Innovations and Practical Applications

Presented by White Deer Run of Allenwood
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Focus of Today’s Presentation

• Treatment Engagement and Retention

• Evidence based interventions targeting:
  ➢ Staff attitudes
  ➢ Drug infiltration into the treatment milieu
  ➢ Meeting patient needs

• Innovations and evidenced based practices to improve treatment effectiveness

• Medication Assisted Treatment
Litmus Test

Treatment Retention rates are one of the litmus tests for assessing the health of a treatment program.

• Low retention rates suggest treatment failure, and present opportunities for improvement.

• High retention rates suggest staff and patient satisfaction and quality treatment.
Against Medical Advice (AMA) Rates in Substance Use Disorder Treatment

Findings from a literature search:

• Typical AMA rates for inpatient treatment range from 18.6% to 23.5%.

• Typical AMA rates for inpatient short term detoxification tend to be higher in the 22%-28% range.
White Deer Run Allenwood AMA Rates

AMA Rates Year over Year

- 2015: 18.3%
- 2016: 17.9%
- 2017: 16.2%
- 2018: 14.6%
- 2019: 11.3%
- Sep-19: 9.8%
- Oct-19: 6.3%
Common Profiles of Patients Who Leave Treatment AMA

• Common characteristics:
  – Young
  – Male
  – Opioid use disorder
  – IV method of use
  – Medicaid or other public funding
  – History of prior treatment(s)

Note: These are common, not exclusive, characteristics.
AMA discharge is a multifaceted, multi-causal phenomenon.

- Top tier causal factors across all inpatient levels of care:
  1. Staff attitudes
  2. Drug infiltration into the treatment milieu
  3. Inadequate or inappropriate Withdrawal Management
     - Management of acute and protracted withdrawal
     - Use of methadone or buprenorphine/naloxone maintenance as an alternative to total abstinence
Causal Factor 1: Staff Attitudes and AMA Rates

— Staff Attitudes as a focus of Intervention:
  • Lack of passion, genuineness, validation
  • Failure to actively engage the patient early in treatment
  • Lack of follow-up with the patient after initial engagement
  • Failure to address patient needs with a sense of urgency
  • Lack of training or sensitivity
    ➢ Lack of mental health training
    ➢ Lack of awareness around cultural sensitivity
    ➢ Using the same approach with all patients
    ➢ Re-traumatizing patients
    ➢ Kicking patients out for acting like we should expect them to act
AMA Reduction: Our Engagement Model

Think about what it is like to arrive in treatment. What would you be feeling? The response to this question is key to engagement of the patient and reduction of AMA discharge.

Video Clip

Note: The clip that follows was designed for staff at a locked inpatient psychiatric facility, but the content is fully applicable to voluntary substance abuse treatment settings.
AMA Reduction: An Evidenced Based Engagement Model using Dialectic Behavioral Therapy (DBT)

“Patients arrive at treatment and it is often the worst day of their lives.”

The patient requires validation and support:
— Listen and be present
— Accurate reflection
— Read the behavior and explore the thoughts and feelings
— Understand behavior in context of patient history and biology
— Normalize and help regulate emotional reaction to events
— Demonstrate radical genuineness

By Marsha Linehan, PhD
AMA Reduction:
Practical Application

First Point of Contact

• Staff greet the patient on arrival with a welcoming, friendly tone
• Ask the patient how they are doing and reflect understanding
• Check on immediate needs: Hungry, thirsty, clothing concerns, need to contact family or children, need to smoke, cup of coffee, etc.
• Explore history: What brought you here and ask if they had prior treatment.
  – if so explore those past experience(s)
  – If not, explore their perception of treatment, any fears and hopes.
• Explain the admission and treatment process
• Express genuine concern and demonstrate it by meeting immediate need(s).
AMA Reduction: Practical Application

Ongoing Contact

• Warm handoff to next team member once each step in the process is completed.

• Orient the patient to each process and answer questions

• Explore perceptions, fears, perceived resistance
  – Perception, right or wrong, is the “truth” at the moment

• Demonstrate listening skills with reflective listening and summarization

• Use motivational interviewing techniques

• Explore any hint of issues that could lead to a safety concern

• Check on, and meet, immediate needs and orient patient about how treatment needs will be met in coming days.

