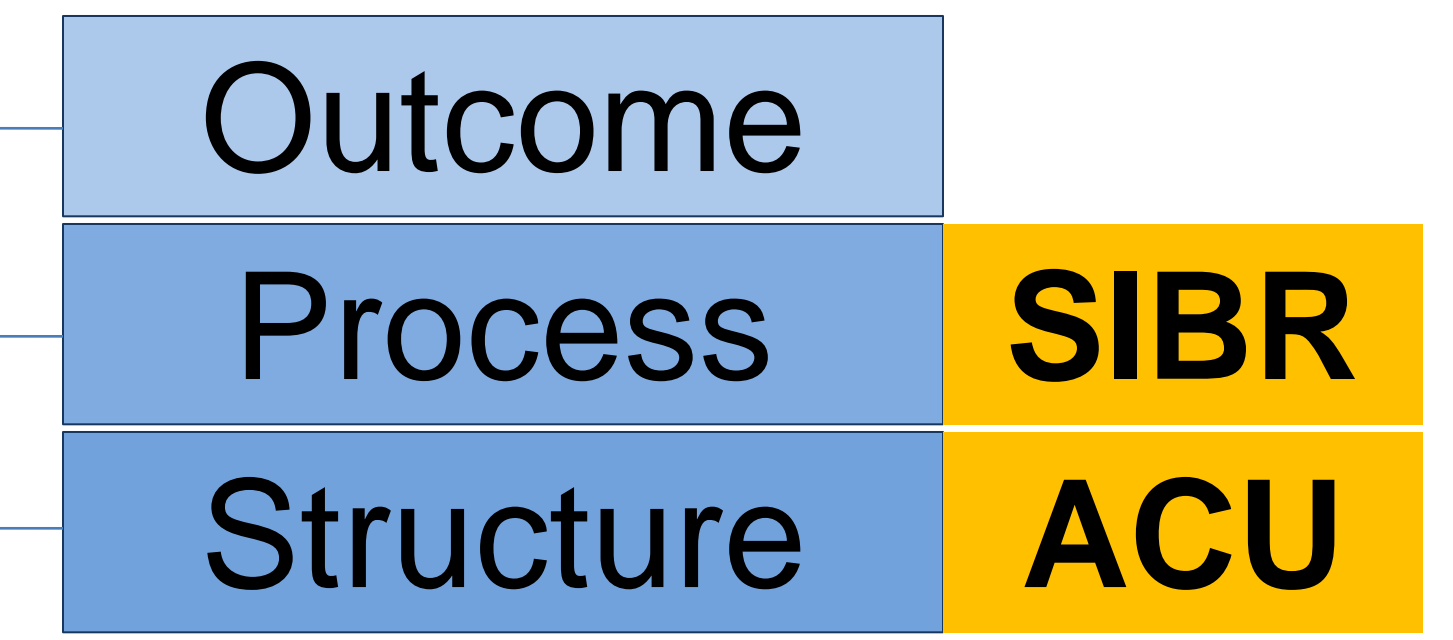


## Improving hospital **outcomes** through Teamwork in an Accountable Care Unit



Emory Healthcare  
Department of Nursing  
Department of Medicine

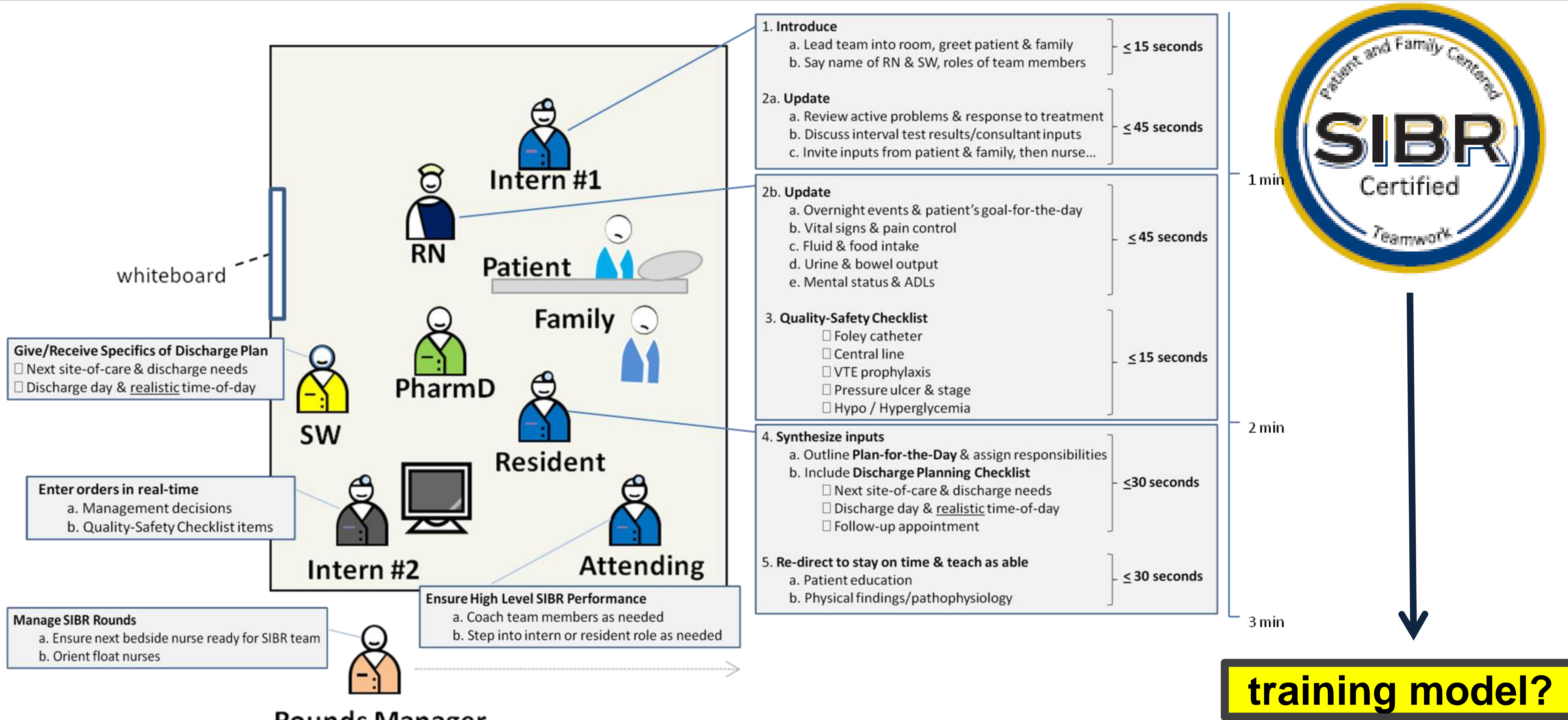
Jason Stein, MD SFHM  
Associate Vice Chair for Quality  
Department of Medicine  
Emory University School of Medicine

# Outcomes

1. **Clinical:** morbidity & mortality
3. **Cost:** utilization
3. **Service:** satisfaction (patients & employees)
4. **Education:** ACGME core competencies\*

