible for inclusion in the study. An auxiliary label stating, “High-Risk Medication OPIOID” was affixed to the opioid prescription bottle to inform patients that their prescriptions were opioids. Patients were given an educational brochure to inform them about the effects, storage, alternative treatments, and proper methods for discarding unused opioid medications. Patients were contacted after one week of receiving their prescriptions to complete an anonymous nine question Skip Logic Qualtrics™ survey. Patients completing the survey answered
questions regarding demographics, knowledge of opioids, the prescriber of their prescriptions, and how they were educated about their opioid prescriptions. A maximum of three attempts were made to reach patients by telephone. Descriptive analyses were conducted to generate results.

Results
Eighteen of the nineteen patients contacted completed the survey for a response rate of 94.7%. The full quantitative question set used in the survey along with the responses obtained is reported below in Table 1.

Table 1. Quantitative Survey questions with responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Survey Responses (Percent) n=18 patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are you aware that a medication of yours is an opioid?</td>
<td>Yes-17 (94.4%), No-0 (0%), Prefer not to respond-1 (5.6%)</td>
</tr>
<tr>
<td>2. Who prescribed you your opioid pain medication?</td>
<td>Physician-16 (88.9%), Physician Assistant-0 (0%), Nurse Practitioner-1 (5.6%), Dentist-0 (0%), Other-1 (5.6%), I don’t know-0 (0%), Prefer not to respond-0 (0%)</td>
</tr>
<tr>
<td>3. How were you made aware that your medication was an opioid? (Select all that apply)</td>
<td>Prescriber-8 (44.4%), Pharmacist-5 (27.8%), Opioid sticker on bottle-3 (16.7%), Opioid brochure-0 (0%), Family member or friend-1 (5.6%), Caregiver-0 (0%), Other-6 (33.3%), I was not made aware that a medication was an opioid-0 (0%), Prefer not to respond-0 (0%)</td>
</tr>
<tr>
<td>4. Who/what educated you on your opioid medication? (Select all that apply)</td>
<td>Physician-10 (55.6%), Pharmacist-3 (16.7%), Opioid brochure-0 (0%), Family member or friend-0 (0%), Caregiver-0 (0%), Other-6 (33.3%), I was not educated on my opioid medication-3 (16.7%), Prefer not to respond-0 (0%)</td>
</tr>
<tr>
<td>5. What were you educated on regarding your medication? (Select all that apply)</td>
<td>What an opioid is-8 (44.4%), How/when to take your medication-9 (50%), Alternative non-opioid medications for pain-2 (11.1%), Alternative non-medication treatments for pain-3 (16.7%), How to store your medication-3 (16.7%), How to dispose of your medication-3 (16.7%), Side effects of your medication-7 (38.9%), Other-3 (16.7%), None of the above/I was not educated on this medication-2 (11.1%), Prefer not to respond-0 (0%)</td>
</tr>
<tr>
<td>6. Who/what answered your questions regarding your medication? (Select all that apply)</td>
<td>Prescriber-8 (44.4%), Pharmacist-7 (38.9%), Opioid brochure-0 (0%), Family member or friend-0 (0%), Caregiver-0 (0%), Other-2 (11.1%), I did not have any medication questions-3 (16.7%), My medication questions were not answered-0 (0%), Prefer not to respond-0 (0%)</td>
</tr>
<tr>
<td>7. Do you have Medicare?</td>
<td>Yes-12 (66.7%), No-5 (27.8%), Prefer not to respond-1 (5.6%)</td>
</tr>
<tr>
<td>8. What is your age?</td>
<td>18-25-1 (5.6%), 26-39-3 (16.7%), 40-65-8 (44.4%), 65+-6 (33.3%), Prefer not to respond-0 (0%)</td>
</tr>
</tbody>
</table>

In this study, patients were assessed on awareness of their opioid prescriptions, followed by who was involved in their care and what education they received. Almost all patients were aware that the medications they were taking were opioids, with 94.4% acknowledging this fact and 5.6% choosing not to respond. When asked who prescribed the medication, the majority of patients responded from a physician (88.9%) with one response each for nurse practitioner (5.6%) and oncologist pain specialist (5.6%). Patients were asked to select all the methods they were made aware of the medication being an opioid. Being informed by a prescriber (44.4%) was the top selection, followed by pharmacist (27.8%), the opioid auxiliary sticker (16.7%), and being told by family and friends (5.6%). Six respondents choose other and self-reported general knowledge, life experience, and prior long-term use of the medication as the method of being made aware the medication was an opioid. Regarding how they obtained education about the product, 55.6% reported the physician and 16.7% reported education provided by the pharmacist. Three (16.7%) of the patients who selected “Other” reported self-education, and three (16.7%) selected they were not educated on their opioid medication. The top two education topics respondents selected were how to take the medication and what is an opioid (complete results are in Table 1, question 5). When patients asked questions about their opioids, physicians (44.4%) and pharmacists (38.9%) were the top answers. When asked what additional comments and questions patients had, one patient reported attempting to taper their hydrocodone prescription unsuccessfully, commenting that they started taking opioids 30 years ago when there was no awareness training at that time, and one patient asked about how long opioids stay in the body.

Discussion
The results of this study agree with the findings of similar studies in this field while also validating legislative efforts on improving patient safety. This study indicates that opioid auxiliary stickers provided opioid awareness. This finding was similar to the findings of the study performed by de la Cruz et al. In addition, various legislative actions have taken place on a state and national level to improve opioid awareness with the requirement of labeling now mandatory by law. At least 5 states have passed legislation requiring opioid warning labels, and the Lessening Addiction by Enhancing Labeling (LABEL) Opioids Act was introduced as a bill in the United States Congress in May 2019 (H.R. 2732). Despite the benefits of written education, verbal patient education by health care providers was shown to be more important for enhancing awareness surrounding opioid prescriptions. This result highlights the importance of health care providers educating their patients about important medication information, including communicating risks and ensuring safe usage of these prescriptions. While this study reinforces the benefits of auxiliary stickers, it casts a more questionable light on pamphlets as a beneficial source of education. The authors of this study hypothesize that this may be due to patients not reading brochures because of their excessive length. Previous studies have questioned the utility and efficacy of medication guides, and this study also questions the benefits of patient-centered brochures in providing meaningful patient education. In the future, healthcare practitioners may want to emphasize using brief yet concise written resources to educate patients on their opioid medications.

A concern found in this study was that 16.7% of the patients were not educated regarding their opioid medications and another 16.7% patients claimed they discovered their medications were opioids by personal research. Patients may seek information on the internet instead of evidence-based information provided to them by a health care practitioner. Overall, this study reinforces the necessity of direct patient communication from a health care professional and the use of auxiliary labels. However, there are some limitations in this study. The small number of participants limits the generalizability of the results.
The study did not differentiate whether the patient’s opioid prescription was a first-time fill or a refill. Future research with a larger sample size involving multiple pharmacies and additional information, including where patients obtain information online and if the prescription was a first-time fill or refill, is needed.

Conclusion
This study found that a majority of patients were aware their medication was an opioid. While the auxiliary sticker aided in making patients aware of their opioid prescription, health care professionals such as prescribers and pharmacists played the larger role in providing this awareness and educating the patients. Furthermore, although the brochures contained important content, no patient reported using this as a resource for education. Findings suggest direct communication from health care professionals play the major role in educating patients on opioid medications. Health profession schools should emphasize opioid education and counseling. Findings from this study and subsequent studies could encourage further legislation and regulation of opioid labeling to inform consumers about their prescriptions.

References