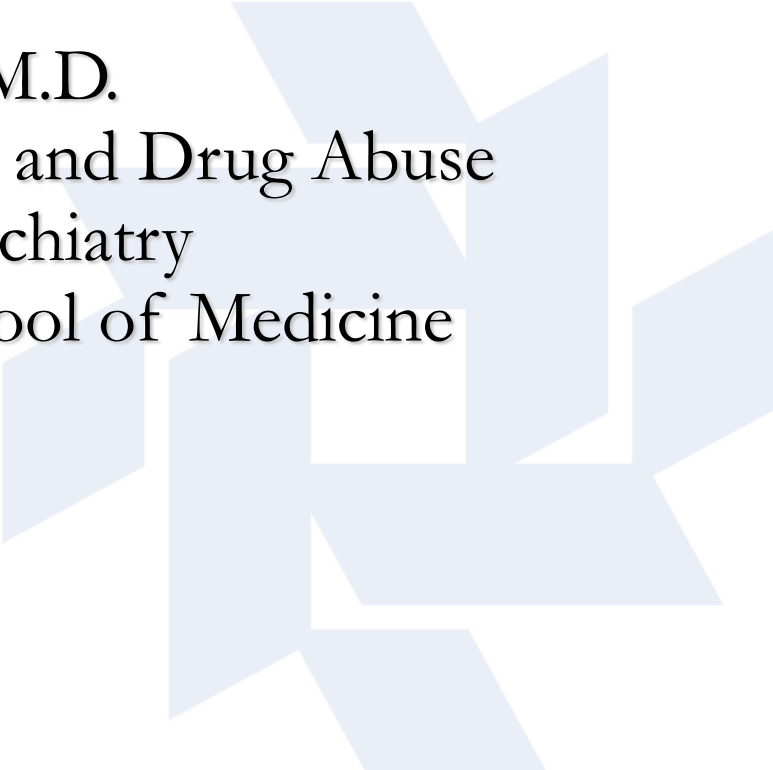


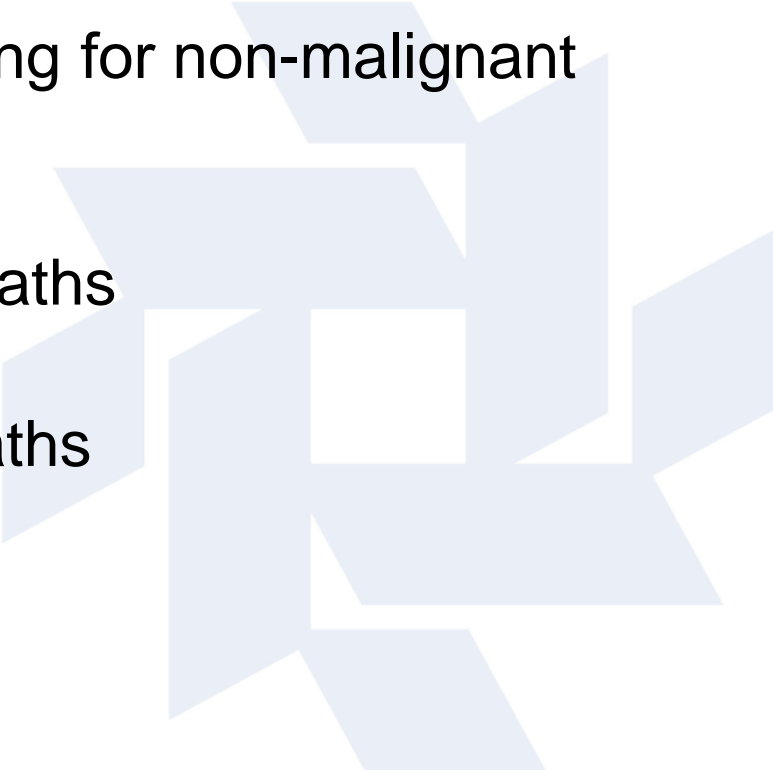
Eric Weintraub, M.D.
Director, Division of Alcohol and Drug Abuse
Department of Psychiatry
University of Maryland, School of Medicine



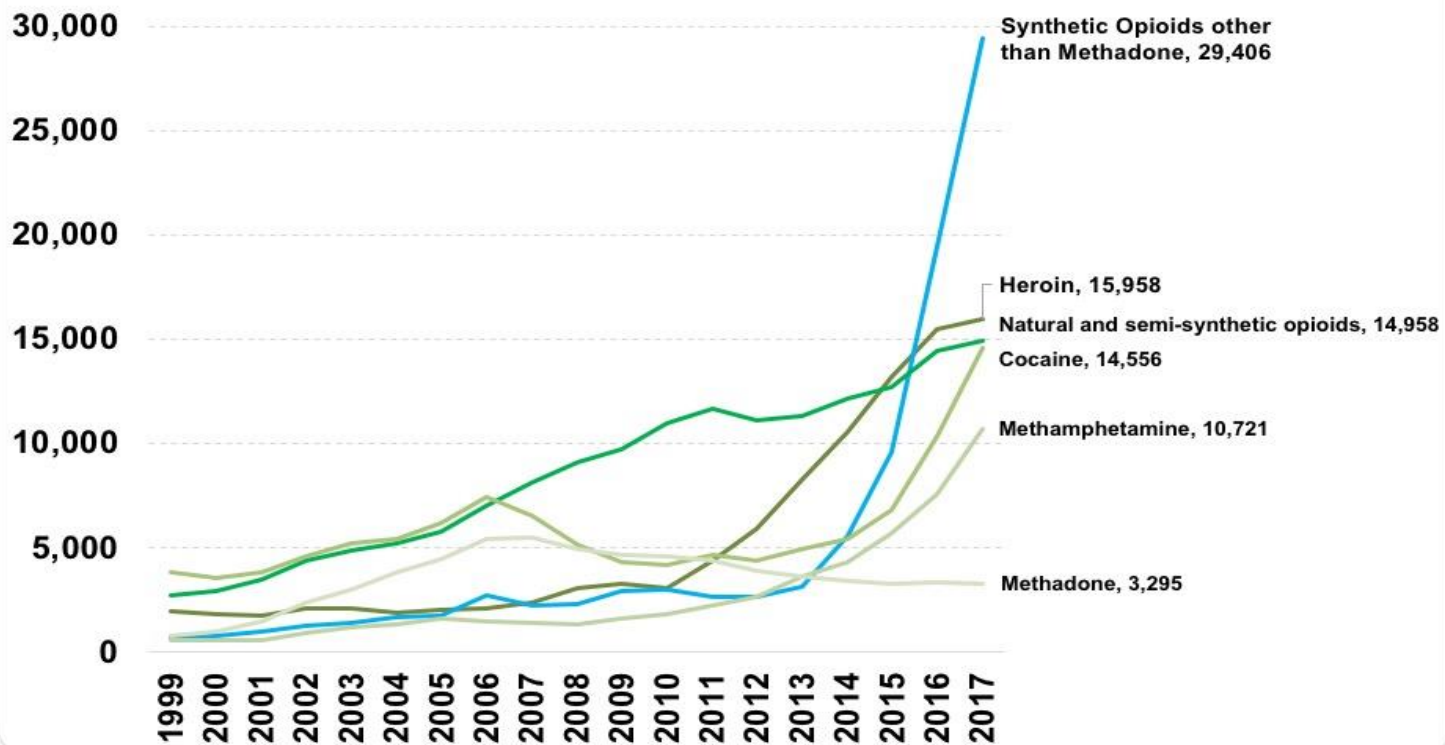
Opioid Overdose Deaths

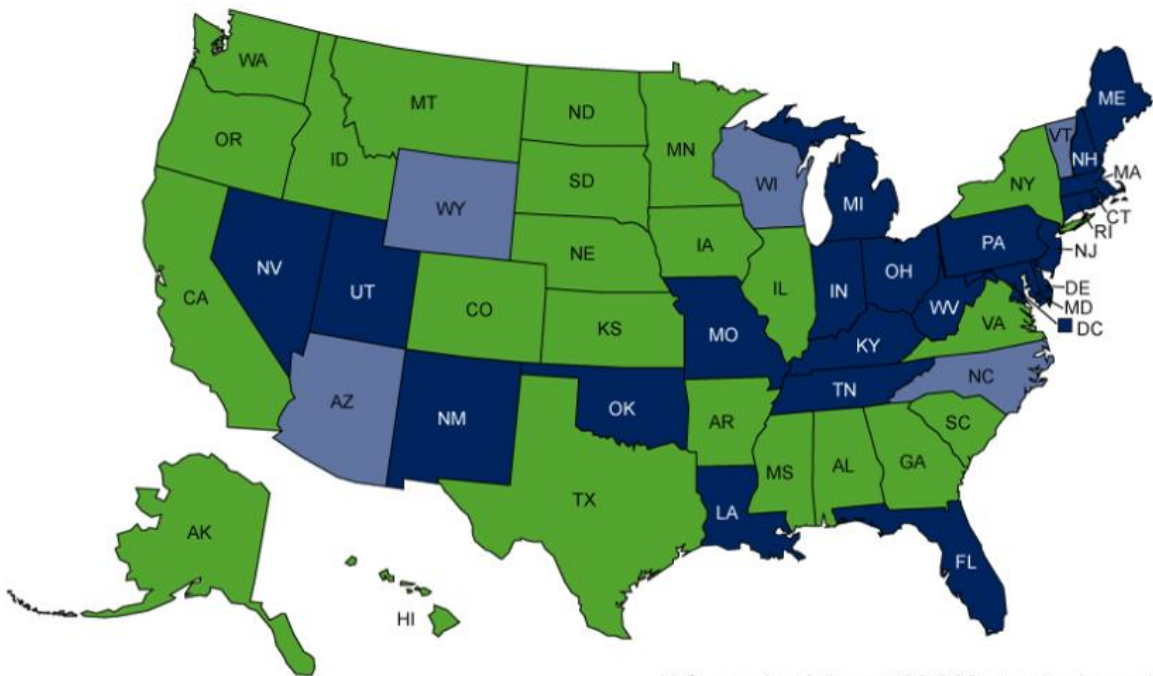
- Opioid overdose deaths have quadrupled since 1999
- 2017 overdose deaths/ over 70,000/9.5% increase from 2016
- 49,068 died of an opioid OD in 2016
- 135 deaths per day from an opioid overdose

Three Surges of Opioid Overdoses

- 1990's Increase in opioid prescribing for non-malignant pain
 - 2010 Increase in heroin related deaths
 - 2013 Surge in synthetic opioid deaths
- 

Drugs Involved in U.S. Overdose Deaths, 1999 to 2017





U.S. rate is 19.8 per 100,000 standard population.

