



A featured project from the Essential Hospitals Engagement Network (EHEN)



# Contra Costa Regional Medical Center *Venous Thromboembolism (VTE) Prevention*

## Problem Identified

VTE is a leading cause of preventable morbidity and mortality in patients with an estimated 10 percent death rate from pulmonary emboli. Though the VTE rate at Contra Costa is relatively low, hospital management understood that rapid assessment for VTE risk as well as timely and appropriate initiation of prophylaxis prevents VTE occurrence and associated complications. As a result, the hospital took steps to lower its VTE rate to ease unnecessary pain and suffering and to save lives.

## Interventions

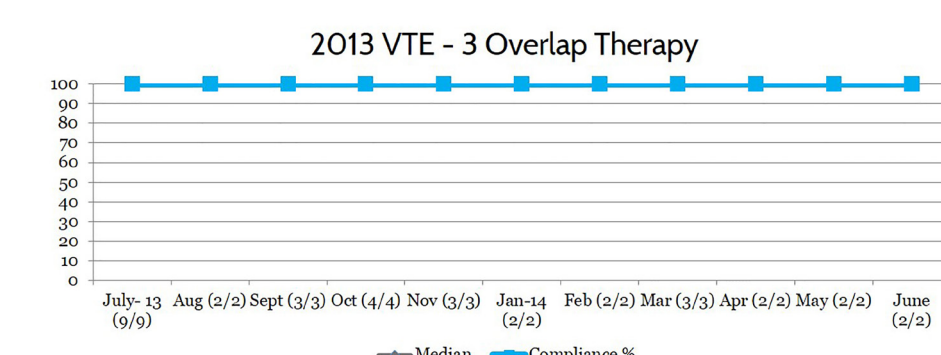
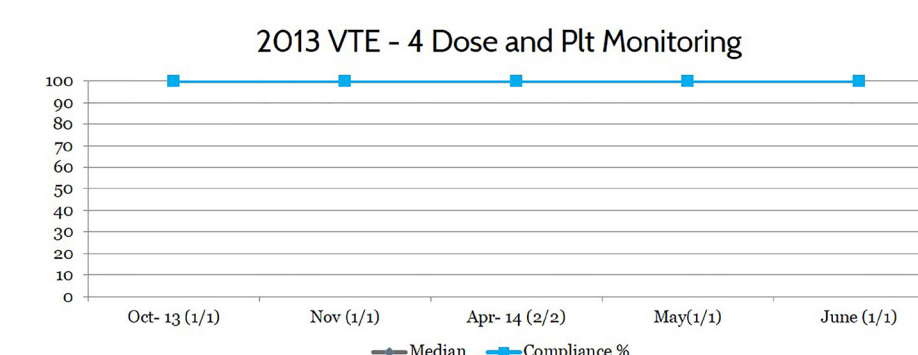
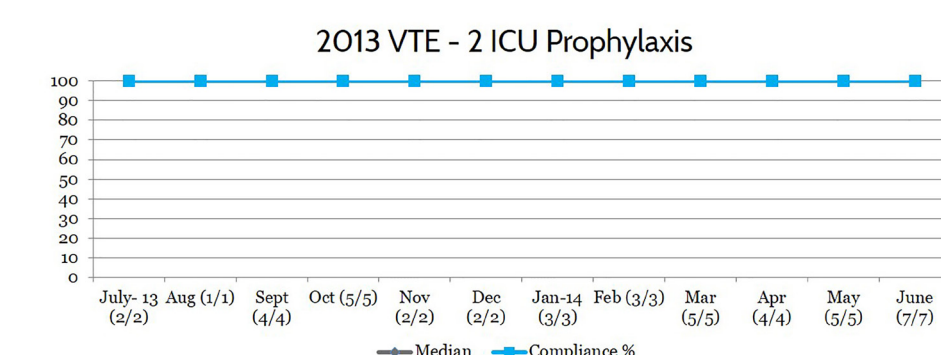
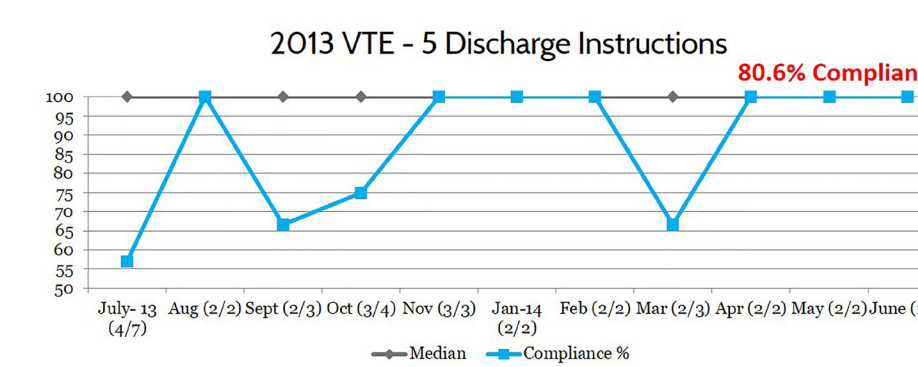
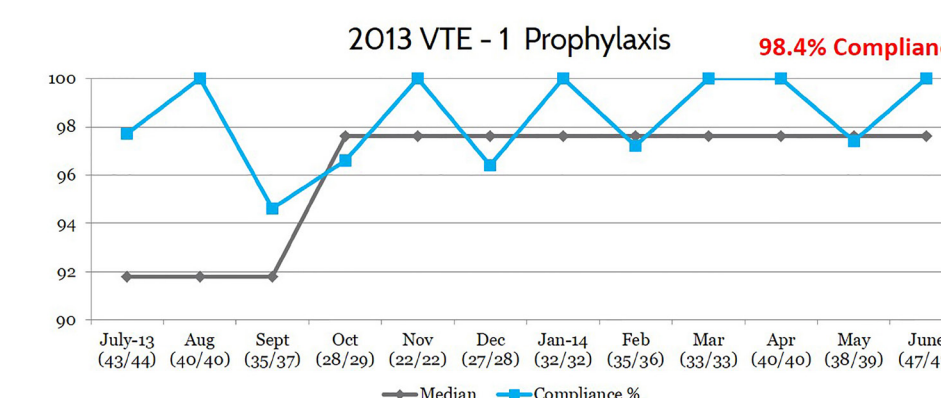
The VTE Prevention Committee implemented the following changes:

- Added orders addressing chemoprophylaxis and mechanic prophylaxis to admitting orders that must be completed.
- Tripled the number of mechanical sequential compression devices (SCD).
- Placed SCD devices and sleeves directly on nursing units to decrease initiation time.
- Required daily auditing by frontline staff on all units for prophylaxis compliance to gain buy-in and raise awareness.
- Developed reports to monitor real-time compliance.

## Outcomes

The intervention for the period from July 2013 through June produced successful results:

- VTE - 1 compliance was 98.4 percent.
- VTE - 2 compliance was 100 percent.
- VTE - 3 compliance was 100 percent.
- VTE - 4 compliance was 100 percent
- VTE - 5 compliance was 80.4 percent.



VTE - 6: Potentially Preventable VTE - No patients met criteria

Month	DVT	All Surgical Discharges	Rate
July 2013	0	112	0.0%
August 2013	0	114	0.0%
September 2013	0	113	0.0%
October 2013	0	93	0.0%
November 2013	0	96	0.0%
December 2013	1	78	1.3%
January 2014	0	95	0.0%
February 2014	0	87	0.0%
March 2014	0	93	0.0%
April 2014	0	90	0.0%
May 2014	0	91	0.0%
June 2014	0	96	0.0%
Total	1	1158	0.1%

## Leadership and Patient Engagement

Sponsorship from the chief nursing officer provided the team with administrative leverage to address any barriers encountered. The VTE committee worked directly with nursing unit managers and the director of nursing to recruit frontline nurses to be unit VTE champions. Contra Costa leadership also identified electronic health record (EHR) changes and report development as top priorities.

## Lessons Learned

The VTE committee discovered critical actions to achieve program success. They include:

- Each nursing unit should conduct concurrent audits for this process to be sustainable.
- Teams should monitor for unintended consequences of process changes.
- Streamlining workflows is essential.
- Empower the frontline staff to identify and give feedback for necessary changes in workflow
- IT staff are essential members because they accelerate the successful leverage of technology to support data collection.

## Strategies for Successful Replication

Launching a VTE prevention program should incorporate the following: executive leadership involvement, patient and staff teaching; empowerment and involvement of frontline staff, physician champions, EHR systems matching with actual workflows, and vigilant monitoring.