

Screening Tools to Assess Risk of Opioid Abuse In the Primary Healthcare Setting

Hollie Muir, BN, RN is a primary healthcare nurse practitioner student at the University
of New Brunswick, Fredericton, NB

Fran Seymour, MN, NP is a primary healthcare nurse practitioner and senior teaching
associate at the University of New Brunswick, Fredericton, NB

Abstract

The prescribing of opioid therapy for patients suffering with chronic pain is increasing, along with rates of opioid abuse. With the advancement of the nurse practitioner scope of practice to include the prescribing of controlled substances, nurse practitioners who work in the primary healthcare settings are now initiating and managing chronic opioid therapy. To ensure that proper treatment and monitoring plans are implemented, nurse practitioners must be able to identify patients at risk of abuse or who are exhibiting aberrant drug related behaviors. There are many screening tools available to assess risk of abuse or identify aberrant drug related behaviors, however, only the Screener and Opioid Assessment for Patients with Pain Revised and Current Opioid Misuse Measure tools have been cross-validated for their validity and reliability for chronic pain patients in primary healthcare settings. A brief review of screening tools is presented, and a recommendation on the consistent use of screening tools when prescribing chronic opioid therapy is discussed.

Keywords: Opioid abuse, opioid misuse, chronic pain, risk assessment, screening tools, aberrant drug-related behaviors

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Chronic pain is estimated to be the third most prevalent condition managed by primary healthcare providers in Canada (Canadian Institute for Health Information 2011). Opioids are commonly prescribed by primary care providers for the treatment of chronic pain, which presents a risk for misuse, abuse and diversion of the medication (Clark 2011; Creech et al. 2011). In this article, a brief review of chronic pain, opioid therapy, and the potential harms of opioids are presented. The use of screening tools to assess the risk of opioid abuse will be discussed, and recommendations for their use by nurse practitioners in a primary care practice are made. Strategies to assist nurse practitioners in managing high-risk patients are also reviewed.

Prescribing opioid therapy for patients with chronic non-cancer pain is an increasingly common occurrence in primary care (Fischer et al. 2011; Juska et al. 2013; Manchikanti et al. 2012). Data from the International Narcotics Control Board's (INCB) (2012: 238.) Estimated World Requirements for 2013 indicates that, "Canada is the second largest per capita consumer of prescription opioids." Across Canada, there has been an increasing trend in the prescription and consumption of opioids (Fischer et al. 2011). Between 2005 and 2010, there was approximately a 3% increase in daily opioid dispensing (Fischer et al. 2011). More alarmingly, "Canadians' use of prescription opioids increased by 204% between 2000 and 2010" (National Advisory Committee on Prescription Drug Misuse (NACPDM) (2013: 1.). This increase in prescribing and consumption creates a serious health concern related to the potential for abuse and misuse of opioids (Frankel et al. 2014).

Harms associated with the abuse of prescription opioid medication are numerous

and include addiction, diversion, overdose and death (NACPDM 2013). The harms of opioid abuse often extend beyond personal and family life and into healthcare, government and safety systems (NACPDM 2013). Diversion of opioids, which has been described as “the transfer of legally obtained drugs into illegal channels” (Meltzer et al. 2013: 1437.) can result in increased crime, violence, policing and corrections costs and a greater need for addiction treatment resources including methadone programs (NACPDM 2013). The INCB (2013) estimates that globally, there are 211,000 prescription drug related deaths each year. In Ontario, deaths related to prescription opioids have doubled in the past 10 years (NACPDM 2013).

In November 2012 amendments to Canada’s Controlled Drugs and Substances Act permitted nurse practitioners (NPs) to prescribe controlled substances with some exclusions such as heroin, cannabis, opium and anabolic steroids (Minister of Justice 2013). While most Canadian provinces have provincial regulations that permit NPs to prescribe controlled substances, some provinces and territories such as Ontario and British Columbia are still working to implement regulations (College & Association of Registered Nurses of Alberta 2014; College of Nurses of Ontario 2014; College of Registered Nurses of British Columbia 2014; Nurses Association of New Brunswick 2014). With this advancement in the NP role, it is critical that NPs enact strategies to safely prescribe and monitor chronic opioid therapy to help protect patients from the potential harms of opioid use.

Obtaining an accurate assessment of a patient’s risk of drug abuse will assist NPs to determine how cautiously opioids should be prescribed, how closely the patient should be monitored, and any further screening that should be completed throughout treatment

(Chou et al. 2009b; Jamison et al. 2011). Even though there are many screening tools available that attempt to quantify a patient's risk of drug abuse, there is limited research on the effectiveness of these tools and no endorsement of a standard tool for use among primary care providers (Adams et al. 2004; Belgrade et al. 2006; Butler et al. 2004; Butler et al. 2007; Butler et al. 2008; Chou et al. 2009b; Coombs et al. 1996; Compton et al. 1998; Melzer et al. 2013; Passik et al. 2004; Webster et al. 2005; Wu et al. 2006).

