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Communication between patients and health care professionals about opioid medications

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ABSTRACT

Prescription opioids contribute to 40% of opioid overdose deaths in the United States. Healthcare professionals (HCPs) play an important role in mitigating the prescription opioid epidemic by appropriate opioid prescribing and patient education. Yet, little empirical literature addresses pharmacist (and other HCP) communication with patients related to risks of opioid use associated with dependence, misuse, and overdose. Nor is there much research on the barriers and facilitators which affect whether and how much opioid-related information is discussed. This commentary, based on an extensive literature search, seeks to inform future communication, education, and research agendas by describing (1) topics commonly discussed or excluded from opioid medication counseling, (2) patient and HCP perceptions regarding opioid medication communication, and (3) barriers and facilitators to opioid risk communication. Based on this literature, recommendations are provided for opioid counseling practices, pharmacist education, and research agendas.

1. Background

Prescription opioids continue to contribute to the opioid epidemic in the United States. In 2018, an average of 41 people died each day from overdoses involving prescription opioids, totaling nearly 15,000 deaths, and opioids were involved in 32% of all opioid overdose deaths.[1] M. Overdose deaths involving prescription opioids were more than four times higher in 2018 than in 1999.[2] Additionally, deaths related to opioid overdose have increased exponentially during the COVID-19 pandemic and will likely continue to grow.

Although many individuals and organizations are involved in combating the opioid epidemic nationwide, health care professionals (HCP) are primarily responsible for appropriate opioid prescribing and promoting safe opioid use.[3] Pharmacists and other HCP can promote safe opioid use through effective patient counseling on the risks of opioid medications, encouraging appropriate prescribing through use of prescription drug monitoring programs (PDMP), and tapering or deprescribing opioids when they are unnecessary or no longer appropriate.[3–5]

Prescription opioid use, even when used as prescribed by a doctor, can lead to an opioid use disorder which can include misuse in severe cases.[1] Due to risks for dependence and misuse associated with prescription opioid use and the increasing prevalence of overdose, the Centers for Disease Control and Prevention (CDC) recommends that HCP discuss risks of dependence, misuse, and overdose with patients when they are prescribed an opioid medication, in addition to discussing pain management, side effects, and treatment goals to ensure safe and appropriate use of opioids.[6] Although discussion of these topics is essential, risks associated with opioids are a sensitive topic that can be difficult for HCP and patients to discuss.[7]

Current literature summarizes information regarding communication strategies specific to patients with an opioid use disorder, but there is a paucity of literature regarding communication between patients and HCP, particularly pharmacists, about risks associated with opioid use. Patient and HCP perspectives of opioid-related communication regarding potential opioid dependence, misuse, and overdose have been understudied, as have the barriers and facilitators to discussing these topics.

1.1. Objective

To help the field set research and communication agendas going forward, this commentary examines and summarizes research on topics commonly discussed or excluded from opioid medication counseling, patient and HCP perceptions regarding opioid communication, and barriers and facilitators for opioid risk communication. Recommendations are provided to improve opioid risk patient education, pharmacist education, and future research agendas.

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2. Methods

2.1. Search strategy

A literature search was conducted in November 2020 using PubMed, Cinahl plus, and Cochrane Review Library. Search terms included opioid AND patient AND (pharmacist* OR provider* OR student* OR technician*) AND (counseling OR communication). Search results from each database were exported to Microsoft Excel, merged, and sorted for removal of duplicate articles. Included studies were original, peer-reviewed research studies and reviews published in English, addressing at least one of the following topics: content covered in opioid risk counseling, HCP and patient perceptions about opioid risk counseling, and barriers and facilitators to the provision of opioid risk counseling. Studies in non-English languages or those discussing non-prescription opioid use disorder and misuse were excluded.