ACGME Core Competencies - **Patient Care, Interpersonal and Communication Skills, Professionalism, and Systems Based Practice**, Medical Knowledge, & Practice Based Learning

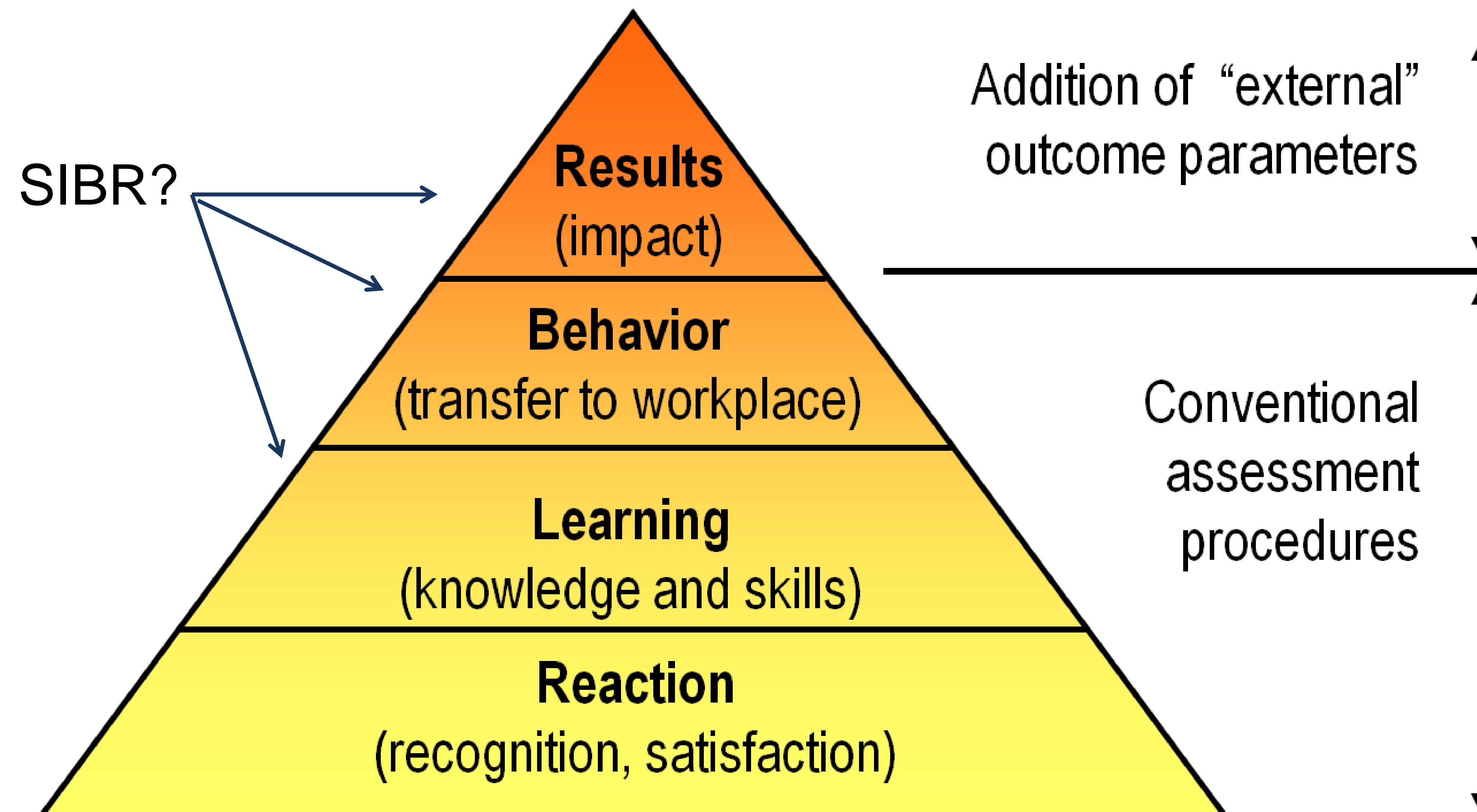
# Education outcomes



Practicing as a team-member...

- within a patient-centered, interdisciplinary care model coupled with coaching and feedback...
- increases teamwork **skills** and **behaviors** of practitioners and improves patient **outcomes**

## Kirkpatrick's hierarchy of education outcomes



# When is competence (in SIBR) reached?

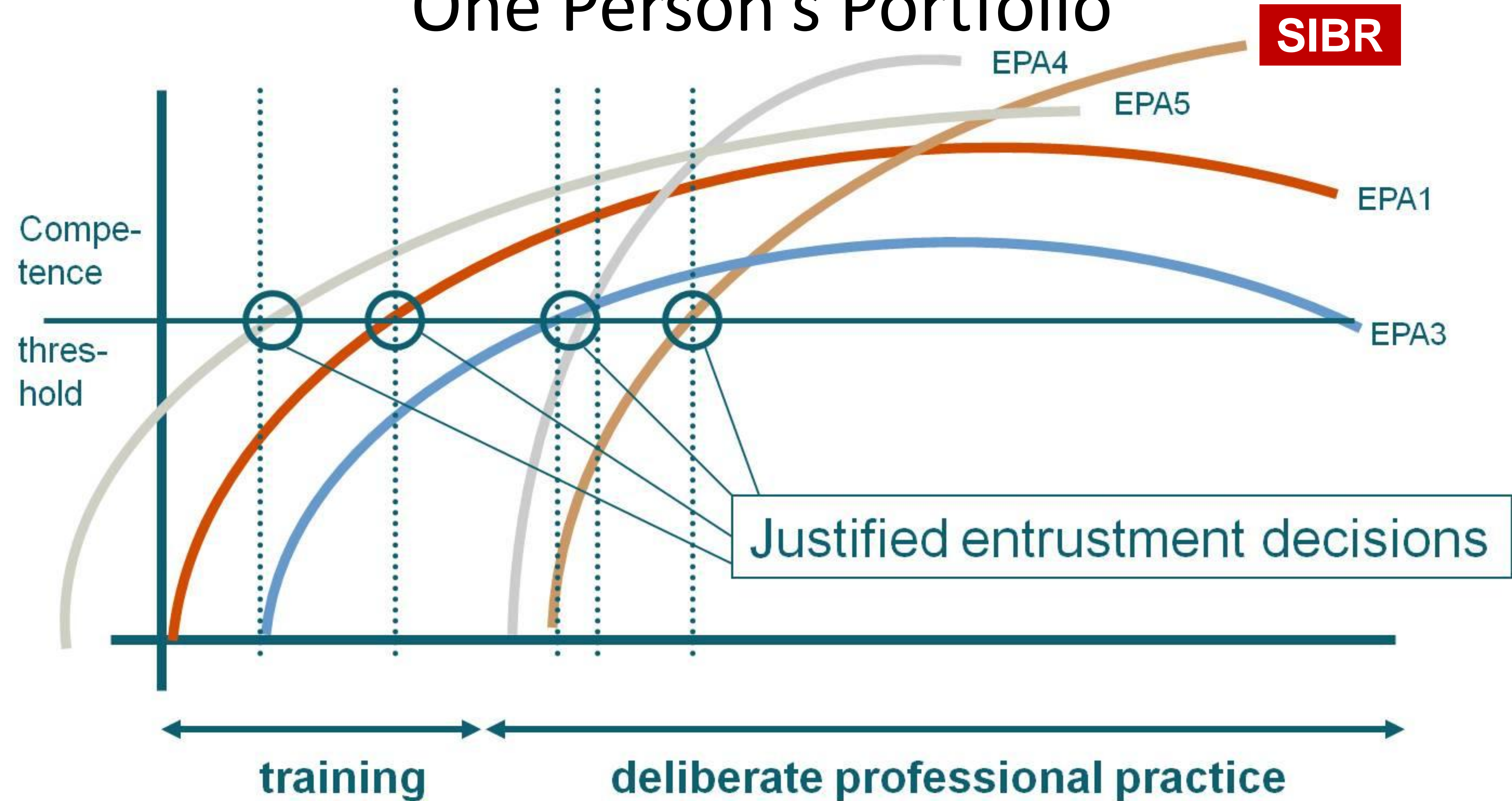
- When a professional activity (SIBR) is mastered
  - ...on a threshold level
  - ...that permits unsupervised practice
  - ...and full entrustment

