

FATAL OPIOID CRISIS OF UNITED STATES

WHAT ARE OPIOIDS?

Opioids are class of analgesics that are naturally found in the opium poppy plant. They include illegal drug heroin, and synthetic opioid, such as fentanyl, which are used to treat acute and chronic pain.

Opioids work in the brain to produce many effects to block the signals between the brain and the body so as to control and relieve pain, but it also can be so-called street drugs, such as heroin for getting “high.”

WHAT IS OPIOID EPIDEMIC?

In late 1990s, pharmaceutical companies stated that patients would not become addicted to opioid painkillers, which caused a rapid increased prescription of opioid medication, and consequently a widespread misuse of both prescription and non-prescription opioids.

In 2017, U.S. Department of Health and Human Services declared a public health emergency to address national opioid crisis.

REACT | ANTICIPATE | DESIGN | TRANSFORM

EVENTS

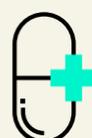
Opioids abuse, misuse and deaths in United States



128 People die everyday from opioid overdose

PATTERNS

10.3 M People misuse prescription Opioids



Every **15 mins** a baby is born suffering from withdrawal

UNDERLYING STRUCTURES



Unattended **Psychological Trauma**

Drug trafficking fueled by efficient supply chains



Medical Practitioners prescribing solely based on patient's subjective report

Greedy **Pharmaceuticals** overselling drugs



MENTAL MODELS



Society's perception of **unequal parity** between physical and mental health

Changing expectations of people towards pain relief



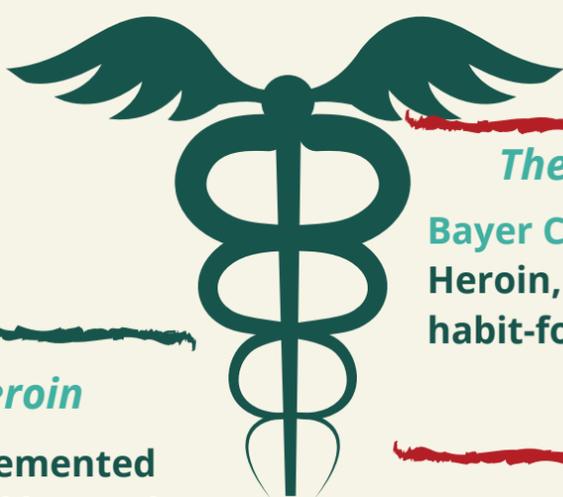
When you 'pain well' you realize that not all pain relief is good and that not all pain is necessarily bad — Dr. Alex Cahana



THE 3 WAVES

HISTORY OF OPIOID CRISIS

In 1860s, the use of opioids was prevalent in the U.S. as a way to relieve wounded soldiers' pain, and chronic pain was managed largely with non-drug and cognitive behavioral therapy (ex- hypnosis, physiotherapy). However, in 1980s, doctors started to treat acute pain with opioids.



1898

The Advent of Heroin

Bayer Company first introduced Heroin, claiming that it was less habit-forming than morphine.

1950

The Advent of Fentanyl

1910-1920

Restrictions on Heroin

The US government implemented restrictions narcotics and banned heroin for medical purposes.

1980



1995

Wave 1 (1990-2010)

Deaths due to prescription opioids

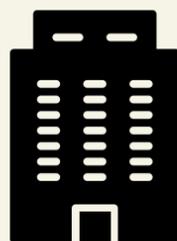
Insurers limited coverage to behavioral pain therapy.



The Advent of OxyContin

Purdue Pharma introduced OxyContin, a version of oxycodone, which was introduced as a gentler and less-addictive opioid pill.

Pharmaceutical companies improperly minimizing addiction potential of drugs in their marketing.



Medical practitioners unscrupulously doling out opioids without adequate medical need.

Wave 2 (2010-2013)

Rise in Herion Overdose deaths

Spike in the availability of opioid analgesics and cheaper alternatives (Heroin).



