

Venous Port Education Model: Decreasing the Days Between the Order for Port-A-Catheter Placement and Placement

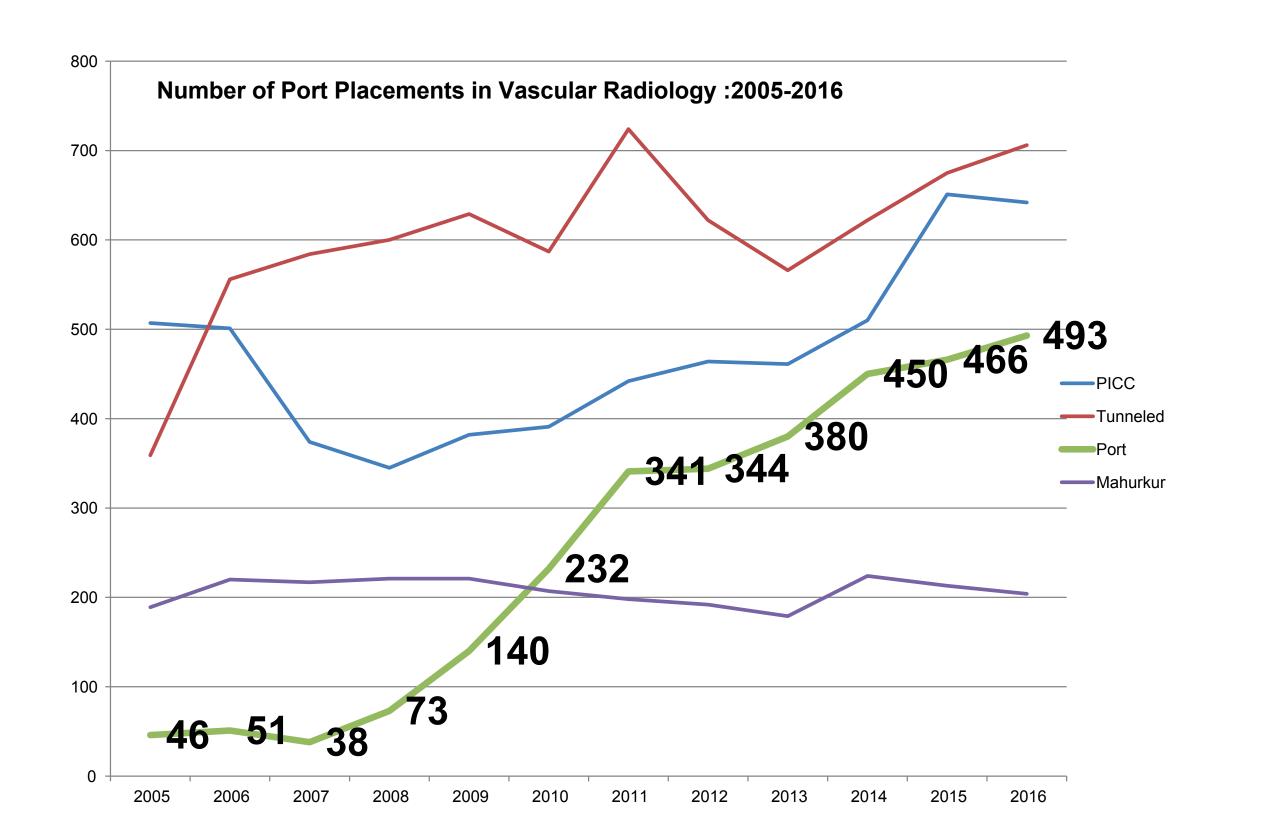
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Background

Within Interventional Radiology(IR), the number of Port-a-Catheter placements has grown rapidly in the last 11 years, from 46 placed in 2005 to 493 placed in 2016 (Figure 1). This number is expected to rise. Patients require pre-placement education. This increase in the number of patients needing education has become a problem for both the providers of this education and the patients receiving the education. In the current model, the appointment for Port-A-Catheter placement cannot be scheduled until the required education is completed.

