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### 2017 - Utah's Heroin Overdose Epidemic - Poster Presentation

Jazmin Hernandez

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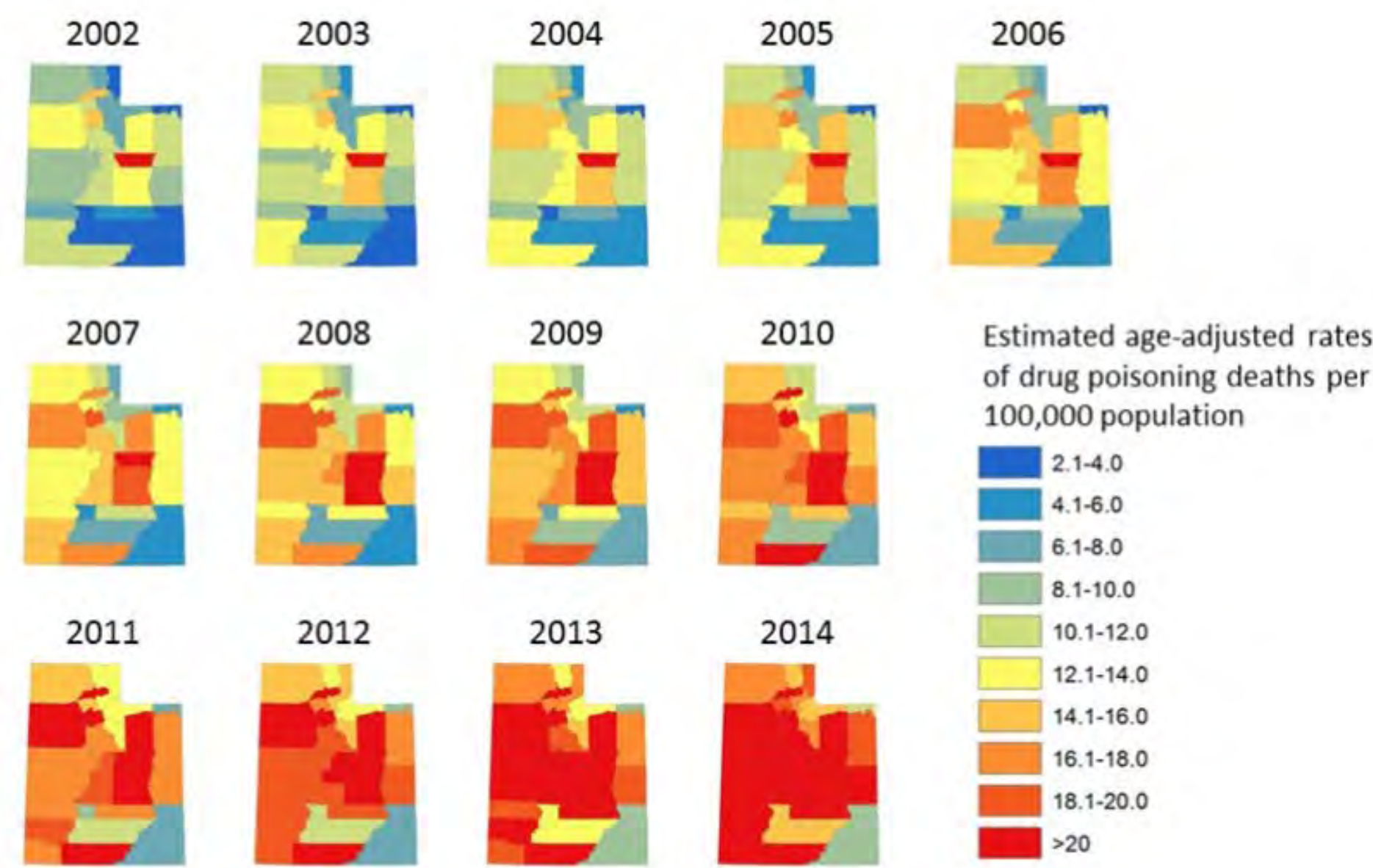
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# Utah's Heroin Overdose Epidemic

