

## Ensuring Proper Administration of Subcutaneous Heparin in Post-Operative Cardiothoracic Surgery Patients.

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# Ensuring Proper Administration of Subcutaneous Heparin in Post-Operative Cardiothoracic Surgery Patients

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## Purpose

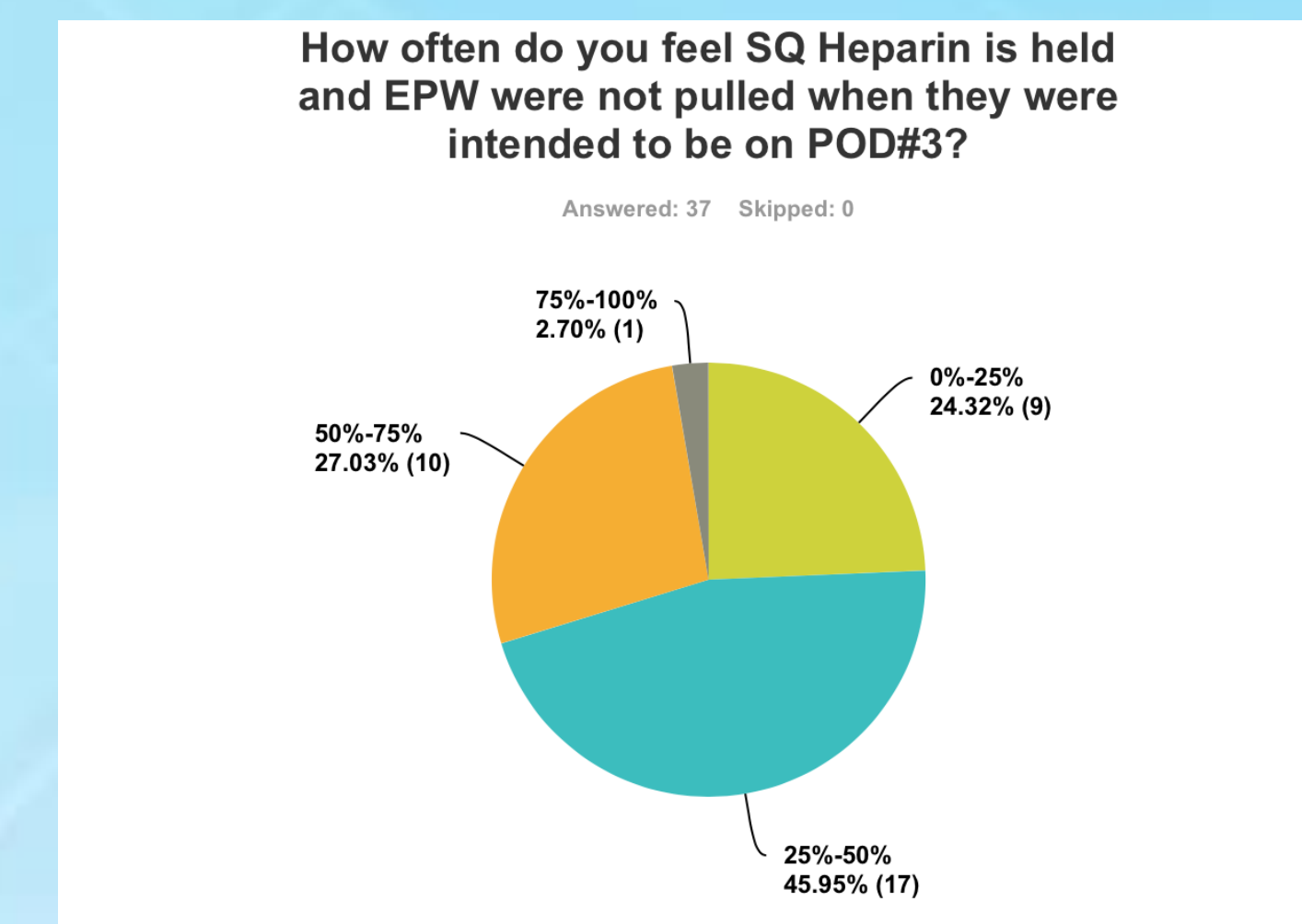
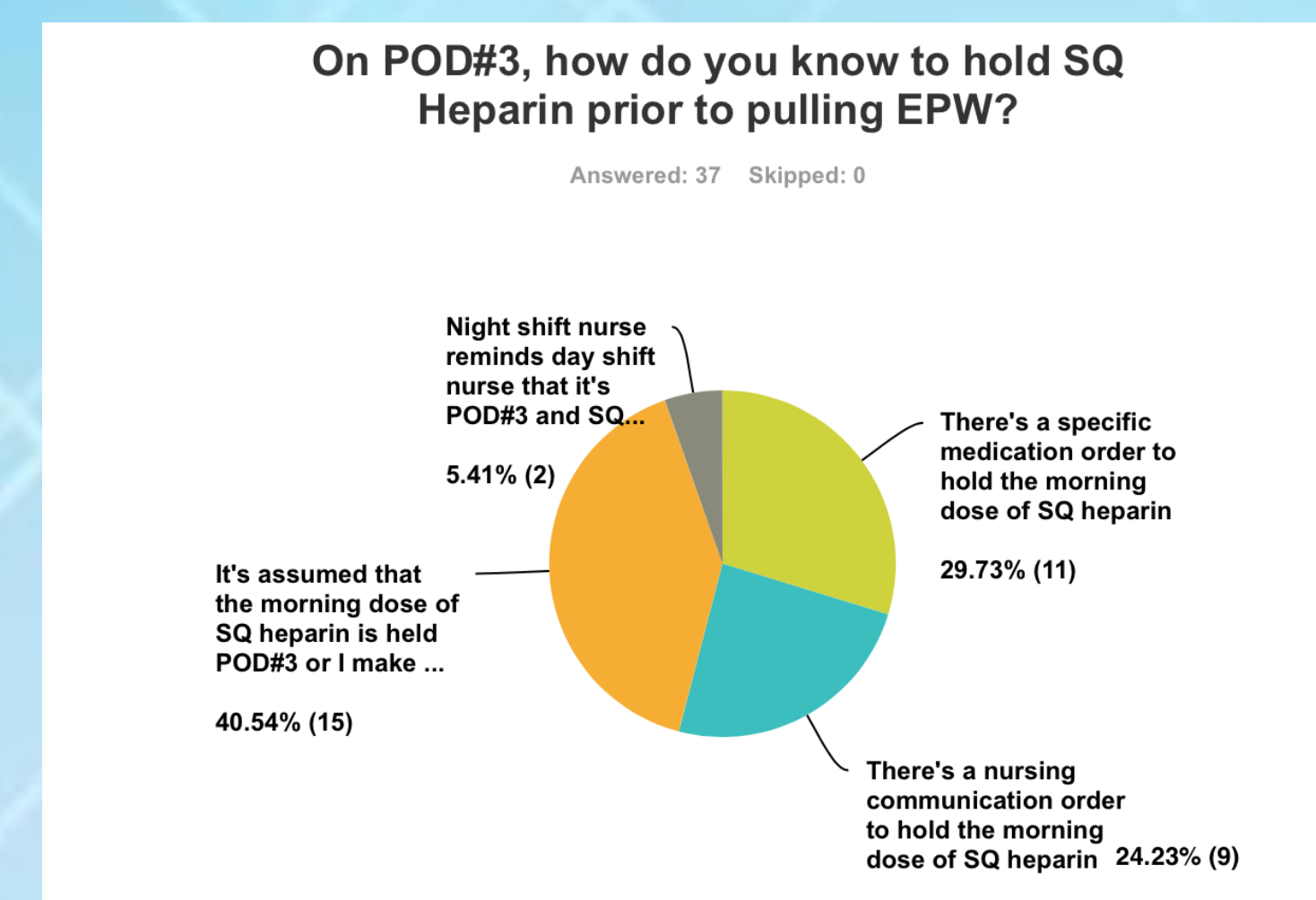
- Ensure Cardiothoracic (CT) surgery patients are receiving scheduled subcutaneous heparin doses appropriately during pacer wire removal on post-op day 3 (POD #3)
- P.I.C.O.
  - P: OHU/TOHU Nurses
  - I: Education of holding medications policy and RN scope of practice on holding medications and notification of provider
  - C: Holding subcutaneous heparin POD #3 without an order vs. only holding medication with an order
  - O: Eliminate the inappropriate holding of medications without a provider order