Quality Gap: If the required pre-placement education is not provided in a timely manner, the procedure for port placement can be delayed. This delay can lead to patient/provider frustration, decreased patient satisfaction and delay of needed care. Some treatments cannot be initiated until the port is placed. Multiple specialty areas provide education throughout the patient's path of care. The education is not standardized across these specialty areas.



Define

Our team utilized the Define-Measure-Analyze-Improve-Control (DMAIC) framework while completing this project.

A multidisciplinary team with representatives from IR, Radiology Value Creation Unit, Medical Oncology, Infusion Therapy, Chemotherapy and Patient Education was assembled to focus on the entire path of care for patients who have a Port-A-Catheter placed in Interventional Radiology.

Key stakeholders included:

IR team: Interventional Radiologist, Nurse Practitioner, Nurse Manager, Registered Nurse

Oncology team: Nurse Practitioner, Nurse Manager and Scheduling Manager Nursing Education Specialist

Infusion Therapy Center Nurse Manager

Chemotherapy Registered Nurse

Radiology Administration Operations Manager

Quality / Education Specialist

Key stakeholder input can be summarized by the following:

Reducing the time between the order for a Port-A-Catheter placement and the actual placement will enhance patient satisfaction and overall patient experience. The main reason for dissatisfaction is the number trips/ days required for the entire port placement process. This project will also create a new best practice for port education that will lead to a positive, uniform and safer patient experience for individuals that have ports placed by IR.

Goal Statement

o reduce the number of days between the order for Port-A-Catheter placement and placement from an average of 7.0 days to an average of 5 days or less without negatively impacting the overall patient satisfaction score by November 30, 2016.

Potential Project Impact:

- Reduced patient care delays, which may positively affect patient outcomes
- Standardized education across multiple departments
- Improved efficiency and effectiveness of patient flow across multiple departments These potential impacts align with Mayo Clinic's Strategic Goals of Integration and its primary value of "The needs of the patient come first".

Measure

Baseline Measurements: Sample size for both measurements: 65 patients

- Days between the order for a Port-A-Catheter placement and its placement in IR (order time stamp in the EMR to the scheduled appointment time in IR for lacement) (Figure 2).
- Counterbalance Measure: Patient Satisfaction Survey; Voice of the Customer: The patient satisfaction survey was used for multiple purposes; Demographic data, identification of potential gaps in educational content and method of delivery and the patient's overall satisfaction with the education process. (Figure 3).
- Additional data collected: (Figure 4)
 - Reasons for Emergency Room visits for patients with recent Port placements
 - Frequently asked questions by patients with a newly placed Port
- % of patients that had to return for an additional day for education

Analyze

Using data analysis and brainstorming, the team looked for gaps that could be

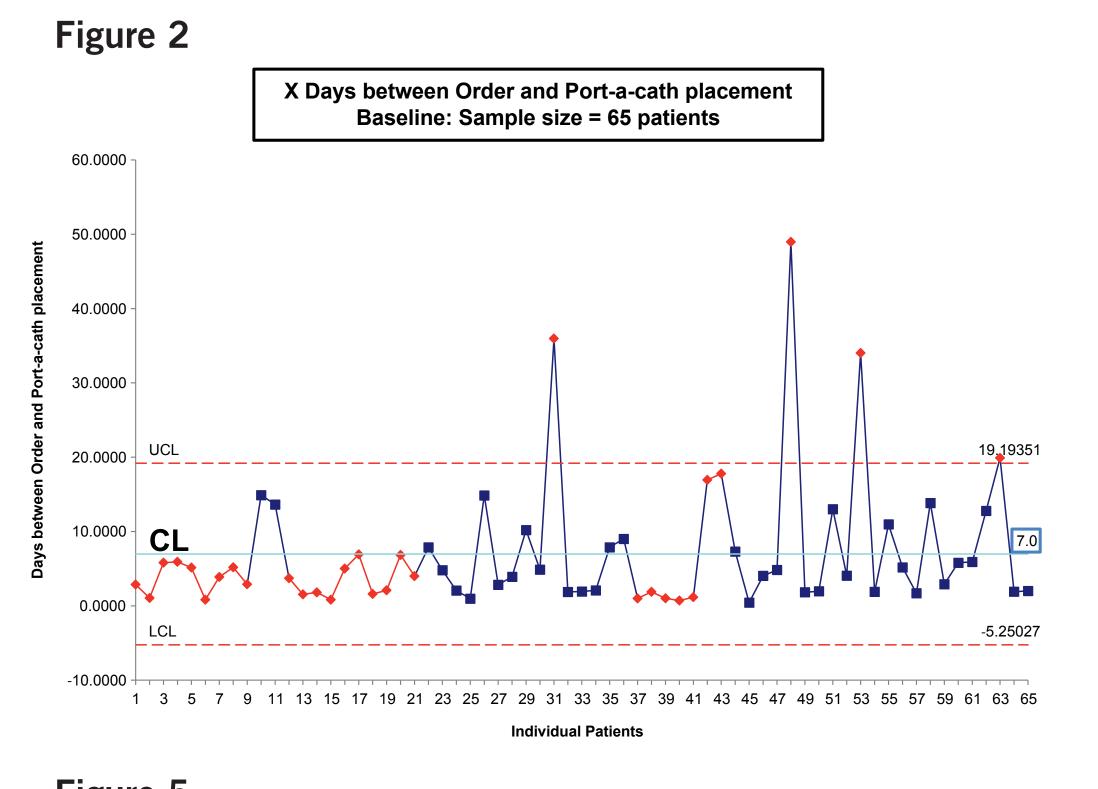
Data from the Patient Satisfaction Survey revealed the following gaps:

