

University of Pennsylvania Health System: Reducing Bloodstream Infection Rates to Zero While Increasing Revenues and Reducing Expenses by Millions



Issue:

The University of Pennsylvania Health System sought to eliminate central line associated bloodstream infections (CLABSI), to reduce harm, deaths, readmissions, and improve processes and problem-solving skills.



Approach:

100+ unit & MICU nurses observed processes to capture variations, shared patient impacts of CLABSIs, and aligned on new standard work (SW).

Created a real-time safety system to solve problems and iterate for zero harm. **Supported** staff to create SW and supply kit for dressing changes, blood draws, and cultures to reduce process variation.

Used real-time problem solving to continually improve the SW and solve system problems that cause CLABSIs.



Results:

- 80% reduction in 30 days.
- Zero bloodstream infection deaths for multiple years.
- 66 fewer deaths in 18-month engagement period.
- \$2.9 million increase in revenues (freed up 33% more ICU bed capacity).
- \$3.6 million expense reduction (reduced excess-stay days and materials/equipment).
- Ecstatic staff.



Staff Feedback: “What at the time seemed unbelievable to [our] nurses now has become a reality... due to a remarkable improvement in nursing practice standards that I know [our unit] will only continue to push higher and higher.” Pilot unit RN
“The project was initiated...[when our unit’s] BSI rate was 3.44 (per 1,000 catheter days). Our overall BSI rate...was what now seems astronomical at 7.5%. After completion of the project, the hospital has been able to maintain a BSI rate of zero for over a year now.” Unit nurse