PfP NJ 2.0 Falls Learning Action Group Webinar #5: Content Call for PROSPECT (Promoting Respect and Ongoing Safety through Patient Engagement, Communication, and Technology)

August 2, 2016
Hosted by New Jersey Hospital Association

Lauren Rava, MPP

Collaborative Faculty
Patricia C. Dykes PhD, RN, FAAN, FACMI
Sr. Nurse Scientist
Research Program Director
Center for Nursing Excellence
Brigham & Women’s Hospital
Harvard Medical School
Boston, MA
Agenda

• Partnership for Patients-NJ 2.0 updates
• Presentation: Content Call with Dr. Dykes on PROSPECT (Promoting Respect and Ongoing Safety through Patient Engagement, Communication, and Technology)
• Q&A
• Next steps
Goals

• Reduce HACs 40% from 2010 baseline
• Reduce preventable readmissions 20% from 2010 baseline

*It is important to note a data anomaly for the fall and falls with injury rates for first quarter 2015. The data shows a dramatic increase in rates. There are a couple of possibilities. One, 2015 was a particularly harsh winter and this could have possibly led to increase in falls due the effect with the elderly population. Or two, the data is misrepresented. We are currently investigating the issue and will update with our findings.
Project Updates

**Total Falls Rate**
Total Falls per 1,000 Patient Days
(NDNQI measure)

- **y = -0.0855x + 3.0475**
- **R² = 0.8698**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Falls Rate</th>
<th>(NDNQI measure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 (n=30)</td>
<td>3.02</td>
<td></td>
</tr>
<tr>
<td>2012 (n=41)</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td>2013 (n=37)</td>
<td>2.84</td>
<td></td>
</tr>
<tr>
<td>2014 (n=42)</td>
<td>2.64</td>
<td></td>
</tr>
<tr>
<td>2015Q1 (n=53)</td>
<td>2.58</td>
<td></td>
</tr>
<tr>
<td>2015Q2 (n=54)</td>
<td>2.48</td>
<td></td>
</tr>
<tr>
<td>2015Q3 (n=54)</td>
<td>2.40</td>
<td></td>
</tr>
<tr>
<td>2015Q4 (n=53)</td>
<td>2.35</td>
<td></td>
</tr>
<tr>
<td>2016Q1 (n=55)</td>
<td>2.25</td>
<td></td>
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</tbody>
</table>

- **NJHEN Baseline**: 3.02
- **National Benchmark**: 2.15
- **NJHEN 40% Target**: 1.81

The trend line shows a decrease in total falls rate over time, indicating improvements in patient safety.
Project Updates

Falls with Injury Rate
Falls with Injury per 1,000 Med-Surg Patient Days
(NDNQI measure)

y = -0.0166x + 0.609
R² = 0.405
Project Updates

Fall Risk Assessment
% Assessed for Risk of Fall w/in 8 Hours of Admission
(Chart Review)

2011 (n=11) 2012 (n=14) 2013 (n=13) 2014 (n=6) 2015Q1 (n=2) 2015Q2 (n=2) 2015Q3 (n=1)
88.3% 90.2% 87.5% 99.2% 98.1% 100.0% 100.0%
PfP NJ 2.0 Falls **Learning Action** Group

Structure

• Evidence based strategies:
  – Patient-centered Fall Prevention
  – STRIDE (STrategies to Reduce Injuries and Develop confidence in Elders)
  – PROSPECT (Promoting Respect and Ongoing Safety through Patient Engagement, Communication, and Technology)

• Peer to peer sharing and networking
  – Coaching calls
Transforming Care in the Intensive Care Unit: The PROSPECT* Project

Center for Patient Safety, Research, and Practice
Brigham and Women’s Hospital
August 2, 2016

*Promoting Respect and Ongoing Safety through Patient Engagement, Communication, and Technology
Overview

• Review current state of healthcare team communication.
• Define patient engagement.
• Describe the BWH PROSPECT Project
  – Goal, specific aims
  – The BWH PROSPECT intervention
• Review results from the clinical trial
  – Preventable harms
  – Patient and care partner experience
  – Healthcare utilization
• Review lessons learned
• Ineffective communication is a leading root cause of medical errors.
Team Communication Challenges

- Multiple handoffs
- Involvement of numerous professional and paraprofessional providers
- Varied communication methods
- Simultaneous parallel conversations
- Information silos
- Inconsistent beliefs re: patient/family role on care team
Team Communication is Suboptimal: BWH Baseline Data

- Asked ICU patients (or caregiver), bedside RN, and physician from primary team about the patient’s overall goal for hospitalization

Goals of Care among Hospitalized Patients (Haberle 2011)

1. Be Cured
2. Live Longer
3. Improve & Maintain Health
4. Be Comfortable
5. Accomplish a personal life goal
6. Provide support for family
7. Other

<table>
<thead>
<tr>
<th>Category</th>
<th>N=88</th>
<th>%</th>
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<tbody>
<tr>
<td>No. with 1 unique response</td>
<td>21</td>
<td>24%</td>
</tr>
<tr>
<td>No. with 2 unique response</td>
<td>44</td>
<td>50%</td>
</tr>
<tr>
<td>No. with 3 unique response</td>
<td>23</td>
<td>26%</td>
</tr>
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</table>
Patient-centered Care

• “Providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions.”

