The ED is Ground Zero for this Epidemic: Face-to-Face with this Crisis and Winning

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November 14, 2019
Learning Objectives

As a result of participating in the webinar, participants will be able to:

- Differentiate between the pill opioid epidemic and the current fentanyl epidemic. In this regard, the speaker will explain the relevant historical patterns with each epidemic while analyzing the roles of the various professional and government bodies.

- Describe the evolution of Project Save Lives (PSL) (a successful Peer-centered ED program) including funding, foundational aspects and processes of rapid change.

- Identify present outcome data and ED/demographic shifts as identified by PSL and analyze current trends and barriers in the opioid epidemic.
OPIOIDS (OPIATES?)
Prequel to Abuse of Prescription Opioids

- In 1971 President Richard Nixon officially declared “a war on drugs” and in 1973 he created the DEA to coordinate the efforts of all other agencies.
- In 1984 Nancy Reagan launched her “Just Say No” campaign
- 1989 President George H. W. Bush presented a national drug control strategy that included the largest budget increase in U.S. history. Unfortunately, even though there were large seizures of drugs and many individuals imprisoned, we have continued to see an increase in drug use.
Abuse of Prescription Opioids

- 1995 – Purdue Pharma develops Oxycontin
- 1999 – the pill opioid epidemic begins; oxycontin, oxycodone, methadone, oxycodone
- 2010 - FL becomes the pill mill capital of the US; FL had 900 unregulated pain clinics, 90 of the top 110 oxycodone prescribing docs were in FL, of the top 50 dispensing clinics in the US 49 were in FL

The “Oxycontin Express”
PAIN SCALE

0 1 2 3 4 5 6 7 8 9 10

No Pain  Mild Pain  Moderate Pain  Severe Pain  Very Severe Pain  Worst Pain Possible

Image: ©EgudinKa/Getty Images
Abuse of Prescription Opioids cont’d

- 2011 - 10 people dying per day; E-FORCSE begins operation; the Pain Rule goes into effect. By 2016 - only 23.7% utilizing E-FORCSE
- 2013 - Fentanyl arrives
- 2014 – The current opioid epidemic appears
- 2018- July 1st, HB21
A Bit of Data
During 2013 – 2014 the number of drug products obtained by law enforcement that tested positive for fentanyl increased by 426% and synthetic opioid-involved overdose deaths (excluding methadone) increase by 79%.

In March and October 2015, the DEA and the CDC, respectively, issued nationwide alerts identifying illicitly manufactured fentanyl (IMF) as a threat to public health and safety. IMF’s are being mixed in unknown concentrations with heroin.

The fourth quarter of 2016 the DEA laboratory system noted a decrease in fentanyl seized from approximately 65% to 50% due to a 300% increase in furanyl fentanyl.
Aside from fentanyl, there have been 9 other IMF’S identified aside from fentanyl (50-100 times more potent than morphine) and carfentanil (greater than 10,000 times more potent than morphine).

Is this the current generation’s AIDS crisis? In 2015 52,000 people died of drug overdoses; the peak year for AIDS related deaths was 51,000 in 1995. With our present crisis, there is no end in sight!
Nationwide

According to the American Medical Association:

- The epidemic will continue to grow through 2025!
- The US could see a record number of deaths, up to 200,000 individuals per year!

According to the CDC:

- 2016 there were 63,632 deaths
- 2017 there were 70,237 deaths

(McCance-Katz, 2018 March 14)
There were 5,725 opioid-related deaths in FL in 2016, an increase of 35% from the prior year and in 2017 it increased another 8%: 17 people died per day!

Of those deaths in 2017, heroin increased by 1%, fentanyl increased by 25% and fentanyl analogues increased by 65%

2016 Medical Examiners Commission Drug Report, FDLE
Overdose victims: 2015 - JFRD responded to 2,114; 2016 – JFRD responded to 3,114

911 calls had tripled.

In 2015 – cost of transporting OD victims was $1,895,388.00; 2016 cost $3,143,376.00 with trend projections reaching $4,451,124.00 in 2017. JFRD was transporting one OD every 2 hours.

Naloxone use by Paramedics had increased fivefold with one-tenth of medical supply budget spent on naloxone.
In 2016 Duval County had 106 murders and 464 overdose deaths (up from 2011 in 2015).

Age distribution of drug related deaths in Duval County - 20-60 years old with 86.9% being Caucasian.

The morgue was continually over capacity!