Jazmin Hernandez  
Salt Lake City Community College

## Data:



- In the last thirteen years the National Overdose Deaths of all drugs increased by 211%
- National Overdose Deaths from heroine increased by 560%
- Utah is in the top 10 in the Nation when it comes to Drug Overdose
- Utah leads with highest rate of drug overdose for veterans
- Overdose is the main cause of injury death in the state of Utah
- Between 2000 - 2015 Utah suffered from a 400% increase in deaths due to overdoses
- From 2002 to 2014 in Salt Lake County deaths increased by 5.9

## Chemical Formula:



- Produced from the seed pod of Asian Opium Poppy Plant
- Pain Killer
- Eliminates action of pain receptors
- Shape of molecule fits the active site of receptor

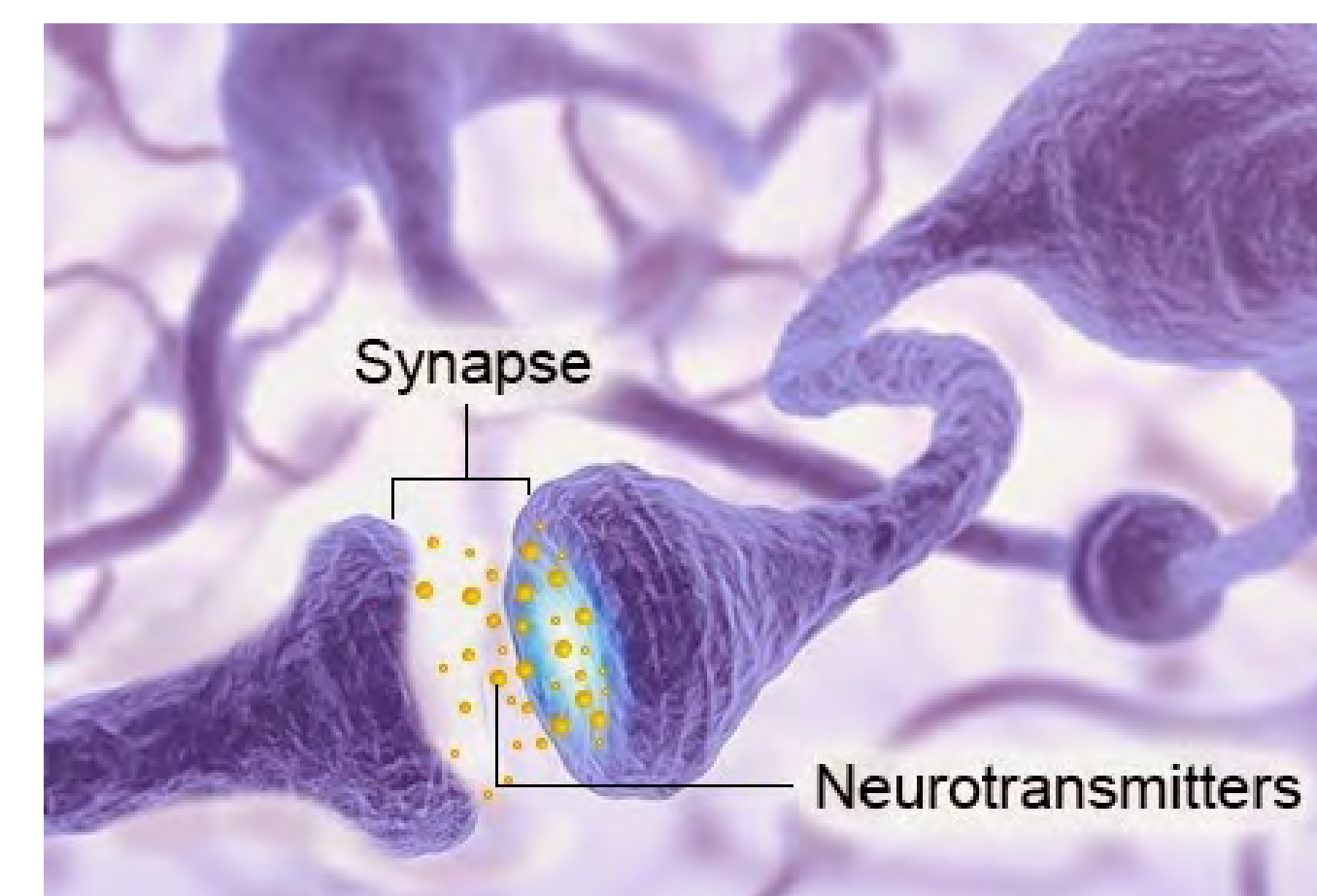
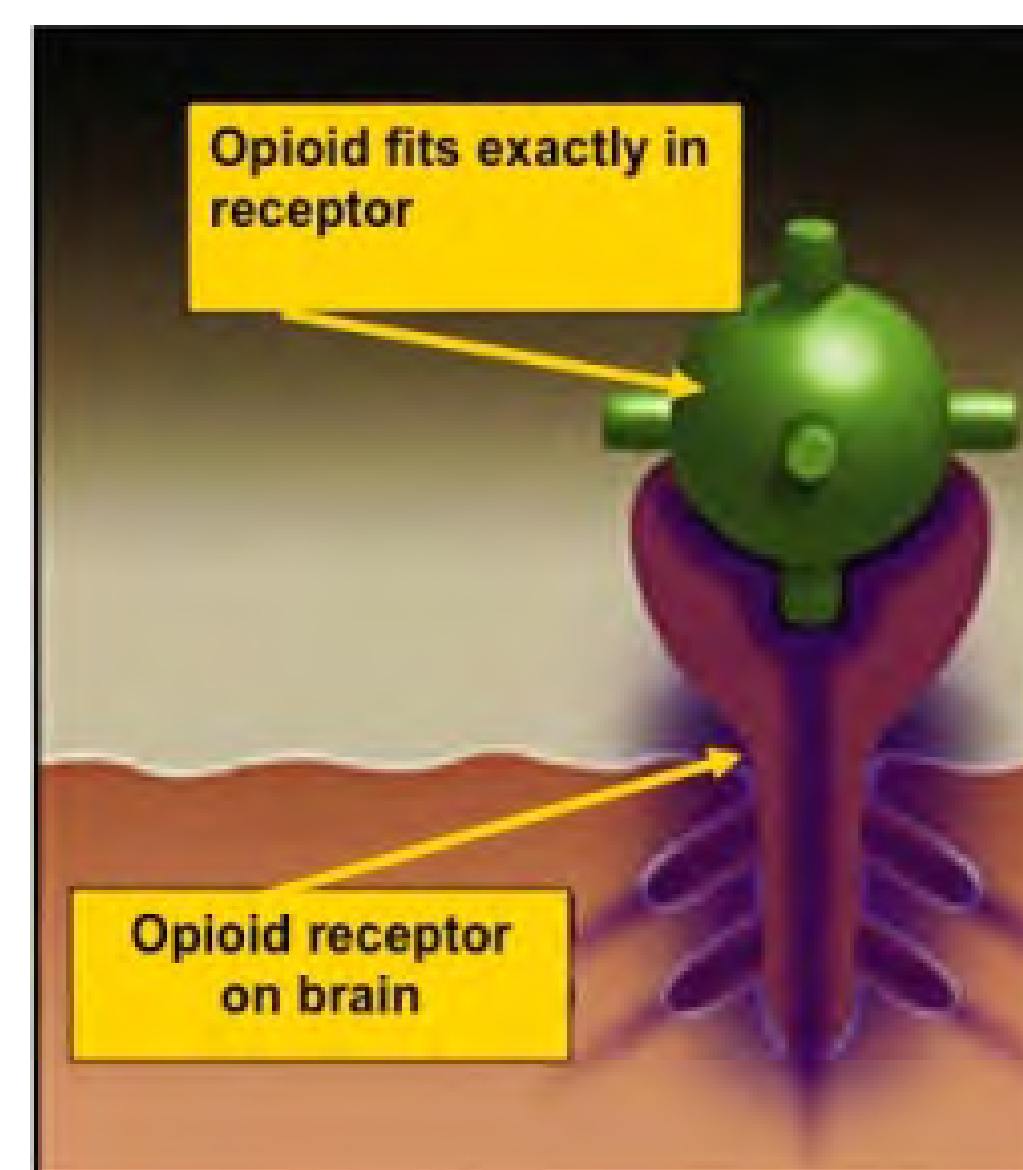
- Three times the potency of morphine
- Less soluble in water

