ARMSTRONG INSTITUTE
FOR PATIENT SAFETY AND QUALITY

JOHNS HOPKINS
MEDICINE

Translating Evidence into Practice

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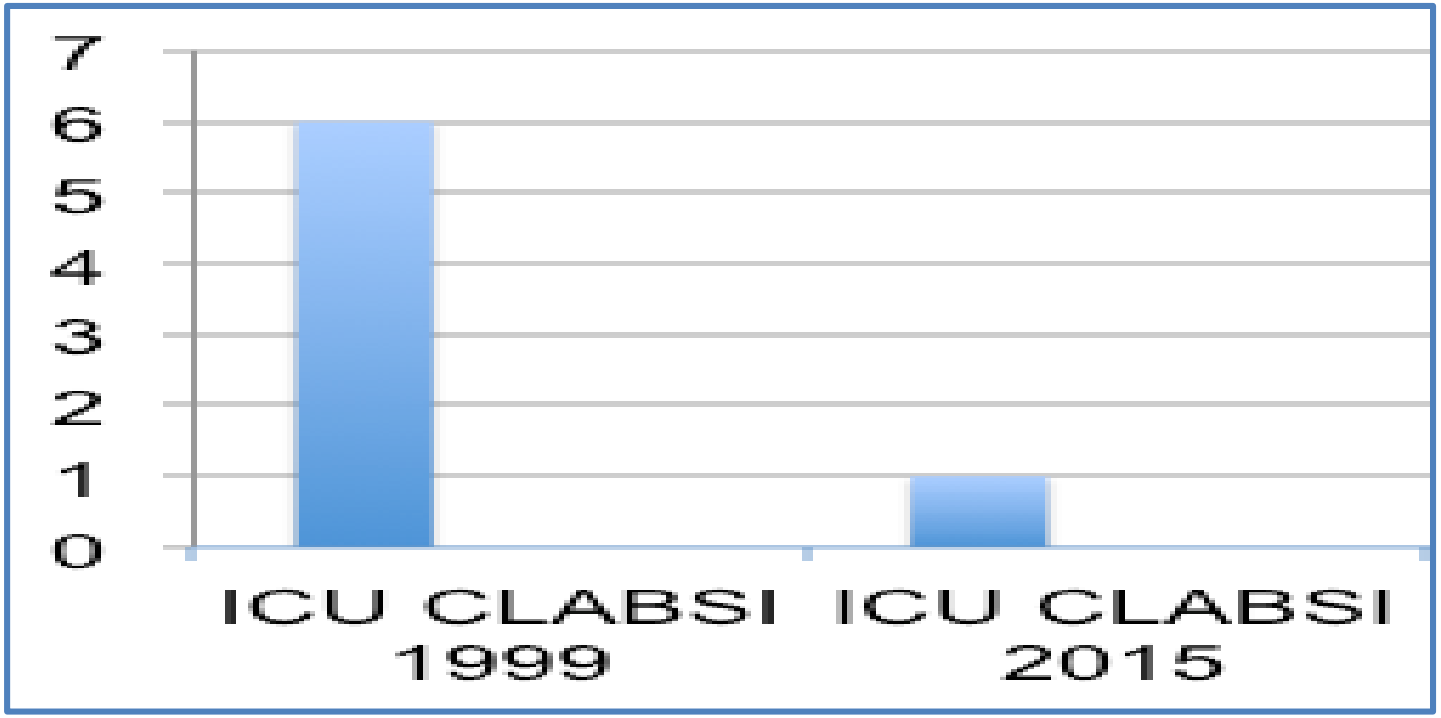
Large Scale Collaboratives
(All funded by AHRQ)

- Michigan Keystone ICU program
  - 103 ICUs, 67 hospitals
- National On the CUSP: Stop BSI Project
  - 1,800 units, >1,000 hospitals, 44 States
- Safety Program for Surgery
  - >350 perioperative teams, 220 hospitals, 37 States
- Safety Program for Mechanically Ventilated Patients
  - 254 ICUs, 214 hospitals, 38 States

