2016 American Nurses Association Annual Conference

Connecting **Quality**, **Safety** and **Staffing** to Improve Outcomes

Value-based metrics to measure nurse staffing and assignment

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Disclosure

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Presenters have no relationship with a commercial interest, product or service related to the content of this educational activity and therefore have nothing to disclose

Objectives

Attendees will be able to:

- Describe data driven approaches to measure nurse staffing and assignment value

- Learn new patient level nurse costing models

- Understand analytic techniques to measure nursing value

Nursing Knowledge: Big Data Conference

A National Problem:

- Drowning in data, starving for information & knowledge
- Lack of patient centric data & cost models
- Need to leverage existing data for secondary purposes
- Measuring care across different settings
- Call for sharable – comparable data

Big Data Expert Panels:

- National experts ~ 100+ participants
- Multiple expert work groups
- Wide variety of talents, informatics, leadership, academics, clinical practice
- Focus: answering some "big" questions in nursing

Nursing Value Expert Workgroup

Group members	14
Conference calls	14
Total conference hours	21
Hours of participation	14
% of participation per call	55.1%
Guest participants	7

Measuring Nursing Value:

Develop a national consensus model to measure patient level nursing intensity and costs per patient in multiple care settings to support the continuum of care and to produce objective measures of nursing value

Year 1, June 2014 -2015

The Concept of Value

Value of Nursing Care

Business Model

$$Value = \frac{Quality}{Price}$$

Healthcare Model

$$Value = \frac{Outcomes}{Price}$$

Expert workgroup consensus
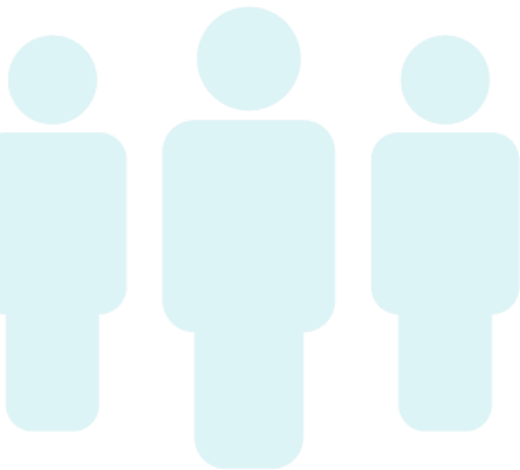
Key items

- Nurses are individual providers of care
- Nursing measured at nurse-patient encounter
- Data collected at all encounters
- Measure all nursing "touchpoints"
- Patient level nursing costs/intensity
- Develop nursing business intelligence/analytics
- Vendor agnostic data model

Welton, J. M., & Harper, E. M. (2015). Nursing Care Value-Based Financial Models. Nursing Economics, 33(1), 14-19.

What does this do?

Staffing:

- Change from staffing -> assignment
- Identify best nursing care AND best nurse
- Identify direct care hours/costs per patient
- Comparison and benchmarking

Quality & Safety:

- Real-time performance/quality metrics
- Predictive analytics
- Business intelligence
- Creates learning system environment

Rethinking nursing/healthcare systems

Operational

- Real-time operational decision making
- Higher quality = acting on poor quality before it occurs
- Better cost monitoring = higher efficiency and effectiveness
- Performance metrics at individual nurse-patient encounter

Clinical

- Real-time clinical decision making
- Automated pattern recognition (data driven expertise)
- Mapping trajectories of care
- Acuity trending (patient, unit, hospital/agency)

Business intelligence and analytics
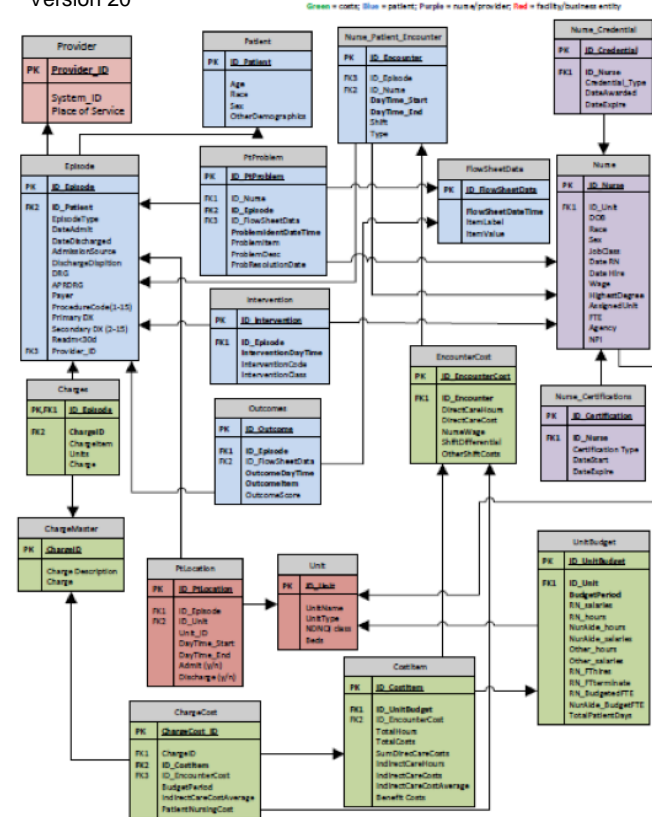
Finance perspective

- Patient level costing and billing models
- Optimizing care vs costs
- Matching right provider (nurse)
- Managing volatility, trends
- Skill mix, experience mix
- Value based purchasing

Nursing value data model

- Organized by:
  - Facility costing, budget, wage
  - Patient, assessment, problem, outcome
  - Nurse/provider, certification, job class, hire date
  - Facility/business, unit
- Incorporates unique RN identifier
- Electronic health record agnostic
- Setting neutral

Nursing Value Data Model
Version 20

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Future directions

- Real-time information systems

- Compare across settings of care

- Follow patient/person across encounters

- Link all providers to patient, family, community

- Performance-based analysis

- Value-driven health care

- Nursing costs and characteristics easily analyzed to person/population level outcomes

Thank you for your time today!

Questions?

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