Welcome!

Lillee Gelinas, MSN, RN, CPPS, FAAN

Editor-in-Chief

American Nurse Today

Plan for Today

- Discuss the importance of the partnership between nursing and finance executives

- Identify the financial implications of using acuity-based staffing systems

- Describe important next steps and resources for planning

Panel

Jack Needleman, PhD, FAAN

Fred W. and Pamela K. Wasserman Professor and Chair

Department of Health Policy and Management

UCLA Fielding School of Public Health

Sylvain (Syl) Trepanier, DNP, RN, CENP

Chief Clinical Executive

Providence St. Joseph Health

Torrance, California

Karlene M. Kerfoot, PhD, RN, NEA-BC, FAAN
Chief Nursing Officer
GE Healthcare, WFM

Financial Implications of Acuity-based Staffing

Jack Needleman, PhD, FAAN
Professor and Chair,
Department of Health Policy
& Management
UCLA Fielding School of
Public Health

Scope of Presentation

- Why acuity-based staffing systems

- Factors that need to be taken into account in "right" staffing

- Criteria for assessing acuity-based systems

- Commercial versus locally developed systems

- Some comments on the business case: Can we afford adequate staffing?

Why? State Legislation and Requirements

- 14 states currently address nurse staffing in hospitals in law/regulations:

  CA, CT, IL, MA, MN, NV, NJ, NY, OH, OR, RI, TX, VT, and WA.

  - 7 states require hospitals to have staffing committees responsible for plans and staffing policy – **CT, IL, NV, OH, OR, TX, WA.**
  - **CA** is the only state that stipulates in law and regulations a required minimum nurse to patient ratios to be maintained at all times by unit.
  - **MA** passed a law specific to ICU requiring a 1:1 or 1:2 nurse to patient ratio depending on stability of the patient.
  - **MN** requires a CNO or designee to develop a core staffing plan with input from others. The requirements are similar to Joint Commission standards.
  - 5 states require some form of disclosure and/or public reporting – **IL, NJ, NY, RI, VT.**

- Continued pressure to expand these

- Demonstrate adequacy of staffing to public and staff
  - Nursing is core service, with expectation it can be expected to deliver care reliably and keep patients safe.

Why? Efficient Care and Patient Safety Require Adequate Staffing Based on Patient Need

Pooled Odds Ratios of Patient Outcomes Corresponding to an Increase of 1 Registered Nurse Full Time Equivalent per Patient Day

Outcome	Studies	Odds Ratio
Mortality, hospital, all patients	5	0.96
Mortality, intensive care units	5	0.91
Mortality, surgical patients	8	0.84
Mortality, medical patients	6	0.94
Hospital-acquired pneumonia	4	0.81
Cardiopulmonary resuscitation	5	0.72
Surgical patients failure to rescue	5	0.84
Surgical wound infection	1	0.15
Nosocomial bloodstream infection (Surgical)	5	0.64
Relative change in length of stay (Surgical)	3	0.69

All ORs significant at 0.05 level
OR below 1.0 positive effect of nursing on outcome
OR of 0.9 implies a reduction of risk of approximately 10%

Source: Kane, 2007. List expanded and confirmed since Kane meta-analysis

Increased Risk of Death With Exposure to Lower RN Staffing and Higher Patient Turnover

From: Needleman, et al., Nurse Staffing and Inpatient Hospital Mortality, NEJM, 2011
Based on *individual patient experience* of "low" staffing based on day-to-day, shift-to-shift variations in staffing at the <u>unit</u> level
        Not institutional or unit annual or monthly average
        Same units, staff, technology, physicians

Increased risk associated with each shift with RN staffing below-target or high turnover, 30 day cumulative exposure

    Shifts with RN staffing 8 or more hours below target (Average = 3)   2%/shift

    Shifts with high patient turnover (Average = 2)   4%/shift

Increased risk associated with each shift with RN staffing below-target or high turnover, first 5 days cumulative exposure

    Shifts with RN staffing 8 or more hours below target (Average = 2)   3%/shift

    Shifts with high patient turnover (Average = 1)   7%/shift

One Measure of Understaffing is Inability of Nurses to Get Their Work Done

Nurses reporting missed care or "care left undone," RN4Cast

	% Missed
Any care missed	87
Comfort/talk with patients	66
Educating patients and family	52
Develop/update nursing care plans/care pathways	47
Adequate patient surveillance	35
Adequately document nursing care	33
Oral hygiene	29
Frequent changing of patient position	28
Planning care	28
Administer medications on time	23
Skin care	21
Prepare patient and families for discharge	20
Treatments and procedures	11
Pain management	7

Sources:
Ball, J. E., T. Murrells, A. M. Rafferty, E. Morrow, and P. Griffiths. 2014. "'Care left undone' during nursing shifts: associations with workload and perceived quality of care." BMJ Qual Saf 23(2): 116-25.

