

Neonatal Nurse Practitioner Workforce, NICU staffing, & Scope of practice

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Disclosures & Objectives

No disclosures

Objectives

- Discuss issues that contribute to NNP shortage
- Gain awareness of ways to recruit & retain NNPs
- Verbalize scope of practice differences between advanced practice registered nurses (APRNs) in the NICU

NNP history

Staffing needs increased exponentially over the years

Role established in 70's

- Level 3 academic model - too many pediatric hours of residency were dedicated to the NICU which was a new field
- Transport model - regionalization
- Level II model – peds could stay in office

Training

- Initially in hospitals – certificate programs
 - Nursing schools resisted – perceived to be a medical model
- National certification began in 1983, NCC
- 1990s move toward a master's requirement

Methodology

(Financial support for survey & analysis – Mallinckrodt)

- 25-minute online survey accessed through the National Certification Corporation
- March 11 to April 17, 2020
- Screening criteria
 - Primary role as an NNP in one of the following
 - NNP with direct patient care in an NBN, level II, III, or IV NICU, or primary care/outpatient follow-up
 - Transport NNP
 - Faculty/dean/director
 - NNP/APRN coordinator/manager/administrator
- They have direct patient care practice in the NICU if they are an administrator or faculty

Region Name	AANP Region Definition	% of sample (N=845)
Region 1	CT, MA, ME, NH, RI, VT	3%
Region 2	NJ, NY	4%
Region 3	DC, DE, MD, PA, VA, WV	10%
Region 4	KY, NC, SC, TN	12%
Region 5	IL, IN, MI, MN, OH, WI	20%
Region 6	AR, LA, OK, TX	10%
Region 7	IA, KS, MO, NE	8%
Region 8	CO, MT, ND, SK, UT, WY	11%
Region 9	AZ, CA, HI, NM, NV	8%
Region 10	AK, ID, OR, WA	4%
Region 11	AL, FL, GA, MS	9%

Comparative data

- 2020 was first survey to ask about race/ethnicity:
 - 89% white
 - 3% Hispanic
 - 2% non-Hispanic Black
 - 1% Asian
 - 3% Other
 - 2% Prefer not to say

In 2020 there were 325,000 NPs in the U.S.

2007 – 3,092 NNP

	2016	2020
Number of NNPs	5,433	6,558
Number of respondents	1,100 (20%)	845 (13%)
Average age	49	51
Mean years of experience	14	16.5
Female Gender	96%	96%

Units & shifts that NNPs cover

Primary Unit	2016	2020
Level 1	1%	2%
Level 2	8%	11%
Level 3	58%	46%
Level 4	33%	41%

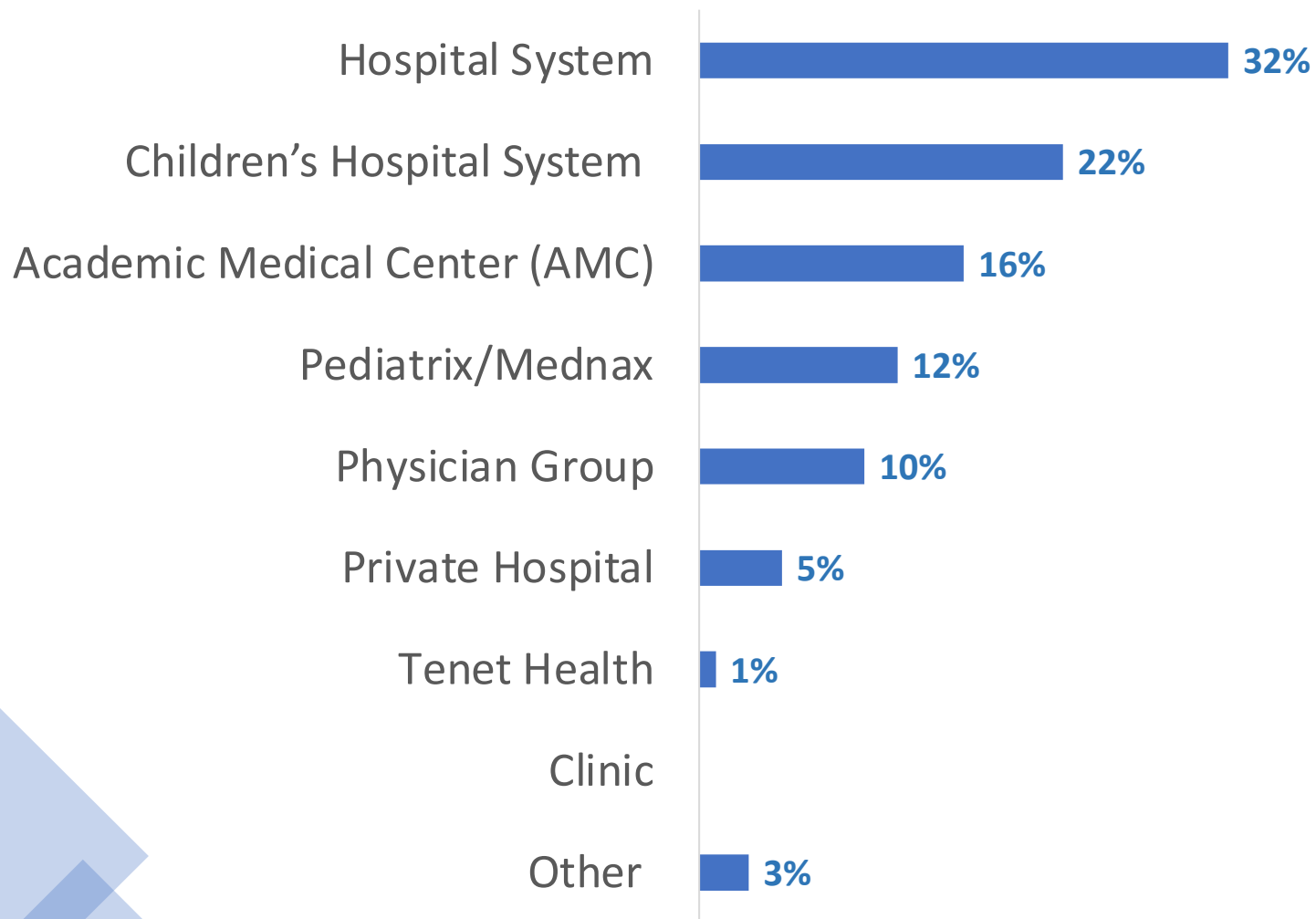
Shifts covered	2016	2020
Days only	16%	16%
Nights only	4%	5%
Rotating	42%	37%
24 hour	52%	41%

Among NNPs who work 24-hour shifts, 77% are not guaranteed any downtime.

