REDUCING OPIOID MISUSE AND MANAGING PAIN SAFELY

OPIOIDS IN ALASKA

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ALASKA DEPARTMENT OF HEALTH AND SOCIAL SERVICES
Introductions

• Dr. Lisa Rabinowitz, Staff Physician, DHSS, DPH
• Elana Habib, Opioid Misuse and Addiction Prevention Specialist, DHSS, DPH, OSMAP
• Dr. Coleman Cutchins, State Pharmacist, DHSS, DPH
• Jessica Filley, Epidemiologist, DHSS, DPH, OSMAP
PAIN: A CLINICAL PERSPECTIVE
What is Pain?

An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.

– International Association for the Study of Pain, 2020
Types of Pain

- **Nociceptive pain**: sprains, bone fractures, burns, bumps, bruises, inflammation (from an infection or arthritic disorder), obstructions, and myofascial pain

- **Inflammatory pain**: Arthritis, delayed pain from a sunburn

- **Neuropathic pain**: Nerve trauma, cancer pain, carpal tunnel syndrome

- **Noninflammatory/nonneuropathic pain**: fibromyalgia
Emotional, Psychological and Spiritual Pain

Definitions:
the affective state associated with discrepancy between ideal and actual perception of self
- Sandler

an aversive state of high self-awareness of inadequacy.
- Baumeister, 1988
Prevalence of Pain in the USA

Percentage of adults aged 18 and over with chronic pain and high-impact chronic pain in the past 3 months, overall and by sex: United States, 2019

Zelaya et al. 2020
Pain and How it Affects Us

It is so much more than just pain intensity. Over time, many [patients] find the effects of living with chronic pain impact their ability to work, engage in recreational and social activities, and for some, [perform] the most basic everyday activities that people just take for granted. Not surprisingly, pain begins to chip away at their mood, often leaving them angry, frustrated, anxious, and/or depressed. Our families suffer along with us, and many relationships are forever altered.

—An advocate for people with chronic pain³

- Decreased quality of life
- Depression and anxiety
- Cardiovascular health

- Decreased socialization
- Sleep disturbances
- Brain function

Save a life. Get naloxone and keep it with you
OPIOIDS: WHAT ARE THEY AND HOW CAN THEY BE USED SAFELY
Definitions

What is an opioid?
Opioid analgesics/pain relievers
- Natural, synthetic, and semi-synthetic substances (excluding heroin) that bind to specific opioid receptors in the Central Nervous System, producing an agonist action. They increase the threshold to pain.

Heroin
- A semi-synthetic opiate synthesized from morphine. It is broken down into morphine.

Fentanyl
- A potent synthetic opioid drug approved by the Food and Drug Administration for use as an analgesic and anesthetic."
- There are also non-FDA approved fentanyl analogs (carfentanil, acetyl fentanyl,...) that can be in most illicit drugs, everything from meth, cocaine, heroine to counterfeit tablets that can look like prescription medications

“Is it an opioid?”
Some examples of opioid medication include:
- Codeine
- Fentanyl (Duragesic)
- Hydrocodone (Vicodin, Norco)
- Hydromorphone (Dilaudid)
- Meperidine (Demerol)
- Methadone
- Morphine (MS Contin, Kadian)
- Oxymorphone (Opana)
- Oxycodone (OxyContin, Percocet)
- Tramadol (Ultram)
Opioids and Why There Needs to be Caution With Use

Side effects depending on length of use:
• Sedation
• Dizziness (ie falls among elderly)
• Nausea
• Vomiting
• Constipation
• Physical dependence
• Tolerance
• Respiratory depression
• Increased pain sensitivity

Other impacts
• Misuse
• Addiction
• Overdose
• Death
What is Overdose?
The brain has many opioid receptors. An overdose occurs when too much of an opioid (heroin, OxyContin, Percocet) fits in too many receptors, stopping the person’s breathing.