## Abstract:

Heroin is classified as an opiate drug that is synthesized from morphine, which is used as a pain reliever. Opiates receptors are ones responsible for pain control, immune responses, and addictive behaviors. The feeling of being “high” defers on the user. Heroin can either be injected, smoked, or snorted. Vast majority of the users prefer to inject it into their bloodstream. Once the user provides over their tolerance limit of this drug to their body, their circulatory system represses the oxygen flow into the body which can potentially lead to brain damage or even death. Naloxone is a drug that was developed in 1961, that is use to reverse the drug overdose cycle in the human body to prevent the loss of their breath outage meanwhile medical care arrives. Throughout the last couple of decades, the drug overdose percentage has increased here in the United States. From 1999 to 2008 the Nation’s number of deaths nearly quadrupled, and from 2002 to 2015 it increased by about thirty thousand deaths. Just from heroin overdose alone, from 2002 to 2015 the fatality rate increased by twelve thousand deaths. Utah is ranked fifth in the Nation when it comes to opiate drug overdoses. Due to the number of overdose deaths in the state of Utah, Salt Lake City Emergency Responders carry two doses of Naloxone with them.

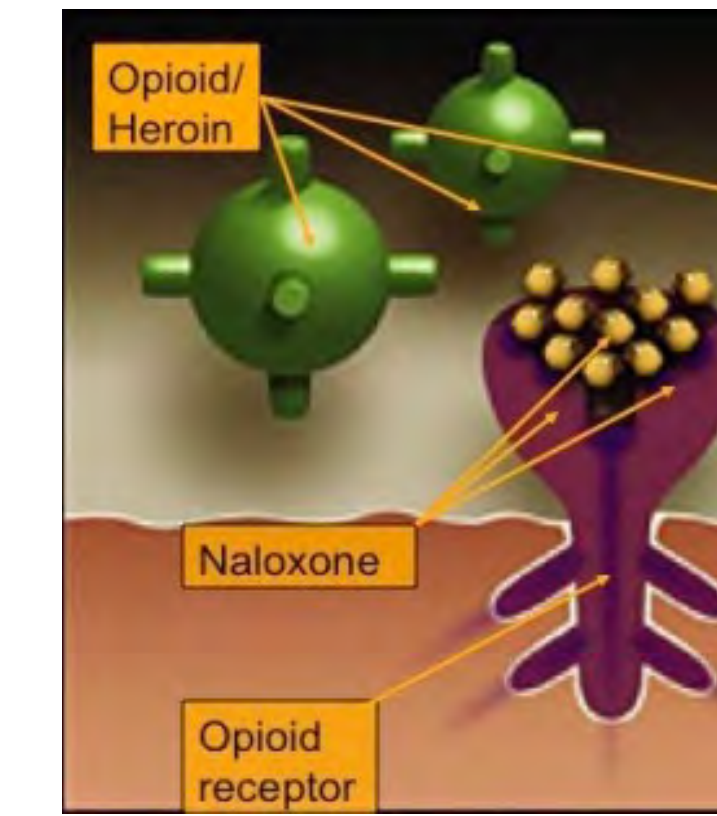
## Physiological Mechanism:

- The brain needs neurotransmitters for communication
- Without neurotransmitters there’s no communication in the brain
- Once heroin is in the body it blocks opioid receptors which blocks neurotransmitters from binding to those receptors
- Once the receptors are blocked, the brain stops sending signals to the body to breath
- Oxygen is not getting to the heart or brain
- Brain death and cardiac arrest are imminent



## Utah's Progress In This Epidemic:

### Naloxone:



- Opiate Antidote
- It's injected or given through the nose
- The opioid receptors are freed from Heroin
- Once receptors are unblocked the person can begin to breath again
- The effects of Naloxone last for about 30 minutes
- Withdraws begin to kick in
- Naloxone does not increase abuse of opioids



- Since 1996 Naloxone has been distributed
- From 1996 to 2014 reports have shown that it has reverse over 10,000 Opioid Overdose
- CDC recommends the expansion of Naloxone use
- Emergency responders in Utah are currently testing Naloxone usage
- There have been over 950 reversals in the last 21 months

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