

Chronic Pain Agreements

Master's project submitted in partial fulfillment of the requirements for the degree of

MASTERS OF NURSING

By

Brea McLaughlin

WASHINGTON STATE UNIVERSITY – SPOKANE, WA

College of Nursing

July 16, 2012

To the Faculty of Washington State University:

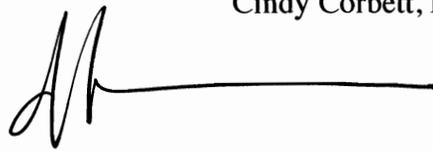
The members of the Committee appointed to examine the master's project of
BREA MCLAUGHLIN find it satisfactory and recommend that it be accepted.



Lorna Schumann, PhD, NP-C, FAANP Chair



Cindy Corbett, PhD, RN



Donelle Howell, PhD

Chronic Pain Agreements

By Brea McLaughlin, RN, BSN

Washington State University

July 2012

Abstract

Chair: Lorna Schumann

Journal submitted to: The American Journal of Nurse Practitioners

Chronic pain is increasingly common in the primary care setting. It is therefore essential for primary care nurse practitioners to be confident managing and treating patients with chronic non-cancer-related pain. One hundred people die every day from drug overdoses in the United States and a majority of these deaths are from prescription drugs. Using the Chronic Care Model as a guiding framework, this paper evaluates the literature to identify evidence-based elements that should be included in a pain management agreement for patients being treated for chronic, non-cancer pain. Pain agreements, while not completely studied for effectiveness and outcomes, are commonly used in primary care settings when opioids are prescribed for patients with chronic pain. Pain agreements between primary care nurse practitioners and patients generally include urine drug screening, assessments to identify psychological comorbidities and Morphine Equivalent Dosing. More research on the impact of pain agreements on patient outcomes is needed.

Key Words: Chronic pain, chronic pain contracts, chronic pain agreements primary care, nurse practitioners

TABLE OF CONTENTS

	Page
ABSTRACT.....	iii
INTRODUCTION.....	1
THEORETICAL FRAMEWORK.....	5
LITERATURE REVIEW	
SECTION 1 Monitoring Misuse.....	7
SECTION 2 Identified Psychological Comorbidities.....	9
SECTION 3 Morphine Equivalent Dosing.....	10
DISCUSSION.....	12
TABLE.....	16
FIGURES.....	17
REFERENCES.....	22

Dedication: To my wonderful husband, who is such a good team player, and our son for the inspiration to keep going.

Chronic Pain Agreements

INTRODUCTION

Chronic pain is a common condition among patients managed by primary care providers. It is generally managed, at least in part, with opioid prescription medicines, which have addictive properties that can lead to misuse and fatal overdose. Opioid prescription medicines are the second most misused category of drugs, following marijuana.¹ Opioid prescription medicines are derived from opium poppy, or synthetic versions of it. Examples of these types of medicines include: hydrocodone (Vicodin™), oxycodone (OxyContin™, Percocet™), fentanyl (Duragesic™, Fentora™), methadone and codeine.² Nurse practitioners should manage patients' chronic pain while preventing opioid misuse and the associated harmful effects. Four justifications for the use of pain agreements include: adherence, informed consent, legal risk, and efficiency.³ Using the Chronic Care Model as a guiding framework, the literature was evaluated to determine the components commonly included in a pain management agreement for the treatment of chronic non-cancer pain.

Chronic Pain Defined

Chronic pain is defined as “chronic, non-cancer pain, constant or intermittent, lasting greater than three months duration”.⁴ However, the International Classification of Disease ninth revision (ICD-9) does not state a specific amount of time required to determine if pain is classified as chronic.⁵ The ICD-9 defines chronic pain as “pain that lasts for a longer than expected amount of time, pain that can range from moderate to severe and pain that may progress or persist over a long period of time”.⁵ Pain disorders are also classified on the basis of anatomy, cause, neurophysiology or body system involved.⁴ The different types of chronic pain described in the literature include musculoskeletal pain, neuropathic pain, chronic widespread pain and non-specific low back pain.⁶

Unintended Consequences of Prescription Opioids

Opioid prescribing for chronic conditions has reached epidemic levels. According to the Centers for Disease Control and Prevention (CDC),² as of 2008, 100 people die every day from drug overdoses in the United States (US) and a majority of these deaths are from prescription drugs.²

In 2008, 28,171 deaths in the US were caused by opioid poisoning, which accounts for 91% of the total accidental poisoning deaths in the US.² Nearly three out of four prescription drug overdoses are caused by prescription painkillers, also called opioid pain relievers, and about one-half involved one other drug, including benzodiazepines, cocaine, and heroin. Alcohol is also involved in many overdose deaths.² Nationwide, nearly 50 million Americans are affected by chronic musculoskeletal pain and 70% of opioid overdose deaths occur in individuals under age 45.^{7,8} The primary cause of opioid overdose is respiratory arrest related to patients' attempts to use higher doses to achieve a euphoric effect and reduce withdrawal symptoms.²

