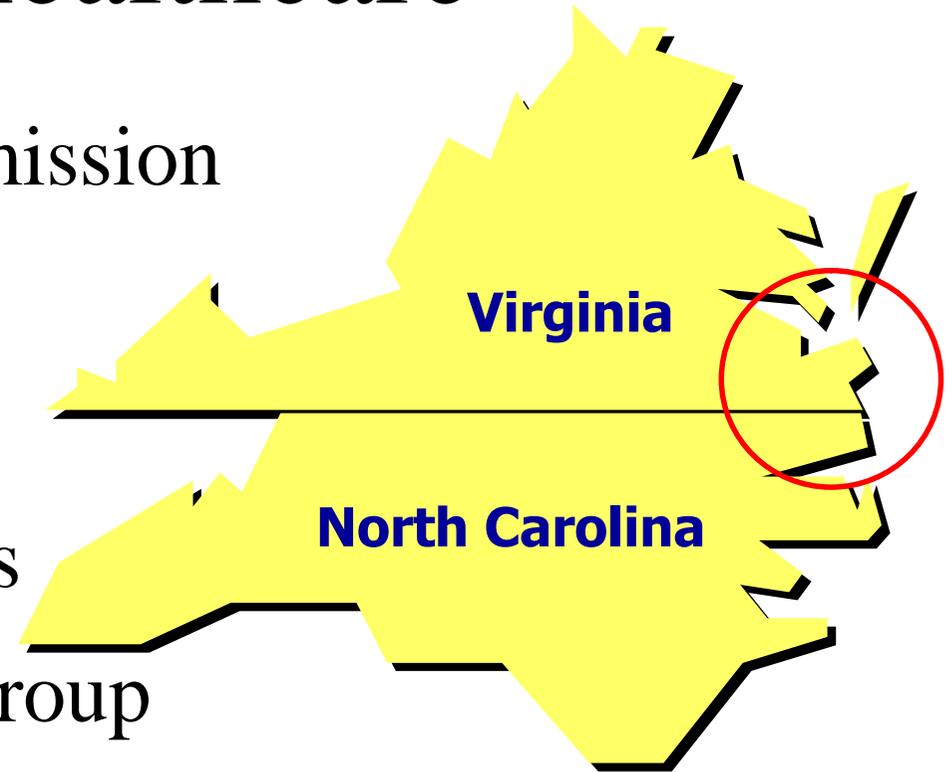# Sentara Healthcare:
A Case Study

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Sentara Healthcare

- 117-year not-for-profit mission

- 6 hospitals

- 7 nursing homes

- 3 assisted living facilities

- 225-physician medical group

- 319,000-member health plan

- Over 2500 community physicians

Virginia

North Carolina

Overview

- Sentara's strategy
- A model for improving results
- Examples of initiatives that improve quality, efficiency, and/or access
  - Introducing new technology (eICU)
  - Creating reliable processes (VAP reduction)
  - Creating a culture of safety
  - Improving care for the chronically ill
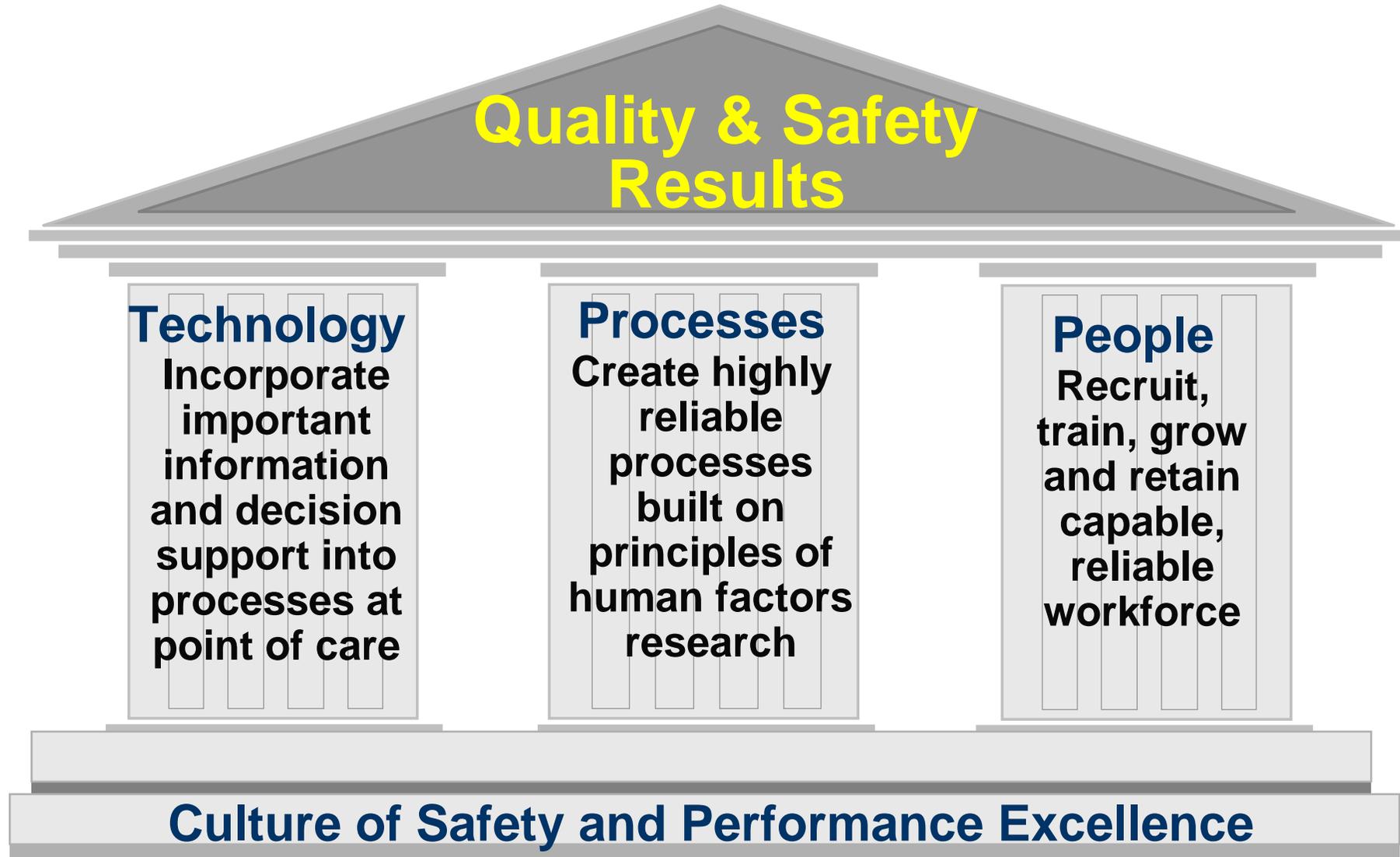 - Improving information availability (eCare)