- Statistically lower than U.S. rate
- Statistically the same as U.S. rate
- Statistically higher than U.S. rate

Source: CDC

Medication Assisted Treatment

“Access to medication-assisted treatment can mean [the] difference between life or death.”

Michael Botticelli, October 23, 2014 Director, White House Office of National Drug Control Policy

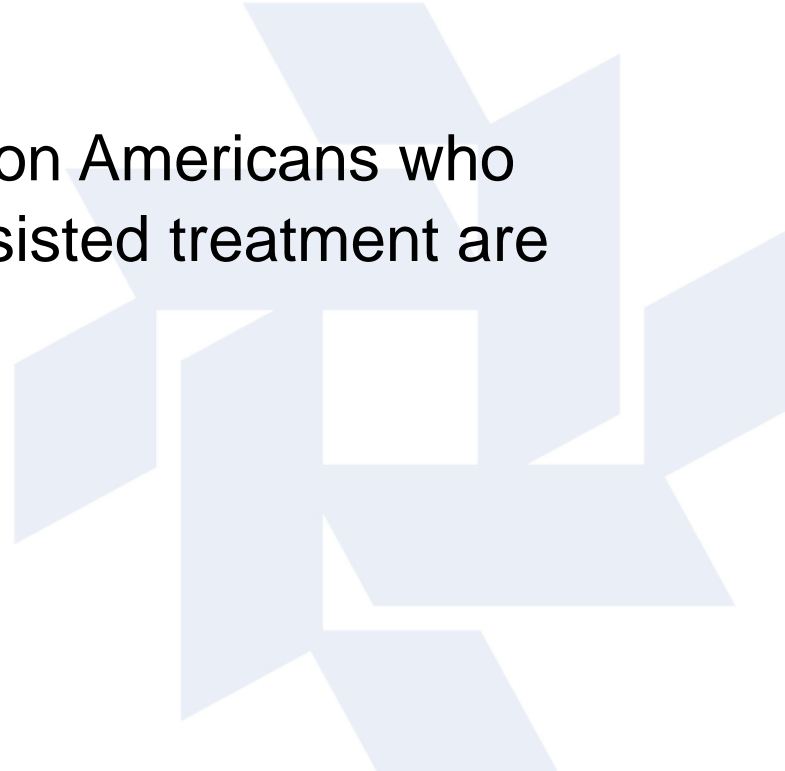
Medication Assisted Treatment

Combination of medications with counseling and behavioral therapies to treat substance use disorders



Medication Assisted Treatment

Only 40 percent of the 2.5 million Americans who could benefit from medication-assisted treatment are receiving it



Medication Assisted Treatment

Recommended as treatment for opioid use disorders by the following:

- United States Federal Government
- American Society of Addiction Medicine(ASAM)
 - World Health Organization
 - United Nations

Medication Assisted Treatment

- Decrease overdose rates
- Increases retention in treatment
- Decreases illicit opioid use
- Improves social functioning
- Decreases transmission of infectious diseases
- Decreases criminal activity

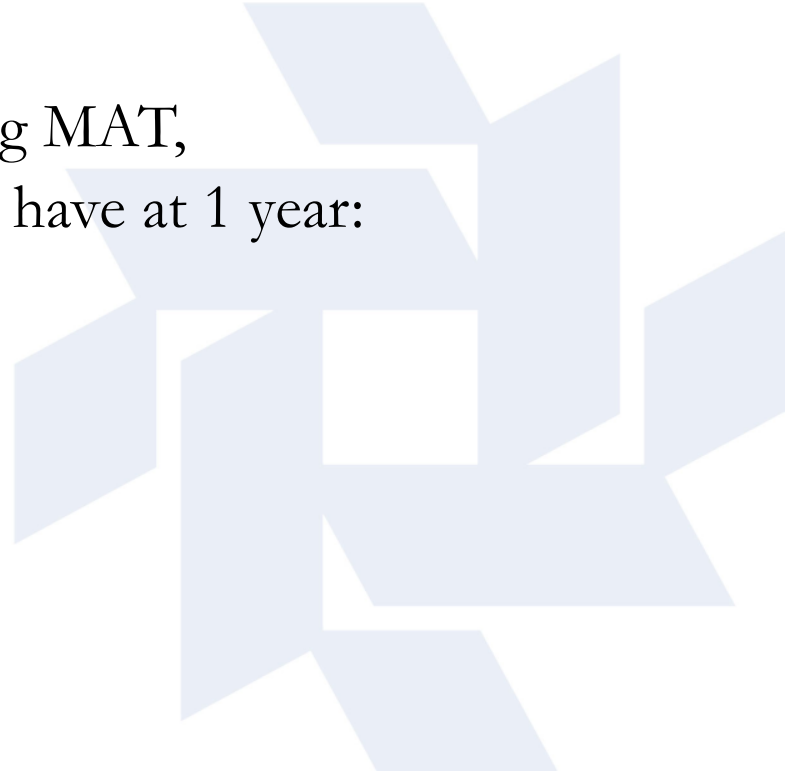


MAT's Impact on Overdose Deaths

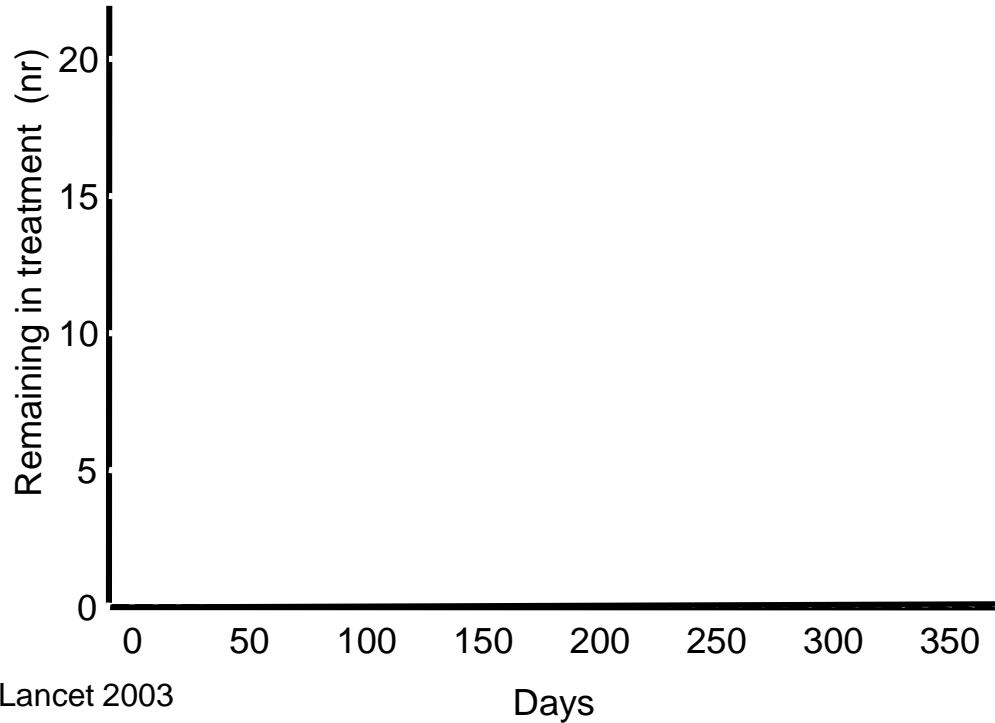
Compared to patients receiving MAT,
untreated patients with OUD have at 1 year:

>2.5 X all cause mortality

> 8 X overdose mortality

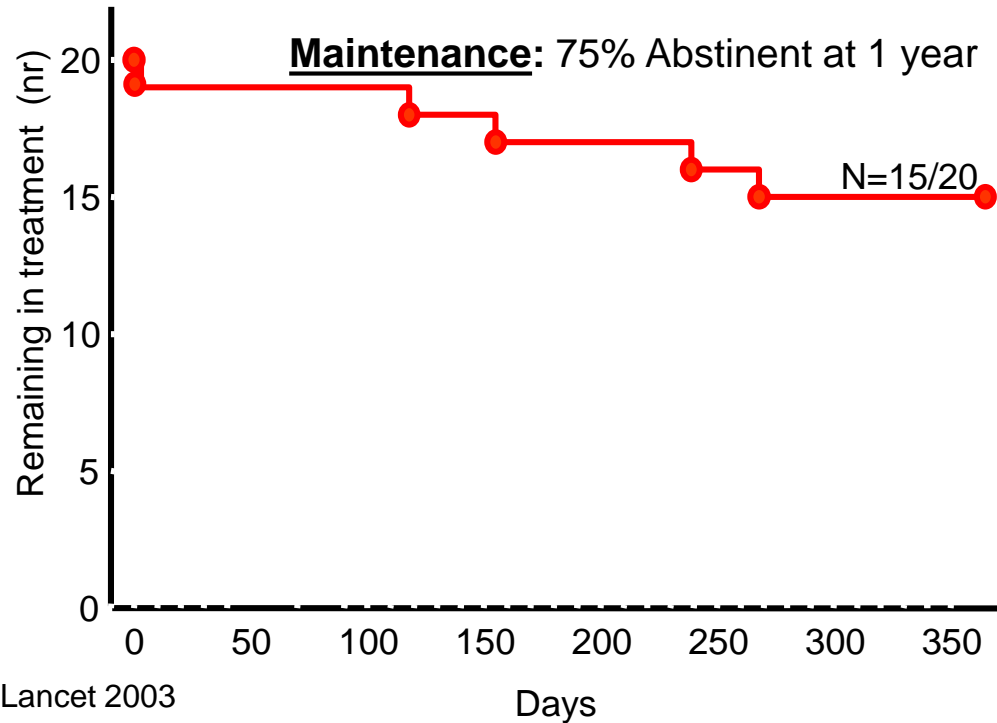


Treatment Retention: Buprenorphine-assisted Detox vs. Maintenance

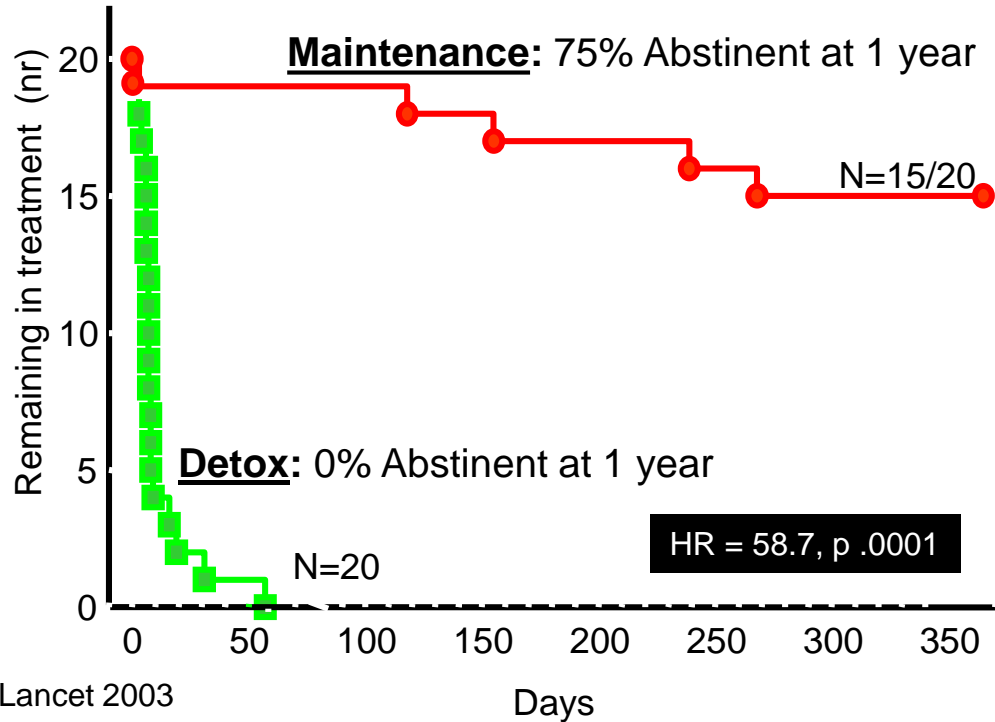


Kakko, Lancet 2003


Treatment Retention: Buprenorphine-assisted Detox vs. Maintenance



Treatment Retention: Buprenorphine-assisted Detox vs. Maintenance



Barriers to Medication Assisted Treatment

- Addicted to another drug
 - Stigma
 - Covering up the addiction
 - Personal bias based on experience
 - Adherence to abstinence based treatment
 - Negative attitudes towards individuals with addiction disorders.
- 

Medication First Model

for the treatment of Opioid Use Disorder



Introduction

The Medication First (or low-barrier maintenance pharmacotherapy) approach to the treatment of Opioid Use Disorders (OUD) is based on a broad scientific consensus that the epidemic of fatal accidental poisoning (overdose) is one of the most urgent public health crises in our lifetimes. Increasing access to buprenorphine and methadone maintenance is the most effective way to reverse the overdose death rate. Increased treatment access will best be achieved by integrating buprenorphine induction, stabilization, maintenance, and referral throughout specialty addiction programs as well as primary care clinics and other medical settings throughout the mainstream healthcare system¹.

Parallels to Housing First

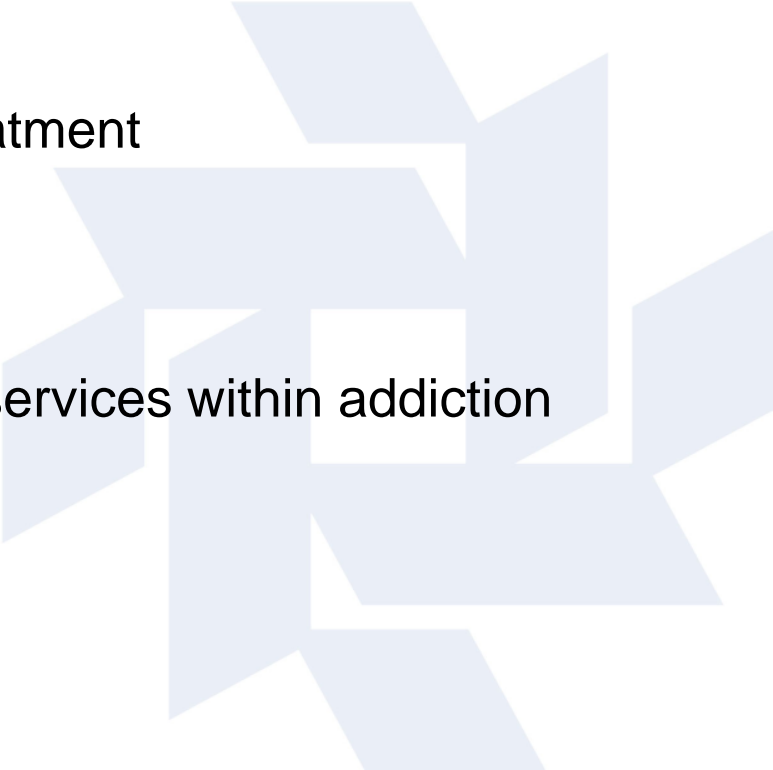
Not Treatment as Usual

Maintenance pharmacotherapy with buprenorphine and methadone can reduce fatal opioid overdose rates by 50-70%, reduce illicit drug use, and increase treatment retention 3-4. However, in traditional treatment programs for addiction, the vast majority of patients are offered no ongoing medical treatment. Those who do receive medical care often face intensive psychosocial service requirements that make treatment both burdensome and costly.

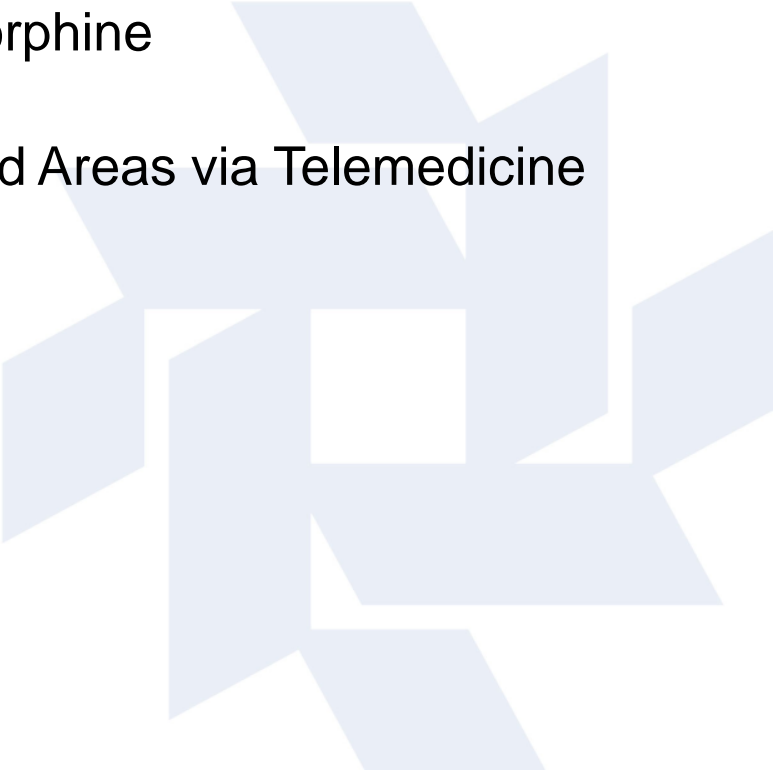
4 Principles of the Medication First Model:

1. People with OUD receive pharmacotherapy treatment as quickly as possible, prior to lengthy assessments or treatment planning sessions;
2. Maintenance pharmacotherapy is delivered without arbitrary tapering or time limits;
3. Individualized psychosocial services are continually offered but not required as a condition of pharmacotherapy;
4. Pharmacotherapy is discontinued only if it is worsening the person's condition.


