

BACKGROUND

Data collected over a year period from April 2016 to May 2017 revealed a total of 18 infiltrates with harm on the inpatient surgical/trauma floor. Almost all infiltrates occurred from continuous intravenous fluids (IVF). 33% of the patients affected were under the Orthopaedic service and 66% of those patients received continuous IVF preoperatively. We sought to reduce this rate by implementing the use of bolus IVFs for this select population of patients.

A multidisciplinary team of nursing, Orthopaedic FLOCs, and Anesthesia utilized improvement methodology to develop a Quality Improvement project focusing on administration of an IVF bolus rather than continuous IVF.

Global Aim

To eliminate harm from PIV infiltrates in Surgical and Trauma patients

OUTCOMES

The team first proved that no infiltrations in preoperative Orthopaedic patients occurred due to bolus fluids (see below image). As a result of increasing bolus fluid usage, the overall infiltration rate decreased from September 2017 to June 2018. Next steps include a plan to spread this work to other patient populations.

Actions and Process

June 2017: Project Charter developed

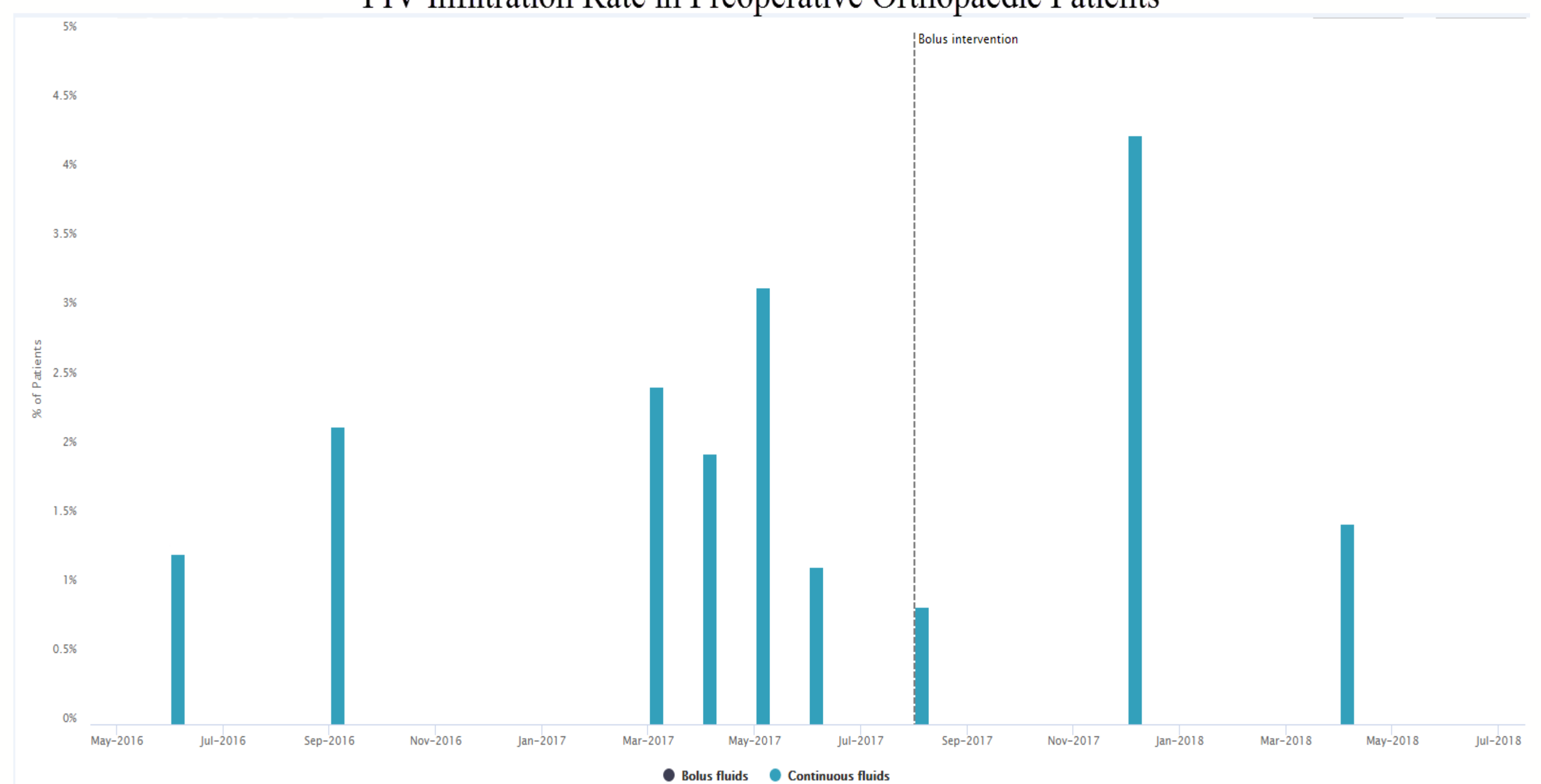
June - July 2017: Multidisciplinary meetings to review PIVIE driver diagram, developed and planned test of change including communication plan

July 2017: Education for RN staff and FLOCs

September 2017: Implementation of bolus project

September - October 2017: Second round of individual nursing education

PIV Infiltration Rate in Preoperative Orthopaedic Patients



4East/South QI Project to Decrease PIV infiltrates From Continuous IVF

*** This is ONLY a project it is NOT a policy or practice change. Please have a conversation with the NP or MD to see if your patient is a good candidate ***

Background:

84% of PIV infiltrates for FY17 happened while continuous IVF were running. 33% occurred in the Orthopedic population.

4E/S will be running a Quality Improvement Project aimed at decreasing PIV infiltrates. The driver we hope to influence is increased timely assessments.

Scope (target population):

Orthopedic patients that are NPO for Orthopedic procedures that meet specific criteria identified by a multidisciplinary group see below:

Patients who's continuous IVF may be held, and May be a candidate for an IVF bolus:

- Supracondylar and Humerus Fractures
- SCFE
- Ankle, Tib/Fib fractures
- Patients undergoing an I&D procedure

Patients that should NOT receive an IVF bolus and should be on continuous IVF:

- Non-orthopedic patients
- Traumatic injuries (ex. Poly-trauma)
- Femur fractures
- Patients with significant Co-morbidities (ex: diabetes, POTs, cardiac, bleeding disorders)
- Risk for significant blood loss

**Process for initiating IVF Bolus:

1. RN must have a discussion with the NP or MD if the patient is a good candidate!
2. Ortho NP or MD will place following orders for bolus and urine output
3. Bolus order will be: LR bolus at 20mL/kg with a max of 1000 mL at 2200 the night prior to the surgery or procedure
4. Urine output orders will be: Notify the team if urine output is <0.5ml/kg/hour
5. Monitor I&Os! Adequate hydration status is important pre-op or pre-procedure. View I&Os in the "Intake/Output" tab in EPIC
6. It is NOT acceptable for a patient to have no IV hydration overnight

Monitoring:

7. We will monitor IV infiltrate rates and monitor any adverse outcomes related to this practice change

We are happy to hear your feedback or concerns!!

Corinne Sermania, RN 12128
Jaclyn Lanciano RN 21424
Kelly Ryan NP 17788

Kaila Wiand NP 20269
Roni Robinson NP 10650
Annette Norton NP 21411

Pre-bolus intervention infiltration rate 1.04%

Post-bolus intervention infiltration rate 0.96%

IMPACT

The plan following the outcomes is to spread this work to other Orthopaedic patient populations and then to patients in other surgical divisions