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Barriers To Recovery For Bangor's Buprenorphine Patients

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BARRIERS TO RECOVERY FOR BANGOR'S BUPRENORPHINE PATIENTS

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PROBLEM IDENTIFICATION AND DESCRIPTION OF NEED

- There are several buprenorphine providers at EMMC's Center for Family Medicine serving the greater Bangor region, an area of substantial opiate use
- Among the patient population of outpatient buprenorphine users, both locally and nationally, there are high rates of relapse (32%) [1]
- In order to decrease relapse rates, it is imperative to conduct a baseline review of the current buprenorphine population to identify specific types of patients who are at higher risk of relapse
- By understanding the barriers to recovery, one can apply an intervention to the current program, targeting this local demographic more effectively
- Future researchers can also use this baseline data as a control group, comparing the intervention to the current treatment model (medication, individual therapy, group therapy)

PUBLIC HEALTH COST OF OPIATES IN MAINE

- **Deadly Crisis**
  - Deaths from heroin overdoses increased from 7 in 2010 to 57 last year (2/3 between ages 20-40) [2]
  - Overdose deaths involving prescription drugs (e.g. methadone, oxycodone, and benzodiazepines) tripled from 51 in 2000 to 161 in 2010 [3]
  - 95% of overdose deaths in Maine involved prescription drugs in 2010 [3]
- **High Rehab Demand**
  - As of 2012, prescription opioids are the second most common substance for which treatment is sought, just behind alcohol [3]
  - 11,518 individuals sought rehab in Maine - 37.19% reported opioids as primary substance [4]
- **Ballooning Costs**
  - Estimated cost of substance abuse in Maine is $1.18 billion, $888 for each Maine resident (crime, deaths, and medical care) [4]
- **Availability Increasing**
  - Heroin is more available, purity levels are increased, street prices have dropped resulting in dramatic increase in heroin addiction across the nation [5]
- **Burden on Crime Enforcement**
  - In 2012, heroin accounted for 8 percent of the caseload for Maine's Drug Crimes Task Force; last year, it jumped to 32 percent [2]
- **Prices Dropping**
  - Today in Maine, a single tablet of oxycodone often costs $50; addicts can find a single-dose packet of heroin for as little as $10 [2]

METHODOLOGY AND INTERVENTION

- **Goal**
  - Develop a descriptive summary of current CFM buprenorphine users to understand the barriers to recovery in the greater Bangor area

- **Methodology**
  - Retrospective chart review of all buprenorphine patients who have filled out both the Recovery Rating Scale and Opiate Craving Survey (n = 32) within the last year (July 2014-July 2015)
    - Summarize key demographic information
    - Report average scores on Recovery Rating Scale and Opiate Craving Survey
    - Trend those patients who have filled out ≥2 Opiate Craving Surveys
  - Conduct interviews with community experts and patients on buprenorphine use

- **Intervention**
  - Presentation of data to the Social Workers and buprenorphine providers at EMMC's CFM
  - Share suggestions for program interventions based on identified barriers to recovery and community/patient perspectives
  - Compile baseline data into excel format for future data manipulation and to allow for use as a control group in future studies
    - i.e. comparing future intervention to the current treatment model

COMMUNITY PERSPECTIVE

Matt Nutt, LCSW – Opiate Addiction Counselor

Center for Family Medicine, Bangor, ME

- Public Health Concerns
  - *"Opiate dependence, when untreated, can result in overdose, medical complications, lack of healthcare coverage, lack of medical /dental care management, decrease in self-worth, decrease population in the workforce, […] and increased burden on public welfare resources."*
- Treatment to Fight Crime
  - *"Many long term users, dependent, eventually end up out of the workforce and in trouble […]. Opioid based replacement treatment are shown to decrease crime rates where treatment is available."*
- Identifying Comorbid Conditions
  - *"[…] there is a higher incidence of Hep C/HIV in the IV using community. When I was working at Acadia's Narcotic Treatment Program, we had a 50% Hep C positive rate with a clinic treatment caseload of approximately 700 clients (mid to late 2000s). Untreated Hep C/HIV often leads to very costly treatment later." I believe screening these individuals and treating them during visits could drastically decrease costs and increase recovery rates.*

