

A Provider Toolkit

Meeting the Challenges of Opioids and PAIN:

PATIENT EDUCATION ON PAIN AND OPIOID PRESCRIPTIONS

ADDRESSING OPIOID PRESCRIPTION PRACTICES

IDENTIFYING SAFE AND EFFECTIVE PAIN MANAGEMENT PROTOCOLS

NONPHARMACOLOGIC AND NON-OPIOID PHARMACOTHERAPY ALTERNATIVES



MEDICA®



PrimeWest
HEALTH

SOUTH COUNTRY
HEALTH ALLIANCE
Bringing Wellness Home

ucareSM

*This Provider Toolkit was created collaboratively by the Minnesota Managed Care Organizations.
Stratis Health provided project development support and assistance to the Collaborative.*

A Provider Toolkit

Meeting the Challenges of Opioids and PAIN:

Contents

Introduction to the issue.....	3
Shared Decision Making.....	6
<i>Resources for Shared Decision Making</i>	6
Patient Education about Pain and Opioids	7
<i>Resources for Patient Education about Pain and Opioids</i>	8
Identifying Opioid Use Disorder or Drug Seeking Behavior	9
<i>Resources for Opioid Use Disorder</i>	11
Prescription Monitoring Programs	11
Effective Screening for Risk Factors	12
Tapering Opioids	13
Continuing Medical Education and Training Opportunities	14
Non-Pharmacological Alternative Pain Management Therapies.....	15
<i>Resources for Non-Pharmacologic Interventions</i>	16
Tools for Pharmacists.....	17
<i>Resources specifically relevant to pharmacists include:</i>	17
<i>Patient education</i>	17
<i>Proper Disposal</i>	18
Tools for Dentists	18
<i>Resources specifically relevant to Dentists include:</i>	19
Considerations for the Elderly/Seniors	19
Considerations for Adolescents and Young Adults.....	20
Safe Storage and Disposal of Prescription Opioids.....	22
Pet Connection: Opioids Prescribed for Animals.....	23
Appendix A: Resources from Other States and Related Topic Areas	25
Bibliography	26
Bibliography (continued)	27

Introduction to the issue

Opioids are a class of drugs used to treat moderate to severe pain. However, it is important not to over-simplify the complexity of opioid side-effects and the potential consequences for patients.



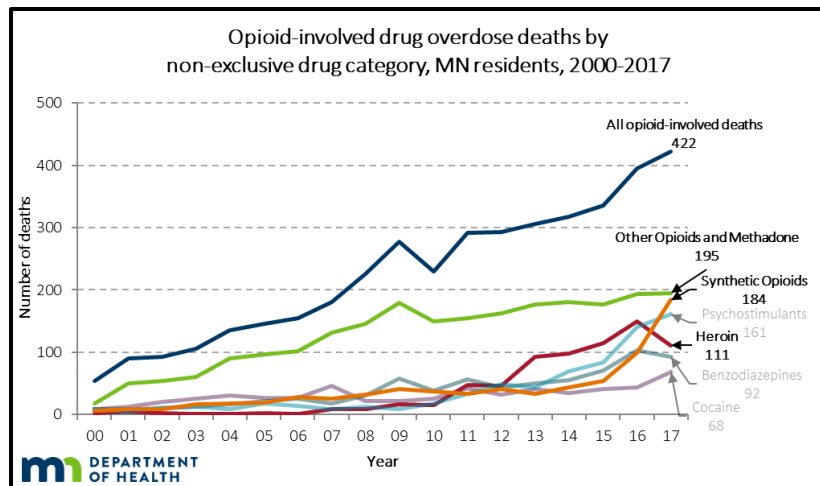
For most people, opioids are relatively safe and reduce pain when taken as prescribed by a medical professional for a short time. However, opioid overuse can lead to dependence and/or addiction and overdose. To reduce this risk, it is important for providers to avoid transitioning patients from using opioids for acute pain management to a more long-term use for chronic pain.

Data from the Centers for Disease Control and Prevention (CDC) states 130 Americans die every day from an opioid overdose. And according to a report from the US National Safety Council, accidental deaths from opioids overtook deaths from car crashes for the first time in 2017.

From 1999 to 2015, the amount of prescription opioids dispensed in the United States nearly quadrupled; yet Americans did not report lower pain levels. During the same time, deaths from prescription opioids have more than quadrupled.¹ In 2017, among 70,237 drug overdose deaths, 47,600 (67.8%) involved opioids, with increases across age groups, racial/ethnic groups, county urbanization levels, and in multiple states.²

Minnesota has not escaped the rise in opioid prescribing or the increase in tragic outcomes related to opioids – both prescription and illicit. From 2010-2016, Minnesota saw an increase in heroin-involved deaths, but in 2017, they declined from the previous year. Fentanyl-involved deaths have continued a dramatic rise since 2015, increasing 86% from 2016 to 2017.

When access to prescription opioids dwindles, desperate users turn to illicit drugs to obtain the same effect. Based on treatment admission data, state trends show a rise in heroin and opioid addiction in both metro and outstate areas.³



As noted in the graph, opioid deaths have increased dramatically since 2000.⁴

Increased awareness among the public and the medical community has already led to changes in prescribing practices in Minnesota. In Minnesota, more than 3.1 million opioid prescriptions were reported as dispensed in 2017 with hydrocodone/acetaminophen, oxycodone, and

tramadol ranked as the top three. There was roughly a 10% reduction in opioid prescriptions dispensed from 2016 to 2017.⁵ However, there is wide variation in the amount and duration of opioids prescribed in Minnesota and the nation. For example, the top 500 prescribers wrote 21% of all the controlled substance prescriptions in Minnesota.⁶

This toolkit includes resources to assist providers to:

1. Adopt prescribing practices that reflect best practice.
2. Engage with patients to make informed decisions about their pain management.

When available, some sections of this toolkit provide industry resources for education and training opportunities for clinicians, pharmacists and support staff, as well as tools for use with patients and community members. This toolkit focuses on that critical time period of new opioid use, but because of the correlation with long term use, many of the resources also relate to chronic opioid use.

Guidelines and Prescribing Standards

Numerous organizations have published guidelines which integrate the most up-to-date research on pain management with best practices for opioid prescribing. These guidelines are intended to guide clinicians through various stages of pain management, suggest alternatives to pharmacological interventions when possible and choose the appropriate types and levels of medication when needed.

Adoption of nationally recognized standards of care will enable clinicians to align their prescribing patterns with industry-wide best practices. Providers are encouraged to learn about these standards, where to reference them and how to integrate them into their practice. This is not an inclusive list of all guidelines available through professional associations or clinical groups, but it focuses on those most relevant to clinicians practicing in Minnesota.

Minnesota Opioid Prescribing Improvement Program (OPIP) is a comprehensive effort to address inappropriate opioid prescribing among Minnesota health care providers. Created by the Minnesota legislature in 2015, the program aims to address inappropriate opioid prescribing in Minnesota with a quality improvement approach.