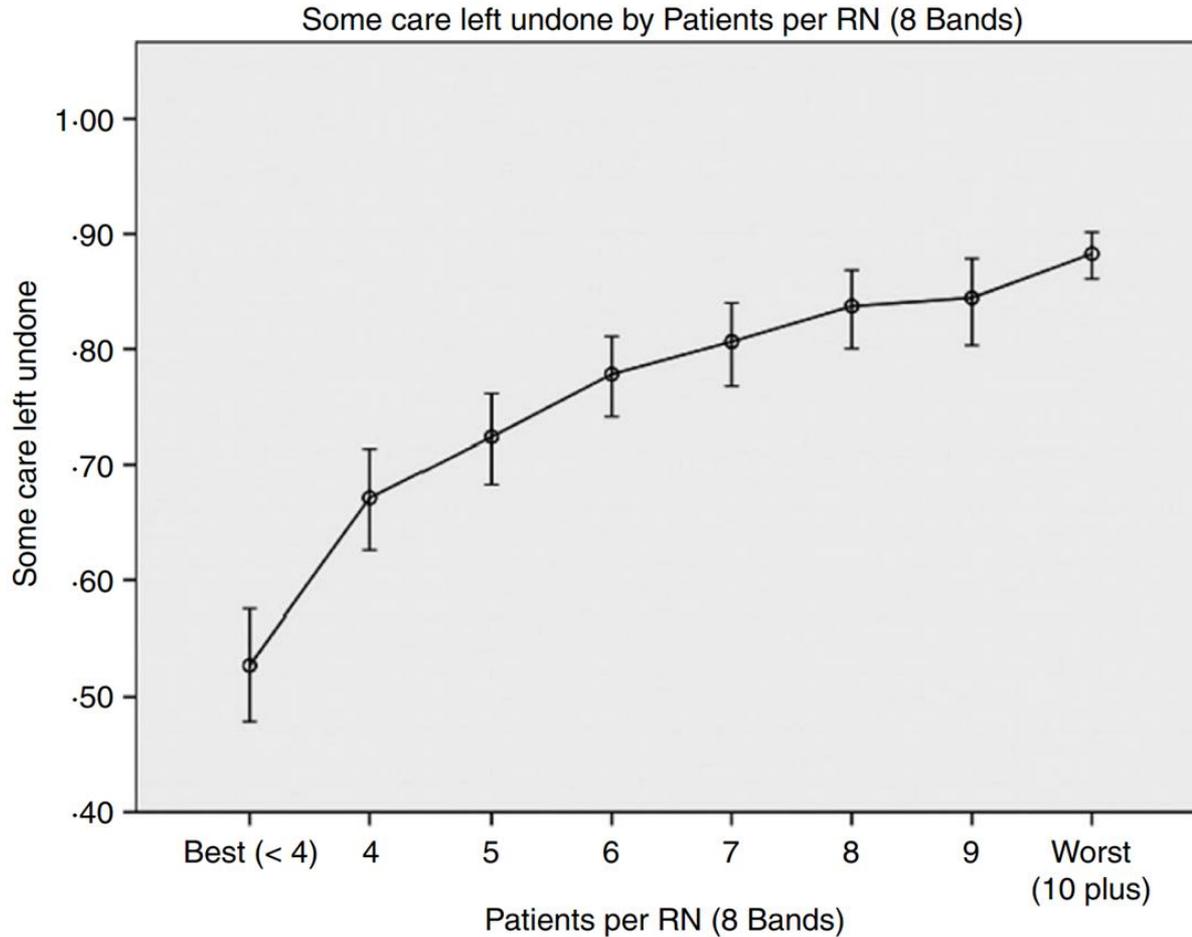# Missed Care Is Associated With Staffing Levels Getting Staffing Right Is Critical

Figure 1 Care left undone by RN staffing (based on multilevel regression analyses presented in Table 5).