3. Results

A total of 32 empirical studies and 5 systematic reviews were identified. Two-thirds of the studies were qualitative, and about one-third were quantitative. The majority studied physician consultation practices regarding opioid medications, whereas only 12 addressed pharmacy practice. Of those addressing pharmacy practice, three were conducted in community pharmacy settings, three studied practices regarding pharmacy students, one study was conducted in the clinic setting, and the remaining represented a mix of settings.

3.1. Content covered in opioid risk counseling

Studies tended to find that HCP discussed drug name, purpose, administration, and side effects.[9–11,24] At times, it was the patient who initiated discussion of side effects. For example, opioid-induced constipation was raised by patients who perceived it as a more severe side effect than did HCP.[9] However, risks associated with opioid medication use were not as frequently discussed as side effects.[8,17] In a series of studies conducted in an emergency department (ED), patients were interviewed about conversations with HCP regarding pain and opioids.[9] Consistent with studies in other settings, patients reported that providers rarely discussed the risk of opioid dependence or pain management options. In a study with patients diagnosed with human immunodeficiency virus (HIV), many HCP did not discuss the risks of opioid medications.[10] The majority of risk conversations, when they occurred, were initiated by patients and were ended by HCP. Conversations about opioid safety occurred more often if the patient reported being anxious about the medication or had close relations with the HCP.[11] These studies as a whole suggest that while risks are often not discussed, patient communication can influence the extent of HCP opioid consultation of side effects, risks, and safety. A different pattern was documented in one primary care-based study, in which HCP often described risks at both the individual-level and population-level, supporting their discussion with statistics regarding opioid use and associated consequences, such as overdose. In response, patients requested additional information about risks or contributed their own information or understanding to the risk discussion.[12]

Education about the use of naloxone and opioid tapering, when appropriate, was not consistently discussed with patients during opioid medication counseling. In scenarios where opioid tapering was discussed to minimize risks with opioid use, several strategies were suggested, such as explaining the need for tapering to ensure patient understanding, negotiating with patients, and emphasizing not completely abandoning opioid therapy as factors to facilitate opioid tapering with patients.[14] Another study suggested describing the patient's opioid use in the context of current guidelines or institutional policies and non-opioid treatment options for chronic pain as a tool to support decisions regarding opioid tapering.[12]

In addition to limited discussion of opioid risks and measures to increase safety, such as naloxone and tapering opioids, several studies have assessed the difficulties HCP have in addressing or acknowledging pain. McCarthy and colleagues found patient complaints about pain, statements related to chronic pain, and goal setting for pain management were other topics that were infrequently discussed.[15] Differences between patient and HCP perceptions included a patient's desire to share treatment decision-making. Overall, patients perceived providers to dominate these conversations. HCP displaying empathy and attending to pain management facilitated communication.[9] In the Hughes and colleagues study of patients with HIV, fewer than half of providers acknowledged the patient's pain, and some conversations contained dialogue that indicated conflict. In another study, opioid use and pain management were discussed more frequently with patients when they had more perceived pain,[11] again reinforcing the influence that patients potentially have by expressing their needs.

3.2. Patient and HCP perspectives

A series of studies have examined and found differences between patient and HCP perceptions.[16] Parents reported wanting to know the medication prescribed for their child was an opioid when this had not been explained earlier.[16,17] In a study assessing communication and relationships between patients and providers, patients had variable opinions regarding HCP treatment decisions.[18] In another study, patients reported being informed by HCP about common side effects of opioids, but not of any risks such as overdose and dependency.[17] HCP were seen as tending to have lower positive regard for a patient when the discussion of opioids was initiated by patients. HCP with negative attitudes towards opioids were less likely to discuss opioid safety with patients.[10,11] Patients expressed wanting to know more. They wanted the pharmacist and provider to explain that the medication prescribed was an opioid and also wanted to know overdose and dependency risks associated with use. Patients had expectations that all HCP would provide this education on opioid risks and safety, especially the pharmacist involved in medication counseling and dispensing.[17]

