Substance Use Disorder and Infectious Endocarditis

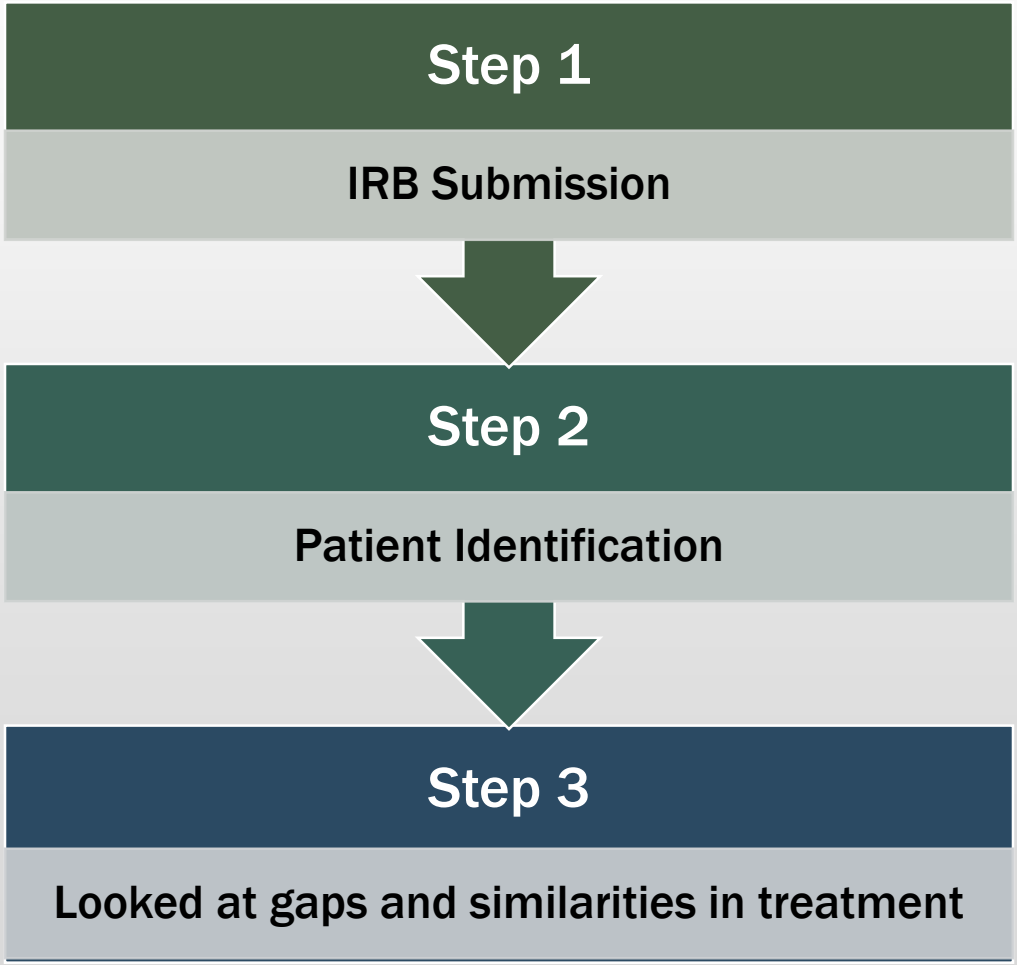
A RETROSPECTIVE STUDY:
2016, 2017, 2018

Why we chose this project

- Saw an opportunity to better serve the Substance Use Disorder (SUD) population.
- Felt a distinct connection with and compassion for this population.
- Wanted to see what Evidence-based Best Practice was for this population.
- Wanted to see system-wide changes in nursing practice and be part of those changes.
- Had the opportunity to join the Evidence-based Boot Camp and gain the Institutional Review Board (IRB) approval while doing a Process Improvement project.

Process Improvement for Change to occur

- IRB Submission (ours required four versions before it was accepted)
- Patient identification with ICD Codes
- Focused on gaps and similarities for patterns and trends



