Nursing: a Catalyst to Drive Value in Healthcare

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Objectives

- **Briefly discuss value as a driver of contemporary healthcare**
- **Provide selected examples of nurses driving value in health care settings**
- **Discuss how this work can serve as a catalyst for improving health**

The Volume to Value Transformation

- **1990s Managed Care Era focus on cost containment**
- **2005-2008: CMS proposed P4P as a solution to the sustainable growth rate**
- **Transition from fee-for-service to alternate payment models**
  - ***Changing how we get paid for health care services***
- **Transition from solo practices and freestanding hospitals to medical homes, accountable care organizations, large hospital systems, and organized clinics**
  - ***Changing how we organize and deliver health care services***

Burns, L. R. & Pauley, M. V. Transformation of the health care industry: curb your enthusiasm? 2018. The Millbank Quarterly, Vol 96, pp. 57-109.

Changing How We Get Paid for Health Care

FFS → APM

Rewards volume	Rewards value
The more you do, the more you get paid	Higher revenue for higher quality

Our goal is to have 50% of Medicare payments tied to quality by the end of 2018

Source: *New England Journal Medicine* 2015; 372:897-899 DOI: 10.1056/NEJMp1500445

Strategies to Drive Value in Health Care

- **Value-Based Payments (Upside/Downside)**
- **Bundles…managing patients and care across time**
- **Accountable Care Organizations**
- **Patient-Centered Medical Homes**
- **Oncology Medical Homes**
- **MIPS (Merit Based Incentive Payment System)**
- **MACRA (Medicare Access and CHIP Reauthorization Act of 2015)**

What does Value Mean?

- **Quality divided by cost[1]**
- **Higher quality for lower cost**
- **Health outcomes achieved per dollar spent[2].**
- **Outcomes that matter to patients over the cost of delivering those outcomes**

1. Burns, L. R. & Pauley, M. V. Transformation of the health care industry: curb your enthusiasm? 2018. The Millbank Quarterly, Vol 96, pp. 57-109.

2. Porter, M. What is value in health care? 2010. New England Journal of Medicine, Vol. 363, pp. 2247-2481.

Nursing as a Catalyst to Drive Value

A Critical Strategy for Health Care Organizations

- **Largest workforce**
- **Practice in all settings**
- **Time with patients**
- **Understand the world of patients and quality**

In the history of modern healthcare, there has not be a better time to capitalize on the knowledge and skills of nurses.

Selected Nursing Exemplars

- **Reaching for Zero Defect CAUTI Rates**
- **The Mepilex® Story in Cardiac Surgery**
- **Letting APPs Practice**
- **Enriching Patient Experience Through Effective Nurse Communication**

Reaching for Zero Defect in CAUTI Rates

- **Bridget Major-Joynes, MSN, RN and Sitha Dy, MSN, RN, CCNS**
- **Led UTI-EBP group that drove broad nursing efforts to translate infection prevention-related evidence into clinical practice**
- **Identified and studied best practice on one unit**
  - Nurses had implemented CDC Guidelines which outlined a process for nurse-initiated removal of indwelling urinary catheters. Systematically assessed need and dialogued with providers
- **Proposed expansion of this practice across the organization and system**
- **Convened IP group, developed EB protocol, translated to EMR, piloted, educated, implemented, and continuously evaluate**