Barriers to individualizing pain management may be due to different perceptions of care priorities, beliefs regarding pain management, and uncertainty associated with opioid therapy.[19] Understanding ethnic and racial perspectives is another consideration in tailoring consults to individual patients. Racial and ethnic disparities exist in accessing effective pain treatment as evidenced by numerous studies reporting that minority patients are more likely to have pain underestimated by providers, less likely to have documented pain scores, and more likely to have undertreated pain compared to white patients. Improved and transparent communication between patients and providers can facilitate better pain management among these patient groups.[20] In a study assessing pain management in black older adults, pain management barriers were related to communication about side effects with providers, fear of misuse, and provider mistrust.[22] A study assessing HCP perceptions in pain management in Hispanic patients identified significant barriers providing care for this patient population, including the lack of training in cultural competence despite caring for a high number of Hispanic patients, and lack of Spanish fluency influencing pain treatment practices, such as difficulty in obtaining patient pain history. HCP with greater Spanish fluency observed that the patient's cultural beliefs had a greater effect on treatment compared to those with less Spanish fluency. Of note, providers did not feel that cultural or language barriers impacted opioid prescribing.[21]

In the context of naloxone and tapering specifically, patients have reported barriers and receiving limited education about opioid medication risks. They saw this as a weakness in communication with their HCP. Patients reported that HCP seemed to infer a patient was misusing opioids if the patient asked for a naloxone prescription or inquired about opioid tapering. Additionally, HCP associated high overdose risk with medication misuse, regardless of other patient factors.[13]

Overall, these barriers highlight a communication gap between providers and patients in discussing patient preferences, treatment information, and pain management follow-up.[22] Additional studies are needed to elicit better the role of racial and ethnic disparities in effective pain

management and develop strategies to improve the management of pain for these vulnerable patient populations.

3.3. Improving HCP-patient communication

Strategies to enhance opioid communication can be on the individual and organizational levels. On the individual level, in response to uncertainties about opioid use for chronic pain, patients and HCP can gather additional information prior to the decision to initiate opioid medications. Acknowledging these uncertainties and discussing options collaboratively was deemed important for effective communication among patients and physicians about opioids.[23] Reframing conversations about the benefits and risks of opioid use were also discussed as a strategy to improve opioid-related communication.[18] Crucial facilitators to building rapport and effective communication included tailoring conversation to the individual patient's needs, perspectives, and knowledge. At times it may be the patient who is uncomfortable with certain topics. In this circumstance, facilitators for patient acceptance of naloxone in case of accidental overdose include the HCP using empowering and nonjudgmental communication practices.[13]

Various organizational and staff strategies can promote effective communication about opioid risks. One approach includes using guidelines and institutional policies that describe appropriate opioid prescribing. For example, a study in the ED assessed how opioid therapy guidelines were incorporated into practice. HCP often used them as a tool to support communication with patients about therapy decisions regarding opioids rather than as a decision-making tool.[24] Other strategies used by nurse case managers to facilitate communication about long term opioid use for chronic conditions included developing a relationship with the patient, encouraging adherence to pain monitoring, inquiring about discrepancies between patient interview and objective data, assessing patient medication use and pain to determine the risk of opioid misuse, and providing patient education for appropriate opioid use.[25] Prescription drug monitoring programs (PDMP) also were used to identify a patient's current and previous opioid use, help guide decisions about opioid prescribing, and facilitate communication between providers or with patients regarding risks of opioid use.[23]

Given public transparency about the opioid epidemic, patients may be familiar with the harmful effects of opioids and may be more likely to underuse prescribed opioids to avoid potential risks, resulting in undertreated pain. In a study involving veterans underusing opioids for chronic pain, improved patient-provider communication about the need for opioids was suggested to avoid the underuse of opioids when pain is not optimally managed and opioids are clinically appropriate.[26]

