Improve *Clostridium difficile* SIR by Limiting Inappropriate Testing

**Background**
- The risk of transmission of *Clostridium difficile* (*C. diff*) from asymptomatic carriers or symptomatic carriers with low probability of infection can be minimized with reliable compliance on standard precautions. Testing patients who have a low probability of *C. diff* infection (CDI) results in false positives, unnecessary treatment, isolation, and additional expenses to the patient.
- Penalties occur when any one or more of the measures in the infection domain are worse than the median or 50th percentile for *C. diff* Standard Infection Rate (SIR). In Q3 CY 2015 UTSW performed at the 72nd percentile for *C. diff* SIR.

**Aim Statement**
- Reduce *C. diff* SIRs from .95 (CUH) and 1.0 (ZL) to .92 by June 2017.

**Interventions**
- **C. diff order laxative question** (initiated Nov-15 and modified May-16): Have laxatives, stool softeners or enemas been administered in the last 48 hours? With a response of ‘yes’, the ordering provider is required to provide an explanation.
- **BPAs (Best Practice Advisory):** Implemented September 2016
  - **BPA 1:** Alert if patient has had a laxative or stool softener administered in the last 24 hours
  - **BPA 2:** Alert if patient has had a negative *C. diff* PCR result in the last 7 days
  - **BPA 3:** Alert if patient has had a positive *C. diff* PCR result in the past 12 weeks
- **Nursing cancelation of active orders >24 hours:** Nurses may discontinue an active *C. diff* order if no specimen has been collected within 24 hours and the ordering provider indicates in the order that the order may be discontinued.

**Results**
- Decreased *C. diff* SIR from 1.20 (Q1-Q3 CY 2015) to 0.67 (Q1-Q2 CY 2017) at CUH.
- Process changes observed: 1) Nov-15 and 2) Dec-16

**Analysis**
- 2016 UTSW HO *C. diff* Attribution Types
  - 93.20% Laxative
  - 97.30% Colonization
  - 63.00% Specimen Delay
  - 3.00% <3 liquid stools
  - 100.00% Tube Feed

**Lessons Learned/Next Steps**

**Lessons Learned:**
- By addressing the most common cause of extraneous *C. diff* testing, UTSW significantly reduced the *C. diff* SIR and subsequent burden of treatment.

**Next Steps:**
- **Kefir BPA Build and Go-Live:** The administration of Kefir was identified as a low risk opportunity to help resolve recurrent CDI. The BPA would fire for patients with a history of *Clostridium difficile* on systemic antibiotics.
- **Monitor Interventions:** Monitor behavior charts to detect signals of process instability.
- **Transition of Responsibilities:** Hand off SWAT team responsibilities to eventual process owner.

**Kefir BPA**
- A laxative use account for 63% of hospital onset *C. diff*. Process improvement efforts will be most effective if the ‘vital few’ causes are addressed first.