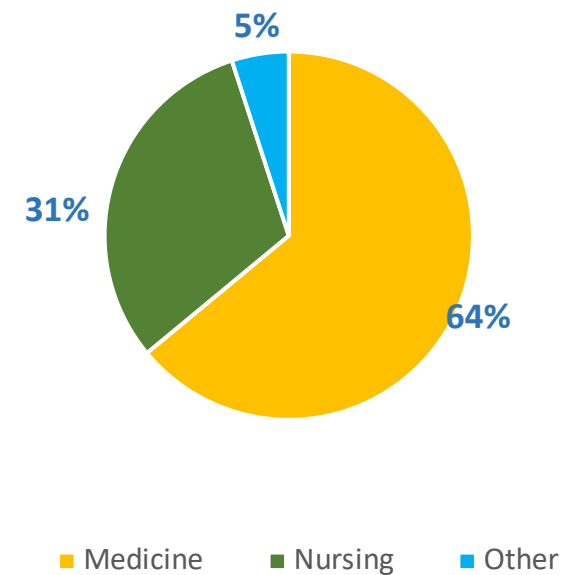
2/3 work the shift they prefer

Preferred Shift	2016	2020
Days only	42%	40%
Nights only	6%	5%
Rotating	11%	7%
24 hour	40%	39%

• Primary employer



Report to:

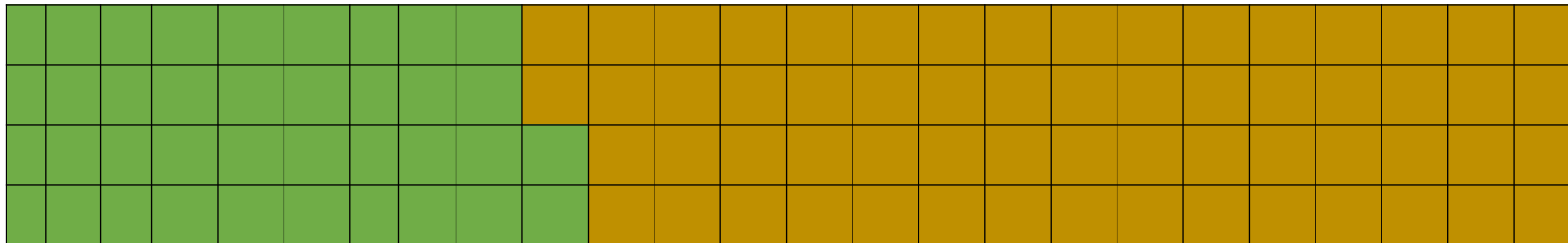


Most NNPs are salaried with an average pay of \$61/hour.
Median \$62/hour (2016 average \$56. Median \$55)

NNP Compensation

38% hourly (28% in 2016)

62% Salary



Max - \$115/hour.

Min - \$42/hour

83% work full-time, 35 hours/week or greater

Only 36% of NNPs get non-clinical time
to work on projects

22% of them get 4 hours or less

Average hourly by employer

NNPs who work for a physician practice group report making, on average, ~ \$4 less per hour. Overall, salaries have increased from 2016 to 2020.

