Overview

1. Stigma
2. Opioids and the brain disease of addiction
3. Opioid Treatment Cascade
4. Recovery and the Rope Bridge Metaphor

No Financial Disclosures
21 yo landscaper admitted with fever, chills and chest pain.

- Diagnosed with MRSA endocarditis
- IV antibiotics started
- Day 2 of admission a nurse found him injecting heroin in the bathroom
• Social: Prejudices and stereotypes that interfere with our understanding the nature of addiction and our ability to render care.
• Structural: When views affect family support, doctors/health systems and policy makers opinions and actions – does not foster a therapeutic alliance
• Personal: the patient internalizes, shame is reinforced and avoids care. More challenging to engage
• Causes: more complex than just ignorance
  – Negative experiences of patient, family, staff
  – Moralistic expectations of disordered behaviors
  – Personal responsibility vs loss of control
  – HOPELESSNESS
Stigma - Examples

• “Drug addicts are criminals”
• “I have real issues with someone who does this to themselves”
• “If they really wanted to get better”
• “They are hopeless”
• “I don’t want my husband to be on Methadone. Its just trading one addiction for another.”
• “If you give them 2 strips of Suboxone, they’ll just sell one of them.”
• “I never felt like I was in recovery while on Suboxone”
Case: Jason with MRSA Endocarditis

• Attending Physician refused to use opioids to address his withdrawal – “not going to facilitate his addiction”
• Medical team attempted to discharged the patient after caught using heroin in the bathroom
• RN quietly confronted the Medical Attending and senior resident, facilitating a Project Engage referral.
• Addiction Medicine Consultant initiated buprenorphine/naloxone which was maintained at a daily 8mg dose. No further aberrant behaviors
• Completed 6 weeks of IV antibiotics, Project Engage facilitated successful transfer to our outpt Medication Assisted Treatment service
45 yo female admitted with a severe leg abscess

- Polysubstance abuse since early teens
- Heroin IVDA since 35 yo
- “Bipolar” and prominent axis 2 comorbidity
- Well known to staff because of multiple admissions and *notoriously* difficult
Case: Jackie

- Did poorly, became septic, transferred to the ICU where developed a necrotizing fasciitis and compartment syndrome.
- Had an above knee amputation
- Addiction Medicine consulted because she was demanding pain medications despite being overtly over sedation and threw a soda
Case: Jackie

• Where as everyone saw a badly behaving “addict”, you see?
• What do you say?
• What do you offer?
Case: Jackie

• The next day, the nurse reported a “good day” without any outbursts and more appropriate use of her pain medications.
• She was awake alert, actually smiled.
• Very spiritual and wanted a chaplain
• Eventually transitioned to q 8 hour methadone and inpatient rehabilitation unit eventually discharging to a methadone clinic
Lesson #1 from Jackie

The glasses we wear determine what we see – a legless woman or a difficult ‘addict’
Lesson #2 from Jackie

This Photo by Unknown Author is licensed under CC BY-SA
Case: Brian

22 yo male admitted after an overdose with compartment syndrome of the arms requiring bilateral fasciotomies and renal dialysis

- Polysubstance use disordered since early teens
- Heroin IVDA since 20 yo, multiple ODs
- Family supportive but frustrated
- Medical team consulted because of difficulty engaging – frustrated with his lack of motivation
Case: Brian

• Initially found to be cognitively impaired—*not unmotivated*
• Eventually improved. Very motivated to return to residential care on Suboxone which was successfully inducted in the hospital
• Followed up as an outpt. Did well for 4 months but insisted on tapering because of discomfort with peer feedback that he was “not sober”
• Relapsed and overdosed in Baltimore
• Survived and re-engaged into care.
Addressing Stigma

• Education
• Promote hope
  – Sharing successes
  – Peer counselors as Recovery Ambassadors
• Counter misinformation and inappropriate actions
• Leaders demonstrate rationale leadership based on evidence and science
Addiction: an Acquired Brain Disease

- Repeated drug use in vulnerable patients
- Reward and motivational circuits involved
- Compulsive drug seeking, use, and craving despite harmful consequences
Review Article

