Optimization of the Surgical Residents’ Educational Experience.

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The surgical skills taught to Lehigh Valley Health Network’s (LVHN) surgical residents during skills laboratories are the foundation for a successful surgeon. Nationally, only 66% of surgical residents are considered ‘autonomous’ by the time they graduate (Frangou, 2017). On a four-step Zwisch scale, residents needed to reach the third stage (‘passive help’) to be considered meaningfully autonomous.

The purpose of this quality improvement project is to increase surgical residents’ engagement in skills labs by creating structure and accountability. The goal is to restructure, condense, and standardize the optimal educational experience, which can lead to better quality of care and health outcomes at decreased costs.

**INTRODUCTION**

- The surgical skills taught to LVHN surgical residents during skills laboratories are the foundation for a successful surgeon.
- Nationally, only 66% of surgical residents are considered ‘autonomous’ by the time they graduate (Frangou, 2017).
  - On a four-step Zwisch scale, residents needed to reach the third stage (‘passive help’) to be considered meaningfully autonomous.
- The purpose of this quality improvement project is to increase surgical residents’ engagement in skills labs by creating structure and accountability.
- The goal is to restructure, condense, and standardize the optimal educational experience, which can lead to better quality of care and health outcomes at decreased costs.

**METHODS**

- **Preparatory Research**
  - Collaboration with surgical education center administration, doctors, and residents.
  - Surgical education center observations.
  - Analysis of current methods of teaching LVHN residents and the available laboratory materials.
- **Curriculum and Literature Analysis**
  - Current schedule, pre-laboratory modules/reading, tasks, and post-laboratory evaluations.
  - Previous attendance at skills labs.
- **Attendance System Implementation**
  - LVHN badge swipe enters resident into attendance log stored on the ‘intranet.’

**OUTCOMES**

- Figure 1: Badge-sweep event screen
- Figure 2: Example of a structured skills lab

**Conclusion**

- Investing in the foundation of surgical residents’ skills will enhance the quality of care at LVHN.
- Initiative addresses the ‘Triple Aim’.
  - Optimal Educational Experience.
  - Better Quality of Care and Health Outcomes.
  - Decreased Costs.
- Attendance system is easy to track.
  - Organized system will hold residents accountable to each skills lab.
  - Low cost and accessible from LVHN’s Intranet.

**Future Implications**

- Basis for further study.
  - Lack of time put a constraint on measuring outcomes:
    - Will these initiatives lead to an increase in attendance?
    - How will this effect residents’ confidence and skills proficiency in the operating room?
- Analysis using post-lab evaluation forms can be used to demonstrate initiative’s effectiveness.
- Mobile applications can be used by attendings to give timely, constructive feedback to residents.
- The next step is to link evaluations of the skills lab to the attendance system using The Learning Curve (TLC) online database.

**References:**