Clinical Goals

- Patient centered care
 - Immediate engagement and linkage to treatment
 - Expanding access to treatment
 - Co-location of medical and mental health services within addiction treatment services
 - Enhancing recovery services for patients
- 

Maryland Initiatives

- Emergency Department Initiated Buprenorphine
 - Expanding Access to Care in Underserved Areas via Telemedicine
 - Eastern Shore Mobile Care Collaborative
 - Maryland Addiction Consultation Service
 - Reverse Co-location Medical Clinic
- 

Emergency Department Buprenorphine Initiative

- **Collaborators:**
 - MD Behavioral Health Administration, Mosaic Group, Open Society Foundation, Univ. of Maryland School of Medicine
 - **Model:**
 1. Universal Screening
 2. Peer Recovery Specialists
 3. Emergency Department provider training
 4. Buprenorphine initiation protocol development
 5. Next day referral
- 

Emergency Department Buprenorphine Initiative

- **Current Sites:**

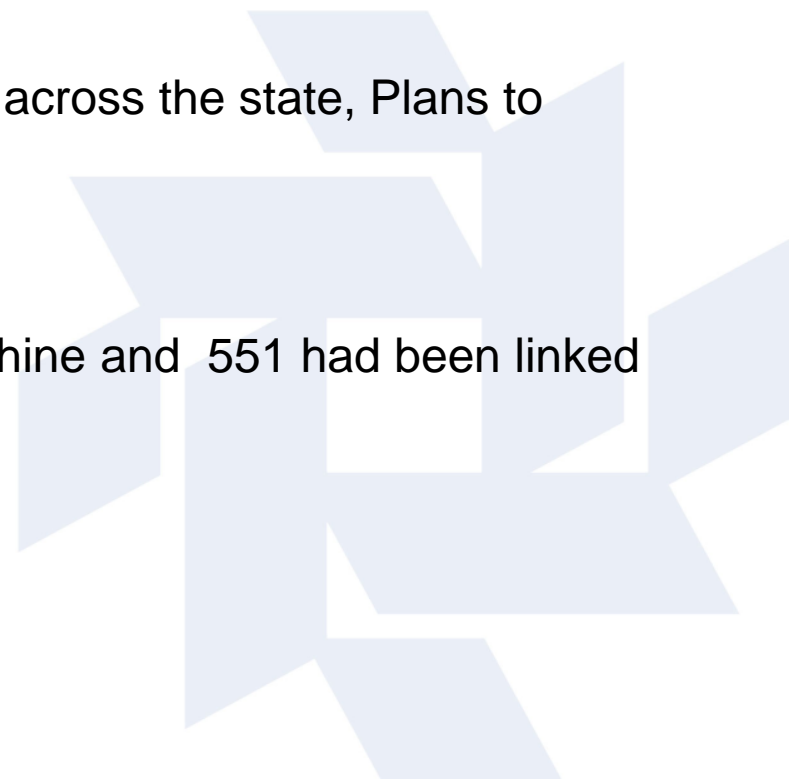
- All Baltimore City Hospitals and a total of 29 across the state, Plans to implement in six other hospitals this year

- **Outcomes:**

- From 2/17-3/19
- 862 patients had been started on Buprenorphine and 551 had been linked to treatment

- **Next Steps:**

- Statewide implementation



Barriers to Medication Assisted Treatment in Emergency Departments

- Stigma
- Lack of training/exposure
- Need a waiver to prescribe
- Belief that MAT treatment is not effective
- Lack of referral sources
- “Not part of my job”
- “Everyone” will come to the ED to get a dose



ED Initiated Buprenorphine Treatment

- Study at Yale/published 2015
- Compared ED-initiated Buprenorphine vs brief intervention and referral in opioid dependent patients
- Patients started on Buprenorphine in the ED had significantly increased engagement in treatment, reduced self-reported illicit opioid use, and decreased use of inpatient addiction services
- [Gail D'Onofrio](#), MD, MS, [Patrick G. O'Connor](#), MD, MPH, [Michael V. Pantalon](#), PhD, [Marek C. Chawarski](#), PhD, [Susan H. Busch](#), PhD, [Patricia H. Owens](#), MS, [Steven L. Bernstein](#), MD, and [David A. Fiellin](#), MD

Rural America

- Certain rural areas disproportionately impacted
- Higher overdose rates
- Higher rates of opioid prescribing-14 rural counties were among the top 15 counties with the highest opioid prescribing rates
- Physical jobs with more injuries and chronic pain
- Higher rates of NAS
- Increased incidence of Hepatitis C infection

Recent CDC study demonstrated that those in rural counties had an 87 percent higher rate of receiving OPIOID prescriptions than those in large metro counties, Athena health over 30,000 PCP's 9.6 percent to 5.2 percent. 14 rural counties were the among the 15 counties with the highest prescribing rates. https://www.cdc.gov/mmwr/volumes/68/wr/mm6802a1.htm?s_cid=mm6802a1_w <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2592302> NAS increase five fold between 2000-12 with an greater increase in rural areas. Incidence twice as high in rural areas, younger than 30, non urban white

Barriers to Medication Assisted Treatment in Rural Areas

- Geography/ transportation/weather
- Health workforce shortages
- Stigma
- Lack of insurance coverage
- Privacy issues/lack of anonymity



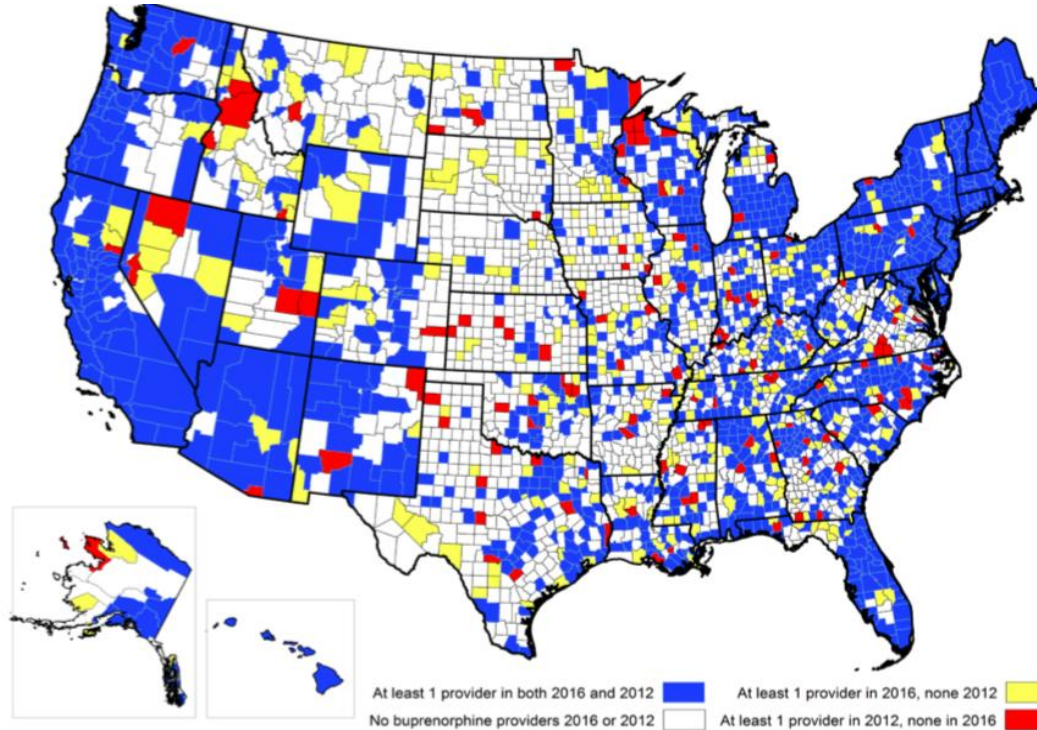
Barriers to Methadone Treatment in Rural Areas

- Lack of methadone programs/less than 5% in rural areas
- Methadone programs are highly regulated and require frequent attendance and daily dosing early in treatment
- Long travel time/high transportation costs
- Long wait lists

Barriers to Buprenorphine Treatment in Rural Areas: Availability

- Approximately 5% of US physicians are waived
- 52.5% of US counties have at least one waived provider
- 56.3% of rural counties have no waived providers (down from 67% in 2012)
- 29.8 percent of rural Americans vs 2.2% of those in urban areas live in a county without a provider
- Many waived providers treat many fewer patients than the maximum allowed or none at all

Map of U.S. Buprenorphine Providers



Data Source: DEA Waivered physician list, July 2012 & April 2016
Map Date: May 2016