Jessica Bloom-Foster, MD – Buprenorphine Provider

Center for Family Medicine, Bangor, ME

- Current Relapse Rates at CFM
  - *"I initially looked at 31 newly enrolled patients in the buprenorphine treatment program from January to June of 2014 and followed their charts to see who met definition of relapse. What we found mimicked the general population of buprenorphine users in that 32% met criteria for relapse.*
- Intervention Ideas
  - *"Based on anecdotal evidence in our buprenorphine population, I think there is room for a study on the role of mindfulness in recovery. I envision the providers hosting a brief educational session on mindfulness at first intake and providing patients with audio files to practice their mindfulness tools once a day."*
- A Role for Providers
  - *"We hope to ultimately show that primary care docs can teach meaningful tools like mindfulness to patients in recovery programs and that these tools can make a substantial impact on their recovery time."*

COMMUNITY PERSPECTIVE

Paula Codrington, LCSW – Opiate Addiction Counselor

Center for Family Medicine, Bangor, ME

- Psychological Hurdles
  - *"Addicts in recovery will take a few steps forward and then one back - relapse is part of the process so it should be considered a challenge not a failure"*
  - *"Often people will get stuck and use the idea that they failed as the reason to keep using and not keep trying to take steps forward"*
  - *"Black and white thinking (all or nothing perspective) makes it more difficult to maintain a path towards recovery"*
- Importance of Self Awareness
  - *"If you are not aware of what is going on in your head and heart and your patterns you can't make change, and without being aware of the patterns, you can't get past the hurdles to recovery"*

Anonymous Patient on Buprenorphine

Center for Family Medicine, Bangor, ME

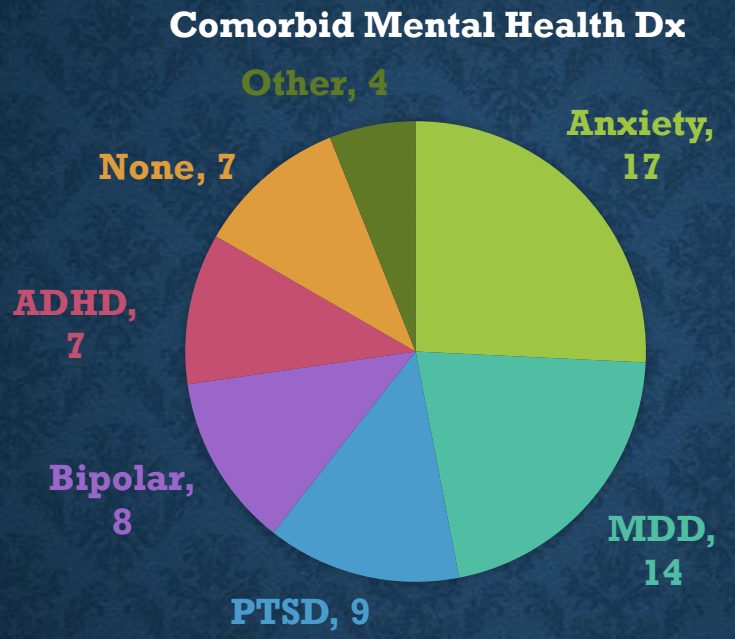
- On Challenges
  - *"Other's people influence [is the hardest part]. My neighbor asked me to help her shoot up heroin and it brought me right back to the feelings I would have before I used. The sweats, anxiety…"*
- On Coping Skills
  - *"I think of my family, husband, animals. I try to keep busy. I used to be really sick and that is why I used. I am feeling better health wise now that I am on [buprenorphine] so I don't feel the need to use. [Also] being around others, having a support system is important. I have learned more to stay away from negative people, like my neighbor. It's important to change social situations."*
- On Group Therapy
  - *"Group is good to learn [coping] skills. Group makes me feel better and I was anxious about that because I have bad anxiety and didn't think I would like group. Music meditation, we did that one, and I liked that. Music is important to me. Doing crafts or coloring which we do sometimes is good to help relieve stress, but it doesn't [always] last. It's like a band aid."*

