Transforming Outcomes through Implementation of a Nurse Practitioner Hospitalist Service

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About Long Beach, CA

- Located in South Los Angeles County
- Seventh largest city in California
- Primary service area is app. 650,000 people
- Population app. 500,000 with >50% Hispanic/Latino or other minorities
- Largest Cambodian population outside Cambodia
- Shipping, oil, aircraft, education and healthcare are the largest industries

About Memorial Care
Long Beach Memorial (462 Beds)
- Annual ED Visits: >100,000 adult & peds
- Heart & Vascular Institute
  - AHA Gold in HF
  - STEMI Receiving Center
  - Certified Stroke Center
  - AHA Gold Plus
  - Joint Commission
  - Destination Joint Center
  - Diabetes Center
  - Joint Commission
  - Level II Trauma Center
  - ACS Reviewed
  - Inpatient Rehab Facility
  - CARF accredited

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Miller Children’s & Women’s (371 beds)
- High Risk Women’s Hospital
  - 6000 births/yr.
- Level III Regional NICU
  - 1000 NICU babies/yr.
- PICU-building to 32 beds
- Ped Hematology & Oncology
- Intensive Ped/Neonate Transport
- Pediatric Spec. Outpatient Clinics
  - 84,000 visits/year

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2011 Force Field Analysis
- Patient-centric
  - Common Purpose
  - Aligned incentives
  - Accountability for LOS
  - Hospitalist Visibility
  - Synchronized and integrated discharge
  - Type of reimbursement

- Length of Stay
  - 5.8 Days
- Batch Processing
  - Type of reimbursement
  - Unplanned Discharge
  - Large number of independent physicians
  - No Plan of Care
  - Specialized Labor
  - 12 hour shifts
  - Nursing motivators
  - Double occupancy rooms

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2015-09-10
January, 2014

Acuity of patients was under-represented, we knew our patients were sicker

This led to a lower CMI, Lower Medicare Reimbursement, and a poorer picture of quality of care.

Three primary patient types

• Unassigned - patients arriving in the medical center through the ED without a PCP-contracted hospitalist service.
• Assigned - patients arriving in the medical center through the ED with a PCP who does not care for patients in the hospital - they select internist.
• Specialist directed admission who wants a hospitalist - they select internist.
2014 –
We had a persistent problem

<table>
<thead>
<tr>
<th>Physician Type</th>
<th>Discharges</th>
<th>Actual Medicare LOS</th>
<th>Medicare GMLOS</th>
<th>CMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unassigned Hospitalist</td>
<td>432</td>
<td>4.33</td>
<td>4.40</td>
<td>1.68</td>
</tr>
<tr>
<td>Frequent Assigned Internist</td>
<td>216</td>
<td>5.63</td>
<td>4.28</td>
<td>1.74</td>
</tr>
</tbody>
</table>

Assigned internists
- practiced at multiple hospitals so saw patients once/day
- did not return calls to nursing staff delaying progression of care and appropriate interventions
- rounded at variable times – many in the middle of night delaying patient progression
- Unaligned incentives with the hospital

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Strategic Plan FY’14 Pyramid
Draft for NMS Strategy Committee Review

Mission To improve the health and well-being of individuals, families, communities through innovative & the pursuit of excellence.

Vision Exceptional People. Exceptional Care. Every Time.

Quality & Value
- Most patients discharged within 24 hours
- Randomly selected patients satisfaction survey
- Documentation aims to enhance patient care
- Uncomplicated medical care
- Happiness index
- Decrease in HCAHPS survey
- Matched patient satisfaction
- Documented patient satisfaction

Strategic Objectives Growth
- Enhance patient length of stay
- Enhance hospital quality metrics
- Enhance patient satisfaction
- Enhance patient care
- Enhance hospital satisfaction

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Finance & Culture
- Revenue growth
- Cost reduction
- Improved profitability
- Improved patient satisfaction
- Improved employee satisfaction

Nurse Practitioner Solution
- January, 2014 – needed innovative interventions
- Based on a partnership model – you help us and we will help you — and ourselves.
- February, 2014 – presented Business Case to Executive Committee for NP hospitalist model to support assigned internists.
- Case accepted and implementation of NP hospitalist program started immediately.