Method of Identification

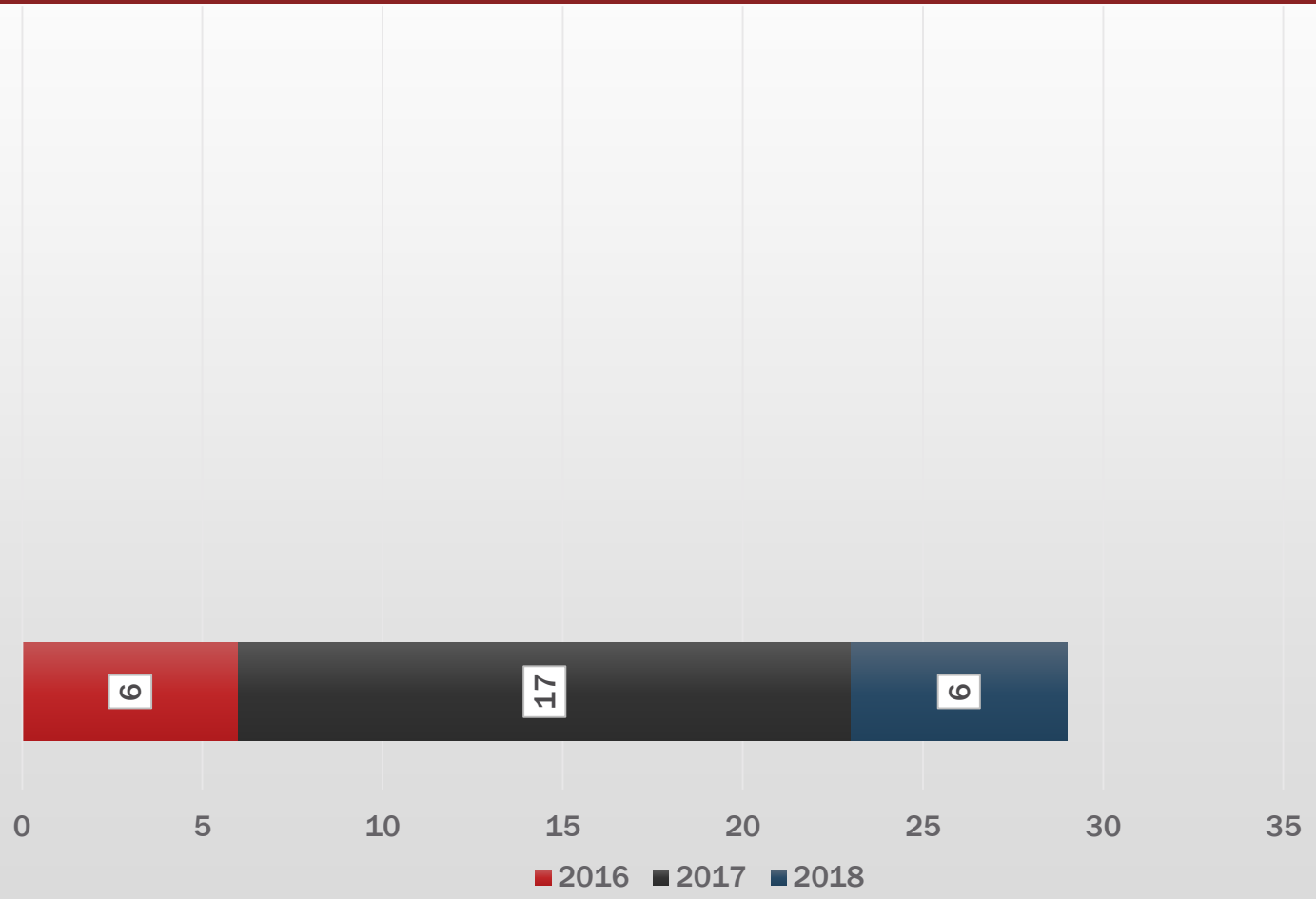
ICD 10 CODES

including type of infectious endocarditis: bacterial, viral and fungal & drug abuse had to be in the EMR to meet inclusion criteria

Other Inclusion Criteria

- Includes all patients from January 1, 2016 to December 31, 2018 admitted to Cardiology A and B
- Total numbers reported take into account multiple admissions for the same patient

Our population: 29 patients total



Breakdown

Other Findings

- Average Age:

  34.4 ± 10.4

- Housing:

Seventeen (59%) patients were reported as homeless on admission.

- Average Length of Stay (LOS):

The average length of stay was 17.03 days ± 20.1 days with a minimum of 2 and a maximum of 93 days.