How Does Naloxone Work?
Naloxone bonds more strongly to the opioid receptors than opioid drugs, so it knocks the opioids off the receptors for a short time. This blocks the effects of the overdose allowing the person to breathe again.
AN OVERDOSE IS A CONTINUUM

• Slow breathing
• Breathing stops
• Lack of oxygen may cause brain damage
• Heart stops
• Death

An opioid-involved overdose can result in the following:
  o Opioid-induced respiratory depression
  o Brain injury can result in:
    • kidney failure, heart complications, neurologic consequences, seizures, nerve damage, temporary motor paralysis, fluid backup in the lungs, stroke, and pneumonia from inhaling
  • Hypoxia can result in damage to the prefrontal cortex worsening addiction and increasing negative cognitive and mental health outcomes
Risk Factors for Overdose

- Access to substances
- Co-prescriptions
- Demand and Tolerance
- Injection use
- Physiological Factors
- Mixing substances/Polysubstance use

Save a life. Get naloxone and keep it with you.
Non-modifiable Risk Factors for Overdose

- Sleep-Disordered Breathing, Including Sleep Apnea
- Pregnant Women
  - Associated with: stillbirth, poor fetal growth, pre-term delivery, birth defects, Neonatal withdrawal
  - For mothers with OUD - MAT with buprenorphine or methadone improved MATERNAL outcomes
- Renal or Hepatic Insufficiency - decreased clearance, increased risk of UIOD
- Aged ≥65 Years - Increased risk: UIOD, fall, cognitive impairment
- Mental Health Conditions
  - Psychological distress interferes with improvements in pain and function
    - Anxiety, PTSD, depression
  - Patients with Harm risk
- History of Substance Use Disorder
- Prior Nonfatal Overdose
Prescription Opioid Use in Morphine Milligram Equivalents (MME) Bn, 1992-2020*

Source: IQVIA Xponent, Mar 2020; IQVIA National Prescription Audit; IQVIA Institute, Nov 2020
Exhibit Notes: Historical NPA archive data for periods 1992-2005 combined with Xponent analysis for periods 2006-2020. 2020* includes data through September, and an estimation of Q4 2020 data based on previous year trend. Analysis is based on opioid medicines for pain management and excludes those medicines used for medication-assisted opioid use dependency treatment (MAT) or overdose recovery. Opioid medicines are categorized and adjusted based on their relative intensity to morphine, called a morphine milligram equivalent (MME), see Methodology. CDC Prescription Opioid Data. Accessed Oct 2020. Available from: https://www.cdc.gov/drugoverdose/data/prescribing.html
Trends in Opioid Overdose Deaths

Three Waves of the Rise in Opioid Overdose Deaths

Wave 1: Rise in Prescription Opioid Overdose Deaths Started in 1999
Wave 2: Rise in Heroin Overdose Deaths Started in 2010
Wave 3: Rise in Synthetic Opioid Overdose Deaths Started in 2013

Overdose Surge - Warning Alaskans

One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of days’ supply* of the first opioid prescription – United States, 2006-2015

Source: CDC, MMWR, 3/17/2017
Opioid Risk Factors (Think 2015)

• **Prescription**
  • More than a third of Americans in past two years

• **Misuse**
  • Up to 29% prescribed

• **Opioid Use Disorder and/or Heroin**
  • 8-12% OUD
  • 4-6% Heroin Use

*Save a life. Get naloxone and keep it with you*
In 2020, Unintentional Injuries Were the Leading Cause of Death Among Alaskans Aged 20-44 Years

<table>
<thead>
<tr>
<th>Rank</th>
<th>Leading Cause of Death (Among Alaskans 20-44 Years)</th>
<th>Number of Deaths</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Accidents/Unintentional Injuries</td>
<td>182</td>
</tr>
<tr>
<td>2.</td>
<td>Intentional Self-Harm</td>
<td>114</td>
</tr>
<tr>
<td>3.</td>
<td>Chronic Liver Disease and Cirrhosis</td>
<td>54</td>
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<tr>
<td>4.</td>
<td>Diseases of Heart</td>
<td>48</td>
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<td>5.</td>
<td>Malignant Neoplasms</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>All Causes of Death</td>
<td>614</td>
</tr>
</tbody>
</table>

In 2020, 54% (98) of unintentional injury deaths among Alaskans aged 20-44 years were due to accidental poisonings.

