



## Reducing Visiting Nurse Association (VNA) Employee Recordable Injury Rate

Vernon Alders, MSW, MBA, MHCDS; Jamie Hedrick, MS, MBA; Carol Palmiotto, MS, CIH; Beth Redfield, OTR/L, COS-C  
Christiana Care Health System, Newark, DE

### Team Members

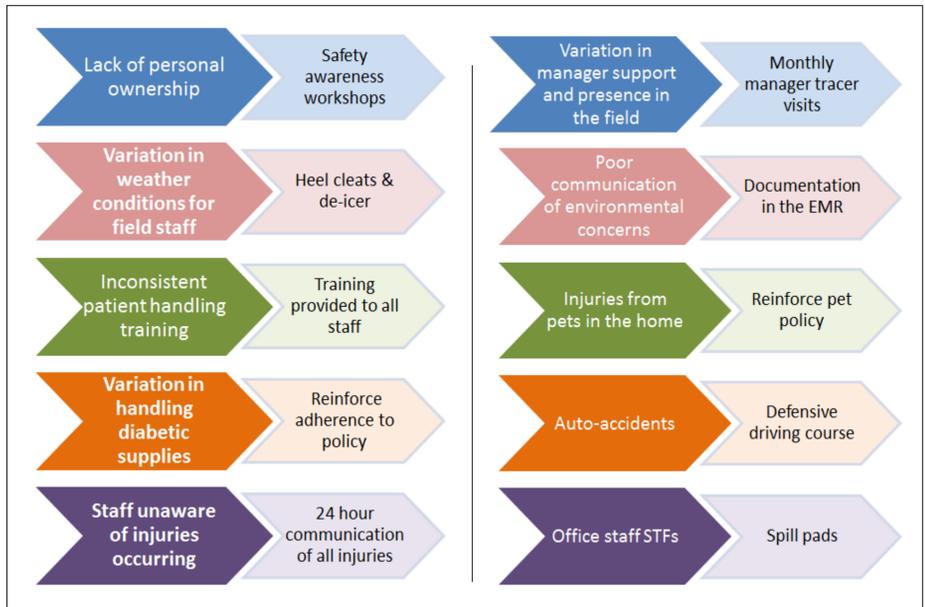
**Principal investigators:** Vernon Alders, MSW, MBA, MHCDS; Jamie Hedrick, MS, MBA  
**Process Owner:** Beth Redfield, OTR/L, COS-C  
**Subject Matter Experts:** Carol Palmiotto, MS, CIH; Beverly Smith Craig, LSS  
**MBB Coach**  
**Team Members:** Jennifer Keith RN, Cheryl Christie PT, Joyce Hoffman PT, Hazem Osman PT, Betty J. Oliveras, Trevor Massaconi, Kathy Oratorio

### PROVEN ROOT CAUSES AND INTERVENTIONS

Upon completion of our root cause analysis and theory testing in the analyze phase the following list of interventions were implemented:

#### ROOT CAUSES

#### INTERVENTIONS



### AIM

In FY2016, the VNA OSHA recordable employee injury rate was 6.96. The goal of this quality improvement project was to reduce that rate to 3.48 by February 2018.

### SETTING

- Christiana Care Health System is a 2-hospital academic health system headquartered in Wilmington, Delaware.
- This study took place within the fully owned and operated Christiana Care Visiting Nurse Association (VNA) which is a full-service skilled home health care agency in Delaware.
- The Christiana Care VNA has been serving the community since 1922. Services provided include skilled, coordinated, compassionate in-home care to help our neighbors stay in their home whenever it is safe, comfortable and medically, functionally and economically appropriate to do so.
- 600 Christiana Care VNA health care professionals make more than 350,000 home visits each year, continuing our mission to provide the high-quality service with excellence and love that has always been part of our history.

### BACKGROUND

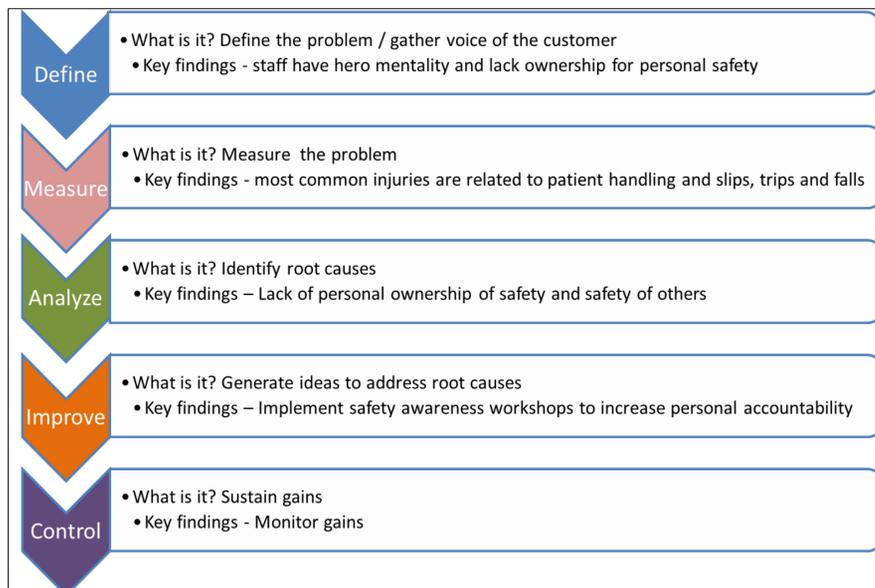
Work related injuries in the healthcare environment are a serious concern impacting staff morale, productivity and potentially, patient safety and the wellbeing of our team. Within the home health setting the risk of work related injuries is compounded by the difficulty for staff to control their work environment and community impacts. As a result, the type of circumstances surrounding these injuries varies significantly often with no identified patterns making interventions difficult. From June 21, 2015 to June 18, 2016, the VNA employee injury rate was 6.96. This is well above the national benchmark provided by the Bureau of Labor and Statistics for Health and Social Service of 3.5.