Almost all prescription drugs involved in overdoses come from prescriptions, with very few obtained from pharmacy theft. Interestingly, more than 75% of people who misuse prescription opioids use medicines prescribed to someone else.² In order to identify patients who are in need of chronic pain management, it is essential to understand which patients are at highest risk for opioid misuse. The four groups identified as the highest risk for misuse are those that:

1. Obtain multiple controlled substance prescriptions from multiple providers, a practice known as "doctor shopping";
2. Take high daily dosages of prescription opioids and/or use multiple abuse-prone prescription drugs;
3. Live in rural areas and/or have low income, including those on Medicaid, who are at six times the risk of opioid overdose;

4. Have a mental illness and/or a history of substance abuse.²

As seen in Table 1,² there is a parallel between increased opioid prescriptions and the 300% increase in opioid-related deaths from 1990-2008. Thus, the CDC has issued a number of recommendations to primary care providers. These recommendations include patient review and restriction programs, health care provider accountability, laws to prevent prescription drug abuse and diversion, and better access to substance abuse treatment.²

Primary care is the dominant healthcare setting where patients are prescribed pain medicine for chronic non-cancer pain.^{2,8} Primary care nurse practitioners need education about, and protocols for, managing the dynamic care most chronic pain patients require. Many patients with chronic pain medication needs also have co-occurring alcohol, tobacco and/or mental health disorders, which further increases risk for opioid misuse.⁸ To promote safe and holistic care for this population, specific recommendations have been developed by The American Society for Pain Management Nursing.⁹ These guidelines include risk assessment and management in the form of chronic pain agreements. In addition to professional guidelines, chronic pain management is increasingly regulated by state law. An example of a widely cited regulation is Washington state House Bill (HB) 2876, which was enacted into law in March of 2010. HB 2876 specifically relates to caring for patients with chronic non-cancer pain management; patients with cancer-related pain are exempt from this measure.¹⁰ In accordance with HB 2876, providers managing patients with chronic, non-cancer pain are required to:

1. Provide informed consent;
2. Evaluate the patient and document in the health record;
3. Use and maintain written treatment plans with written review regarding risk for misuse;
4. Provide a written agreement for high risk of misuse;

5. Seek consultation from a pain specialist for Morphine Equivalent Dosing >120mg per day unless the provider maintains continuing education in the management of chronic pain for more than 12 hours every two years.

Chronic pain agreements or contracts may provide a resource and plan for safely managing patients with chronic pain (Figure 1), and helping to assure compliance with professional guidelines and state regulations.¹¹ Most of the literature advocates for use of chronic pain agreements to promote patient safety and prevent opioid misuse. Unfortunately, adoption of opioid treatment agreements by primary care providers has been limited and some literature questions whether pain agreements actually restrict the freedoms patients have to seek care.³ This restriction of freedom may be due to the patients' loss of rights to obtain medication to treat pain at a place and time convenient to them and possibly not at the convenience of the provider, which in turn diminishes the patients' autonomy.³ An analysis of three primary care studies described managing patients prescribed long-term opioids revealed that only 23% of the physicians completed treatment agreements.¹² In contrast, other elements of literature regarding chronic pain argue that when implemented, pain agreements may provide structure and monitoring for chronic pain management and promote patients taking an active and informed role in their own care.^{13,14}

Statement of Purpose

It is essential to ensure that primary care nurse practitioners have substantial knowledge and confidence in prescribing opioid pain medicine to provide care for patients with chronic non-cancer pain. The enactment of protocols, in the form of pain agreements for collaborative treatment and management within primary care practices, may ensure safety and consistency of care for patients. The purpose of this paper is to identify evidence-based guidelines about the commonly found components of pain agreements to promote safe management and reduce the risk of opioid misuse.

THEORETICAL FRAMEWORK

Chronic pain management in primary care, through the use of chronic pain agreements, may be guided by the Chronic Care Model (CCM; Figure 2).¹⁵ Chronic pain, like ~~other~~ chronic diseases, is a condition we can treat, but rarely cure, which requires dynamic coordination of care between practitioners and patients.¹² The philosophy behind the CCM includes treatment and management of chronic conditions through sustained commitment from health care providers and involvement of knowledgeable patients as partners in their care.¹² Chronic pain agreements are a tool that can be used to facilitate productive interactions between providers and patients, a hallmark of the CCM. Pain agreements guide provider interventions, engage the patient in self-care and create a basis of shared understanding and care coordination between the patient and provider. This creates safe and productive interactions aimed at mutually agreed upon goals for the well being of the patient. The following literature review explores common elements of chronic pain agreements through the lens of the CCM.