Institute of Medicine, Crossing the Quality Chasm (2001)
Precondition for patient-centered care

Patient Engagement

Patient Activation + Interventions/tools designed to promote activation and positive health behaviors
Patient Activation

4 Stages of Patient Activation

1. Believing the patient role is important
2. Having the confidence and knowledge necessary to take action
3. Taking action to maintain and improve one's health
4. Staying the course even under stress

Activated, Engaged Patients…

- Are more likely to...
  - Engage in preventive behavior (check-ups, screenings, and immunizations)
  - Engage in healthy behavior such (healthy diet, regular exercise)
  - Avoid health-damaging behavior (smoking and illegal drug use)

Hibbard & Green (2013). What The Evidence Shows About Patient Activation: Better Health Outcomes And Care Experiences; Fewer Data On Costs *Health Affairs*: 32 (2) 207-214
### Activated, Engaged Patients...

- Incur less costs

#### Predicted Per Capita Costs of Patients by Patient Activation Level

<table>
<thead>
<tr>
<th>2010 patient activation level</th>
<th>Predicted per capita billed costs ($)</th>
<th>Ratio of predicted costs relative to level 4 PAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 (lowest)</td>
<td>966**</td>
<td>1.21**</td>
</tr>
<tr>
<td>Level 2</td>
<td>840</td>
<td>1.05</td>
</tr>
<tr>
<td>Level 3</td>
<td>783</td>
<td>0.97</td>
</tr>
<tr>
<td>Level 4 (highest)</td>
<td>799</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Source:** Judith H. Hibbard, Jessica Greene, and Valerie Overton, “Patients with Lower Activation Associated with Higher Costs; Delivery Systems Should Know Their Patients’ Scores,” *Health Affairs* 32, no. 2 (2013): 216–22. **Notes** Authors’ analysis of Fairview Health Services billing and electronic health record data, January–June 2011. Inpatient and pharmacy costs were not included. PAM is Patient Activation Measure. **p < 0.05**
Continuum of Engagement

**Consultation**
- Provide patient education materials

**Involvement**
- Inquire about patient preferences

**Partnership & Shared Leadership**
- Provide patients/family with same info as providers in consumer literacy format
- Partner with patients/family in decision-making that is based on evidence, patient preferences, clinical judgment

“Yes, but our patients…”

- Are too sick to engage
- Have poor health literacy
- Are generally unmotivated
- Have poor social supports
- Have limited resources
PROSPECT (Promoting Respect and Ongoing Safety through Patient Engagement Communication and Technology)

• Goal: To transform the intensive care environment through implementation of a patient-centered intervention
  – Focus on patients and care partners
Libretto Consortium

Create and test care innovations that improve patient and family engagement and reduce preventable harm
PROSPECT: Specific Aims

• Minimize preventable harms.
• Optimize the overall experience of patients (and care partners) by facilitating engagement and promoting dignity/respect.
• Reduce unnecessary healthcare resource utilization and associated costs.
PROSPECT Preliminary Work

- Collaborative approach to designing and implementing a structured team communication program enabled by health information technology.
  - Focus on physicians, nurses, patients and care partners
  - Methods:
    - Interviews, workflow observations, focus groups
    - Participatory, iterative design of the communication model and a suite of shared documentation and communication tools
PROSPECT Intervention (Implemented)

- Patient SatisfActive® Model
  - *Refined for use in BWH MICU*
- Web-Based Patient-Centered Toolkit (PCTK)
  - *Expanded to include suite of provider facing tools*

“Provider-facing” Tools

“Patient-facing” Tools

Patient or Health Care Proxy Consent
Goals:

1) Accurately and reliably identify care team members
2) Proactively engage providers
3) Consolidate plan of care dialog into a single, transparent conversation thread
“Provider-facing” Tools

Multidisciplinary Plan of Care Platform

PATIENT input for provider

Last Updated On: 3/13/2015 1:35:21 PM

Health Concerns: Patient’s Goals

Overall Goal:

Goal for today: I want to walk twice

Care Preferences: No Steroids

My care team is helping me to meet my goals: Somewhat

PROVIDER input for patient

Clinical Problems
(click the ‘x’ to delete from patient view)

