

The Role of the Acute Care Nurse Practitioner: New Models for Acute Care Delivery in an Academic Medical Center

March 22, 2012

Barbara Cashavelly MS, RN, AOCN

Maria Winne MS, RN, NE-BC

Massachusetts General Hospital

Objectives

- Identify current events that expanded opportunities for nurse practitioners to practice in acute care settings
- Describe two acute care nurse practitioner (ACNP) models

Institute of Medicine (IOM) Future of Nursing Recommendations

- Advanced Practice Nurses should be able to practice to the full extent of their education
- Expand opportunities for nurses to lead and manage collaborative efforts with physicians and others to redesign and improve practice environments and health systems.



Expanding Opportunities ... WHY?

- Acute Care Nurse Practitioners (ACNPs) play significant role toward improving quality and enhancing efficiency.
- Surge in acuity levels of hospitalized patients leading to advanced practitioners managing complex patients
- Regulations set forth by Accreditation Council for Graduate Medical Education (ACGME)
 - Restricted residents to work an average of only 80hours/week
- Challenges of decreasing LOS

We are the Future of Nursing

- Nurse leaders at MGH took leading roles in design and creation of 2 collaborative inpatient ACNP health care models:
 - The Academic Hospitalist Service
 - The Oncology Inpatient Nurse Practitioner Service



Background

- Development and Implementation of these two models are aligned with the recommendations put forth by IOM “The Future of Nursing: Leading Change, Advancing Health”
- The two ACNP care delivery models also align with the AONE Guiding Principles addressing:

“The Role of the Nurse in Future Patient Care Delivery”

Background

What is in the literature?

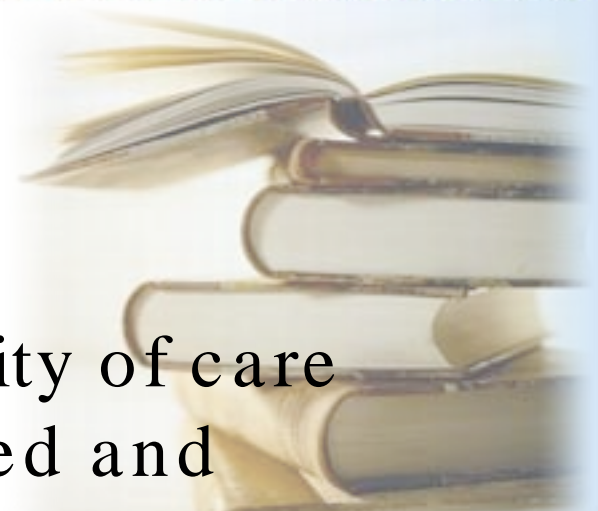


- Two common themes about ACNPs
 - continuity of care
 - easy accessibility of ACNPs to the staff nurses due their constant presence on the units.

Background

Literature cont'd

- Improved efficiency and quality of care when ACNPs at UCSF admitted and managed an acute medical population previously cared for by house staff
 - Positively impacted quality of care due to continuity of care and availability of NPs throughout the day to interact with patients, families and nursing staff



Background

Literature cont'd



- ACNPs improved patient flow and continuity of care to pediatric ICU patients and families

Background

Literature cont'd

- n= 145
- Integrating NPs in ICU setting positively impacted patient care by enhancing workflow
- Having more time to discuss patient care issues w/ nurses and interact more with patients' families than physician colleagues



Academic Hospitalist Service (AHS)

- Spring of 2010, department of medicine in collaboration with medical nursing service developed a new model of care called the Academic Hospitalist Service (AHS)
- Goal: expedite admissions of acutely ill medical patients from our ED
- Collaborative Care Team – hospitalists, ACNPs, medical students