→ an **Entrustable Professional Activity (EPA)**

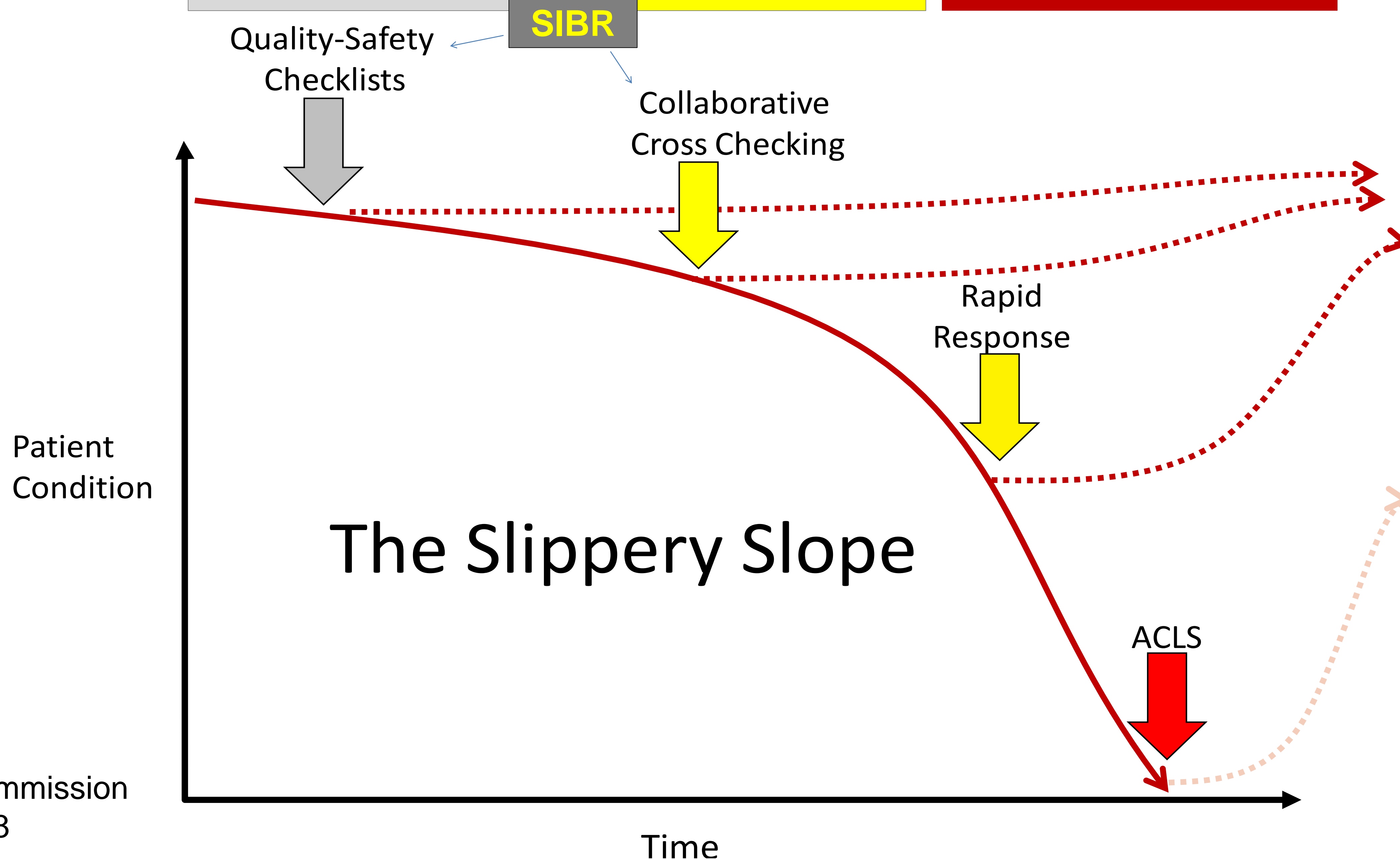
# Entrustable Professional Activity (EPA)

- An EPA requires specific knowledge, skill, and attitude
- Bundle of EPAs constitute the core of the profession
- EPA competence achieved in observable stages:
  - **not yet competent**
  - competent **with supervision**
  - competent to **perform independently at the highest level**
  - competent to perform independently at the highest level and **to teach**