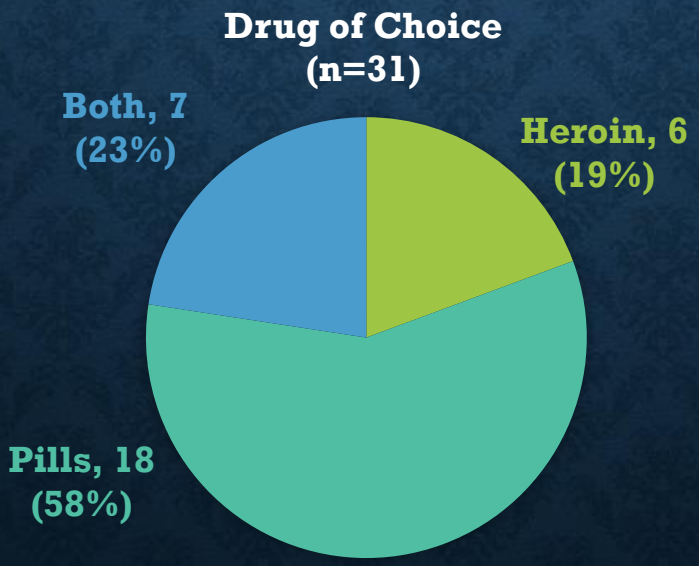
RESULTS

Patient Demographics

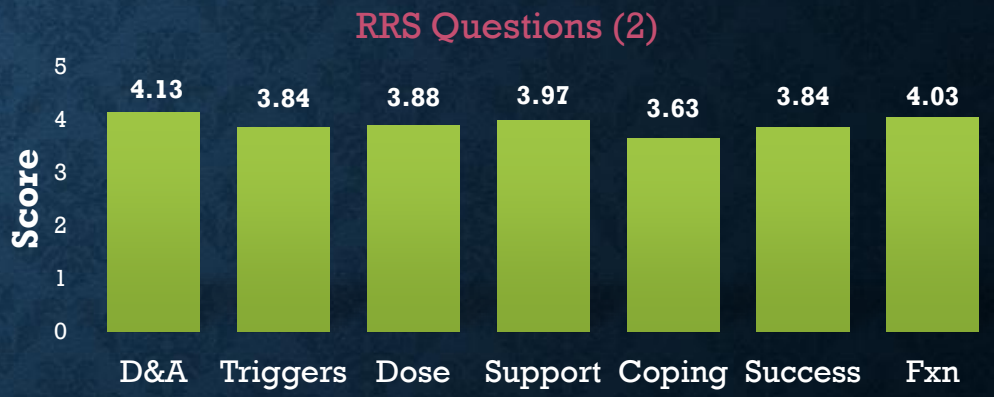
- Sex of Patient (n=32)
  - Male = 7 (22%)
  - Female= 25 (78%)
    - Pregnant = 21 (84%)
    - Not pregnant = 4 (16%)
- Average age = 29.56 (n= 32)
  - Age at 1st opiate use = 19.48 (n=31)
- Comorbid Mental Health Dx (n=32)
  - No = 7 (22%)
  - Yes = 25 (78%)
    - Multiple = 17 (68%)
- Average ACE Score = 5.85 (n=15)
- Previous Recovery Attempts (n=32)
  - No = 13 (41%)
  - Yes = 19 (59%)