Neurobiologic Advances from the Brain Disease Model of Addiction

Nora D. Volkow, M.D., George F. Koob, Ph.D., and A. Thomas McLellan, Ph.D.
Opioid Withdrawal

- With dependence, brain mal adapts
- Collection of reproducible symptoms when opioids are removed – **PRIMAL MISERY**
- Highly motivating
Addiction more like Stroke than Larceny having catastrophic consequences if not adequately treated initially or over time.
Drug overdose deaths 1980-2016

Safety First

The New York Times
Tackling the Opioid-Overdose Epidemic

1. “providing prescribers with the knowledge to improve their prescribing decisions and the ability to identify patients' problems related to opioid abuse
2. reducing inappropriate access to opioids
3. increasing access to effective overdose treatment
4. providing substance-abuse treatment to persons addicted to opioids.”
Death rates from opioid overdose were reduced in 19 communities where overdose education and naloxone distribution was implemented.
Overall Strategy – Intranasal Narcan

- Initially EMS and Police only
- My patients commonly describe use for family and friends
- In Delaware, likely 4X increase in deaths if no Narcan – now have standing order by DOH Director
- Developing models for broader dissemination
  - Drug treatment patients
  - Emergency room patients with OUD and/or Overdose
  - Hospitalized patients with OUD
  - Chronic opioid patients
- Need systematic approaches

Safety First
OUD Drug Treatment Options

- Outpatient
- Inpatient
- Counseling
- Medication-Assisted Treatment (MAT)
- Fellowship – Narcotics Anonymous, AA
- Drug Free, Faith-based

**DETOX by itself is not treatment** and may place patients at risk for overdose.
## FDA-Approved For OUDs

<table>
<thead>
<tr>
<th>Agent</th>
<th>Dose</th>
<th>Dosing</th>
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<tbody>
<tr>
<td>Buprenorphine sublingual film, tablets (generic)</td>
<td>PO: 2 mg, 8 mg film and tablets</td>
<td>Initial: 2–4 mg (Increase by 2–4 mg)</td>
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<tr>
<td></td>
<td></td>
<td>Daily: ≥8 mg/day</td>
</tr>
<tr>
<td>Methadone tablets/liquid (generic)</td>
<td></td>
<td>20 mg (Reassess in 3–4 hours; PRN)</td>
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<td></td>
<td></td>
<td>0 mg</td>
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<tr>
<td>Naltrexone XR injection (<em>Vivitrol®</em>)</td>
<td></td>
<td>(May give 2–3 daily doses T–W–F.)</td>
</tr>
<tr>
<td>Naltrexone tablets (generic)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gastfriend, MD. "Medication-Assisted Treatments (MAT) for Opioid Use Disorder", 4th Annual Addiction Medicine Symposium, Delaware, August, 2016
Buprenorphine

- Partial opioid agonist, “Ceiling Effect”
  - Higher safety profile
  - Milder withdrawal
- Slow dissociation from receptor
  - Long duration of action
  - Milder withdrawal
- Sublingual dosing
- New Extended Release monthly injection

Suboxone
Blocks other opioids, Reduces overdose risk

- Milder withdrawal
  - Sublingual dosing
  - New Extended Release monthly injection
Methadone For Opioid Use Disorders

- Addiction treatment – Rockefeller University 1965 daily observed liquid form (>80mg) at an OTP
- More effective than non-pharmacological approaches in retaining patients in treatment and in the suppression of heroin use (6 RCTs, RR = 0.66 95% CI 0.56-0.78)

Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. Cochrane Database of Systematic Reviews 2009
C = Counseling Only (N=70)
C+M = Counseling & Methadone Started in Prison (N=71)

Counseling Only:
- % of 180 days post-release in treatment: 11%
- % of 180 days post-release used heroin: 85%

Counseling & Methadone:
- % of 180 days post-release in treatment: 85%
- % of 180 days post-release used heroin: 64%

Counseling & Methadone vs. Counseling Only
- % of 180 days post-release used heroin is significantly lower in the counseling & methadone group (p < 0.001)

Sources:
- Gastfriend, MD. “Medication-Assisted Treatments (MAT) for Opioid Use Disorder”, 4th Annual Addiction Medicine Symposium, Delaware, August, 2016
Relapse to intravenous drug use after methadone maintenance treatment for 105 male patients who left treatment.