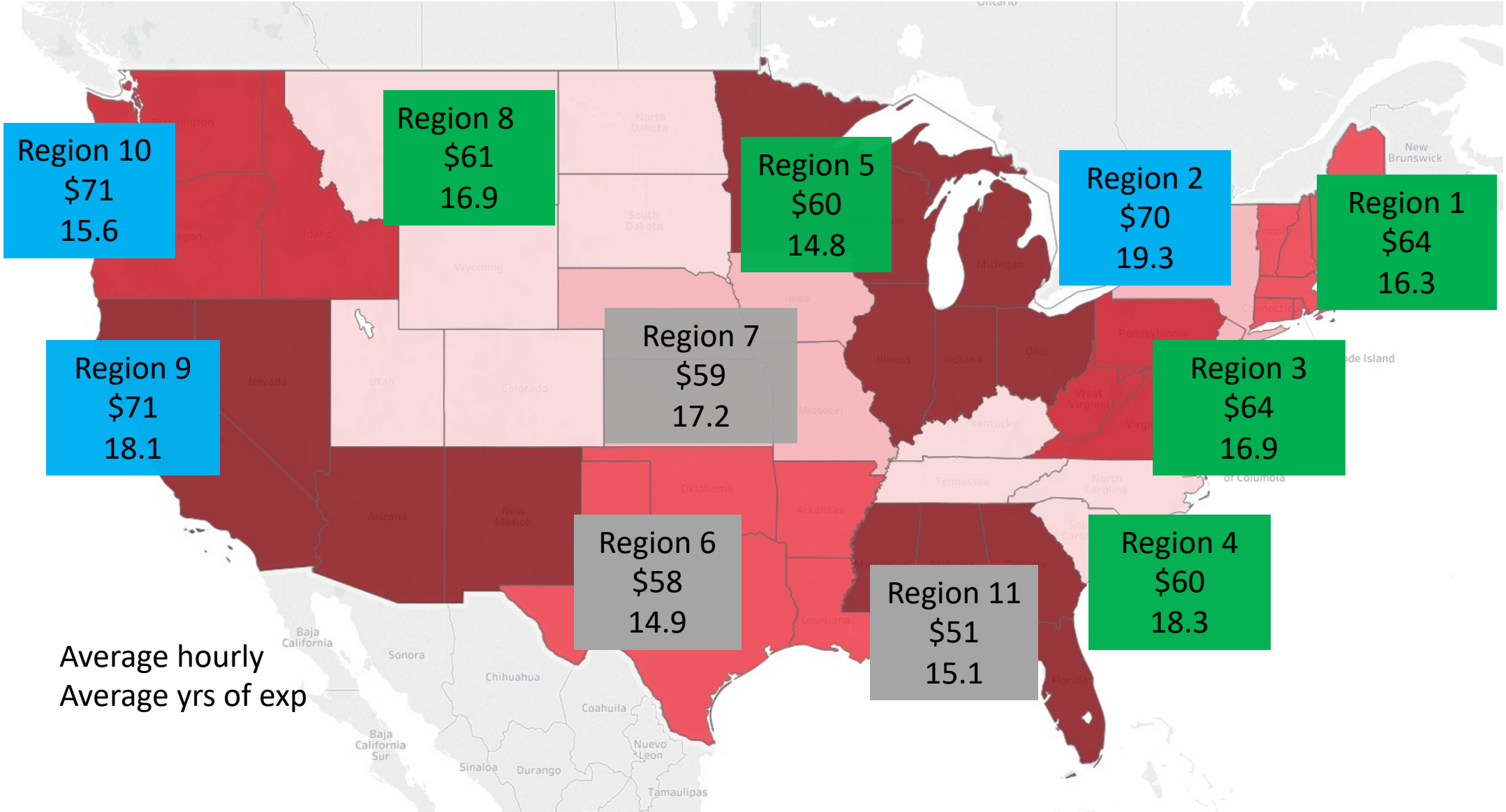
Multi-hospital
system -
\$63/hour

Private hospital -
\$61/hour

Physician practice
group - \$57/hour

University/Med
Center -
\$63/hour

Children's Hospital
-
\$62/hour



The question

- 2020: 81% satisfied with current position

Satisfaction with	2016	2020
Career	73%	95%
Annual Income	55%	55%
PTO	60%	55%
Health benefits	51%	43%
Retirement benefits	61%	49%



Benefits ranked

- Salary is the most valued benefit
 - 75% rank salary as the most important part of a compensation package
 - 92% rank salary as in the top three of most important in a compensation package
 - 84% most important factor when considering new job
- Health insurance – 52%
- Retirement benefits – 40%
- PTO - 32%

Ranked in top 3

Bonus/Pay increase



Bonus based on:

42% quality metrics
22% based on merit
18% based on RVU



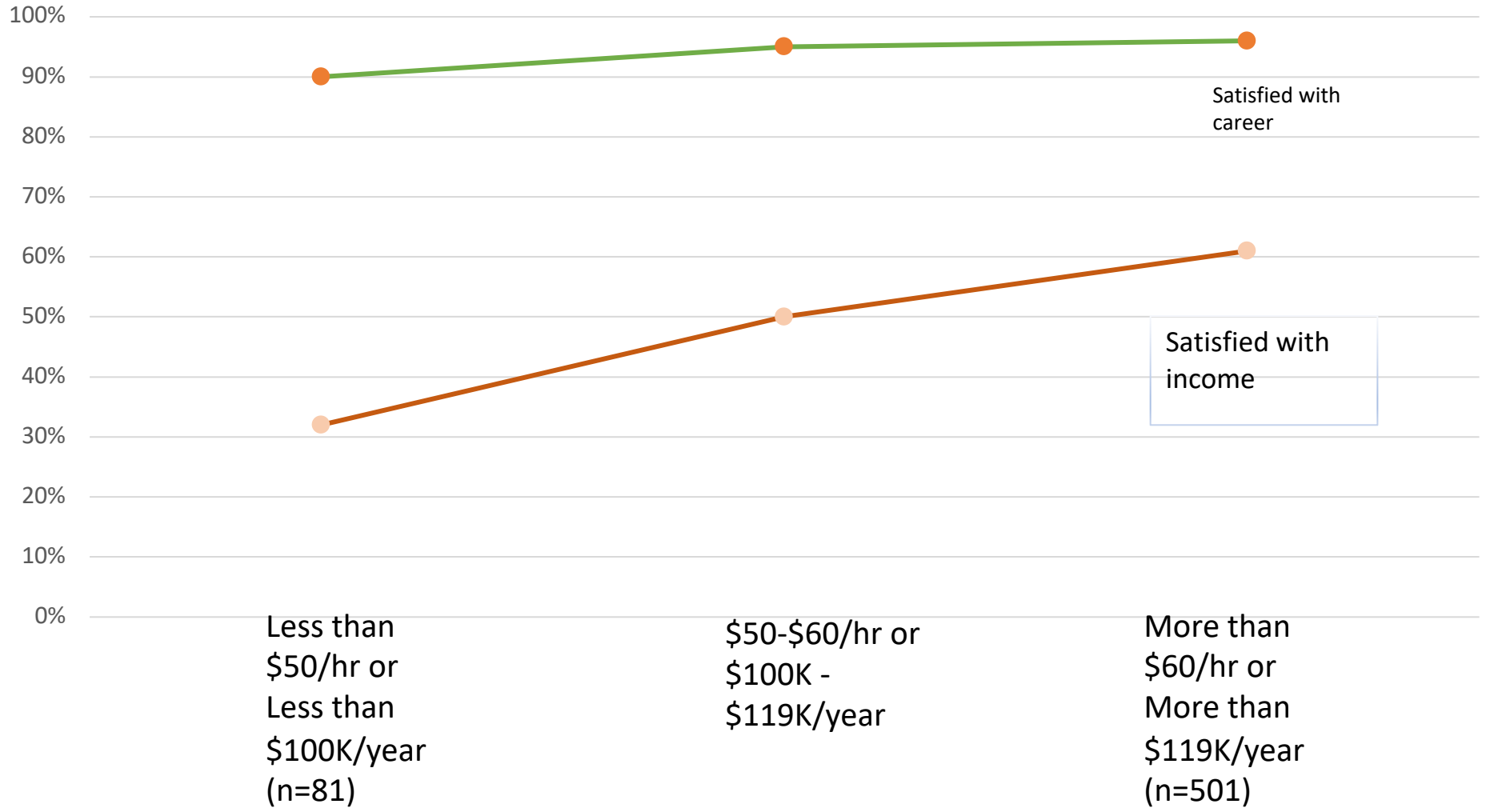
Pay increase:

57% merit
46% market/cost of living

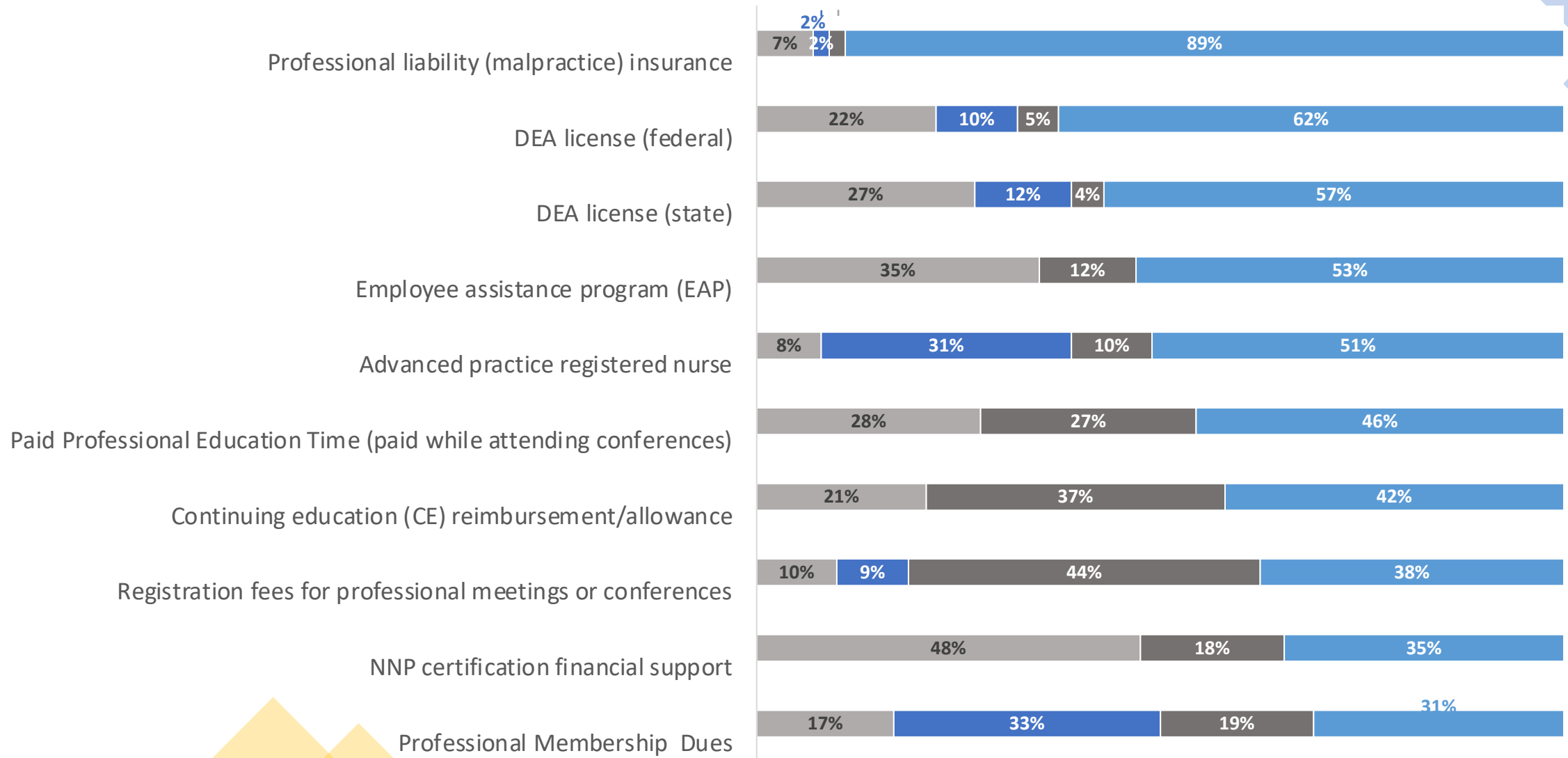
Type of Employer	Bonus	Annual pay increase
Multisystem	36%	68%
Private	40%	65%
Physician group	52%	52%
University medical center	27%	76%
Children's hospital	42%	84%