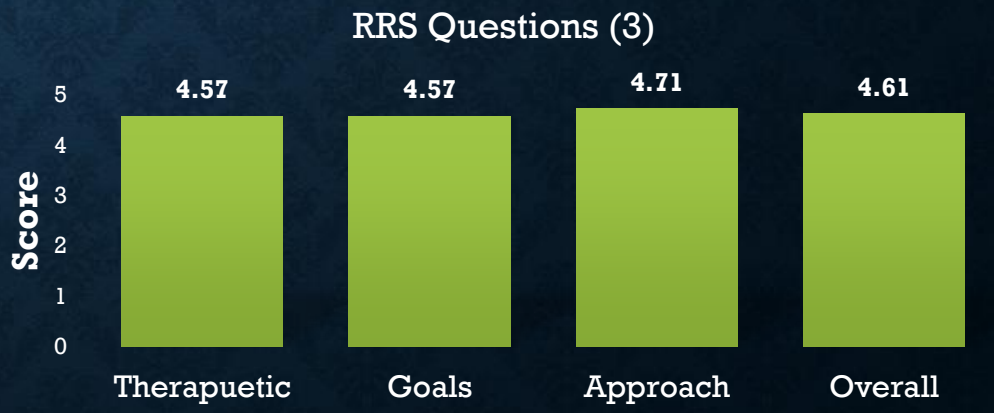
- Key: Pink = Barriers to Recovery





Average Recovery Rating Scores





RESULTS

Evidence of Program Success

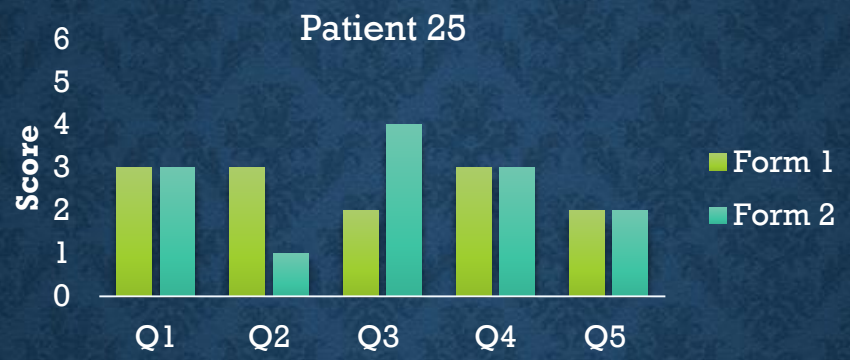
- 3 patients with complete decreased craving scores (**purple stars**)
- On average, low craving scores for patients on medication (**pink**)
- Very high RRS 3 % (**orange**)