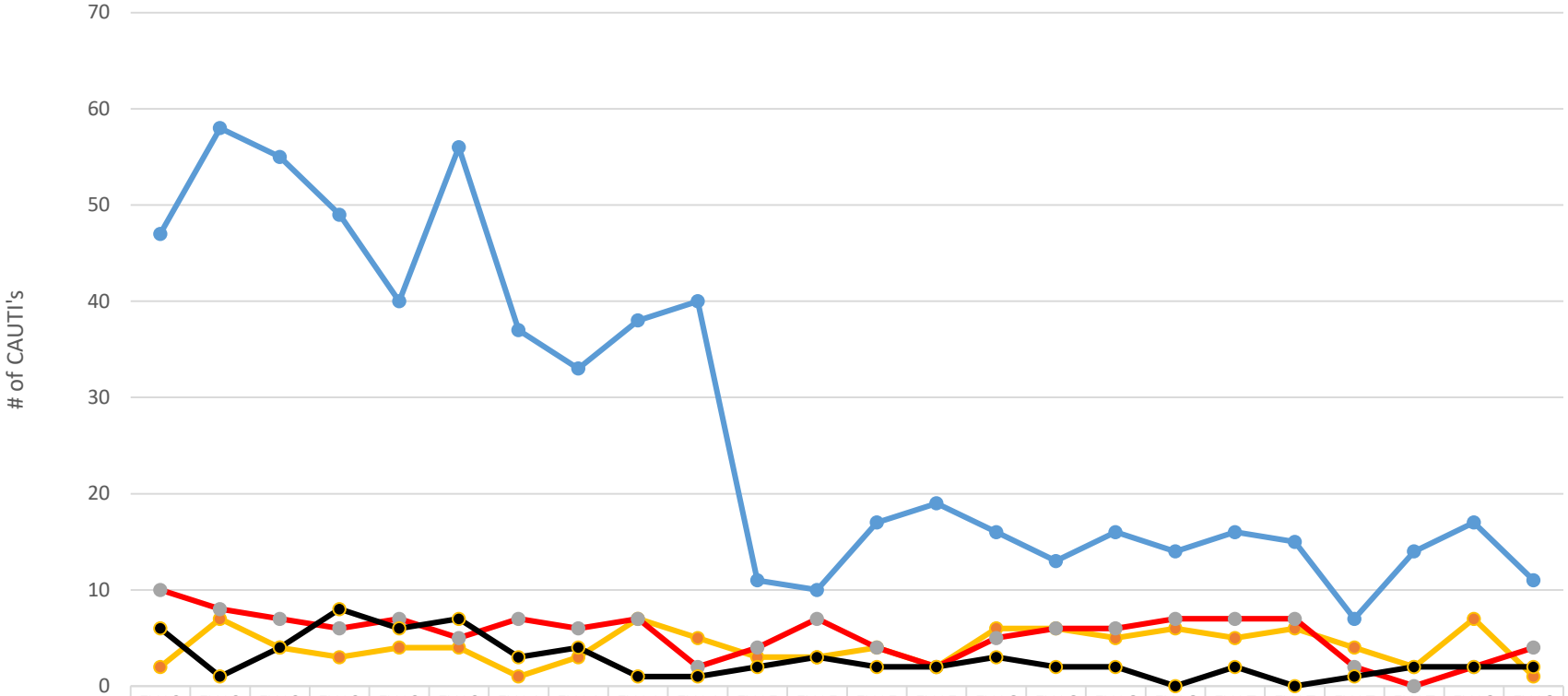
Implications of Good CAUTI Control Practices

Data Source: NDNQI, 2014

Hospital of the University of Pennsylvania Cost Assessment

- Catheter-associated UTIs increase the direct costs by $11,800
- Catheter-associated UTI increases Length of Stay by 17.8 days