- The OPIP developed opioid prescribing recommendations for the acute pain, post-acute pain and chronic pain phases of pain/recovery. The recommendations are for all Minnesota prescribers and support the quality improvement program in the Minnesota Health Care Program. The MN Opioid Prescribing Guideline can be found on MDH website <https://mn.gov/dhs/opip/opioid-guidelines/>

- Flip the Script - The Department of Human Services (DHS), in collaboration with the medical community, developed a new educational campaign to change the narrative around prescription opioid therapy, pain management and prescription opioid misuse.

The [Flip the Script](#) outreach program increases awareness about safe opioid prescribing behavior and arms you with the tools and resources you need to talk with your patients about opioids and pain management. It also includes an online learning activity allowing you to earn continuing education credits for learning more about safe opioid prescribing behavior guidelines. Visit the Flip the Script Opioid Prescribing Improvement Program website to learn more about the Opioid Prescribing Improvement Program.

- The Opioid Prescribing Improvement Program requires a [quality improvement program](#) for prescribers who serve Minnesotans on public health care programs and prescribe above specific thresholds for the [sentinel opioid prescribing measures](#).
 - The intent is to support providers whose opioid prescribing behavior is outside the normal practice of their specialty group.
 - A provider whose prescribing rate exceeds the quality improvement threshold for at least one measure must participate in a quality improvement review.

Institute for Clinical Systems Improvement (ICSI) is working with 13 health care organizations from across Minnesota to address opioid issues in clinical practice. The work of this group focuses on limiting the excess supply of opioids, identifying and intervening with high-risk opioid use populations to decrease adverse events, and improving access to adequate pain control for those who are on opioids for chronic pain. This work builds on efforts by many organizations that are already showing promising results in Minnesota.

ICSI members can access the full [ICSI guideline](#) on pain management on the [ICSI website](#).

Centers for Disease Control and Prevention (CDC) developed and published the [CDC Guideline for Prescribing Opioids for Chronic Pain](#) to provide recommendations for the prescribing of opioid pain medication for patients ages 18 and older in primary care settings.

Recommendations focus on:

- The use of opioids in treating chronic pain (pain lasting longer than 3 months or past the time of normal tissue healing)
- Treatment options for outside of active cancer treatment, palliative care, and end-of-life care
- When to initiate or continue opioids for chronic pain
- Opioid selection, dosage, duration, follow-up and discontinuation
- Assessing risk and addressing harms of opioid use

Shared Decision Making

Before an opioid regimen is initiated or continued, clinicians should ensure that their patients understand the risks and benefits of opioids as well as alternatives before starting or continuing their use. Decisions should support patient safety while improving function and should be made collaboratively.

Shared decision making is the process by which patients and their health care team identify all acceptable treatment options to choose a course of care that is consistent with the patient's values and preferences in the context of the best available medical evidence.⁷

Through shared decision making, patients are encouraged to have open and honest discussions with their healthcare team to develop a plan to address pain and minimize the need for opioids. Using assessments, health care providers can discuss pain management options with their patients, specifically addressing:⁹

- Previous experiences with pain medications
- Current prescription and over-the-counter medications or illicit drug use
- The type of discomfort that patients are experiencing or that is anticipated during and after a procedure
- The pain management plan and realistic recovery goals
- Patient lifestyle and how it is or may be affected by pain
- Patient family backgrounds and ethnicities

Patients with limited health literacy skills often lack medical-related knowledge and have trouble comprehending instructions and demonstrating intended medication administration and dosing. Using assessments, health care providers can discuss pain management options with their patients, specifically addressing:

- Opioid-related knowledge gaps and expectations.
- Cultural and linguistic barriers to health literacy, such as prescription labeling appropriate to patient's primary language

Clinicians should initiate conversations with patients about the risks and benefits of opioid therapy including:¹⁰

- Alternatives to pharmacological therapies
- Proper use, storage and disposal of opioids
- Use of naloxone

Resources for Shared Decision Making



- Minnesota's Prescription Drug Monitoring Program offers a [Sample Opiate/Pain Management Agreement](#) that clinicians can use to ensure patients understand and agree with what is expected of them and what the clinician's responsibilities are when opioids are prescribed.

- Minnesota’s Flip the Script campaign includes discussion guides for both [prescribers](#) and [non-prescribers](#) to support clinicians through difficult conversations.
- Substance Abuse and Mental Health Services Administration ([SAMSHA](#)) offers a series of free patient education fact sheets called [Rx Pain Medications, Know the Options, Get the Facts](#) which are useful tools as clinicians work with their patients on deciding a pain management strategy.
- Minnesota has a [Shared Decision Making Collaborative](#) which promotes the routine use of Shared Decision Making in clinical practice in Minnesota.
- The Oregon Pain Guidance [Opioid Prescribing Guidelines](#) contains a section on difficult conversations with patients about opioids and three samples of patient treatment agreements for controlled substances.
- [ICSI](#) offers resources for pain assessment and shared decision making on their member site.
- [Mental Health America](#) offers tips for clinicians to work through the Shared Decision Making process with their patients related to mental health issues.
- [The SHARE Approach](#) is developed by the Agency for Healthcare Research and Quality (AHRQ). The [SHARE](#) approach is a five-step process for shared decision making that includes exploring and comparing the benefits, harms, and risks of each option through meaningful dialogue about what matters most to the patient. One tool in the SHARE approach is a [reference guide with conversation-starters](#).
- The [Ottawa Personal Decision Guide](#) is a tool that patients could fill out when they are making a difficult decision about their health. It is available in both English and Spanish.

Patient Education about Pain and Opioids



Patient education is an important component to successful pain management and patient safety in prescribing opioids. Patients may not always understand nor comprehend the information being provided due to the intensity of their pain, residual effects of anesthesia, cognitive limitations, etc.

In a study conducted by the Centers for Disease Control and Prevention in 2016, a review of clinical evidence found that many patients lack information about opioids. Patients may not always be aware or understand the risks associated with taking opioids or when to seek help if they have any concerns about using opioids or opioid dependency.

When educating about expectations around pain, consideration should be given to promoting a biopsychosocial model of pain care using multimodal treatment approaches and include an emphasis on:

- Defining and understanding causal factors associated with pain
- Education on types of pain and factors that can influence or impact pain
- Differentiation of pain management strategies for acute and persistent or chronic pain
- Education on treatment options for reducing and managing pain

Patient education and dialogue are important components to successful pain management and patient safety in prescribing opioids. Using the principals of shared decision making is an effective way to ensure patient preferences and personal values are understood and utilized to determine clinical decisions (CDC 2016) and to ensure the patient is aware of the risks and benefits prior to using opioids.

Shared decision making can be a useful process that creates opportunities for the provider to review realistic benefits, common and/or serious risks and side effects as well as alternative options with the patient. It allows the patient time to reflect on what they've been told, read information about the opioid medication and ask questions while the provider communicates recommendations, thereby mutually reaching a decision for starting or continuing prescription opioids for managing pain.