Duval had the 2nd highest in the state for NAS cases in 2016

A sampling of urines from a lab servicing the nation analyzing positive heroin samples in Florida from 2013 to 2016 found a 56.41% increase in associated fentanyl positivity (not testing for the other IMF’s). Gateway detox: 100% of all heroin + urines are + for Fentanyl.
Facts:

Substance use disorder is happening in your zip code to your friends and neighbors to your kids.
Present Day

140 Deaths Per Day in the US
2 Deaths Per Day in Duval County
Jacksonville Fire & Rescue Department: Ingestion/Overdose Responses

Source: Jacksonville, Florida Fire & Rescue Department, Asst. Chief Mark Rowley. Retrieved from: dbo.CADDData (Signal 69), Emergency.Pro dbo.tbl_Medications (Narcan) and dbo.tbl_incident_data.ZINC_AT_SCENE (Ingestion/Poisoning/OD). A 9-1-1 Call Received as OD and/or Narcan administration does not necessarily confirm an overdose or opioid use.
Locally:

- **2016-2019**: The Number of Babies with Neonatal Addiction at UF Health Increased from 10 per 1,000 to 15/16 per 1,000 Births

- **Average LOS is 16/17 Days and Up to 2 Months**
How Common is Opioid Dependence?

Approximately 2.5 million Americans were dependent on prescription opioid prescription pain killers or heroin in 2012. **We don’t know the real numbers now!**

- ED data not accurate
- Hospital data not accurate
- Morgue data not accurate

**It is worse than we know!**

Key Substance Use and Mental Health Indicators in the United States: Results from the 2016 National Survey on Drug Use and Health (2017)
The Centerpiece of Addiction

Dopamine
The Limbic System (Pleasure Center)
Neurophysiology

The Action of Opioids
**DRUGS OF ABUSE TARGET THE BRAIN’S PLEASURE CENTER**

**Brain reward (dopamine) pathways**

- Frontal Cortex
- Nucleus Accumbens
- Ventral Tegmental Area

**Drugs of abuse increase dopamine**

- **FOOD**
  - Dopamine Transporter
  - Dopamine
  - Dopamine Receptor

- **COCAINE**
  - Dopamine Transporter
  - Cocaine
  - Dopamine

These brain circuits are important for natural rewards such as food, music, and sex.

Typically, dopamine increases in response to natural rewards such as food. When cocaine is taken, dopamine increases are exaggerated, and communication is altered.
<table>
<thead>
<tr>
<th>Immediate Release Opioid</th>
<th>Onset of Analgesia</th>
<th>Duration of Effect</th>
<th>Advantages (A)/Disadvantages (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine (oral)</td>
<td>30-40 min</td>
<td>4 h</td>
<td>A – available in multiple dosage forms, liquid concentrate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D – slow onset of analgesia for idiopathic BTP</td>
</tr>
<tr>
<td>Oxycodone (oral)</td>
<td>30 min</td>
<td>4 h</td>
<td>Same as morphine</td>
</tr>
<tr>
<td>Hydromorphone (oral)</td>
<td>30 min</td>
<td>4 h</td>
<td>D – no liquid concentrate, slow onset of analgesia for idiopathic BTP</td>
</tr>
<tr>
<td>Methadone (oral)</td>
<td>~10-15 min</td>
<td>4-6 h</td>
<td>A – faster onset of analgesia in one small study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D – complex pharmacology, pharmacokinetics</td>
</tr>
<tr>
<td>Fentanyl (Transmucosal)</td>
<td>~5-10 min</td>
<td>1-2 h</td>
<td>A – fastest onset of analgesia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D – requires ongoing patient cooperation in use</td>
</tr>
</tbody>
</table>
What is Fentanyl?

- Fentanyl is 50 to 100 x’s more potent than heroin!
- Playing Russian Roulette with 5 chambers full!
- Carfentanil (one of many analogues) is 5,000 x’s more potent than heroin!
- Playing Russian Roulette with 6 chambers full: death and no reversal!
What happens when you mix heroin and fentanyl?
Addiction Hijacks the BRAIN

FENTANYL HIJACKS the MIND, BODY and SOUL!
This is an epidemic that is growing faster than we ever imagined. The cost in lives and money is pushing the envelope of everything the system has to offer. We need a solution now!!!!
PROJECT SAVE LIVES

The Evolution of an Idea
The Shifting of a Paradigm
THE GOAL

Reduction in Opioid-Related Overdoses, Recidivism and Death
A Prerequisite
Funding

