An Innovative Approach to Address Serious Consequences of Opioid Substance Use Disorder

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Conflict of Interest Disclosure

- Conflicts of interest for contributor:
  - Ann Quinlan-Colwell is a paid member of the speaker bureau for non-branded education for Mallinckrodt Pharmaceuticals.

A conflict of interest is a particular financial or non-financial circumstance that might compromise professional judgment. Anything that fits this should be included. Examples are owning stock in a company whose product is being evaluated, being a consultant or employee of a company whose product is being evaluated, etc.

Taken in part from "On Being a Scientist: Responsible Conduct in Research". National Academy Press, 1995.

Objectives

- Participants will be able to:
  1. Identify at least 3 serious medical complications of IV SUD
  2. Describe the process through which an innovative intervention was developed to support and assist patients in this group
  3. Identify and describe the multi-modal interventions to best support and assist this group of patients
  4. Identify challenges that exist in providing support and assistance to these patients
Background

- Epidural abscess
  - August and November 2011
- Endocarditis
  - February and June 2012
- Strep bacteremia
  - February 13, 2014
- Abscesses, Cellulitis and Rhabdo

Commonalities

- Very ill
- Physiologically - invasive bacterial infections
- Emotionally/ psychologically
- Long term need for IV antibiotics
- History of IV substance use disorder
- Concern for outpatient IV antibiotics
- Ethical concerns
- Poor psychosocial inventory
- Lack of out-patient support

Interventions

- Holistic – Integrative – Person-centered Approach
- Addressing primary health care diagnosis
- Antifungal therapy
- Pain Management
- Substance Abuse Counseling
"Endocarditis Work Group"

- Two cardiovascular surgeons
- Infectious disease (ID) physician
- Cardiology administrator & nurse manager
- Behavioral Health Administrator
- Substance abuse counselor
- Pharmacist
- Social worker
- Case manager
- Pain Management CNS

A focus group was formed

Exploration of
- The problem
- Options
- Resources
- NHRMC
- Community

Endocarditis Work Group Members
Unique Opportunity for Sobriety

- In "drug-free" environment
- Dramatic motivation
- Time for contemplation
- Professionals willing to help
  - Multi-modal pain management
  - Transition from benzodiazepines & amphetamines
  - Substance abuse counselling
  - Healing Arts
- No transportation or financial constraints

Aim

- Identify and develop a process to:
  - work with
  - help
  - support
  - control pain
- Engage patients in their care
- In-patients who are
  - hospitalized for extended periods of time
  - with serious medical conditions
  - which resulted from IV substance use disorder
Data for NHRMC re:

- 875 patient community hospital
- Level 2 Trauma Center
- Serious Infections and SUD
  - 2011: 8
  - 2012: 13
  - 2013: 24
  - 2014: 46
  - 2015: 56

Sought Information

- Community Substance Abuse Treatment Options
  - Buprenorphine provider
  - Addictionologist
- Community Resources
  - Mental Health
  - Outpatient PT & OT
  - Vocational rehab
  - Support groups
- Medical Center Resources
  - Code Outreach physicians
Membership Expansion

- Cardiovascular Surgeons
- Infections Disease MD
- Cardiology Director and 2 Nurse Managers
- Case Manager for Cardiology
- Behavioral Health Director
- Code Outreach MDs
- Pharmacist
- Substance Abuse Counselors
- Pain Management CNS

Re-designing to Fine Tuned Group

- Autumn of 2016
- SOS Team
  - Code Outreach MDs
  - Dedicated MSW, LCSW
  - Substance Abuse Counselors
  - Cardiac Nurse Manager
  - Pain Management CNS
  - Pharmacist
  - Social Work Supervisor
  - Case Management Manager
- Focus
- Re-name to

"COST"

- Code Outreach Special Team

Evolved into

- Code Outreach Safety Team
Current Members

- Physician Advisor
- LCSW
- Substance Abuse Counselors
- Case Management
- Pain Management CNS
- Social Worker supervisor
- Nurse Manager Cardiology
- And the TeleSTAFF

As needed

- Pharmacist
- Healing Arts
- Infectious Disease
- Behavioral Health staff
- Hospitalists
- Cardio thoracic surgeons
- Spiritual care
- Physical Therapist

Patient Challenges

- Patients who are pre-contemplative
- No PCP
- Low education level
- Patients actively using substances while hospitalized
- Patients who are ready for change have:
  - Lack of support or negative support
  - Lack of transportation
  - Lack of insurance coverage
  - Limited or no financial support
  - No employment
  - Low education
  - Poor or no coping skills
Staff Challenges

- Unique patient issues and needs
- Not prepared
- “Splitting” and mixed messages
- Scheduling
- Burnout
- Need for guidance

