Perspectives on Nurse Staffing Ratios and the Real Problems Nurses Should be Addressing

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1. Impact of nurse staffing ratios from multiple perspectives – costs, efficiency, value, equity, fallacy of research, nurses, patients and regulatory problems

2. Key challenges facing nurses and hospitals (now through 2030) that we should be focusing our time and energy addressing

3. Discussion
Disclosure

Past and current funders, and board associations

• Gordon & Betty Moore Foundation (current)
• Montana State University Institute for Applied Regulatory Economic Analysis (current)
• Johnson & Johnson Campaign for Nursing’s Future (past)
• Robert Wood Johnson Foundation (past)
• American Association of Nurse Practitioners (past)
• Board of directors: AcademyHealth, Bozeman Health
Disclosure

The data and views expressed in this presentation are mine, and are not the views of the (still unfunded) National Health Care Workforce Commission established by the Affordable Care Act in 2010!

Assume proponents of staffing ratios believe

Minimum patient to nurse staffing ratios are required to assure the quality of patient care
Presentation based on

• Buerhaus, P. What is the harm in imposing mandatory hospital nurse staffing regulations? *Nursing Economic*$ 1997;15:66-72.


• Buerhaus, P. It’s time to stop regulation of hospital nurse staffing dead in its tracks, *Nursing Economic*$, 2010, 28(2), 110-113.
1. Impact of nurse staffing ratios from multiple perspectives

• Costs, efficiency and value
• Equity
• Problems of using research to argue for ratios
• Nurses
• Patients
• Regulators
Costs, efficiency and value

• Firms (like hospitals) use different quantities and types of capital and labor to produce their products and/or services

• Relationship between capital and labor is *interdependent*: the two inputs work together to determine quantity and quality of products produced, and whether produced efficiently (or inefficiently) ... and hence the cost of the product/service

• To stay in business firms must constantly seek to produce their product/service using the least costly combination of capital & labor
Costs, efficiency and value

• Nurses are one component, one labor input, in the production of clinical patient care
• Yet, nurses are the largest number of a hospital high-wage earners
  – APRNs, RNs, LPNs, aids, medical assistants
• Labor is highest portion of hospitals’ operating costs
Consequently, when employing nurses, employers’ seek to determine

- How productively each type of nurse contributes to producing patient care and the cost of employing each type of nurse
- How it can produce patient care using the least costly combination of nurse labor combined with other professional/non-professional/administrative personnel, and with different types, quantities and productivity of capital, subject to budget constraints
Impact of Nurse Staffing Ratios

• Costs of nursing care increase directly (wages, benefits, recruitment, orientation), and ...

• By freezing quantity (and types) of nurse labor, ratios affect the efficient use of other personnel and capital

• Decreases flexibility to adjust capital and labor, which is required to achieve efficiency ... efficiency affects costs
Ratios also undermine relationships with hospitals

• By increasing the costs of nursing care without any assurance of improved outcomes, ratios
  – Worsen relationships w hospital
  – Negatively influence ability to invest in new/expand facilities, new clinical programs, consequently ...
  – Hospitals motivated to resist, eventually innovate away from nurses
Ratios decrease the economic value of nurses

• Not a good thing when payment reforms are evolving to strip away volume-based utilization incentives in the fee-for-service system in favor of more efficient, value-driven care
How will ratios decrease the economic value of nurses?

- Value = Health *outcome(s)* achieved for patients relative to the *costs* of achieving the outcome(s)
- Value expressed as the ratio of outcomes to cost (O/C)
- 3 ways to increase the value of nursing care/nurses
Value = outcome(s)/cost

1. Improve outcomes (quality or quantity) without changing the costs of producing outcome(s)

Baseline example: Outcomes currently = 10, and costs are $4, then value $10/4 = 2.5

Now, if outcomes are increased from 10 to 14, while holding the costs the same, then value increases $14/4 = 3.5
2. *Decrease the costs* of producing the outcomes, without changing the quantity or quality of outcomes.