Key points to consider when engaging in an open dialogue with patients on the use of opioid medication for pain management include:

- Providing detailed and realistic benefits of opioids medications including what they are and their intended use
- Offering alternative treatment options
- Helping the patient to focus on the primary goal- managing pain during the healing process and improving functionality
- Discussing benefits, risks and side effects of opioid use, and providing patients with written materials that are straightforward and easy to understand
- Discussing safe storage of opioids in a secure place and out of the reach of others
- Encouraging questions and providing appropriate contact information in the event the patient has follow-up questions or concerns

Resources for Patient Education about Pain and Opioids



The resources provided in this toolkit can be used by providers/practitioners in educating their patients about pain management, opioid therapies as well as alternative options that are available. This is a sampling of educational materials that are available for free download or sharing. It is important to choose the educational resources most appropriate to a given situation.

- The Centers for Disease Control ([CDC](#)) has a number of [resources to increase patient awareness](#) of opioid issues, including an [Opioid Fact Sheet](#), an [educational poster](#) and information related to [opioids and pregnancy](#). The CDC also has [social media tools](#) that can be used to raise awareness of the opioid issue to a broad audience.

- Patient Agreements such as this one from [the National Institute on Drug Abuse](#) may be a valuable tool to facilitate discussion and help ensure patients understand their role and responsibilities regarding their treatment.
- The Physician Assistant Foundation offers [Pain: A Guide for Physician Assistants and Patients](#) which covers many areas of pain management and treatment options.
- [Turning the Tide: For Patients](#) is a website developed as a call to action by former U.S. Surgeon General Vivek Murthy, M.D. and provides educational materials for patients and providers.
- The [U.S. Food and Drug Administration](#) website provides [information on opioids](#), a consumer's [Guide to Safe Use of Pain Medication](#), as well as a [List of Questions](#) patients should ask their provider. [Safe disposal instructions](#) can also be found on their website.
- The [American College of Physicians](#) has a [Patient Fact Sheet on Safe Opioid Use](#)
- The [American Academy of Pain Medicine](#) has a [Patient Center](#) which includes resources around pain management and opioid safety.
- [Lock Your Meds Campaign](#) is an opioid safety campaign developed by National Family Partnership with an educational focus on adult awareness of prescription medications being obtained and used in unintended ways.
- Many states have developed information specific to their state. One example of an educational tool for patients is from New Jersey Consumer Affairs: [“What Patients Should Ask Prescribers Before Taking Opioids”](#)
- Prevention is Part of the Solution. The [Whats Up With Opioids](#) website provides free tools to host a community workshop. The online toolkit is designed specifically to help non-profits, parents, schools, faith-based groups, and others keep their communities safe by preventing opioid misuse and addiction—especially among young adults. The website includes ready-to-use materials and a step-by-step guide for hosting a local discussion or town hall meeting.

Identifying Opioid Use Disorder or Drug Seeking Behavior

Although patients have the right to be involved in their medical decision-making, they should not use that right for malicious gain or to make unreasonable demands.¹¹ The problem of people seeking drugs who do not require the medication for the management of pain has become increasingly common. In fact, it can be a sign that the patient is suffering from Opioid Use Disorder (OUD). According to the DSM-5 Opioid Use Disorder Checklist, the symptoms of OUD include:

- Reduced sense of pain
- Agitation, drowsiness or sedation
- Slurred speech
- Problems with attention and memory
- Constricted pupils

- Lack of awareness or inattention to surrounding people and things
- Problems with coordination
- Depression
- Confusion
- Constipation

One important tool physicians can use to help determine if a patient is engaged in drug seeking behavior is a state prescription monitoring program. Physicians with access to prescription monitoring systems can track prescriptions for drugs controlled under federal schedules.¹² Currently at least 47 states including [Minnesota](#), have functional prescription monitoring programs.¹²

Providers should be alert for common red flags present during clinical visits in deciding whether patients are seeking opioids for reasons unrelated to pain such as:

- Asking for opioid medications by name
- Presentation at multiple visits for the same complaint
- Exhibiting a suspicious history
- Reporting symptoms out of proportion to the examination

The American Association of Family Practice Management (AAFP) encourages a [Systematic Approach to Identifying Drug Seeking Behaviors](#). Clinicians should have direct and honest discussions about opiate use with patients for whom there are concerns related to drug seeking behavior.

Sitting down with patients during discussions about opiate use has been shown to be an effective way for physicians to communicate, since being at eye level with patients helps to decrease possible defensiveness.¹²

Other tips for interacting with patients suspected of drug seeking behavior include:¹³

- State your prescribing policies up front and make sure that all staff provides the same message
- Just say no - don't be vague or let patients think you will change your mind
- Explain why you are saying no to their request for opioids
- Offer alternatives to opioid pain medication
- Be kind and understanding
- Do not argue with the patient. Be empathetic and allow an opportunity for the patient to express frustration. However, if a patient becomes aggressive, it is time to end the conversation.

The use of state prescription monitoring programs and an increased awareness of common patient drug seeking behaviors are effective approaches to help ensure that opioids are prescribed responsibly during the shared decision-making process with patients.

Resources for Opioid Use Disorder



- If you suspect OUD for a patient, this resource from DHS outlines some of the [Options for Opioid Treatment in Minnesota](#).
- National Helpline: **1-800-662-HELP (4357)** or 1-800-487-4889 (TDD — for hearing impaired)
- SAMHSA has a [Behavioral Health Treatment Services Locator](#) on their website as well as a listing of [Medication-Assisted Treatment](#) resources in MN and other states

Prescription Monitoring Programs

Although patients have the right to be involved in their medical decision-making, they should not use that right for malicious gain or to make unreasonable demands.¹¹ The problem of people seeking drugs who are not really experiencing pain has become increasingly common.

One important tool clinicians can use to help determine if a patient is engaged in drug seeking behavior is a state prescription monitoring program. Physicians with access to prescription monitoring systems can track prescriptions for drugs controlled under federal schedules.¹⁴ Currently, 47 states including Minnesota have functional prescription monitoring programs.¹⁴

Clinicians are required to register for the **Minnesota Prescription Monitoring Program (MNPMP)** and are strongly encouraged to utilize it in conjunction with all other assessment tools. Since dispensers of prescription drugs in MN are required to report controlled substances that are dispensed to the MNPMP, clinicians and pharmacists should check this resource to monitor for controlled substance prescriptions from multiple prescribers.



- To learn more about Prescription Drug Monitoring Programs, the [CDC](#) and [CMS](#) have fact sheets available.
- Minnesota has a [Restricted Recipient Program](#) for recipients of Minnesota Health Care programs (Medicaid) who are suspected of misusing services. Patients may be limited to one medical provider and/or one pharmacy for their care. Clinicians can consult the [MN-ITS program](#) to determine if a patient is on this program.