Factors Influencing "Right" Staffing

Variables from the Literature to Consider in a Staffing Model, Classified as Patient, Nurse, or Organizational Indicators

Patient	Nurse	Unit/Organization
Complexity (nursing diagnosis, DRGs)	Education	Stability/maturity
Severity (length of stay)	Experience—total	Volume
Dependency/functional status	Experience—unit	Patient turnover (admissions/ discharges/transfers)
Activities of daily living/ Transports	Skill mix	Interdisciplinary relationships/ communication
Age		Support services
Patient care needs		Unit complexity/variation (in patient type and treatment)
• Observational needs		Autonomy/work environment
• Obesity		Protocol-driven care
• Postdischarge needs		Multitasking (high frequency/low volume)
• Psychosocial needs		

Factors Influencing "Right" Staffing

Table 1. Patient Classification System conceptual definitions

Medications	The number of medications a patient receives during a 12-h nursing shift that must be verified against a medical doctor's order and based on standards of medication delivery.
Complicated Procedures	Task- and time-oriented procedures carried out to perform competent patient care in management of disease process and prevention of complications.
Education	Requirements for complex patient care encompassing teaching about disease processes, procedures, preventive measures, and standard facility protocols.
Psychosocial	Nursing tasks related to monitoring and intervention correlating with mental disabilities, end-of-life care, palliative care, and including personal or family dynamics.
Complicated Intravenous Medications	Task- and time-oriented distribution and monitoring of intravenous medications, blood or blood products, or hemodynamic monitoring of vascular access.

Source: Harper K, McCully C. Acuity systems dialogue and patient classification system essentials. *Nurs Admin Quarterly*. 2007;31:284-299.

Criteria for Acuity-based System

- Parsimony

- Minimal additional workload requirement

- A basis in expert nurse judgment

- True reflection of nursing work

- Indicators that measure patient complexity,
  optimal required nursing care,
  available resources,
  and relevant organizational attributes.

Source: Fasoli DR, Haddock KS. Results of an integrative review of patient classification systems. *Ann Rev Nurs Res*. 2010;28:295-316.

Options Include Commercial Systems or Locally Developed Systems

Commercial

Pro:
Existing algorithm

Can be calibrated to local nursing model

Modules allow for tracking of actual versus target

Con:
High data entry burden (can be mitigated by linkage to EHR)

Sometimes don't take turnover into account

Locally Developed

Pro:
Can be adjusted for local patient variation on specific units or conditions nursing staff consider relevant (e.g., turnover)

Consensus model

Con:
Possible data entry burden

No linkage to tracking data entry and storage

Example of "Local" Acuity Model

Patient Classification System
Acuity Rating Scale

Room: _____ Date: _____

Initials: _____ Time: _____

ACUITY	1	2	3	4	Score
MEDICATIONS	1-5	6-10	11-15	>16	_____
COMPLICATED PROCEDURES	o Neuros Q4 o Foley o Suction	o Picc o NGT o Central Line o Incontinent o Respiratory Monitoring o PCA	o Neuros Q2 o Trach o Freq. _____ o Wound/skin Care o Telemetry o Assist w/ADL o CBI	o Total Care o Isolation o Restraints o Feeder o Confused o Sundowners o Falls Risk o RRT	_____
EDUCATION	o Standard	o CHF o DM o CAP o Smoking	o Planned DC o Family Educ. o Pre/Post procedure	o New diagnosis o Inability to comprehend o Multiple chronicities	_____
PSYCHOSOCIAL	o Depression	o Bipolar	o Palliative Care	o Personal/family dynamics	_____
COMPLICATED IV'S & MEDS	o IDDM	o 2–5 IV meds	o K Rider o Heparin o >5 IV meds o TPN o Lipids	o Blood o Tube feeding o Cardiac drip	_____
TOTAL					_____
DIVIDED BY 5					_____

Figure 2. Patient Classification System. Copyright 2003, K. Harper.