LITERATURE REVIEW

An electronic search of current literature within the last seven years was conducted to find the most relevant articles regarding chronic pain management in primary care. The Washington State University (WSU) Library system was utilized with the search for the keywords: *chronic pain, primary care, urine drug screen, chronic pain management, opioid misuse, opioid related deaths, collaborative care model, chronic care model, chronic pain contracts, chronic pain agreements*; with the latest year of published work from 2005. The WSU Library System uses several search engines, which include: CINAHL, PubMed and Medline. Google Scholar was also utilized. Several thousand articles resulted from the Google Scholar search. In a general search, most of the results from the library were similar to Google Scholar with most articles referencing cancer-related pain, rather than chronic pain. Nineteen pertinent articles in regard to opioid misuse assessments and collaborative care for pain management were

judged to be pertinent and selected for review. Three elements of chronic pain agreements were most commonly described in the literature: (a) monitoring misuse in the form of urine drug screenings, (b) identification of psychological co-morbidities of chronic pain and (c) dosage limitations of opioids in primary care in the form of morphine equivalent dosing.

Monitoring Misuse

The use of alternative substances when combined with opioid medications may cause harmful and lethal effects to patients, as previously noted from the CDC.² Urine drug screening is an important and commonly found element in most pain contracts. Urine drug screening may aid in assessment of adherence, use of alternative substances and the diversion of prescribed opioids.

In a non-linear mixed effect study, Starrels and colleagues hypothesized that practitioners would employ opioid risk reduction strategies to decrease opioid misuse.⁸ Of 1,612 primary care patients, four independent variables were analyzed and considered risk factors for opioid misuse, including: 1) age 45 years or less; 2) drug or alcohol use disorder; 3) tobacco use; or 4) mental health disorders.⁸ Additionally, three risk reduction strategies were described, which included: 1) any urine drug test; 2) regular office visits (at least once per six months and within 30 days of modifying treatment); and 3) restricted early refills.⁸ This study found patients with three or more of the above independent risk factors had more frequent office visits and were more likely to have been monitored via urine drug screens. These findings parallel some of the risk factors identified by the CDC. Lastly, several limitations were identified by Starrels et. al. which include 1) a narrow sample pool from eight clinics in one university health care system, 2) information for the study came from a electronic medical record and there may be misclassification especially for drug and alcohol disorders and 3) the risk factors were based on observational studies of varying quality.⁸

Urine drug screening is a common practice when managing chronic pain in primary care settings, but is widely understudied regarding the improvement in safety regarding opioid misuse.^{13, 16, 17} In an article by Chou and colleagues, clinical guideline recommendations included conducting risk assessments on every patient managed with chronic pain. Factors that should be considered when categorizing patients' were comorbidities, risk for diversion and risk for drug abuse.

Chou et. al.,¹⁷ suggest that periodic urine drug screening can be a helpful strategy for monitoring patients on chronic opioid therapy. Chou maintains that despite limited research regarding the efficacy of reducing opioid misuse by monitoring urine drug screens, it is an essential aspect of safe and responsible chronic pain management.

In contrast, another study by Chelminski and colleagues describes a primary care disease management study involving 85 patients in a 3-month uncontrolled trial where urine drug screening was used as primary tool for monitoring patients' misuse of opioids.¹⁶ Substance or opioid misuse was defined by the following: 1) cocaine or amphetamine detection; 2) procurement of opioids from more the one provider on a regular basis; 3) diversion of opioids; and 4) negative urine drug screenings on at least two occassions.¹⁶ Of the 85 patients studied, 32% of the patients committed substance misuse as detected by urine drug screening and ~~they~~ accounted for the majority of patients who did not complete the 3-month controlled trial. This study suggests that any abnormal urine drug screen is a violation of the pain contract and may result in discontinuation of care with referral to an illicit drug dependence treatment program and after six months in treatment the patient would be reconsidered for opioid management.¹⁶ This study represents a small sample size. A similar study with a larger patient sample size may prove an even more useful tool for evaluation of the effectiveness of urine drug screening.

In an additional systematic review, published by Starrels and colleagues,¹³ 100 published studies and articles were explored. The use of pain contracts was described, including use of

urine drug screening for chronic non-cancer pain. Urine drug screens were described as a universal precaution due to the potential adverse effects of opioids, including overdose or death. Starrels and colleagues argued because opioid misuse cannot be fully predicted, urine drug screens are a necessary tool for primary care providers.¹³ The authors concluded that despite insufficient evidence-based treatment guidelines, urine drug screening is a necessary element for managing patients requiring opioids for treating chronic non-cancer related pain.