## One Person's Portfolio

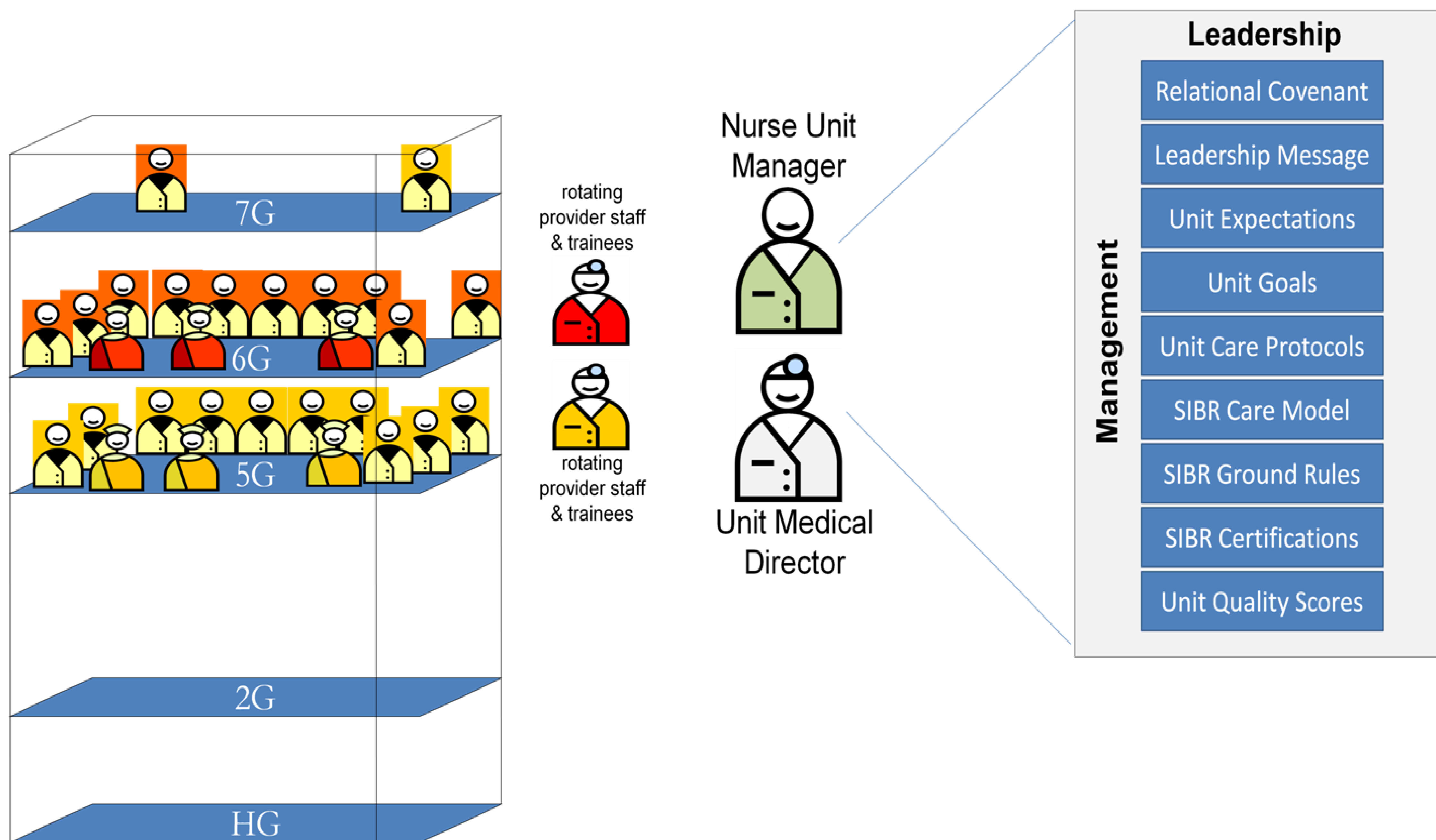


# Resilient hospital units are prepared, proactive, reliable, and safe



Adapted from:  
Charles Pain, MD  
Clinical Excellence Commission  
New South Wales 2008

# Partnered Management: Leadership Accountable to Unit Process and Outcomes



## Mortality (per 100 encounters)

<b>Intervention Unit</b>	<b>Deaths</b>	<b>Discharged to Hospice</b>	<b>Sum</b>
Pre ACU (12 mos)	1.00	5.17	6.17
Post ACU (12 mos)	<b>0.27</b>	4.41	4.68
Percent reduction	72.9%	14.6%	24.1%
p value	<b>0.005</b>	0.382	0.060

## Mortality (per 100 encounters)

<b>Control Unit</b>	<b>Deaths</b>	<b>Discharged to Hospice</b>	<b>Sum</b>
Pre (concurrent)	0.80	2.18	2.99
Post (concurrent)	0.53	2.01	2.54
Percent reduction	33.9%	8.1%	15.0%
p value	0.229	0.626	0.288

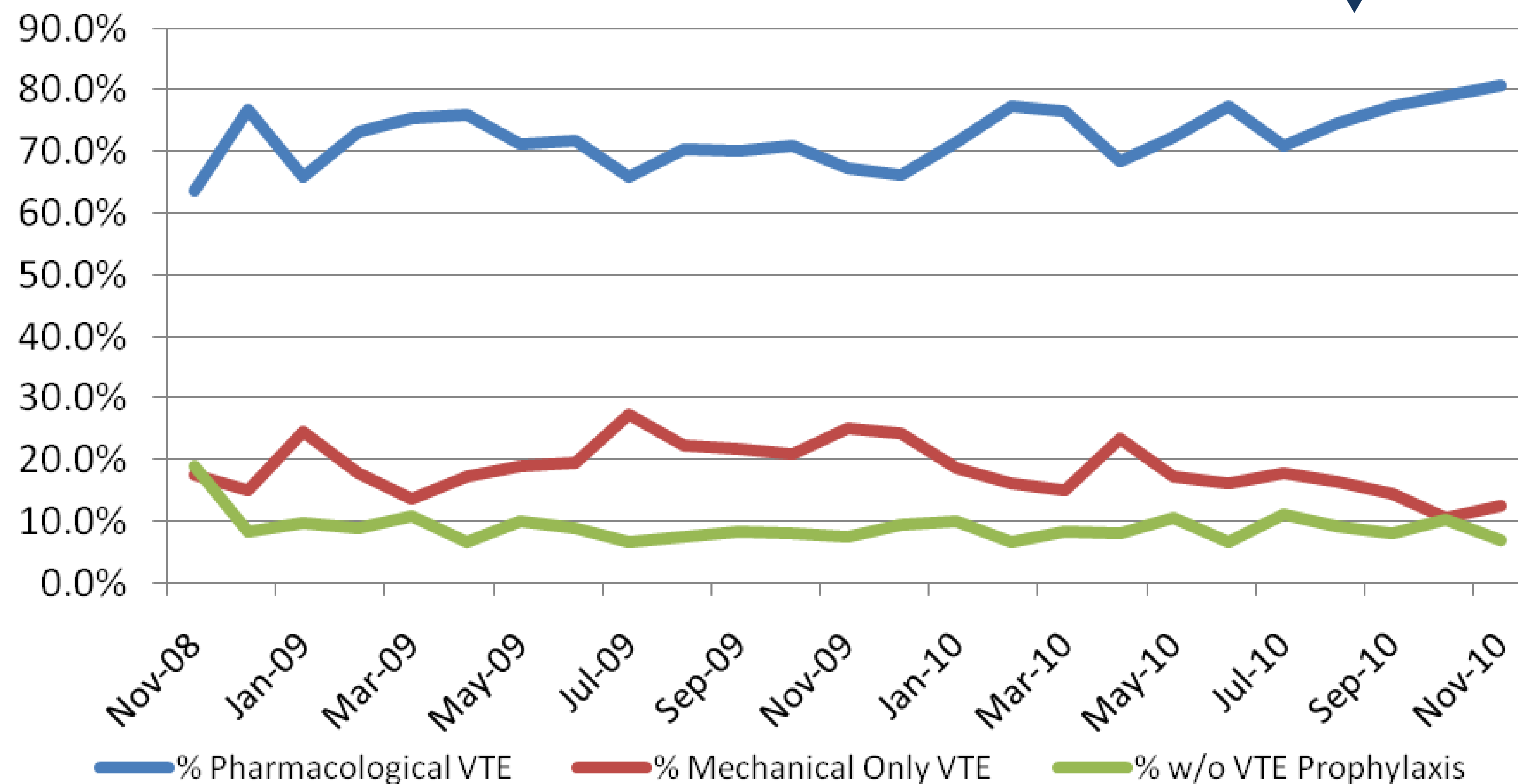
Encounter – a hospitalization (either as inpatient or observation status)