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**Nurse Practitioner Solution**

One of four strategies implemented to decrease LOS and accurately report CMI:

1. NP hospitalist service for assigned patients
2. Contracted hospitalist service for unassigned patients
3. Clinical Documentation Improvement Program
4. Escalation Huddles

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**Cost Benefit Analysis**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cln Ops Manager</td>
<td>$160,000</td>
</tr>
<tr>
<td>NPs</td>
<td>$1,184,433</td>
</tr>
<tr>
<td>Supplies &amp; Purchased Services</td>
<td>$24,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,370,433</td>
</tr>
</tbody>
</table>

Benefit:
- Each .1 reduction in Medicare LOS = 1.5 million savings annually
- Each .1 increase in case mix index = 3.0 million increase in Medicare reimbursement annually

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**Project Description**

The NP Hospitalist Service will assist a pilot group of LBM private practice internists with assigned patients.

The service may be expanded to other LBM physicians and Miller Children’s physicians in the future.
**Target Condition**

Implement 24/7 NP Hospitalist Service to:

- Document accurately to reflect case mix index, and thus severity of illness and risk of mortality
- Reduce delays in care progression and unnecessary LOS
- Create partnership with internists not closely aligned with the hospital goals

**Implementation of Adult NP Hospitalist Service**

<table>
<thead>
<tr>
<th>Steps to Implementation</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met with employed Nurse Practitioners in the medical center to discuss opportunity</td>
<td>January 2014 (22 attended)</td>
</tr>
<tr>
<td>Met with identified assigned internists to make them aware of the potential new service and the benefits to them (CNO and CMO)</td>
<td>February through March 2014</td>
</tr>
<tr>
<td>Posted positions and interviewed NP Clinical Operation Manager</td>
<td>February 2014</td>
</tr>
<tr>
<td>Adult NP Hospitalists- 7.0 FTEs (7 full-time and 1 part-time)</td>
<td></td>
</tr>
<tr>
<td>Start of NP orientation program (2 month program)</td>
<td>March 24th 2014</td>
</tr>
<tr>
<td>Adult NP service fully operational</td>
<td>May 26th 2014</td>
</tr>
</tbody>
</table>

**Planning for NP Role and Implementation**
Planning for NP Role

- **Need a standard process for planning and implementing the NP role**
  - Avoid barriers
  - Provide optimal development of role

**Utilized PEPPA Framework**

P = Participatory  
E = Evidence-based  
P = Patient-focused  
A = Process for guiding the development, implementation, and evaluation of APN  

Bryant-Lukosius & DiCenso developed framework to help guide implementation of APN  
Developed by combining two different models for the APN  
- Spitzer in 1978  
- Dunn and Nicklin in 1995  

**Nine step process for implementation**

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**PEPPA Framework**

- Define the population and describe the current model of care
- Identify stakeholders and recruit participants
- Determine the need for a new model of care
- Identify priority problems and goals to improve the model of care
- Define the new model of care and APN role
- Plan implementation strategies
- Initiate APN role implementation plan
- Evaluate the APN role and new model of care
- Long-term monitoring of the APN role and model of care
• **Step 1-5 (Initiated by Administration)**
  - Analyze current state, processes and models
  - Is the NP role going to meet the needs of the organization, strategic initiatives, hospital, and patients.
  - Identify priority problems and goals
  - Define the new model