Effective Screening for Risk Factors

Screening for depression, mental health and chemical dependency is an important part of responsible opioid prescribing. Balance between the benefits and harms of opioid therapy is a critical factor influencing the strength of clinical recommendations. Before starting and periodically during continuation of opioid therapy, the CDC recommends clinicians should evaluate risk factors for opioid-related harms since it can be difficult to discontinue opioids once started.

The Minnesota Opioid Prescribing Guidelines were released in draft form in December 2017 and finalized in May 2018 . The report includes guidance on clinical evaluation that should occur in conjunction with opioid prescribing for acute pain and up to 45 days following an acute event. It encourages clinicians to look at the overall picture of the patient’s situation related to their pain, including:

- The expected level of tissue healing
- Perceived level of pain compared to what is expected in a typical recovery period
- The amount of opioids that patient has already been exposed to
- Mental health, chemical health and risk of chronicity status

It includes suggested tools for the screening that is recommended. The Minnesota Opioid Prescribing Guidelines First edition, 2018 is included in this toolkit in Appendix B.



ICSI has created a mnemonic to aid in the evaluation of factors that may affect the prescriber’s decision to prescribe opioids. The mnemonic **ABCDPQRS** provides a simple way to remember contraindications to opioids.

Alcohol Use

Benzodiazepines & Other Drugs

Clearance & Metabolism

Delirium, Dementia & Falls Risk

Psychiatric Comorbidities

Query the Prescription Monitoring Program

Respiratory Insufficiency & Sleep Apnea

Safe Driving, Work, Storage & Disposal

Drug and Alcohol Screening - Because of the added risk for addiction to opioids, clinicians should ask patients about their drug and alcohol use and assess for substance use disorder using validated tools prior to prescribing opioids:



- [The Drug Abuse Screen Test](#) (DAST-10) was designed to provide a brief, self-report instrument for population screening, clinical case finding and treatment evaluation research. It can be used with adults and older youth.
- The National Institute on Alcohol Abuse and Alcoholism has a [Pocket Guide](#) which includes screening for heavy drinking and assessing for alcohol use disorders

- The [Alcohol Use Disorders Identification Test](#) (AUDIT) can also help identify alcohol dependence and some specific consequences of harmful drinking.

Mental Health Screening – Screening for depression, anxiety, post-traumatic stress disorder (PTSD), and a history of trauma or abuse is a critical step to evaluating risk prior to prescribing opioids. Studies suggest that adults with mental health disorders are more likely to be prescribed opioids and remain on them long-term.¹⁴ Adults with mental illness receive more than 50% of the opioid prescriptions in the US, but represent only 16% of the population.¹⁴

Prior to prescribing opioids, clinicians should assess for psychiatric comorbidities, such as anxiety, PTSD and depression, using validated tools such as:



- Generalized Anxiety Disorder assessment ([GAD-7](#)) or
- The Patient Health Questionnaire ([PHQ-9](#)) or
- [Primary Care Post Traumatic Stress Disorder Screening tool \(PC-PTSD\)](#).
- Because of the risk of overdose death, suicide risk should also be evaluated when appropriate. One tool to consider is the [Safe-T](#) tool from the Suicide Prevention Resource Center.

Tapering Opioids

Although opioids can be utilized as part of a safe and effective treatment plan for pain and function, discontinuation may become necessary because of lack of efficacy, adverse effects, or misuse. This can be a challenging situation, but it is crucial to educate patients on the appropriate way to discontinue opioid use and set expectations for the process.



The CDC has created a [Pocket Guide: Tapering Opioids for Chronic Pain](#) and Saskatoon City Hospital uses an [Opioid Tapering Template](#) during this process. Patients should be educated on what to expect when an opioid is tapered or discontinued.

- Patients being tapered due to lack of efficacy may or may not experience a worsening of pain.
- Patients should expect to have some insomnia and anxiety, especially if opioid use was chronic. They should plan for not feeling well.
- Increased pain is an early symptom of withdrawal; pain with opioid dose reduction is not a sign that the opioid was effective for the patient's pain. Pain due to withdrawal should resolve after the first week. In a Veterans Administration population being tapered for reasons other than aberrant behavior, 70% of patients had no change or less pain compared to baseline, despite a 46% average dose reduction.¹⁵
- Unmasking of psychiatric conditions may occur.

Continuing Medical Education and Training Opportunities

Clinicians across the country are educating themselves about opioid prescribing and management. A 2016 survey by the American Academy of Pain Medicine exposed knowledge gaps among non-pain specialists related to pain management and opioid prescribing.¹⁶



This is not a comprehensive list, but it represents some of the resources and Continuing Medical Education (CME) trainings available from trusted sources that clinicians can access to educate themselves about this issue.

- Minnesota has created an education campaign called Flip the Script, aimed at health care professionals and developed by the Minnesota Department of Human Services (DHS) to change the narrative around prescription opioid therapy, pain management and prescription opioid misuse. [Resources for health care professionals](#) includes podcasts, tools for prescribers and other resources.
- The Minnesota Department of Health (MDH) has created an [Opioid Dashboard](#) as a way to consolidate current state data, resources, projects, efforts, and information regarding opioid use. Providers can refer to this to keep up to date on happenings around the state related to the opioid epidemic.
- The American Medical Association (AMA) has multiple training resources on their website. The [End the Epidemic project](#) encourages all physicians to have the education and training necessary to ensure evidence based treatment for patients with pain and substance use disorders by providing training and resources from many sources.
- American Psychiatric Nurses Association (APNA) offers free training for nurses regarding a multitude of topics, including opioid use. Free [continuing education webinars](#) are offered for nurses to provide needed information and help answer the question “What can Nurses do?”
- The Office of Disease Prevention and Health Promotion offers a training called [‘Pathways to Safer Opioid Use’](#). This training is interactive and allows the trainee to assume the role of different characters including the prescriber, nurse, pharmacist, and patient. Free CPE and CME credits are available for this course.
- Substance Abuse and Mental Health Services Administration (SAMHSA) offers courses in relation to the [treatment of opioid use disorders](#) as well as information on training for [Medication-Assisted Treatment](#).
- The [Turn the Tide Campaign](#) is led by the Surgeon General and focuses on ending the opioid crisis. Prescribers can go to the website and take the pledge to assist with this effort. This movement offers many resources and educational items including prescribing guidelines, evidence based treatment options, safe disposal information and addiction treatment information.
- The University of MN School of Dentistry offers opportunities for education regarding opioid use. Check the main [Continuing Dental Education](#) page for upcoming workshops
- The Minnesota Medical Association (MMA), the Steve Rummeler Hope Network (SRHN), and the University of Minnesota Medical School began a collaboration to bring medical

education on the topic of opioids to medical students, residents, and practicing doctors. The [lectures](#) are recorded live at the University of Minnesota Medical School and made available for CME on the MMA website with underwriting by the SRHN.

