



Department of

**Mental Health &  
Substance Abuse Services**

# The Unseen Consequences of Prescription Drug Abuse

Stephen Loyd, M.D.

# Stephen Loyd, M.D.

- Receives no commercial support, in any form, from pharmaceutical companies or anyone else
- Medical Director for Substance Abuse Services, Tennessee Department of Mental Health and Substance Abuse Services
- Associate Professor of Medicine, Quillen College of Medicine, East Tennessee State University
- Expert witness, *U.S. Attorney, TBI, FBI, DEA, IRS, Commonwealth Attorney Virginia and Kentucky, Virginia State Police, Tennessee Board of Medical Specialties*
- Member, Greene County Drug Court, Judge Kenneth Bailey and member of the National Association of Drug Court Professionals
- Speaker, *Proper Prescribing of Controlled Substances*
- Founding Partner, *High Point Clinic*, a non-profit clinic in Johnson City, Tennessee, with an interest in opiate addicted pregnant women
- Recovering from addiction to opiates, benzodiazepines and alcohol since July 2004
- *2014 Advocate for Action*, Office of National Drug Control Policy, Executive Office of the President of the United States
- Tennessee Volunteer Fan and Alum and Father to **Heath** and **Hayley** and husband of 26 years to **Karen**

# Objectives

- 1. Begin to understand addiction as a disease of the reward pathway of brain
- 2. Understand how opiate painkillers "hi-jack" the brain's natural reward system.
- 3. Understand how prescription drug abuse can be the primer for injection drug use and eventually heroin
- 4. Understand injection drug abuse as a risk factor for HIV and Hepatitis C

## Prevailing Philosophy

- *“Here is the solution to the American drug problem suggested by the wife of our President: “Just Say No.””*

Kurt Vonnegut

## Substance Abuse- Nationally

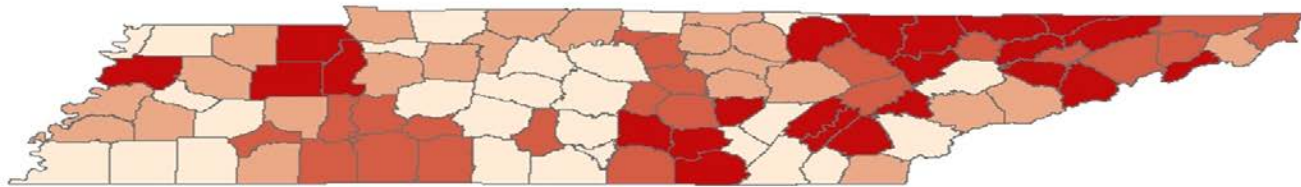
- From 1999-2009, drug overdose deaths due to prescription painkillers increased 400%
- Overdose fatalities are now the leading cause of accidental deaths in America, *nudging out motor vehicle crashes*
- In 2010, about 12 million Americans (age 12 or older) reported non-medical use of prescription painkillers in the past year
- The United States represents < 5% of the world's population but consumes approximately 80% of the world's opioid supply

# Tennessee

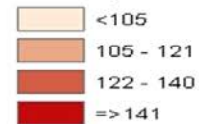
- An estimated 4.25% Tennessee adults (or 201,000 people) used pain relievers non-medically in the past year. Almost 12% of 18-25 year olds (or about 77,000 people) abused pain relievers
- Tennessee ranks third in the nation for number of prescriptions written at 17.6 per capita. Prescribing practices in 2010 resulted in *51 pills of hydrocodone, 22 pills of Xanax and 21 pills of oxycodone for every Tennessean above age 12*
- There were 887 prescription drug overdose deaths in Tennessee in 2010, up from 301 deaths in 2001
- Currently losing 3 Tennesseans/day to unintentional drug overdose
- More than 1,000 babies born with NAS in 2015