This study applied the Lean Six Sigma (LSS) DMAIC (Define, Measure, Analyze, Improve, and Control) methodology to this problem to identify root causes and solutions to help address this chronic safety issue.

### DESIGN METHODS

LSS is a proven scientific approach to solving problems. The DMAIC method is used for problems that have the following conditions: 1) that the problem is associated with an existing process, 2) that the problem is measurable and 3) that the problem is chronic in nature and no existing ideas to fix it are available. Given the chronic nature of the elevated VNA employee injury rate, the following model was applied.

### APPLICATION OF THE DMAIC MODEL



### TESTING AND ADAPTATION

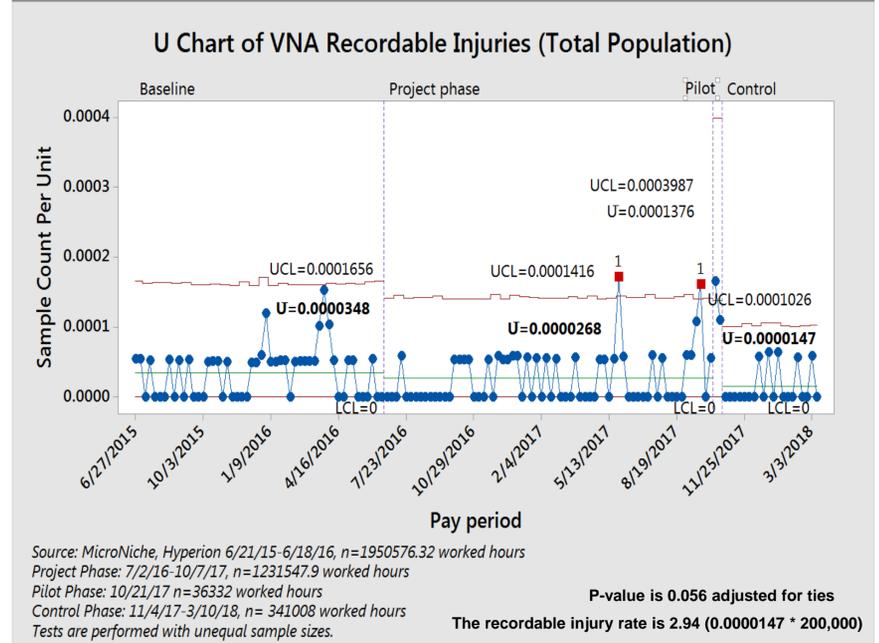
Solutions applied in this project were identified using Root Cause Analysis tools from the Lean Six Sigma Methodology. In many cases, these solutions were consistent with industry best practices for reducing employee injury rates. These solutions were piloted and tested as part of this project to learn how they could be applied in our local environment to achieve results.

Specific solutions that were piloted include: Safety Awareness Workshop, Employee Safe Practices Training, communication of injuries within 24 hours, adherence to diabetic supplies policy, increased manager tracer visits, and winter weather gear usage.

### CRITICAL TO QUALITY MEASURES

PROCESS MEASURES	BASELINE	SUSTAINMENT
Manager Tracer Visits	0%	84%
Employee Safe Practices Training	2%	30%
Communication within 24 Hours of Event or Debrief	0%	100%

### RESULTS / SUSTAINMENT



### LESSONS LEARNED / DISCUSSION

- Workplace injuries are not a byproduct of broken or inefficient workflow processes. Injuries are “snowflakes” where the causes are very unique.
- Workplace injuries are impacted by personal ownership of safety and leadership support that create a culture where injuries are seen as avoidable.
- In healthcare and within our own VNA, the current culture supports a “hero” mentality where staff are expected to put the needs of the patient above their own personal well-being. Recent VNA culture of safety surveys suggest staff feel they will be punished or reprimanded for reporting injuries.
- As we’ve looked back on our project, we’ve seen these themes through our voice of the customer analysis, through our 5 why and fishbone analysis, and most recently, during our safety awareness workshops.
- Improving the rate of recordable injuries takes time through changing staff and leadership attitudes, adopting personal ownership about safety and implementing specific practices and processes that reduce the likelihood of injury.