

Opioid Review and MAT Clinic Community Impact of Buprenorphine

August 15, 2018

Announcements

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- CME evaluation forms are due to Katie Stangl by Friday, August 17th at 4:00pm.

Upcoming Presentations

- **August 22:** Dr. Lisa Lindquist, psychiatrist in Anchorage presenting about Neuro-biochemistry of OUD
- **August 29:** Dr. Heather Bell
- **September 5:** Labor Day week- no ECHO
- **September 12:** Abby Kuschel, MN State Treatment Court Coordinator

Buprenorphine Providers?

- If you or someone within your clinic is considering or will be starting to prescribe buprenorphine, please private message Katie. We would love to help in any way possible!
- OR... if you have become waived because of our ECHO please let us know!!!

Missed a Session?

- **If you have missed a session and wish to watch it, just e-mail Katie and she will send you the link to watch!**

Objectives

- **Identify the benefits of MAT for a community**
- **Explain the positive impact MAT can have on a patient's life**

Benefits of MAT

- Improve client survival/decrease mortality related to opioid use
- Improve treatment retention
- Decrease opioid use and related criminal activity
- Improve patient's ability to obtain and maintain employment
- Improve birth outcomes for pregnant women with substance use disorder
- Decrease risk to contract HIV or hepatitis B or C
- Enhance social functioning

Decrease Mortality Related to Opioid Abuse

- People with opioid dependence have 10x the risk of mortality than general population

Decrease Mortality Related to Opioid Abuse

- Swedish study- 16mg buprenorphine daily vs 6 day “detoxification” and then placebo
 - 25% failure/relapse with 16mg
 - 100% failure with placebo
 - 20% mortality of those who relapsed/left treatment
- NIDA. (2018, June 8). Medications to Treat Opioid Use Disorder. Retrieved from <https://www.drugabuse.gov/publications/research-reports/medications-to-treat-opioid-use-disorder> on 2018, August 13

Decrease in Mortality

- Study from Boston Medical Center Annals of Internal Medicine found:
 - Patients who survived initial overdose- 5% overdosed and died in the first year
 - 17,568 cases 2012-2014
 - 62% males
 - 69% <45 years old

Decrease in Mortality

- After overdose those patients placed on MAT had the following outcomes:
 - 59% reduction in mortality for those taking methadone
 - 38% reduction in mortality for those taking buprenorphine
 - Naltrexone- no association with change
- Nora D. Volkow et al. Overdose Prevention Through Medical Treatment of Opioid Use Disorders, *Annals of Internal Medicine* (2018). DOI: 10.7326/M18-1397
- <http://annals.org/aim/article-abstract/2684925/overdose-prevention-through-medical-treatment-opioid-use-disorders>

Decrease in Mortality

- Only 30% received MAT in 12 months following overdose
 - 8% received methadone
 - 13% received buprenorphine
 - 4% received naltrexone
 - 5% received more than one medication

Decrease in Mortality

- Conclusion- we need to increase access as this saves lives.
- ER doctors and primary care are key.
 - Buprenorphine and methadone were associated with reduced all cause mortality and opioid related death.
 - Nora D. Volkow et al. Overdose Prevention Through Medical Treatment of Opioid Use Disorders, *Annals of Internal Medicine* (2018). DOI: 10.7326/M18-1397
 - <http://annals.org/aim/article-abstract/2684925/overdose-prevention-through-medical-treatment-opioid-use-disorders>

Improved Treatment Retention

- RCT meta-analyses show that fixed dose buprenorphine/naloxone has superior levels of treatment retention compared to placebo and no treatment
- Higher doses more effective than lower doses

Improved Treatment Retention

- Retention with methadone was superior to buprenorphine, but there was no difference in opiate use in the two groups
- Overall mortality was less with buprenorphine group vs. methadone group
 - Connock M., Juarez-Garcia A., Jowett S., Frew E., Liu Z., Taylor RJ., Fry-Smith A., Day E., Lintzeris N., Roberts T., Burls A., Taylor RS. Methadone and buprenorphine for the management of opioid dependence: A systematic review and economic evaluation. *Health Technology Assessment*. 2007; Vol. 11: No. 9
 - <https://www.ndph.ox.ac.uk/publications/116795>

MAT and Criminal Justice

- Research based on randomized controlled studies with greater than 3 month follow up show buprenorphine/naloxone is as effective as methadone in:
 - Decreasing opioid use and re-arrest
 - Increase treatment retention
 - Inmates were more likely to report to continued community treatment upon release
- Jessica Reichert, Lily Gleicher, and Elizabeth Salisbury Afshar. An Overview of Medication-Assisted Treatment for Opioid Use Disorders for Criminal Justice-Involved Individuals. *Illinois Criminal Justice Information Authority*. July 18, 2017
- <http://www.icjia.state.il.us/articles/an-overview-of-medication-assisted-treatment-for-opioid-use-disorders-for-criminal-justice-involved-individuals>

MAT and Criminal Justice

- In correctional setting heroin dependent men were randomized to methadone or buprenorphine after 10-90 day sentences
 - Buprenorphine patients reported to community treatment centers 48% of the time, while methadone patients only followed up 14% of the time
- Stephen Magura, Joshua D. Lee, Jason Hershberger, Herman Joseph, Lisa Marsch, Carol Shropshire, Andrew Rosenblum. Buprenorphine and methadone maintenance in jail and post-release: A randomized clinical trial. Drug and Alcohol Dependence. January 2009, Pages 222-230; Volume 99, Issues 1-3.
- <https://www.sciencedirect.com/science/article/pii/S0376871608003177>