- The CDC has developed [an interactive, web-based training](#) with free CMEs which features self-paced learning, case-based content, knowledge checks, and integrated resources to help healthcare providers gain a deeper understanding of the Guideline for Prescribing Opioids.
- The American Academy of Pain Medicine (AAPM) [Education Center](#) offers several CME courses related to pain management and medication such as *Opioid and Non-Opioid Medications Management: Filling in the Gaps, Prescribing for the Whole Patient*
- [CHI St. Gabriel's Health](#) in Little Falls, MN, is participating in the University of New Mexico's Project ECHO. This project focuses on an e-learning model and promotes community collaboration, care coordination, and education in this area.

Non-Pharmacological Alternative Pain Management Therapies

For many conditions and injuries, experiencing pain is a normal part of the healing process, and finding ways to manage pain without reliance on opioids is important. Studies¹⁷ show that patients who prepare for pain are more comfortable and have a better understanding of their recovery process. Many patients prefer to try non-opioid treatments for pain before supplementing with medication, or in conjunction with painkillers. For others, alternative therapies used in conjunction with traditional medical treatments create a more effective program to help cope more successfully with their pain.

While pain relievers are used for treating the physiological and emotional dimension of pain, non-pharmacological therapies focus on the affective, cognitive, behavioral and socio-cultural dimensions.

Advantages to recommending non-pharmacological methods may include:

- Engaging in a person-centered approach:
 - Empowers personal choice based on personal preferences and past experiences
 - Promotes shared decision making and individualizes the treatment approach
 - Promotes patient's active management of pain
- Improving and maintaining the patient's quality of life by:
 - Addressing activity level and functional capacity
 - Managing stress and anxiety
 - Redirecting focus from pain level and/or pain behavior
 - Reducing potential side effects and risks associated with opioid use

Alternative pain management therapies, such as chiropractic care, physical therapy or acupuncture may be covered by a patient's insurance. Provide the member with your written recommendations and direct them to call the phone number on the back of their member ID card to verify benefits/coverage.

Clinicians should educate themselves about potential alternatives and discuss the patient's preferences for alternative treatments. To assist clinicians in determining what alternative therapies may be covered by Medicaid, refer to this grid for [Minnesota Medicaid Benefit Coverage](#).

Examples of Non-Pharmacological Alternative Pain Management:

Cognitive and Behavioral Therapies

- Techniques such as cognitive behavioral therapy (CBT), mindfulness-based stress reduction, behavioral operant therapies and other modalities may be included during the assessment/session with a licensed behavioral health professional.

Physical Rehabilitation and Peripheral Therapies

- Includes strategies such as physical therapy treatment modalities (e.g., TENS, exercise programs, hydrotherapy, hot-cold treatments), chiropractic treatments, acupuncture, exercise and massage.

Complementary and Integrative Medicine

- Includes techniques such as specialty pain care/pain management, acupuncture, Tai Chi, yoga, meditation and biofeedback.

Resources for Non-Pharmacologic Interventions



- The [Compassion and Support Initiative](#) offers pain management resources for patients and their families including a self-help, alternative therapies and complementary therapies for pain management patient guide.
- The National Nursing Home Quality Improvement Campaign has compiled a resource of [Evidence-Based Non-Pharmacological Interventions for Pain](#) which includes an extensive appendix of the research used to create the guide.
- [SAMSHA](#) offers a series of free patient education fact sheets called [Rx Pain Medications, Know the Options, Get the Facts](#) including a fact sheet on [alternative approaches](#) which are useful tools as clinicians work with their patients on deciding a pain management strategy.
- Back pain is one of the most common reasons that patients begin an opioid regimen and, in turn, become chronic opioid users. The American College of

Physicians created a clinical guideline for [Noninvasive Treatment for Acute, Subacute and Chronic Low Back Pain](#).

- A chapter in *Pain Management – Current Issues and Opinions*, details [Non-Pharmacological Therapies in Pain Management](#).
- The Mayo Clinic has also published research on [Evidenced-Based Evaluation of Complementary Health Approaches for Pain Management](#).

Tools for Pharmacists

Pharmacists and prescribers are partners in ensuring patient safety, including reviewing medications and treatment plans. As the touch point where patients get the prescription, pharmacists play an important role in educating patients on opioid side effects, risks and how to manage those risks.

Many of the areas covered in other parts of this toolkit are also relevant to pharmacists such as alternatives to opioids for pain management, use of PMPs and education for patients. Some areas are particularly relevant to Pharmacists such as conversations to have when dispensing the medications, when and how to appropriately taper or discontinue opioids, and proper disposal of unused opioids.

Resources specifically relevant to pharmacists include:



- The Minnesota Pharmacists Association (MPhA) has compiled an [MPhA Opioid Toolkit](#) with information and tools that MN pharmacists will find useful.
- The American Pharmacists Association (APhA) has compiled a list of tools specific to the needs of pharmacists on their [Opioid Use, Abuse and Misuse Resource Center](#) webpage.
- [Prescription Drug Monitoring Programs](#) (PMP) are jurisdictionally operated electronic databases which collect, maintain and disseminate controlled substance prescription information specific to each jurisdiction's laws and regulations.

Every individual that is given an opioid should discuss their prescription with a pharmacist upon pick-up.

Patient education by the pharmacist is important to help patients adhere to their medication regimens and maximize pharmacological benefits. Important counseling points include:

- Reassuring the individual with acute pain that a 3 to 7-day supply is often enough for postoperative care, and advising them that complete pain relief as recovery from an acute event, such as surgery, will take some time.

- Diffusing tension if a prior authorization is needed for a longer duration of higher dose by being empathetic and trying to help expedite the process.
- Medicaid members are not allowed to pay cash for opioid prescriptions. If the prescription exceeds payer limits the pharmacy can dispense a smaller quantity. Explain that the limits are in place to try to encourage safer opioid use, not just control costs.

Increasing Access to Naloxone

Naloxone is a potentially lifesaving drug that can reverse an opioid overdose. Minnesota has recently passed legislation to make it easier to have Naloxone available to people at risk of opioid overdose. Visit [Opioid Overdose Prevention & Control](#) for information on where to get Naloxone, a video about using it and other information about overdose prevention.

Proper Disposal

Proper disposal of unused opioids is essential to avoid the dangers of the drugs being diverted to someone who is not the patient. Some pharmacies have drug take-back kiosks, but if one is not available, there are other options. Many local law enforcement offices will collect unused prescription medications, especially narcotics and opioids.



The importance of proper disposal is essential, and pharmacists play a key role in informing patients how this can occur. Some tools to share with the public include:

- The Minnesota Pollution Control Agency offers guidance to the public for [Managing Unwanted Medications](#).
- Minnesota's Attorney General's office promotes the [Dose of Reality Program](#) which has drug take back locations across the state.
- The [FDA](#) has guidance on [Disposal of Unused Medications](#), including [DEA-Authorized Take Back Programs](#), and how to dispose of medication.
- The AMA's End the Epidemic Program also includes information on [safe storage and disposal](#) of medications.