CAUTI Counts, UPHS, Q3 2012- Q2 2018



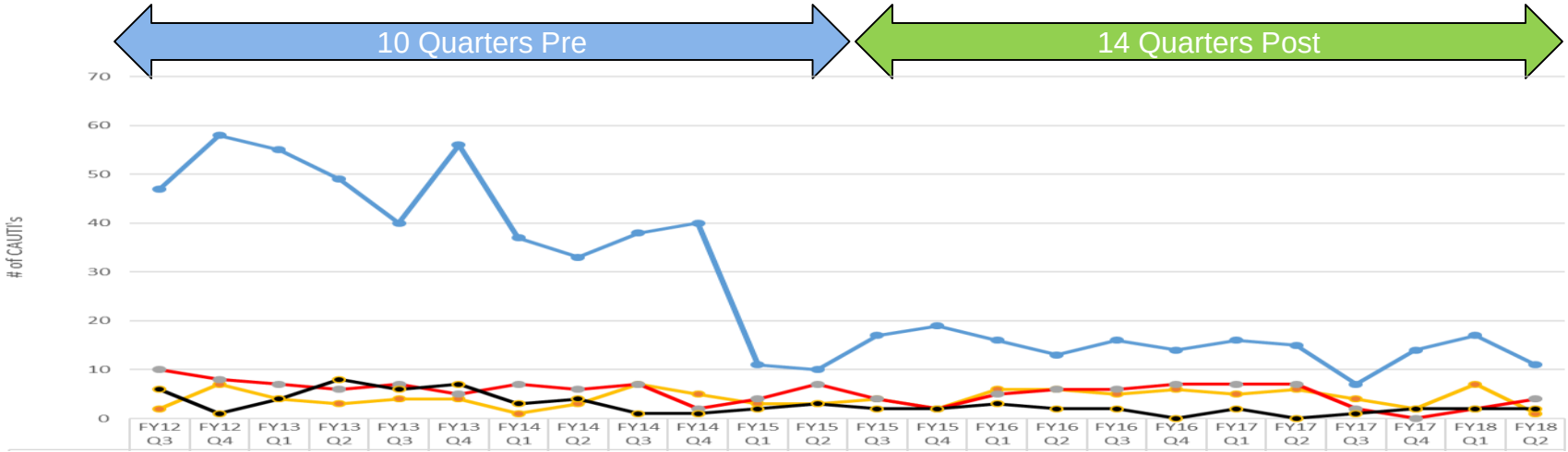
	FY12 Q3	FY12 Q4	FY13 Q1	FY13 Q2	FY13 Q3	FY13 Q4	FY14 Q1	FY14 Q2	FY14 Q3	FY14 Q4	FY15 Q1	FY15 Q2	FY15 Q3	FY15 Q4	FY16 Q1	FY16 Q2	FY16 Q3	FY16 Q4	FY17 Q1	FY17 Q2	FY17 Q3	FY17 Q4	FY18 Q1	FY18 Q2
HUP	47	58	55	49	40	56	37	33	38	40	11	10	17	19	16	13	16	14	16	15	7	14	17	11
PPMC	2	7	4	3	4	4	1	3	7	5	3	3	4	2	6	6	5	6	5	6	4	2	7	1
PAH	10	8	7	6	7	5	7	6	7	2	4	7	4	2	5	6	6	7	7	7	2	0	2	4
CCH	6	1	4	8	6	7	3	4	1	1	2	3	2	2	3	2	2	0	2	0	1	2	2	2

4/2014: NDRP

1/2015: NHSN definition change—exclude low colony count cultures and candiduria

11/2015: RUA/reflex urine culture CDS

How does this practice change drive value?



	Pre	Post
Average Additional Costs per Quarter Due to CAUTI	$532,311	$165,200
Average Additional Patient Days per Quarter Due to CAUTI	803 days	249 days

Total Additional Costs in Post Period if Performed at Avg Pre Levels	$7,452,356
Total Additional Patient Days in Post Period if Performed at Avg Pre Levels	11,242 days
Total Actual Additional Costs in Post Period	$2,312,800
Total Actual Additional Patient Days in Post Period	3,489 days

Difference = $5.1M

Difference = 7,753 days

CAUTI reduction lowered additional costs across the 4 hospitals by an estimated $5.1M and freed up 7,753 patient days in the post period (this does not include back fill opportunity)