Main reason for hospitalization: Acute kidney injury

Other problems: Congestive Heart failure x Anemia x

Care Team Goals
(click the ‘x’ to delete from patient view)

Urine Output greater than 30 mL/hr

Pain management goal 2 x

Patient Schedule

4/14/2015

CT Scan Morning x
Family Meeting Afternoon x

Events to be added to patient schedule:

LAB: BLOOD DRAW Add

+Add a free text event
“Provider-facing” Tools

Plan of Care Worksheet

<table>
<thead>
<tr>
<th>Onset Date</th>
<th>R</th>
<th>Problems</th>
<th>Goal(s)</th>
<th>Planned Assessments and Interventions</th>
<th>Outcome Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/12/2014</td>
<td></td>
<td>Comfort alteration</td>
<td>Pain management goal 1</td>
<td>Assess pain every 2 hours</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Scale used Numerical (0-10)</td>
<td>Patient will appear comfortable</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other</td>
<td>T &amp; R q 2 hrs w/ PROM increase oob as tol</td>
<td></td>
</tr>
</tbody>
</table>

SENSEYR

NEURO
### MICU Safety Checklist Tool

#### Safety Checklist

<table>
<thead>
<tr>
<th>Item</th>
<th>Safety Screen (MD w/RN present at time of care)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient/Family Toolkit</strong></td>
<td>We have given the RN an opportunity to present any new patient or family input (from the Patient SatisfActive model, Toolkit, or Microblog).</td>
</tr>
<tr>
<td><strong>Vent Bundle</strong></td>
<td>Is the patient on mechanical ventilation?</td>
</tr>
<tr>
<td><strong>HOB elevation</strong></td>
<td>Indicated</td>
</tr>
<tr>
<td><strong>Spontaneous Awakening Trial</strong></td>
<td>Contraindicated- Hemodynamic instability (up titration of pressors)</td>
</tr>
<tr>
<td><strong>Spontaneous Breathing Trial</strong></td>
<td>Contraindicated-</td>
</tr>
</tbody>
</table>
My Overall Goal:
Be comfortable

My Daily Goal:
Get out of bed

My Care Team is helping me to meet my goals:
Not at All  Somewhat  Completely

My Preferences related to my care:
I would like my sister to be involved in my care

Care Team Goals:
- Improve respiratory status
- Prevent skin breakdown
- Free of pain
- Adequate nutrition

“Patient-facing” Tools
Congestive Heart Failure
- Pneumonia
- Anemia
- Risk of DVT

Getting up to urinate during the night

“Patient-facing” Tools
“Patient-facing” Tools
"Patient-facing" Tools
"Patient-facing" Tools

Harry Potter's Plan of Care
Room #:1040A Phone#: (617) 555-1212z

My Medications:

1. HEPATITIS A VACCINE 1,440 UNITS IM x1
   Last administration given: 2013-12-04 14:15:00Z
   Next administration due:

2. ACETAZOLAMIDE PO 25 MG (5 MG/KG) Q6H
   Last administration given:
   Next administration due:

3. TRANSFUSE 1 bags PLATELETS Over 0.5 hrs for platelet count < 10 thousand each bag ROUTINE 06/12
   Last administration given:
   Next administration due:

4. HYDROMORPHONE HCL 1MG/ML PCA IV Q24H
   Last administration given:
   Next administration due:

5. HYDROMORPHONE HCL 1MG/ML... 0.8 mg IV Q10MIN X 2 doses PRN Pain
   Last administration given:
   Next administration due:

6. ONDANSETRON HCL 1 MG IV/USH Q6H PRN Nausea
   Last administration given:
   Next administration due:

7. NALBUPHINE HCL 5 MG IV/USH Q4H PRN Itching
   Last administration given:
   Next administration due:

8. NALOXONE HCL 0.04-0.08 MG IV Q2MINUTES PRN Other:Respiratory Depression
   Last administration given:
   Next administration due:

Message Care Team 🔗
Does the PROSPECT framework positively impact dignity and respect, satisfaction, care plan concordance, and lead to reduction in adverse events and healthcare resource utilization and costs?

Pre-Post Design

Data collection (control and intervention units)