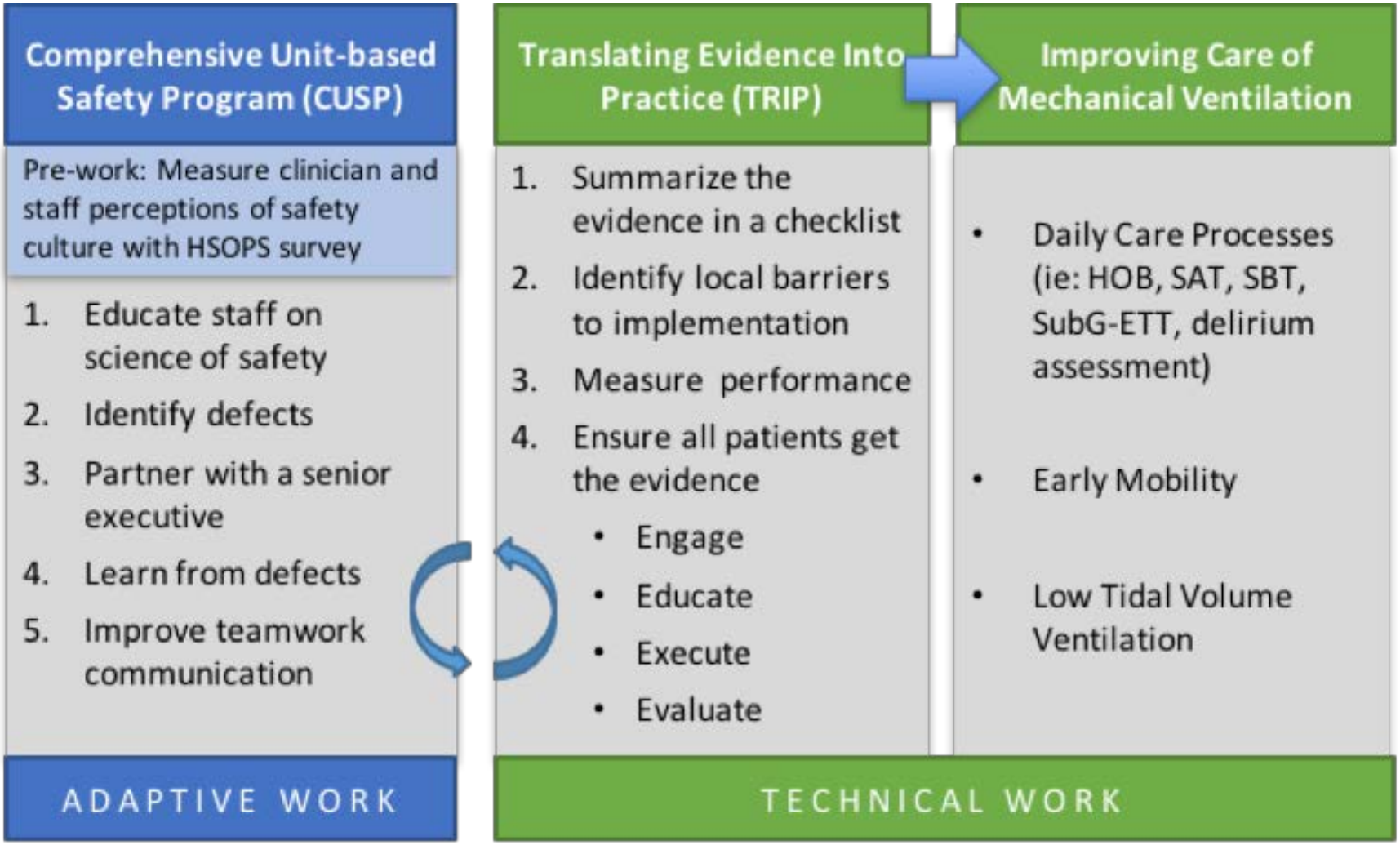
A National Success Story

ICU CLABSI Rates per 1000 catheter days in US



Pronovost PJ, et al. BMJ Qual Saf 2015

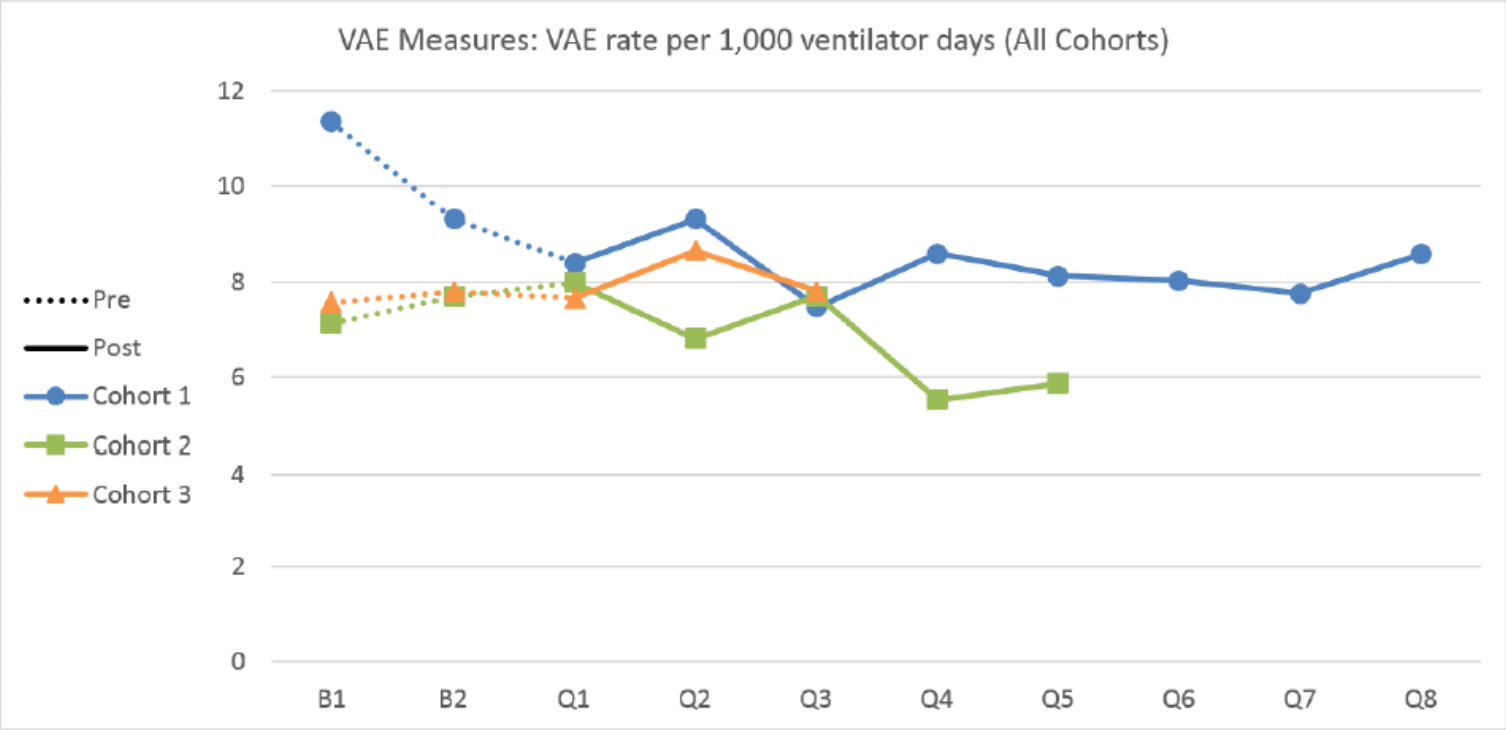
TECHNICAL WORK	ADAPTIVE WORK
Work that we know we should do, like hand hygiene or appropriate skin prep prior to surgical incision	The intangible components of work, like ensuring team members speak up with concerns and hold each other accountable
Work that lends itself to standardization (e.g., **checklists and protocols**)	Work that shapes the **attitudes, beliefs, and values** of clinicians, so they consistently perform tasks the way they know they should
Evidence-based interventions	Safety culture, including teamwork


Comprehensive Unit-based Safety Program (CUSP)
Pre-work: Measure clinician and staff perceptions of safety culture with HSOPS survey
1. Educate staff on science of safety
2. Identify defects
3. Partner with a senior executive
4. Learn from defects
5. Improve teamwork communication
ADAPTIVE WORK
Translating Evidence Into Practice (TRIP)
1. Summarize the evidence in a checklist
2. Identify local barriers to implementation
3. Measure performance
4. Ensure all patients get the evidence
• Engage
• Educate
• Execute
• Evaluate
Improving Care of Mechanical Ventilation
• Daily Care Processes (ie: HOB, SAT, SBT, SubG-ETT, delirium assessment)
• Early Mobility
• Low Tidal Volume Ventilation
TECHNICAL WORK

National CLABSI reduction: A Success Story to Learn From

- Valid and reliable measures
  - Scalable mechanism to collect and report (NHSN)