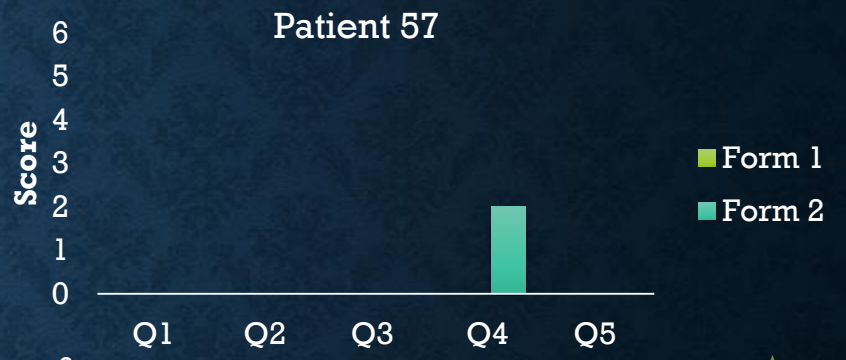
Average Opiate Craving Scores

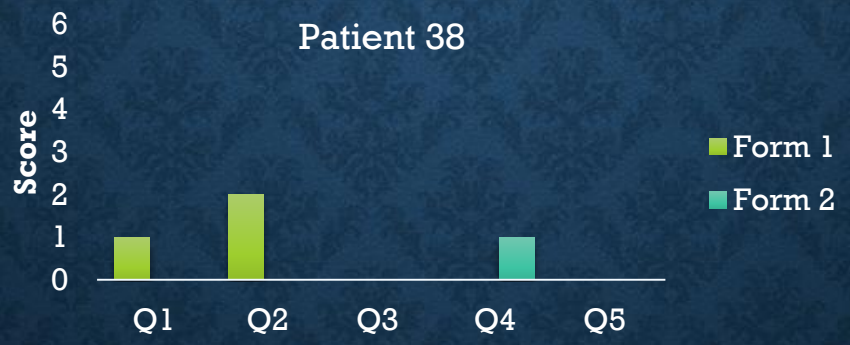
Total Average Scores Per Scale

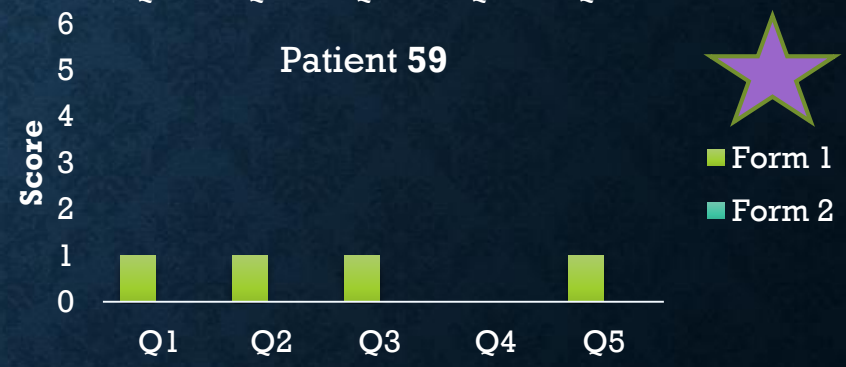
Scale	Average	Max	%
RRS 1	23.34	35	67%
RRS 2	27.31	35	78%
RRS 3	**18.46**	**20**	**92%**
OCS	7.72	25	31%

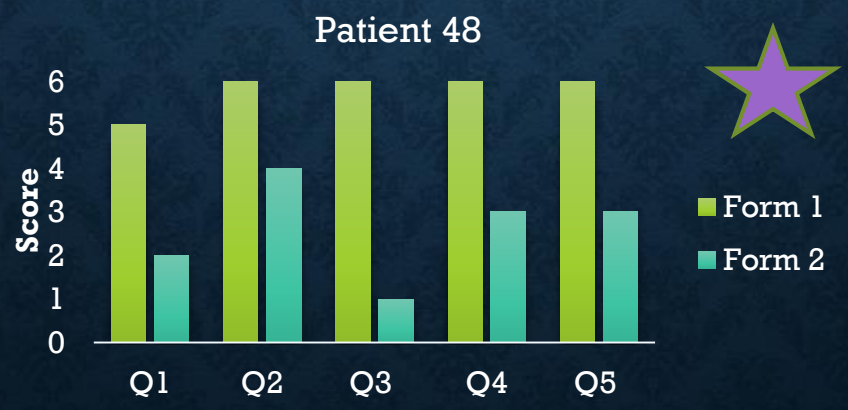
Opiate Craving Trends in Patients Who Completed ≥2 Forms (n = 6)