• Collaborate with family, referral source, legal representatives, etc.
AMA Reduction: Practical Application

Engagement Activities

- Patient is assigned to a mentor or positive peer (“buddy”)
- Patient is actively engaged in treatment decisions (i.e., medications, treatment planning and updates, contact with family and referrals, etc.)
- Family is engaged in treatment from day one and invited to participate in sessions (in person or by phone)
- Children are engaged in treatment with the patient (HUGGS program)
- Patient is encouraged to rate their satisfaction with treatment through focus groups, satisfaction surveys and individual sessions
- Patient has access to a patient advocate and understands grievance procedure
AMA Reduction: Practical Application

**Collaborative Activities**

- Management staff talk with patients about their experience during facility rounds.
- Identified issues are resolved at lowest level in the organization
  - When issue cannot be resolved at that level, warm handoff to a responsible staff for resolution and follow-up
- Patient is assigned to, and works with, a treatment team
- Keep your appointments with the patient to show your commitment
- Frequent check-in with the patient to ensure they know you view them and their treatment as important
- Collaborative and timely continuing care planning starting day 1
AMA Intervention

• If a patient voices thoughts of AMA, conduct immediate intervention
• Identify the patient’s stated reason and reflect understanding
• Explore any underlying or hidden reason or motivation
• Do not be quick to assume or express the reason is “to get high”. We have found this is not the case as often as we believe.
  – A common reason is an unmet need
  – Another common reason is either a stated or unstated fear
• Have an AMA intervention team available using you best AMA blocking clinicians who have rapport with the patient.
• Utilize family, referral, etc. (with consent)
• Utilize innovations (more on this shortly)

**Mistake:** reacting to the patient’s desire to leave in a confrontational manner. This solidifies abandonment and reinforces decision.
AMA Intervention

• Reflect on patient’s strengths and goals. Reflect back to the patient how their decision to abandon treatment is counter to stated goals.

• Reflect on past pattern of AMA (if applicable) and express desire to help the patient break the cycle.

• If all fails, respect the patient’s decision, but express concern and give permission for the patient to change their mind without judgement or consequence.

• Once it is clear the patient is leaving and you have exhausted all efforts, offer to arrange aftercare for a level of service the patient will agree to.
  – Secure consents
  – Establish a plan
  – Secure the appointment(s)
  – Communicate outcome to all individuals involved in care (family, referral, etc.)
Causal Factor 2:
Drug Infiltration and AMA Rates:

While assessing our AMA rate in 2018, we suspected the role of drug infiltration. We graphed mentions of drug use and positive urines in our logs and overlaid it with a graph of AMA spikes.

**Note:** The counts on the left side of the graph have no relationship to the blue line. This line is represents that there was, or was not, a mention of drugs on grounds or positive urine screen(s)
Drug Infiltration and AMA Rates

Drug infiltration occurs in two primary ways:

• Concealment
  – In belongings
  – On person (Patient and Visitors)
  – “In” person
  – In mail >>>>>>

• Drug drops
  – On treatment facility property
  – Hiding drugs during admission process with later retrieval
Drug Infiltration Interventions

• Drug Drops
  • Preadmission: Make potential patients aware of no tolerance drug policy
  • Have security procedures in place with transportation staff
  • Regular cleaning and clearing of potential drop areas
  • Removal of any area where drugs could be hidden and later retrieved (i.e., trash cans, flower pots, under chairs, drop ceilings, toilet bowels, etc.)
  • Use of drug dogs to search facility at random intervals
  • Secured and partitioned admissions area
    – next slide
Intake area showing secure and non-secure partitions
INNOVATION: Drug Detection

Belonging Searches

• Patient and belongings separated on arrival
• Belongings undergo x-ray scan
• Belongings are then physically searched item by item
• Belongings may receive a secondary scan (shoes, bottles, deodorant), etc.)

X-Ray Package Scanner
INNOVATION: Drug Detection

• Example scans using various filters
INNOVATION: Drug Detection

- Nail clippers
- Flashlight
- Pills
- Pills in deodorant stick
- Syringe
- Screwdriver
- Keys with key fob
INNOVATION: Drug Detection

• Some drugs are invisible to scan (i.e., Suboxone films)

Suboxone strip hidden in cell phone          Invisible to x-ray scans
INNOVATION: Drug Detection

- **Body Searches**
  - Patient is physically searched on start of admission process.
  - Patient undergoes **full body x-ray scan** to identify any hidden contraband on or in their person.
  - Female patients are pregnancy tested.
  - Pregnant females are excluded from scanning.
INNOVATION: Drug Detection

Example of full body scan with findings using different view options.
INNOVATION: Drug Detection

Example of another full body scan with findings
Causal Factor 3: Withdrawal Management or MAT Selection

• Additional AMA factors in WM (detoxification) level of care:
  – Immediate engagement is critical
  – For opioids, the strength of drugs being used prior to entrance into detoxification plays a significant role
    • Fentanyl, benzodiazepines, or combinations
    • Method of use
  – Quality of withdrawal management
    • Failure to stabilize prior to tapering is key contributor to treatment abandonment. Initial stabilization is critical.
    • Regular re-assessment of taper and adjustment as needed is critical to success
Causal Factor 3:
Withdrawal Management, MAT and AMA Rates

Treatment Retention starts with matching patients to the proper treatment modality.