# Tennessee 2007

- Opioid Prescription Rates by County

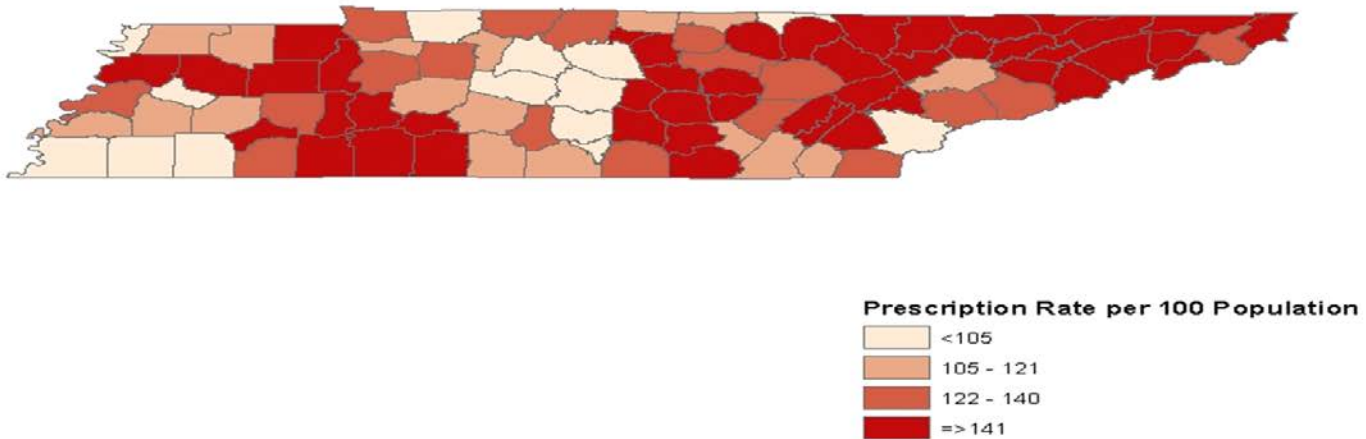


Prescription Rate per 100 Population



# Tennessee 2008

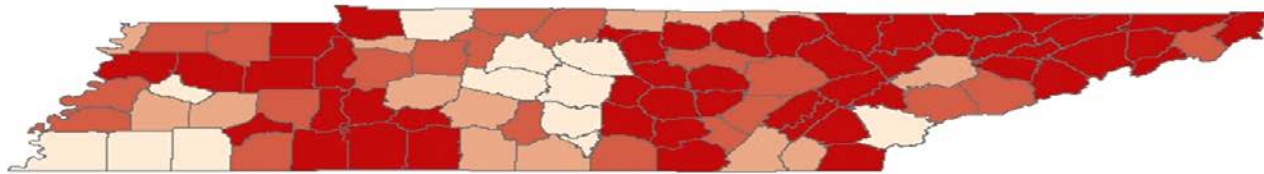
- Opioid Prescription Rates by County





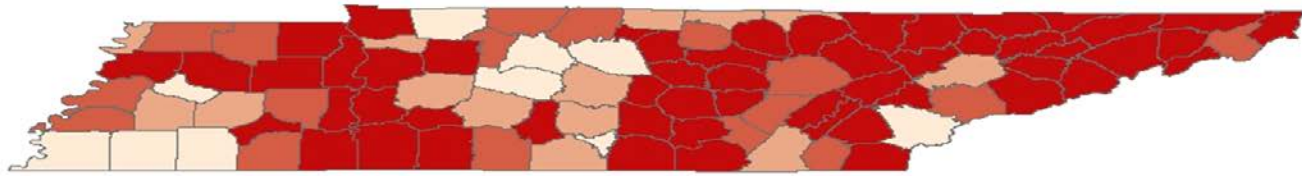
# Tennessee 2009

- Opioid Prescription Rates by County

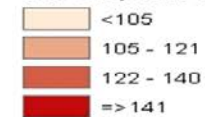


# Tennessee 2010

- Opioid Prescription Rates by County

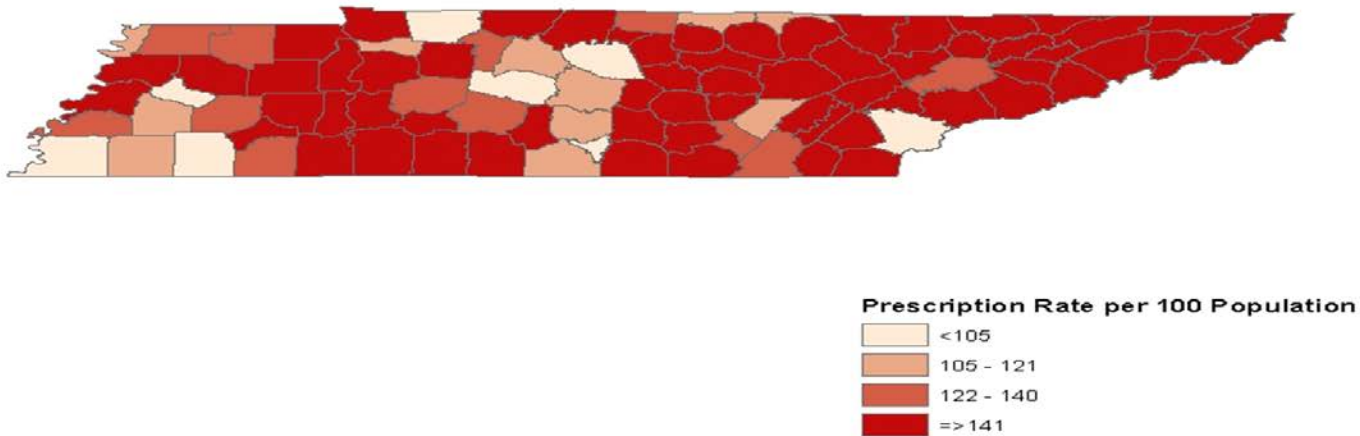


Prescription Rate per 100 Population



# Tennessee 2011

- Opioid Prescription Rates by County



# The Beginning



- ***“Darkness cannot drive out darkness, only light can do that. Hate cannot drive out hate, only love can do that.”***

# Addiction

- *23 million people in the United States suffer from addiction, the same number that suffer from Type I diabetes mellitus*
- The *AMA*, the *American Psychiatric Association*, and the *American Society of Addiction Medicine* all describe addiction as a **“chronic, relapsing disease”**, yet we treat it more as a moral failing than a disease

## People's Views

- “How about treatment that works instead of ridiculous 12-Step AA/NA cult “Higher Power” nonsense that has a 100% failure rate?”
- “Pain management specialist are hard to come by and not covered by my insurance. My physicians will not treat my pain properly and threaten me with no medication.”
- “99% of addicts are personality disordered. They are mentally retarded.”

# My Treatment Options

- East Tennessee, 150 inpatient beds available for drug treatment as late as 1995
- My treatment= \$50,000.00, CASH
- Buprenorphine based treatment- pill mills vs. legitimate treatment
- What does the medical literature say about current best treatment options? What if 12-step doesn't work?
- **Concept of harm reduction**- It is estimated that individuals with opioid dependence have a **mortality rate 10 to 30 times higher** than those who do not use. The main causes of death are *HIV/AIDS* and overdose. Individuals on opioid replacement therapy (methadone or buprenorphine) have **a 70% reduction in mortality** compared with those who are not in treatment.



# 1930's Mental Health Treatment



What's the picture that changes the face of addiction? (David Kirby)