- 49% of patients identified lack of comfort with caring for their port at home
- Comments from the survey identified the following gaps
- Lack of take-home information / training on caring for their Port-A-Catheter at
- RNs in each area were not confident they could answer all the patient's questions as they were not familiar with other department's processes

Process-related gaps

- No increase in IR nursing staff / port education slots to match increase in volumes
- Due to wait times / extra days before the education appointment, patients frequently skipped this appointment
- If a patient skipped the education appointment, IR nursing had to educate the patient before the placement which caused delays. Ideally education should be done 24 hours in prior to the administration of conscious sedation.
- Patients received segmented education that was not standardized across medical specialties.
- Our best opportunity to reduce the number of days between the order for a Port-A-Catheter and placement would be to look for opportunities to provide the education as close to the time of the order as possible.
- Pareto analysis of Ordering Providers showed that 35% of the orders for Port-A-Catheter placement come from the Oncology GI Blue Care Team. (Figure 5).

Baseline Measurements



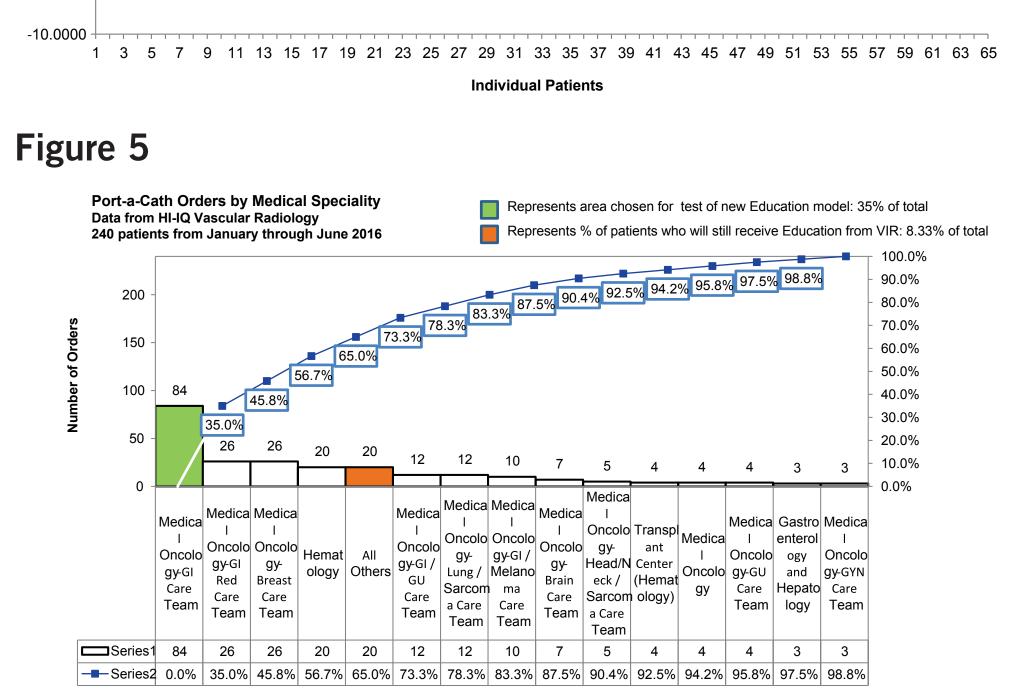


Figure 3: Overall, are you satisfied with the education you received before your Port-A-Cath placement? **Pre-Intervention All Patients**