Identified Psychological Comorbidities of Chronic Pain

Chronic pain is highly associated with other comorbid conditions. Many of these comorbid conditions are psychological. Evaluation and identification of psychological comorbidities of chronic pain is often a component of chronic pain management. For example, patients with a history of depression were more likely to receive long-term opioid therapy for non-cancer pain, than those without a history of depression.¹⁸ In the review of literature, two specific studies related the incidence of chronic pain with depression and anxiety. In a randomized controlled trial of 250 patients in six community based clinics and five Veteran Affairs clinics,¹⁹ patients were treated for depression and chronic pain. At 12 months, 37.4% of the intervention patients had a 50% or greater reduction in depression severity compared with 16.5% of the control group. Overall, this study found optimized antidepressant therapy coupled with pain self-management resulted in substantial improvement in depression, as well as moderate reductions in pain severity and disability.¹⁹ This study has few limitations but one main limitation may include the lack of random control against treating patients who do not have chronic pain for just depression and whether the effectiveness of treating depression alone improves quality of life, rather it is an assumption of the study.

Chronic pain has been identified as a psychological symptom inhibiting activities of daily living. In a research article by Means-Christensen et. al., using data from the Collaborative Care for Anxiety Panic Study involving 1,319 patients, it was reported that pain was often a

presenting symptom of a primary psychiatric disorder.²⁰ Means-Christensen found depression was strongly associated with anxiety, and if patients screened positive for anxiety mediated by pain, they also screened positive for depression.²⁰ Furthermore, the study also concluded if pain interfered with the patient's work, there was also an association with an increase in the odds of screening positive for a panic disorder; thus, pain impacted their activities of daily living.

Lastly, the previously mentioned study by Chelminski also examines the benefits of collaborative care with an interdisciplinary team in the treatment of chronic pain and psychological co-diagnoses.¹⁶ The team consisted of the patient's primary care provider, a clinical pharmacist, a program assistant with training in health behavior and a psychiatrist with sub-specialization in pain management. The study conducted a quantitative analysis of data using an 11-point scale known as the Brief Pain Inventory. Each patient signed a chronic pain agreement and provided a urine sample at the initial visit for management of chronic pain. The pharmacist or psychiatrist adjusted patients' pain medication dosages based on the recommendation of the primary provider. During medication titration patients returned at one month intervals. Patients were advised at entry into the program (and in the written chronic pain agreement) that serious violations of the pain agreement would result in discontinuation of opioids.¹⁶ Additionally, comorbidities of chronic pain were identified with each patient. The comorbidities included psychiatric disorders, such as depression and anxiety and substance use disorders. Overall depression ratings were improved by 37% for individuals treated for depression and chronic pain in this particular study. The multi-disciplinary, primary care-based, disease program improved pain, depression and disability scores in opioid-treated patients with chronic pain.¹⁶

In summary, identification of psychological comorbidities should be considered in any chronic pain agreement for adequate management of patients with chronic pain to improve overall quality of life.

Morphine equivalent dosing for prescribing practices

To ensure patients are managed safely, morphine equivalent dosing (MED; Figure 3) is a recommended element of chronic pain agreements.¹⁴ MED also aids practitioners in determining when to refer patients to pain specialists.¹⁴ Many state agencies and laws include a stipulation for referral when a patient is receiving more than a predetermined dosage of opioids in one day.⁹ Since opioids have different potencies, MED is implemented to universally calculate opioid dosages among all of the available opioid medications.

Two articles in the review of literature evaluated the relationship between MED and patient outcomes. An article by Braden et. al.,²¹ used MED to determine whether different dosages of opioids for chronic pain resulted in more emergency department visits. The data were collected from 14 different states and included over 10,000 people who had received opioids for more than 90 continuous days over a 6-month period. The threshold MED used for the purposes of this study was 120 milligrams (mg) per day. Findings suggested that MED dosage near or under the median of 120 mg per day resulted in more emergency department visits and more drug and alcohol substance abuse encounters with practitioners. This study also analyzed whether psychological issues, drug abuse or alcohol intake were comorbid reasons for emergency department visits in conjunction with opioid therapy. Although Braden et. al., did not investigate whether any other comorbidities were considered.²¹

A cohort-observational study reported by Dunn and colleagues²² followed 9,940 patients from Group Health Cooperative in Washington state who initiated long-term opioid therapy over a mean of 42 months. During this study there were six fatal and 74 non-fatal overdoses.²² Dunn and his colleagues used MED to determine a correlation between risk of overdose and amount of prescribed opioids. The study found the higher the MED, the higher incidence of overdose.