Bryant-Lukosius & DiCenso, 2004; Sangster-Gormley et al., 2011

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PEPPA Framework

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<tr>
<th>Step</th>
<th>Description</th>
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<tr>
<td>1.</td>
<td>Define the population and describe the current model of care</td>
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<td>2.</td>
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<td>3.</td>
<td>Determine the need for a new model of care</td>
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<tr>
<td>4.</td>
<td>Identify priority problems and guide to improve the model of care</td>
</tr>
<tr>
<td>5.</td>
<td>Define the new model of care and APN role</td>
</tr>
<tr>
<td>6.</td>
<td>Plan implementation strategies</td>
</tr>
<tr>
<td>7.</td>
<td>Initiate APN role implementation plan</td>
</tr>
<tr>
<td>8.</td>
<td>Evaluate the APN role and new model of care</td>
</tr>
<tr>
<td>9.</td>
<td>Long-term monitoring of the APN role and model of care</td>
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Bryant-Lukosius & DiCenso, 2004; McNamara et al., 2009; Sangster-Gormley et al., 2011

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**Steps 6-7**

- Initiating of a plan for the implementation of the role
- Look at barriers and challenges
  - If barriers and challenges not addressed then synergy and desired outcomes will not occur

Bryant-Lukosius & DiCenso, 2004; McNamara et al., 2009; Sangster-Gormley et al., 2011

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Barriers and Challenges

- Understanding the goals, role, and strategic initiatives
- Organizational culture
- NP Role
  - Job description
  - Union-CBA
  - Reporting structure
  - Orientation
  - Nursing policies-Standardized Procedures
  - Privileging & medical staff policies
- Acceptance by multidisciplinary teams and MDs
- Burnout and retention
- Outcome and financial evaluation

Bryant-Lukosius, B. S. (2002); McNamara et al., 2009; Sangster-Gormley et al., 2011

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Implementation

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Nurse Practitioners

- Extensive Interview Process
  - Nursing administration reviewed applicants and interviewed
  - Looked at clinical knowledge, communication, teamwork, positive attitude, and commitment
- Hired 8 NPs (7 full-time, 1 part-time)
  - 7 internally
    - 5 new graduates, 2 never worked as hospitalist NP
    - Allowed for 2nd job code so could return to unit
  - 1 externally with experience as Hospitalist NP

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Orientation Program

- Two week intensive classroom orientation
  - Explanation of strategic goals of program
  - Initial needs assessment
  - Epic training
  - Clinical documentation (CDI) classes
  - Team building exercises
  - Clinical-DM, Neuro, Cardiac, Pharmacology

- Six week shadowing/precepting with physicians and other NPs in hospital

- Clinical competency assessment and validation tool utilized during orientation

Medical Staff and Privileging

- Collaboration with Medical staff and Medical Directors
  - Previously took 3-9 months for privileges
  - NPs were granted temporary and then full privileges within 2-3 months

- Proctoring process
  - 90 day process for experienced NPs
    - Utilized existing medical staff processes and documents
  - 1 year process for new grads (6 NPs)
    - Worked with nursing education to specify competencies
    - Standardized physician sign off on proctoring documentation

Service Implementation

May 2014

- Adult NP service a 24 hour service with operations 7 days a week including holidays

- 7 Physicians initially divided up into 2 teams
  - (Red and Blue)
  - 2-3 NPs from 6am to 6pm
  - 1 NP from 6pm to 6am
  - Oversee Admission, discharge, and daily progression of patients with physicians
  - Update problem lists with appropriate clinical documentation
    - Example: Acute postop blood loss anemia instead of Anemia

- Standard work created
  - Documentation, expectations, and goals
PEPPA Framework

Step 1: Define the population and describe the current model of care
Step 2: Identify stakeholders and recruit participants
Step 3: Determine the need for a new model of care
Step 4: Identify priority problems and goals to improve the model of care
Step 5: Define the new model of care and APN role
Step 6: Plan implementation strategies
Step 7: Monitor APN role implementation plan
Step 8: Evaluate the APN role and new model of care
Step 9: Long-term monitoring of the APN role and model of care