Pre-implementation Period
7/1/13 – 6/8/14

PROSPECT Intervention
7/1/14 – 5/29/15

Post-implementation Period

Education & Training

Wash-in Period

6/9/14 – 6/30/14
<table>
<thead>
<tr>
<th>Domain Measure</th>
<th>Instrument or Definition</th>
<th>Data Source</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventable Harms</td>
<td>• Medication errors&lt;br&gt;• CAUTI&lt;br&gt;• Blood stream infections&lt;br&gt;• VTE&lt;br&gt;• Falls&lt;br&gt;• Pressure ulcers</td>
<td>Record review&lt;br&gt;Interview-based survey*</td>
<td>Ongoing by BWH Quality Department</td>
</tr>
<tr>
<td>Dignity &amp; Respect, Experience &amp; Satisfaction</td>
<td>• FS-ICU 24 Survey&lt;br&gt;• Semi-Structured Interview&lt;br&gt;• HCAHPS Mail Survey&lt;br&gt;• HCAHPS Phone Survey</td>
<td>Patients, Care Partners</td>
<td>Within 48 hours of discharge&lt;br&gt;48 hours - 6 weeks post-discharge</td>
</tr>
<tr>
<td>Care Plan Concordance</td>
<td>Interview-based survey*&lt;br&gt;Haberle</td>
<td>Patients, Care Partners, Providers</td>
<td>48-72 hrs into admission</td>
</tr>
<tr>
<td>Healthcare Utilization</td>
<td>• Length of stay&lt;br&gt;• 30-day readmissions</td>
<td>BWH administrative data</td>
<td>At or post-discharge</td>
</tr>
</tbody>
</table>
Weighted propensity score: Accounts for differences in observed participant characteristics in the baseline/during intervention periods

- Age
- Sex
- Race
- Insurance
- Charlson score
- Median income by zip code
- Care unit length of stay
PROSPECT Patient Demographics

• MICU
  – Pre: 1030
  – Post: 1075
  – Demographics similar pre-post; Post patient less likely to be Caucasian (*p*=.02)
  – Toolkit users: 194 (18%)
    • Mean age: 60
    • More likely to be Caucasian and private pay
Patient and Care Partner Quotes…

• “It’s a really great idea. We’re always asking questions so this way we won’t have to chase anyone down”

• (In response to “My Care Team page) “These are my friends! I’ve known them for 7 years. It’s nice to see their pictures here”

• “With something like this, you know what’s going on”

• “This is great! Patients need more info about risks, safety, medications, ‘who is my doctor’ …”
PROSPECT Lessons Learned

• Clinical outcomes and patient/care partner experience improved
  – Multidisciplinary involvement needed
  – Clinical champions to reinforce best practices
  – Documenting reasons why safety checklist items are not indicated

• Patient care units are busy; many barriers to adoption and use of new innovations
  – Patients lack capacity, no care partner
  – Lack of access outside of hospital

• A device strategy is needed
  – Accessories
  – Storage
  – Cleaning
  – Security
  – Enrollment

• Patients want to be engaged but still challenges
  – Incapacitated, less “tech-savvy”, variably “activated” patients
  – Access to content for non-English speaking patients
  – Understanding of goals of care concept
  – Identifying and providing access to care partners can address some challenges

• More work needed re:
  – Workflow integration and clinician buy-in
  – Communicating value of using technology
Conclusions

• PROSPECT improved relationships with patients and families and reduced the likelihood that they would be harmed in the MICU

• Recognition of value of technology and impact on workflow is needed
  – Attention to provider “readiness” and workflow are key to success

• Patient Satisfactive Model was useful for reinforcing patient-centered practices and increased collaboration and communication needed for successful adoption of technology
  – Technology can be used to engage patients but additional work is needed to overcome barriers to use
  – More work needs to be done to flesh out patient/provider roles in establishing goals of care

• Technology is ubiquitous in all other aspects of many patients/care partners lives— we need to create tools to engage all stakeholders that support good communication and evidence-based care
PROSPECT Team

BWH Research Investigators
- David Bates – Principal Investigator
- Sarah Collins – Co-Investigator / Nursing Informatics Specialist
- Anuj Dalal – Co-Investigator
- Patricia Dykes – Co-Investigator
- Priscilla Gazarian – Co-Investigator
- John Hanna – Research Assistant
- Jaeho Lee – Graphical Design
- Lisa Lehmann – Co-Investigator
- Stuart Lipsitz – Biostatistician
- Kelly McNally – Research Assistant
- Eli Mlaver – Research Assistant
- Conny Morrison – Research Assistant
- Kumiko Ohashi – Project Manager
- Sucheta Ravindran – Research Assistant
- Ronen Rozenblum – Co-Investigator
- Lipika Samal – Co-Investigator
- Diana Stade – Research Assistant
- Cathy Yoon – Data Analyst

Clinical Leadership
- Oncology
  - Ted Alyea – Medical Director
  - Eddy Chen – Medical Oncologist
  - Katie Fillipon – Nursing Director
  - Marsha Malone – Nursing Director
- MICU
  - Anthony Massaro – Medical Director
  - Kathleen Leone – Nursing Director

Other Collaborators
- Frank Chang – Developer
- George Getty – Developer
- Deborah Williams – Database Programmer
- Maureen Fagan – Executive Director for Patients and Families
- Care Thread Inc.
Questions?
Next Steps

• Please complete survey to receive your attendance certificate
• Continue to submit data
• Next webinar: September 6: Coaching call on PROSPECT