Morphine equivalent dosing may also provide a means to ensure holistic care and proper analgesia is prescribed to patients. In a cross-sectional study with 801 patients, by Dillie and

colleagues,²³ morphine equivalent dosing (MED) was used to determine whether low dose, mid-dose or high dose opioids improved a patient's quality of life in the primary care setting. Written survey techniques were used and averages were computed to determine the relationship between patients' quality of life and their opioid use. Overall, study results were that patients with low to mid MED opioid use had higher quality of life ratings compared to patients on high MED opioid use.²³

DISCUSSION

Evidence-based elements of chronic pain agreements

To date there has been little exploration of the long-term agreement use in improving adherence to chronic pain therapy, reasons for discontinuation of pain agreements or their use in primary care practices.²⁴ Despite the popularity of chronic pain agreements, there is a lack of consensus on conceptual issues concerning the proper composition and goals of opioid agreements. The literature regarding chronic pain agreements describes the utilization of chronic pain agreements as a way to reduce risks associated with chronic opioid use. Including mitigating the potential for misuse.³

Furthermore, most of the current literature on chronic pain is based on guidelines for care. The guidelines are not always evidence-based, but rather discuss the risks associated with opioid misuse, including overdose and suggestions for methods of decreasing the amount of medication diversion by utilizing random urine drug screening. In addition, psychological comorbidities were identified as quite common among patients with chronic pain. Consequently, screening for depression and anxiety should be included as part of the chronic pain management protocol in the pain agreements. Improved outcomes for both pain and psychological comorbidities were obtained in research that used a collaborative team approach to care. As such pain contracts should include referrals to other specialists, such as psychologists and pain specialists are part of the protocol.

Calculating MED is also a recommended best practice. However, there is no clear evidence-based research to discern opioid dosages that result in increased morbidity and mortality. There is only evidence indicating that higher opioid dosages are associated with lower quality of life scores, more emergency department use, and higher mortality rates. Research demonstrates patient driven MED dosing relates to higher quality of life and more efficient pain control. Opioids are dosed based on a patient's need for pain control and guidelines and state laws determine when primary care providers should refer. Guidelines for dosing opioids and the related policies and laws are based on expert opinion, rather than evidence generated by research, but should be included as part of a pain agreement.

Significance or implications for nurse practitioner practice

Chronic non-cancer pain may pose a significant level of risk to many patients in primary care settings. The research suggests nurse practitioners have several management and prescriptive tools to choose from when managing patients with chronic pain. The theoretical framework suggests that chronic pain may be optimally managed through engagement of patients and providers through chronic pain agreements. Pain agreements integrate evidence-based strategies, such that pain may be managed safely. These strategies include monitoring misuse through urine drug screening, acknowledgement and determination of psychological comorbidity and morphine equivalent dosing. All of the aforementioned strategies aid in the facilitation of the practitioner and patient collaboration of care for the treatment of chronic pain. Figure 4 describes a case example describing the mismanagement of a patient with chronic pain.²⁵ Pain management agreements may prove beneficial to nurse practitioners managing patients with chronic pain and facilitate the ability to identify patients at risk for opioid misuse. Chronic pain agreements and MED dosing may provide practitioners with guidelines to determine when a patient needs to be referred to a pain specialist.

In accordance with the CCM, chronic pain agreements provide knowledge to patients regarding the risks and necessary precautions when prescribing opioids, while enabling practitioners to safely prescribe and manage treatment with opioids.

The literature reviewed indicates that the available research regarding primary care management of chronic pain was carried out by physicians, and rarely included data from nurse practitioners. Very few articles mentioned nurse practitioners and treatment of chronic pain in primary care. The percentage of patients with chronic pain who are managed by nurse practitioners is unknown. Furthermore, nurse practitioners' confidence in treating and managing patients with chronic pain is also unknown. More research regarding nurse practitioners' practice in treating and managing patients with chronic non-cancer pain, including the use of screening and assessment tools and pain agreements, is needed.

Summary

In summary, chronic pain agreements may prove a useful element of care and may improve pain, depression, and disability among patients.¹³ Identification of risk factors for patients with chronic pain are necessary precautions that primary care nurse practitioners may employ to provide holistic care to patients through chronic pain agreements. Chronic pain agreements may facilitate positive outcomes for this patient population and are generally recommended by the literature. It is important to note that not all of the literature supports the usage of chronic pain agreements. Chronic pain agreements may inhibit patients' freedom to seek care and treatment when they deem appropriate rather than according to the guidelines of a pain agreement.

