Definitions

• Opioid is not morphine-based, synthetic/semi-synthetic
  – OxyContin, Vicodin, Methadone, Fentanyl
  – Universal term now
• Opiate is morphine-based
  – Morphine, Codeine, Heroin
• MME = Morphine Milligram Equivalents
  – Common measure for strength of opioids
• Dependence vs addiction
The history

1980’s  Opioids for cancer and end of life treatments
1996   Purdue Pharm releases OxyContin and starts marketing
1999   Pain named fifth vital sign
2001   WA finds Worker’s Comp deaths due to opioids
2008   Drug OD deaths surpass auto fatalities as leading cause of death in US
2010-2015 Annual opioid prescribing rate in US drops
2016   CDC publishes prescribing guidelines for chronic pain

PAIN MEASUREMENT SCALE

0  NO HURT  2  HURTS LITTLE BIT  4  HURTS LITTLE MORE  6  HURTS EVEN MORE  8  HURTS WHOLE LOT  10  HURTS WORST

No pain  1  Mild  3  Moderate  5  Severe  7  Worst pain imaginable
How do opioids work?

- Opioids alter the way a person perceives pain
  - Drug attaches to opioid receptors (nerve cells) in the brain
  - Nerve cells send inaccurate message about pain severity = person feels less pain
- Opioids also affect how the brain feels pleasure
  - Results in feelings of elation
  - Next deep relaxation and/or sleepiness
What we know...Nationally

- The majority of drug overdose deaths involve an opioid.¹
- There is a relationship between the number of opioid prescription and the number of opioid deaths.
- Since 1999, opioid overdose deaths & amount of prescription opioids sold nearly quadrupled.²
Nationally

- Opioid epidemic has demographic differences
  - Regional, rural vs urban, age
- In U.S. opioid prescriptions have declined since 2010
  - Number of Rx’s and MME’s per Rx³
  - Recent opioid death increases due to heroin and synthetic opioids (fentanyl)
  - White heroin vs black tar heroin
- Many drug overdose deaths include multiple drugs vs one drug
Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least 3 other drugs.

Heroin is a highly addictive opioid drug with a high risk of overdose and death for users.

People who are addicted to...

- Alcohol are 2x
- Marijuana are 3x
- Cocaine are 15x
- Rx Opioid Painkillers are 40x

...more likely to be addicted to heroin.


Based on 2015 CDC report: http://www.cdc.gov/vitalsigns/heroin/index.html
Drug overdose deaths by major drug type—United States, 1999–2011

- **Opioid pain relievers**
- **Cocaine**
- **Heroin**

CDC, National Center for Health Statistics, National Vital Statistics System
What we know...Locally

- What is reported in national media is not currently seen at the same levels in San Mateo County.

Source: CDPH Opioid Dashboard
## San Mateo County (2013)

### Deaths related to Opioids

<table>
<thead>
<tr>
<th></th>
<th>CA</th>
<th>SMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude rate</td>
<td>4.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Age Adjusted</td>
<td>3.8</td>
<td>1.9</td>
</tr>
<tr>
<td>County Rank</td>
<td>38 of 58</td>
<td></td>
</tr>
</tbody>
</table>

### Prescriptions Filled

<table>
<thead>
<tr>
<th></th>
<th>MME/resident/year</th>
<th>Opioid Rx/1,000 residents</th>
<th>Avg # of Vicodin/resident/year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CA</strong></td>
<td>615</td>
<td>572</td>
<td>123</td>
</tr>
<tr>
<td><strong>SMC</strong></td>
<td>501</td>
<td>469</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: CDPH, Brandeis PDMP Center of Excellence for CA Healthcare Foundation
Data from the State: San Mateo County

- In 2014, opioids were involved in 669 non-fatal ED visits
- In 2013, 33 deaths for “Other Drugs Only”

http://epicenter.cdph.ca.gov on August 15, 2017
# SMC Prelim Drug Death Analysis

**Oct – Dec 2016**

<table>
<thead>
<tr>
<th>Total Deaths - all types</th>
<th>1426</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug deaths</td>
<td>12</td>
</tr>
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</table>