Types of Valves Involved and Organism Identified

Valves Involved

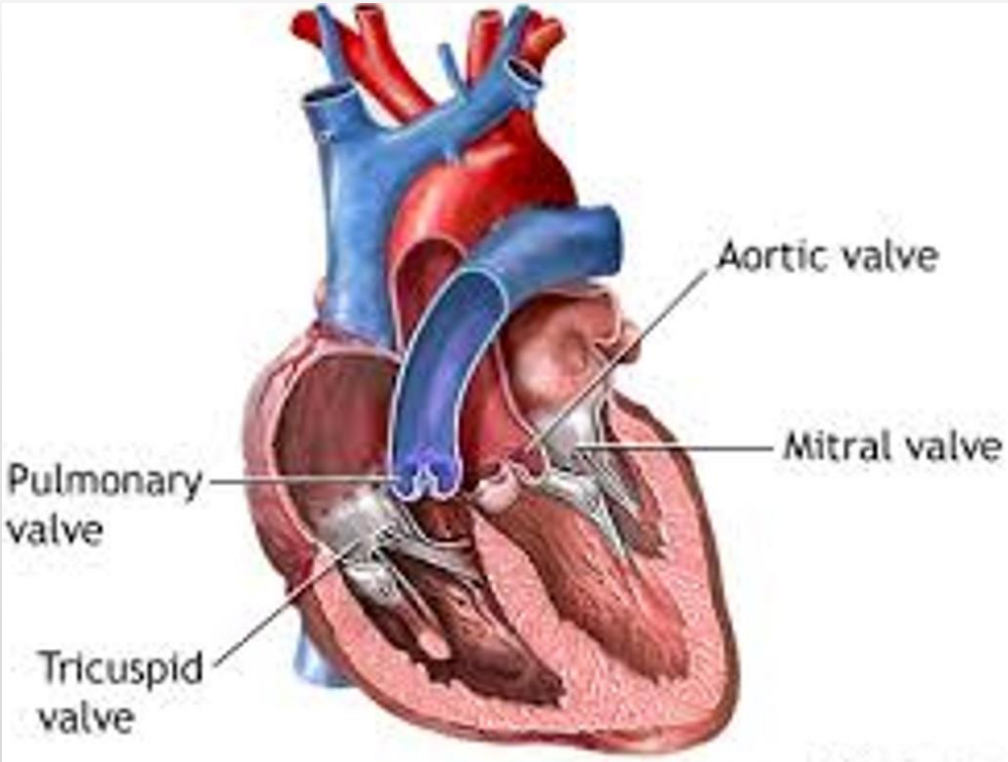
- 4 (14%) aortic valve
- 18 (62%) tricuspid valve
- 0 (0%) had the pulmonary valve
- 3 (10%) mitral valve
- 4 (14%) had more than one valve affected.

Organisms Identified

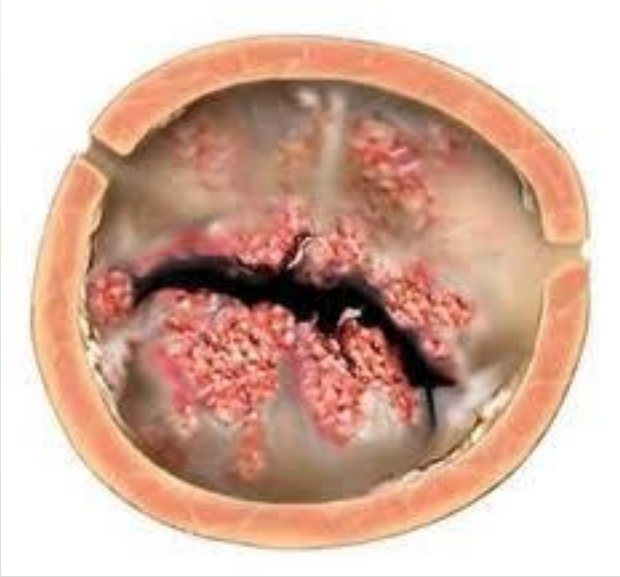
- 6 (35%) Methicillin-Susceptible Staphylococcus Aureus
- 6 (21%) No Organisms
- 6 (21%) Multiple organisms
- 2 (7%) Streptococcus
- 2 (7%) Candida parasilosis
- 1(3%) Methicillin-resistant Staphylococcus Aureus
- 1 (3%) Enterococcus faecilis
- 1 (3%) Serratia marcescens