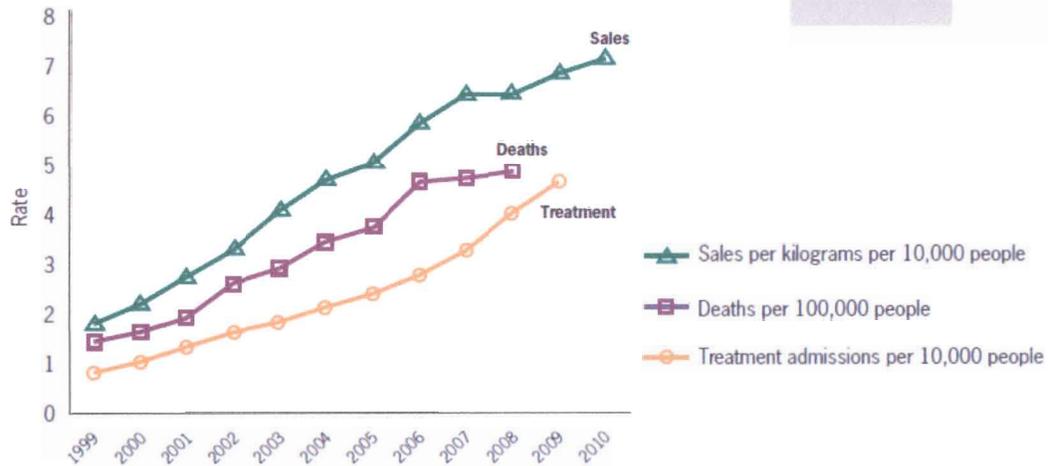
Most of the current literature on chronic pain is based on guidelines for care. The guidelines are not always evidence-based, but rather discuss the risks associated with opioid misuse, including overdose and suggestions for methods of decreasing the amount of medication diversion by utilizing random urine drug screening. The articles reviewed discussed the use of

random urine drug screens, identification of common psychological comorbidities and morphine equivalent dosing.

The Washington state legislation from 2010 regarding the prescription and management of chronic opioids is likely to aid in careful evaluation of patients requiring chronic pain management. However, there is no clear evidence-based research at what amount of opioid dosage directly results in increased mortality. There is only evidence explaining the higher the amount opioids prescribed to patients the lower they rate their quality of life, increase in their mortality and increase visits to emergency departments. Research demonstrates patient-driven MED dosing relates to higher quality of life and more efficient pain control, but there have been no clinical studies to identify how much opioids are really too much. Opioids are dosed based on a patient's need for pain control and guidelines and state laws determine when primary care providers should refer. Only expert opinions are provided to determine the guidelines for dosing opioids and then implemented by policies and laws regarding safe dosing of opioids. To conclude, nurse practitioners in primary care settings may use chronic pain agreements as valuable tools to manage this high-risk population but further evidence is needed to show the efficacy of such management.

Table 1

Rates of prescription painkiller sales, deaths and substance abuse treatment admissions (1999-2010)



SOURCES: National Vital Statistics System, 1999-2008; Automation of Reports and Consolidated Orders System (ARCOS) of the Drug Enforcement Administration (DEA), 1999-2010; Treatment Episode Data Set, 1999-2009

Figure 1

Sample Patient Contract for Using Opioid Pain Medication in Chronic Pain

This is an agreement between _____ (the patient) and Provider _____ concerning the use of opioid analgesics (narcotic pain-killers) for the treatment of a chronic pain problem. The medication will probably not completely eliminate my pain, but is expected to reduce it enough that I may become more functional and improve my quality of life.

1. I understand that opioid analgesics are strong medications for pain relief and have been informed of the risks and side effects involved with taking them.
2. In particular, I understand that opioid analgesics could cause physical dependence. If I suddenly stop or decrease the medication, I could have withdrawal symptoms (flu-like syndrome such as nausea, vomiting, diarrhea, aches, sweats, chills) that may occur within 24-48 hours of the last dose. I understand that opioid withdrawal is quite uncomfortable, but not a life-threatening condition.

I understand that if I am pregnant or become pregnant while taking these opioid medications, my child would be physically dependent on the opioids and withdrawal can be life-threatening for a baby.

3. Overdose on this medication may cause death by stopping my breathing; this can be reversed by emergency medical personnel if they know I have taken narcotic pain-killers. It is suggested that I wear a medical alert bracelet or necklace that contains this information. '
4. If the medication causes drowsiness, sedation, or dizziness, I understand that I must not drive a motor vehicle or operate machinery that could put my life or someone else's life in jeopardy.
5. I understand it is my responsibility to inform the provider of any and all side effects I have from this medication.
6. I agree to take this medication as prescribed and not to change the amount or frequency of the medication without discussing it with the prescribing provider. Running out early, needing early refills, escalating doses without permission, and losing prescriptions may be signs of misuse of the medication and may be reasons for the provider to discontinue prescribing to me.
7. I agree that the opioids will be prescribed by only one provider and I agree to fill my prescriptions at only one pharmacy. I agree not to take any pain medication or mind-altering medication prescribed by any other provider without first discussing it with the above-named provider. I give permission for the provider to verify that I am not seeing other doctors for opioid medication or going to other pharmacies.
8. I agree to keep my medication in a safe and secure place. Lost, stolen, or damaged medication will not be replaced.
9. I agree not to sell, lend, or in any way give my medication to any other person.
10. I agree not to drink alcohol or take other mood-altering drugs while I am taking opioid analgesic

medication. I agree to submit a urine specimen at any time that my provider requests and give my permission for it to be tested for alcohol and drugs.