Tools for Dentists

Along with medical practitioners, dentists play a significant role in the opioid epidemic and are a key player in identifying solutions. In particular, dentists were identified as prescribing more opioids to teens than any other healthcare provider. Thus, dental prescribing habits play an important role in preventing new chronic users of opioids as many young adults first opioid exposure occurs following a dental procedure. Adolescents exposed to opioids have a 33% higher risk of abusing them later in life.²⁴

Many of the areas covered in other parts of this toolkit are also relevant to dentists such as alternatives to opioids for pain management, use of PMPs and education for patients. Some areas are particularly relevant to dentists such as conversations to have when prescribing the

medications, considerations for adolescents and young adults, and proper disposal of unused opioids.

Resources specifically relevant to Dentists include:



- The University of Minnesota, School of Dentistry implemented [“Acute Postoperative Pain Opioid Prescribing Guidelines”](#) in October 2016. Over 70% of Minnesota dentists are trained at the University of Minnesota, so the protocol can cast a large net to aid in the state’s opioid epidemic. The new protocol requires using non-steroidal, anti-inflammatories (NSAIDs) as the first-line analgesic, which have been shown to provide equal pain relief without the associated misuse, abuse, diversion and addiction problems.³²
- Dr. Angie Rake is a Minnesota dentist and a national resource on opioids and their use in dentistry. The Dakota Valley Oral and Maxillofacial Surgery [website](#), where Dr. Rake practices, has many resources for the dental community on this issue.
- Sample [Opioid Prescription Patient Agreement](#) that dentists can use to ensure patients understand and agree with what is expected of them and what the dentist’s responsibilities are when opioids are prescribed.
- The University of Minnesota, School of Dentistry call to action and education to prevent opioid addiction, [Slaying the Dragon](#).
- The New York Times, [Breaking the Opioid Habit in Dentists’ Offices](#).
- The University of Minnesota, School of Dentistry is rethinking the way dentists treat pain. [Dentists: On the front line of the opioid epidemic](#).

“Dentists need to be part of the solution in decreasing the number of opioid prescriptions and the number of pills prescribed.” – Harold Tu, DMD, MD

Considerations for the Elderly/Seniors

Most individuals who use pain relievers do not misuse their prescriptions; however, older adults are more vulnerable to medication abuse because they use more prescriptions and over-the-counter medications than other age groups and may develop increased medication sensitivity as they age.

Elderly also are at risk for having a higher rate of accidental misuse or abuse of opioids due to conditions of pain, sleep disorders, insomnia, anxiety and depression.^{18, 19} Several studies have shown that the use of opioids in the elderly present serious risks, including:

- Greater risk for cardiovascular problems, such as heart attacks or heart failure
- Disordered breathing, such as slower or shallow breathing during sleep

- Sedation and mental confusion causing sleepiness or mental clouding, increasing the risk of falls and fractures caused by falls
- Greater risk for being hospitalized for an adverse drug event

The National Safety Council reports that elderly adults taking opioids for pain relief have four times as many bone fractures, are 68% more likely to be hospitalized and are 87% more likely to die as those taking over-the-counter medication.²⁰ Furthermore, many of the signs of dependency mirror symptoms of the aging process, making opioid abuse more challenging to identify in the older population. These symptoms include forgetfulness, confusion, changes in vision and financial problems.²¹



Here are resources for patients 55 years or older that can be downloaded and added to your patient education library:

- The [American Academy of Pain Medicine - Patient Center](#) promotes Eight Opioid Safety Principles for Patients and Caregivers
- A brochure titled [As You Age...A Guide to Aging Medicines and Alcohol which](#) addresses potential misuse of alcohol and over-the-counter medications by seniors offered from SAMHSA and the FDA;
- A series of [free patient education materials on Pain Management](#) that includes topics such as alternative therapies for pain, drug interactions, and safe storage can be found on the Substance Abuse and Mental Health Services Administration (SAMHSA) website. Some titles include:
 - Rx Pain Medications Know the Options, Get the Facts; Managing Your Pain: Which Approach is Right for You?
 - Rx Pain Medications, Know the Options, Get the Facts: Dangerous Drug Interactions
 - Rx Pain Medications, Know the Options, Get the Facts: Safe Storage of Prescription Medications
- Visit [American Academy of Pain Medicine - Get the Facts on Pain](#) to access additional information on pain

Considerations for Adolescents and Young Adults

Adolescents and young adults are often exposed to opioid pain relievers following oral surgery, in the treatment of athletic injuries and by acquiring the unused and improperly disposed opioids prescribed to parents, relatives or friends.

Ninety percent of all drug addictions begin during adolescence and young adulthood.²² Studies indicate that approximately 25% of high school seniors in the United States have had exposure, either medically or non-medically, to prescription opioids.²³ It is an alarming fact considering a recent study which demonstrated that legitimate opioid use before high school graduation is associated with a 33% increase in the risk for future opioid misuse after high school.²⁴

This increased risk of misuse and adverse effects of opioids in adolescents and young adults may be due to vulnerabilities associated with the development of “reward and habit formation centers” in the brain.²⁵

The high level of opioid exposure among American adolescents and young adults, coupled with their heightened vulnerability to misuse, is especially concerning since almost 80 % of new heroin users have previously used opioid pain medications.²⁶

Oral Surgery

Adolescents and young adults are often exposed to opioids during oral surgery, such as after the extraction of wisdom teeth. In fact, dentists and oral surgeons are the number one prescribers of opioids for adolescents between the ages of 10 and 19 years old.²⁵

To address the reality that even short-term opioid prescriptions have been linked to later drug misuse among teens who have not used illegal drugs before, the University of Minnesota School of Dentistry has implemented a new protocol of using non-steroidal anti-inflammatory drugs such as ibuprofen combined with acetaminophen as the first line pain treatment for all dental procedures.²⁷ The University of Minnesota School of Dentistry is tracking the new protocol and has not observed an increase in patient complaints related to pain management.²⁷ The experience of the University of Minnesota Dental School in changing its protocol suggests that non-opioid pain management alternatives should be explored by other dental providers.

In 2017 Minnesota updated statute 152.11 Subd 4, limiting the quantity of opiates prescribed for acute dental and ophthalmic pain. Find details of this law [here](#).

Athletic Injuries



Participation in sports has many benefits for people of all ages. However, involvement in athletics can also lead to injuries. High school athletes account for approximately two million injuries, 500,000 doctor visits and 30,000 hospitalizations each year.²⁸

Pain related to injury and the pressure to continue to play sports while injured causes many young athletes to seek care that results in the prescribing of opioid pain medication by health care providers. In many cases, opioid use related to sports injuries can lead to opioid abuse. According to a 2013 University of Michigan study, by the time high school athletes enter their senior year, approximately 11% will have used a narcotic pain reliever such as OxyContin or Vicodin for non-medical purposes.²⁹

To prevent the possible misuse and abuse of opioids among athletes, the following should be considered with regard to common sports related injuries:³⁰

- Ice can be used to reduce soreness and inflammation.
- Over-the-counter non-steroidal anti-inflammatory medications (NSAIDs) can be effective for treatment in some cases.