Harper K, McCully C. Acuity systems dialogue and patient classification system essentials. *Nurs Admin Quarterly*. 2007

Staffing on "Nurse Driven Staffing Demo Unit" Additional Staffing Based on Review/consensus of Charge Nurses

Shift	Charge	RN	PCA	US
Day	1	1 / 4 patients	1 /12 patient	1
Eve	1	1 / 5 patients	1 /12 patients	1
Night	1	1 / 5 patients	1 /12 patients	0

Additional RN assigned if 2 or more of the following:
 3 or more patients in isolation
 5 or more patients needing total care
 3 or more 1:1 feeders
 2 or more blood transfusions
 6 or more admits and discharges
 1 or more complex geographic assignment
 1 or more patient requiring frequent suctioning
 1 or more confused patients
 50% or more float staff

Additional PCA assigned if 2 or more of the following:
 4 or more patients in isolation
 6 or more patients needing total care
 4 or more observation
 4 or more 1:1 feeders
 2 or more admits
 1 or more patients with constant diarrhea

Business Case Considerations

Can we afford adequate staffing?

Need to consider not only the direct costs of nursing but the cost offsets of adequate staffing that come from lower length of stay, reduced adverse events, and reduced readmissions

Business Case Analysis
Avoided Days and Adverse Outcomes

	Raise RN Proportion	Raise Licensed Hours	Do Both
Avoided Days	1,507,493	2,598,339	4,106,315
Avoided Adverse Outcomes Cardiac arrest and shock, pneumonia, upper gastrointestinal bleeding, deep vein thrombosis, urinary tract infection	59,938	10,813	70,416
Avoided Deaths	4,997	1,801	6,754

Source: Needleman J, Buerhaus PI, Stewart M, et al. Nurse staffing in hospitals: Is there a business case for quality? *Health Aff*. 2006;25(1):204-211.

What Are the Costs and Cost Offsets of Increased Nurse Staffing?

	Raise RN Proportion	Raise Licensed Hours	Both
Cost of higher nursing	$ 811 Million	$ 7.5 Billion	$ 8.5 Billion
Avoided costs (full cost)	$ 2.6 Billion	$ 4.3 Billion	$ 6.9 Billion
Long term cost increase	($ 1.8 Billion)	$ 3.2 Billion	$ 1.6 Billion
As % of hospital costs	-0.5%	0.8%	0.4%
Short term cost increase (save 40% of average)	($ 2.4 Billion)	$ 5.8 Billion	$ 5.7 Billion
As % of hospital costs	-0.1%	1.5%	1.4%

Business Case Analysis

- Other analyses by commercial acuity system vendors
- Benefit to hospital increases as more outcomes and patient reported outcomes are included in analysis and value based payment expanded.
- Whether hospitals can retain savings depends on payment models
  - Per discharge and capitated systems most likely to allow hospital to retain gains.
- One message from business case analysis:
  - Deskilling nursing, replacing RNs with LPNs or other less skilled staff, likely to increase net costs, not save money.

Closing Thoughts

- <u>Nursing is a core service line of hospitals</u>, not just a cost center, and should be assessed as a service line.

- Safe, reliable, effective <u>nursing care depends on staffing at adequate levels</u> to meet patient needs.

- <u>Systems</u>, whether commercial or locally developed, can <u>ensure more appropriate levels of staffing</u> matched to patient acuity and needs.

How Can Nurse and Financial Executives Partner to Reap the Benefits of Acuity-based Staffing? The CNO Perspective

Sylvain (Syl) Trepanier, DNP, RN, CENP
Chief Clinical Executive
Providence St. Joseph Health
California (LA Market)
Torrance, California

Today's Topics

- Breaking down silos by developing a relationship between CNOs and CFOs

- Leveraging a business case to support investing in an acuity-based system

- Tapping into resources to develop a business case

- Identifying potential financial outcomes related to an acuity-based staffing model

Relationship Building

- Use deliberate intent
- Be honest
- Avoid gossip
- Compliment each other on a job well done
- Make the first move if needed
- Respond, rather than react
- Be interested, not interesting

Relationship Building:
What to Expect

- Trust
- Mutual Respect
- Mindfulness
- Welcoming diversity
- Open communication

Ask for Help

- Don't ask on the first meeting

- Identify a "common pain"

- Inquire about an institutional business case model: Return on Investment (ROI) format

- Ask if you can partner on the development of the business case – review and feedback

Develop the Business Case

- Use a model known to your organization
- If not present, consider resources such as: www.sba.gov/tools/business-plan/1?from_mobile=true