11. I agree that I will attend all required follow-up visits with the provider to monitor this medication and I understand that failure to do so will result in discontinuation of this treatment. I also agree to participate in other chronic pain treatment modalities recommended by my doctor.
12. I understand that there is a small risk that opioid addiction could occur. This means that I might become psychologically dependent on the medication, using it to change my mood or get high, or be unable to control my use of it. People with past history of alcohol or drug abuse problems are more susceptible to addiction. If this occurs, the medication will be discontinued and I will be referred to a drug treatment program for help with this problem.

I have read the above, asked questions, and understand the agreement. If I violate the agreement, I know that the doctor may discontinue this form of treatment.

Patient signature

Provider signature

Date

Addendum:

Sample Statement that could be in this agreement or included in chart at each visit:

I understand that the medication is prescribed as follows:

Type of medication _____

Number of pills and frequency _____

Total number of pills _____

Next refill due _____

Patient signature

Provider signature

Figure 2

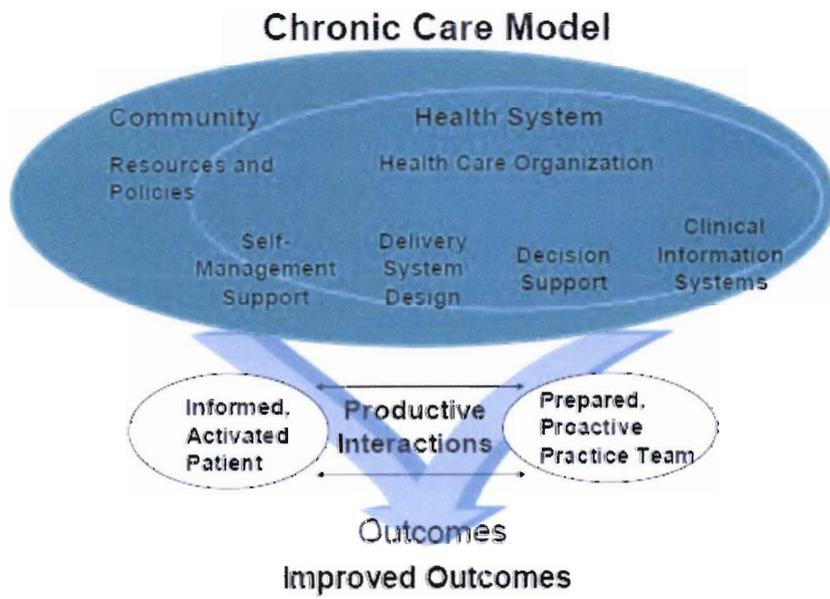


Figure 3

OPIOID DOSE CALCULATOR		
Optional:	Patient name:	
	Today's date:	April 8, 2012
Instructions:	Fill in the mg per day* for whichever opioids your patient is taking. The spreadsheet will automatically calculate the total morphine equivalents per day.	
Opioid (oral or transdermal):	mg per day*:	Morphine equivalents:
codeine	800	120
fentanyl transdermal (in mcg/hr)	50	120
hydrocodone	120	120
hydromorphone	30	120
methadone		
up to 20mg per day	20	80
21 to 40mg per day	30	240
41 to 60mg per day	60	600
>60mg per day	80	960
morphine	120	120
oxycodone	80	120
oxymorphone	40	120
TOTAL daily morphine equivalent dose (MED) =		2720
* Note: All doses expressed in mg per day with exception of fentanyl transdermal, which is expressed in mcg per hour		
If this value is less than 120mg Morphine Equivalent Dose (MED), please follow Part I of the AMDG Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain. Referral for pain management consultation is required before exceeding 120mg MED daily. See:		
www.agencymeddirectors.wa.gov/opioiddosing.asp		
www.doh.wa.gov/hsqa/professions/painmanagement/		
If this value is greater than 120mg MED, please follow Part II of the AMDG Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain. See: www.agencymeddirectors.wa.gov/opioiddosing.asp		
CAUTION: This calculator should NOT be used to determine doses when converting a patient from one opioid to another. This is especially important for fentanyl and methadone conversions. Equianalgesic dose ratios are only approximations and do not account for genetic factors, incomplete cross-tolerance, and pharmacokinetics.		