## Background

- Subcutaneous heparin is generally held POD #3 before epicardial pacer wire removal to minimize bleeding risk
- Nurses would hold heparin dose without order from provider before pacer wire removal
- PA Nurse Practice Act states that an RN must have a provider order to administer or hold medications (Pennsylvania Nurse Practice Act, 2002)

## Survey Results

- A survey was sent to all 90 OHU/TOHU nurses about holding and administering subcutaneous heparin POD #3. Thirty seven surveys were completed.



## Evidence

- Current Policy states that for a medication to be held there must be a provider order. (LVHN Patient Care Manual- Medication-Administration-Patient Care Services, 2017)
- Subcutaneous heparin is effective in preventing post-op DVT's (Rydberg et. al., 1999)
- Effective communication between nurses and providers is vital for quality patient care and safety (Flicek, 2012)
- Subcutaneous heparin minimally increases risk of bleeding, however evidence is inconclusive with patients who have epicardial pacing wires (Li et. al., 2011)

## Methodology and Implementation Plan

- Contrary to survey results, an order to hold subcutaneous heparin was present in 20/25 charts of patients with epicardial pacing wires prior to staff education
- However, policy states there must be an order for every medication held
- Education of staff was performed reminding them of LVHN policy through means of staff meeting (2), shift huddle (5), and 1:1 conversation (42 nurses)
- After education was performed, charts of patients with epicardial pacing wires were

## Results and Recommendations

- It was found that 25/25 charts contained a hold order for subcutaneous heparin post education
- Recommend continued staff education with a mandatory TLC to ensure compliance
- Propose periodic chart review to ensure policy is being followed

### REFERENCES

1. Li, H.-K., Chen, F. C., Rea, R. F., Asirvatham, S. J., Powell, B. D., Friedman, P. A., Shen, W.-K., Brady, P. A., Bradley, D. J., Lee, H.-C., Hodge, D. O., Slusser, J. P., Hayes, D. L. and Cha, Y.-M. (2011), No Increased Bleeding Events with Continuation of Oral Anticoagulation Therapy for Patients Undergoing Cardiac Device Procedure. *Pacing and Clinical Electrophysiology*, 34: 868–874. doi:10.1111/j.1540-8159.2011.03049.x
2. Flicek, C. L. (2012). Communication: A Dynamic Between Nurses and Physicians. *MEDSURG NURSING: Professional Issues*, 21(6), 285-287. Retrieved May 31, 2017, from <https://www.amsn.org/sites/default/files/documents/practice-resources/healthy-work-environment/resources/MSNJ-Flicek-21-06.pdf>.
3. Rydberg, E.J., Westfall, J.M., and Nicholas, R.A. (1999) University of Colorado Health Sciences Center, Denver, Colorado. Low-Molecular Weight Heparin in Preventing and Treating DVT. Retrieved May 31, 2017, from <http://www.aafp.org/afp/1999/0315/p1607.html>
4. Pennsylvania Nurse Practice Act, Pennsylvania. Stat. § 21.14. Administration of drugs. (2002).
5. LVHN Patient Care Manual (2017). Administration of Medications. Retrieved July 05, 2017.

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