Studies involving training and education reinforce their importance to improve HCP comfort and consultation skills. For example, one study in this review assessed a web module developed for faculty physicians regarding opioid prescribing communication for non-malignant chronic pain. Participants reported improved comfort in pain management, opioid prescribing, and facilitating conversations about discontinuing opioids after completing the module. This suggests communication, knowledge, attitudes, and skills for pain management can be developed and improved through HCP training using web modules or lectures.[27] Structured training for initiating communication about opioid risks using an opioid safety handout has proven useful to facilitate opioid risk and safety counseling in pharmacists.[28] Open-ended questions to understand patients' baseline knowledge and to build on patients' perceptions and knowledge to educate them about potential risks of opioids were reported to increase pharmacists' satisfaction and confidence about opioid risk counseling for pediatric patients.[28] Similar to pharmacists, pharmacy students were also observed not to cover opioid risks and safety topics with standardized patients in simulated opioid consults. They expressed discomfort with this sensitive conversation and lack of training as reasons for not covering these topics.[29,30] A training module consisting of a structured lecture, reading assignment, and practice-based skills laboratory experience significantly improved pharmacy students' opioid risk counseling practices and confidence.[31]

Technology interventions for patients have also proven useful in promoting effective communication about opioid risks. To develop and investigate the utility of PainAPP, a patient-centered tool created to improve patient-HCP communication, Col and colleagues. Identified differences in communication barriers from patient and HCP perspectives.[32] Patients described the primary barrier to effective communication as feeling not trusted or respected by their HCP, whereas HCP described the primary barrier as not having enough biologic and psychosocial information about the patient to inform the treatment of chronic pain. Patients who utilized the tool expressed that it helped them to think about treatment goals, understand chronic pain, and make the most of upcoming appointments with their HCP.[32]

3.4. Pharmacists' role in opioid medication counseling

Although the pharmacist's role in opioid medication counseling is understudied, both patients and prescribers recognize that pharmacists play an important role in counseling patients about opioid medications at the point of medication dispensing.[16,33] Pharmacists have expressed barriers in communicating with patients about opioid safety, including offering naloxone to combat opioid overdose among high-risk patients.[34] Patients and pharmacists perceived pharmacists to be responsible for medication safety, yet pharmacists were uncomfortable dispensing opioids, in part due to the perception of "policing" opioid prescriptions. Additionally, pharmacists desired training about communication techniques to facilitate conversations with patients regarding opioids.[33]

Two theoretical frameworks have helped shape a small number of pharmacy studies. Theory of Planned Behavior led to a study that identified the most prevalent pharmacist behavioral belief was the discomfort associated with confronting patients about opioid misuse.[35] While pharmacists believed that conversations about opioids might cause loss of customers, they also believed that it may help provide appropriate counseling to patients. For normative beliefs, pharmacists identified regulatory agencies and family or friends of patients as groups of individuals who influence their willingness to refer a patient to addiction therapy for opioid misuse. Time required for counseling was found to be the most commonly cited control belief.[35] Role theory was used in another study paper to explore the roles of prescribers and pharmacists in opioid medication counseling.[16] Pharmacists expressed uncertainty in the acceptability of their role as opioid safety educators by patients and prescribers even though patients and prescribers deemed pharmacists important and responsible for providing opioid risk and safety education when dispensing opioids. Clear assignment of roles and expectations at an organizational level was proposed to reduce ambiguity and increase transparency among HCP in providing patient education.[16]

4. Discussion

This commentary seeks to identify gaps in opioid counseling topics, recognize differences in perceptions of patients and providers regarding these consults, and summarize key barriers and facilitators to opioid risk communication. By examining published empirical literature, we intend to promote strategies to improve patient-HCP communication and set agendas to address research gaps, particularly with respect to pharmacist roles.