The displayed timeframe includes the COVID-19 pandemic, during which ED volume fluctuated greatly. We recommend considering trends in both absolute numbers and rates when assessing activity during this timeframe. Not all emergency departments participate in syndromic surveillance, and some have onboarded at different times. Syndromic Surveillance data are based on queries of emergency department notes and diagnosis codes suggestive of the condition of interest and are therefore approximate. Data are best suited for trend analysis, rather than final counts.

Opioid Overdose Death Rates

*2020 data are preliminary and subject to change

Save a life. Get naloxone and keep it with you.
CDC Prescription Data

Alaska Opioid Dispensing

RATE PER 100 PEOPLE

2016 2017 2018 2019

58.9 52 44.9 39.1

Save a life. Get naloxone and keep it with you
OPIOID: TOOLS TO KEEP ALASKANS SAFE

- SAFE STORAGE AND DISPOSAL
- NALOXONE
- PRESCRIPTION DRUG MONITORING
Medication Storage and Disposal

The importance:
- Risk of sharing
- Risk to children and youth

The interventions:
- Medication kiosks
- Medication disposal bags
- Medication lockboxes
- Sharing is not caring

Save a life. Get naloxone and keep it with you
Clinicians: caring for patients with complex pain medication regimens?

We're behind you.

A new partnership between State of Alaska and University of Washington:

UW Medicine Pain and Opioid Consult Hotline for Alaskan Clinicians

1-844-520-PAIN (7246)

UW Medicine pain pharmacists and physicians are available Monday through Friday, 7:30 a.m. to 5:30 p.m. AKT (excluding holidays) to provide clinical advice at no charge to you.

Consultations for clinicians treating patients with complex pain medication regimens, particularly high dose opioids:

- Individualized opioid taper plans
- Systematic management of withdrawal syndrome
- Evaluate/recommend non-opioid/patient specific treatment
- Triage and risk screening
- Individualized care consultation for client care and medication management

UW Triage Services: Available Wednesdays 10 a.m. to 1:30 p.m. AKT: https://www.washington.edu/alaska/Triage.html

DHSS OSMAP Academic Detailing Pilot

Provider and Patient Education
PDMP: A Tool to Support Patients

- Querying
  - Then having the conversation with the provider and patient (The Pharmacist and the ED provider)
- Using the alerts
  - NarxCare Alerts
  - Clinical Alerts
- Communication and continuity of care
  - Communications Module
Learn the Signs of an Overdose

FACE is clammy to touch and has lost color. Has trouble speaking. Center part of their eye very small, sometimes called "pinpoint pupils."

BODY is limp. Fingernails or lips are turning blue or purple.

SLEEP is deep and person cannot be woken. Will not respond to your voice or touch.

BREATHING is slow or has stopped.

BREATHING is slow or has stopped.
Naloxone Distribution

- Universal, opt-out co-prescribing naloxone
- Cost-effective and life saving:
  - One-time pharmacy of naloxone prevented 14 additional overdose deaths per 100,000 persons, with an incremental cost-effectiveness ratio (ICER) of $56,699 per QALY. - Acharya et al., 2020
  - In the US, one-time pharmacy distribution of naloxone would lead to overdose death reductions 64% of the time. Acharya et al., 2020

- Especially distribute for elevated risk prescriptions
- Incorporate the device into the bag with the opioid prescription, and/or offer education about it

Save a life. Get naloxone and keep it with you
Naloxone Saves Lives

- Naloxone is an overdose reversal drug that is safe, has no potential for abuse, and reverses overdoses 75% to 100% of the time. Narcan is a brand of naloxone.
- A person who has a fentanyl-involved overdose may only have 2 minutes before his/her/their death.
- Studies show overdoses are reversed and lives are saved when lay people carry and use naloxone.

