

The Centers for Disease Control & Prevention (CDC) defines **Primary Prevention** as follows:

“Intervening before health effects occur, through measures such as vaccinations, altering risky behaviors (poor eating habits, tobacco use), and banning substances known to be associated with a disease or health condition.”

Source: https://www.cdc.gov/pictureofamerica/pdfs/picture_of_america_prevention.pdf. Accessed 16 September 2018.

The Institute for Work & Health defines **Primary Prevention** as follows:

“Primary prevention aims to prevent disease or injury before it ever occurs. This is done by preventing exposures to hazards that cause disease or injury, altering unhealthy or unsafe behaviours that can lead to disease or injury, and increasing resistance to disease or injury should exposure occur.

Examples include:

- Legislation and enforcement to ban or control the use of hazardous products (e.g. asbestos) or to mandate safe and healthy practices (e.g. use of seatbelts and bike helmets);

- Education about healthy and safe habits (e.g. eating well, exercising regularly, not smoking)
- Immunization against infectious diseases."

Source: <https://www.iwh.on.ca/what-researchers-mean-by/primary-secondary-and-tertiary-prevention>. Accessed 16 Sept. 2018.

Episodes of major lifetime racial discriminatory events are the strongest predictors of back pain reported in African- Americans, with perceived day-to-day discrimination being the strongest predictor of back pain for African

American women.⁵⁰ Racial discrimination as a predictor of pain is consistent with the impact of social context and its interrelationship with chronic pain.⁵¹

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Older African Americans
experience severe
mismanagement of pain and

potentially inappropriate or
dangerous medication
duplication or interactions,
particularly those with
comorbidity, multiple providers
and limited access.⁵²

Patients of lower socioeconomic status and lower health care literacy are less likely to be able to pursue effective healthcare

options not typically
covered by insurance.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Hispanics are at higher risk for pain and pain undertreatment given the incidence of lower education, income levels, and lack of health insurance and/or access to care.

These disadvantages are further compounded when there is limited English proficiency that impacts communication with health care providers.¹

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

American Indians and Alaska natives have markedly higher rates of pain symptoms

compared to U.S. general population,⁵³ with high rates of diseases and health conditions such as diabetes, arthritis and obesity that produce significant pain.¹ Despite this, American Indians report minimizing pain complaints and not readily asking for help, likely exacerbating disparities through underdiagnosis and undertreatment.⁵⁴

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Asian Americans have overall lower pain prevalence than non-Hispanic whites. However, the variety of national origins, cultures, languages and ethnicities lead to variations within this group. Lower reports may be due to a general reluctance to report pain (perceived as a sign of weakness) and a fear of side effects of pain medication combined with the potential

liability of lower English proficiency and the experience of cultural bias by health professionals.¹

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

In every ethnic/racial category, women are more likely than men to report a wide range of chronic pain

conditions 1,55,56 while pain prevalence varies for women by age and race/ethnicity.⁵⁷

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Women experience disparities in pain care with misdiagnoses, delays in correct diagnoses, improper and uneven treatment, gender bias, stigma and neglect, and

dismissal and discrimination from the health care system.^{1,58} Women report greater severity, longer-lasting and more frequent pain than men, and also experience multiple pain problems. Women are prescribed opioids and benzodiazepine sedatives at higher rates than men.^{59,60}

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

While men are more likely than women to die from prescription opioid painkillers, the percentage increase in deaths since 1999 is over fivefold greater among women.⁶¹ Between 1999 and 2010, about 18 women died every day in the U.S from a prescription opioid overdose. For every woman who died of an overdose, there were 30 who went to the emergency

department for painkiller misuse or abuse.⁶¹

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

The prevalence of chronic pain among independent living older adults ranges from 18 % to 57%, depending on the definition of chronic pain. More severe pain and pain that interferes with activities increases with age.¹

Additionally, there may be difficulty assessing pain in older adults with cognitive impairment. Side effects of drug treatment may further adversely affect their cognitive function and overall health.⁶⁶⁻⁶⁸

