The Suboxone Story: Improving Outcomes in Managing Sickle Cell Disease
What is Sickle Cell Disease (SCD)?

- An inherited blood disorder
- Sickle-shaped red blood cells interrupt blood flow by blocking small blood vessels
- *Tissue that has no blood flow is damaged and causes pain, often leading to a pain crisis, organ damage and early death*
Treatments for SCD Pain

Crisis

• Opioids are tradition mainstay of treatment for both acute and chronic SCD pain
• Emerging evidence of poor efficacy and high toxicity/morbidity with use for chronic pain
  • Adverse effects include:
    • Tolerance
    • Dependency
    • Opioid-induced hyperalgesia
    • Worsening of mood disorders
    • Dental decay
    • Constipation
    • Opioid withdrawal
• The new CDC guidelines discourage use of opioids for the management of chronic pain
  • Suboxone (buprenorphine/naloxone) is an options that can be used off-label to treat chronic pain
270mg methadone daily plus 8mg hydromorphone as needed

Took 48mg hydromorphone because he was “tired of it all”

Admitted to IP psych for attempted suicide

Transitioned to Suboxone as an alternative for chronic pain and opioid induced hyperalgesia

Has been off traditional opioids for three years!
42 year old Hgb SS Female, High Acute Care Utilization

- Started on methadone for cyclic withdrawal and chronic pain
- Prolonged QTc on methadone
- Transitioned to Suboxone as an alternative for chronic pain and opioid induced hyperalgesia
  - No Admissions for over a year!
  - Cosmetology school

"SCD team Saved my Life"
What is an alternative to chronic high dose opioids in SCD?
And why we pursued it…
Suboxone
(Buprenorphine / Naloxone)

• Used to treat Opioid Use Disorders for decades
  • Increasingly used off-label to treat chronic pain in patients with opioid dependency

• Proposed to help with opioid-induced hyperalgesia
  • Often seen in SCD patients who have been on chronic high-dose opiates
What Prompted the Need for Change?

- Increased ED utilization
- Increased IP utilization
- Increased length of stay
- Increased no-show rates
- Poor quality of life
- Increased social determinants
- Increased mortality rates

Opioid Crisis – in the News
Accidental overdose rates increasing steadily in the US
Several health & social issues
New CDC guidelines
The Journey Began.....
What was Needed?

Collaboration with the addiction services, ED, CHG and Primary care teams to learn from our success / failures

Small tests of change
- 1 patient, 1 provider
- Learning
- Scale up

Develop strategy to improve chronic pain management in SCD
Aim: To achieve better health outcomes for adults with SCD

Find a Safer Alternative to Chronic High Dose Opioids

- **Goal 1: Reduce reliance on acute care**
  - Reduce quarterly admissions by 20% from 46 to 36 by January 2018

- **Goal 2: Reduce Readmission rate**
  - Reduce quarterly readmission rate by 20% from 65% to 52% by January 2018
Established a treatment algorithm to identify appropriate patients to transition to Subuxone
• >100 MME/day
• >6 ED/Admits/year
• BH comorbid diagnosis

Individualized Pt conversations on risks/benefits of Suboxone treatment

Community engagement (Community Based Organizations CBOs) educated on use of Suboxone for chronic pain and opioid dependency

Provider training on Medication Assisted Therapy with DEA waiver

How did we obtain key stakeholder engagement?
Goal 1: Reduce Reliance on Acute Care

CMC Hospital Admission Rate

- UCL 41.1
- CL 25.1
- LCL 9.1
Goal 2: Reduce Readmission Rates

CMC Readmission Rate

UCL 64.55%
CL 36.27%
LCL 7.99%

2016 Q3 2016 Q4 2017 Q1 2017 Q2 2017 Q3 2017 Q4 2018 Q1 2018 Q2 2018 Q3 2018 Q4

CMC Readmission Rate
How do these outcomes impact Atrium Health Primary Enterprise?

Estimated **668** bed days saved and **$524,567** in cost avoidance!

**111** admissions (70 readmissions) avoided in the past year.

To improve Health, elevate Hope, and advance Healing – for all.
To improve **Health**, elevate **Hope**, and advance **Healing** – for all.

**WE WILL BE DIFFERENTLY BETTER AS ONE BY:**

**GROWTH**
Growing as the most **connected** and **convenient** system of care
- Build upon world-class specialty service lines
- Deliver the primary care and on-demand services consumers want
- Create the next generation regional network

**VALUE**
Excelling at delivering **high-value**, **person-centered** care
- Improve the health of at-risk populations
- Enhance community health and benefit in partnerships with others
- Improve our value for teammates, their families and for employer partners

**AFFORDABILITY**
Increasing the **affordability** of care for our patients
- Deliver effectiveness and efficiency by practicing to the highest clinical standards
- Streamline operations by identifying and minimizing the 8 wastes*
- Strengthen our integration as **ONE** system by reducing silos

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**10th ANNUAL Quality & Patient Experience SHARING DAY**

**IT STARTS WITH YOU.**

**Atrium Health**
Many Thanks to the Amazing Team

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Questions?