- Jacksonville City Council: almost $1.5M
- DCF/LSF: $150,000 per year x 2 years for Recovery Peer Specialists
- Project management/oversight by JFRD
- Time frame: 6 months – November 16, 2017 to May 15, 2018
- The time frame has been expanded beyond a pilot status
The Process

- OD admission to ED and stabilization
- Role of the Recovery Peer Specialists
  - Family
  - Victim
  - Consent v. no consent
- WARM HANDBOFF
  - Narcan (Pharmacist) (a barrier)
- Role of the Mental Health Worker (not continued)
- Role of the ED Coordinator (not continued)
## Recovery Peer Specialist

<table>
<thead>
<tr>
<th>Is/Does</th>
<th>Is Not/Does Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>A person in recovery</td>
<td>A licensed professional or Sponsor</td>
</tr>
<tr>
<td>Shares lived experience</td>
<td>Gives professional advice</td>
</tr>
<tr>
<td>A role model for positive recovery behaviors</td>
<td>Tells person how to live their life in recovery</td>
</tr>
<tr>
<td>Encourages, supports, praises</td>
<td>Diagnose, assess, or treat</td>
</tr>
<tr>
<td>Uses language based on common experiences</td>
<td>Uses clinical language</td>
</tr>
<tr>
<td>Provides peer support services</td>
<td>Motivates through fear of negative consequences</td>
</tr>
<tr>
<td>Sees the person as a whole person in the context of the person’s roles, family, community</td>
<td>Sees the person as a case or diagnosis</td>
</tr>
</tbody>
</table>
Treatment Options

Pre-pilot - TREAT and STREET!

Pilot: and beyond

Modified (capacity/funding concerns) traditional residential treatment

Modified (capacity/funding concerns) outpatient treatment

Ongoing engagement by Recovery Peer Specialists
EVOLUTION
Weekly Meetings of all the stakeholders

- Definition of OD
- Treat withdrawal symptoms
- Addition of Southside ED
- Attitudinal shift of ED staff
- Buprenorphine in ED and referral issues
- Physician certification
### THE GOAL

**Pre-Pilot**

Reduction in Opioid-Related Overdoses, Recidivism and Death

### THE OUTCOME

**Post-Pilot**

THERE HAVE BEEN ONLY FIVE DEATHs (now in 5 ED’s)!!!!

and

Only 1/3 of the Budget for the 6 month Pilot!!!!
# PSL Update Through 9/30/2019

<table>
<thead>
<tr>
<th>PSL UPDATE THROUGH 9/30/2019</th>
<th>TOTAL COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL PATIENTS ELIGIBLE FOR PROGRAM PARTICIPATION</td>
<td>1044</td>
</tr>
<tr>
<td>NO PROGRAM CONTACT (e.g. expired, AMA, off-hours)</td>
<td>30</td>
</tr>
<tr>
<td>REFUSED ALL SERVICES</td>
<td>403</td>
</tr>
<tr>
<td>CONSENTED TO PROGRAM SERVICES</td>
<td>611</td>
</tr>
<tr>
<td>PARTICIPANT DISENGAGED FROM SERVICES (i.e. no phone services, relocated, declined further peer intervention, unable to contact, death related to other causes, etc.)</td>
<td>82</td>
</tr>
<tr>
<td>DEATH CAUSED BY OPIOIDS</td>
<td>5</td>
</tr>
<tr>
<td>PROGRAM COMPLETION</td>
<td>358</td>
</tr>
<tr>
<td>TOTAL PARTICIPANTS ACTIVELY ENGAGED IN SERVICES</td>
<td>166</td>
</tr>
<tr>
<td>INITIAL TRADITIONAL (Residential, OP, CC)</td>
<td>38</td>
</tr>
<tr>
<td>PEER SUPPORT ONLY</td>
<td>128</td>
</tr>
</tbody>
</table>
THE PARADIGM SHIFT

- Initially only 30% entered traditional treatment.
- Saving lives became more important than pressuring into treatment.
- Ongoing and regular engagement with RPS.
- Now, approximately 50% are entering traditional treatment.
Demographic Shift

- Opioids have been a predominately Caucasian problem.
- Cocaine has been a predominately African-American problem.

Now approximately 70% of cocaine is laced with fentanyl
And, More Complications!

- It is not uncommon to find individuals to be UDS+ for cocaine, methamphetamine, fentanyl and marijuana.
- Many of these individuals say they DO NOT use fentanyl or heroin!

