Patient Safety Concerns and Nurse Practitioner Burn Out due to Lack of Regulation on NP to Patient Ratios. What Will It Take to Establish a Guideline?

Rebecca John, CPNP, Melissa Hill, CPNP & Lauren Kanamori, CPNP

Disclosure Information

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Objectives

1. Participants will recognize the need for development of NP to patient ratio guidelines
2. Participants will understand the purpose of establishing NP to patient ratio guidelines
3. Participants will be motivated to respond to our questionnaire regarding current perceived patient ratios and workload
Background

- Since the 1980s nurse practitioner (NP) scope has grown to include hospitalized patients of all ages and involves a spectrum of care from acute to chronic illness, trauma and critical care, which led to the introduction of the inpatient nurse practitioner (Reuter-Rice et al., 2013)
- Today’s inpatient/acute care pediatric nurse practitioner (PNP) takes care of patients throughout their hospitalization in varying departments, including pediatric subspecialties such as cardiology, oncology, trauma and general surgery (Reuter-Rice et al., 2013)
- In a survey conducted of pediatric surgeons regarding NPs, they reported, “advanced providers had largest impact on continuity of care, efficacy of service, and education of parents and patients – three areas that represent significant barriers to improved care delivery and cost reduction within the healthcare system” (Beaulieu-Jones, Croitoru and Baertschiger, 2020)

Kleinpell, et al. (2019) reviewed several studies comparing services run by advanced practice providers (APPs) to those of residents/fellows/house staff. They found APPs positively impact:
  - Decreased length of stay
  - Decreased ED to admission time
  - Decreased time to OR
  - Decreased costs associated with lab studies ordered
  - Decreased rate of complications
  - Increased rate of discharges before noon
  - Decreased rate of 14-day readmissions

RN Ratios

- With AB 394 in 1999, California became the first state to establish minimum registered nurse (RN)-to-patient ratios for hospitals
  - Pediatrics Med/Surg 1:4
  - PICU/NICU 1:2
- Only CA and MA have laws governing RN ratios, but 12 other states have regulations on RN staffing
- Federal public health regulation 42CFR 482.23(b) states that in order to participate in Medicare, hospitals are required to have adequate nursing staffing to care for patients
  - Proposed ratios are similar to California’s guidelines
- In 2019, Congress introduced the Nurse Staffing Standards for Hospital Patient Safety and Quality Care Act (H.R. 2581), advocating for an amendment to the Public Health Service Act that would make a standard nurse-to-patient ratio required in hospitals and health care facilities
ICU NP/PA Ratios

• Kleinpell, et al. (2015) published a descriptive survey of 222 NPs and 211 PAs in the ICU setting
  - Adult ICU mean provider to patient ratio was 1:5 (range, 1:3-8)
  - PICU mean provider to patient ratio was 1:4 (range, 1:3-8)
  - Influencing factors include patients’ diagnoses and severity of illness, unit patient census, total number of providers in the unit, number of physicians in the unit, time of day, and number of fellows and medical residents on service
  - In settings with fellows and medical residents, the NP/PA to patient ratios were lower
• Kaminski, et al. (2015) conducted a National Association of Neonatal Nurse Practitioners workforce survey of 1300 NNPs
  - When data are analyzed by NICU level, 59% of those in level IV NICUs “consider their patient loads during their shift unsafe”

Resident Regulations & Ratios

• On April 30, 2001, a petition filed with the Occupational Safety and Health Administration (OSHA) requested that OSHA adopt federal regulations limiting “work hours” for resident physicians
  - Limits resident work hours to 80 hrs/week, with at least one 24-hour off-duty period per week, and limits shifts to a maximum of 24 consecutive hours
  - This led to the Accreditation Council for Graduate Medical Education (ACGME) standards, which are similar with some variance by discipline
  - Per ACGME, a 1st year resident will not be responsible for >10 patients
  - A supervising resident will not be responsible for >14 patients
  - “As a result, residents now report a higher level of satisfaction with their educational experience, attend more educational forums, and spend more time with patients”

CHOC Pediatric Surgery Team

• CHOC is a 334-bed free-standing Level 1 pediatric trauma center in Orange County, CA
• Our Pediatric General, Thoracic & Trauma Surgery Team is composed of the following:
  - 10 Pediatric General Surgery/Trauma Surgeons
  - 1 Pediatric Surgery Fellow
  - 3 Pediatric General Surgery NPs
  - 1 Trauma NP (only M-F)
  - 1-2 General Surgery Residents
• Pediatric General Surgery NPs cover 7 days/week (two on M-F, one on Sat & Sun)
  - Primary surgical patients on surgical floors, co-management of PICUNICU patients, consultant for medical and Oncology patients; also cover Trauma patients on the weekends
  - Average daily census ~25 patients
CHOC Pediatric Surgery NP Role

- Daily rounds with Peds Surgery Fellow and/or attending
- Complete H&Ps, progress notes, consults; divided among the NP(s) and Resident(s)
- Complete discharge summaries & review discharge instructions with families
- Carry service pager for front line communication with nurses, consultants and other providers
- Bedside procedures: chest tube, surgical drain & suture/staple removals, rectal irrigations
- Weekly home-call from 4pm-8am (14hrs): calls/admits from ED, floor calls from RNs
- Weekly telehealth post-op clinic (uncomplicated appys/choles/pylorics)
- Present at weekly M&M and other educational conferences
- Provide RN education, write/update hospital policies & procedures, patient/family education handouts, and care guidelines/order sets
- Participate in research, quality improvement projects and professional shared governance committees

What’s the Problem?

