

Minimizing Proton Pump Inhibitors (PPI) Usage to Enhance Patient Safety

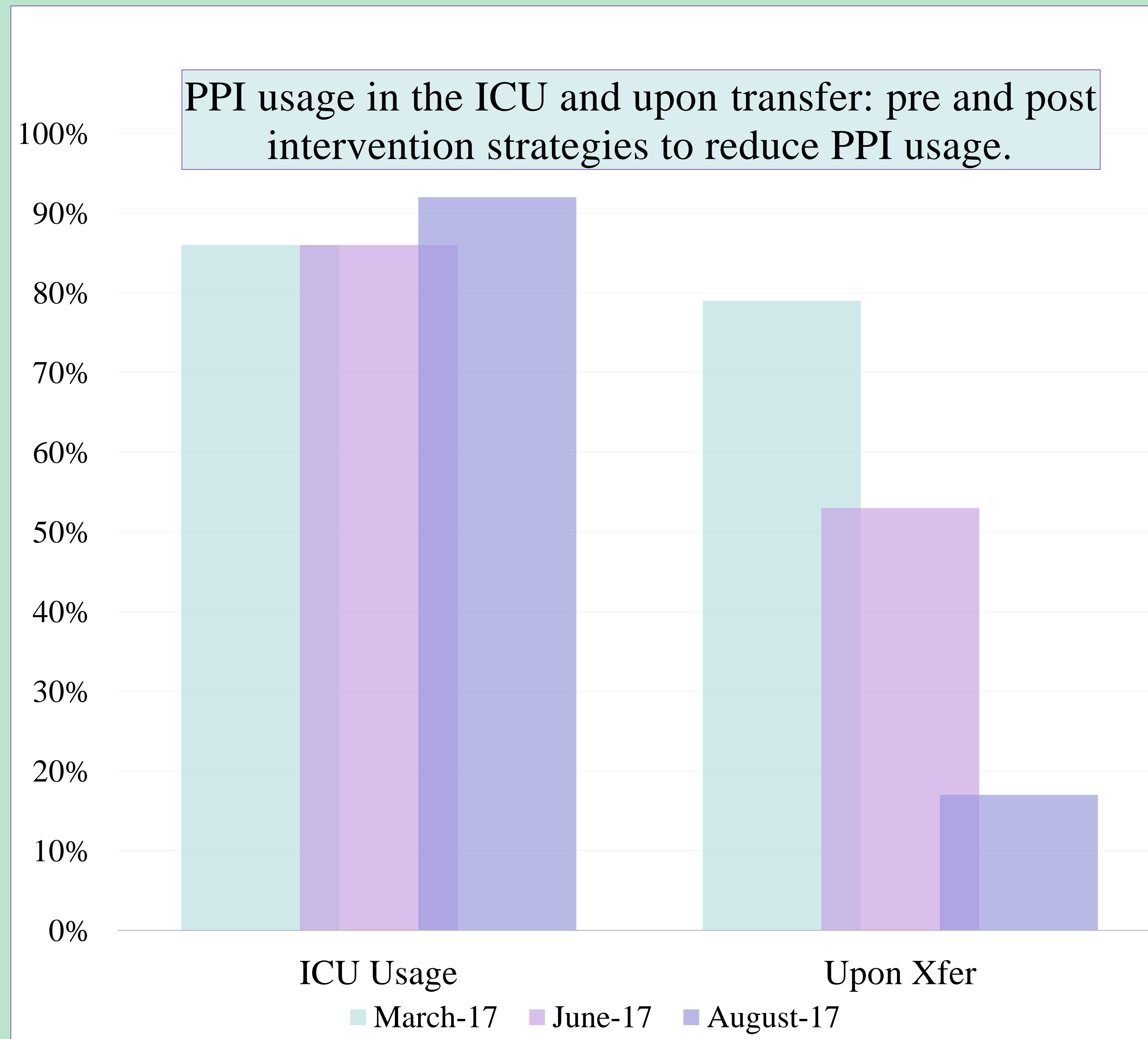
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Background: New evidence shows a significant and costly relationship between PPI usage and *Clostridium difficile* (*C. diff*) infections and death. A gap between literature and clinical practice was noticed as PPI were perceived as innocuous and widely ordered. A change in practice utilizing an evidence based approach, was implemented to decrease risk of complications and optimize patient well-being.

Methods:

- Baseline data was obtained on patients prescribed PPI during their ICU stay and then those who remained on PPI after transfer. Data demonstrated a very low rate of discontinuation upon transfer.
- Nursing and Pharmacy created an PPI-reduction plan.
- Three fact sheets/articles provided via email, presentations and unit postings.
- Interdisciplinary rounding PPI-appropriateness was questioned.
- Prior to transfer the RN-MD reviewed the need for PPI.
- Specific criteria was established for continuing PPI, along with mandatory documentation of the reason for the medication.



Results: Baseline data: **March 2017**

- 86% PPI usage in the ICU
- 79% PPI carried on upon transfer

Post interventions **June 2017:**

- 86% PPI usage in the ICU
- 53% PPI carried on upon transfer.

Post interventions **August 2017:**

- 92% PPI usage in the ICU
- 17% carried on upon transfer.

Conclusion:

A nurse expert empowered the interdisciplinary team with new evidence, inspiring a practice change. The comprehensive education of all team members, the change of practice for nursing, pharmacy and providers yielded a dramatic reduction in usage.

Further information:

Chitnis, A, Holzbauer, S, Belflower, R. (2013). Epidemiology of Community-Associated Clostridium difficile Infection, 2009 Through 2011. *JAMA Intern Med.* 173(14):1359-1367.

Xie Y, Bowe B, Li T, et al. (2017). Risk of death among users of Proton Pump Inhibitors: a longitudinal observational cohort study of United States veterans, *British Medical Journal*, 2017;7.

U.S. Food and Drug Administration (2012). FDA Drug Safety Communication: Clostridium difficile associated diarrhea can be associated with stomach acid drugs known as proton pump inhibitors (PPIs). Retrieved from <https://www.fda.gov/Drugs/DrugSafety/ucm290510.htm>

79% → 53% → 17%

Decrease in PPI usage after transfer out of ICU