- Be sure to include
  - The link to the vision and mission
  - The problem
  - The solution
  - The outcome
  - The value

Present the Business Case

- In collaboration with the CFO, with each member presenting a section of the case
- Sometimes you have to present an idea first and make the ask later

Acuity-based Staffing: Tangible Benefits

- In some states, enables meeting a regulatory requirement

- Provides an accurate picture of the needs of the patients and the workload associated with it: Objectivity

- Supports individualized staffing plan based on patient needs

- Promotes a patient needs budget as opposed to the "historical" hours per patient per day

References

- Leavitt M, McKeown R. *Finding Allies, Building Alliances*. 2013; San Francisco: Jossey-Bass A Wiley Brand.

- MindTools. Building great work relationships. Retrieved June 1, 2017.www.mindtools.com/pages/article/good-relationships.htm

- U.S. Small Business Administration. Build your business plan. Retrieved on June 1, 2017. www.sba.gov/tools/business-plan/1?from_mobile=true

Challenges in Today's Healthcare System: The CFO Perspective

Karlene M. Kerfoot, PhD, RN, NEA-BC, FAAN
Chief Nursing Officer
GE Healthcare, WFM

Less Cost, More Value

- Primary outcome: Labor cost containment
  - Flexing staff up and down based on patient need
  - Managing overtime and premium labor costs

- Clinical outcomes and staff satisfaction
  - Hard to measure monetary impact
  - Affected by many initiatives, hard to know the effect of a single initiative

  BUT
  - Need to make the connection between data-driven staffing and clinical outcomes
  - Need to recognize the link between data-driven staffing, patient satisfaction, and revenue

CFOs' Top Financial Concerns

What are the top three financial concerns for your organization? What keeps you up at night?

Managing labor costs	73%
Uncertainty around reimbursements	71%
Staying competitive in the market	61%

Survey conducted by Becker's Healthcare, April 2017

Top Workforce Management Challenges

Where do you struggle with workforce management in your organization?

Ability to flex staff up and down based on volumes and patient needs	60%
Managing overtime and premium labor costs	47%
Leveraging staff across the enterprise	45%
Staffing productivity as a lagging measure vs. proactive	43%
Managing staff turnover and the cost of turnover	40%

Data is Underutilized

How are you using these data elements to make staffing decisions?	Not Using	Retroactively	Real Time
Staff skill/competency data	37%	35%	28%
Acuity	31%	44%	25%
EHR data	29%	33%	37%
Admissions/discharges/transfers	9%	31%	60%
Census	1%	20%	79%

Poll Question

Is your organization currently using an automated acuity system that matches nurses with patients based on objective, accurate data from other systems?

YES
NO

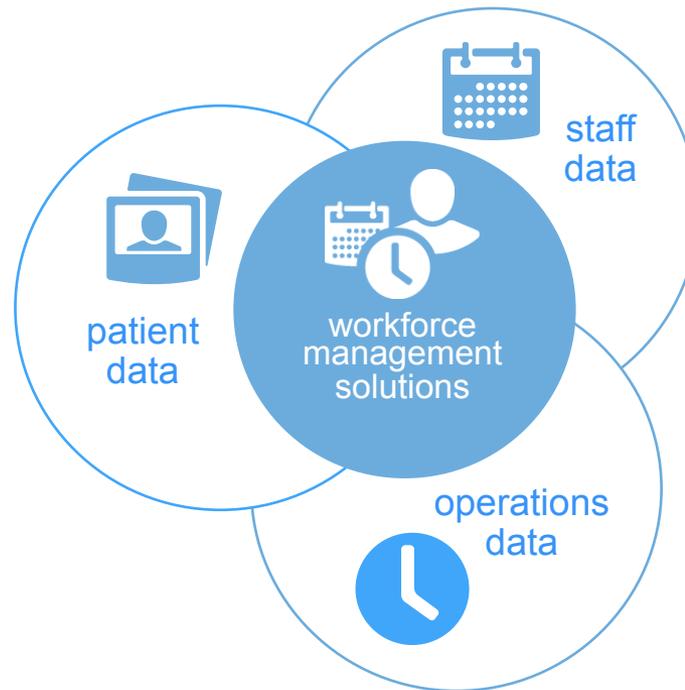Type **YES** or **NO** in the chat box to participate.