Annual bonus or pay increase improves satisfaction

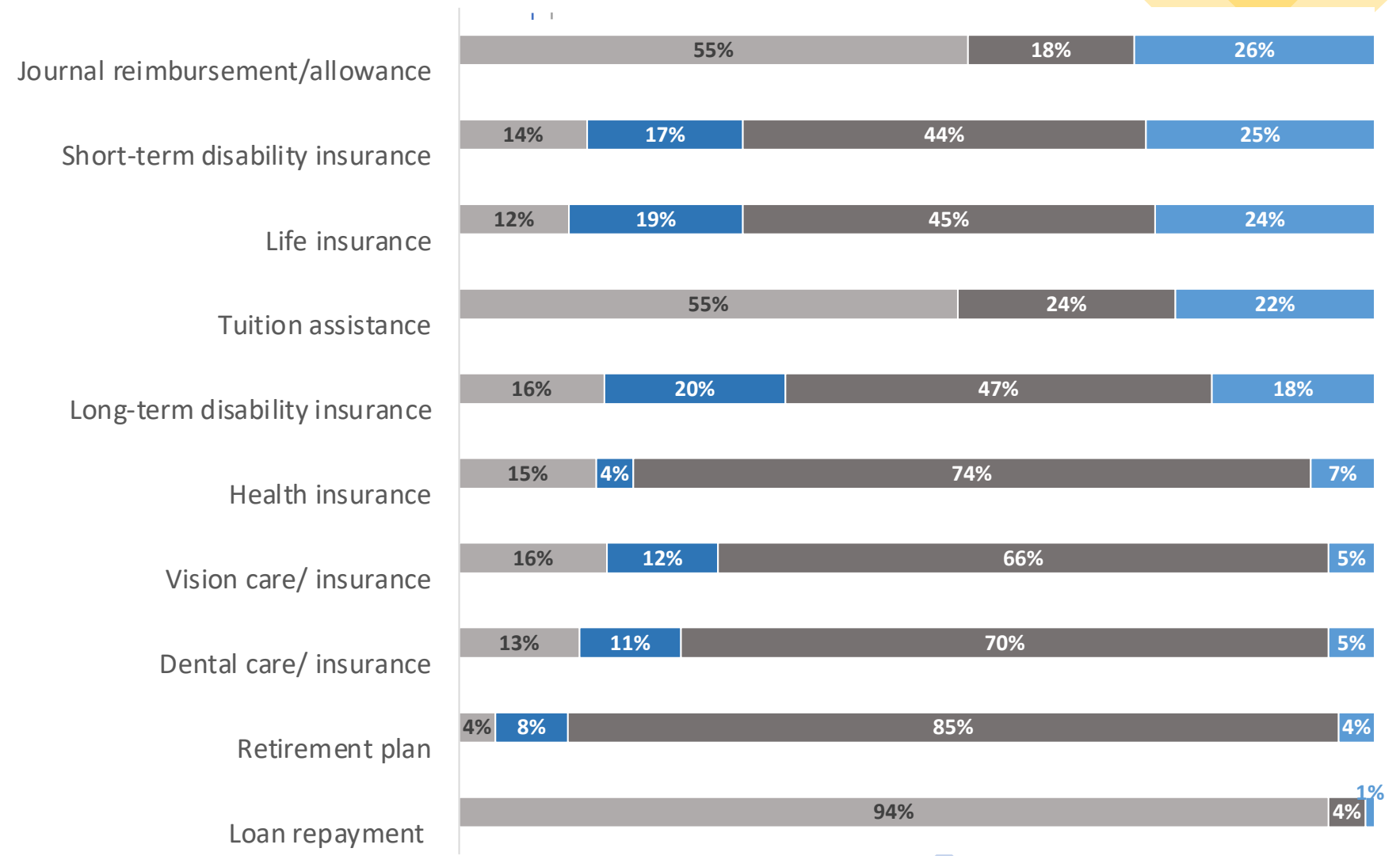
Level of Satisfaction by Income Level (Top 2 Box Satisfaction Ratings)



■ Not applicable ■ Paid fully by myself ■ Paid partially by employer and myself ■ Paid fully by employer



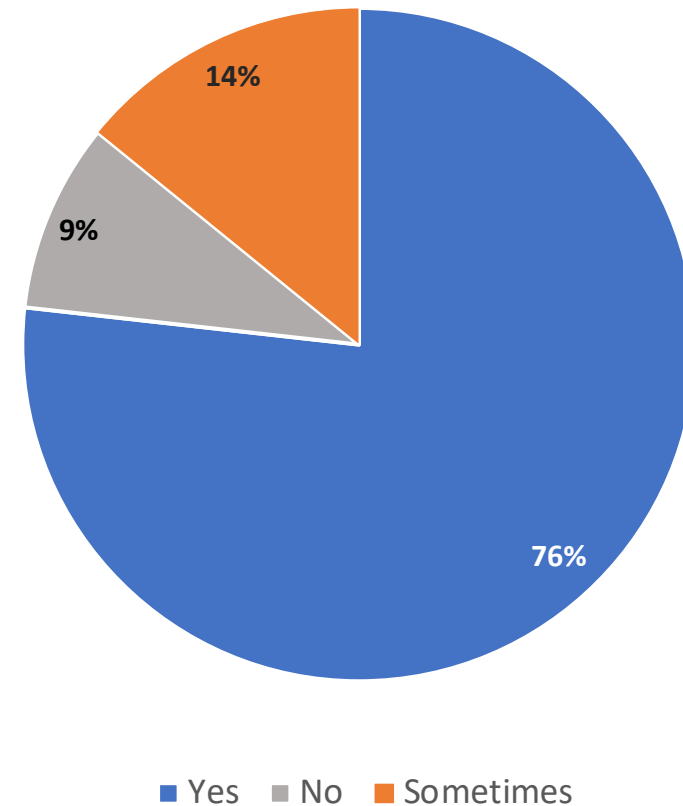
Not applicable
 Paid fully by myself
 Paid partially by employer and myself
 Paid fully by employer




Work load and clarity of role

- ✓ 53% of NNPs work in units with an ADC of > 30 patients
- ✓ 30% of NNPs carry 5 – 8 patients
- ✓ 40% of NNPs carry 9 – 12 patients
- ✓ 25% of NNPs carry > 12 patients

Clarity of NNP role





Percentage rating
question as
frequently or always
in relation to their
workplace

83% practice to full scope of practice allowed
per state regulation

75% valued as a member of the health care
team

64% the number of patients that they manage is
safe

61% most days their workload is appropriate

56% unit is staffed appropriately to provide best
care





Most enjoyable part of job

- Procedures 71%
- Attending deliveries 58%
- Discussion with families 50%
- Daily rounds 30%