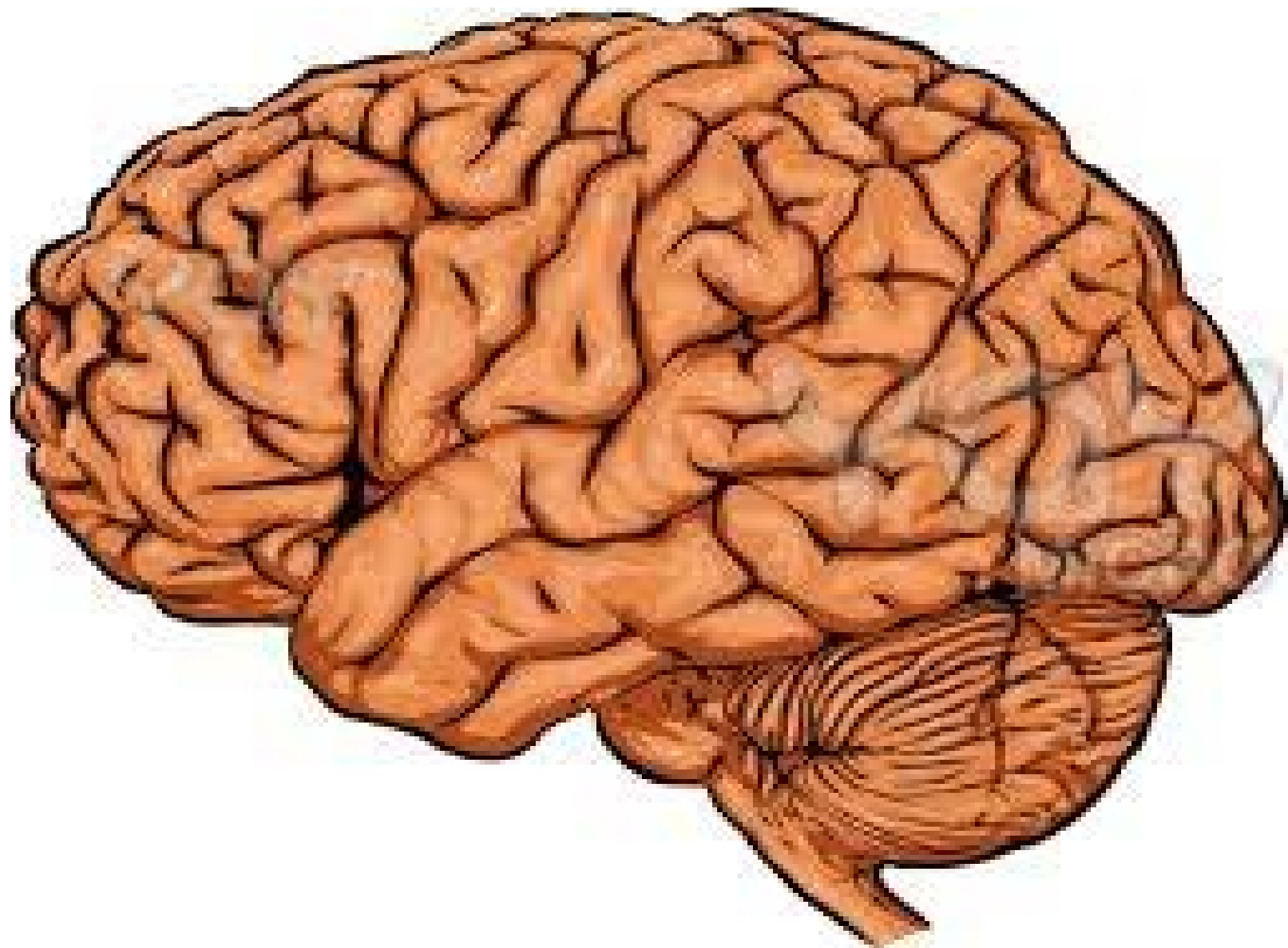


Does this change the face of drug addiction?