Community Resource Involvement

- Discharge planning
- Treatment Centers
- Methadone
- Suboxone
- “12 step calls” through AA community
- Coastal Horizon Representative in ED
- PORT Human Resources
- RHA Mental Health Services
- Medication Assistance Program
- Vivitrol

Supportive Community Activities

- Opioid task force,
- Harm reduction coalition,
- STOP ACT
  - Extend standing orders for naloxone to community-based organizations and protect these organizations from civil or criminal liability
  - Allow local public funding to be used to purchase syringes for syringe exchange programs
  - Mandate that prescribers and dispensers check the Controlled Substance Reporting System before prescribing or dispensing targeted controlled substances
  - Mandate the use of electronic prescription, with some exceptions
**Mission**

- Using an integrative multidisciplinary team approach to engage patients with history of IV SUD who need extended hospitalization for medical complications of IV SUD to participate in care to promote optimal physical and mental wellbeing within a safe environment.

**Current COST Process**

- The team meets weekly to evaluate their process and revise the individual plan of care.
- Multi-disciplinary, multi-modal, holistic approach.
- COST order set.
- COST note documented in EMR.
- Consistency of message among team members with the patients.
- Sobriety is encouraged and supported.
- Patient education (pain, SUD, non-pharm interventions, sobriety)
- Staff are supported in best ways to intervene.
- Team acts as a conduit to assess patients for various disciplines.

**COST Order Set**

- Standard orders for diet
- Antibiotic orders
- Analgesic Orders
- Teles-sitter
- Consults for:
  - Pain Management CNS
  - Healing Arts
  - Substance Abuse Counselor
  - Behavioral Health
Pain Management

- Pain is controlled using multi-modal approaches including:
  - Opioid medications
  - Non-opioid medications
  - Non-pharm interventions
- Generally as healing occurs, there is a plan for weaning opioids.
- Whenever possible, outpatient follow up is arranged and coordinated during hospitalization.

Non-pharm interventions

- Tai-chi
- Yoga
- Massage
- Distraction
- Art therapy
- Art making
- Problem solving
- Therapeutic Touch
- Music therapy
- Recreational therapy
- Behavioral modification

Important Co-incidental Sequale

- Substance Abuse Education Classes
- NA and AA meetings (since 3/15/17)
- Yoga
- Tai chi
Opioid dependence and overdose have increased to epidemic levels in the United States. The 2014 National Survey on Drug Use and Health estimated that 4.3 million persons were nonmedical users of prescription pain relievers (1). These users are 40 times more likely than the general population to use heroin or other injection drugs (2). Furthermore, CDC estimated a near quadrupling of heroin-related overdose deaths during 2002–2014 (3). Although overdose contributes most to drug-associated mortality, infectious complications of intravenous drug use constitute a major cause of morbidity leading to hospitalization (4). In addition to infections from hepatitis C virus (HCV) and human immunodeficiency virus (HIV), injecting drug users are at increased risk for acquiring invasive bacterial infections, including endocarditis (5, 6). Evidence that hospitalizations for endocarditis are increasing in association with the current opioid epidemic exists (7–9). To examine trends in hospitalizations for endocarditis among persons in North Carolina with drug dependence during 2010–2015, data from the North Carolina Hospital Discharge database were analyzed. The incidence of hospital discharge diagnoses for drug dependence combined with endocarditis increased more than twofold.

Communicable Disease Center

▶ Scope of Problem

▶ Between 2010 – 2015 in NC

▶ Hospital discharge dz of “drug dependence” + endocarditis increased from 0.2 per 100,000 to 2.7 per 100,000 (12 fold increase)

▶ Hospital costs for these patients increased from $1.1 million in 2010 to $22.2 million in 2015 (18 fold increase)
COST Data

- Age
  - 22 – 59

- Gender
  - Male 40
  - Female 18

- LOS Range
  - 13 – 62 days

- Substance Use in hospital
  - 12

- Family participation
  - 24 of 58

- Medication Assistance Therapy
  - 12 buprenorphine
  - 7 methadone
  - 1 naltrexone

- Expired
  - 4 during hospitalization post discharge
  - 4 post discharge

Future

- Education of all clinical medical center staff
- COST Nursing Plan of Care
- Expand interactions with community treatment centers
- Increase Healing Arts availability
- Grant funding
- Medical Center providers for buprenorphine & naltrexone
- Supervised sub-acute dual diagnosis environment
- Increase community behavioral health provider options
- Increase buprenorphine prescribers at medical center
Community Activities

- Medication Assistance Programs
- Behavioral Health Services
- Clean Needle Exchange Program
- Naloxone
- Social Justice Activities