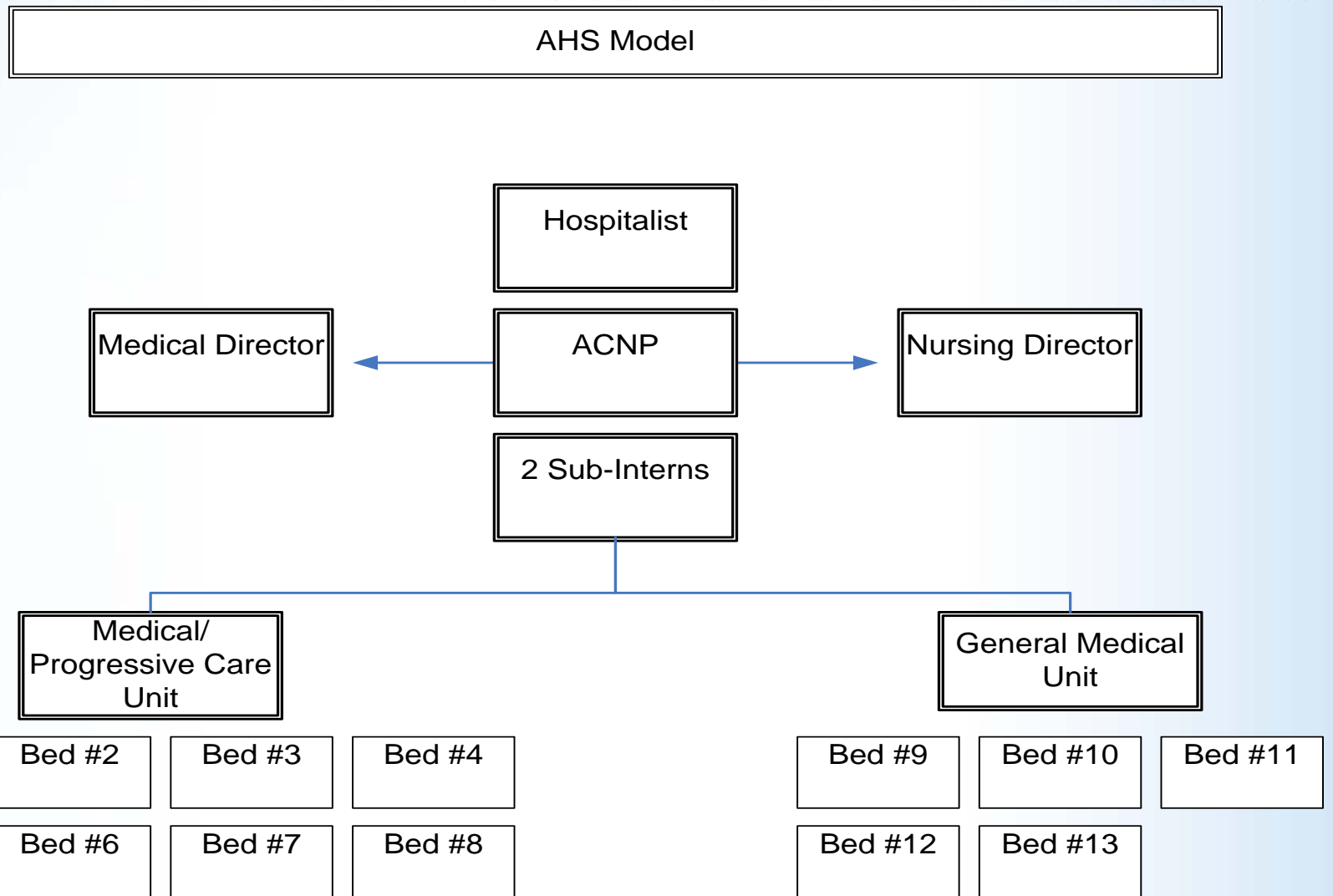


Figure 1. AHS Model

Academic Hospitalist Service

Care Delivery Team



7am-7pm:

- one hospitalist
- one ACNP, two 4th year sub-interns.
- The physician and ACNP care for 13 patients

7pm-7am:

- one hospitalist for 13 patients

Academic Hospitalist Service

Q: What are the desired experiences and qualities required by the role of the ACNPs?

A: NPs should have:



- experience caring for acutely ill patients on a general medical inpatient unit or in an ICU
- pioneering mindset
- be flexible, adapt well to change and be proactive in the ongoing development of a newly formed service.

Academic Hospitalist Service

- By May 2010, 2.5 part-time acute care nurse practitioners were hired (two 36 hrs/wk, one 24hrs/wk)
- Two NPs were novice to the advanced practice role
 - Both were experienced medical ICU nurses
- One NP had several years NP experience in a similar model and worked as a staff nurse at our institution.