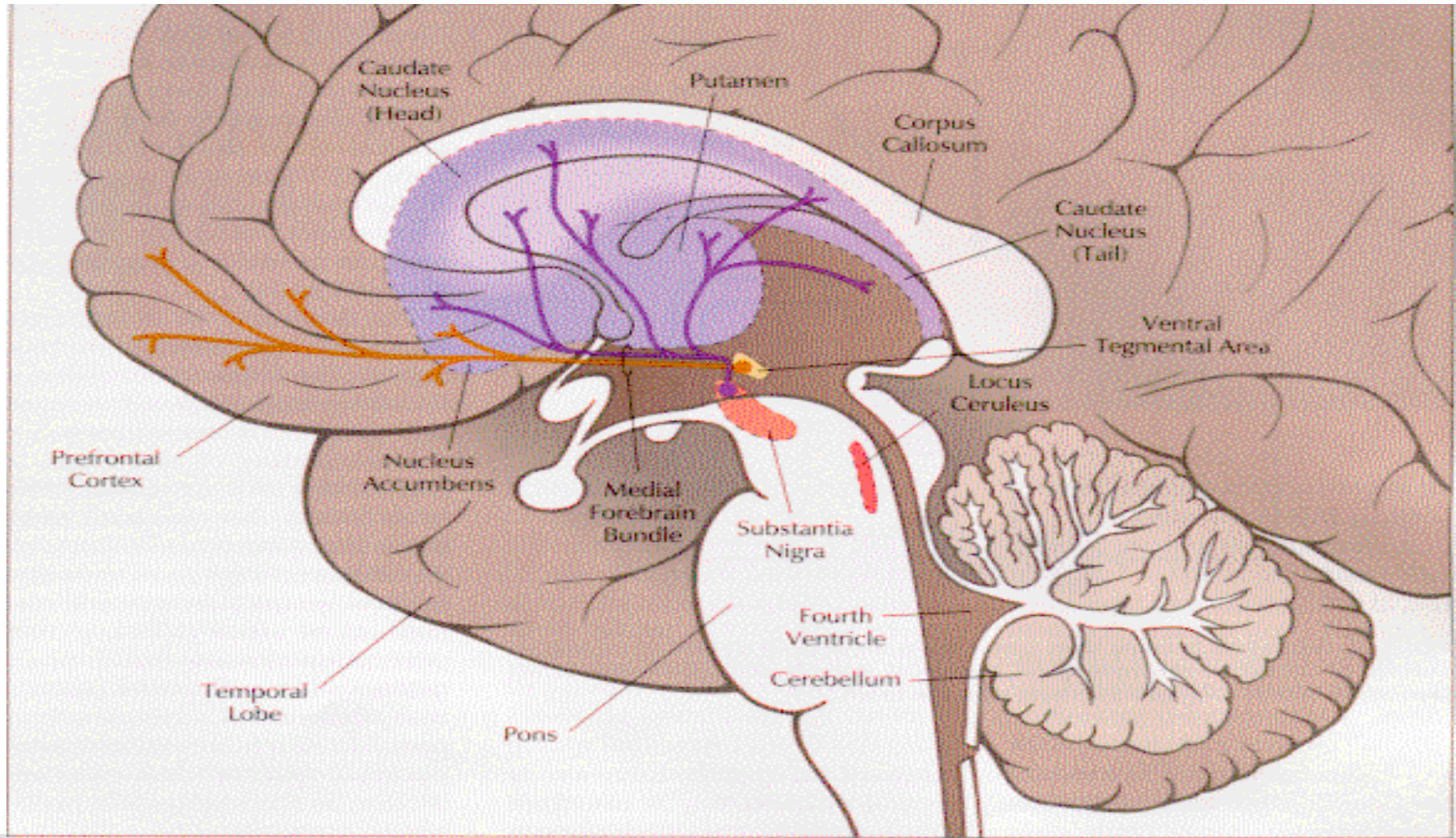
# Dependence vs. Addiction

- **Dependence**- once the drug is stopped, a predictable physiological withdrawal syndrome occurs
  
- **Addiction**- the compulsive use, loss of control and continued use despite adverse consequences; *hallmark is craving*