Chronic Pain and Opioid Use

Chronic pain is defined as pain lasting longer than six months, which is beyond the time necessary for an injury to the body to heal (Rosenquist et al. 2014). Approximately 17% of Canadians 15 years of age and older suffer from chronic pain (Reitsma et al. 2011). According to Health Canada's 2012 Canadian Alcohol and Drug Use Monitoring Survey, almost 17% of the Canadian population used an opioid pain reliever within the last 12 months (Health Canada 2012). Prescription opioids are often added to a patient's plan of care when conservative measures have failed to provide adequate pain relief (American Academy of Pain Medicine 2013). When used as directed, opioids are necessary and effective for the treatment of moderate to severe pain however, it is when they are abused or misused, that opioids become a problem (Chou et al. 2009b).

Indications that a patient may be starting to abuse opioid medication can be observed when patients exhibit aberrant drug related behaviours (Meltzer et al. 2012). Aberrant drug related behaviours include asking for early refills, asking to increase their dose beyond what was prescribed, making frequent emergency department visits, and seeking prescriptions from different providers (Meltzer et al. 2012). Abuse of opioids

involves the illegal use of the medication without therapeutic intent to alter the state of consciousness or achieve euphoria (Webster and Fine 2010). The Canadian Alcohol and Drug Use Monitoring Survey (Health Canada 2012) revealed that 410,000 Canadians, or 6.3% of the population, reported abusing prescription drugs to get high or for other purposes. The INCB (2013: 11.) stated in its 2013 report that they “continue to be concerned about the high prevalence of drug abuse among the general population and especially among youth.”

Even when clearly indicated, the increase in opioid abuse and diversion can cause primary healthcare providers to be reluctant or concerned about prescribing opioids (Brennan and Stanos 2010). Despite concerns, primary care NPs have a responsibility to treat their patients’ chronic pain, and this may involve prescribing opioid medication. To balance concerns about opioid abuse with responsibilities to help patients manage chronic pain, it is important that NPs screen patients’ for risk for abuse prior to initiating chronic opioid therapy (NOUGG 2010). Knowledge of risk will allow the NP to be cautious in their prescribing and to determine which patients may require more intensive management and closer monitoring (Chou 2009b). It may also be reasonable to assume that if a patient’s risk for opioid abuse is low, primary healthcare providers’ reluctance to prescribe opioids may decrease. Studies examining the prevalence of screening for aberrant drug related behaviors in patients taking opioid therapy in primary care indicate that screening is completed infrequently, and inconsistently without the use of a practice standard (Hartrick et al. 2012; Starrels et al. 2011; Lewis et al. 2014).

A standardized screening approach, using a validated opioid screening tool, is recommended as a way to minimize risk and maximize benefits for patients on long term

opioid therapy (Bohn et al. 2011). In particular, the use of a screening tool for patients with chronic pain prior to initiating opioid therapy, as well as regularly throughout treatment can facilitate enhanced understanding of drug abuse risk through continuous assessment and documentation (Chou et al., 2009b; Manchikanti et al., 2012; NOUGG 2010; Nuckols et al. 2014). If a patient is deemed high risk, it does not mean they will ultimately abuse their prescribed opioids, but it should prompt the healthcare provider to ensure that an in-depth discussion occurs, and that the patient has an appropriately structured treatment and monitoring plan in place (Bohn et al. 2011; Clark 2011; Turk et al. 2008; Passik 2009).

Screening Tools

Numerous screening tools to assess risk related to opioid abuse exist and, overall, these tools differ based on whether they assess risk prior to or during opioid therapy. Tools that can be used *prior to* initiation of chronic opioid therapy include the Screener and Opioid Assessment for Patients with Pain-Revised (SOAPP-R) (Butler 2010), the Opioid Risk Tool (ORT) (Webster and Webster 2005), the Diagnosis, Intractability, Risk and Efficacy (DIRE) tool (Belgrade et al. 2006) and the Screening Instrument for Substance Abuse Potential (SISAP) (Coombs 1996) (Jamison et al. 2011; Passik 2009). Tools that assess opioid abuse and aberrant drug related behaviours during opioid therapy include the Current Opioid Misuse Measure (COMM) (Butler et al, 2010), the Addiction Behavior Checklist (ABC) (Wu et al. 2006), the Pain Medication Questionnaire (PMQ) (Adams et al. 2004), the Prescription Drug Use Questionnaire (PDUQ) (Compton et al. 2008) and the Pain Assessment and Documentation Tool (PADT) (Passik et al. 2004).