Wave 3 (2013-Present)

Deaths due to synthetic opioids (Fentanyl)

Emergence drug trafficking organizations made availability of fentanyl and its analogs easier.



Susceptible individuals: with rising dependency and tolerance, some people who used prescription opioids transitioned to a more potent and cheaper alternative



Between 2013 and 2016, deaths attributed to fentanyl analogs spiked by a shocking 540%!

PROBLEM LANDSCAPE

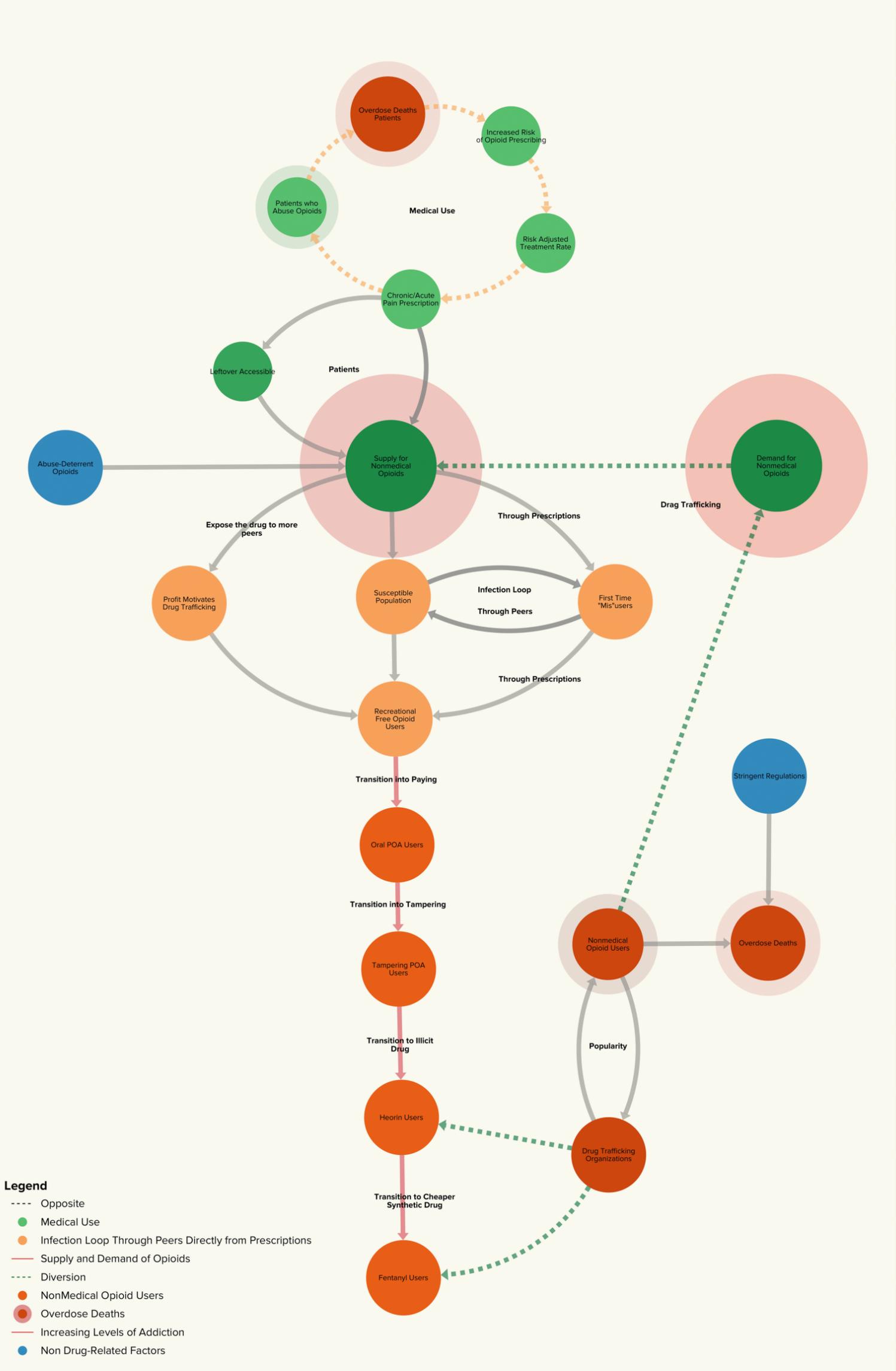
DYNAMICS OF THE OPIOID CRISIS SYSTEM

The system thinking model includes several causal loop diagrams of the opioid system model:

- Opioid medical use for pain treatment
- Patients initiating the supply of non-medical opioids
- Diversion of pharmaceutical opioids from first misusers to susceptible population and recreational free opioid users, increasing levels of addiction, and drug trafficking between supply and demand.

We categorize overdose deaths as patients and non-patients to distinguish between people who abuse 'first-hand-opioids' and people who get addicted due to the sequential effects of opioid diversion. In addition, Abuse-Deterrent Opioids (ADOs) and stringent regulations are other non-drug related factors that aggravate the problem. The model contains 7 loops and 21 factors.

Dynamics of the Opioid Crisis System



EXISTING SOLUTIONS

RAY OF HOPE

Connect the Dots across Systems of Care to Maximize the Resources

REDUCING THE FLOW OF OPIOIDS



Medical Centers
and Physicians

- Use of local anesthetic solutions to lessen the need for opioids during surgery.
- Oxy-free emergency departments that don't prescribe or refill opioids as a first line response

COMMUNITY PARTNERSHIPS

- The Angel Project, which was started in Massachusetts in 2016, is a plan that offers treatment instead of jail time for those who voluntarily come forward to turn in their drugs.
- Today more than 100 police departments have modeled their own versions of the initiative.



Law Enforcing
Agencies

PREVENTING OVERDOSES



Pharmacies and
