Purpose

The purpose of this presentation is to share the methodology and innovative safety tools to be used by nursing when implementing health information technology (HIT) solutions, specifically related to computerized provider order entry (CPOE) processes, powerplan functionality, and staff engagement.

Relevance/Significance

As described in The Joint Commission's Sentinel Alert #54 and the ECRI Institute's Top 10 Patient Safety Concerns in 2015, HIT is a variable that affects nurses' ability to deliver safe, high-quality care. In response to incentives or penalties related to the American Recovery and Reinvestment Act, healthcare organizations have experienced a paradigm shift in patient care delivery resulting in rapid changes that can lead to uninformed staff and unexpected adverse consequences.

TJC Sentinel Alert #54

"Health information technology (health IT) is rapidly evolving and its use is growing, presenting new challenges to health care organizations. This alert builds upon Sentinel Event Alert #42 on safely implementing health information and converging technologies (published in 2008) to take a broader look at health IT, particularly the socio-technical factors having an impact on it's safe use. This alert's suggested actions center on safety, culture, process improvement and leadership."

-March 31, 2015

Strategy and Implementation

This organization that attained ARRA Stage 2 attestation in 2014 developed methodology for implementing CPOE safely with phases of mapping, building, testing, and education for each specialty. The multidisciplinary team was led by nursing, involved nursing in all phases, and allocated additional staffing with 100 superusers who were engaged frontline providers to support safe practice. This team developed powerplans to translate paper processes to electronic form through workflow redesign using LEAN tools. Safety measures included Test Bundles, built in core measures, alerts for powerplan in a planned state, and rules for single selection of narcotics to avoid the "narcotic buffet" for medication administration. The use of failure mode/affects analysis, safety checklists, along with governance from multidisciplinary leadership are means of error prevention and quality improvement (QI). Lewin's change model along with transformational leadership underpins the success of these efforts.

COMPUTERIZED PHYSICIAN ORDER ENTRY

is change worth melting for.



offeeze Mezeze



change



MAP

1. Assemble CPOE team related to knowledge of specialty.

- 2. Identify physician team leader from each group within specialty.
- 3. Review throughput of patients within specialty.
- 4. Determine powerplan needs based upon common order practices.
- 5. Assess current workflow related to common order practices.

BUILD

1. Gather content for Powerplans related to specialty or group.

- 2. Convert paper processes into electronic processes- Workflow redesign.
- 3. Identify elements within processes or Cerner system that can be improved as well as potential safety risks.
- 4. Build Powerplans in testing domain and live domain.

TEST

- 1. All clinical areas impacted by powerplan will test using the test domain to assure intent matches the action.
- 2. Revisions are made, as necessary.
- 3. One physician will be asked to test the powerplan on a patient in a live domain with the clinical team following for evaluation of workflow and correctness.
- 4. After live testing the powerplan will be hidden from view as necessary revisions are carried out.

TEACH

- 1. Physician training sessions will include: Content of powerplans, Important workflow redesign information, and Customization of powerplan favorite
- 2. The physician training sessions are approximately 1.5 hours in duration. This session serves as proficiency training defined in comanagement goals for CPOE use.
- 3. Clinical staff will also recieve education in their respective areas (Nursing, Pharmacy, etc).