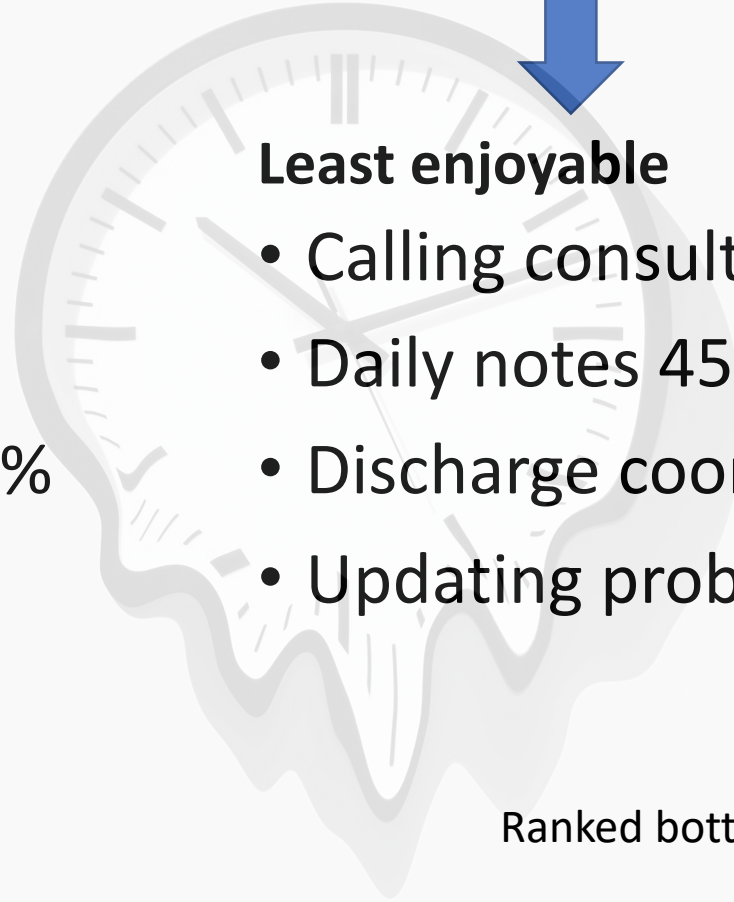
Ranked by top 3



Least enjoyable

- Calling consultants 46%
- Daily notes 45%
- Discharge coordination 35%
- Updating problem list 33%

Ranked bottom 3



Overtime

22% of full-time NNPs are working hours above their 40 hr FTE

63% of NNPs work overtime ~ 250 hrs

26% of NNPs have mandatory overtime

Due to NNP shortage 68%

NNP illness 53%

NNP vacation needs 40%

High census 36%

20% mandatory OT In 2016

PTO

87% of
NNPs earn
PTO

- Average earned 209 hours
- Average taken 120 hours

2016 earned PTO = 178

Reasons
for not
taking PTO

- 46% staffing shortage
- 29% save it for future
- 17% schedule can be arranged so I don't need to take it
- 5% can carry over to next year



Work environment

12% experience bullying (often, frequently, always)

8% experience lateral violence (often, frequently, always)

20% would rather not go to work (often, frequently, always)

10% have days when they have ethical concerns (often, frequently, always)

21% do not have good work/life balance

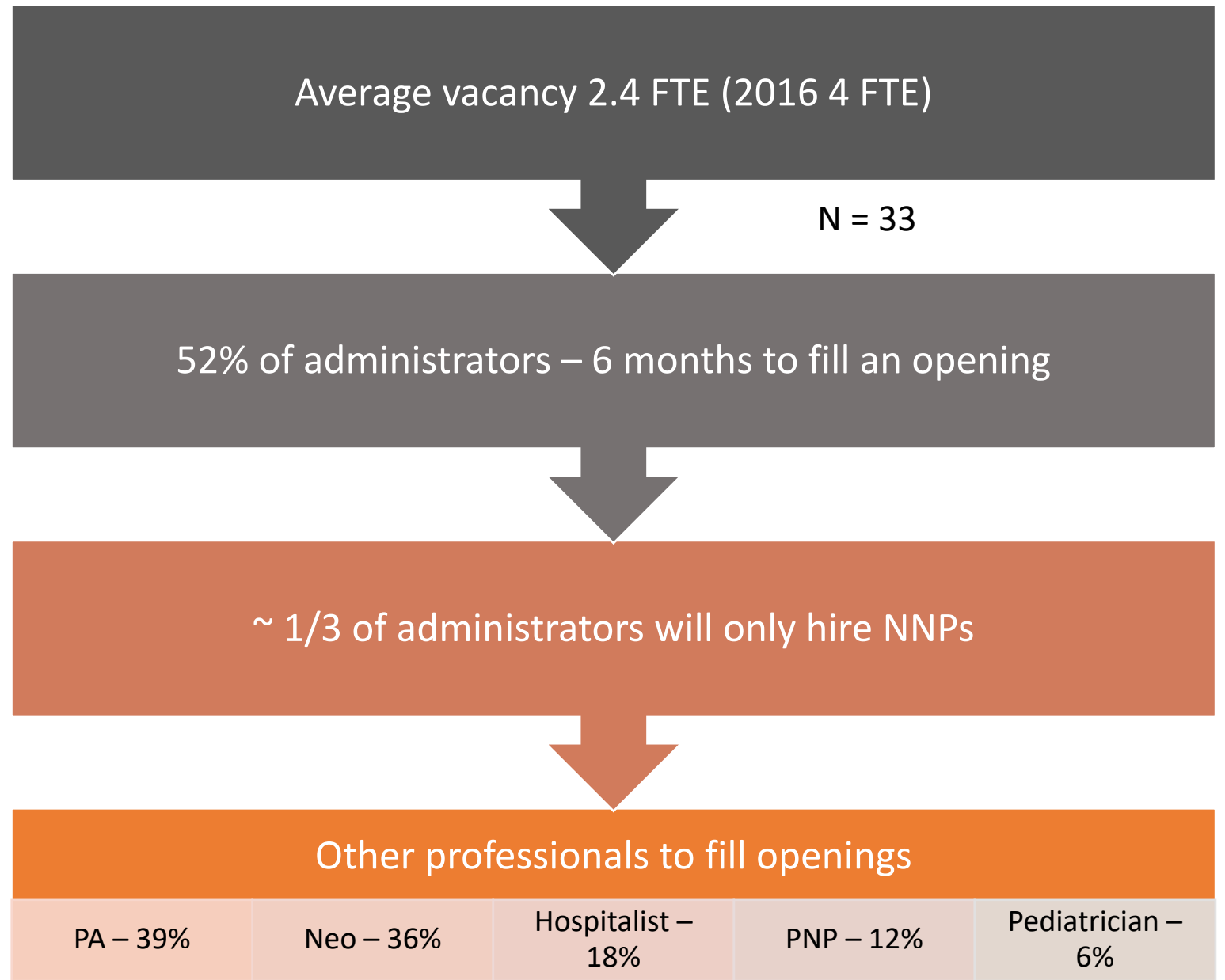
17% have called in for a mental health day