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Patients with chronic pain are at increased risk of comorbid depression, anxiety and post-

traumatic stress disorder.^{32,90} Pain increases depression risk 3-5 fold.⁹¹ Pain, rather than chronic disease, is associated with the recurrence of depressive and anxiety disorders;²⁰ 50-80% of chronic pain patients report insomnia of a severity that warrants clinical attention.⁹² However, opioids generally exacerbate rather than improve these sleep and mental health comorbidities.⁹³

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

There are many interconnections between social rejection or exclusion and pain; for example, both are experienced in the same parts of the brain.⁵¹ Social isolation is a common condition among pain patients. Pain itself isolates the individuals since they may withdraw from family, work, school and social activities. Pain medications, however, can exacerbate rather than improve

isolation by interfering with hormonal and neurotransmitter functions.⁹⁴

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Physicians who receive fellowship training in pain care learn interventional pain strategies that originated in regional anesthesia and acute pain care. Acute pain interventions are an essential part of pain care. But the expansion of these strategies, which are the mainstay of anesthesiology and acute pain practices, to chronic pain care have had more modest success and only in carefully selected patient groups.¹¹¹ Additionally, there are licensed practitioners from evidence-based

disciplines, as in acupuncture therapy, massage therapy, osteopathic therapy, chiropractic and others, providing pain care but whose work may currently be less accessible within most formalized health systems.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Practitioners licensed in fields such as acupuncture, massage, chiropractic, and naturopathy provide care that 60-70% less likely to be reimbursed.¹¹² Even when health coverage is available it is generally limited, such

that patients will still have substantial out-of-pocket costs.¹¹³ There are also studied approaches to pain care that are not regulated but are delivered by licensed practitioners 'in place' such as nurses using guided imagery or progressive relaxation, for example. These services are generally not reimbursed.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Nonpharmacologic therapies can be stand-alone interventions or work in combination

with medicine, procedures or surgery. An often underrecognized feature of nonpharmacologic therapies is their ability to confer additional benefits: a treatment to reduce pain can also reduce anxiety and depression, nausea and vomiting; facilitate restful sleep; and increase a patient's sense of well-being and desire to participate in their own recovery.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

The assumption that conventional care is proven care has been challenged by reviews: the U.S. Office of Technology Assessment in 1978 estimated that only 10-20% of all procedures then used in medical practice were shown to be efficacious by controlled trial. 205 Estimates reported in the early 1990's determined 10-15% of medical interventions were based on results from randomized controlled trials; by 2003 that figure improved: approximately 50%, of

conventional care was found to be evidence-based.²⁰⁶

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

There are effective nonpharmacologic therapies available from licensed and regulated professionals such as acupuncture therapy, massage therapy, osteopathic manual medicine, chiropractic, physical therapy, and

psychology. There are instructors trained in evidence-based, directed or self-engaged movement and meditative movement therapies as in yoga and Tai chi.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Lifestyle or behavioral approaches, such as stress management, cognitive behavioral therapy, meditation/mindfulness, and meditative movement therapies are also

recommended as nonpharmacologic strategies. Other lifestyle approaches including diet and sleep hygiene have been shown to benefit health. These are low risk, low cost, well accepted by patients and many have been used successfully for thousands of years.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

There is an additional benefit to many of non-pharmacological pain care (NPPC) strategies; unlike drugs and surgery, they involve patient participation and a commitment to self-care. Increased self-efficacy in managing pain often accompanies NPPC and correlates with improved mood and predicts improved

outcomes in many chronic conditions,
including pain.²⁰

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Over 50% of chronic opioid use begins in the acute care setting, after surgery, or for treatment of acute injury related pain.¹²⁹ Nonpharmacologic therapies

have demonstrated benefit for acute pain with opioid sparing in hospital settings for inpatient post-operative pain and for acute pain not related to surgery.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

The largest hospital accreditation organization in the US, The Joint Commission (TJC), has revised their

pain mandate that was introduced in 2000. Effective January 1, 2018, TJC will require that their accredited hospitals and facilities 'provide' nonpharmacologic therapies for pain as a 'scorable' Element of Performance.¹⁹⁴ Per TJC clarification statement of 2015, these include but are not limited to, physical modalities such as acupuncture therapy, chiropractic therapy, osteopathic manipulative treatment, massage therapy, physical therapy (PT), relaxation therapy, and cognitive behavioral therapy (CBT).