Deaths – died on unit during hospitalization

# Unit-Level VTE Prophylaxis

Full Coverage SIBR = 20-24 patients / day  
Sep 1, 2010 - Current

## 6G: VTE Prophylaxis Use by Type

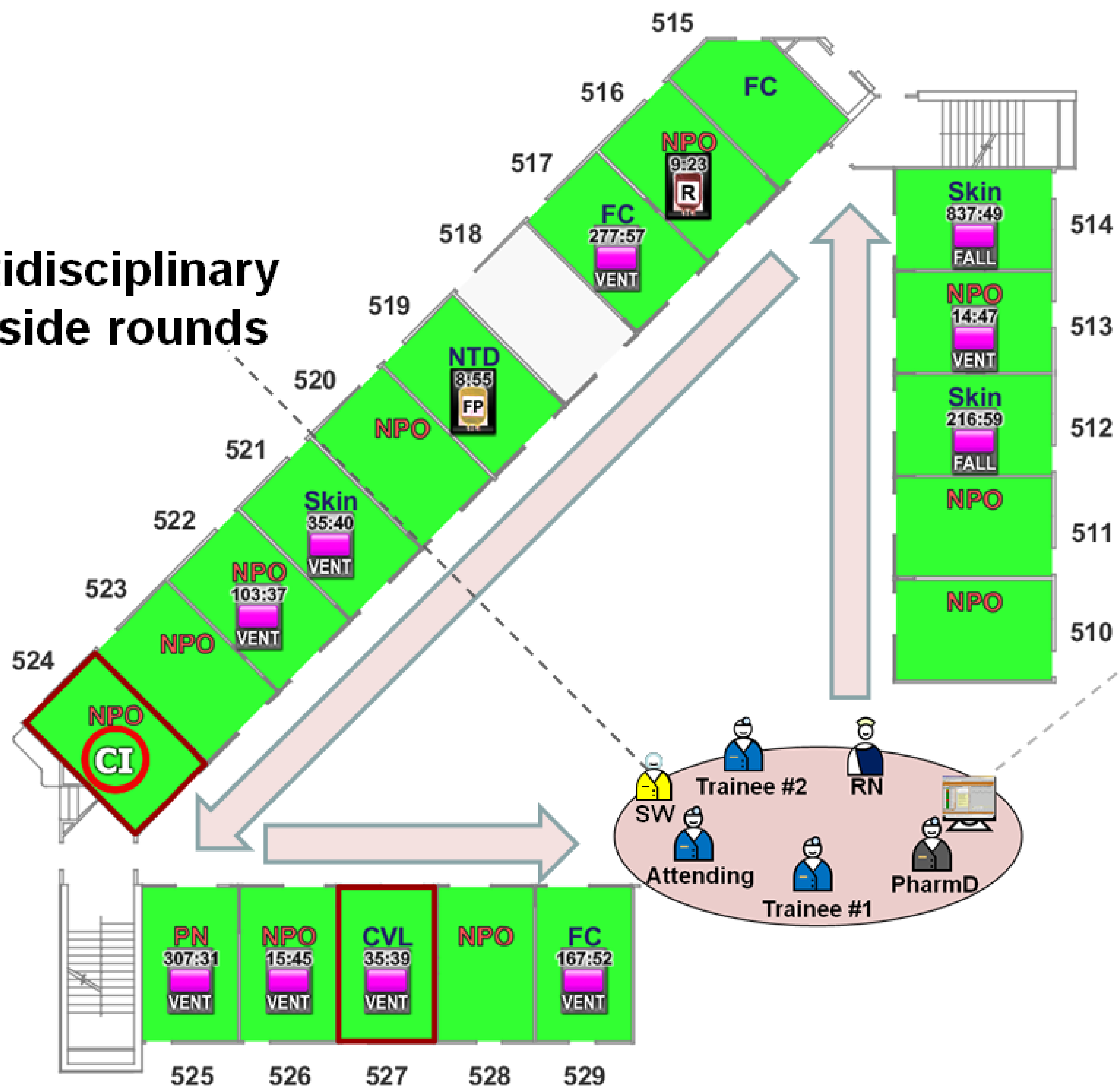


**Variability:** ↓  
**Performance:** ↑

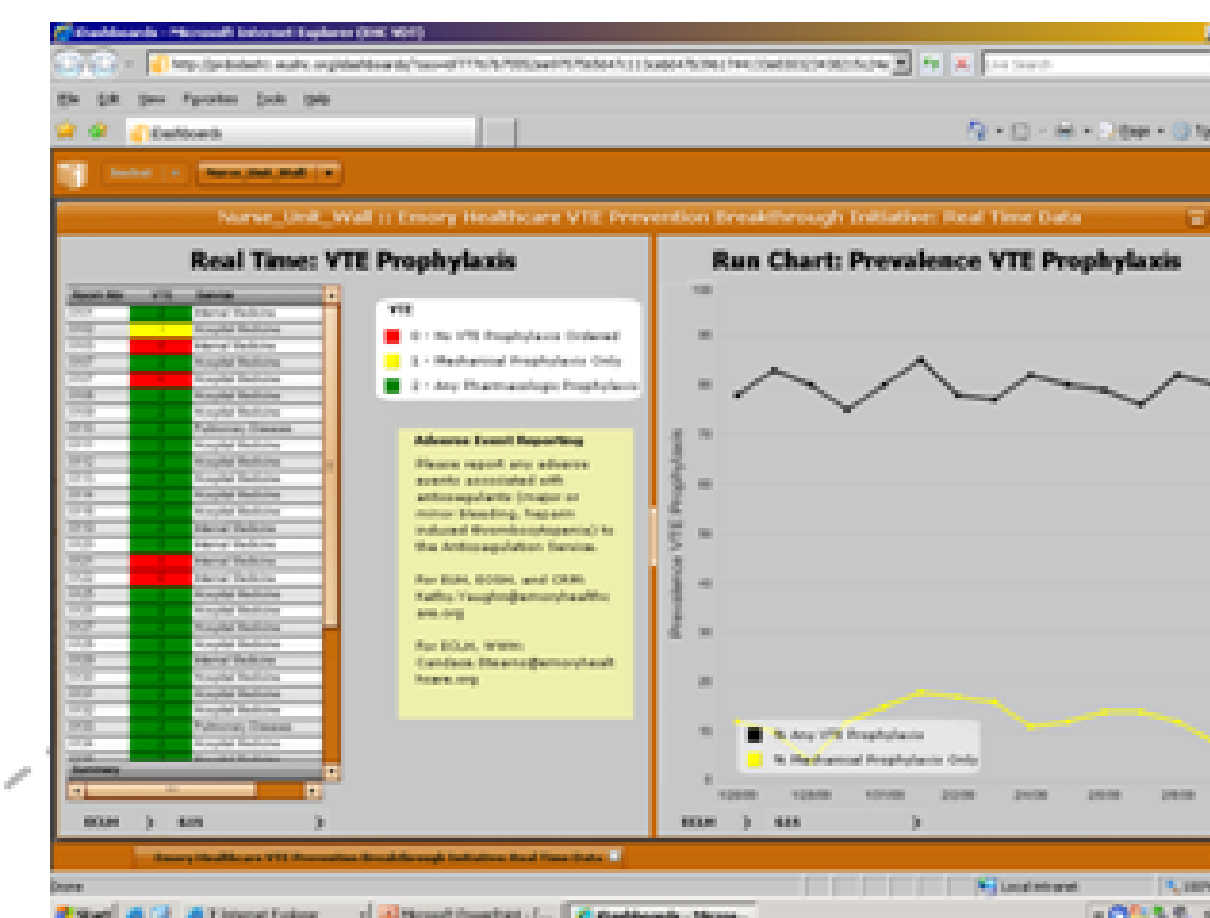
# Unit-Level VTE Prophylaxis and Hospital Acquired VTE

Surgical ICU

Multidisciplinary bedside rounds



Real-time visualization



Unit: 95%  
Hospital: 84%

We are currently out of REMOTE telemetry boxes. Please assess all patients for continued telemetry need. Return boxes to 4G telemetry ASAP.