End of Part 1

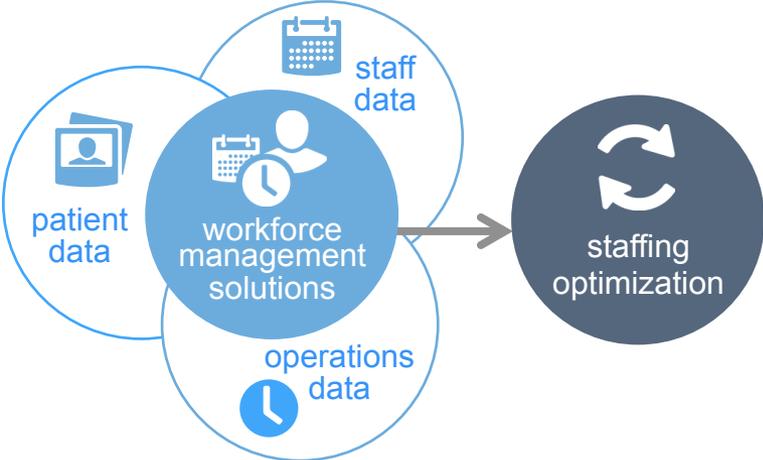# Operationalizing Acuity-based Staffing

Karlene M. Kerfoot, PhD, RN, NEA-BC, FAAN
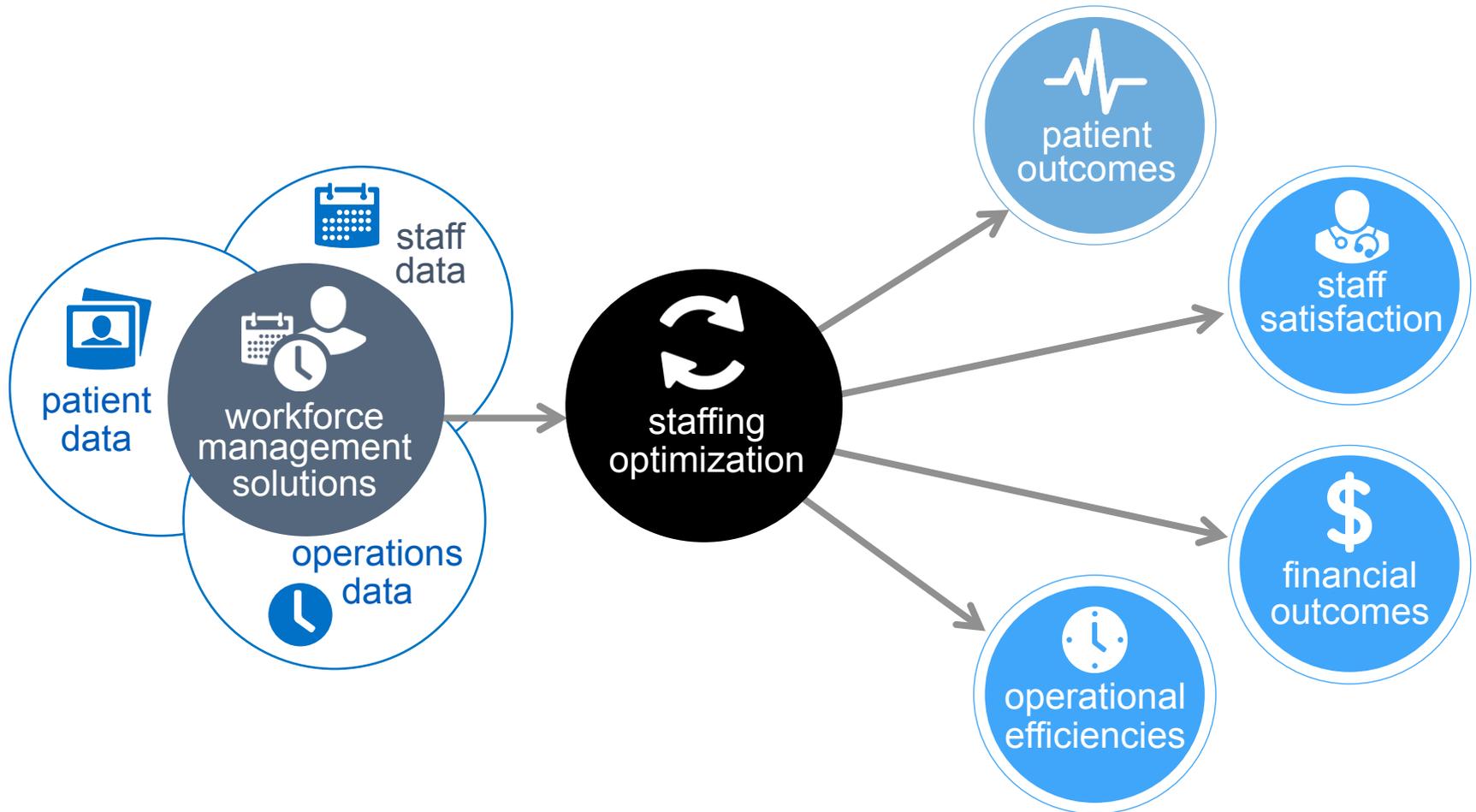Chief Nursing Officer
GE Healthcare, WFM