- Effective strategies to reduce harm
  - Mature practice guidelines
- Investment in implementation science
  - Combine technical and adaptive work
  - Single and multicenter studies
- Clinical communities
  - Clinicians led the work
  - Hospitals learned from each other

VAE Rate per 1,000 Ventilator Days
(n=194 units ever submit VAE data)



	B1	B2	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Cohort 1	11.4 (144/12,687)	9.3 (159/17,080)	8.4 (152/18,115)	9.3 (144/15,475)	7.5 (95/12,731)	8.6 (129/15,037)	8.1 (94/11,585)	8 (89/11,103)	7.7 (85/10,973)	8.6 (75/8,755)
Cohort 2	7.1 (137/19,243)	7.7 (189/24,588)	8 (209/26,164)	6.8 (175/25,704)	7.7 (188/24,430)	5.5 (127/22,972)	5.9 (111/18,902)			
Cohort 3	7.6 (125/16,512)	7.8 (134/17,216)	7.7 (209/27,315)	8.6 (333/38,520)	7.8 (184/23,593)					

B1 and B2 are baseline quarters.

Preliminary data, unpublished

Barriers

- Competing priorities
  - Multiple efforts at unit/hospital level
- Lack of leadership support
  - Senior leaders and physicians
- Burden of data collection
  - Lack of integration with EMR
- Challenges with sustainability

Best Way Forward

- Advance the science
  - Increase funding for research in patient safety and implementation science
- Enabling infrastructure
  - Standard measures, data collection tools and performance reports; Resources for data collection
- Engage and connect frontline staff
  - Educate and build capacity; clinical communities
- Transparent reporting and accountability
  - National, state and hospital (board to bedside)