Barriers to Buprenorphine Tx in Rural Areas: Provider Factors

All

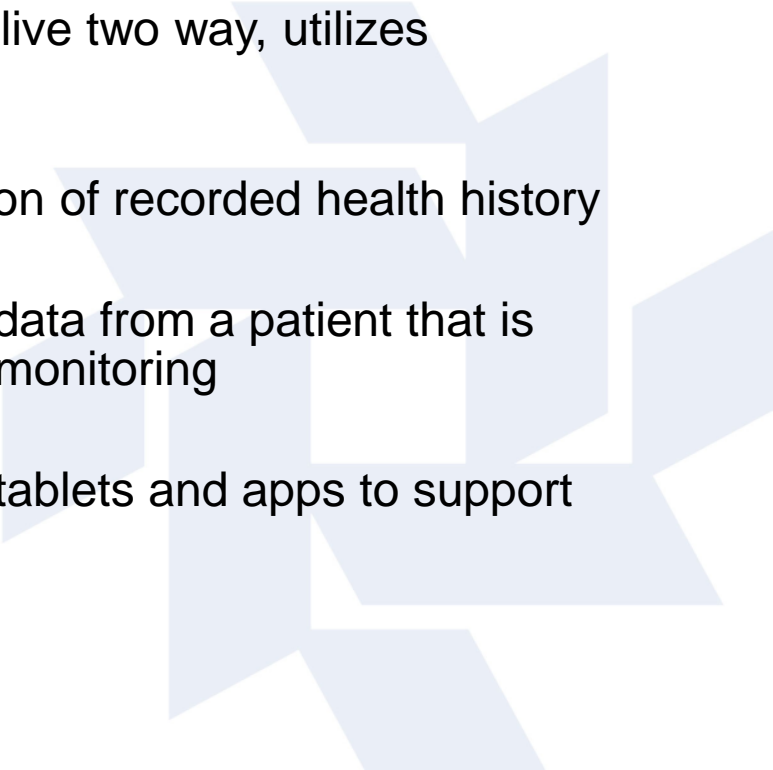
1. Time constraints
2. Diversion concerns
3. Lack of mental health, psychosocial support

Non-Prescribers

1. Lack of patient need
2. Resistance from practice partners
3. Lack of specialty back up for complex cases
4. DEA
5. Administrative/infrastructure
6. Lack of confidence



Types of Telehealth

- **Live videoconferencing**-synchronous video, live two way, utilizes audiovisual communications
 - **Store and forward**- asynchronous-transmission of recorded health history
 - **Remote patient monitoring (RPM)**- medical data from a patient that is transferred to clinician in another location for monitoring
 - **Mobile of mHealth**-use of smart phones and tablets and apps to support healthcare
- 

Telehealth MAT Studies

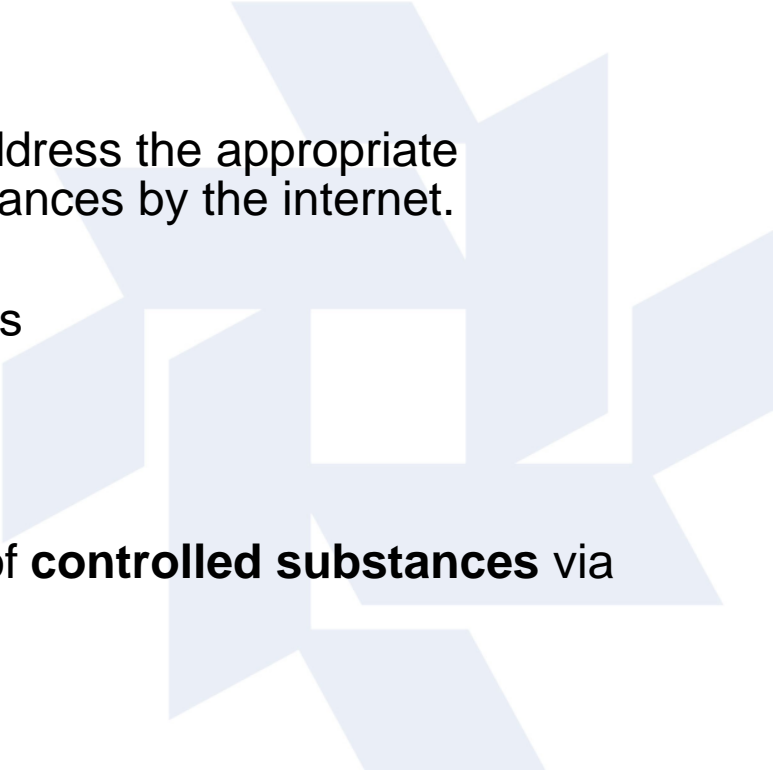
- Zheng/WVU- Videoconferencing for buprenorphine and group counseling, 100 patients, non-inferior to in-person care for average time to 30 and 90 days abstinence and for 90 and 360 days retention rates
- Eibl/Northern Ontario SOM-examined 3,733 patients in 59 clinic sites in Canada, Videoconferencing group had significantly better retention than in-person group.



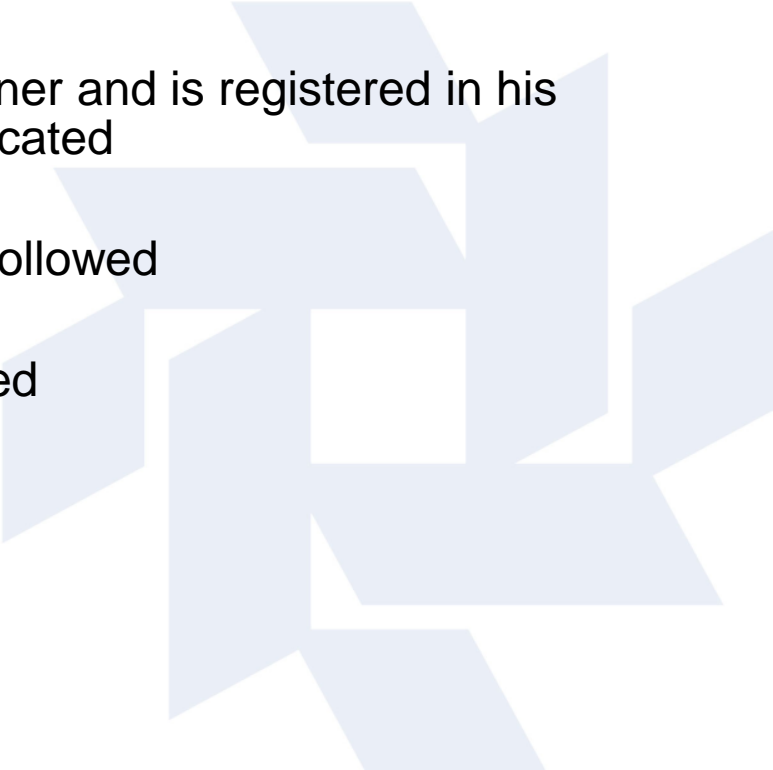
RYAN HAIGHT, 18, VICODIN

Ryan died from an overdose of prescription drugs he had purchased online. He was only 18.

Ryan Haight Act

- Ryan Haight Online Consumer Protection Act
 - Amended the Controlled Substances Act to address the appropriate dispensing and prescribing of controlled substances by the internet.
 - Targets Rogue “Form Only” Online Pharmacies
 - Passed in 2008 and took effect in April 2009
 - To prevent illegal distribution and dispensing of **controlled substances** via the internet
- 

Ryan Haight Act

- Telehealth provider is DEA registered practitioner and is registered in his state and every state his or her patients are located
 - All applicable federal and state laws must be followed
 - Live audio-video teleconferencing must be used
- 

Ryan Haight Act

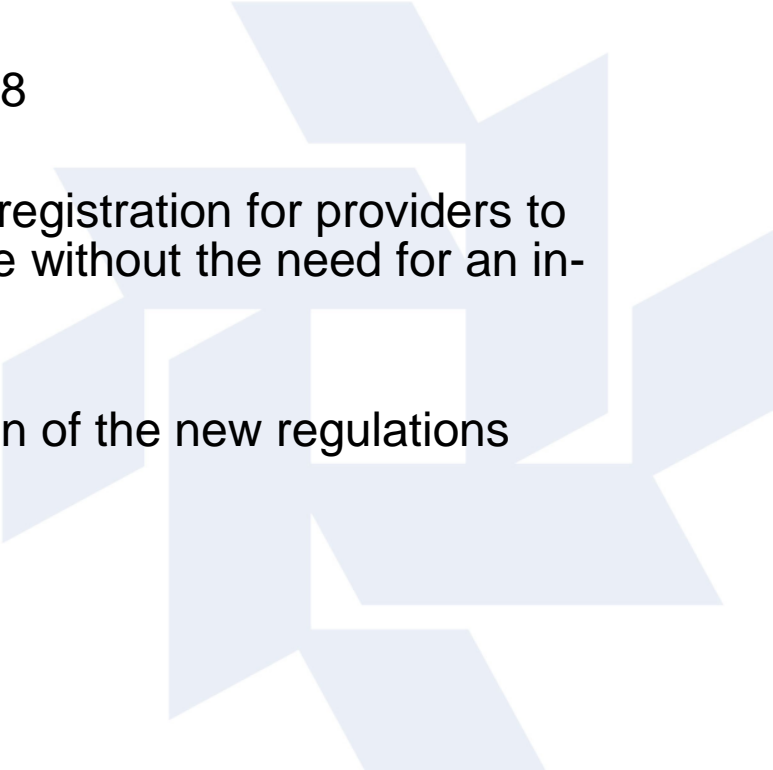
- No controlled substance may be delivered, distributed, or dispensed without a “Valid Prescription”
- “Valid Prescription” A prescription issued for a legitimate medical purpose in the usual course of professional practice
- A Prescription issued by a practitioner who has conducted. at least 1 “in-person medical evaluation” of the patient
- In-Person Medical Evaluation A medical evaluation that is conducted with the patient in the **physical presence** of the practitioner