Overall Strategy

- Focus on quality and patient safety as strategic aims

  - Use quality as differentiation

  - View quality as key to long-term success

  - Align the organization

- Embrace the IOM's six dimensions for improvement

Framework for Improvement

Quality & Safety Results

Technology
Incorporate important information and decision support into processes at point of care

Processes
Create highly reliable processes built on principles of human factors research

People
Recruit, train, grow and retain capable, reliable workforce

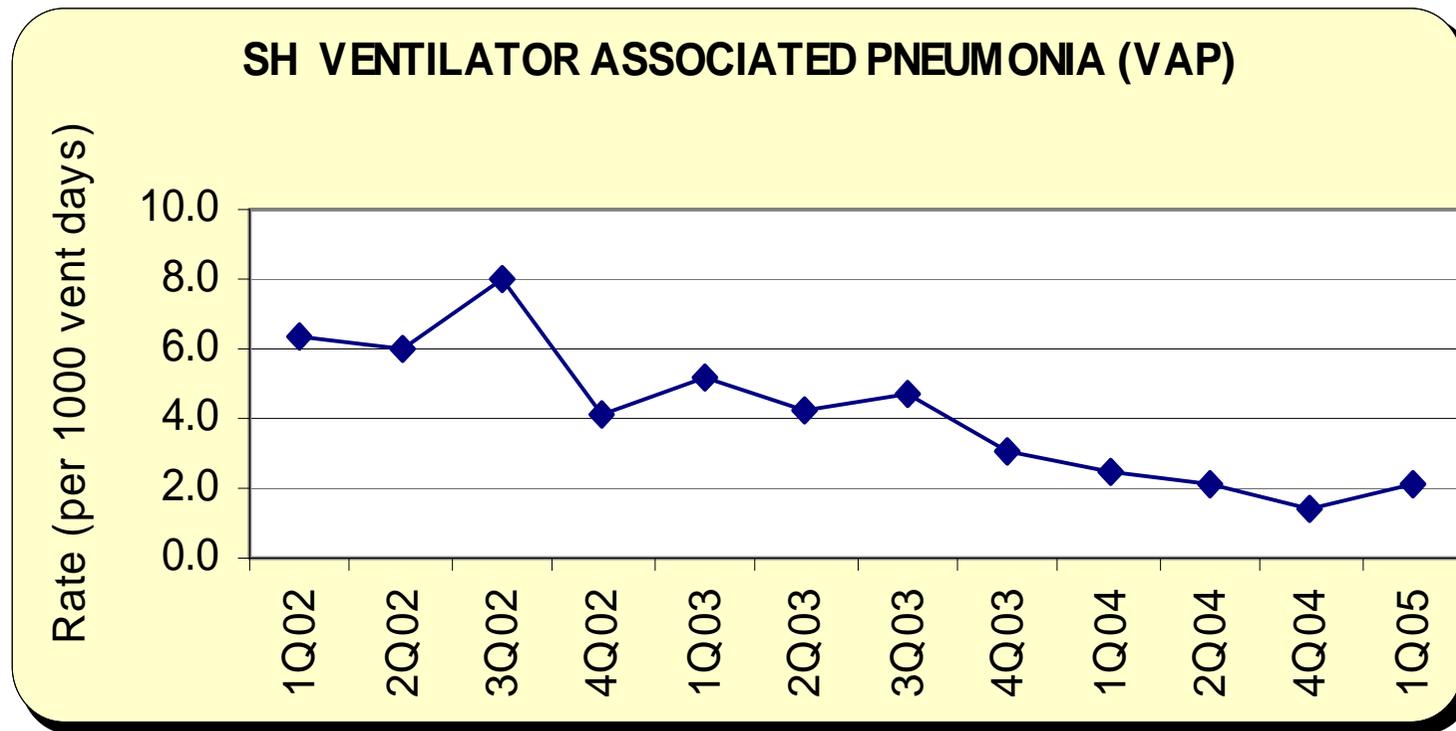## Culture of Safety and Performance Excellence