Although many tools exist, only the SOAPP-R and COMM tools have been cross-

validated for their usefulness specifically for patients with chronic pain in primary care settings (Butler et al. 2010; Butler et al. 2011; Jamison et al. 2011). “Cross-validation estimates the prediction error for a fitted model or algorithm” (Salkind 2010: 134.) which means that it re-evaluates the model or tool to determine whether the results obtained are relevant to the general population, or if they are specific to the original sample used (Low and Molzahn 2007). The same procedures are used as in the initial validation study; however, they are administered to a new group of participants (Butler et al. 2010). Cross-validation is important when determining the reliability and validity of a test because the initial sample may have produced erroneously high values due to random sampling errors (Butler et al. 2009). Having a cross-validated tool increases our confidence that the tool we are using is able to predict future abuse or detect aberrant related drug behaviors. For these reasons, in this article we deal specifically with the only two cross-validated tools, the SOAPP-R and COMM.

Initial Risk Screening Tools

Screener and Opioid Assessment for Patients with Pain (SOAPP).

The SOAPP was developed in 2004 by researchers Butler, Budman, Fernandez and Jamison. The tool is intended for use before initiating long term opioid therapy for chronic pain patients to assess risk of developing addiction (Butler et al. 2004). The SOAPP helps the healthcare provider answer the following questions: “Is long-term opioid therapy a reasonable option? Should you take extra precautions with this patient? What level of monitoring may be necessary to safely proceed with long-term opioid therapy?” (Inflexion Inc 2014: 3.). One weakness of the tool is that the SOAPP was designed with the assumption that the patients would be truthful and direct in their

responses, and therefore, many of the questions required that the patient admit to “incriminating behaviors” (Butler et al. 2008).

Screener and Opioid Assessment for Patients with Pain-Revised (SOAPP-R)

The SOAPP-R was developed in 2008 by Butler, Fernandez, Benoit et al. to address some of the limitations of the original SOAPP tool. The questions on the SOAPP-R are subtler and less susceptible to deception than the original SOAPP (Butler et al. 2008). The SOAPP-R is a 24-item patient-administered tool by that is designed for use with patients with chronic pain in the primary care setting (Butler et al. 2008). The tool takes less than 10 minutes to complete, and was written at a grade six reading level (Inflexxion Inc 2009). Questions probe patients to consider “how often” they experience certain feelings or exhibit particular behaviors, and response options range from never to very often (Inflexxion Inc 2009). Never responses yield a score of zero and very often responses yield a score of four (Inflexxion Inc 2009). After the screening tool is complete, a total score is determined by adding scores for responses to all 24 questions. A score of 18 or higher identifies the patient as high risk to abuse opioids (Inflexxion Inc 2009).

When comparing the available evidence on commonly used screening tools Chou et al. (2009a) and Jones et al. (2012) both reported the SOAPP-R to have good sensitivity in predicting aberrant drug related behaviours. SOAPP-R’s initial validation sensitivity was .81 and specificity was .68 (Butler et al. 2008). Sensitivity represents the percentage of people that test positive, who are truly high risk, while specificity represents the percentage of people that test negative and are truly not high risk (Butler et al. 2009). This means that the SOAPP-R positively identified 81% of participants that were truly

high risk. The SOAPP-R correctly identified 68% of those who were truly not high risk (Butler et al. 2008). Cross-validation of the tool revealed a sensitivity of .80 and specificity of .52 (Butler et al. 2008; Butler et al. 2009). Sensitivity and specificity values above .80 are considered high (McClure 2001). Considering a screening tool such as the SOAPP-R, the ability to detect a high risk patient (sensitivity) is considered more important than its accuracy in identifying low risk patients (specificity) (Butler et al. 2008).

Current Opioid Misuse Measure (COMM).

The COMM was developed in 2007 by researchers Butler, Budman, Fernandez et al. to be used as an ongoing assessment tool for monitoring aberrant drug related behaviors among patients who are prescribed opioids to manage chronic pain. The COMM has 17 questions and is sensitive to detecting aberrant drug related behaviors (Butler et al. 2007). The tool can be self-administered in a primary care setting (Butler et al. 2007) and takes less than 10 minutes to complete (Inflexxion Inc 2008). All questions on the tool all begin with, “in the past 30 days, how often...”, and response options range from never to very often (Inflexxion Inc 2008). Never responses are given a score of zero and very often responses are given a score of four (Inflexxion Inc 2008). A score of nine or higher alerts the care provider that the patient may be misusing or abusing their prescription opioid medication (Inflexxion Inc 2008).

