



Facts about the VTE Prevention Project

In October 2014, the Center for Transforming Healthcare launched its eleventh project, which aims to prevent rates of venous thromboembolism (VTE). VTE is a major cause of morbidity and mortality in the United States.¹ It has been estimated that up to 900,000 VTE's occur per year resulting in approximately 100,000 deaths.^{2,3} In addition to the toll on mortality, VTE is expensive to treat, costing the United States alone approximately \$8-10 billion in direct medical costs each year, not including the costs of associated complications.^{3,4} Approximately 50-60 percent of incident VTE cases are associated with a hospital stay that occurred within the past 3-6 months, making hospital-acquired VTE a serious problem.^{4,5} The current accepted guidelines are not implemented consistently, leading to continued VTEs in hospitalized patients.⁶ There is variation in the assessment of VTE risk factors across different hospital patient populations and in the selection of appropriate mechanical and/or pharmacological prophylaxis.⁷

VTE rates can be reduced with accurate and consistent risk assessment and appropriate utilization of pharmacological and/or mechanical prophylaxis. However, there are multiple barriers to consistent, successful implementation of preventative measures. This project will utilize Robust Process Improvement® (RPI®) methodology with five participating hospitals and health systems in collaboration with the Centers for Disease Control and Prevention (CDC). RPI® is a fact-based, systematic, and data-driven problem-solving methodology which incorporates tools and concepts from Lean Six Sigma and Change Management. This methodology will guide and support organizations in identifying the root causes and barriers to preventing VTE in at-risk patients. The participating organizations will then develop solutions that are targeted to the specific root causes that have been identified and analyzed at their organizations. The measurement system and solutions will be tested, validated, and then spread to other organizations.

The results for this project are targeted for publication in 2016.

Project team

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Texas Health Resources, Texas

In collaboration with the Centers for Disease Control and Prevention (CDC)

For more information about this project or the project team, visit the [project detail](#) page or visit our [website](#).

¹ Horlander KT, Mannino DM, Leeper KV: Pulmonary embolism mortality in the United States, 1979-1988: An analysis using multiple-cause mortality data. *Arch Intern Med.* 2003;163:1711-1717.

² Beckman M, Hooper WC, Critchley S, Ortel T. Venous thromboembolism: a public health concern. *Am J Prev Med.* 2010;38(4 Suppl):S495-501.

³ Raskob G, Silverstein R, Bratzler D, Heit J, White R. Surveillance for deep vein thrombosis and pulmonary embolism: recommendations from a national workshop. *Am J Prev Med.* 2010;38(4 Suppl):S502-9.

⁴ Prevention of Hospital-Acquired Venous Thromboembolism (HA-VTE) Expert Panel Meeting. Centers for Disease Control and Prevention (2011).

⁵ Spencer FA, Lessard D, Emery C, Reed G, Goldberg R. Venous thromboembolism in the outpatient setting. *Arch Intern Med.* 2007;167(14):1471-5.

⁶ Cohen AT, et al. Venous thromboembolism risk and prophylaxis in the acute hospital care setting (ENDORSE study): A multinational cross-sectional study. *Lancet* 2008;371(9610):387-394. Erratum in: *Lancet* 2008;371(9628):1914.

⁷ Biffl WL, Beno M, Goodman P, Bahia A, Sabel A, Snow K, Steele AW, Swartwood C, Thienelt C, MacKenzie TD, Mehler PS. "Leaning" the Process of Venous Thromboembolism Prophylaxis. *The Joint Commission Journal on Quality and Patient Safety.* March 2011.