Heart Valves

Tricuspid was the most commonly infected valve



Infected valve

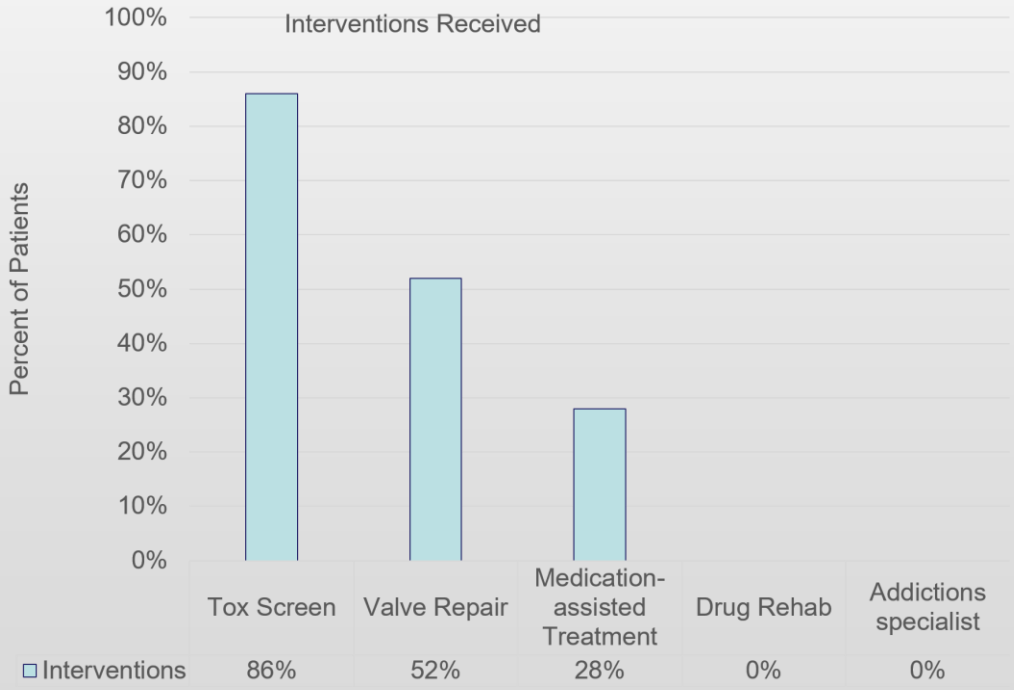


Valve Replacements

- 15 (52%) received valve replacement and/or repair
- 7 (24%) had more than one surgery.

Interventions

Interventions



Noteworthy findings

- A total of 25 patients (86%) had a urine toxicology screen on admission.
- None of the patients in the study received services from addictions provider or addiction-specific team while at PSVMC.
- Only 8 (28%) of patients were discharged on MAT with Suboxone or methadone.
- 0 (0 %) of the sample size went to inpatient substance abuse rehabilitation centers.

Supporting Evidence-Based Best Practice

- Two studies from University of Massachusetts and Oregon Health Science University (OHSU) support a need for a systematic team-based care model.
- Both studies recommend medication-assisted treatment (MAT) for the patient while hospitalized to decrease the drug dependence and continue the MAT at the time of discharge. Medications used include buprenorphine/ naloxone and methadone.
- In addition to the use of medications, a Trauma Informed Care (TIC) model is advised in caring for this patient population. U.S. Department of Health and Human Services, SAMHSA defines trauma as: “Individual trauma results from and event, series of events, or set of circumstances this is experienced by and individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual’s functioning and mental, physical, social, emotional, or spiritual well-being.

Discharge Location

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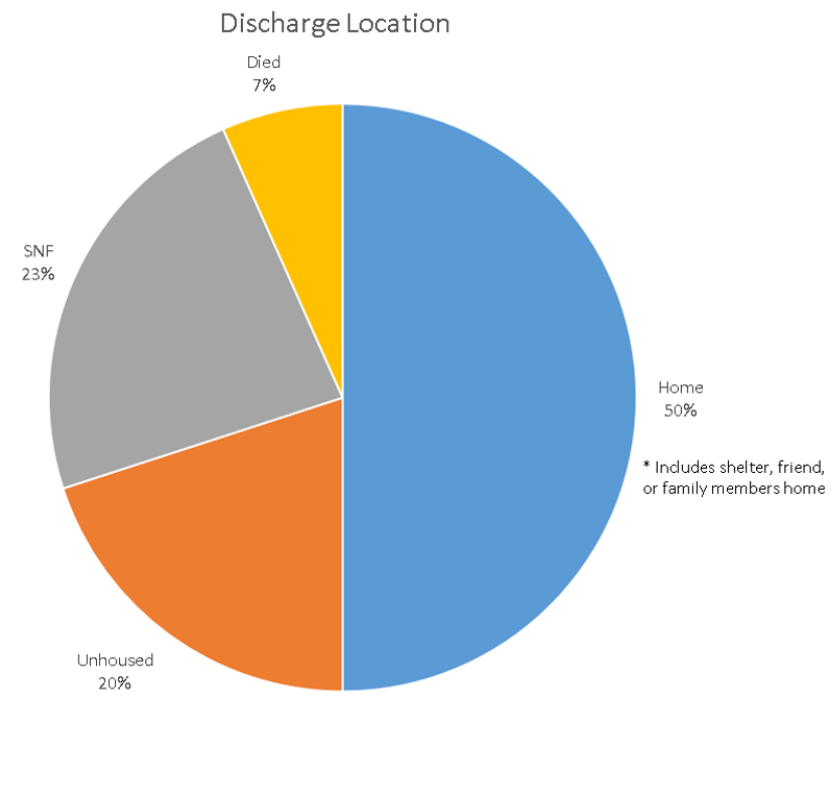