4.1. Gaps in communication

Discussion of drug name, purpose, and side effects are often considered minimum expectations for counseling by HCP, especially pharmacists.[36] While some studies found that side effects were commonly discussed with patients,[8,13,15,22,37] some HCP do not consistently discuss them with patients.[38,39] Additionally, several patients often did not receive information regarding mitigation strategies or further options for managing bothersome side effects.[13,37,39] Consequences of unaddressed side effects may result in over or undertreated pain or inappropriate prescribing.[40]

The problem is greater with regard to discussing risks. Opioids have increased risks associated with use compared to non-opioid analgesics.[2] For this reason, counseling patients about potential risks associated with opioids, such as dependence, misuse, and overdose, is crucial to ensure patient safety and appropriate use.[6] However, there is substantial evidence that these risks were discussed less frequently than side effects and discussion was more often initiated by the patient compared to the HCP.[10,33] HCP may feel uncomfortable discussing sensitive issues with patients and may lack the training to provide information regarding safe opioid use.[10,19,33,35,41,42] Additionally, patients may feel uncomfortable asking questions out of fear of judgment. Regardless of factors in the patient-HCP relationship, HCP have a professional responsibility to provide this information to all patients using an opioid medication. Safe storage and disposal of opioid medications is also an important discussion point, yet none of the included studies assessed if this topic was discussed with patients.

4.2. Interventions to improve opioid consultations by pharmacists

Pharmacists can contribute to counseling about opioid medications by discussing the adverse events, risks, safety of opioids as well as offering naloxone, but they have yet to expand their services as opioid educators.[34,43] Pharmacists have indicated their uncertainty in role designations and lack of structured guidance about opioid safety counseling contribute to lack of initiating opioid risk and safety communications with patients.[16,43] This warrants clarifying the profession's role as well as organizational clarification of expectations of pharmacists, prescribers and technicians. Community pharmacists have mentioned not having sufficient time or opportunity to discuss opioid risk and safety with patients during their interactions.[16,33] HCP and their patients believe that the pharmacy is the optimal place to educate patients about the risks of their opioid medications.[16,17] Training programs to prepare pharmacists to better deliver opioid risk and safety counseling are needed. Structured training modules, teach-back, and use of handouts have proven effective in improving pharmacists' communication practices.[28,31,44] More research about efficacious training approaches to promote improved pharmacist knowledge is needed.

While empirical literature lacks evidence about the potential role of pharmacy technicians in opioid risk counseling, a few studies focused on perceptions and practices of pharmacy students on opioid risk and safety counseling.[29,30] In the United States, pharmacy students usually work as technicians in pharmacies. Intervention studies confirm the need and effectiveness of standardized training and resources to increase students' efficient communication about opioid risks and safety with patients, which has implications for technicians as well.[29,30]

Of the 32 studies included in this commentary paper, only 12 studies focused on pharmacy practice, while the remaining studies discussed other HCP's opioid counseling practices and perceptions. This gap in the literature highlights the need for explanatory, large-scale, descriptive, and intervention studies of higher quality in this topic. As pharmacists are more accessible HCP and responsible for medication dispensing, pharmacists have an essential role as opioid risk and safety educators at the time of medication dispensing.[43] Pharmacists can also provide this education in a variety of other settings, including at hospital discharge or in an ambulatory care clinic setting. Research to understand pharmacists' perceptions about opioid counseling practices and factors that affect pharmacists' practices is warranted to better harness the skills and capabilities of pharmacists. Exploratory studies can be adapted from the studies that have been conducted previously to understand other HCP practices and perceptions for opioid medication counseling.

Regarding patient and HCP perceptions of pain management, this commentary paper highlighted many discrepancies between both parties.[13,18,37,39] Such discrepancies had negative consequences for communication between the patient and HCP and often resulted in non-optimal pain management. Some studies reinforce that HCP had negative associations with opioid use, which resulted in less discussion of opioid safety with patients.[11,20] Aside from differing patient and HCP perceptions, one of the most commonly mentioned barriers to pain treatment was lack of patient-centered treatment focusing on patient questions, comfort and pain.[18,22,26] Ethnic differences in perceptions of pain among HCP and patients[20,22] impacts communication and negatively affects the relationship between the patient and HCP. The need to assess patient beliefs and experience with pain suggests training in this area would be an important contribution.

