Value Based Nursing Workforce

State of the Nursing Workforce in an Era of Health Care Reform: Data, Trends, and New Collaborations
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Nursing Value, Big Data, and Workforce Considerations

John Welton
Value Equation

Business Model

Value = Quality / Price (cost)

Healthcare Model

Value = Outcomes / Price (cost)
Barriers to Measuring Value of Nursing Care

- Nursing costs are unknown
- Reported = only averages
- Nursing cost ≠ billing ≠ reimbursement
- Payment ≠ “optimum” nursing care
- Nursing economic value?
- Without clear value, nurses are vulnerable
# Approaches to Data Driven Value

## Clinical Component (Patient)
- Better population health
- Improve patient experience
- Higher quality of care
- Alignment of providers to best meet patient needs
- Data driven real-time clinical support
- Optimize clinical resources to minimize harm, improve outcome

## Operational Component (System)
- Lower costs
- Seamless integration of care
- Alignment of resources/costs with billing and reimbursement
- Data driven value systems: costs, quality, performance, efficiency, effectiveness
- Optimizing the “system” of care
Big Data Concepts

- Volume
- Velocity
- Variety
  - Diverse representations of data
  - Complexity and multiple/mixed media, e.g. video, sound, pictures, texting, Twitter, Facebook, etc.
  - Autonomous data sources with distributed and decentralized controls
- (Veracity) or how good are the data?


http://d1mpb3f4gq7nrb.cloudfront.net/img/toons/cartoon6517.png
Rethinking Nursing/Healthcare Data

- Very large and complex data systems (volume)
  - Statistical significance of large data
  - Time referenced data (e.g. stock market)

- Sipping from a fire hose (velocity)
  - Continuous data streams
  - Natural experiments

- Large data sets Complex data sets (variety)
  - Span multiple settings
  - Complex questions and answers
# What are the “Big” Nursing Questions

**Clinical/Patient Focus**
- Improve health/nursing care
- Optimize outcomes
- Population management
- Better patient experience

**Operational/Organizational Focus**
- Nursing workforce
- Resource utilization
- Nursing costs, quality
- Performance, efficiency and effectiveness

**Other/Healthcare System Focus**
- Payment
- Policy, etc.
A National Problem:

- Drowning in data, starving for information & knowledge
- Patient centric data and cost models
- How to leverage existing data for other useful purposes?
- Measuring care across different settings
-Sharable – comparable data
Big Data Expert Panels

- National experts ~ 100 participants
- 10 work groups
- Wide variety of talents, informatics, leadership, academics, clinical practice, etc.
- Focus: sharable and comparable nursing data, answering some of the “big questions” in healthcare
Nursing Value Work Group (7)

**Key consensus items**

- Nursing as a practice discipline
- Nurses as providers of care
- Nursing measured at individual nurse-patient encounter
- Need for common data model to extract relevant costs and quality data
- Patient level nursing costing model
Common Data Model

- Red: Facility
- Blue: Patient and clinical information
- Purple: Nurse/Provider
- Green: Costs/Resources

Note: this common data model is in the public domain
Finance Perspective

- Patient level costing and billing models
- Optimizing care vs costs
- Matching right provider (nurse)
- Managing volatility, trends
- Achieving stability (adaptive systems)
- Skill mix, experience mix
- Aligning resources with revenue (capitated or bundled payment)
- Value based purchasing (pay for nursing performance)

The Value of Nursing Care
Sharon Pappas
...significant associations were found between proportion of BSNs & readmissions and LOS when individual patients got >80% of their care from BSN-qualified nurses.

Value is a Nursing Outcome

Our Cost ↔ Our Contribution
Nursing Innovation

- Hospital cost analysis realized $1394.00 net revenue opportunity per patient in Emergency Department Observation Unit (EDOU) through reduction in variable direct cost of staffing & supplies.
Nurse-led TIA clinic

PROCESS

• Stroke incidence following TIA is greatest within a week.
• Low risk patient referred using ABCD2 tool
• Visit scheduled within 48 hours
• Full stroke workup with neuro consult

OUTCOMES

• No stroke events
• 95% patient satisfaction
• Fewer out of pocket expenses
• Saved $209,336 direct costs
Cost Comparison
Observation Status vs. TIA Clinic

<table>
<thead>
<tr>
<th>Hospital 1</th>
<th>Hospital 2</th>
<th>Hospital 3</th>
<th>TIA Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,900</td>
<td>$1,882</td>
<td>$2,071</td>
<td>$423</td>
</tr>
</tbody>
</table>

Average Cost Per Patient
Reducing Adverse Events

INPUT
Cost of a Nurse
$120,000

OUTPUT
Cost per Case
-$2,000,000
Summary Points

What do you take away today?

- Better understanding how to use existing data (including cost data) to improve care
- Optimize clinical and operational environments of care
- Move towards a data-driven and value-oriented approach to nursing practice
- Provide the “best” nursing care at the highest quality and lowest cost (the value equation) = best outcome
- The value of nursing can only be described when the financial impact is included