GO LIVE

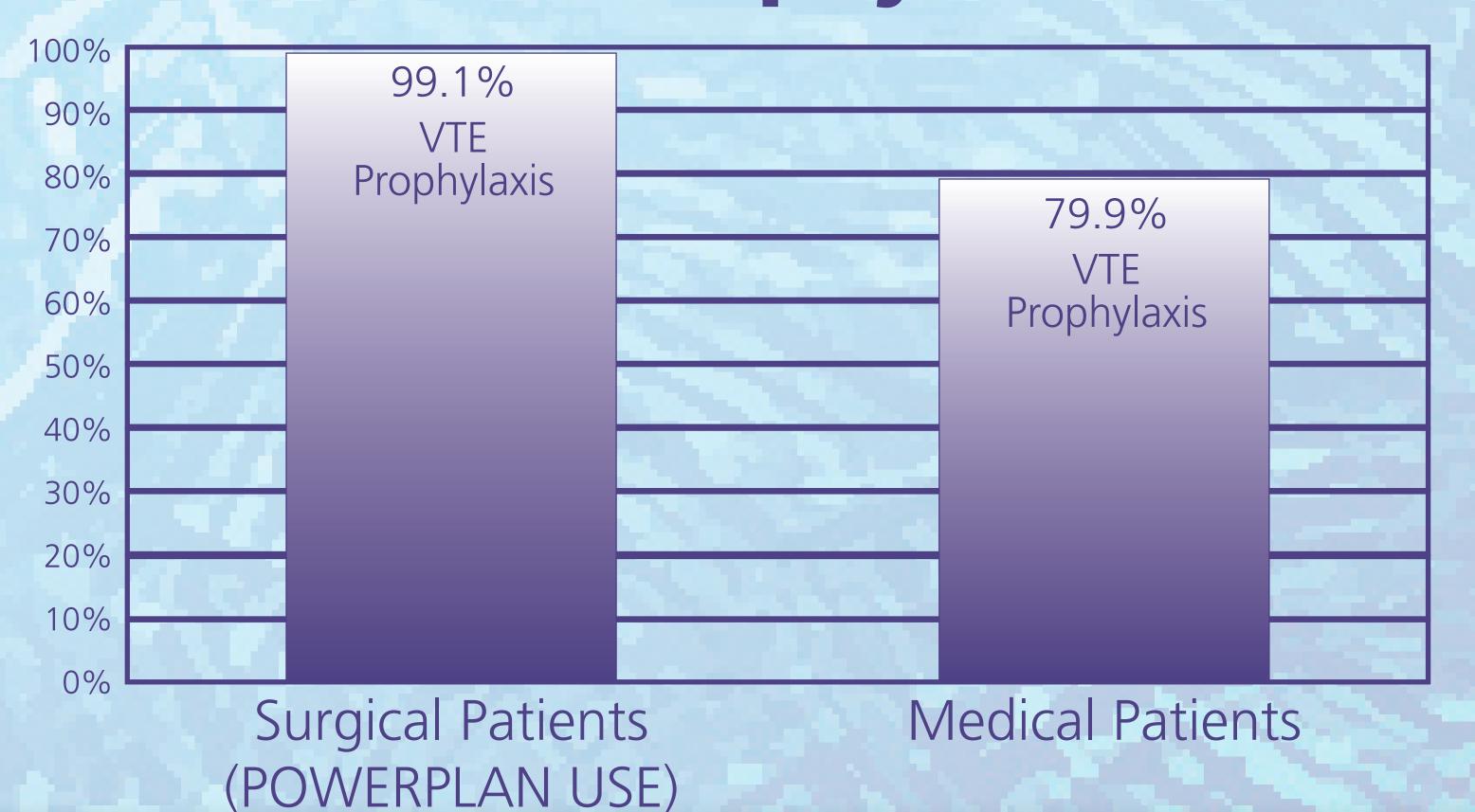
- 1. All powerplans will be loaded into Cerner for "live" use at the designated time.
- 2. Support staff will be available during the transition.
- 3. The CPOE team will hold follow-up meetings to review feedback and resolve any issues after go live.



Evaluation

One example of QI was venous thromboemolism prophylaxis (VTEP). Medical patients received VTEP at a rate of 79.9%, while surgical patients received VTEP at a rate of 99.1%. This success is credited to the use of post-operative powerplans that contain VTEP and documentation options that align with provider workflow.

VTE Prophylaxis



Implications for Practice

Implications for nursing practice involve knowledge sharing and application of innovative methodologies that promote a culture of safety and a focus on QI, as well as leadership to facilitate change safely. While the unfreezing phase of change is a challenge, CPOE is change worth melting for!



east alabama medical center