Steps 8-9
- Outcomes & evaluation often forgotten when first implement the role
- Changing environment need both short and long term monitoring of role
  - Allows for the role to evolve to meet the changing governmental regulations, hospital, and needs of patients

Bryant-Lukosius & DiCenso, 2004; McNamara et al., 2009; Sangster-Gormley et al., 2011

Initial Outcomes
Barriers to CMI

- NP barriers
  - Knowledge and education
  - Periodic peer review
- Physician barriers
  - Education on proper clinical documentation
  - Standard use of NP documentation
- Coding
  - Clarification on what could code from notes
  - Education of coding staff
Barriers to LOS

• New grad NPs
  - Extensive education on discharge planning at admission
  - Standard work and EMR templates
  - Schedule standardization

• Physician barriers
  - Sharing of data and outcomes
  - Sharing of best practices
  - Administrative support

• Family barriers
  - Improved communication via NPs
  - Standard work and EMR templates around communication with families

• Long term care placement
  - Working relationships with places in community

Outcomes

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>CMI</td>
<td>1.54</td>
<td>1.63</td>
</tr>
<tr>
<td>LOS</td>
<td>5.3 (4.9)</td>
<td>5.0 (5.5)</td>
</tr>
<tr>
<td>Complications of Care</td>
<td>3.73% (2.31)</td>
<td>2.74% (2.84)</td>
</tr>
<tr>
<td>Mortality Rate</td>
<td>4.44% (3.58)</td>
<td>3.84% (4.62)</td>
</tr>
<tr>
<td>Readmissions</td>
<td>16.40% (12.90)</td>
<td>18.28% (13.97)</td>
</tr>
</tbody>
</table>

*Crimson Data

Financial Outcomes

**Medicare CMI**

Improvement of 0.09 = $810/patient (807)
Total = $653,670 return for hospital

**Medicare LOS**

Improvement of 0.3 = $390/patient (807)
Total = $314,730 return for hospital

Total = $968,400 return for hospital
Expansion of Services

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Expansion to Pediatrics

NP Hospitalist Service
Manager Clinical Operations

Adult General

Red

Pediatric General

Blue

Pediatric NP Team

- Assist teaching service in general pediatrics
  - Issues with continuum of care
  - Issues with communication
  - Recent transition to APRG (CM)
  - LOS
- Started with a trial in November 2014 due to concerns over NP role from Teaching service
- Hired 3 NPs (2.7 FTEs) internally for trial
  - Worked Monday through Sunday (including holidays) 6am to 6pm
  - Followed similar model of adults but orientation modified to meet needs of trial
- Trial stopped only after 2 months and role fully implemented and additional 0.9 FTE hired
Los Outcomes

Expansion to Cardiology

Adult Cardiology Team

- Additional 1.8 FTE (2 NPs)
- Coverage of internal medicine cardiologists
  - LOS and CMI
- Coverage of CP patients in ED - June 2015
  - Initial implementation ED CP delayed due to changes physicians coverage
  - Help with inappropriate admissions
  - Help with fast track of Low Risk patients
    - Stress Testing
    - CP clinic
- Initial data shows a decrease LOS and admissions
Lessons Learned

- Utilize standard processes
- Be aware of organizational culture
- Identify barriers early in implementation
- Be realistic when identifying goals and timeline
  - New grad education and clinical skills
  - Lead time for program implementation
- Monitor outcomes and make adjustments as needed

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Further Expansion

- Further development of a Utilization Management NP Team (Red)
- Addition of Adult Green Team and Collaboration with Memorial Medical Group
- Further expansion with Pediatric Hospitalists
- Creation of best practices for NP hospitalist role and expansion within memorial healthcare system

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Vision of NP Hospitalist Service

“Improving the Quality of Patient Care through Exceptional Nurse Practitioners Providing Compassionate and Extraordinary Care Every Big and Little Moment in Time”

Questions/Contact Information

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