### Cause of Death

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Nbr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meth</td>
<td>3</td>
</tr>
<tr>
<td>Opioid + Benzo</td>
<td>2</td>
</tr>
<tr>
<td>Opioid + Cocaine + Benzo</td>
<td>1</td>
</tr>
<tr>
<td>Meth + Benzo</td>
<td>1</td>
</tr>
<tr>
<td>Heroin + Benzo + Cocaine</td>
<td>1</td>
</tr>
<tr>
<td>Heroin</td>
<td>1</td>
</tr>
<tr>
<td>unknown</td>
<td>3</td>
</tr>
</tbody>
</table>

### Acquisition of Drug ?

<table>
<thead>
<tr>
<th>Acquisition of Drug ?</th>
<th>Nbr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illicit</td>
<td>3</td>
</tr>
<tr>
<td>Prescription</td>
<td>2</td>
</tr>
<tr>
<td>Combo</td>
<td>4</td>
</tr>
<tr>
<td>Unknown</td>
<td>3</td>
</tr>
</tbody>
</table>

### Demographics

<table>
<thead>
<tr>
<th>Gender</th>
<th>Nbr</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>5</td>
<td>42%</td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Nbr</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian/PI</td>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td>Black</td>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>8%</td>
</tr>
<tr>
<td>White</td>
<td>7</td>
<td>58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age range (yrs)</th>
<th>Nbr</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 - 94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 24</td>
<td>1</td>
<td>9%</td>
</tr>
<tr>
<td>25 to 44</td>
<td>4</td>
<td>33%</td>
</tr>
<tr>
<td>45 to 64</td>
<td>4</td>
<td>33%</td>
</tr>
<tr>
<td>65+</td>
<td>3</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: VRBIS, SMC Coroner toxicology reports & scene summary
California Opioid Dashboard

San Mateo Deaths - Total Population - 2015

All Opioid Overdose: Age-Adjusted Rate per 100,000 Residents

https://pdop.shinyapps.io/ODdash_v1/
Why are we concerned?

• Most people are given a prescription for pain (acute & chronic)

• In San Mateo County
  – 2010-2014 approx. 47% of filled Rx’s are opioids (CA CURES 1.0)
  – 70% increase in Emergency Room visits for overdoses from 2007-2013 (Epicenter.cdph.ca.gov)
  – 345,755 opioid prescriptions filled (CA CURES 1.0, 2013)
    • Over 24 million pills
    • 43 pills/year for residents over 18 years of age

• Estimated 7,600 SMC residents are opioid dependent⁴
What can we do?
What we can do

• Ask your Dr. for alternative pain treatments
  – Exception: hospitalization, acute pain
• Don’t keep extra pills at home
  – Don’t flush or put in garbage
  – Take-back programs (pharmacy, law enforcement)
• Increase awareness
  – Prescription drugs can be dangerous
  – Need more $ for treatment programs
  – Reduce stigma – talk about the issue
What can prescribers do?
What prescribers can do

- Follow CDC guidelines when treating chronic pain
- Register and check CURES 2.0 before prescribing controlled medications
- Educate patients regarding the risks and benefits of taking opioids
- Refer patients for substance use treatment when you suspect they are opioid dependent or have multiple prescriptions
- Notify San Mateo County Public Health Dept. if you notice anything unusual
  - Call 650-573-2346
Resources

- San Mateo County Health System Rx Opioid Safe: smchealth.org/opioid-safe
- Prescribers: smchealth.org/opoid-safe-prescriptions
- CA Opioid Overdose Surveillance Dashboard pdop.shinyapps.io/ODdash_v1/
- CA Dept. of Justice, CURES 2.0 oag.ca.gov/cures/statistics
- CA Health Care Foundation, CA Opioid Safety Coalitions Network chcf.org/oscn
References

- ²CDC Wonder; Available at http://wonder.cdc.gov.
- ⁴Anne Case & Angus Deaton, Rising morbidity & mortality in midlife among white non-Hispanic Americans in the 21st Century (PNAS 2015 112 (49) 15078-15083; published ahead of print November 2, 2015, doi:10.1073/pnas.1518393112)
Questions?
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