Ryan Haight Act Exceptions

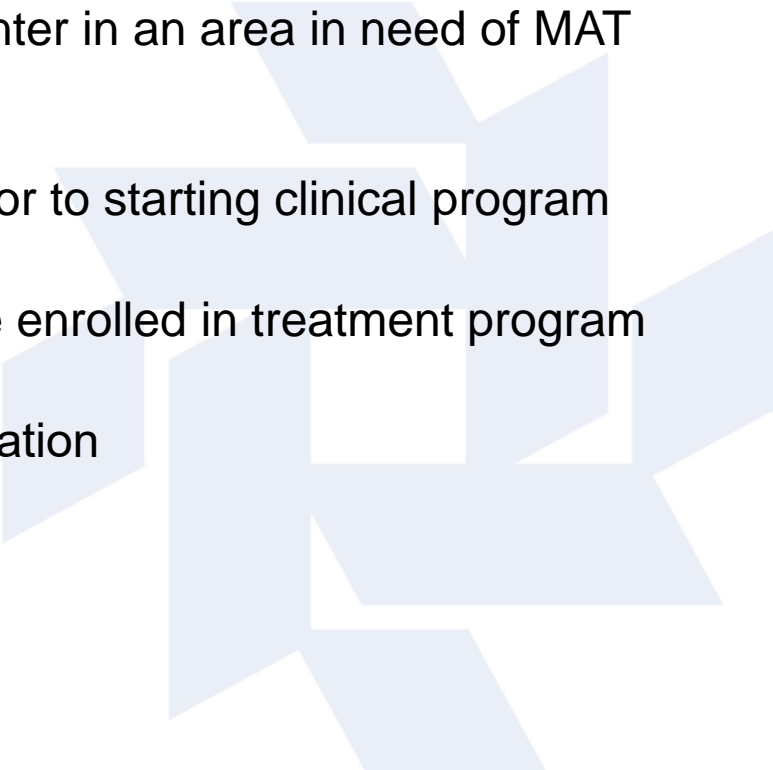
1. Treatment in a DEA-registered hospital or clinic
2. Treatment in the physical presence of a DEA registered practitioner
3. Veterans Affairs Medical Emergency
4. Public Health Emergency
5. Special Registration for telemedicine
6. Indian Health Service
7. Other circumstances specified by regulation



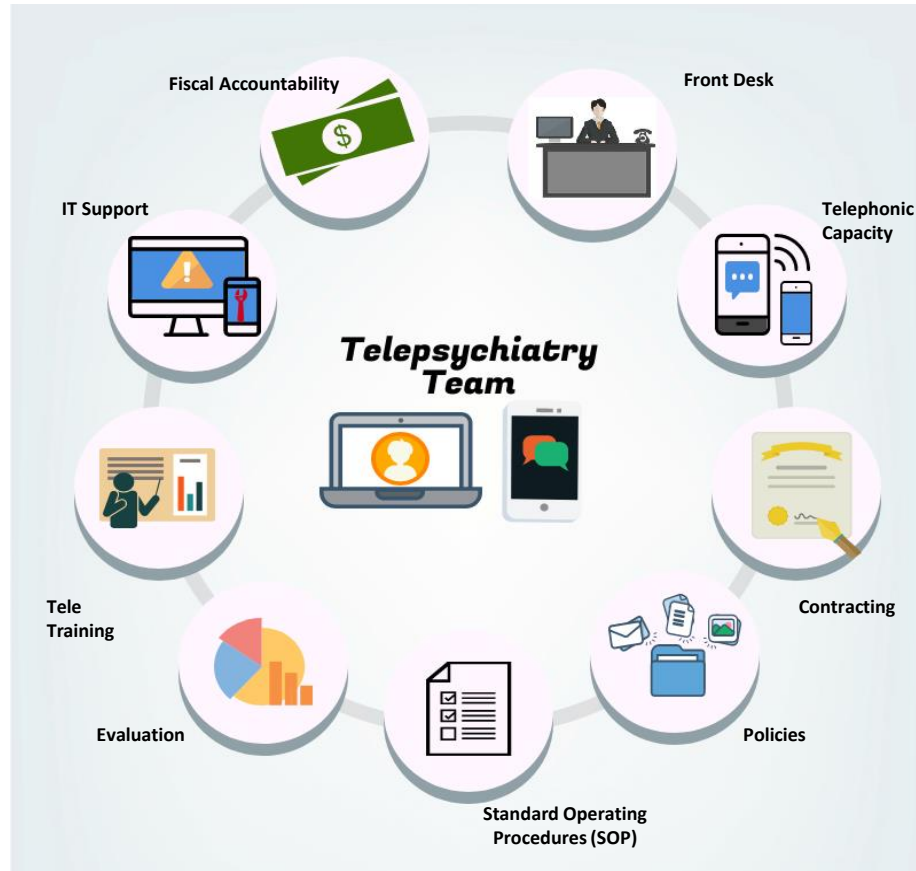
Ryan Haight Act: Update

- Special Registration for Telemedicine Act of 2018
 - Requires DEA to finalize regulations for special registration for providers to prescribe controlled substances via telemedicine without the need for an in-person exam
 - A deadline of October 24,2019 for the completion of the new regulations
- 

Maryland Telemedicine Buprenorphine Model

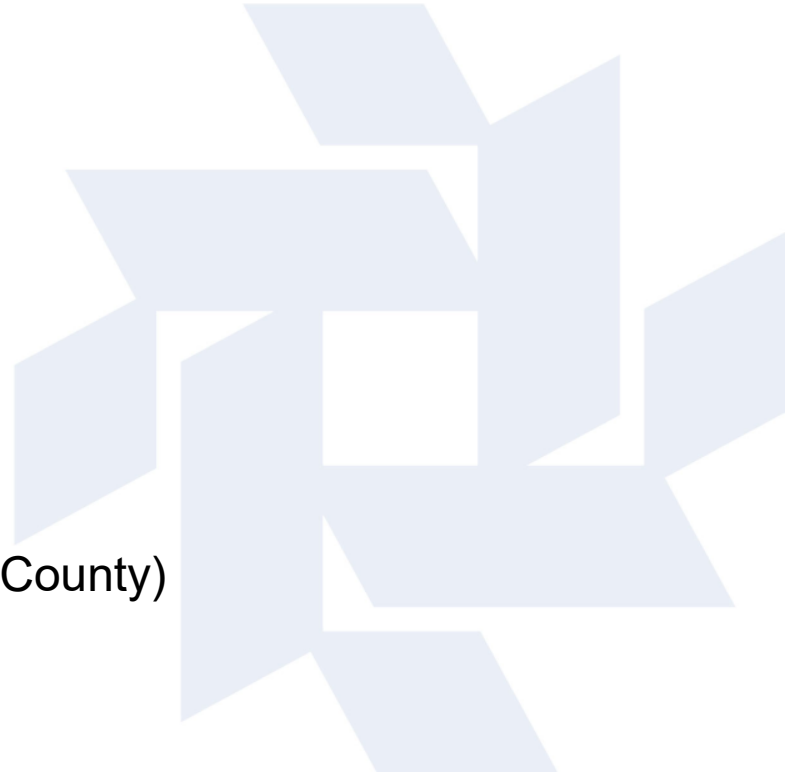
- Develop relationship with a rural treatment center in an area in need of MAT prescribers.
 - All programs now receive DEA certification prior to starting clinical program
 - All patients receiving MAT by telemedicine are enrolled in treatment program
 - Develop SOP's focusing on clinical communication
 - Program Coordinator
- 

Centralized Infrastructure Functions

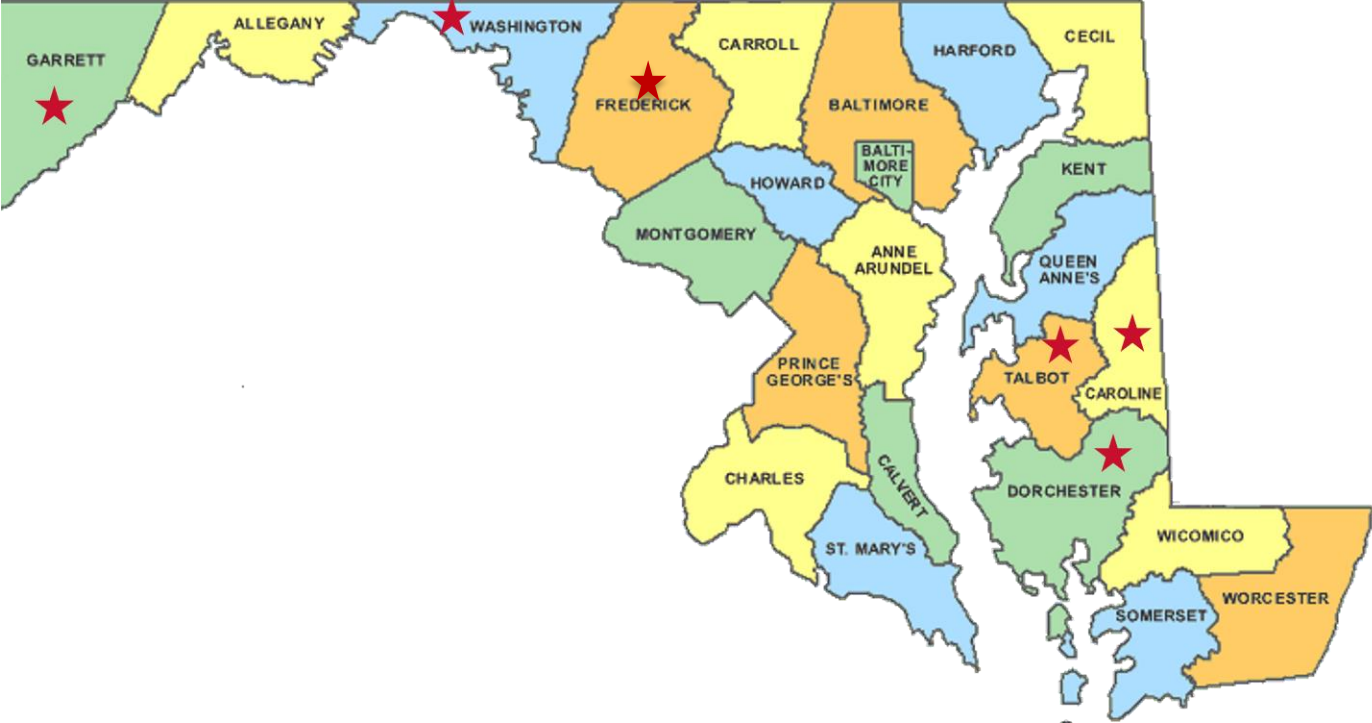


Rural Telemedicine Partnerships at University of Maryland

- Rural Health Departments
 - Caroline County (CCHD)
 - Garrett County (GCHD)
 - Eastern Shore Mobile Care Collaborative
- Rural OP/IOP/Residential Treatment
 - Wells House/Gale House
- Rural Nonprofit Outpatient Practice
 - Life's Energy Wellness Center Inc. (Talbot County)