Distributors

- CVS 90 days Safe Medication Disposal Plan: Patients can cancel their prescription and dispose opioid medicine at CVS
- McKesson: Creating a nationwide clinical alert system to identify patients at risk of opioid overuse, abuse, addiction or misuse.

COMBATING ADDICTION WITH ACTION

Overdose Lifeline, Indiana based non-profit offers one-of-a-kind 'This is (not) about drugs' program which reached over 24,000 students in Indiana.

Project Engage, Delaware based healthcare system offers an early intervention and referral program for patients struggling with opioids and other substance abuse.



Health and
Wellness
organizations and
non-profits



Addiction is a family disease. One person may use, but the whole family suffers

— Shelly Lewis



LEVERS OF CHANGE

WHO & HOW

Medical | Political | Behavioral | Educational | Legal

REDUCE ABUSE || REDUCE HARM || REDUCE STIGMA

BREAK THE STIGMA ASSOCIATED WITH OUD



Policy Makers: Eliminate policies that bans drug felony individuals from receiving any benefits
Provide employment opportunities for people recovered from OUD

Non-Profits: Create support groups of Ex-addicts, friends and family

UNDERUTILIZED NON-PHARMACOLOGIC TREATMENTS OF PAIN RELIEF

Insurers: Provide coverage and reimbursements for alternative pain treatments

Medical Centers: Address the challenge of insufficient alternative treatment providers



CHANGING THE NARRATIVE OF PAIN



Pharmacies: Harness the strength of marketing to change the perception on pain

Medical Practitioners: Being responsible in prescription of opioids for pain relief

REDUCE THE RISK OF OUD DEATHS

Medical Centers: Support Discovery and development of innovative and comprehensive treatments including non addictive analgesics

Policy Makers: Ease restrictions on medication-assisted treatment and Naloxone to bridge the gap between need and capacity



In all my years as a physician, I have never, ever met an addicted person who wanted to be an addict.

— Dr. Nora Volkow, NIDA Director