Improve Employment

- We feel buprenorphine has greatest potential to get people back to work
 - Convenient monthly visits- not daily
 - Overall cost likely less
- Anecdotally, patients we have switched over report less fatigue and increased motivation
 - Out of our 73 patients: 44 working, 7 retired, 22 others in treatment/disabled/not working

Pregnancy

- Improve birth outcomes in pregnant women with substance use disorders
- Pregnant women with untreated OUD have:
 - Increase risk of low birth weight
 - Intrauterine growth restriction
 - Placental changes
- Methadone treatment has been standard for many years, although buprenorphine appears to have some advantages
- Klamon, Stacey L. MPH; Isaacs, Krystyna PhD; Leopold, Anne MSc; Perpich, Joseph MD, JD; Hayashi, Susan PhD; Vender, Jeff MLIS; Campopiano, Melinda MD; Jones, Hendrée E. PhD. Treating Women Who Are Pregnant and Parenting for Opioid Use Disorder and the Concurrent Care of Their Infants and Children: Literature Review to Support National Guidance. *Journal of Addiction Medicine*. May/June 2017 - Volume 11 - Issue 3 - p 178–190. doi: 10.1097/ADM.0000000000000308
- <https://journals.lww.com/journaladdictionmedicine/Pages/ArticleViewer.aspx?year=2017&issue=06000&article=00004&type=Fulltext>

Buprenorphine and Pregnancy

- Recent study showed lower rate of NOWS (neonatal opioid withdrawal syndrome) at 31.11%
- Duration of NOWS shorter
- No relationship to dose
- No relationship to smoking

- Chavan, Niraj R., Ashford, Kristin B., Wiggins, Amanda T., Lofwall, Michelle R., Critchfield, Agatha S. Buprenorphine for Medication-Assisted Treatment of Opioid Used Disorder in Pregnancy: Relationship to Neonatal Opioid Withdrawal Syndrome. *American Journal of Perinatology Reports*. 2017;7:e215-e222.
- <https://www.thieme-connect.com/products/ejournals/pdf/10.1055/s-0037-1608783.pdf>

Pregnancy

- Buprenorphine exposed fetuses, when compared to methadone, had:
 - Higher levels of FHR variability (*good*)
 - More fetal HR accelerations (*good*)
 - Greater coupling of heart rate and fetal movement (*good*)
 - At 31-33 weeks, buprenorphine babies were less likely to have nonreactive non-stress tests, and had higher scores of biophysical profiles

Decrease Risk of Contracting HIV or Hepatitis B & C

- HCV kills more than all 60 of the other reportable infections
- 1 in 10 HIV diagnosis are from injectable drugs
- Nationwide 400% increase in new HCV between 2004-2014
- Hepatitis B infections on the rise, in 2014 there were 200,000 new cases
 - Preventing Infectious Diseases Amid the Opioid Epidemic. AIDS United. [https://www.aidsunited.org/data/files/Site_18/Opioid Viral Hepatitis Request - Jan 10 \(002\).pdf](https://www.aidsunited.org/data/files/Site_18/Opioid%20Viral%20Hepatitis%20Request%20-%20Jan%2010%20(002).pdf). Published January 10, 2018.
 - [https://www.aidsunited.org/data/files/Site_18/Opioid%20Viral%20Hepatitis%20Request%20-%20Jan%2010%20\(002\).pdf](https://www.aidsunited.org/data/files/Site_18/Opioid%20Viral%20Hepatitis%20Request%20-%20Jan%2010%20(002).pdf)

Decrease Risk of Contracting HIV or Hepatitis B & C

- Efforts to decrease the spread include:
 - Access to MAT
 - Education
 - Needle exchange
 - Aggressive testing of high risk population
- Preventing Infectious Diseases Amid the Opioid Epidemic. AIDS United.
[https://www.aidsunited.org/data/files/Site_18/Opioid Viral Hepatitis Request - Jan 10 \(002\).pdf](https://www.aidsunited.org/data/files/Site_18/Opioid%20Viral%20Hepatitis%20Request%20-%20Jan%2010%20(002).pdf). Published January 10, 2018.
- [https://www.aidsunited.org/data/files/Site_18/Opioid%20Viral%20Hepatitis%20Request%20-%20Jan%2010%20\(002\).pdf](https://www.aidsunited.org/data/files/Site_18/Opioid%20Viral%20Hepatitis%20Request%20-%20Jan%2010%20(002).pdf)

Reduce Potential for Relapse

- Behavioral intervention alone- 80% relapse within 2 years
- Methadone and buprenorphine 60% retention in program
- One small study with buprenorphine showed a 1 year retention of 75%, patients on placebo had a retention rate of 0% with 4 deaths at 1 year.
- Bart, Gavin MD, FACP, FASAM. Maintenance Medication for Opiate Addiction: The Foundation of Recovery. *Journal of Addictive Diseases*. Volume 31, 2012 - Issue 3: Aspects of Recovery from Addiction.

Enhancing Social Functioning

- Buprenorphine patients report much less fatigue than untreated OUD patients
- Buprenorphine patients reported fatigue at approximate rate of 15% compared to methadone rate of 25%
- Increase in employment
- Increase in marriage/family involvement
- Increase employment