

Re-Engineered Discharge Vascular Pathway (REDVP): An approach to improving quality of care transition of patients with peripheral arterial diseases



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Introduction & Background

- Peripheral Artery Disease (PAD) is a chronic disease that can have devastating outcomes if not managed efficiently
- Patients who have undergone lower extremity bypass (LEB) for PAD are a significant consumer of healthcare resources (Siracuse et al., 2014; Wang et al., 2017)
- Hospital discharge affected by patients with PAD undergoing LEB due to lack of understanding and preparation for the self-care role (Dalley et al., 2020)
- Poor quality of care transition for LEB can result in decreased patient satisfaction, increased LOS and increased readmission rate (Damrauer, Gaffey, DeBord Smith, Fairman, & Nguyen, 2015; Siracuse et al., 2014; Wang et al., 2017)

Purpose & Aims

The purpose of this quality improvement (QI) project was to create a pathway using evidenced based intervention and streamline the LEB discharge process.

Aims:

- Increase the overall quality of care transition score
- Increase the satisfaction of patients
- Decrease hospital length of stay (LOS)
- Decrease 30- day readmission rate

Evidenced – based Intervention

- Clinical practice guidelines (CPGs) and clinical pathways offer a structured approach to transitioning care
- RED toolkit developed at Boston University and endorsed by AHRQ is an accessible and comprehensive resource that optimizes the discharge process

Methods

Design: A two group pre- and post-intervention
 Settings: 30-bed inpatient step-down vascular surgical unit at a 900-bed non-profit academic tertiary hospital
 Sample: Convenience sampling, patients admitted after LEB from October 2020 to December 2020
 Procedure: Utilizing an adapted RED clinical pathway, called Re-Engineered Discharge Vascular Pathway (RED-VP)
 Outcome measures: Care Transitions Measure (CTM ®-15), 4-item satisfaction survey, Hospital LOS, 30- day readmission rate

Results

- 21 patients who underwent LEB surgery participated
- 11 patients were assessed during the pre-intervention phase and 10 patients received the REDVP intervention
- Overall median CTM 15 score, 73.3
- Satisfaction rates increased, 73% to 100% (p= 0.02)
- Pre-intervention group, 90.9% had a hospital LOS > 7 days compared to the intervention group, 40% (p = 0.02)
- 30-day readmission rate was higher among the pre-intervention group (18%) compared to intervention group (10%)

Clinical Outcomes		Pre-intervention Group (n = 11)	Intervention Group (n = 10)	P- Value
Overall quality of care transition scores, Median (IQR)		66.7 (53.3, 66.6)	100 (78.8, 100)	0.0001
Hospital Length of stay	Less than 7 days	1 (9.1 %)	6 (60%)	0.02
	More than 7 days	10 (90.9%)	4 (40.0%)	
30-day readmission rate		2 (18.0%)	1 (10.0%)	0.54

Limitations

- Large inner-city hospital where many resources were reallocated to meet COVID-19 needs
- Advanced practice providers took on an extra role by acting as a clinical coordinator and delegator of the task outlined in REDVP
- Small sample size (n=21)
- Small group of providers

Conclusion and Dissemination

- REDVP works for optimizing discharge flow for lower extremity bypass surgery
- REDVP decreased variations in essential elements of discharging a patient home; medication reconciliation, wound care, scheduling follow up appointments, reviewing written discharge plan, contacting caregivers, scheduling outpatient services, and obtaining necessary medical equipment
- Dissemination
 - Results will be presented to providers, leaders and the interdisciplinary team in a formal presentation
 - Training of providers and staff of REDVP will continue within the step-down vascular surgery unit and incorporated into other vascular surgery procedures

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