- Fractures, sprains and broken bones need plenty of rest to heal properly. The athlete should see an orthopedic specialist to evaluate and manage the healing process.
- The athlete’s parents/guardians, health care provider and coach should discuss how the injury will sideline the player and develop a return-to-play plan together. Adolescence is a time when students are encouraged to advocate for themselves and become more independent. However, when it comes to health and injury, it is essential that a parent or guardian become involved.
- Return-to-play decisions should include the proper healing of the injured athlete as the primary objective. Some students may be eager to return to the game and will try to mask their discomfort. To avoid improper healing and premature participation, have a medical professional and/or the school’s athletic trainer make the final decision regarding the athlete’s return-to-play plan.
- Pay attention to the social and emotional impact of a sports injury. Being sidelined may lead to general depression and a loss of structured activity, connection to friends, and identity as an athlete.
- Opioids for pain should be considered by a physician only after other approaches have not provided relief.

Safe Storage and Disposal of Prescription Opioids

Researchers at Johns Hopkins found that a majority of patients prescribed opioids used only a small portion of the pills, and more than 90% failed to safely dispose of the remainder.³¹

Unsafe disposal of unused opioids is a major concern; according to a National Survey on Drug Use and Health, 75% of all opioid misuse starts with individuals using medication that wasn’t prescribed for them, but instead obtained from a friend, family member or dealer.³² The following strategies are recommended for patients by the National Safety Council to prevent the use of opioids for non-prescribed purposes:³³

Safe storage	Safe disposal
<ul style="list-style-type: none"> • Opioid medications need to be stored securely, preferably locked up just the way you would if you keep a firearm in your home. • Choose a location in your house that is up and away and out of sight of children and visitors. Install a lock or 	<ul style="list-style-type: none"> • Once you are finished taking an opioid painkiller, promptly dispose of them. Do not keep these medications for “later.” • Take-back programs and events allow the public to bring unused drugs to a central location for proper disposal.

Safe storage	Safe disposal
<p>use a locking medicine cabinet.</p> <ul style="list-style-type: none"> Return medication to your secure location after every use. Avoid leaving medication or pill containers on countertops, tables or nightstands in open view where they can be easily accessed by others. Do not keep loose pills in easily opened plastic bags or containers in your purse, luggage or office drawer. Travel cases that lock are available to carry prescription medicines. 	<ul style="list-style-type: none"> Many pharmacies offer mail-back programs where you can pick up a drug disposal envelope at their nearest store. Most pharmacies charge a small fee for a postage paid envelope. Avoid flushing prescriptions down the toilet or pouring in a drain because they can pollute water supplies. In some states, it is illegal to flush any medications. If a take-back or pharmacy mail-back program is not available in your community, you can go online to learn how to safely dispose of unused medications.

Resources on Safe Disposal:



- Visit www.nsc.org/disposalresources to find a take-back program or learn how to safely dispose of unwanted medicine.
- The [Partnership for Drug-Free Kids](#) has resources for parents on substance abuse in youth such as prescription opioids, including this [Fact Sheet: Preventing Teen Prescription Medicine Abuse](#), and downloadable [Resources for Parents](#)
- The Drug Enforcement Administration (DEA) has a publication for parents and others to understand and identify medications that teens may be abusing. [Prescription for Disaster: How Teens Abuse Medicine](#) covers the different categories of prescription and over-the-counter medications that can be abused. It also contains links to additional resources for parents and teens.
- The National Institutes of Health has a [website](#) with resources for teachers, parents and teens about teen drug abuse.
- The [FDA](#) has guidance on [Disposal of Unused Medications](#) including [DEA-Authorized Take Back Programs](#), and how to dispose of medication.

Pet Connection: Opioids Prescribed for Animals



Opioids are sometimes prescribed by veterinarians for treating pain in animals. For people struggling with opioid addiction or others living in the home, this is yet another avenue through which they can procure drugs for their own use. Some

states are taking the war on opioids into veterinarians' offices, aiming to prevent people who are addicted to opioids from using their animals to procure drugs for their own use.³⁴

State prescription monitoring programs (PMPs) allow physicians and other practitioners to check a patient's prescription history. According to the National Alliance for Model State Drug Laws, at least 32 states including Minnesota do not require veterinarians to report any dispensing information on the PMP.

The regulations for veterinarians prescribing opioids vary greatly by state. There are limitations in understanding about how big the issue of animal-prescribed opioids is in the human opioid crisis, but at a minimum, increased awareness and education is important for veterinarians, animal owners and others working to address the opioid epidemic. The same precautions are needed for animal-prescribed opioids as those prescribed for human use, including the safe and secure storage of opioids during use, as well as safe disposal of any unused drugs.

Appendix A: Resources from Other States and Related Topic Areas

- The American Hospital Association has a toolkit called [Addressing the Opioid Epidemic](#) which is relevant to both hospital and clinic-based clinicians.
- The Oregon Pain Guidance group created a comprehensive resource on opioid prescribing, [Opioid Prescribing Guidelines](#), including guidelines, assessment tools, patient communication, non-opioid options and more.
- The US Department of Veterans Affairs has an [Opioid Safety Initiative](#) which includes guidelines for management of opioid therapies, an Opioid Safety Toolkit and a patient guide for taking opioids responsibly.
- The Colorado Hospital Association published a report detailing the results of the [Colorado Opioid Safety Pilot](#) that was conducted across 10 Emergency Departments over a six-month period to reduce the administration of opioids in EDs.