Noteworthy findings

- Fourteen patients (48%) discharged home, which included personal home, friend or family home, or shelter
- 7 (24%) were discharged to Skilled Nursing Facilities
- 6 (21%) were unhoused
- 2 (7%) died
- Of the 29 patients, 5 (21%) left against medical advice regardless of discharge location.

Readmissions

- Readmission was defined as a readmit to any Providence facility within a six-month window following the discharge.
- Fourteen (48%) patients readmitted.

Conclusions

This study identifies gaps in admission screening, in-hospital treatment for drug use, and discharge planning related to SUD patients admitted with IE.

Conclusions

- Not every patient had a urine toxicology screen on admit.
- No current screening tool, risk assessment, or model of care existed for this population.
- No pathway bundle existed.
- No substance use physician was available to prescribe a medicated assisted treatment (MAT) or facilitate a treatment plan upon discharge.
- Gaps in discharge also included no patients discharging to an in-patient drug rehab center.

Recommendations

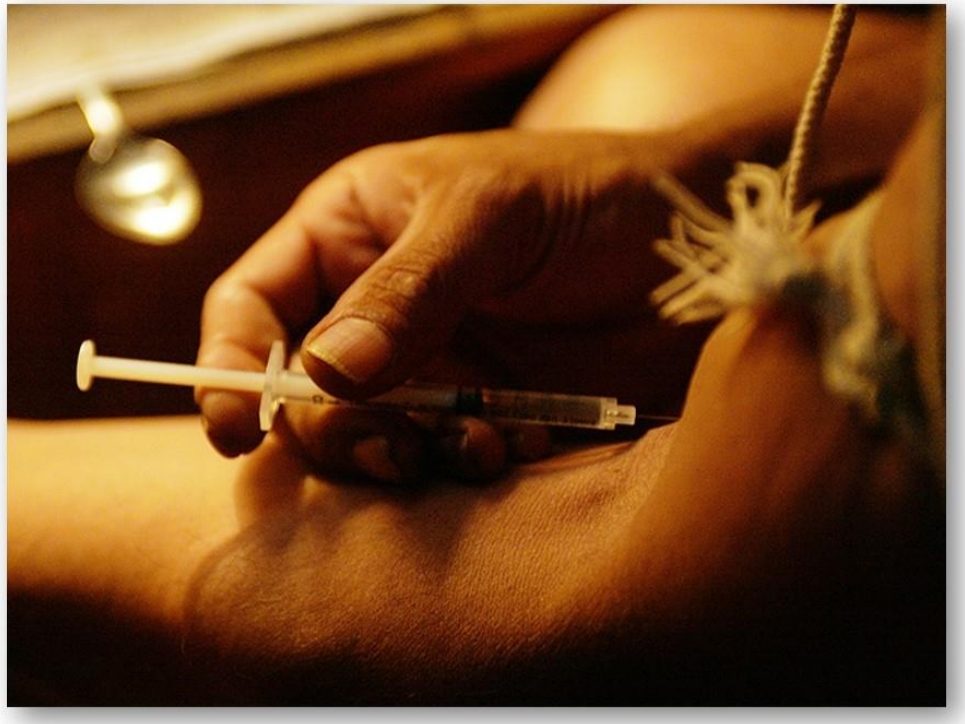
- This study supports the need to improve care for this vulnerable population by developing a systematic team-based care model.
- Recommendations to improve care would be to collaborate with our interdisciplinary team to create a **care pathway bundle** for patients diagnosed with SUD and IE.
- This **pathway bundle** will include *standard care practices* written into policy that will use a screening tool for identifying these patients, TIC education for caregivers, a patient agreement upon admission, urine toxicology screen upon admission, consultation with a substance abuse physician, and close follow up with social work.