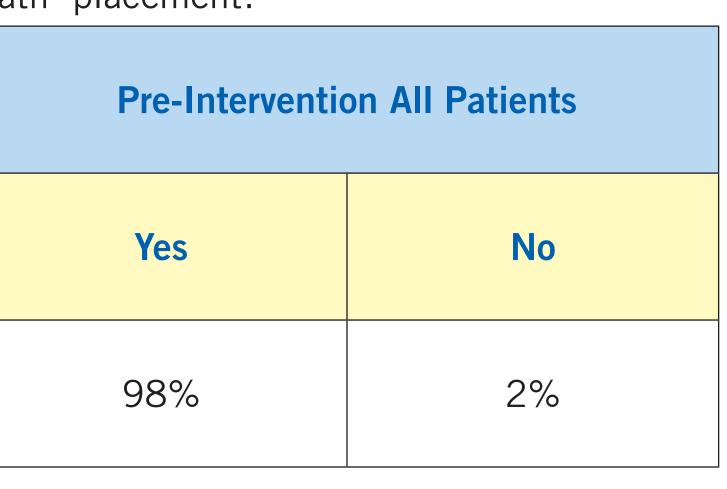


Figure 4

Number one reason for ED visits: Question of infection

Most frequently asked questions:

- How do I care for my Port-A-Catheter at
- How do I know if I have an infection?
- 49% of patients returned for an extra day for the education appointment.

Results

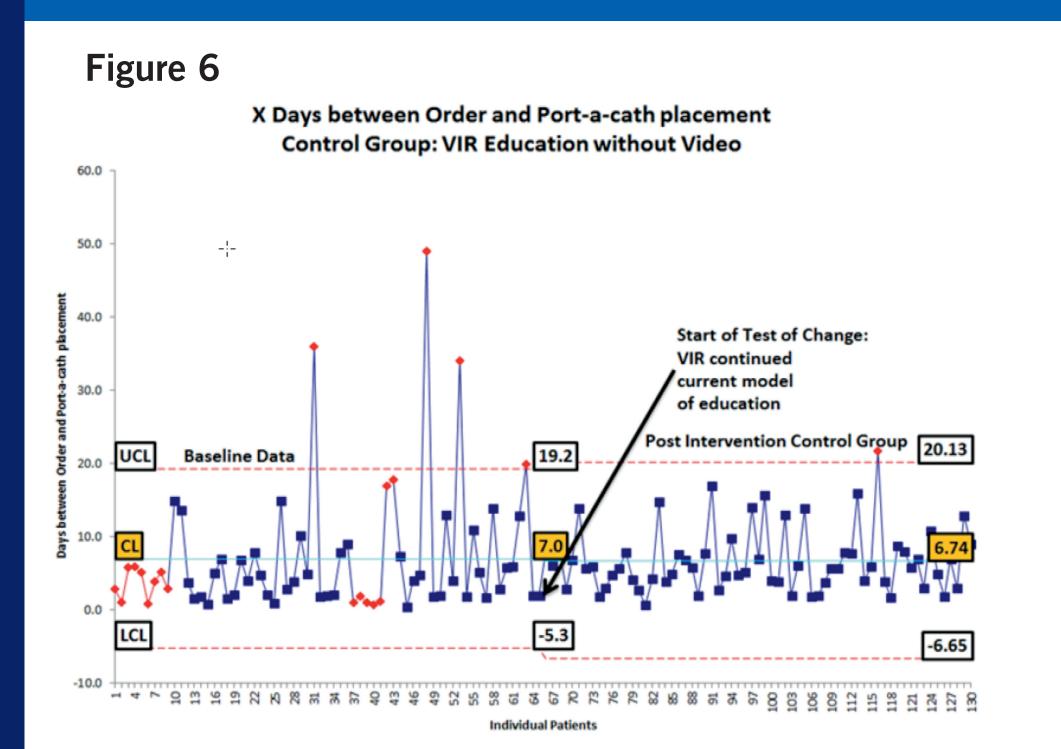


Figure 8: Overall, are you satisfied with the information you received before your port placement