Cocaine, methamphetamine and marijuana are being laced with fentanyl!!!
Positive Percentages

(197 Samples)

- Fentanyl + Analogs: 75%
- Cocaine: 72%
- Opiates: 58%
- Amphetamine: 36%
- Benzodiazepines: 27%
- 6AM: 20%
- Gabapentin: 18%
- Tramadol: 14%
- Bupropion: 13%
- Oxycodone: 12%
- Buprenorphine: 12%
- Dextromethorphan: 9%
- Methadone: 6%
Fentanyl Breakdown

(147 total)

- Furanyl Fentanyl: 3%
- Acetyl Fentanyl: 44%
- Acetyl Norfentanyl: 59%
- Fentanyl: 100%
- Norfentanyl: 99%
Opiate Breakdown
(106 Total Positive Opiates)
Benzodiazepine Breakdown

- Alpha-hydroxyalprazolam: 56%
- Clonazepam: 19%
- Oxazepam: 33%
- Nordiazepam: 11%
- Temazepam: 19%
- Lorazepam: 22%
Amphetamine/Methamphetamine Breakdown
(50 Samples)
Even Worse!
Xanax-Fentanyl Pills
Oxycodone Fentanyl Pills

[Image showing Fentanyl-laced Pills and Oxycodone]
The manufacturing and distribution of fentanyl and its analogs is more than an epidemic... It's chemical warfare.
Recreational Drug Use is Now LETHAL!

A few grains is deadly; where else might it be found?
Jacksonville Fire & Rescue Department: *Ingestion/Overdose Responses*

- **9-1-1 Call Received as Overdose**
- **Narcan Doses Given**
- **Treated as Overdose**
- Trendline for ODs

Source: Jacksonville, Florida Fire & Rescue Department, Asst. Chief Mark Rowley. Retrieved from: dbo.CADData (Signal 511), Emergency/Pre-dbo.tbl_Medications (Narcan) and dbo.tbl_incident_data.2.NOC_AT_SCENE/Ingestion/Poisoning/OD. A 9-1-1 Call Received as OD and/or Narcan administration does not necessarily confirm an overdose or opioid use.
Why the Drop?

- Not because of PSL
- Almost 60% acetyl fentanyl (approximately 15x’s more potent than heroin)
- Increase use of buprenorphine
- Other reasons?

Why the Rise?

Fentanyl and acetyl fentanyl being mixed with all the other drugs mentioned!
Some Very Good News!
Fire Rescue Recidivism & Medical Examiner Report for the 155 participants who entered PSL in 2018

<table>
<thead>
<tr>
<th></th>
<th>Overdoses</th>
<th>Other 911</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to PSL</td>
<td>108</td>
<td>39</td>
<td>147</td>
</tr>
<tr>
<td>After PSL</td>
<td>31</td>
<td>19</td>
<td>50</td>
</tr>
<tr>
<td>Change</td>
<td>↓71%</td>
<td>↓51%</td>
<td>↓66%</td>
</tr>
</tbody>
</table>
Endocarditis Data

- 4\textsuperscript{th} quarter 2017: 106
- 1\textsuperscript{st} quarter 2018: 90
- 2\textsuperscript{nd} quarter 2018: 63
- 3\textsuperscript{rd} quarter 2018: 28
Looking to the Future
More on HB 21

- Education a little late but great idea!
- Limiting prescriptions to 3 to 7 days for acute pain; possibly effective but not complete!......What will happen when those addicted to pain pills can no longer get their prescriptions?
- This Bill was needed in the late 90’s for the pill opioid epidemic.......we need more than this Bill due to the Fentanyl epidemic!!!
- STR and SOR only a beginning.....I hope!
Future Local Plans

- 7 new ED’s by the end of the next city fiscal year; capturing about 80%-90% of the city’s OD’s. We are now in Memorial’s ED’s. Soon to be in Baptist and UF Health.
- Now working with SUD and mental illness.
- Expanding Peers into detox and hospital floors.
- Network development of treatment providers (present and expanding). Bed board.
- Network development of housing (present and expanding).
- Project Echo for city-wide/state-wide/nation-wide education and resource management.
BARRIERS

- 12 step community had been pushing back against people on Buprenorphine!
- Recovery housing community had been rejecting those on Buprenorphine!
- How long to keep people on Buprenorphine? Funding could run out!
- Detox beds are filling up!
- Only approx. 15% of ED referrals have commercial insurance, approx. 25% have Medicaid and 60% are indigent (funding?).
References

- Official City of Jacksonville and Duval County Government Website. (2019).Requested from JFRDRecordsRequest@coj.net.