Note: Additional CAUTI costs are based on 60% of direct costs

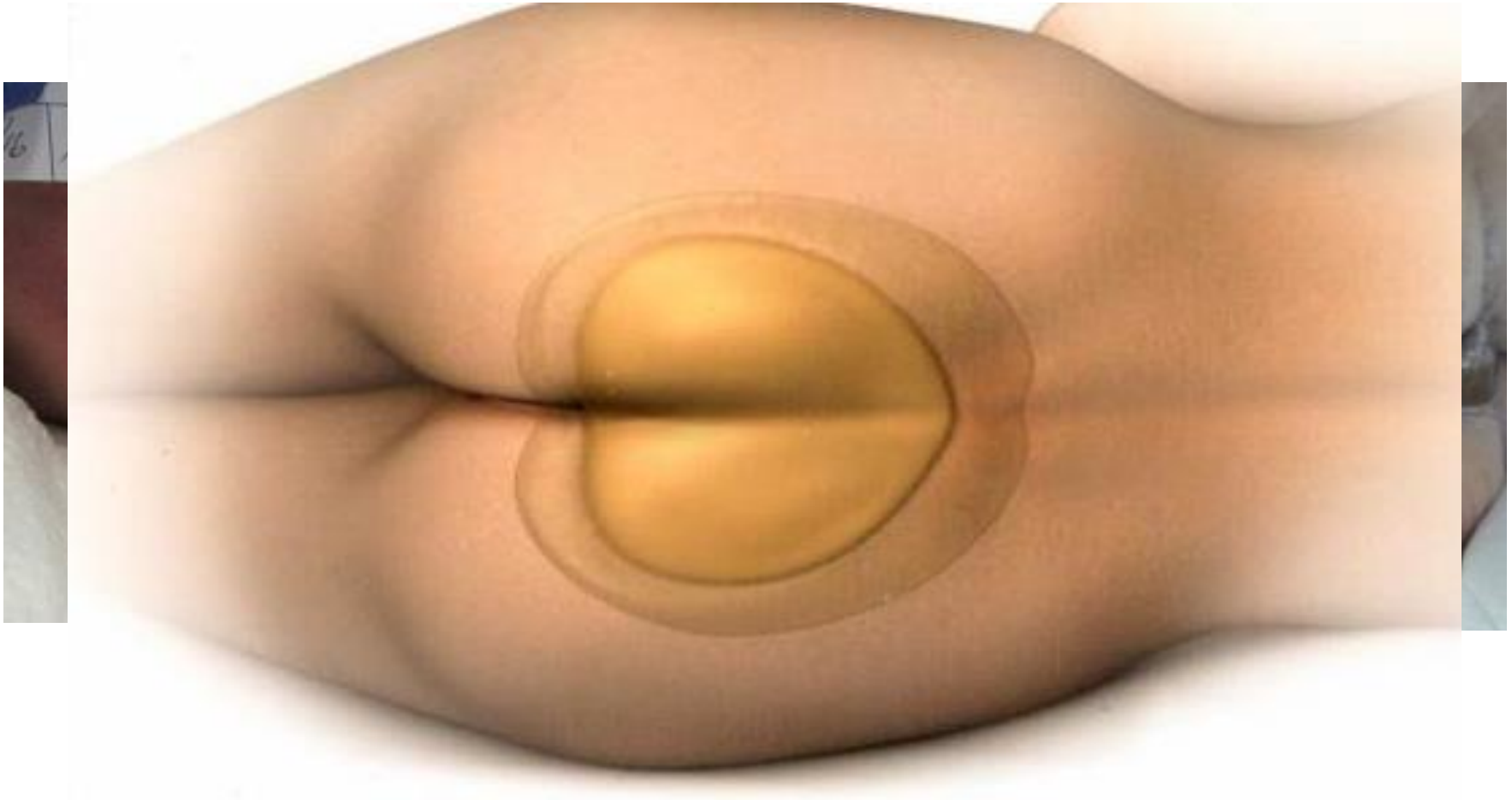
Supply Standardization

Improving Care in Cardiac Surgery

Preventing Deep Tissue Injuries Post-Op

- **Problem: Nurses noted patients developing deep tissue injuries (DTIs) within days following cardiac surgery (CSU)**
  - DTI: serious type of pressure injury that rapidly deteriorates despite optimal treatment
  - DTI pathophysiology not yet well understood; bone/muscle interface
  - Multiple risk factors: age, BMI, anemia, vasopressors, length of surgery, time on bypass, comorbidities, etc.
  - Like stage 3 or 4 pressure injuries, DTIs are a “never event” per CMS
  - Pre intervention incidence: 2.3%
- **Proposed Intervention: Apply prophylactic foam dressing**
  - Emerging evidence
  - Molnlycke 9X9 Mepilex® Border Sacrum Dressing X 5 days
  - Collaborated with nurses across units
  - Post intervention incidence 0%
  - Maintained at 0 since February 2016

Deep Tissue Injuries Following Cardiac Surgery



Deterioration DTI discovered immediately post-op

Proposed intervention: prophylactic sacral foam dressing

Goal: Avoid iatrogenic damage to patients' skin

[1] Rao, Preston, Strauss, Stamm, & Zalman (2016). Risk Factors Associated with Pressure Ulcer Formation in Critically Ill Cardiac Surgery Patients: A Systematic Review. *JWOCN.*

How does this practice change drive value?

37 fewer patients per year develop a DTI

Average Additional Costs per DTI	$40,200
Average Additional Patient Days Due to DTI	40.8 days
Total Additional Costs Due to DTI (n = 37)	$1,487,400
Total Costs of Mepilex Dressings ($9.80 x 2800)	$27,440
Total Additional Patient Days Due to DTI (n = 37)	1509.6 days

DTI reduction lowered additional costs by an estimated $1,459,960 ($1,487,400 - $27,440) and freed up 1509.6 patient days (this does not include back fill opportunity).

