

# Reducing Readmissions for Vascular Surgical Site Infections at West Virginia University Medicine Heart and Vascular Institute – a Multidisciplinary Quality Improvement Project

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### BACKGROUND

Surgical site infections (SSIs) are a leading cause of postoperative readmissions and extended recovery in vascular surgery patients. Per review of Vascular Quality Initiative (VQI) database, between July and December 2023, SSIs accounted for 17% (8 of 46) of readmissions at West Virginia University Ruby Memorial Hospital.

### SMARTER OBJECTIVE

This quality improvement project seeks to address this issue by implementing a standardized SSI prevention bundle and enhancing postoperative wound care education with the aim of reducing readmissions due to surgical site infections on vascular surgery patients who underwent an operation with a groin wound by 5% over a 6-month period (Dec 2024 – May 2025), with progress evaluated monthly.

### IMPROVEMENT ACTION PLAN WITH ACTIONS TAKEN

A multidisciplinary team—including quality data managers, vascular surgery nursing leadership, surgical trainees and vascular surgery staff—developed wound care kits tailored to wound types: one for open wounds and one for closed surgical wounds.

A discharge education plan was also established to improve patient adherence to wound care protocols.

Educational materials were created at a sixth-grade reading level to address health literacy barriers and were distributed to nursing staff for review with patients prior to discharge.

### RESULTS

The wound care kits were assembled at a unit cost of \$12, containing essential supplies such as gauze, tape, wound cleansing solution, gloves, non-adherent dressings, and a suture removal kit (Fig. 1). Two educational handouts at a sixth-grade reading level were also distributed.

### SCALE UP PLAN

Create, distribute, and promote an orderset for wound patients to include diabetic education and consultation, nutrition consultation, and assessment and optimization of comorbidities that increase the risk of wound healing complications.

### SUSTAINABILITY PLAN

This project is scheduled over a 6-month period and includes updates to previously used educational materials and ordersets which will remain available at the conclusion of the project.

### LESSONS LEARNED

Smoothing pain points and points of failure with non-standardized regimens of educational materials and supplies, prepared in advance.

The development of a shared mental model of the key steps of postoperative care

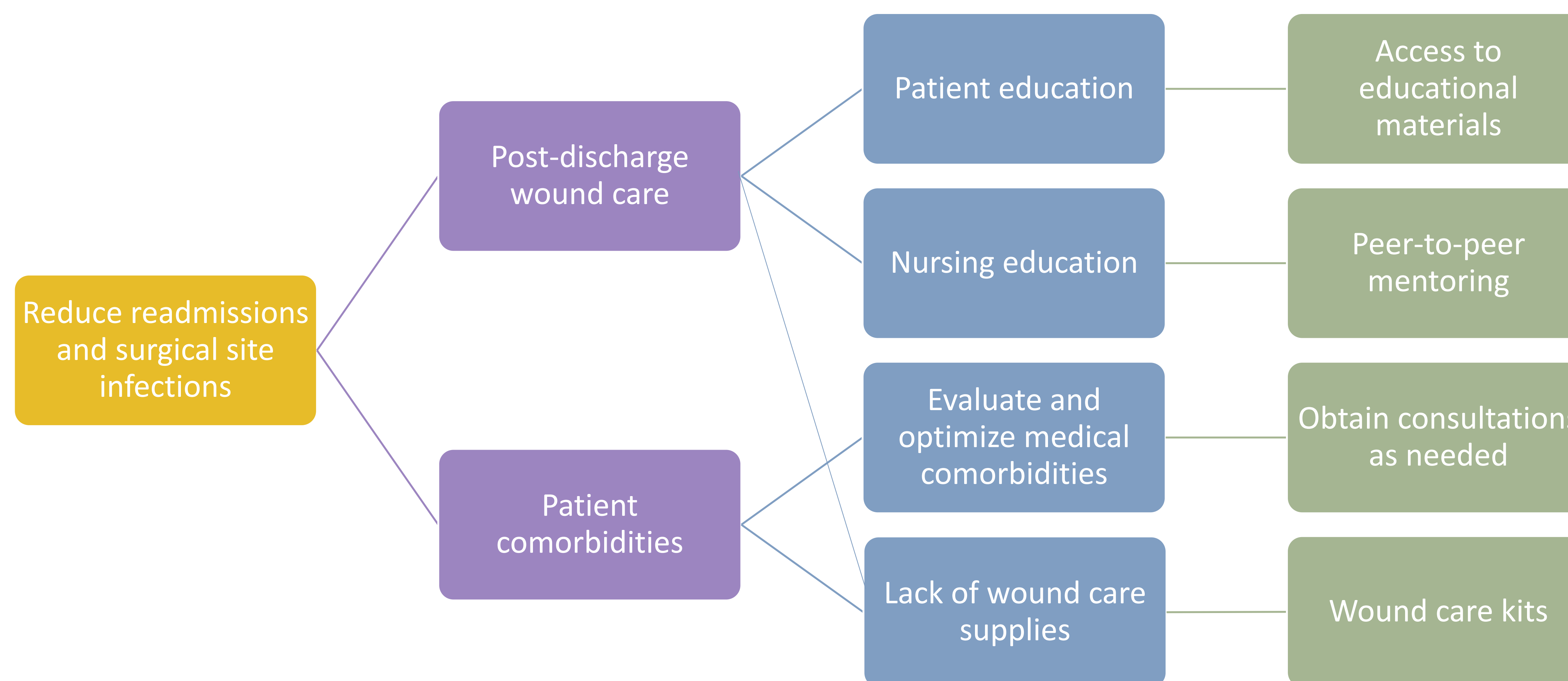


Fig 1. Wound care kit

Fig 2. Driver diagram