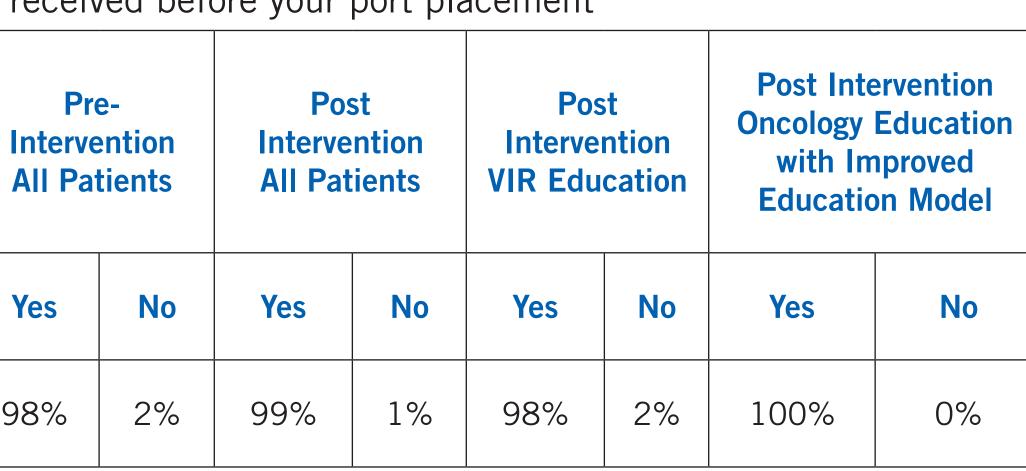
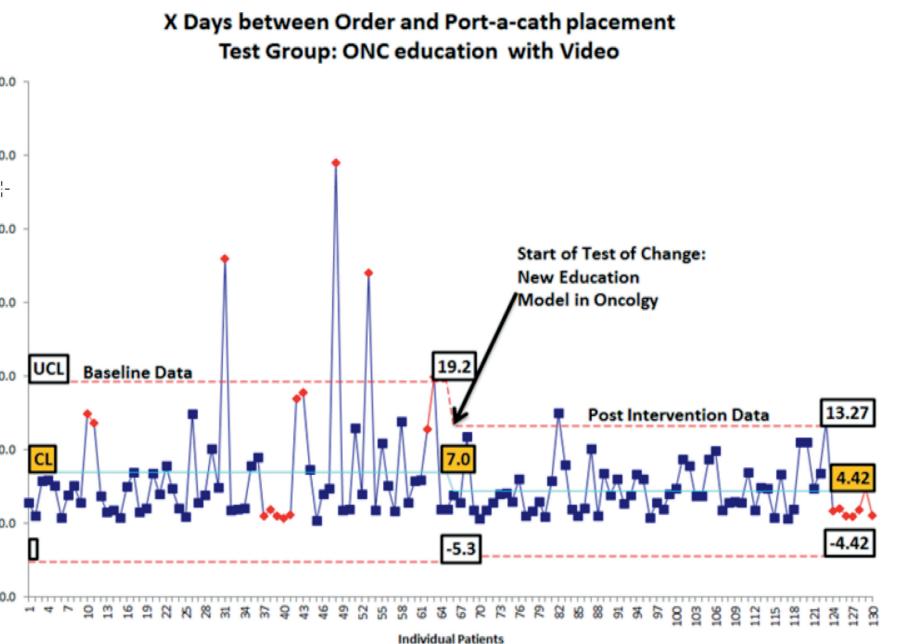
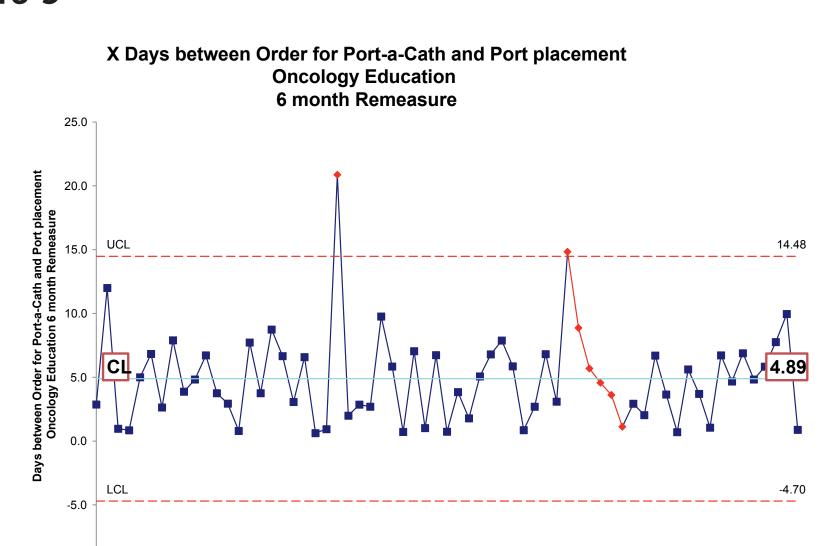