Figure 4

Case example

A news story from the Seattle Times in Washington state describes how a 32-year-old female, a 911 dispatcher from King County, in Washington State dies due to chronic pain mismanagement. Her chronic pain stemmed from post-surgical related nerve damage after a gallbladder removal. She died after a physician managing her chronic pain increased her methadone dose in an effort to wean her off of oxycodone. The patient was never instructed to decrease her oxycodone or to stop taking it with the

higher dose of methadone. While awaiting treatment for her chronic pain she lost her job, and her home plus gained weight due to her debilitating pain and sedentary lifestyle. The weight gain led to sleep apnea and the combination of the two pain medications caused respiratory arrest.²⁵

References

1. Volkow ND, McLellan TA. Curtailing diversion and abuse of opioid analgesics without jeopardizing pain treatment. *JAMA*. 2011;305(13):1346-7.
2. Centers for Disease Control and Prevention. Policy Impact Prescription Painkiller Overdoses. Available at: www.cdc.gov/homeandrecreationalafety/rxbrief/. Accessed on December 19, 2011.
3. Arnold RM, Han PK, Seltzer D. Opioid contracts in chronic nonmalignant pain management: objectives and uncertainties. *Am J Med*. 2006;119(4):292-6.
4. Elliott AM, Smith BH, Penny KI, Smith WC, Chambers WA. The epidemiology of chronic pain in the community. *Lancet*. 1999;354(9186):1248-52.
5. Buck, C. *ICD-9-CM volumes 1, 2, &3. Professional edition*. St. Louis: Elsevier Saunders; 2011.
6. Turk DC, Wilson HD, Cahana A. Treatment of chronic non-cancer pain. *Lancet*. 2011;377(9784):2226-35.
7. Creech CJ, Clark S, Grube G, et al. Nurse practitioner management of chronic musculoskeletal pain: a chart review. *Nurse Pract*. 2011;36(9):29-36.
8. Starrels JL, Becker WC, Weiner MG, Li X, Heo M, Turner BJ. Low use of opioid risk reduction strategies in primary care even for high risk patients with chronic pain. *J Gen Intern Med*. 2011;26(9):958-64.
9. American Society for Pain Management Nursing. Promoting Pain Relief and Preventing Abuse of Pain Medications: A Critical Balancing Act. Available at: http://www.aspmm.org/organization/position_papers.htm. Accessed on June 13, 2012.

10. Washington State Legislature. (2010). Engrossed Substitute House Bill 2876. 61st Legislature: 2010 Regular Session.
11. Department of Regulatory Agencies of Colorado State. Sample Pain Contract.
Available at: <http://www.dora.state.co.us/medical/policies/10-14SampleContract.doc>.
Accessed on June 13, 2012.
12. Deyo RA, Mirza SK, Turner JA, Martin BI. Overtreating chronic back pain: time to back off? J Am Board Fam Med. 22(1):62-8.
13. Starrels JL, Becker WC, Alford DP, Kapoor A, Williams AR, Turner BJ. Systematic review: treatment agreements and urine drug testing to reduce opioid misuse in patients with chronic pain. Ann Intern Med. 2010;152(11):712-20.
14. Agency Medical Directors Group. *Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain: An educational aid to improve care and safety with opioid therapy 2010 Update*. Olympia, WA: Washington State Agency Medical Directors. 2010.
15. Improving Chronic Illness Care. The chronic care model. Available at:
www.improvingchroniccare.org/index.php?p=The_Chronic_Care_Model&s=2.
Accessed on July 1, 2012.
16. Chelminski PR, Ives TJ, Felix KM, et al. A primary care, multi-disciplinary disease management program for opioid-treated patients with chronic non-cancer pain and a high burden of psychiatric comorbidity. BMC Health Serv Res. 2005;5(1):3.
17. Chou R, Fanciullo GJ, Fine PG, et al. Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain. J Pain. 2009;10(2):113-30.

18. Braden JB, Sullivan MD, Ray GT, et al. Trends in long-term opioid therapy for noncancer pain among persons with a history of depression. *Gen Hosp Psychiatry*. 31(6):564-70.
19. Kroenke K, Bair MJ, Damush TM, et al. Optimized antidepressant therapy and pain self-management in primary care patients with depression and musculoskeletal pain: a randomized controlled trial. *JAMA*. 2009;301(20):2099-110.
20. Means-christensen AJ, Roy-byrne PP, Sherbourne CD, Craske MG, Stein MB. Relationships among pain, anxiety, and depression in primary care. *Depress Anxiety*. 2008;25(7):593-600.
21. Braden JB, Russo J, Fan MY, et al. Emergency department visits among recipients of chronic opioid therapy. *Arch Intern Med*. 2010;170(16):1425-32.
22. Dunn KM, Saunders KW, Rutter CM, et al. Opioid prescriptions for chronic pain and overdose: a cohort study. *Ann Intern Med*. 2010;152(2):85-92.
23. Dillie KS, Fleming MF, Mundt MP, French MT. Quality of life associated with daily opioid therapy in a primary care chronic pain sample. *J Am Board Fam Med*. 21(2):108-17.
24. Hariharan J, Lamb GC, Neuner JM. Long-term opioid contract use for chronic pain management in primary care practice. A five year experience. *J Gen Intern Med*. 2007;22(4):485-90.
25. Berens, MJ, Armstrong, K. State pushes prescription painkiller methadone, saving millions but costing lives. *Seattle Times*. December 10, 2011.