Find out how to use and get naloxone at https://dhss.alaska.gov/osmap/Pages/hope.aspx

NARCAN saves lives.
Reverse an overdose.
Save a life.
Get NARCAN and keep it with you!
Naloxone is Effective Against Opioids Such As:

- Heroin
- Methadone
- OxyContin
- Vicodin
- Percocet
- Codeine
- Fentanyl

Naloxone Will NOT Reverse Overdose from Drugs Such As:

- Cocaine
- Meth (Methamphetamine)
- Alcohol
- Stimulants
- Benzos (Benzodiazepines such as Xanax and Valium)

Carry naloxone regardless as those who are using illicit substances may not know their substance is contaminated with an opioid.
Get the Rescue Kit

The rescue kit includes

- Two doses of naloxone nasal spray
- Instructions on how to stop an overdose with naloxone nasal spray
- Fentanyl testing strip
- Instructions on how to the test strip
- Latex protective gloves
ALTERNATIVE PAIN MANAGEMENT APPROACHES

- MULTIMODAL APPROACHES
- NON-OPIOID PAIN MANAGEMENT
- NON-PHARMACOLOGICAL PAIN MANAGEMENT
- PRESCRIPTION DRUG MONITORING
Three Main Messages of Guidelines

1. Determining when to initiate or continue opioids for chronic pain
2. Opioid selection, dosage, duration, follow-up, and discontinuation
3. Assessing risk and addressing harms of opioid use
Effects on The Brain

- Transduction
  - NSAIDS
  - Membrane-stabilizing agents
  - Antihistamines
  - Bradykinin and serotonin antagonists
- Perception
  - Systemic Opioids, NMDA-antagonists
  - Cannabinoids
  - General Anesthetics
- Descending/Local Modulation
  - Opioids, Tapentadol
  - SNRIs
  - NMDA-receptor antagonists
  - Anticholinesterases, NSAIDS, OCK antagonists, NO inhibitors, K+ channel openers
  - Cannabinoids
- Transmission
  - Gabapentenoids
  - NMDA-antagonists
  - Cannabinoids
  - Intraspinal agents
    - Local anesthetics
    - OPIOIDS
    - Agonists
    - Corticosteroids
- Intraspinal agents
  - Local anesthetics
  - OPIOIDS
  - α2-Agonists
  - Corticosteroids
  - Gabapentenoids
  - NMDA-antagonists
  - Cannabinoids

Save a life.
Get naloxone and keep it with you

Polomano, et al.
2016 CDC Opioid Guidance for Pain #1 “Nonpharmacologic Therapy and Nonopioid Pharmacologic Therapy are Preferred”

PT, weight loss, exercise, psychology behavioral modification

- Hip or knee osteoarthritis - improved function and reduced chronic pain
- Low back pain and fibromyalgia - improved function and well-being
  - No evidence for decreased pain or improved function with long-term use of opioids for: low back pain, headache, or fibromyalgia

Non-opioid pharmacotherapy

- Pain: neuropathic or nociceptive
  - NSAID better for nociceptive
  - Tricyclic, anticonvulsants, TD lidocaine better for neuropathic
- Non-Opioid are generally not associated with substance use disorder
- Numbers of fatal overdoses associated with nonopioid medications are a fraction of those associated with opioid medications
  - 2010 APAP+NSAIDs ~100x less than opioids
  - When multimodal approach is used with opioids MMEs ~3x4x lower

Fransen, et al., Hayden et al., Hamrick, et al.
RCT of 410 Pts: Management of Extremity Pain (Sprain, Fracture, MS Pain) in the ED