How do these nursing initiatives drive value?

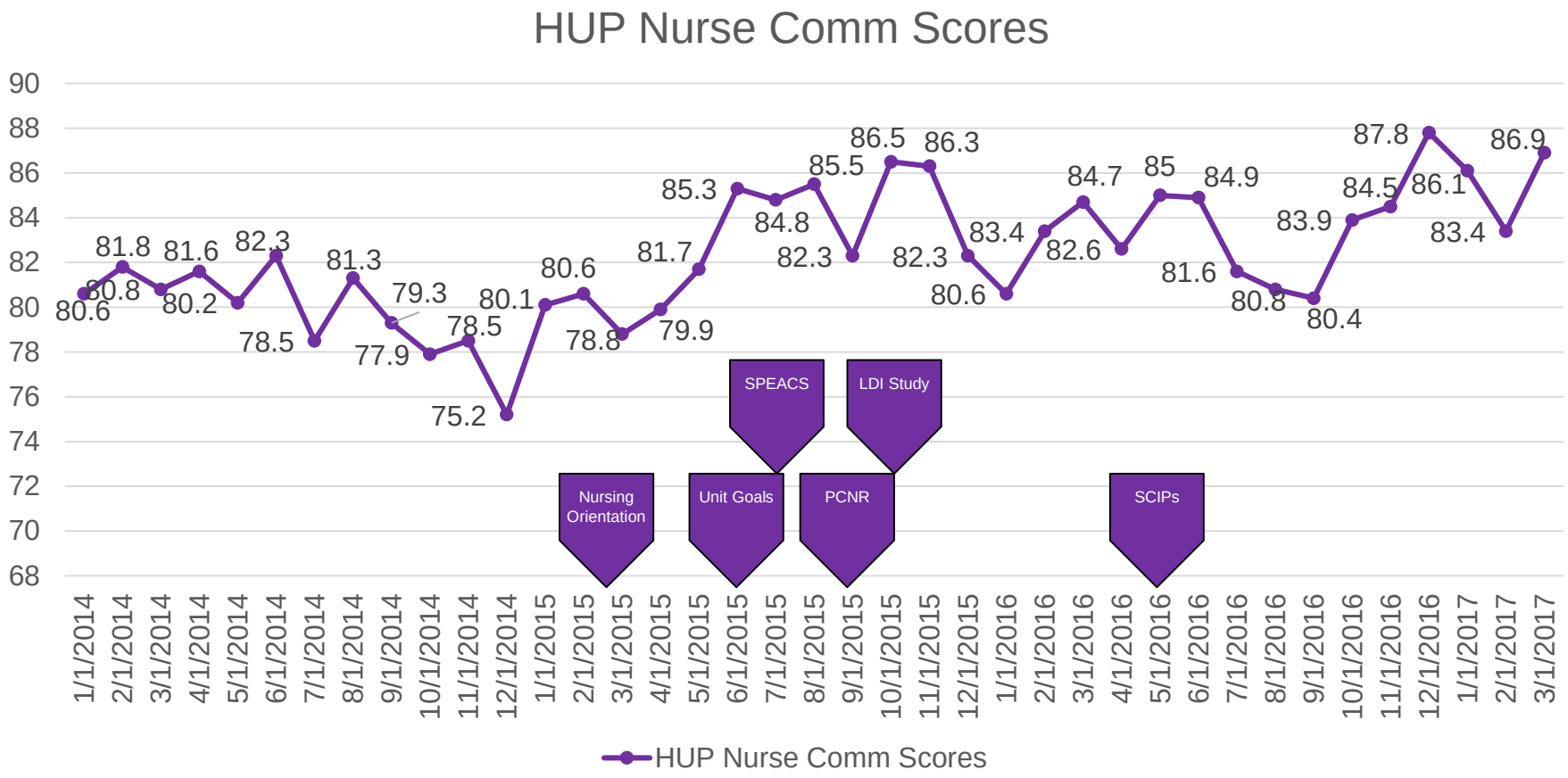
- Improvements in ***outcomes that matter to patients***
- Better care
- Lowers costs
- Drives standardization of practice and supplies
- Drives efficiency
- Promotes autonomy
- Improves organizational revenue