It Starts with Leveraging Your Data

An Integrated Workforce Management Solution

The Power of Staffing Optimization

Turn Workforce Data Into Better Outcomes

Data + Technology + Processes = Outcomes

data

technology

processes

=

patient
outcomes

$

cost
outcomes

- Data by itself is not enough

- Need to get the right data to the right people at the right time

- Need to have tools and processes that support using the data to achieve better outcomes

Before the Shift – Creating the Schedule

Create Schedule	Open Shift Management	Intra-Shift Adjustments	Post Shift Analysis
4-8 weeks out	ongoing	just prior to and during the shift	after the shift
create core schedule based on staffing matrix	collaborative effort between managers and staff	real-time changes based patient needs	how did my unit or organization perform

Before the Shift – Open Shift Management

Create Schedule	Open Shift Management	Intra-Shift Adjustments	Post Shift Analysis
4-8 weeks out	ongoing	just prior to and during the shift	after the shift
create core schedule based on staffing matrix	collaborative effort between managers and staff	real-time changes based patient needs	how did my unit or organization perform

During the Shift – Intra-shift Adjustments

Core Scheduling	Open Shift Management	Intra-Shift Adjustments	Post Shift Analysis
4-8 weeks out	ongoing	just prior to and during the shift	after the shift
create core schedule based on staffing matrix	collaborative effort between managers and staff	real-time changes based patient needs	how did my unit or organization perform
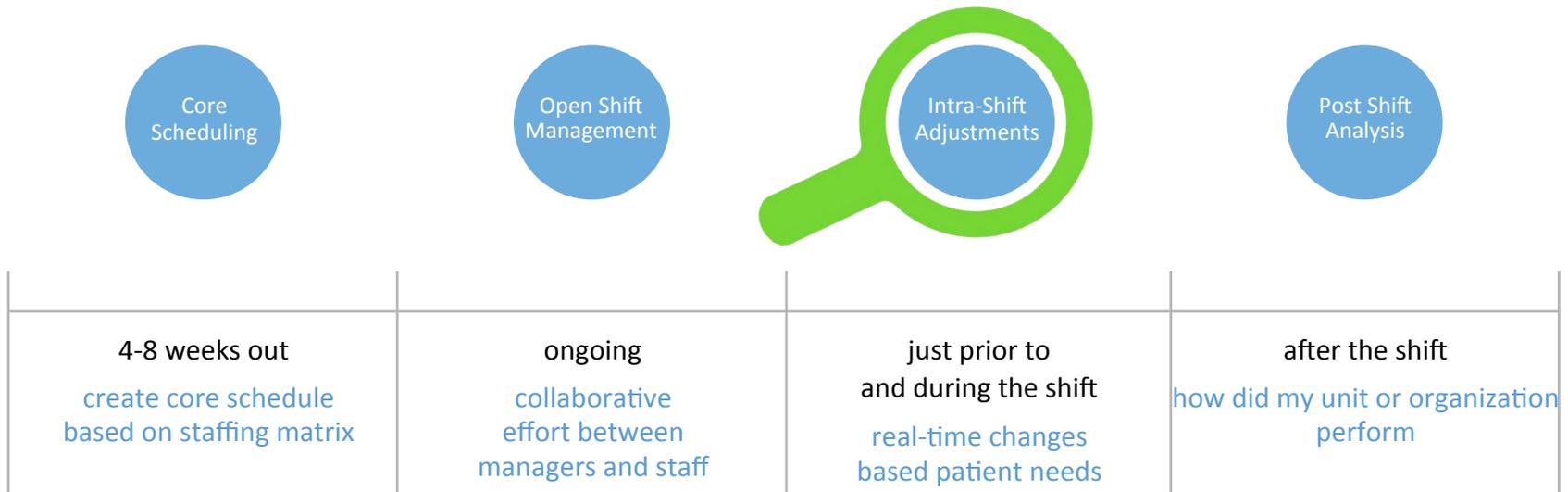
After the Shift – Review and Analysis