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Acupuncture is understood as the insertion and manipulation of fine solid core needles at specified points or combination of points on the body. 'Acupuncture therapy' derives from the traditional East Asian paradigm recognizing the interrelationship of organs and body points and channels

as well as associated symptoms,
disease and dysfunction.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Depending on a state's scope of practice, acupuncture often includes treating by means of mechanical, thermal or electrical stimulation; by insertion of needles, or by application of heat, pressure, or other forms of stimulation. In practice, acupuncture needling is often done in combination with other therapies such as palpation, Tui na, Gua sha, cupping,

moxibustion, e-stim, auricular treatment, herbal medicine and recommendations on diet, exercise, self-reflection and meditative movement like Tai chi. Acupuncture therapy, therefore includes acupuncture needling, accompanying therapies and recommendations that engage a patient in self-care, particularly in the treatment of chronic pain.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

In multiple systematic reviews with meta-analyses, acupuncture was effective in reducing post-surgical pain compared to

sham acupuncture, controls and usual care with reduction in opioid need (21% opioid reduction at 8 hours, 23% at 24 hours and 29 % at 72 hours post-surgery) with lowered incidence of opioid-related side effects such as nausea, dizziness, sedation, pruritus and urinary retention.213-215

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

A systematic review with meta-analysis found acupuncture after total knee arthroplasty reduced pain and was associated with delayed opioid use.²¹⁶

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

In a systematic review and meta-analysis, peri-operative auricular acupuncture reduced postoperative pain and need for analgesic use compared to sham or standard-of-care controls.²¹⁷ Pain benefit at 48 hours was equivalent to analgesics with fewer

side effects. These findings have potential for reduction in hospital readmission due to uncontrolled pain.²¹⁸

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

A retrospective study of emergency department acute

pain patients found
acupuncture decreased pain
comparable to analgesics
with additional benefit of
reduction in anxiety.225

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

A trial of 1964 patients found
acupuncture benefit
comparable to
pharmacotherapy for
emergency department
patients presenting with

acute low back pain and ankle sprain.226

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

A systematic review with meta-analysis of acupuncture analgesia in the emergency setting found

acupuncture ‘...provided statistically significant, clinically meaningful and improved levels of patient satisfaction with respect to pain relief in the emergency setting’.²²⁷ The authors found evidence of lower cost and low adverse effects profile.

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

In an observational study of 1008 patients including children, acupuncture given as first aid immediately after, optimally within 48 hours, of a burn injury reduced pain, reddening, pigmentation, scarring and

PTSD that commonly follows traumatic burns.228

Source: Tick, H. Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care. *The Consortium Pain Task Force White Paper* © www.nonpharmpaincare.org

Discuss | *MINNPost Reported the Following in September of 2017:*

“In ‘Deaths of Despair: from the Cities to the Hollers: Explaining Spatial Differences in U.S. Drug, Alcohol, and Suicide Mortality Rates,’ Syracuse University associate sociology professor Shannon Monnat looks at the geographic distribution of mortality rates due to drugs, alcohol and suicide in economically disadvantaged parts of the U.S.

'In the places with high rates of drug, alcohol, and suicide mortality, economic distress has been building and social and family networks have been breaking down for several decades,' Monnat wrote in an email to MinnPost.

'This is about downward mobility at the community level. In these places, there are now far fewer manual labor jobs that once provided livable wages and benefits to those without a college degree,' she wrote. 'This isn't new. It's been building for at least the last three decades.'

It's happening in Minnesota, too. Monnat found the highest rates of drug, alcohol and suicide deaths in Minnesota in parts of the Iron Range, where unemployment and poverty rates are some of the highest in the state, and in Cass and Mahnommen counties, home to American Indian communities, which are disproportionately affected by some of these issues."

Discuss | *MINNPost Reported the Following in September of 2017:*

“Income inequality is another factor that seems to correlate with diseases of despair, Ehlinger said. Minnesota has some of the largest opportunity gaps between whites and people of color in the U.S. and also has stark differences in mortality rates for diseases of despair.

American Indians in Minnesota have the highest rate of alcohol mortality, at 53.5 per 100,000 people in 2015, followed by black Minnesotans, at about 9.9 per 100,000 people. White Minnesotans' mortality rate due to alcohol was 9.5 per 100,000.