Developing a Nurse Communication "Bundle"

Shaping the Patient Experience

- **Setting the Stage and Expectation – Nursing Orientation**
- **Unit-specific goals…*driven by data* through front line leaders**
- **Leonard Davis Institute Study – Understanding patient perceptions, salient episodes**
- **Continuum-based thinking – It's not just the discharging units! SPEACS in critical care**
- **Let's get patients and families front and center – PCNR**
- **SCIP Phones**

Nurse Communication Bundle Timeline Slide



Financial Impact of Improving Nurse Comm

HCHAPS Reimbursement for Nurse Communication

FFY 16	FFY 17	FFY 18 (Estimated)
(9,100)	91,000	130,200

Data Source: Hospital Association of Pennsylvania, 2018

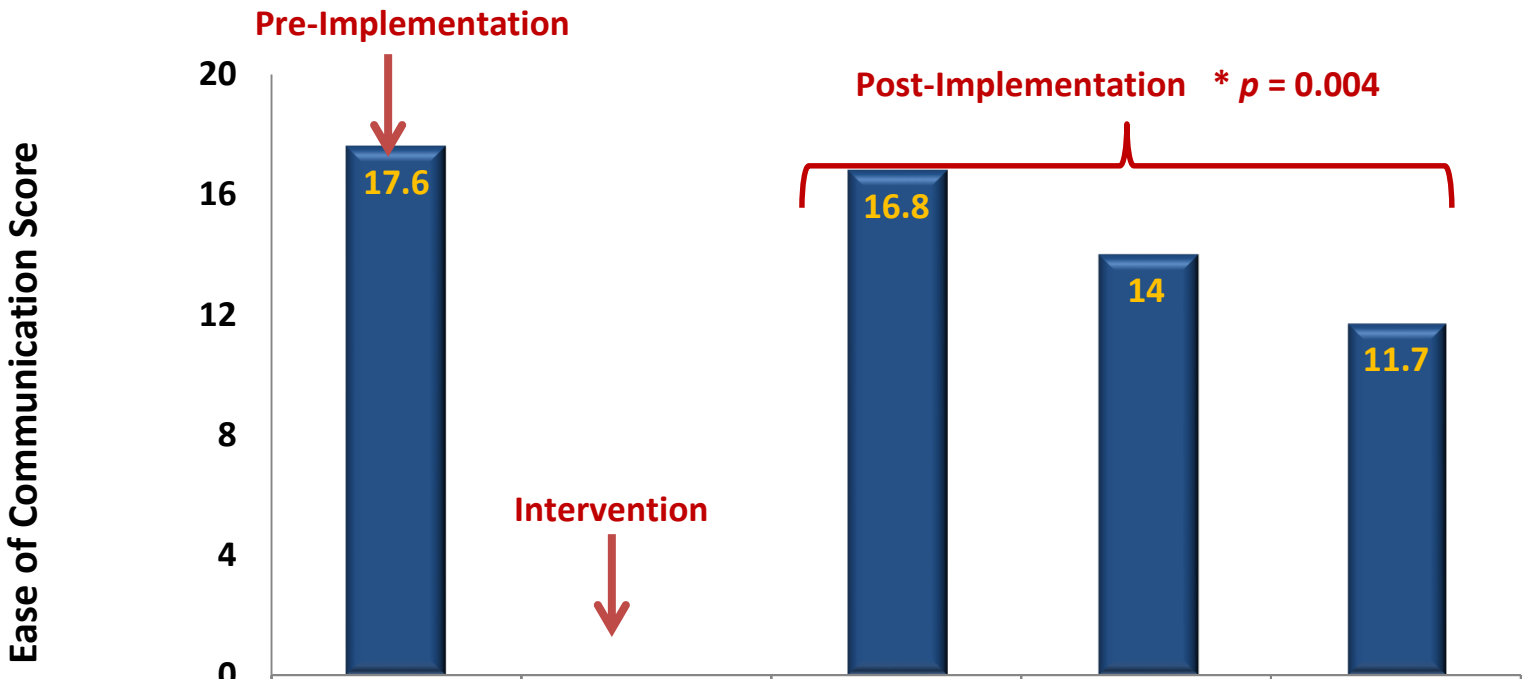
What did the LDI study uncover?