Same baseline example: Outcomes currently = 10, and costs are $4, then value $10/4 = 2.5

Now, if *decrease costs* from $4 to $2, keeping outcomes the same, then value increases $10/2 = 5.0
3. *Improve outcomes* and *decrease costs* simultaneously

Same baseline example: Outcomes currently = 10, and costs are $4, then value $10/4 = 2.5$

Now, if *increase outcomes* from 10 to 14, and simultaneously *decrease costs* from $4 to $2, then value increases $14/2 = 7.0$!
However, because ratios increase nursing costs without improving outcomes, value of nurses will decrease
Value = outcome(s)/cost

Same baseline example: Nursing outcomes currently = 10, and costs are $4, then value 10/4 = 2.5

Now implement ratios:

Outcomes are unlikely to change = 10, yet ratios cause nursing costs to increase, say from $4 to $6

Value decreases 10/6 = 1.6
Moral of the story

• As providers transition into a value based payment and delivery world, proponents of ratios better be darn sure the outcomes associated with the nurses improve substantially to pay for their increased cost of nursing imposed by ratios
  ▪ Mortality, readmissions, adverse clinical outcomes, infections, patient satisfaction, etc.

• If not, nurses value will decrease
Equity

• Ratios will affect hospitals inequitably and penalize some hospital through no fault of their own
  – Capital costs higher/lower in some hospitals
  – Access to nurse labor is unequal
    • Types, quality and cost of nurses (nearby vs distant location of nursing education program)
    • Nursing students
  – Amount of voluntary non-nurse labor is unequal across hospitals
The problems using research studies to argue for ratios

- Even if there was a really good study offering evidence that ratios improved outcomes, there are two problems using results to develop ratios
Problem One

• Because capital and labor inputs are interdependent, dynamic and ever changing

• Whenever the hypothetical study was conducted, it implicitly factored in the capital and labor inputs that existed in the hospital(s) at the time study was conducted

• But things change – EMR, imaging, new services, new types of professionals, competencies, consequently...

• Ratios based on some study then are unlikely to yield same results now, or in the future
Problem Two

• Even if some optimal ratio exists based on a study, how does one develop a staffing ratio that takes into account differences in:
  – Nurses (edu, experience, competence, skills, communication, productivity, etc.
    • Same for LPNs and APRNs
  – Patients (acuity, psycho/social needs, culture, age, physical size, etc.)
  – The work done on shifts (day, evening, night)
  – Types of hospitals – community, public, inner city, rural, small or large teaching
  – Types and productivity of capital used across hospitals
  – Types of medical care, specialties, residents, interns
  – Ability to measure outcomes directly connected to nurses
• Impossible… ratios are blunt … ignore all the above
• We are not producing hamburgers, items sold at the Home Depot; we are producing patient care in a high cost environment
Regulator problems: Even if you ignore these two problems and impose ratios

- Who should develop the ratios? New or existing agency?
- What is the budget of the regulatory agency? New hires or existing staff? Qualifications? Do people exist with needed skills?
- How would proposed and final regs be developed, communicated and implemented? Revised?
- Who will monitor, how, how often? How enforced? Waivers? Exemptions? How long will regs/ratios remain in effect? Penalties? Who collects and what is done w fines? How much should fines be?
- How will quality of care and outcomes associated w the ratio be measured? How frequently? Validity? Reliability? Comparability? Who will measure, collect and disseminate data?
- I am just getting started ...
- **All of the above increase costs born by tax payers**

See Buerhaus, P. What is the harm in imposing mandatory hospital nurse staffing regulations? *Nursing Economic* 1997;15:66-72.
Patients

• Patients would bear increased costs, yet receive no added benefits

• Could quality or safety suffer?
  – Using disproportionately more new graduate nurses could satisfy ratio requirement
  – The experienced nurse who no longer can take care of the sick patients who most need her/him
Impact of ratios on public perceptions of nurses

• Nurses are the most trusted, admired, and respected professional in the US

• Nurses have astonishing public and private sector support
  – RWJF, J&J, federal and state governments, corporations, citizens, others

• Ratios risk ruining positive public perceptions – “make work”, deceit, loss of trust, respect..