- Since 2008, we have doubled the number of attending surgeons; our hospital has become a level 1 trauma center, and we have developed specialized programs such as pectus, colorectal, and fetal/surgical NICU
- With such growth comes increased patient census and higher patient acuity
- The number of surgical residents has actually decreased in this same time period, while the number of NPs has remained the same
- We struggle to prove our “worth” and obtain budget approval to hire more NPs
- Currently there are no guidelines for how many patients an inpatient acute but non-critical care NP can safely and responsibly care for at one time
- From the development of strict bedside RN to patient guidelines and newer restrictions on resident workload, we know RATIOS IMPROVE OUTCOMES
- We wonder…what will it take to create an acute care NP to patient ratio guideline?


- Examined data collected from a survey of advanced practice providers (APPs) perceptions of reasonable versus actual APP-to-patient ratios and other factors that affect workload burden in both inpatient and outpatient clinical settings
- 1466 APPs across 37 areas of practice responded to a 43-question survey distributed through 14 separate organizations from Nov. 2014-Jan. 2015
- Two-thirds of inpatient NPs reported that their actual workload was significantly higher than perceived reasonable workload
- Most APPs are working more than 40 hours per week, and “few organizations have structures in place to support times of short staffing or census and acuity surge versus working harder or more”
- Reflecting on the previous year, 30% of respondents reported an increase in overtime, 50% reported an increase in patient load, and 40% reported an increase in overall responsibilities
- “Limited evidence or benchmark data exist that would assist in determining optimal workload and staffing models that include APPs”
Without Ratios...

- NPs are working increasingly harder and seeing more patients without limits in place
- What is the threshold when increased responsibility and workload leads to poor outcomes and decreased patient safety?
- What is an appropriate pediatric acute care NP to patient ratio?
- At what NP to patient ratio do patient/family satisfaction and NP job satisfaction decline?
- Where is the ceiling for how much stress a nurse practitioner can handle, and how does this contribute to burnout?

Nurse Practitioner Burnout

- Expansion of the APP role has been deemed necessary for high quality and cost-effective care
- Negative effects of role expansion include poor job satisfaction related to workload, demands for productivity, decreased empowerment within organizational constraints, role strain and ambiguity surrounding scope of practice, leading to burnout (Hoff et al., 2017)
- Burnout is characterized by overwhelming exhaustion, cynicism related to and detachment from one’s job, and a sense of ineffectiveness or lack of accomplishment on the job (World Health Organization. (n.d.), retrieved 4/12/2022)
- Kapu et al. (2021) surveyed 1,014 APRNs and PAs; 59% of respondents reported either current or former burnout
- Burnout affects physical and mental health and can lead to breakdown of teams and subsequent decreased patient safety (Welp et al., 2016)

Our Survey in Brief

- Do you work at a free-standing children’s hospital?
- What is your work schedule like?
- Do you work weekends and holidays?
- Do you take call?
- What do your job responsibilities include?
- Average Daily Census (ADC)?
- Number of patients you (as an individual NP) see per day? Do you have a maximum number/cap?
- Do you feel adequately staffed & supported?
Survey Distribution

- Survey sent out on 3/15/22 via email blast by APSNA to all active APSNA members
- Survey featured in News You Can Use email sent to active APSNA members (x2)
- Survey respondents offered a $5 gift card

Preliminary Survey Results

NP to Patient Ratio

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<thead>
<tr>
<th>Patient Ratio</th>
<th>No. of Respondents</th>
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<tbody>
<tr>
<td>1-5 patients</td>
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<td>6-10 patients</td>
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<tr>
<td>11-15 patients</td>
<td>3</td>
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<td>16-25 patients</td>
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Do your surgical service adequately staffed?

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Do you feel supported by surgeons?

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<td></td>
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Do you feel supported by your hospital?

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<th>Yes</th>
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<td>12</td>
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Next Steps...

• Help determine what a safe NP to patient ratio might be
  • May vary by specialty and patient acuity
• Advocate for the development of an acuity tool to calculate appropriate acute care NP to patient ratios
• Move to collaborate with NP certifying bodies to help develop regulations on acute care NP to patient ratios

We need your help!

• If you have already filled out our survey, “THANK YOU!”
• If you have not filled out our survey, please refer to an email sent to you from info@apsna.org titled “APSNA – Membership Survey: Determining the need for Inpatient NP to Patient ratio guidelines” sent out on 3/15/22
• Or go to https://redcapweb.choc.org/surveys/?s=D4P4AD949L9YPRWE
• Use QR Code:

References