Tele MAT Sites 2019



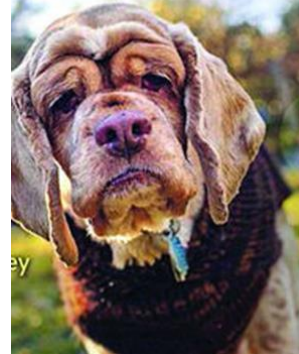
Wells House: Initial Tele MAT Site

- Halfway house in Hagerstown, Maryland
 - IOP/OP program
 - Many live there but some in own housing
 - No medical staff (initially)
- Had M.D. prescribing buprenorphine but retired
- Started clinical operations in August 2015



Wells House-Preparation

- Preparation
 - Internal
 - Meetings with Child Division (already doing tele)
 - Meetings amongst ourselves
 - External
 - Brief in-person visit to Wells House
 - IT coordination
 - Logistical coordination- charting, labs, clinical, pharmacy
- Ongoing
 - Periodic communication with Wells House point-person
 - Periodic communication with Wells House counselors
 - Tele-meeting with clinical/administrative staffs- January, 2016
 - In-person visit- March, 2016
 - Fredrick sites added- March, 2016
 - 3rd 2-3 hour block added with an Addiction Fellow- May, 2016
 - 4th 2-3 hour block added with faculty/rotating PGYIV resident- July 2018
 - 5th 2-3 hour block added 2019



Wells House: Challenges

- Peripheral role in treatment team
 - Organizational
 - Geographic
- Transition of patients
 - Stable, at end of treatment
 - Abrupt, for rule violations, etc.
- EMR issues
 - Originating vs Distant site
- Coordination of care with other providers
 - Psychiatry, Primary Care
- Scheduling issues



Wells House/Direct Clinical Care

- Home inductions
 - Residential Patients technically “at home”
- SOP including:
 - (1) informed consent
 - (2) privacy/HIPAA compliance
 - (3) video conferencing security
 - (4) initiation of telemedicine consults
 - (5) patient scheduling
 - (6) urine toxicology testing
 - (7) medical records.



Wells House/Published Outcomes

- Retrospective case series of first 177 pts
- Population young (~35yo), male (~89%), mostly voluntary (19% from drug court), mostly PWID (75%)
- Primary Outcome: 57% retained in treatment onsite at 3 months

Expanding Access to Buprenorphine Treatment in Rural Areas With the Use of Telemedicine

Eric Weintraub, MD,^{1,2} Aaron David Greenblatt, MD,² Jay Chung, MD,² Seth Henselrich, MD,² Christopher J. Walsh, MD²

¹Department of Psychiatry, School of Medicine, Johns Hopkins University, Baltimore, Maryland; ²Department of Family Medicine, Johns Hopkins University, Baltimore, Maryland

Background and Objectives: The opioid epidemic in the United States has resulted in a significant increase in the number of people with opioid use disorder (OUD). Buprenorphine treatment is an effective and safe medication for OUD. However, access to buprenorphine treatment is limited in rural areas. Telemedicine may be a way to expand access to buprenorphine treatment in rural areas.

Methods: Patients in treatment on buprenorphine in a rural area were recruited to a study of telemedicine. The study included a baseline assessment and a 3-month follow-up assessment. The primary outcome was the percentage of patients who were retained in treatment at 3 months.

BACKGROUND

The opioid epidemic in the United States has resulted in a significant increase in the number of people with opioid use disorder (OUD). Buprenorphine treatment is an effective and safe medication for OUD. However, access to buprenorphine treatment is limited in rural areas. Telemedicine may be a way to expand access to buprenorphine treatment in rural areas.

Methods: Patients in treatment on buprenorphine in a rural area were recruited to a study of telemedicine. The study included a baseline assessment and a 3-month follow-up assessment. The primary outcome was the percentage of patients who were retained in treatment at 3 months.

significant mental morbidity and mortality. The past decade has seen a rapid increase in the number of people with OUD. Buprenorphine treatment is an effective and safe medication for OUD. However, access to buprenorphine treatment is limited in rural areas. Telemedicine may be a way to expand access to buprenorphine treatment in rural areas.

Methods: Patients in treatment on buprenorphine in a rural area were recruited to a study of telemedicine. The study included a baseline assessment and a 3-month follow-up assessment. The primary outcome was the percentage of patients who were retained in treatment at 3 months.

Results: The percentage of patients who were retained in treatment at 3 months was 57%. This finding suggests that telemedicine may be a way to expand access to buprenorphine treatment in rural areas.

Conclusions: Telemedicine may be a way to expand access to buprenorphine treatment in rural areas. Further research is needed to evaluate the long-term effectiveness and safety of telemedicine for buprenorphine treatment.

Keywords: buprenorphine, telemedicine, rural areas, opioid use disorder, medication-assisted treatment.

Weintraub et al. Expanding Access to Buprenorphine Treatment in Rural Areas with the Use of Telemedicine. *American Journal on Addictions*, 2018

Wells House: Retention Data

1 week	98% still in care
1 month	91% still in care
2 months	73% still in care*
3 months	57% still in care*

*at Wells House; those in care elsewhere not known

Wells House: Urine Opiate Positive Toxicology Results

1 week	12%
1 month	11%
2 months	11%
3 months	6%

Facing mounting opioid overdoses, Maryland doctor defies federal law

By [DAVID PITTMAN](#)

HAGERSTOWN, Md. — At a 100-bed halfway house on the southern edge of this heroin-ravaged town in the Appalachian foothills, **addiction specialists have taken the law into their own hands**. It was either that or watch their patients die, they say.

Every Tuesday afternoon for the last two years, psychiatrist **Eric Weintraub** has spoken through a Skype-like feed from Baltimore with patients in a second floor room of the Wells House. He offers counseling that usually includes prescribing an opioid drug, Suboxone, that removes their need for a fix.

Program Adaptations

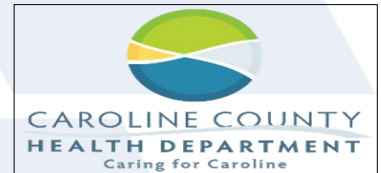
- Increasing flexibility of scheduling
 - Desk-top set-up
 - System compatibility
 - EMR
- E-prescribing
- Expanding medication capabilities (ie. Vivitrol)
- Billing

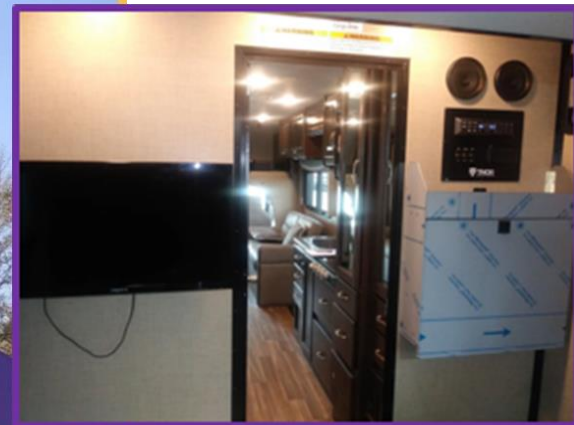


The Eastern Shore Mobile Care Collaborative at the Caroline County Health Department

A collaborative effort between The University of Maryland School of Medicine and Caroline County Health Department

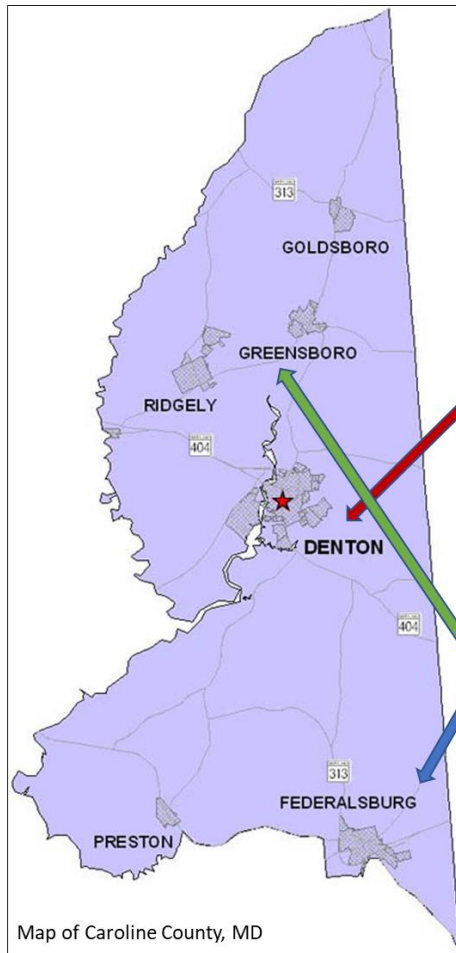
The ESMCC Mobile Treatment Unit is equipped with medical supplies and telecommunication devices, and staffed by an addictions counselor and peer recovery specialist. The Mobile Treatment Unit is linked via encrypted, HIPAA compliant videoconferencing technology to an addictions medicine specialist at the University of Maryland, School of Medicine in Baltimore who will provide point-of-care diagnosis at the initial visit and monitoring during follow-up visits.