Limitations

- Small sample size of 29 patients.
- Chart review process. The study population was found using ICD 10 Codes in the electronic medical record. As a result the study population may underrepresent the number of patients with SUD and IE.
- Missed opportunities include the inability to include social work in reviewing the study population and lack of post-hospital follow-up data.
- Unable to corroborate follow-up care, as many patients did not have strong follow-up care documentation.
- The study only followed our patients for 6 months post discharge.

Phase 1 of Process Improvement moves into Phase 2

Phase 1



Phase 2

- Further research will need to be done once a **Standard of Care** is implemented.
- The research and data would suggest that a best practice standardized approach with an addictions team is warranted, and that addicted patients be treated by this team.

What's happening now

- The Addictions Team
- Substance Use Disorder (SUD) Focus Group
- Trauma Informed Care (TIC) Information Sessions and Awareness for Nursing
- SUD Care Plan Implementation
- Phase 2 on this project would be to establish a Care Pathway Bundle for this population

Substance Use Disorder Care Plan

Patient Name: _____ Date of Birth: _____

Welcome to Providence St. Vincent Hospital. As your care team, we want to provide you with the best and safest care possible. You are being admitted to the hospital for the treatment of a serious infection and a substance use disorder. We see your hospitalization as an opportunity to address and treat your substance use disorder and seek to offer you support and resources while you are here as well as when you are discharged.

Our promise to you:

1. We will provide care to you in a kind, respectful and nonjudgmental manner.
2. We will learn from you your goals for your own recovery.
3. We will provide medication(s) to prevent withdrawal symptoms, if needed.
4. We will help manage any pain issues through routine assessment and re-assessment.
5. We will discuss medication assisted treatment options with you.
6. We will discuss coping strategies with you to help you adjust to being in the hospital.
7. If you smoke, we will offer smoking cessation treatment options to you.
8. If you consider leaving against medical advice, we will work with you to problem-solve your challenges with the goal that you will stay in the hospital for completion of your recommended treatment.
9. We will include friends and/or family members you identify as important people in your care planning.
10. We will partner with you to coordinate available outpatient substance use disorder services.

We understand that stopping substance use is incredibly difficult. In working with other patients, we have learned that hospitalization can be a very challenging time. Some patients (or visitors) have brought illegal substances and paraphernalia into the hospital…placing themselves, other patients and caregivers at risk for harm.

Because we care about you and want to support your safety, we ask that you follow these guidelines to maintain a healing environment at Providence St. Vincent Hospital:

1. Give any drugs, medications, and/or paraphernalia (including syringes) you brought with you to the hospital to a care team member. Any illegal substances will be disposed of safely.
2. Agree for your belongings to be searched upon admission to support your recovery.
3. Tell a care team member when you experience withdrawal symptoms or cravings so we can treat you effectively.
4. Do not use illegal or non-prescribed drugs OR mishandle or inject substances into an IV line. These can be deadly behaviors, especially in combination with prescribed medications.
5. Allow visitors who will support your recovery and who will not bring dangerous substances into the hospital. Visitors are asked to sign-in at the HUC's desk. Visitors who bring illegal drugs into the hospital may be criminally prosecuted.
6. Remain on the medical unit/floor during the hospitalization.
7. Participate in routine urine toxicology screenings.
8. Tell a care team member if you're considering leaving against medical advice so we can learn how we might support you differently. If you do choose to leave, it's important that a nurse removes your IV line.

Further protective measures may be implemented if safety concerns exist:

1. Visitors may be limited or restricted entirely.
2. Additional room or belonging searches may occur.
3. Nurses may ask that you show when you've swallowed medications.

Thank you for trusting us with your care.

_____ _____
Patient Signature Date

_____ _____
Physician Signature Date

Research & Evidence-Based Boot Camp (EBP)

- Phase 2 Identification for Process Improvement
- Nursing needs representation on the SUD Focus Group
- If you see a process that needs improving, EBP is a great way to be proactive

OR, JUST INTERESTED IN…

- Learning more about the research process?
- Obtaining CEU's for the attended sessions (will need to use ONA education fund, swap shifts or attend on own time)?
- Have a unit project in mind and submit for Clinical Ladder (CAL)?
- Working on your CAL? Increase hourly wage and education funds.
- A Research project that looks good on your resume?

Contact Marla London in Nursing Administration


Thank you for listening!
Helga, Sarah & Tina