The COMM tool is the only screening tool that has been cross-validated to monitor for aberrant drug related behaviors during treatment with opioid therapy. The COMM tool’s initial validation revealed a c-statistic of 0.82 for males and 0.85 for females. C-statistic is used to assess a model’s predictive ability. A model is considered

strong when the c-statistic is above 0.8 (University of Manitoba 2011). Cross-validation of the tool for reliability and predictive validity revealed an area under the curve (AUC) that was “highly significant (AUC = .79) and not significantly different from the AUC in the initial validation study (AUC = .81)” (Butler et al. 2010: 1.). This indicates that the reliability and validity of the tool were not simply based on chance relationships to the sample of participants in the original validation study (Butler et al. 2010).

Managing High-Risk Patients

It is important to note that when patients are deemed high risk for opioid abuse using screening tools such as the SOAPP-R, they still require treatment for their pain. If it is determined that opioid therapy remains the most appropriate approach, these patients will require closer monitoring (Inflexxion Inc 2009). The monitoring plan of a high-risk patient may include more frequent appointments, fewer pills prescribed at one time, and random urine drug screenings (Passik 2009). Using the COMM screening tool at each visit may also help to identify aberrant drug related behaviors early in the course of treatment. By closely monitoring high-risk patients the NP is better able to detect aberrant drug related behaviors early and then make appropriate treatment decisions (Chou et al. 2009b; Passik 2009).

Even when a patient obtains a high score on the COMM tool, which indicates potential for aberrant drug related behaviours or abuse, the responsibility remains to assist the patient in managing their pain (Inflexxion 2008). In this circumstance, the NP can further customize the patient’s treatment and monitoring plan to include an opioid contract, more frequent appointments and education on the potential harms of opioid abuse and the importance of taking medications as prescribed (Hatrick et al. 2012). The

NP may also want to implement more frequent urine drug screenings for nonprescription and/or illicit drugs (Hatrack et al. 2012). Other cautionary measures when prescribing opioids could include prescribing only one to two weeks of opioids per fill, requiring in office visits for each prescription refill and not providing early refills (Hatrack et al. 2012; Passik 2009). Ultimately, if the NP is not comfortable prescribing opioids due to concerns about potential misuse or abuse, the patient should be referred to a pain management specialist or program for collaboration in their care (Chou et al. 2009; Inflexxion Inc 2009).

Practice Recommendation for Nurse Practitioners

Nurse practitioners have a responsibility to treat patients with chronic pain safely and effectively, and therefore incorporating a comprehensive, holistic and systematic approach to prescribing opioid therapy is critical (NOUGG 2010). Incorporating the use of screening tools such as the SOAPP-R and the COMM into routine prescribing and monitoring practices is one way to identify patients at risk of opioid abuse. In addition to proper assessments and clinical judgment, nurse practitioners should use the cross-validated SOAPP-R for initial screening, and the COMM for ongoing screening. Approaching the patient in a nonjudgmental manner with assurance that universal screening is completed with all patients throughout opioid therapy may help to ease any defensiveness or negative feelings the patient may have towards the screening process.

Usefulness and practicality in everyday practice must also be considered when implementing screening tools. Although it may be practical to have an initial screening tool that takes 10 to 20 minutes to complete, it is not ideal to have a screening tool for subsequent visits that is lengthy or difficult to administer (Passik 2009). Both tools are

self-report measures that are practical for the busy primary healthcare environment as they can be completed by the patient in the waiting room prior to being seen by the NP (Butler et al. 2007; Butler et al. 2008). The tools can then be reviewed with the patient, and used as a starting point for discussion with the patient about the harms of opioid abuse and the implementation of safeguards into their treatment and monitoring plan (Hatrick et al. 2012). In collaboration, the NP and the patient are able to set priorities for care to optimize the patient's functionality, safety and overall health (CNA 2010).

Combining the consistent use of a screening tool, along with other available safeguards such as careful prescribing practices, opioid contracts, urine screening, and frequent monitoring will help NPs feel more confident in prescribing and monitoring opioid therapy, will improve overall patient safety and will help to reduce the harms associated with opioid abuse and addiction.

Further Research Needed

Although there are multiple validated tools, and two cross-validated tools, research related to screening tools to predict aberrant drug related behaviors is limited (Adams et al. 2004; Belgrade et al. 2006; Butler et al. 2004; Butler et al. 2007; Butler et al. 2008; Butler et al. 2010; Butler et al. 2011; Chou et al. 2009a; Coombs et al. 1996; Compton et al. 1998; Melzer et al. 2013; Passik et al. 2004; Webster et al. 2005; Wu et al. 2006). Thus, before an ideal universal screening tool for patients with chronic pain can be recommended, there is a need for more research, including randomized controlled trials and studies that compare patient outcomes (Chou et al. 2009a; Hatrick et al. 2012; Manchikanti et al. 2012; Sehgal et al. 2012; & Solanki et al. 2011). A core competency of the NP role is involvement in research (CNA 2010). Therefore, NPs should contribute to

ongoing evaluation of these tools to strengthen the overall research base and to satisfy their professional responsibilities.

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