White Minnesotans have the highest suicide rates, (13.6 per 100,000 people compared to 9.4 for Asian and Pacific Islanders,

and 7.4 for black Minnesotans), according to Minnesota Department of Health records.”

According to the Stanford University
Belonging Project,

“Studies focused on risk factors giving rise to poor health outcomes have also shown how crucial the experience of belonging can be. Individuals who feel marginalized are more likely to experience significant health problems over the course of their lives. Moreover, clear evidence has shown that individuals in distress who feel that they are

disconnected and are not part of a larger community ("thwarted belongingness") are especially vulnerable to poor outcomes, including impulsive or self-harmful behavior."

Source: <https://med.stanford.edu/psychiatry/special-initiatives/belonging.html>

Among the distinctions of the current epidemic from earlier opioid abuse epidemics is that this crisis, having been based in

medical prescribing, is disproportionately affecting white, middle-class people in non-urban settings, including those with private insurance.

Source: Wilhelmi BG, Cohen SP. A framework for "driving under the influence of drugs" policy for the opioid using driver. *Pain Physician*. 2012;15(3 Suppl):Es215-230.

Between 2007 and
2014, opioid
dependence rose by
3,203% among

patients privately
insured.

Source: Wilhelmi BG, Cohen SP. A framework for "driving under the influence of drugs" policy for the opioid using driver. *Pain Physician*. 2012;15(3 Suppl):Es215-230.

Between 2011 and
2015, privately insured

opioid abuse or
dependence charges
rose from \$72 million
to \$722 million.

Source: Rudisill TM, Zhu M, Kelley GA, Pilkerton C, Rudisill BR. Medication use and the risk of motor vehicle collisions among licensed drivers: a systematic review. *Accid Anal Prev.* 2016;96:255-270.

Allowed amounts for
opioid abuse/dependence
health care services grew
more than thirteen-fold
between 2011 and 2015,

from \$32 million in 2011 to
\$446 million in 2015.

Source: Tick H, Nielsen IA, Pelletier KR, Bonakdar R, Simmons S, Glick R, Ratner E, Lemmon RL, Wayne P, Zador V. Evidence-based nonpharmacologic strategies for comprehensive pain care: The consortium pain task force white paper. *The Pain Task Force of the Academic Consortium for Integrative Medicine and Health.*

In 2015, the average annual per-patient charges and estimated allowed amounts by insurance

were more than five times
higher for patients with
diagnoses of opioid abuse or
dependence than for those with
any diagnosis.

Source: Tick H, Nielsen IA, Pelletier KR, Bonakdar R, Simmons S, Glick R, Ratner E, Lemmon RL, Wayne P, Zador V. Evidence-based nonpharmacologic strategies for comprehensive pain care: The consortium pain task force white paper. *The Pain Task Force of the Academic Consortium for Integrative Medicine and Health.*

In 2015, private insurers and employers providing self-funded plans paid nearly \$16,000 more per patient with a diagnosis of opioid abuse or dependence than for those with any diagnosis.

Source: Rudisill TM, Zhu M, Kelley GA, Pilkerton C, Rudisill BR. Medication use and the risk of motor vehicle collisions among licensed drivers: a systematic review. *Accid Anal Prev.* 2016;96:255-270.

Between 2006 and 2010,
emergency department (ED)
visits related to prescription
opioid poisoning increased
to 259,093; over half were

hospitalized resulting in over
\$4 billion in costs.

Source: Centers for Medicare and Medicaid Services. National Health Expenditures 2015 Highlights. Baltimore, MD: U.S
Centers for Medicare & Medicaid Services; 2016.

Emergency department
visits for pediatric opioid
poisoning between 2006

and 2012 numbered
21,928 with over \$81
million in total charges.

Source: Keehan SP, Stone DA, Poisal JA, et al. National health expenditure projections, 2016-25: price increases, aging push sector to 20 percent of economy. *Health Aff (Millwood)*. 2017;36(3):553- 563.

From 2007-2014,
pregnancy drug
dependence
diagnosis (including

prescription opioid)
rose 511%.

Source: Wilhelmi BG, Cohen SP. A framework for "driving under the influence of drugs" policy for the opioid using driver. *Pain Physician*. 2012;15(3 Suppl):Es215-230.