XR-Naltrexone vs Buprenorphine

- Open-label, randomized controlled, comparative effectiveness trial at eight US community-based sites
- N = 570 randomized to XR-NTX or BUP-NX measuring relapse and craving at 24 weeks
- 24 week relapse events were greater for XR-NTX (65% vs 57%; p<0.036)
- XR-NTX had a "substantial induction hurdle": fewer initiated onto XR-NTX than BUP-NX (72% vs 94%; p<0.0001)

XR-Naltrexone vs Buprenorphine

- XR-NTX early relapse (70 of 79 [89%]) due to induction failures.
- Outcomes similar when compare those inducted onto XR-NTX vs BUP-NX.
- 28 overdoses in 23 persons, 5 fatal (2 XR-NTX and 3 BUP). No difference between groups.
- Overdoses occurred in those unable to start or who stopped medication.

Detox = Poor Outcome

- N = 653 Rx drug dependent patients
- **Phase 1** – Short term 2 week bup/naloxone tx
  - only 6.6% (43 of 653) successful = no opioid use
- **Phase 2** – Extended 12 week bup/naloxone tx
  - 49.2% (177 of 360) successful
- If tapered off bup – only 8.6% successful by week 24
- Counseling and chronic pain had no effect on outcomes

Detox Increases Risk of OD and Death

- Psychosocial and pharmacological treatments versus pharmacological treatments for opioid detoxification. Cochrane Database Syst Rev
- Risk of fatal overdose during and after specialist drug treatment: the VEdetTTE study, a national multi-site prospective cohort study, Davoli, M., Addict
- A Call For Evidence-Based Medical Treatment Of Opioid Dependence In The United States And Canada, Bohdan Nosyk, B., Health Affairs 2013
Reducing Overdose Deaths - MAT

Baltimore – Schwartz

- Longitudinal series analysis of archival data 1995-2009
- 4x expansion of Methadone and Buprenorphine services* associated with 62% reduction of overdose deaths

* sharpest drop from 2007 to 2008 associated with doubling of buprenorphine access

Reducing Overdose Deaths- MAT

Mortality risk during and after opioid substitution treatment: systemic review and meta-analysis of cohort studies – Sordo et.al. BMJ, April 2017

– 19 cohorts, n =122,885 treated with methadone 1.3-13 years and 15,831 treated with buprenorphine 1.1-4.5 years
– Being in MAT significantly reduced mortality risk
– Induction onto methadone and stopping both most dangerous
– **Methadone**: all cause mortality 11.3 vs 36.1/1000 person yrs
  overdose mortality 2.6 vs 12.7  (5x reduction)
– **Buprenorphine**: all cause mortality 4.5 vs 9.5 (2x reduction)
  overdose mortality 1.4 vs 4.6  (3x reduction)
Reduce Deaths by Engaging in Tx

**Retrospective cohort study of 17,568 Massachusetts adults without cancer who survived an opioid overdose between 2012 and 2014.**

- Followed for 1 year
- 4.7/100 person/yr overall death rate
- Only 34% received MAT
- MAT significantly reduced mortality
  - Methadone \( \text{AHR} = .47 \)
  - Buprenorphine \( = .62 \)
  - Naltrexone ER \( = 1.42 \)
Summary: Benefits of MAT

- Facilitates retention in drug treatment*
- Reduces heroin use*
- Reduces relapse**
- Reduces overdose deaths and overall mortality***

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* Mattick, RP., Cochrane Database Syst Rev. 2009
* Gordon, MS et al., Addiction, 2008
** Clark et.al. J Subst Abuse Treat, May 2015
****Sordo et.al. BMJ, April 2017
“But Dr Horton, I don’t want my son trading one addiction for another”
Opioid Treatment Cascade of Care

OUD like HIV is a chronic, relapsing, often fatal disorder that requires long-term medication treatment.