Figure 7 X Days between Order and Port-a-cath placemen Test Group: ONC education with Video







1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65

Improve

The Oncology GI Blue Team was identified as the test group for the following reasons:

- 35% of the orders originate from that group
- Oncology RNs currently provide the education for Chemotherapy immediately after the patient's initial consult with their oncologist
- Oncology RNs are able to combine the Chemotherapy and the Port-A-Catheter education appointments into one appointment time

Control Group: Education by IR-current process: (Figure 6)

Test Group: Education by Oncology Blue GI Care Team using the changed education model based on the Voice of the Customer: (Figure 7)

Sample Size: 65 patients pre and post intervention for both groups.

Changes evaluated during the test of change

patients from both groups. (Figure 8)

Sample Size for Patient Satisfaction Survey: 65

 Port placement education done with Chemotherapy education by the Oncology GI Blue Care team

- Education done using newly created "Living With a Port" DVD to standardize education across multiple care givers. Chapters also address the concerns identified by the patient.
- Chapter 1: Introduction to a Port
- Chapter 2: Implanting a Port
- Chapter 3: Removing or Replacing a Port
- Chapter 4: Accessing a Port
- Chapter 5: Deaccessing a Port
- The patient watches Chapter 2: Implanting a Port. Flip chart used to reinforce education.
- The patient receives their own copy of the "Living with a Port" DVD for home use.
- Only 20% of patients need to return for an extra day for education (reduced by 29%)

Control

- Project results were shared with the Radiology Quality Oversight Subcommittee, Vascular Radiology Operations Group and Oncology Clinical Practice Committee.
- Project results supported the decision to transition the education appointment to Oncology.
- Lunch and Learn sessions to educate Oncology RNs on port placement
- Electronic order for Port-A-Catheter placement and Medical Oncology nurse education appointment were
- Patients receiving education in Oncology receive their appointment for Port-A-Catheter placement as soon as the education is completed
- All Care Teams in Oncology are providing the education prior to Port-A-Catheter placement
- Radiology IR RN staff will still provide education to 8.33% of the total number of patients who have ports placed in IR Living with a Port is now available on the Patient Education
- most viewed videos. The DVD received a Bronze award at the 2017 National

Channel for in-patient viewing and is ranked #17 out of 300

- Health Information Awards.
- Remeasurement of the days between occurred 6 months post implementation (Figure 9)

Lessons Learned

- Thinking systemically and including stakeholders from outside of Radiology led to a customer focused solution.
- Listening to the Voice of the Customer and acting on their suggestions is a very positive experience for both the patients and the stakeholders.
- Quality patient education presented in the right format, to the right audience, at the right time, can have a positive impact on patient satisfaction, patient learning, and healthcare efficiency, which can lead to better patient outcomes.
- Focusing the content of the DVD on patient concerns was a huge patient satisfier.

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