Patients identify ***specific behaviors*** that convey *courtesy & respect*, *careful listening and* ***specific moments*** when these behaviors matter most

What behaviors can nurses employ to strengthen communication with patients?	When do these behaviors matter most?
✓ Introduce yourself, ***explain why you're there*** ✓ Provide ***undivided attention*** ✓ Be ***mindful of the environment***	❑ Entering patient room
✓ ***Elicit concerns*** up front ✓ Take concerns seriously ✓ Provide ***time frames for follow up*** ✓ ***Check back with patient*** even if concern isn't resolved	❑ Night time
✓ Engage in ***patient-centered nurse report*** ✓ ***Protect sleep***; check in with patients ***overnight***	❑ Painful/ invasive procedure (e.g., shots)
✓ Avoid jargon, be gentle and honest during ***invasive/ painful procedures*** ✓ Provide ***step-by-step explanations with return demos*** when teaching	❑ Responding to individual concern
	❑ Responding to vulnerable moments
	❑ At discharge

Improving Communication with Non-Vocal ICU Patients

- **SPEACS Intervention:** **Algorithm to determine patients' communication preferences and ability and use of assistive communication methods**



Mobilization in Neurosurgical Patients

- **Problem: Neurocritical care nurses concerned about limited mobility in patients with subarachnoid hemorrhage who have EVDs**
  - Historical conservative approach to activity for patients with an EVD
  - High fall risk
  - Impulsivity
  - Concerns about exacerbating delayed cerebral ischemia
  - Potential complications of mobilizing patients with an EVD (catheter dislodgement, over-drainage of CSF, infection)

- **Developed a standard mobility protocol with specific inclusion and exclusion criteria to test 2 different mobility interventions**
  - Inclusion: SAH, EVD, able to tolerate drain clamping x 20 minutes
  - Exclusion: Sustained ICP > 20, unstable neuro exam, pulmonary or cardiovascular instability, unable to tolerate 20 minutes of drain clamping, patient refusal

Methods

Phase 0: No mobilization until EVD removal

Phase I (11/2014 – 11/ 2015)	Phase II (1/2016 – 08/2016)
PT/OT (therapy)-driven mobility	Nurse-driven mobility
Activity only during PT/OT sessions	Nurses independently mobilize patients; able to mobilize patients prior to PT/OT evaluation
Continuous RN and therapist observation	Allowance to stay out of bed in a chair with intermittent nursing assessment
Average duration of activity: 32 minutes	Maximum time out of bed with drain clamped: 3 hours
Bedside activity: •Sit at edge of bed •Stand at bedside •March in place	Progressive mobility: •Lift to chair •Stand and pivot •Mobility in hallway

Results

	Phase 0 (N = 15) No mobility	Phase 1 (N = 24) Therapy-Driven	Phase 2 (N = 17) Nurse-Driven
1st Mobilization	20.1 days (±7.02)	6.0 days (±3.16)	4.9 days (±3.46)*
No. Sessions	0	3.0 (±1.33)	7.1 (±4.37)*
Hospital LOS	28.2 (±10.08)	24.6 (±8.29)	20.9 (±7.56)
ICU LOS	21.4 (±8.74)	18.7 (±6.00)	16.1 (±7.53)
Ventilator Days	12.3 (±13.89)	6.3 (±10.47)	3.1 (3.84)
Tracheostomy	40%	16.7%	0
Discharge Disposition	**Home** = 6.7% **Rehab** = 53.3% **LTACH** = 33.3% **Acute Care Hospital** = 6.7%	**Home** = 33.3% **Rehab** = 54.2% **LTACH** = 8.3% **SNF** = 4.2 %	**Home** = 29.4% **Rehab** = 70.6% **LTACH** = 0 **SNF** = 0

Care Variation

- **Major area of focus as healthcare shifts from volume to value**
- **Recent study from the Advisory Board Company showed that more hospital CFOs consider care variation reduction their single most important cost opportunity (ahead of labor and supplies)**
- **One study of 1000 hospitals estimated that the typical organization has the potential to save $20M-30M through reductions in care variation**

How well are we doing?

Original Scholarship

Transformation of the Health Care Industry: Curb Your Enthusiasm?

LAWTON R. BURNS and MARK V. PAULY

The Wharton School, University of Pennsylvania

Connecting Quality + Value at the Front Line

https://vimeo.com/arsenalmediaworks/review/230835886/2664731519