- Must achieve every step to be safe
- Diagnosis and Linkage
  - EMS, emergency room, hospital, criminal justice, outreach, needle exchanges, peer navigators.
- Retention/abstinence
  - Aggressive case management
  - Attention to vulnerabilities
  - Motivational interviewing, incentives
- Metrics to guide interventions

“90-90-90 An ambitious treatment target to help end the AIDS epidemic”, UNAIDS 2014
Hospitals Aggregate the Disordered

- Doors are always open
- Substance use disorders are common and severe*
- High dosages of heroin/fentanyl
- **IVDA** instead of inhaled
- Early medical sequelae
- Increasing OD rate

* Saitz, JGIM, 2006; Bertholet, JGIM, 2010
Role of Project Engage Peer

- Peer/Social Worker Dyad
- Engage and support
  - Patient and Family
  - Medical team
- Liaison between staff and patient
- Assist with discharge planning
- Improve readmissions
- Case management
- Overcoming stigma
  - Recovery ambassadors
  - Marketing success
Opioid Withdrawal is a Safety Issue

Poorly addressed opioid withdrawal negatively impacts:
1. ability to address acute serious health consequences of addiction
2. ability to engage and transition into community-based drug treatment

CCHS Response to the Opioid Epidemic

• 2016: Behavioral Health partnered with Acute Care Service Line

• Inpatient Medical Service
  – Screening and Identification of admitted patients
  – Rapid treatment of withdrawal by medical team
  – Inpatient initiation of drug abuse treatment
  – Addiction Medicine Consultation Service
  – Referral to community-based care using Project Engage
Additional Outcomes (discharged 11/15-1/18)

- 296 patients received Addiction Medicine Consult
- **63%** (187/296) scheduled community treatment; of those,
  - **72%** (133/187) successfully attended their initial appt
  - **78%** (104/133) were still attending community treatment at 30 days. **56%** (104/187) of interested
- **Treatment associated with lower 90 day readmission**
Recovery

Definition: “Process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential.” *

A path towards becoming or returning to citizenship which implies achieving sobriety, maturity, self-awareness and necessary skills to become a productive member of society while learning to live with others in an honest and meaningful manner.

*SAMHSA 2018
Elements of Recovery

- **Safety dictates that adherence to MAT is critical**
- Outcome determined by length of time in treatment
- Individualized support important
  - Role for group and individual counseling
  - Medical and psychiatric comorbidities
  - Care Management?
- Reconnecting with family and spirituality helpful
- Sober social network, fellowship
Social determinants mitigate results
- Safe Housing and environmental risk
- Transportation
- Meaningful employment
- Legal issues
- Family involvement
Safe Housing

- Many suffer from environmental risk
  - Homelessness is a risk factor for poor outcome
  - Active substance use is common at home

- Residential Treatment
  - Most are < 30 days and do not allow MAT
  - Long term residential care is rare
  - Sober Living Houses is an option
  - Need for longer term “Supervised Sober” housing
Research Supports Residential Care

- SAMHSA Treatment Episode Data Set (TEDS-D)
  - n = 318,924
  - 65% completion rate compared to 52% for outpatient
  - increased the likelihood of completion for older clients, Whites, and OUD (Stahler, Addict Behav, 2016)

- Drug Abuse Treatment Outcome Study (DATOS)
  - n = 2,966 interviewed at intake and at 1-year follow-up
  - Clients dependent on heroin benefited most from inpatient and residential programs. (Yser, JSAT, 1998)

- Research supporting outpt care vs residential
  - Starting 1980’s looking at detox comparing costs
  - Compared Day programs with residential
  - Did not consider environmental risk (Guydish 1989, 1999)
• Life threatening disorder of core motivational circuits of the brain that can be treated
• First must engage into care and have resources - MAT is critical
• Treatment needs to be long term and comprehensive to meet our patients’ needs
• Stigma threatens our patients’ safety
• There is hope