From 2003-2012, neonate
abstinence syndrome (NAS)
admissions increased more

than four-fold with annual costs growing from \$61 million to nearly \$316 million.

Source: Gureje O, Von Korff M, Simon GE, Gater R. Persistent pain and well-being: a World Health Organization study in primary care. *JAMA*. 1998;280(2):147-151.

The hospital stay is 3.5 times longer for NAS (neonate abstinence syndrome) neonates compared to non-NAS

neonates, with a three-fold increase in cost.

Source: Gureje O, Von Korff M, Simon GE, Gater R. Persistent pain and well-being: a World Health Organization study in primary care. *JAMA*. 1998;280(2):147-151.

A sizable percentage of the driving public has detectable levels of

opioids in their blood with
opioid impaired driving
implicated in motor
vehicle accidents.

Sources: (1) Raofi S, Schappert SM. Medication therapy in ambulatory medical care: United States, 2003-04. *Vital Health Stat 13*. 2006(163):1-40. (2) Guy GP, Jr., Zhang K, Bohm MK, et al. Vital Signs: Changes in opioid prescribing in the United States, 2006-2015. *MMWR Morb Mortal Wkly Rep*. 2017;66(26):697-704.

The US spent 17.8% of the GDP on healthcare in 2015, expected to increase to 20% or higher by 2025. A significant portion of that is pain related since pain is the most common and

compelling reason for seeking medical attention.

Sources: (1) Centers for Medicare and Medicaid Services. National Health Expenditures 2015 Highlights. Baltimore, MD: U.S Centers for Medicare & Medicaid Services; 2016. (2) Keehan SP, Stone DA, Poisal JA, et al. National health expenditure projections, 2016-25: price increases, aging push sector to 20 percent of economy. *Health Aff (Millwood)*. 2017;36(3):553- 563.
(3) Gureje O, Von Korff M, Simon GE, Gater R. Persistent pain and well-being: a World Health Organization study in primary care. *JAMA*. 1998;280(2):147-151. (4) Raofi S, Schappert SM. Medication therapy in ambulatory medical care: United States, 2003-04. *Vital Health Stat 13*. 2006(163):1-40.

The economic burden of prescription opioid overdose, abuse and

dependency is estimated
to be \$78.5 billion each
year in the US.

Source: Guy GP, Jr., Zhang K, Bohm MK, et al. Vital Signs: Changes in opioid prescribing in the United States, 2006-2015. *MMWR Morb Mortal Wkly Rep.* 2017;66(26):697-704.

The U.S. is in the midst of
an alarming opioid

epidemic, resulting in increased rates of overdose. Since 1999, the number of overdose deaths involving opioids quadrupled.

Source: Centers for Disease Control & Prevention, 2016.

In 2015 alone, there were 33,091 opioid-related overdose deaths. These trends are magnified among American Indians/Alaska Natives (AI/ANs) compared to other racial/ethnic groups. American Indians/Alaska Natives are second only to Whites in the rate of overdose mortality (8 per 100,000 versus

12 per 100,000 deaths, respectively),
despite representing a significantly
smaller proportion of the overall
population.

Sources: Rudd et al., 2016. Centers for Disease Control & Prevention, 2016.

American Indian/Alaska Native
overdose deaths vary
substantially by state, with

highest overdose mortality in
Minnesota (26 per 100,000),
Washington (21 per 100,000),
Alaska and Oklahoma (both 13
per 100,000).

Sources: (1) Momper et al., 2013. (2) Substance Abuse & Mental Health Services Administration (SAMHSA), 2011.

Although specific tribal data is scarce, a recent survey of one tribe revealed alarming rates of non-medical use of prescription drugs (30% lifetime; 13% past month), especially among those aged 18–25 (47% lifetime; this is compared to 5% for the U.S. overall). Despite these marked disparities, very little opioid-related treatment research

has been conducted with these communities.

Sources: (1) Momper et al., 2013. (2) Substance Abuse & Mental Health Services Administration (SAMHSA), 2011.

Three highly effective pharmacological medications for the treatment of opioid use disorder (OUD) are currently available:
methadone, an agonist medication;
buprenorphine/naloxone, a partial agonist medication that does not reproduce opioid effects even at higher doses and thus has

lower abuse liability; and naltrexone, an antagonist medication which requires that patients be fully detoxified from opioids before initiation (to not precipitate withdrawal).