Future support?
Ratios do Not FIX the problems affecting nurses and quality of patent care

The real problems affecting nurses’ ability to provide high quality care are more likely due to:

• Problems w EMR, technology, equipment, excessive documentation and compliance
• Difficult physicians, poor nurse-physician relations
• Uncooperative and/or unproductive support staff, poor relations
• Lack of clinical competence, skills, teamwork among nurses
• Patient churning – flooding units w admissions, discharges, transfers on and off the unit
• Poor hand washing, poor communication, lack of compliance to quality and safety guidelines and protocols
• These problems vary across hospitals and over time
Is there anything positive to say about ratios?

• It’s possible that for a very small number of hospitals, increasing the number of nurses could be the best way (least costly, most efficient, quickest and most effective) to improve quality
• Doesn’t mean ratios are permanent
Rather than spend so much time and effort focusing on ratios, better to focus on the real problems as well as the challenge nurses and their employers will (and are already beginning) to face.
2. Key challenges facing nurses and the organizations employing them now through 2030

- While we do not anticipate major national shortages, there will be uneven growth in the supply of RNs
- Increasing demand due to aging of the population
- Retirement of 1/3 of RN workforce
- Growing physician shortages (primary and specialty)
- RNs unprepared for value-based health care delivery
Millennial RNs will soon be largest group in the RN workforce

Auerbach, Buerhaus, & Staiger. Millennials are becoming RNs at twice the rate of the baby boomers: yet the workforce will still grow more slowly. Health Affairs, Oct 2, 2017 36(10), 1804-1807.
Very low RN/population growth through 2030 in eastern and western regions of the US

Demand: Aging of the baby boomers!

- 76 million Americans gaining eligibility for Medicare over next 2 decades
- Medicare at 54m today, 80m by 2030
- Multiple chronic and degenerative conditions
- Will increase demand for RNs and intensity of nursing care required in inpatient, outpatient and community settings
By 2030, an estimated one million RNs born during the baby boom generation will have retired

• One-third of the RN workforce
• Shortages reported in some areas of country already

Buerhaus, Auerbach, & Staiger, May 3, 2017. How should we prepare for the wave of retiring baby boomer nurses. http://healthaffairs.org/blog/2017/05/03/how-should-we-prepare-for-the-wave-of-retiring-baby-boomer-nurses/
Millions of years of nursing experience leaving the workforce each year

Buerhaus, Auerbach, & Staiger, May 3, 2017. [http://healthaffairs.org/blog/2017/05/03/how-should-we-prepare-for-the-wave-of-retiring-baby-boomer-nurses/](http://healthaffairs.org/blog/2017/05/03/how-should-we-prepare-for-the-wave-of-retiring-baby-boomer-nurses/)
Many (most?) nurses are unprepared for value based care/payment

• As providers transition to value based payment and bundled payment models ... 

• Most nurses receive inadequate education on the core elements underpinning value based care
  • Improving quality of care
  • Reducing cost of care, waste
Growing shortages and uneven distribution of physicians

- By 2030, shortages up to 49,300 primary care physicians and 72,700 non-primary care physicians\(^1\)

- In 2018 an estimated 84 million people have inadequate access to primary care, 7,181 health professional shortage areas in the US\(^2\)

- These shortfalls will fall onto nurses, to an unknown but likely meaningful extent

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Consequently

• Not only will the aging of the population heat up and increase demand for RNs just as the most experienced and knowledgeable nurses are retiring, but

• Large shortages of primary and specialty care physicians, particularly in rural areas, will increase demand for nurses, all of this falling onto

• Increasing numbers of less experienced Millennial RNs who are ill-prepared for a value based world

• These are the challenges nurses, hospitals, and policy makers, working together, should be addressing
No time to impose ratios!
In sum, ratios lead to

- Increasing costs, economic devaluation of nurses, inequitable, may harm patients, risk ruining the strong public opinion of nurses
- Short-sighted, wasteful of time and resources, won’t fix “problem”
- Diverts nurses and organizations to focus on the political and regulatory marketplace and away from the real challenges facing nurses and hospitals
Thank you

Discussion