~ 90% have collegial work relationships

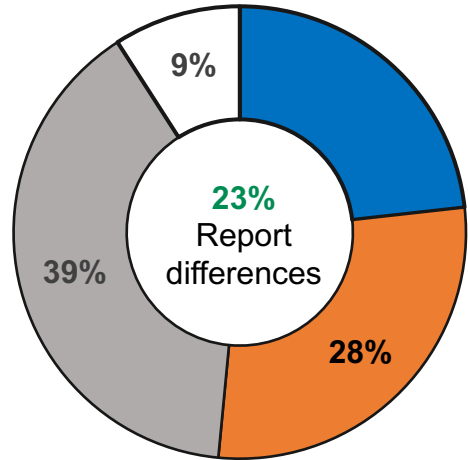
NNP shortage

52% admin say shortage likely to worsen

45% of NNPs plan to retire in next 10 years



Differences between NNPs & other providers



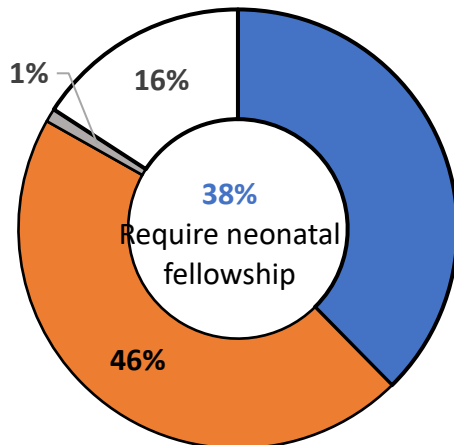
■ Yes ■ No ■ Not applicable ■ I don't know

N = 198



Differences in roles	%
Types of patients, level of acuity	20%
PNP – well newborns	9%
PNP – 34 weeks and older	5%
Prescriptive and procedural	23%
NNP is front line provider	13%
NNPs attend deliveries	10%
Specialized vs generalized training	4%
Co-signature on documents	4%
NNP can work more hours/24 hr shift	4%
Transport (PA/PNP can't do)	4%
Developmental clinic follow up	3%
None noted	10%

Neonatal fellowship required for PAs



■ Yes ■ No ■ Not applicable ■ I don't know

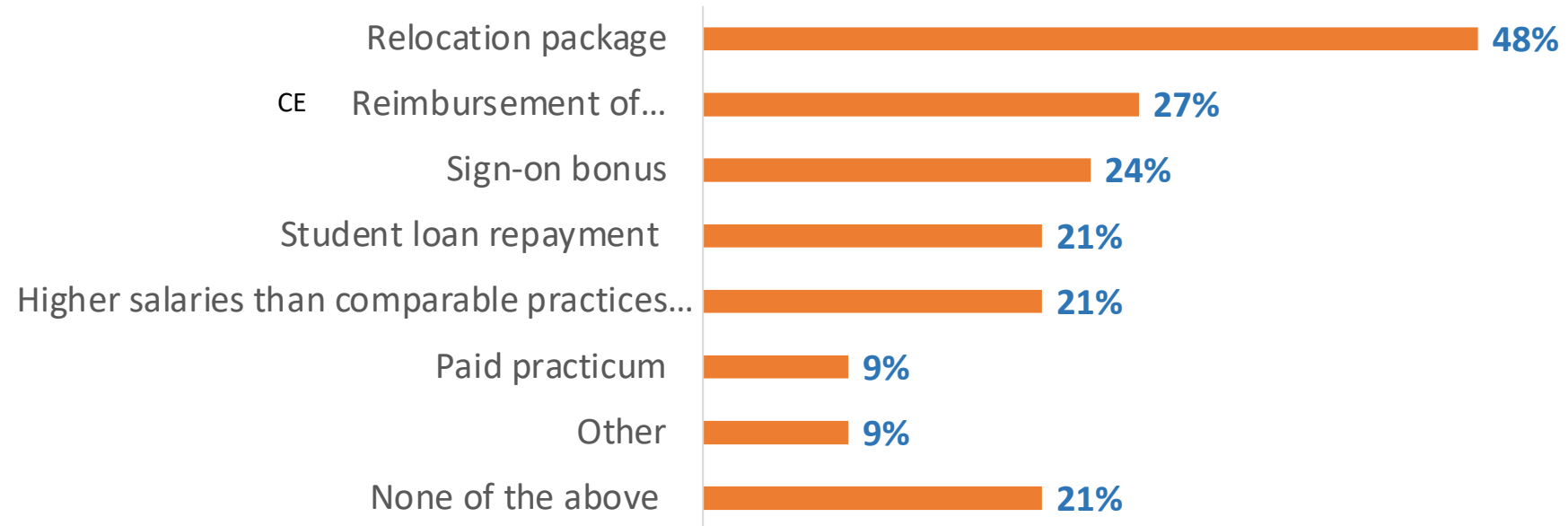
Available HCPs in unit	%
Other allied health (RT, OT, PT)	63%
Neonatologist day coverage, on-call night, out of house	49%
Residents	42%
Neonatologists 24-hour in-house	39%
Fellows	30%
Physician Assistants	20%
Neonatologists on-call / or consultant (e.g. calling referral center)	18%
Pediatricians	13%
Hospitalists	12%
Pediatric Nurse Practitioners	11%
Neonatologists day coverage, on-call night but in-house	11%
Family Nurse Practitioners	1%
Other	5%