Source: Substance Abuse & Mental Health Services Administration (SAMHSA), 2018.

Results from rigorous clinical trials demonstrate that “medications for addiction treatment (or MAT)” produce superior abstinence and treatment retention

outcomes compared to psychosocial treatments without medication or with placebo. More specifically, methadone has been shown to yield twice the abstinence rates compared to placebo or detox, buprenorphine/naloxone is highly efficacious with three to eight times the abstinence rates of placebo or detox alone.

Sources: Connery, 2015; Mattick et al., 2003; Fudala et al., 2003; Weiss et al., 2011; Woody, 2017.

DID YOU KNOW? Western treatment is commonly secular while Indigenous healing practices often focus on spirituality and holistic wellness. For example, most Indigenous peoples utilize circle-based teachings of traditional knowledge for healing (Coyhis & Simonelli, 2008), such as the medicine wheel. The medicine wheel is an Indigenous view of the person as equal parts mental, physical, emotional and spiritual (McCormick, 2009) with the health of a person depending on the balance and integration of these dimensions (McCabe, 2008). In comparison, Western science is often reductionist and may study one area

(e.g., biological) to the exclusion of other areas (psychological, social, cultural, spiritual).

Source: K.L. Venner, et al. *Addictive Behaviors*. 86 (2018) 111–117

While methadone has a long history of successful treatment of opioid use disorder, its implementation in many tribal communities is relatively minimal. This is due in part to regulatory burdens with respect to

storing and dispensing the medication, requirement of daily observed dosing, and transportation difficulties where MAT clinics are far away.

Source: K.L. Venner, et al. *Addictive Behaviors*. 86 (2018) 111–117

DID YOU KNOW? The “disease of despair” is a term to describe the dramatic increase of mortality rates from drug overdoses, suicides, and alcohol-related liver diseases (or the “deaths

from despair”) among white non-Hispanic, middle-aged Americans, particularly people with high-school diplomas or less, between 1999 and 2015. The term was coined by economists Anne Case and Angus Deaton in their paper, “Mortality and Morbidity in the 21st Century” published in the Spring 2017 edition of the *Brookings Papers on Economic Activity*.

Source: Gingras, J. Newark Think Tank on Poverty, 2018.

Critics of Medicaid argue that the program enables the opioid use disorder epidemic by paying for prescription opioids. In fact, Princeton University researchers Janet Currie and Molly Schnell calculate that only 8 percent of all opioid prescriptions from January 2006 to March 2015 were paid for by Medicaid, based on data from

QuintilesIMS, a leading health-care information company.

Source: Case, A. & Angus Deaton. "The Truth about Deaths of Despair," *The Washington Post*. (September 12, 2017.)

Princeton researchers of the epidemic, and original coiners of the term "disease of despair," Anne Case and Angus Deaton have written that their work on the topic leads them to believe that "deaths of despair among those without a university degree are primarily the result of a 40-year stagnation of median real wages and a long-term decline in the number of well-paying

jobs for those without a bachelor's degree. Falling labor force participation, sluggish wage growth, and associated dysfunctional marriage and child-rearing patterns have undermined the meaning of working people's lives as well."

Source: Case, A. & Angus Deaton. "The Truth about Deaths of Despair," *The Washington Post*. (September 12, 2017.)

DID YOU KNOW? The crisis of despair (and the impact of its associated illnesses) has hit men and women about equally. There are