Given the findings that risks are underattended during patient education, it is promising that several studies identified examples of strategies to improve communication regarding opioid risk and safety. These include the use of tools, such as guidelines and PDMP, and the focus on developing strong patient relationships that foster nonjudgmental, empathic, and unbiased discussions regarding opioid use.[24,25,45] Training and education increased HCP knowledge about opioid risks and confidence discussing sensitive issues with patients.[27]

4.3. Research agenda

This commentary noted major research gaps. First, there are relatively few studies that focus, specifically on pharmacists. Role uncertainty exists among pharmacists, other HCP, and patients regarding pharmacists' roles in opioid risk and safety counseling.[16,42] This is an important and overlooked area that should be a priority. Second, most published studies are exploratory and qualitative. Studies tend to use a convenience sample and are limited in their generalizability. While exploratory studies are important to begin exploring possible causes and underlying factors, they must be followed by larger studies encompassing larger samples and validated measures that can be used in survey studies, observational studies, or secondary dataset analyses. Studies that use the evidence from exploratory studies to design and test scalable interventions are essential to convert research to practice. The field needs more well-designed intervention trials of HCP training, structured guidelines and resources, and organizational interventions to define role expectations across the health care team in the setting. Given the research findings noted in this commentary about the influence of patients on opioid discussions, more research is needed on how to raise patient expectations of pharmacists and train patients to participate more actively in opioid consultations by sharing their questions, concerns, and needs.[46,47] Thus far, relatively few studies use a theoretical framework to help form the conceptual model of underlying dynamics and impact. Building on frameworks and models that are applicable will enrich this research field.

In closing, the following recommendations are suggested to improve communication and counseling practices.

1. Standardize the content of HCP counseling for opioid medication to include potential risks associated with opioid medication use in addition to drug name, purpose, side effects, and safe storage and disposal.
2. Encourage consistent use of opioid prescribing guidelines and PDMP to identify the patient's experiences with opioids and to inform discussions with patients about opioids.
   Develop education and training for pharmacy students and pharmacists specific to discussing risks associated with opioid use.
3. Conduct additional quantitative and intervention studies to better assess current HCP-patient communication strategies, barriers, and facilitators to the provision of effective counseling.

4.4. Limitations

There are a limited number of published studies around patient-HCP communication regarding opioids, particularly related to pharmacists. Four of the included authors are responsible for the majority of studies published with respect to pharmacists. Therefore, a specific patient population or geographic area may be over-represented in the findings presented in this review. However, the barriers and facilitators suggested in these studies are likely generalizable to many different patient populations and

settings, and findings are reinforced by other studies included in this review. As mentioned above, many of the included studies were observational or retrospective conversation analysis studies. Interventional studies are needed within this area of research to further assess current communication topics and identify optimal strategies to improve discussion between patients and HCP regarding opioids.

5. Conclusions

This commentary assessed and summarized topics covered and excluded from opioid consults, patient and HCP perceptions regarding opioid communication, and barriers and facilitators to opioid risk communication. The findings from this review emphasize the gap between HCP and patient perceptions and communication regarding pain and opioids. Given the preponderance of exploratory, qualitative studies, the field needs to move to the next stage of quantitative and mixed methods studies. This commentary highlights the need for explanatory, large-scale, descriptive, and intervention studies of higher quality in this topic. Further, there is a strong need to focus these studies on pharmacists who have been understudied. Fruitful areas for intervention studies to improve effective communication include the use of prescribing guidelines and PDMP, interpersonal skills, organizational interventions, reduction of HPC opioid counseling role ambiguity, and even bolstering patient communication strategies and skills. Implementation and dissemination of scalable, effective strategies can then build on these studies as a foundation.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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