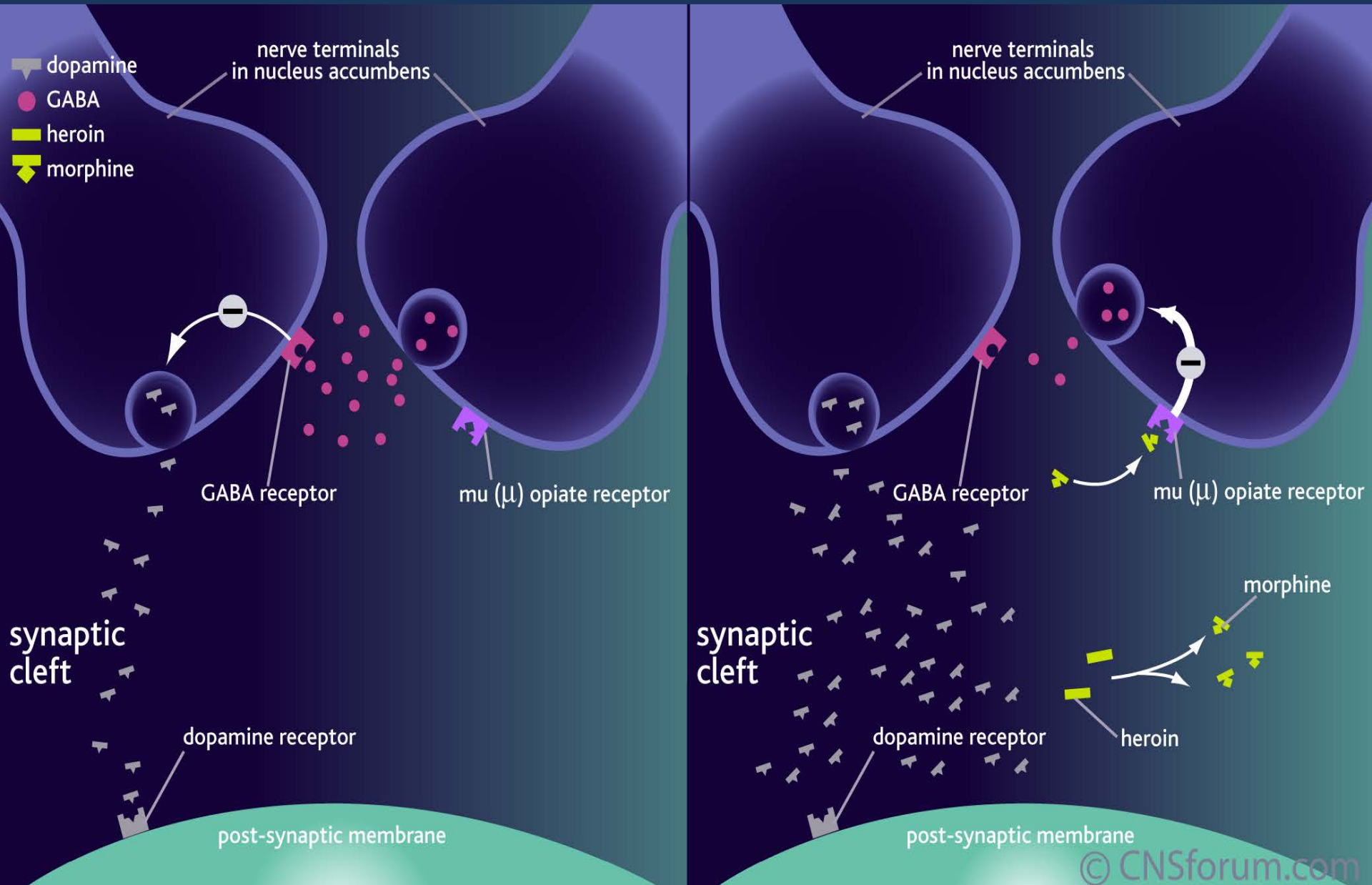




# Hi-jacking of the Reward Center



# Opioids



# Abuse Potential

- Codeine
- Fentanyl
- Morphine (*Kadian*)
- Opium
- Methadone
- Oxycodone (*Percocet*, *Roxicet*, *Oxycontin*)
- Meperidine (*Demerol*)
- Hydromorphone (*Dilaudid*, *Opana*)
- Hydrocodone (*Lortab*, *Vicodin*)
- Propoxyphene (*Darvon*, *Darvocet*)
- Buprenorphine (*Subutex*, *Suboxone*)



# Buprenorphine

- mu1, mu2, kappa and delta receptors
- Partial agonist, antagonist depending on the receptor
- mu1= pain control
- mu2= euphoria/respiratory depression
- Treatment for opioid addiction and pain (ceiling effect)
- Theory for adding *naloxone* to *buprenorphine*
- Acute pain management in patient taking *Suboxone*

## IV Drug Abuse



## Not Just the Arm- Subclavian



# Jugular



# Abscess- Complication: Endocarditis





Doctor?



# Underground Healthcare



# Injection Risks

- Cellulitis +/- abscess formation
- Sepsis
- Endocarditis
- Osteomyelitis
- Hepatitis B & C
- HIV



## Future??

- Heroin is the scary issue
- “Black Tar” vs. “Powder” heroin
- Xalesco, Mexico
- 80-85% pure
- Avoid big cities and organized crime
- “Chinese Restaurant” Marketing
- “Pizza delivery”

# Almost Missed It



# My Girls





# My Boy



The King RIP age 42



## Contact Information

- **Email**- [stephen.loyd@tn.gov](mailto:stephen.loyd@tn.gov)
- **Office**- (615) 532-1225