New Technology: e-ICU

- First in nation

- Remote monitoring by Intensivists

- 95 ICU patients, 5 different hospitals

- Teleconferencing, data feeds, EMR, and "Smart Alerts"

- Sustained 20% decrease in mortality

- 155% ROI: Cap Gemini study
    (Crit Care Med 2004; 32:31-38)
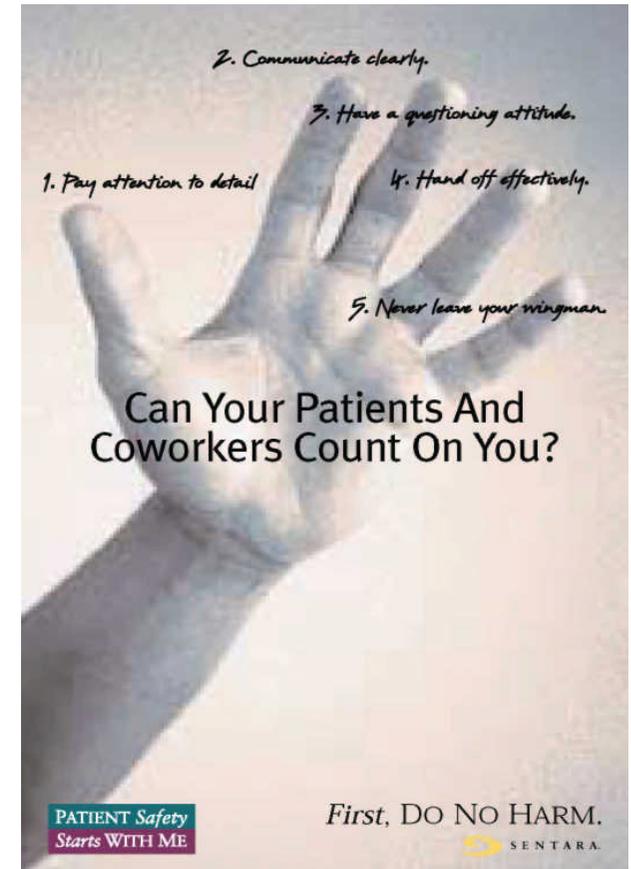
- No third-party reimbursement

Improving Reliability: VAP Reduction

SH VENTILATOR ASSOCIATED PNEUMONIA (VAP)

Rate (per 1000 vent days)

	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	4Q04	1Q05

- 13 ICUs with 161 beds across 6 hospitals
- 63.7% Reduction in VAP rate (CY 02- CY 04)
- 80 Fewer VAPs CY 02 vs. CY 04
- 3 ICUs: > 17 consecutive months w/o a VAP & counting
- $650K bottom line impact & helps relieve delays in ED

Creating a Culture of Safety

- Adapting successful strategies from nuclear power to healthcare

- Key components
  - implement behaviors for error prevention (create safe habits)
  - Focus and simplify
  - More effective event investigation

- 47.4% reduction in serious events over 2 years

2. Communicate clearly.

3. Have a questioning attitude.

1. Pay attention to detail

4. Hand off effectively.

5. Never leave your wingman.

Can Your Patients And Coworkers Count On You?

PATIENT *Safety* *Starts* WITH ME

First, DO NO HARM.

SENTARA

Improving Chronic Care

- Disease Management
  - Asthma: 35% total cost reduction
  - Diabetes: 21% improvement in HgbA1C<7
  - Sickle Cell: 65% decrease in ED visits
- Palliative care
  - Consult service in all 6 hospitals
  - Reduction of $2,713 in direct costs & 2.5 days ALOS/case
  - Improved patient/family satisfaction

Improving Information Availability

- "eCare" Initiative
- Offering:
  - office-based EMR to all community physicians
  - personal health record for patients/consumers
  - hospital EMR linked to physicians offices
  - order-entry with decision support for physicians
- Enabling true "patient-centered" care