For this discussion focus will be on opioid use disorder:

**Treatment Modalities**

– Detoxification to Total Abstinence with no MAT
– Detoxification to Total Abstinence with Naltrexone (Vivitrol) MAT
– Medication Assisted Treatment with Methadone MAT
– Medication Assisted Treatment with Buprenorphine (Suboxone) MAT
– NSS-2 Bridge Device (as adjunct or stand-alone option)
Withdrawal Management

• Dr Baxter addressed proper withdrawal management.
  – Adequate stabilization is critical: Cover all withdrawal symptoms with adequate and appropriate medication
  – Proper taper is a key factor for success

• Stigma:
  – **Myth**: “Letting them feel some discomfort is a good thing” (punishment)
  – **Truth**: Comfort is key. Proper medication stabilization and taper is crucial.

• Connection to Treatment
  – Detox is not treatment; it is stabilization in preparation for treatment
  – Treatment is critical
WITHDRAWAL INNOVATION: NSS-2 Bridge Device

The NSS-2 Bridge Device is the first FDA approved device for the treatment of opioid withdrawal. It is a “...percutaneous nerve field stimulator (PNFS) that can be used as an aid to reduce the symptoms of opioid withdrawal, through application to branches of Cranial Nerves V, VII, IX, and X, as well as branches of the occipital nerves identified by trans-illumination.” By permission of IHS: IHS (IFU) Instructions for Use.
NSS-2 Bridge Device

• A pen light is provided for performing the trans-illumination technique. The figure to the right illustrates how a clinician can use transillumination for proper electrode placement. By permission of IHS: IHS Mechanism of Action whitepaper.
NSS-2 Bridge Device

What to Expect:

• [Review Case Example(s)]

• Within 5 minutes of application, the patient’s facial expression improves.

• Within 15-30 minutes of application, there is a marked reduction of objective signs and subjective symptoms of withdrawal (i.e., COWS score of 20 reduced to 10 or less, decrease in blood pressure, reduced sweating, reduced hot/cold flashes, reduce cramping, etc.).

• Within 1 hour of application, there is further reduction of COWS score (i.e., Original COWS score of 20 now down to 4)
NSS-2 Bridge Device

Resource Table Available:

• We have a resource table available so you can see the device and obtain additional information.

• Note: White Deer Run has no business relationship with the manufacturer of this device other than to purchase and use it on our patients.
  – We included this device in the presentation because we believe it to be an extraordinary innovation in the treatment and retention of opioid dependent patients.
  – The device can be used in any level of care (inpatient, outpatient, etc.)
Opioid Use Disorder: Medication Assisted Treatment

• Our field is highly polarized on what is the appropriate treatment for opioid use disorder:
  – “Total abstinence is the only way to go”
  – “Total abstinence has to include Vivitrol”
  – “Methadone is a proven approach that has worked for decades”
  – “Suboxone is the new Gold Standard”

Accepting any one statement as truth is a flawed application of the available treatment options. Each has pros and cons within the context of an individual patient.
Opioid Use Disorder: A Model for Treatment

1. A thorough assessment using a proven scientific instrument (we lack solid assessment tools at this time);

2. Review of the assessment findings with the patient and a review of the treatment options, including pros and cons of each;

3. Patient makes a choice;

4. Implementation of the patient choice (unless contraindicated);

5. Review of progress with the patient and allowance for patient to make changes in their choice as they gain experience with the original choice;

6. Ongoing counseling/behavioral therapy and meaningful urine testing is critical to success of any approach.
Before examining the pros, cons and outcomes of each, consider that outcomes can be viewed by a number of criteria either alone or in combination, making comparisons difficult:

- Reduction in the use of illicit drugs
- Reduction in criminal activity
- Reduction in needle sharing
- Reduction in HIV infection rates and transmission
- Cost-effectiveness
- Reduction in commercial sex work
- Reduction in the number of reports of multiple sex partners

- Improvements in social health and productivity
- Improvements in health conditions
- Retention in addiction treatment
- Reduction in suicide
- Reduction in lethal overdose
Opioid Use Disorder: Evidence Based Treatment Options