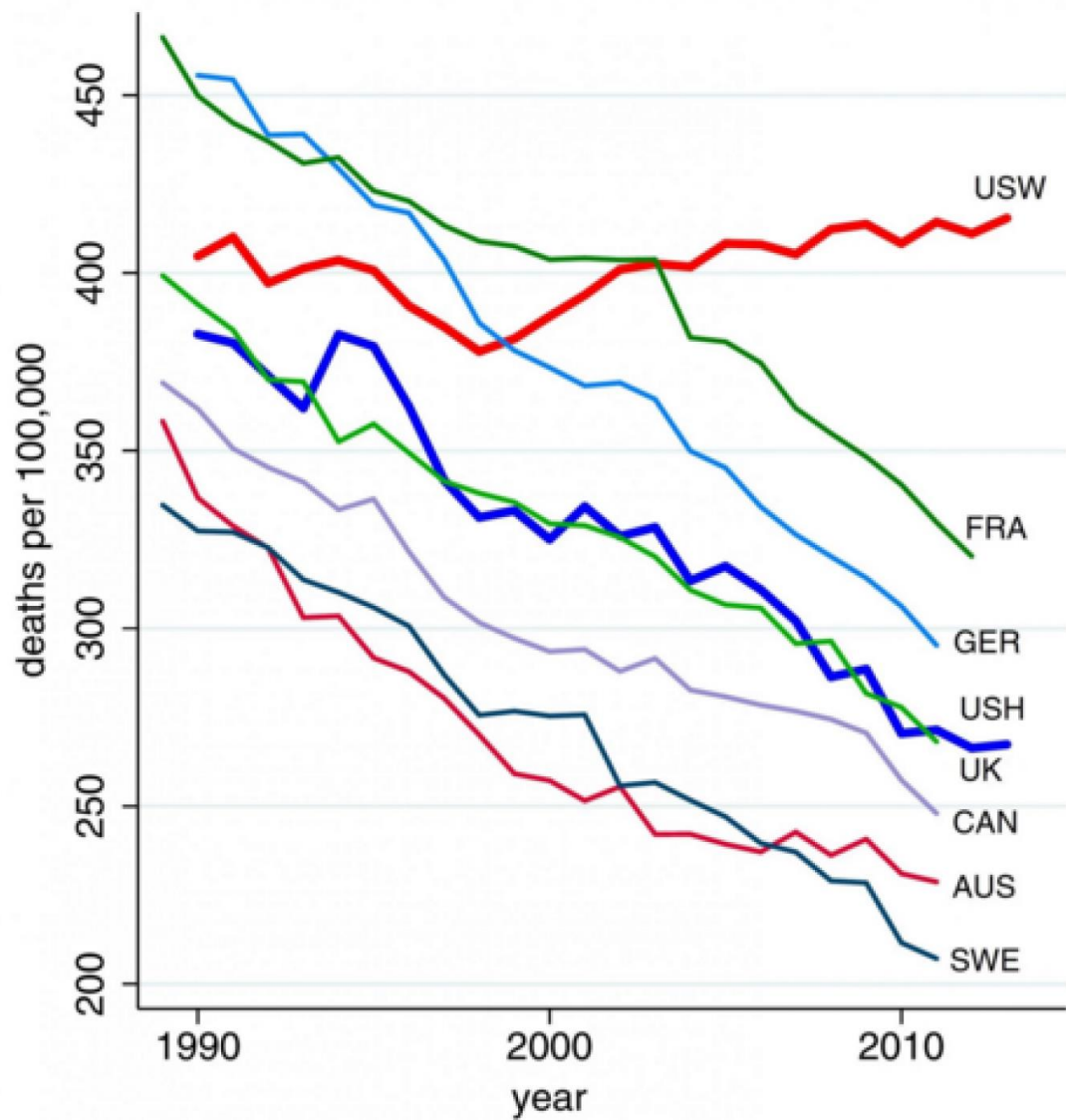
competing myths that women (or men) have faced the greater brunt of the epidemic. In fact, the increase in deaths of despair has been similar for men and women.

Source: Case, A. & Angus Deaton. "The Truth about Deaths of Despair," *The Washington Post*. (September 12, 2017.)

DID YOU KNOW? Rural Americans are not alone in this crisis. While mortality rates are somewhat lower in the suburbs of large

cities than elsewhere, deaths of despair have risen in parallel in all levels of urbanization defined by the Census Bureau, from inner cities to rural areas. They have increased for middle-aged whites — not blacks or Hispanics — in every state between 1999 and 2015, with deaths concentrated among those who do not have a four-year college degree.

Source: Case, A. & Angus Deaton. "The Truth about Deaths of Despair," *The Washington Post*. (September 12, 2017.)



Death rate for U.S. non-Hispanic whites (USW), U.S. Hispanics and six comparison countries, aged 45-54. (Source: Proceedings of the National Academy of Sciences.)