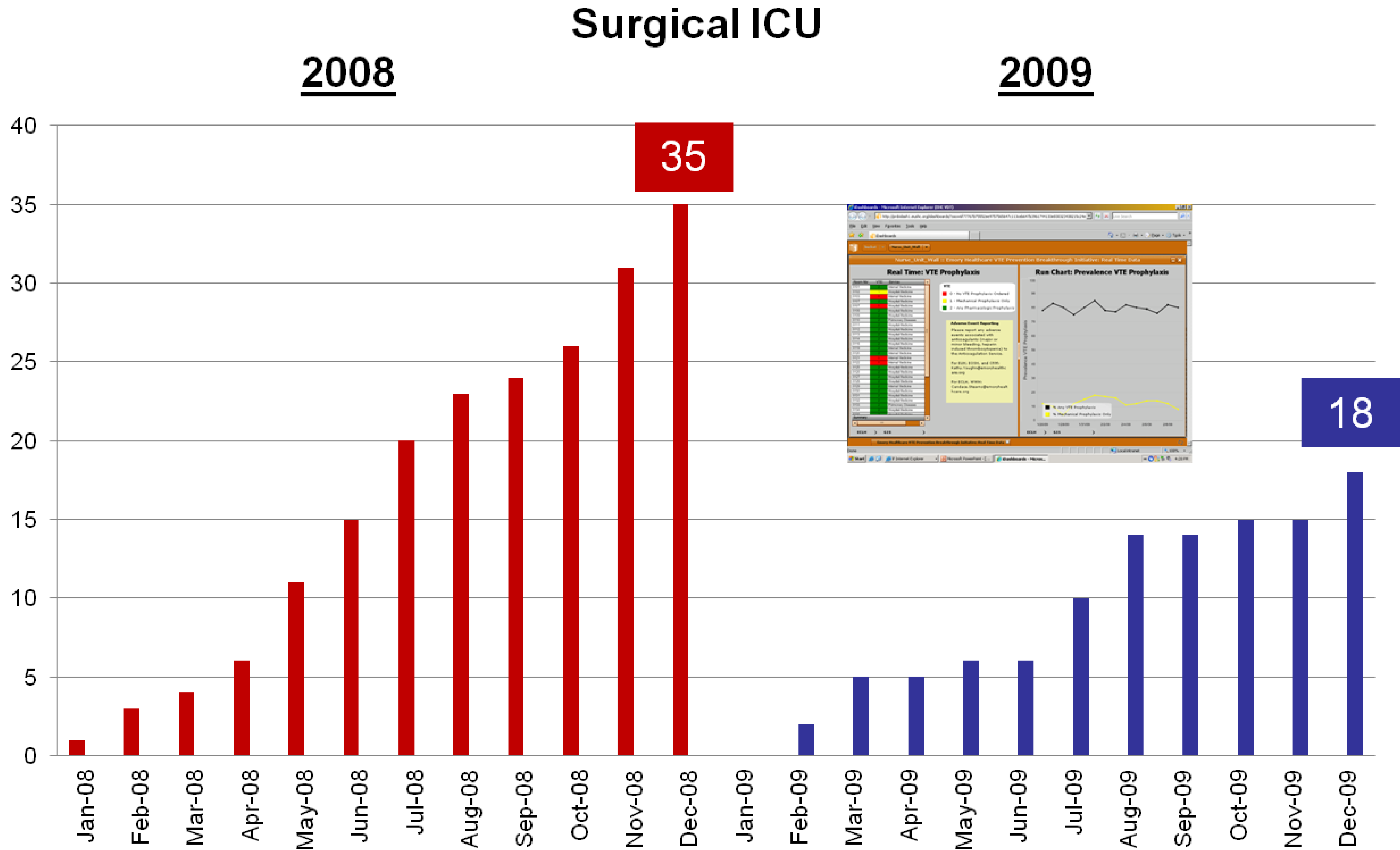
2

# Unit-Level VTE Prophylaxis and Hospital Acquired VTE

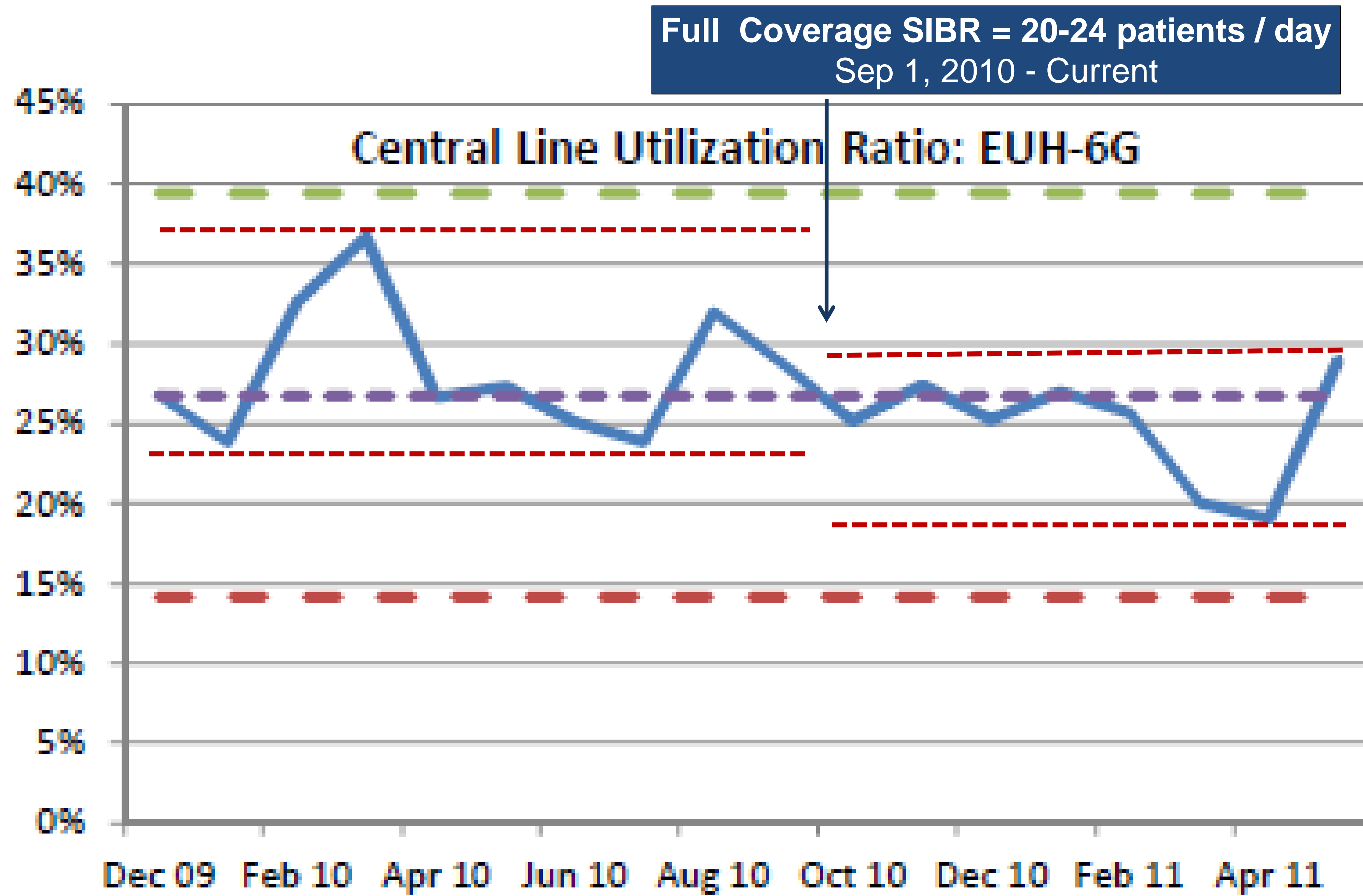
Process Measure	2008	2009	Difference (95% Confidence Interval)	p-value
Any prophylaxis	78.2%	93.9%	15.7% (13-18.4%)	<0.01
Lone mechanical prophylaxis	17.3%	19.6%	2.3% (-1.9%-6.5%)	0.282