Total Abstinence:

• Pros:
  – Highest quality of life if successful
  – Strong support groups all over the country

• Cons:
  – High relapse rate
  – High risk of OD post discharge

• Outcomes:
  – Studies suggest long term (greater than a year) success rates between 5% - 10%
Opioid Use Disorder: Evidence Based Treatment Options

Naltrexone (Vivitrol/Revia):

• Pros:
  – Blocks effects of opioids
  – Not an opioid itself so no dependency concerns
  – Helps reduce cravings

• Cons:
  – Must undergo detoxification prior to implementation to prevent precipitant withdrawal. This heightens risk of treatment abandonment and relapse prior to starting naltrexone.
  – Craving reduction not equally effective in all individuals
  – High attrition rates over time
  – High cost (although mostly covered by insurance)

• Outcomes:
  – Studies suggest high attrition rates: 50% by 3rd month and 75% by 6th month.
Opioid Use Disorder:
Evidence Based Treatment Options

Methadone (Dolophine):

• Pros:
  – Can transition directly from any full agonist opioid to methadone without detoxification
  – Because it is a full agonist it tends to provide better relief to those with stronger opioid and higher tolerance.
  – Long acting, once daily dosing
  – Best choice for patients requiring close monitoring or those who failed Suboxone MAT
  – Cheaper

• Cons:
  – Likelihood of fatal overdose is higher with methadone than with Suboxone.
  – Methadone detox symptoms are severe contributing to lifelong maintenance
  – Can be easily abused and therefore requires closer monitoring

• Outcomes:
  – More severely dependent = better outcomes on methadone
  – Studies suggest lowest attrition rates: 19% by 3rd month and 37% by 6th month.
Opioid Use Disorder: Evidence Based Treatment Options

Buprenorphine/Naloxone (Suboxone/Sublocade):

- **Pros:**
  - Many prescribers coming on line and insurance covers cost
  - Withdrawal relief provided by buprenorphine plus blocking effect of naloxone
  - Long acting partial agonist and safer than a full agonist
  - Naloxone adds additional safety

- **Cons:**
  - Highly Diverted-Requires strong monitoring w/urine testing and strong psychosocial counseling component. Sublocade is a good option for those with diversion behaviors
  - Contrary to some reports, it does produce euphoria, but opioid users do not prefer it over a full agonist.
  - More costly than methadone

- **Outcomes:**
  - Comparable to methadone outcomes.
  - Studies suggest attrition rates at 30-40% by 3rd month and 50-58% by 6th month.
6-Month Attrition Rates by Medication for OUD: CCBH Network

- **buprenorphine**
- **naltrexone**
- **methadone**

<table>
<thead>
<tr>
<th>Medication</th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
</tr>
</thead>
<tbody>
<tr>
<td>buprenorphine</td>
<td>100%</td>
<td>91%</td>
<td>81%</td>
<td>74%</td>
<td>68%</td>
<td>63%</td>
<td>57%</td>
</tr>
<tr>
<td>naltrexone</td>
<td>100%</td>
<td>91%</td>
<td>81%</td>
<td>74%</td>
<td>68%</td>
<td>63%</td>
<td>57%</td>
</tr>
<tr>
<td>methadone</td>
<td>100%</td>
<td>91%</td>
<td>81%</td>
<td>74%</td>
<td>68%</td>
<td>63%</td>
<td>57%</td>
</tr>
</tbody>
</table>

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6-Month Attrition Rates by Medication for OUD: CCBH Network with non-CCBH overlay for Non-MAT
Medication Assisted Treatment

• None of the treatment options presented have exceptional outcomes, but the following are keys to improved success;
  – Early engagement plus active engagement with aftercare provider
  – Counseling/Behavioral Therapy is critical to long term success of any method since medication alone does not resolve the condition.
  – Frequent and random urine drug screening is essential and should consider quantification of positive results as standard practice.
  – Family/support system involvement. Involvement of positive supports is a strong contributor to long term success.
  – Medication assisted treatment with methadone or buprenorphine/naloxone provides the best outcomes, when used in combination with the above, based on current research.
Opioid Use Disorder: Culture Shift and The Arguments

• Culture shift:
  – While educating staff on MAT treatment they had a strong reaction.