Bibliography

- ¹ Minnesota Department of Human Services, 2012 [Guideline]; Substance Abuse and Mental Health Services Administration, 2010 [Low Quality Evidence]
- ² https://www.cdc.gov/mmwr/volumes/67/wr/mm675152e1.htm?s_cid=mm675152e1_w
- ³ <http://www.health.state.mn.us/divs/healthimprovement/opioid-dashboard/#NumberPrescriptions>
- ⁴ Minnesota Shared Decision Making Collaborative, 2017. Shared Decision Making Explained. [Online] Available at: <http://msdmc.org/sdm-explained/> [Accessed 11 October 2017]
- ⁵ <https://www.health.state.mn.us/communities/opioids/opioid-dashboard/index.html#NumberPrescriptions>
- ⁶ American Association of Nurse Anesthetists, 2017. Nurse Anesthetists Encourage Patients to Learn about Pain Management Options Available During and After Surgery. [Online] Available at: <http://www.aana.com/newsandjournal/News/Pages/030717-Nurse-Anesthetists-Encourage-Patients-to-Educate-Themselves-on-Pain-Management-Options.aspx> [Accessed 11 October 2017]
- ⁷ https://www.lek.com/insights/how-intermountain-healthcare-developed-its-pain-management-strategy?mkt_tok=eyJpIjoiTORneE9URXpOROV5WkRrMSIsInQiOiJJUnN2N1EyVjdQQzZOMjFGWkpyQmt2RE9sVEd5aW9TSmVPdjRSUlVtNjPOWtuNXdHZGZxeXdnZTdkRzJDYnV6dGNiTEIsTHBySFVMdmJBbmZKUHA4T1dRbysrQ2ZuZWpMUmFzQmxPbW5DSE93VDYxWE5RcW1Pa0NQOE80Q0ozQiJ9
- ⁸ (Secemsky, 2012)
- ⁹ (Butterfield, 2014)
- ¹⁰ (Girgis, 2017)
- ¹¹ Matthew A. Davis, Lewei A. Lin, Haiyin Liu, and Brian D. Sites Prescription Opioid Use among Adults with Mental Health Disorders in the United States *J Am Board Fam Med* July-August 2017 30:407-417; doi:10.3122/jabfm.2017.04.170112
- ¹² Harden P, Ahmed S, Ang K, Wiedemer N. Clinical implications of tapering chronic opioids in a veteran population. *Pain Med* 2015; 16:1975-81
- ¹³ Opioid Prescribing for Chronic Pain: An Assessment of Knowledge, Attitudes, and Beliefs Among Non-Pain Providers Using an Established Survey. Presented at the 2016 AAPM Annual Meeting Amy Pearson, MD, pearson.amy@mayo.edu; Jason Eldrige, MD; William Hooten, MD; (1) Mayo Clinic available at: <http://www.painmed.org/2016posters/abstract-184/>
- ¹⁴ ICSI: Pain Assessment and Opioid Prescribing Protocol. 2014. Available at: www.icsi.org; National Institute of Health. What You Can do to Fight the Opioid Epidemic. September 2017. Available at https://medicineplus.gov/news/fullstory_168358.html. [Accessed September 9, 2017]; Centers for Disease Control and Prevention. CDC Guideline for Prescribing Opioids for Chronic Pain. 2016. Available at: <https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm>. [Accessed June 6, 2017]
- ¹⁵ Benson, William F. and Aldrich, Nancy. Raising Awareness and Seeking Solutions to the Opioid Epidemic's Impact on Rural Older Adults. August 2017. Available at: https://www.giaging.org/documents/170818_Benson-Aldrich_paper_for_GIA_web_FINAL.pdf [Accessed December 4, 2017].
- ¹⁶ Basca, Belinda. The Elderly and Prescription Drug Misuse and Abuse. 2008. Available at: <http://www.cars-rp.org/publications/Prevention%20Tactics/PT09.02.08.pdf>. [Accessed December 4, 2017].
- ¹⁷ Teater, MD, Joseph. The Psychological and Physical Side Effects of Pain Medications. National Safety Council. February 2015. Available at [:http://webcache.googleusercontent.com/search?q=cache:KjtJmJ9Mm_EJ:safety.nsc.org/sideeffects+&cd=4&hl=en&ct=clnk&gl=us](http://webcache.googleusercontent.com/search?q=cache:KjtJmJ9Mm_EJ:safety.nsc.org/sideeffects+&cd=4&hl=en&ct=clnk&gl=us). [Accessed December 7, 2017].
- ¹⁸ Carroll, Chrysta. Opioids and the Elderly: A Disturbing Trends Sees Seniors Turning into Dealers. November 8, 2017. Available at: <http://www.bladenjournal.com/news/15061/opioids-and-the-elderly-a-disturbing-trend-sees-seniors-turning-into-dealers>. [Accessed December 5, 2017].
- ¹⁹ The National Center on Addiction and Substance Abuse, Adolescent Substance Use: America's #1 Public Health Problem (2011)
- ²⁰ Jakob D. Allen, Marcel J. Casavant, Henry A. Spiller, Thiphalak Chounthirath, Nichole L. Hodges, Gary A. Smith; Prescription Opioid Exposures Among Children and Adolescents in the United States (2017), pgs 2016-3382²¹

Bibliography (continued)

Miech, R., Johnston, L., O'Malley, P. M., Keyes, K. M., & Heard, K; Prescription Opioids in Adolescence and Future Opioid Misuse (2015), pgs 1169-1177

²² Calista M. Harbaugh, Jay S. Lee, Hsou Mei Hu, Sean Esteban McCabe, Terri Voepel-Lewis, Michael J. Englesbe, Chad M. Brummett, Jennifer F. Waljee; Persistent Opioid Use Among Pediatric Patients After Surgery (2017), pgs 2017-2439

²³ Jakob D. Allen, Marcel J. Casavant, Henry A. Spiller, Thiphalak Chounthirath, Nichole L. Hodges, Gary A. Smith, Prescription Opioid Exposures Among Children and Adolescents in the United States (2017), pgs 2016-3382

²⁴ Rosenberg, Tina, Breaking the Opioid Habit in Dentists' Offices, New York Times (Jul 10 2017)

²⁵ American Orthopaedic Society for Sports Medicine. (2017, 12 11). Sports Injuries Statistics. Retrieved from Stop Sports Injuries:

<http://www.stopsportsinjuries.org/STOP/Resources/Statistics/STOP/Resources/Statistics.aspx?hkey=24daffdf-5313-4970-a47d-ed621dfc7b9b>

²⁶ Wertheim, L. J. (2015, June 22). Special Report: Smack Epidemic. How Painkillers are Turning Young Athletes into Heroin Addicts. Sports Illustrated, pp. 1-15.

²⁷ MDPH. (2016, August 1). Preventing Prescription Opioid Misuse Among Student Athletes. Retrieved 12 5, 2017, from MassTAPP- Massachusetts Technical Assistance Partnership for Prevention:

<http://masstapp.edc.org/preventing-prescription-opioid-misuse-among-student-athletes>

²⁸ Mark C. Bickett, MD et al., Prescription Opioid Analgesics Commonly Unused After Surgery: A Systematic Review, JAMA Surgery, 2017, pgs 831

²⁹ The National Center on Addiction and Substance Abuse, Adolescent Substance Use: America's #1 Public Health Problem, 2011.

³⁰ <http://www.nsc.org/RxDrugOverdoseDocuments/Rx%20community%20action%20kit%202015/CAK-practice-safety-at-home.pdf>

³¹ Mercer, Marsha. (2017, August 23). https://www.huffingtonpost.com/entry/war-on-opioids-moves-to-veterinarians-offices_us_599d936de4b02289f7619172

³² Moore, Paul. (2013, February 7). [https://jada.ada.org/article/S0002-8177\(14\)60509-2/abstract](https://jada.ada.org/article/S0002-8177(14)60509-2/abstract)