Save a life. Get naloxone and keep it with you.
Multimodal Approaches to Pain

Strategies for Managing Pain and Associated Disability

1. Pharmacotherapy
   • AP AP, NSAIDs, TCAs, opioids, topical agents
2. Physical Medicine and Rehabilitation
   • Assistive devices, electrotherapy
3. Complementary and Alternative Medicine
   • Massage, supplements
4. Lifestyle Change
   • Exercise, weight loss
5. Psychological Support
   • Psychotherapy, group support
6. Intervventional Approaches
   • Injections, neurostimulation


Save a life. Get naloxone and keep it with you.
Restorative Therapies

• **Massage Therapy**
  • Though the evidence is supportive of massage therapy, studies are lacking in quality so it is tough to determine the overall effectiveness of massage therapy in pain management.

• **Therapeutic Exercise**
  • A recent meta-analysis (2015) evaluated the role of exercise in patients with knee osteoarthritis. Data from 44 trials (3,537 participants) indicated that therapeutic exercise provides short-term benefits such as reduced pain, improved physical function and improved quality of life.

• **Transcutaneous electric nerve stimulation**
  • TENS uses low voltage electrical currents to provide pain relief. These electrical impulses are delivered via electrodes that are placed on the surface of the skin near nerves or where the pain trigger points are located.
Behavioral Health Approaches

- Behavioral therapy
- Cognitive-behavioral therapy
- Acceptance and commitment therapy
- Mindfulness-based Stress Reduction
- Psychophysiological Approaches
Complimentary and Integrative Health

- **Acupuncture**
  - Evidence is building for the importance of acupuncture in pain management depending on the condition.

- **Yoga**
  - Depending on the medical condition, yoga can be very beneficial according to the evidence.

- **Tai Chi**
  - The evidence indicates Tai Chi to be beneficial for immediate relief of chronic pain.
Importance of Nutrition

• Lifestyle
  • Adapting and increasing activity
  • Healthy sleeping habits

• Nutritional Status
  • Thoughts and emotions effect dietary behavior e.g. comfort eating
  • Isolated from social aspects of eating
  • Energy balance, and access to and preparation of food
  • Poor sleep = poor intake
  • Therapeutic role for pain and comorbidities

• Biopsychosocial
  • Biomedical: structural problems or illness
  • Use of medication and surgery
  • Connection: isolation from people, place or purpose
  • Mindbody: thoughts and emotions
Safely and Effectively Managing Pain

To find effective treatment options, talk to your doctor about managing your pain safely.

A conversation with your doctor can help you understand nonopioid pain management options. Talk to your doctor about:

- your health history
- how your activities have been impacted by pain
- what you hope to gain from managing your pain
- a complete list of all your medications

Having detailed discussions with your doctor about your pain management and function goals can help your doctor identify the best treatment with the lowest level of risk.
Treatment Resources

Alaska Community Resources

- State of Alaska - DBH page
  - Links to Substance Use Disorder Treatment Provider Lists
  - [https://dhss.alaska.gov/dbh/Pages/default.aspx](https://dhss.alaska.gov/dbh/Pages/default.aspx)
- OpenBeds
  - [www.treatmentconnection.com](http://www.treatmentconnection.com)
  - Provides a list of treatment providers based on real time availability
  - Not all providers are listed

SAMHSA

- [https://www.samhsa.gov/medication-assisted-treatment/find-treatment](https://www.samhsa.gov/medication-assisted-treatment/find-treatment)
- Medication for Addiction Treatment Locator
  - Buprenorphine Practitioner Locator
  - Opioid Treatment Program Directory
- Behavioral Health Treatment Locator
- SAMHSA Helpline: 1-800-662-HELP (4357)
“THE OPPOSITE OF ADDICTION ISN’T SOBRIETY. IT’S CONNECTION.”

— JOHANN HARI, CHASING THE SCREAM: THE FIRST AND LAST DAYS OF THE WAR ON DRUGS
Materials Available

Save a life.
Get naloxone and keep it with you
Q&A

opioids.alaska.gov
email: osmap@alaska.gov
References