Outcome Measures	2008	2009	Relative Risk (95% CI)	P-value
Any HA-VTE	35	18	0.53 (0.28 – 0.96)	0.04
Rate per 1000 patient days	5.84	3.1		
Lower extremity DVT	16	9	0.58 (0.22 – 1.39)	0.26
Rate per 1000 patient days	2.67	1.55		
Upper extremity DVT	7	2	0.29 (0.03 – 1.54)	0.19
Rate per 1000 patient days	1.17	0.345		
Pulmonary embolism	12	7	0.6 (0.20 – 1.67)	0.39
Rate per 1000 patient days	2.00	1.21		
Potentially preventable HA-VTE	12	3	0.26 (0.05 – 0.95)	0.04
Rate per 1000 patient days	2.00	0.52		

## Cumulative annual # of hospital-acquired VTE

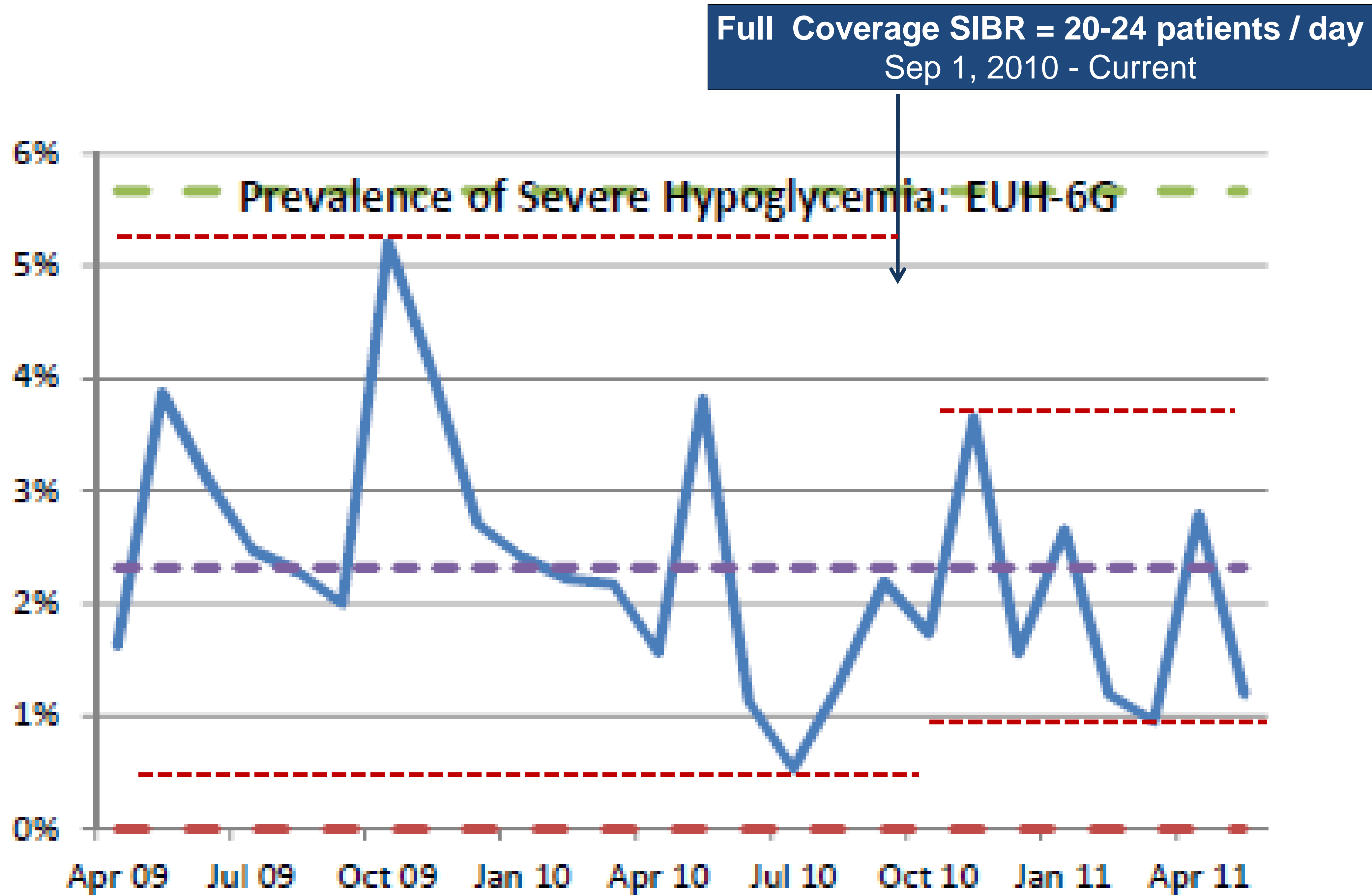


# Unit-Level Prevalence of Central Lines



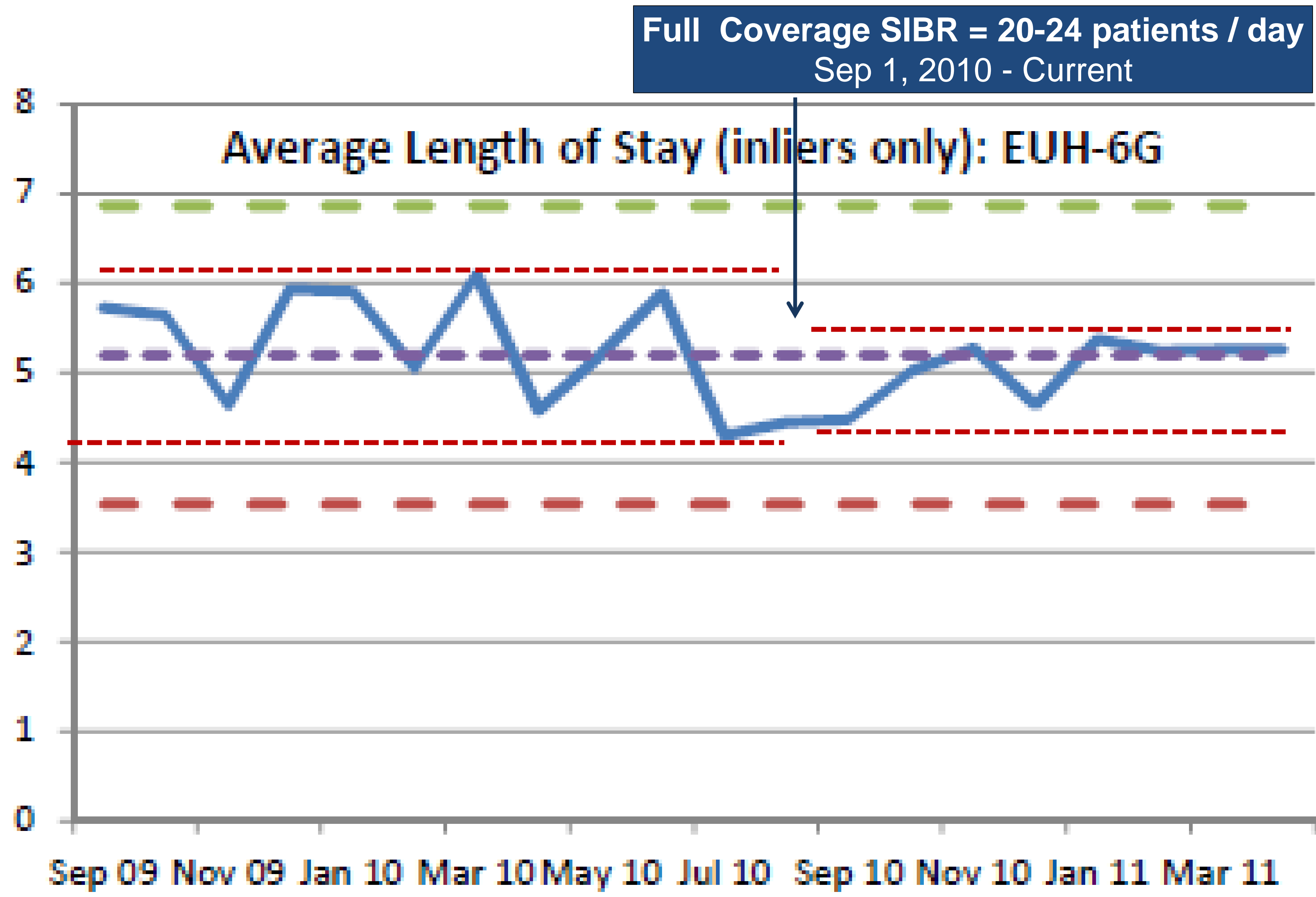
**Variability:** ↓  
**Performance:** ↑

# Unit-Level Prevalence of Severe Hypoglycemia



**Variability:** ↓  
**Performance:** ↑

# Unit-Level Length of Stay



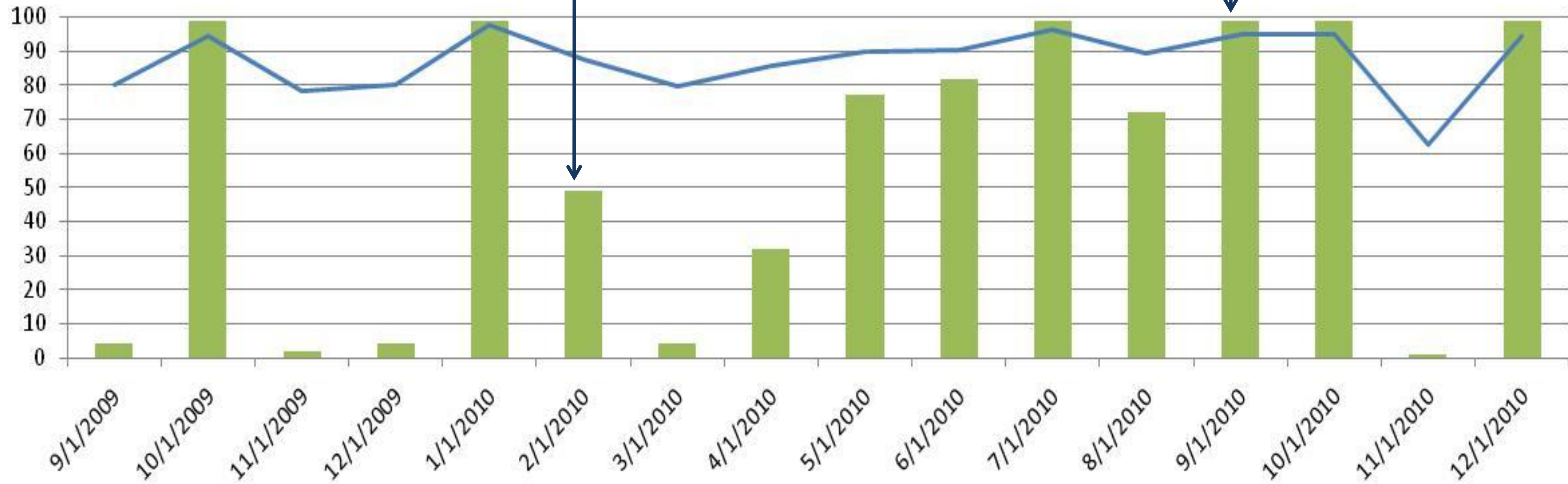
**Variability:** ↓  
**Performance:** ↑

# Unit-Level Patient Satisfaction

**SIBR Pilot = 5-6 patients / day**  
Feb 1- Aug 30, 2010

**Full Coverage SIBR = 20-24 patients / day**  
Sep 1, 2010 - Current

**6G - Overall Assessment: Overall rating of care given**



**Variability:** ↓  
**Performance:** ↑

	9/1/2009	10/1/2009	11/1/2009	12/1/2009	1/1/2010	2/1/2010	3/1/2010	4/1/2010	5/1/2010	6/1/2010	7/1/2010	8/1/2010	9/1/2010	10/1/2010	11/1/2010	12/1/2010
■ Percentile Rank	4	99	2	4	99	49	4	32	77	82	99	72	99	99	1	99
○ Sample Size	10	9	15	5	11	10	11	7	10	13	7	12	5	10	6	9
— Mean Score	80	94.4	78.3	80	97.7	87.5	79.6	85.7	90	90.4	96.4	89.6	95	95	62.5	94.4

Source: Press Ganey