NNP shortage

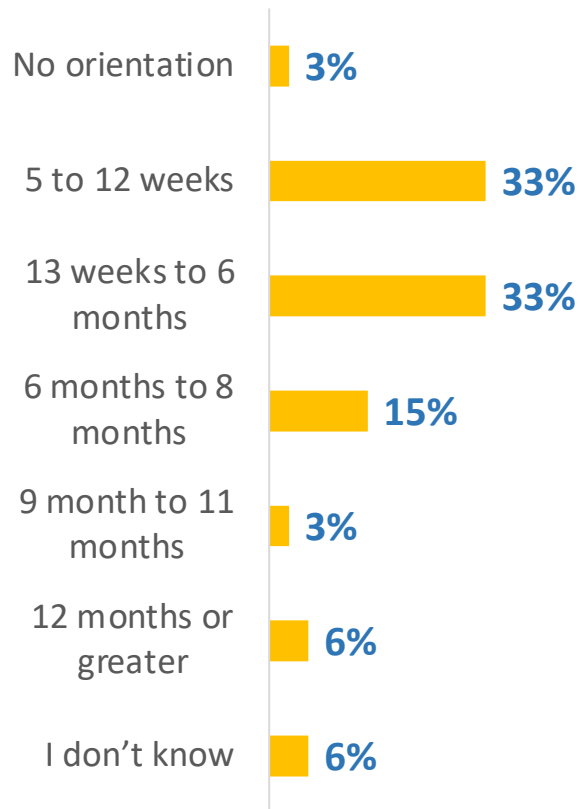
- Shortage of NNP faculty
- Not enough clinical sites
- NNP programs left with openings for students
- 51% of NNPs not interested in being faculty
 - Cost to go back to school – 45%
 - Salary – 40%
 - No interest – 36%
- 10% of NNPs seeking new jobs

NNP Recruitment Tools

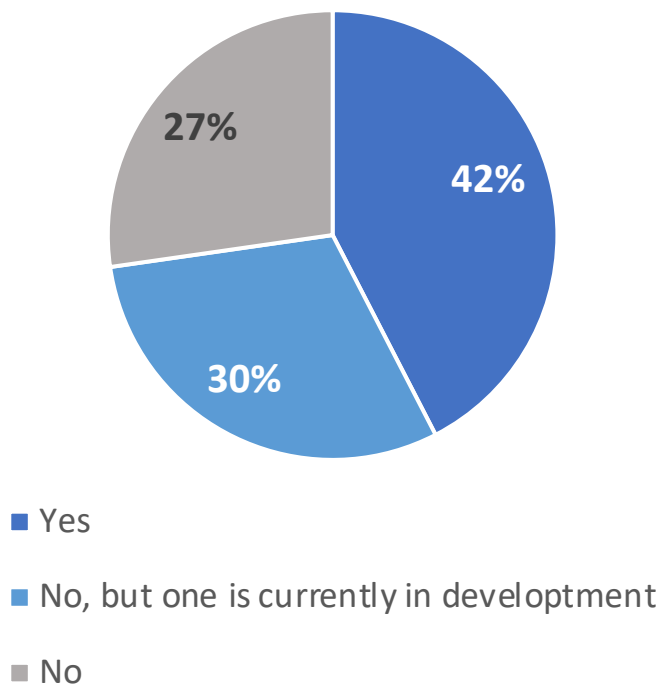


Retention Strategies

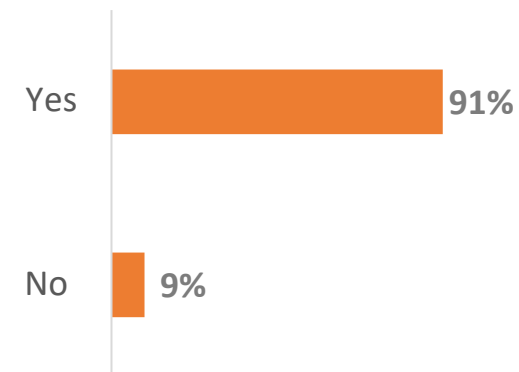
Length of new grad orientation



Mentoring program in place



Precepting NNP students



Post-graduate fellowship programs

Other considerations for retention

Pay increase

Educational
funding

Bonus pay for OT

Senior benefit

- Shift accommodations
- Ergonomic accommodations

Hire a D/C
coordinator

Improve templates
for daily notes

Increase diversity

Teamwork in the NICU (Keels, Neonatal Provider workforce 2019, AAP)

- APRNs
 - Education is nursing model
 - CRNA, CNM, NP, CNS
 - Population foci
 - Neonatal
 - Pediatric – primary or acute care
 - FNP
 - Adult / Gerontology – primary or acute care
 - Women’s Health
 - Psychiatric
 - Practice is determined by licensing, accreditation, certification, education (L.A.C.E.)
 - Professional organization has scope and standards practice guidelines
 - State board of nursing and state law impact scope
 - Requires masters, post-master’s certificate or DNP

Neonatal Nurse Practitioners

- Neonatal Nurse Practitioners
 - Management of the acutely or chronically ill infant from very pre-term until 2 years of age
 - Education includes delivery room experience, clinical hours in level II, III, & IV NICU.
 - Didactic focused on physiology and pathophysiology of fetus and infant
 - NNP must maintain competency in standard procedures such as intubation, umbilical line insertion, thoracentesis
 - Take maintenance assessment every 3 years
 - Number of required CEUs varies depending on assessment score

Pediatric Nurse Practitioner

- Pediatric Nurse Practitioner Primary Care
 - Typically, outpatient
 - Focus on wellness, comprehensive care
 - Neonatal curriculum includes typical newborn care, growth and development
 - No preterm infant pathophysiology
 - No training in DR management

- Pediatric Nurse Practitioner Acute Care
 - Typically, inpatient
 - Care of children who are acutely ill/unstable
 - Neonatal curriculum focused on congenital disorders, chronic lung and sepsis
 - Training in ventilatory strategies
 - No content related to fetal, infant pathophysiology or management of preterm
 - Shortage of PNP-AC

PNPs 15 CEUs & recert every year. Every 7 years recert with specific requirements: pharm 15 CEUs

Physician Assistants

- Education is medical model
 - 2000 hours of clinical
 - Generalist
 - Aligned with a supervising physician
 - Usually receive specialized training post graduation on the job
 - More hospitals are offering post-graduate training
 - 100 CME every 2 years
 - Recert every 10 years

?