• Some Examples of staff comments (both pro and against):
  – “Methadone and buprenorphine are just replacement drugs and the addiction is maintained. Quality of life is lower than total abstinence.”
  – “Giving a replacement opioid to an opioid addict is just like giving insulin to a diabetic” or “no its not...not even close”
  – “The option for MAT allows the addict an ‘easier softer way’ and prevents them from achieving highest quality of life.”
  – “If I had the option for MAT during a rough opioid detox, I would have taken it and not achieved sobriety.”
Opioid Use Disorder: Our Collective Philosophy

- Highest quality of life comes from total abstinence (there are exceptions such as chronic pain for example)
- Not everyone can achieve total abstinence.
- Overdose is a critical concern (including post treatment).
- If an individual dies because we pushed total abstinence, we failed them.
- If an individual survives and obtains quality of life because they utilized methadone or buprenorphine MAT, we have succeeded.
- Those on methadone or buprenorphine MAT may one day achieve abstinence, but this is not necessarily the end goal.
- We have a responsibility to develop science-based tools to help us assess and treat our patients using evidence based practices.
AMA Reduction Timeline (Blue Arrow)

AMA Rates Year over Year

2015: 18.3%
2016: 17.9%
2017: 16.2%
2018: 14.6%
2019: 11.3%
Sep-19: 9.8%
Oct-19: 6.3%

Detox Changes and HOPE Programming
Staff Training
NSS-2 Bridge
X-Ray Scanners
MAT Program
Focus:
Staff Attitudes Meeting Pt needs
Innovations in Outpatient
INNOVATION:
PEAR Therapeutics reSET® and reSET-O®

• reSET® and reSET-O® are the first FDA approved Prescription Digital Therapeutic (PDT) Software designed to treat substance use disorders using a smartphone app that applies Evidenced Based Treatment techniques.

• Implementation steps:
  – Licensed Clinician prescribes reSET® or reSET-O® via enrollment form
  – A patient care specialist contacts the patient via phone and provides the patient an access code
  – Patient downloads and activates the application using the code.
  – Patient uses the app and clinician monitors progress and works with client in therapy
PEAR Therapeutics/Sandoz: reSET®

• reSET is a 90-day Prescription Digital Therapeutic (PDT) for Substance Use Disorder (SUD) intended to provide cognitive behavioral therapy (CBT) in a series of weekly lessons, as an adjunct to a contingency management system, for patients 18 years of age and older who are currently enrolled in outpatient treatment under the supervision of a clinician.
PEAR Therapeutics: reSET-O®

• reset-O is an 84-day PDT for Opioid Use Disorder (OUD) intended to increase retention of patients in outpatient treatment by providing cognitive behavioral therapy lessons, as an adjunct to outpatient treatment that includes transmucosal buprenorphine and contingency management, for patients 18 years of age and older who are currently enrolled in outpatient treatment under the supervision of a clinician.
PEAR Therapeutics: reSET® and reSET-O®

- reSET and reSET-O both offer a clinician-facing application which provides a dashboard displaying information about patients’ use of reSET/reSET-O, including lessons completed, patient-reported substance use, cravings and triggers, medication use, compliance rewards and urine drug screen results.
reSET® and reSET-O® Outcomes

- The abstinence rate (%) by treatment group between weeks 9-12.

- TAU = Treatment as Usual
Resource Table Available:

- There is a resource table available so you can obtain additional information about reSET and reSET-O.

- Note: White Deer Run has no business relationship with the manufacturer of this device other than to purchase and use it with our patients.
  
  We included this device in the presentation because we are piloting it at our outpatient sites and have found it to be an extraordinary innovation in the treatment and retention of substance use and opioid use disordered patients.
INNOVATION:
AppToTo Outpatient Text/Email/Phone Appointment Reminders

• White Deer Run struggled with outpatient engagement and no show rates. This began to improve when we implemented the retention and AMA interventions previously noted.

• The improvement was even more dramatic when we implemented a text/email/phone appointment reminder system by a company called AppToTo. This significantly reduced outpatient no show rates.
Outcomes using AppToTo Text Reminders

No Show Rates Pre and Post AppToTo

Pre-implementation: 23.0%
Post-implementation: 11.0%
AppToTo: Outpatient Text/Email/Phone Appointment Reminders

• Example of a reminder >>>

• In the message, we allowed a confirmation, but quickly learned not to allow a cancellation by text. Patients had to call us to reschedule. Surprisingly, this worked the best.
AppToTo: Outpatient Text/Email/Phone Appointment Reminders

• For more information on the product that we used you can visit:

https://www.apptoto.com/

• Product information is available at the resource table.
Thank You!

– Thank you for taking the time to come to this conference and allowing us to present.

– We are passionate about what we do...not many of us do this, but the need is great and what we all do is critically important.

– We welcome your comments and feedback after the session. Please reach out and introduce yourself to us.

Jeff Thomas
Kieran Pelletier