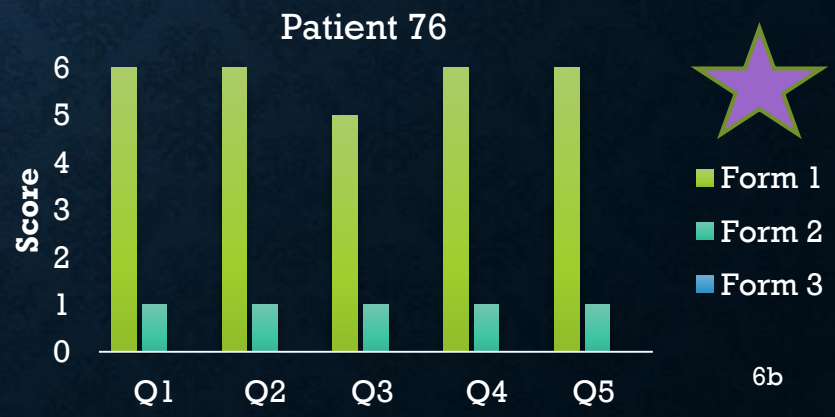












EVALUATION OF EFFECTIVENESS AND LIMITATIONS

- **Effectiveness**
  - Our first aim was to summarize the data set - in this regard we succeeded
  - Given the obstacles we encountered with data integrity, both the LICSWs and providers were pleased with our findings and will use our recommendations for future projects
  - The information compiled for future data manipulation was organized in excel and distributed to the team (see attached)
- **Limitations**
  - Due to the relatively recent distribution of the Opiate Craving Scale, the retrospective chart review yielded a small sample size with a large standard deviation across all measures
    - In order to find any significance in outcomes of treatment, providers will likely need to greatly increase the patient population to include all ~ 200 buprenorphine users in the practice
  - Our evaluation relied on self reported data from a questionnaire, making it difficult to validate patient responses
    - Poor self-esteem, a low level of education, and legal problems are common in opiate users and interfere with self-reporting [6]
    - Corroboration of the data with a second questionnaire, or variations on the same questions, may help increase validity and assess reliability
  - The time interval between initial intake and survey distribution was not standardized and often not recorded
    - Future studies need to standardize specific time stamps for data collection in order to yield significance – analyzing points in time will allow for better trending and more useful data analysis

RECOMMENDATIONS

Barriers to Recovery

- Females make up 78% of the patient population, 84% of whom were pregnant at intake
  - Social stigma, guilt and shame of ongoing drug addiction during pregnancy may pressure the woman into attempting to quit using opiates on her own or hiding the problem until delivery [6]
  - The partner's continued use of opiates can be an insurmountable problem because the woman may be caught in between the need for emotional/financial support with the continued temptation to relapse [6]
  - Treatment compliance and pregnancy outcomes are improved when addiction and obstetrical care are delivered at the same location [6]
  - Recommendation: Key in on these considerations while treating pregnant women in order to decrease relapse rates
- 78% of patients had a comorbid mental illness, and of those, 68% had a diagnosis of $\geq$ 2 mental illnesses
  - Psychiatric disorders are associated with increased physical symptoms such as pain and are associated with increased opioid use [7]
  - Recommendation: Imperative for providers and social workers to focus on treating mental health concurrently
- Average scores for RRS1 (67%) and RRS2 (78%) could be improved across patient population
  - On RRS 1, particularly low scores included answers to questions on stress management, daily physical activity, healthy eating, sleep hygiene, and social support improvement
  - On RRS 2, particularly low scores included answers to questions on triggers and healthy coping skills
  - Recommendation: Future interventions should include a focus on stress management, physical activity, healthy eating, sleep hygiene, social support, triggers and coping skills
    - e.g. a mindfulness program like the one suggested by Dr. Bloom Foster could be one key step toward decreasing relapse rates

RECOMMENDATIONS

Evidence of Success with Current Program

- Very high patient satisfaction with therapy as measured by RRS3 (92%)
- Overall low average on self-reported Opiate Craving Surveys (31%)
  - Recommendation: Continue to provide therapy in combination with buprenorphine as much as possible for the best opportunity at a successful recovery

Additional Ideas and Recommendations for Future Investigation

- Standardize the intake process for all patients receiving buprenorphine, including specific times throughout the treatment at which patients receive the RRS and OCS questionnaires
- Per Matthew Nutt's suggestion, investigate the rates of HCV and HIV comorbidities in order to understand how these patients can be better screened and treated
- Looking at the small sample size of trending OCS responses (patients 25, 38, 48, 57, 59, 76), identify what factors make certain patients more successful via correlation with their RRS and demographic data
- Once local barriers to recovery are fully understood, one could project how well a patient will do in treatment and how likely he or she is to relapse
- Focus investigations on those with previous recovery attempts (59%) and ultimately failed to understand what may have occurred and individualize treatment based on those prior obstacles
- Per Paula Codrington's suggestion, in each patient encounter, focus on psychological hurdles such as all-or-nothing thinking to help patients better understand the progression of recovery

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