The Mobile Treatment Unit is currently serving patients in Denton and Federalsburg, Maryland, and will begin to serve patients in Greensboro. Future plans include increasing service locations in Caroline County (pictured to the right) and throughout other counties within the Eastern Shore of Maryland.

Dates the Mobile Treatment Unit Began Providing Services in the Following Cities:

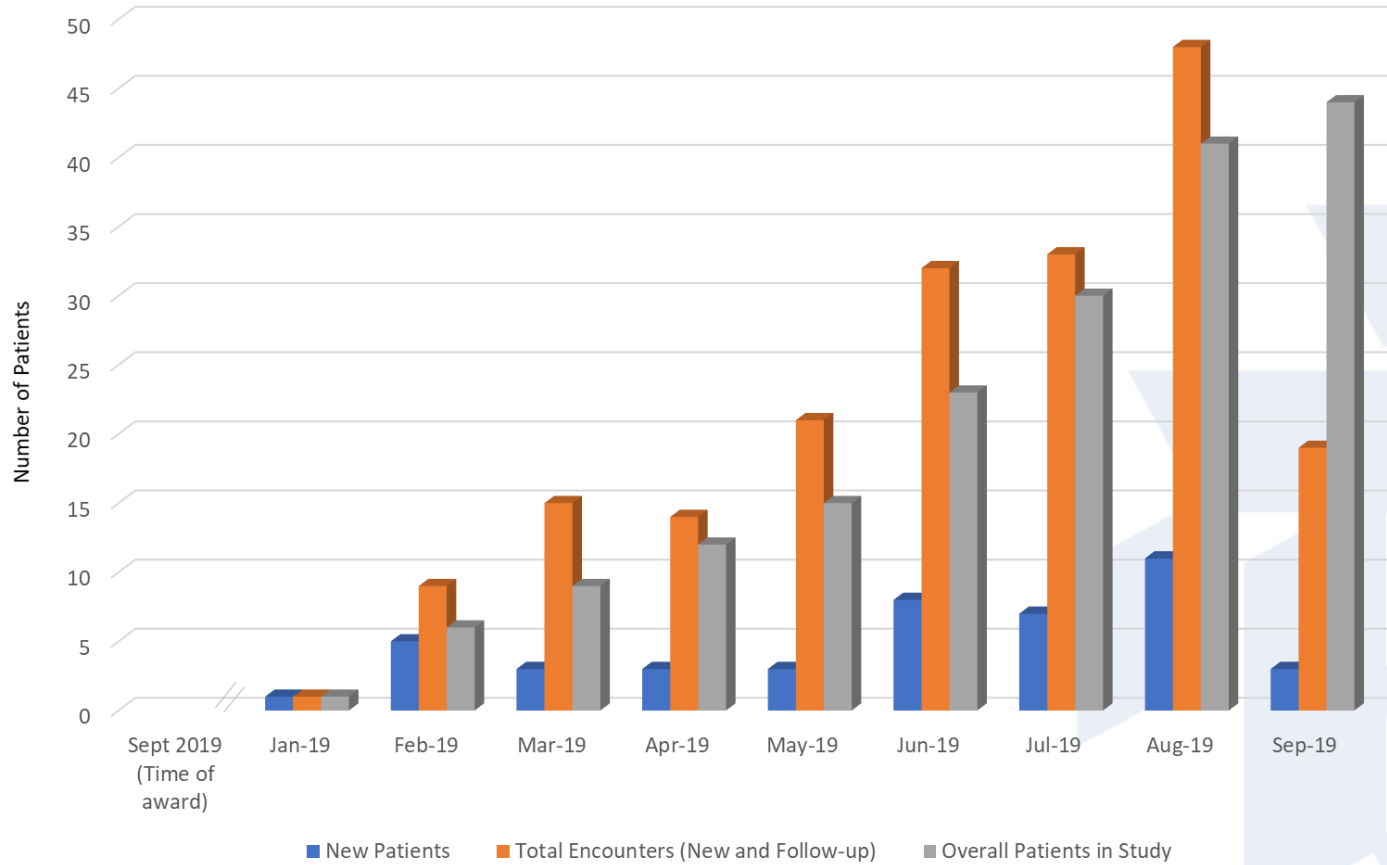


*Denton, Maryland: **January 2019***

*Federalsburg, Maryland: **June 2019***

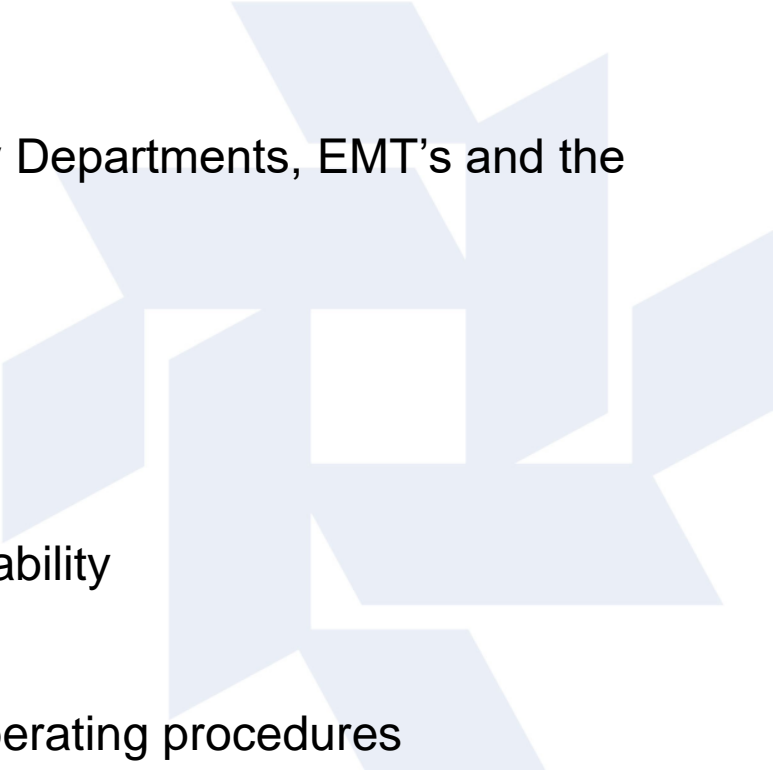
*Greensboro, Maryland: **September 2019***

MTU Patient Overview



Total Number of Patients who have been treated by a telemedicine provider (as of September 16, 2019): **44**

Future Directions

- Adapting to other clinical models
 - Mobile MAT/ HRSA Grant
 - In-home treatment (for patient)
 - Integration of telemedicine with Emergency Departments, EMT's and the criminal justice system
 - Role in OTPs?
 - Cell-phone tele
 - Issues with both provider and patient
 - Enhancement of consultation/supervision capability
HUB and Spoke Model
 - Development of evidenced based standard operating procedures
- 

MACS

Maryland Addiction Consultation Service (MACS)

Provides support to primary care and specialty prescribers across Maryland in the identification and treatment of Substance Use Disorders and chronic pain management.

All Services are FREE

- Phone consultation for clinical questions, resources, and referral information
- Education and training opportunities related to substance use disorders and chronic pain management
- Assist in the identification of addiction and behavioral health resources that meet the needs of the patients in your community
- Administered by UMB School of Medicine and funded by Maryland Department of Health, Behavioral Health Administration



MACS

MACS Expansion

Statewide Clinical Support Via Telehealth:

- Warmline Telephone Consultation
- Webinars
- Community Outreach
- Project ECHO Partnership
- Statewide Technology Transfer and Technical Assistance
- Workforce Development

The logo for MACS (Michigan Association of Child and Adolescent Counselors) features the letters 'MACS' in a bold, sans-serif font. The letters are filled with a gradient of colors: 'M' is black, 'A' is red, 'C' is yellow, and 'S' is black. The logo is positioned in the bottom right corner of the slide, overlaid on a large, light blue, stylized graphic of a person's head and shoulders.

MACS Outcomes

- Since MACS began in October 2017, highlighted achievements include:
- ✓ 396 prescribers have signed up with MACS
- ✓ 208 consultations were completed as of April 30, 2019
- ✓ Expanded scope to include all substance use disorders and chronic pain management
- ✓ Outreach conducted in every Maryland county, including 63 training events
- ✓ The MACS newsletter has over 624 subscribers
- ✓ The MACS website has over 6,748 views since January 2018

Reverse Co-location Clinic

- Integrated medical services in substance use treatment center
 - Primary care
 - Infectious disease treatment
 - Wound care
 - Women's health
 - Dental services