Core Scheduling	Open Shift Management	Intra-Shift Adjustments	Post Shift Analysis
4-8 weeks out	ongoing	just prior to and during the shift	after the shift
create core schedule based on staffing matrix	collaborative effort between managers and staff	real-time changes based patient needs	how did my unit or organization perform
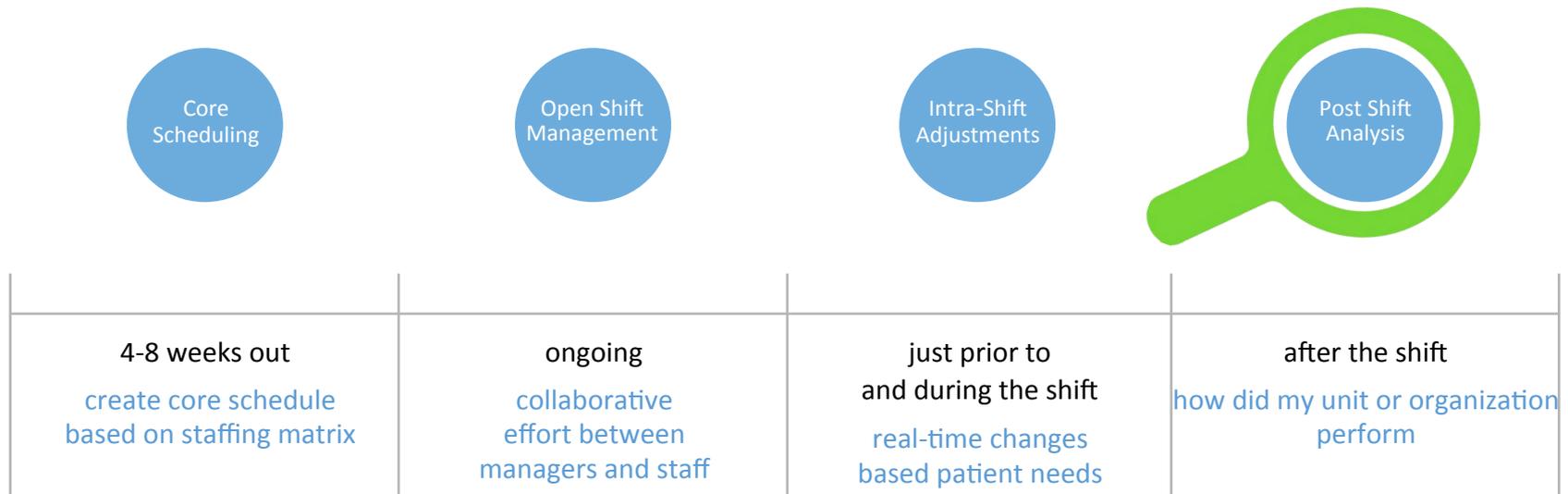
Poll Question

Is your organization at a "beginner," "intermediate," or "advanced" level when it comes to understanding the impact that data-driven, evidence-based acuity has on clinical and financial outcomes?

A) Beginner
B) Intermediate
C) Advanced

Type **A, B, or C** in the chat feature to participate.

Wrap-up

- CFOs and CNOs face many workforce challenges.
- The evidence shows acuity-based staffing is effective.
- A CNO/CFO partnership is essential to best manage workforce.
- Operationalizing acuity-based staffing helps providers, patients, and leaders.

Questions?

If you have questions, contact:
American Nurse Today
Sofia Goller, VP, Publishing and Sales

215-489-7002

webinars@AmericanNurseToday.com

Thank you for attending!