Academic Hospitalist Service

ACNP Orientation

Essential Elements

Clinical education, socialization, networking and
mentorship

Achieved by.....



Academic Hospitalist Service

ACNP Orientation

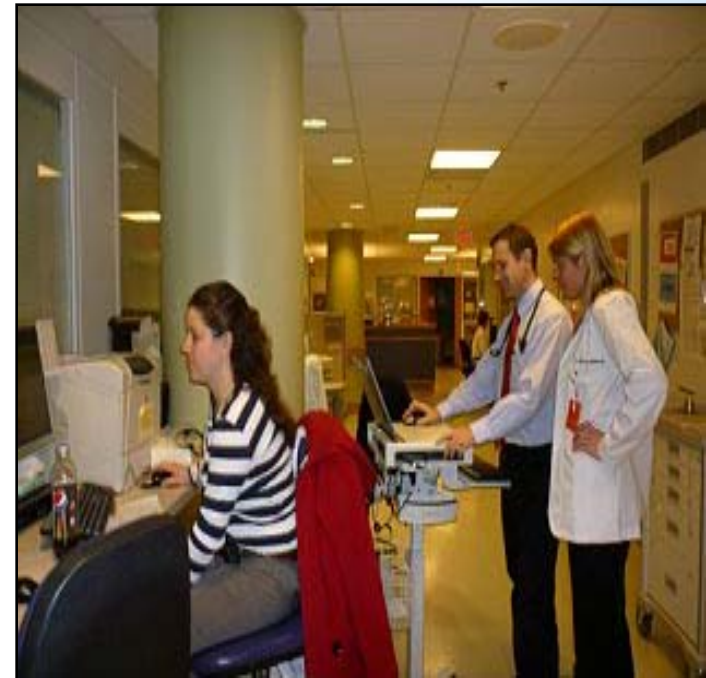
- A 4-week orientation for the two novice ACNPs and a 3 week orientation for the experienced ACNP.
- Shadow days with experienced ACNPs and physicians within the medical, oncology and cardiac services – learned organizational culture, informatics, consultation process, clinical assessment, care management as well as role development

Academic Hospitalist Service

ACNP Orientation cont'd

Shadow Days with AHS Hospitalists

- Each ACNP worked with the AHS Hospitalists for 4-7 days prior to having full responsibility for patient care
- The ACNPs were able to coordinate plans of care with AHS Hospitalists, an experience which was described as an invaluable part of the orientation



Academic Hospitalist Service

ACNP Orientation cont'd

- Clinical Simulations
 - 4 hour clinical simulation program
 - Developed by the nursing simulation staff in the Norman Knight Center for Clinical & Professional Development and the Clinical Directors of the NP teams
 - 4 scenarios: pulmonary embolism, urosepsis, gastrointestinal bleed and hypercalcemia

Academic Hospitalist Service

Staffing

- ACNP is scheduled to work 7am-7pm seven days/week
- ACNPs rotate responsibility in devising their 8 week schedules

Reporting Structure:

- ACNPs report operationally to the nursing director
- A medical director serves as their supervisory physician
- ACNP is the responding clinician (works in lieu of an intern)

Academic Hospitalist Service

Multidisciplinary Collaboration

- Collaborates daily with multiple disciplines necessary to provide seamless care
- Participates in patient rounds along with staff nurses, attendings, case managers, physical therapist, nutritionist and social workers
- Provides more opportunities for timely discussion and resolution of patient care issues and staff education

Academic Hospitalist Service



Multidisciplinary Rounds

Academic Hospitalist Service

Continuing Education

- AHS Hospitalist is available to provide ACNPs with input, mentorship and assistance with emergencies
- Clinical simulations are offered every few months – work in progress
- ACNP continuing education programs are offered on a monthly basis

Academic Hospitalist Service

Summary

- New service opened July 2010
- Comprised of 13 beds
- Admit house and private patients
- ED access unit
- 7am-7pm
 - Hospitalist, NP & 4th year sub interns
- 7pm - 7am
 - a Hospitalist cares for all patients

Academic Hospitalist Service

Summary cont'd

ACNP Practice Model

- ACNPs manage care of their patients in collaboration with the attendings
- ACNPs are the responding clinician (practice in lieu of residents)

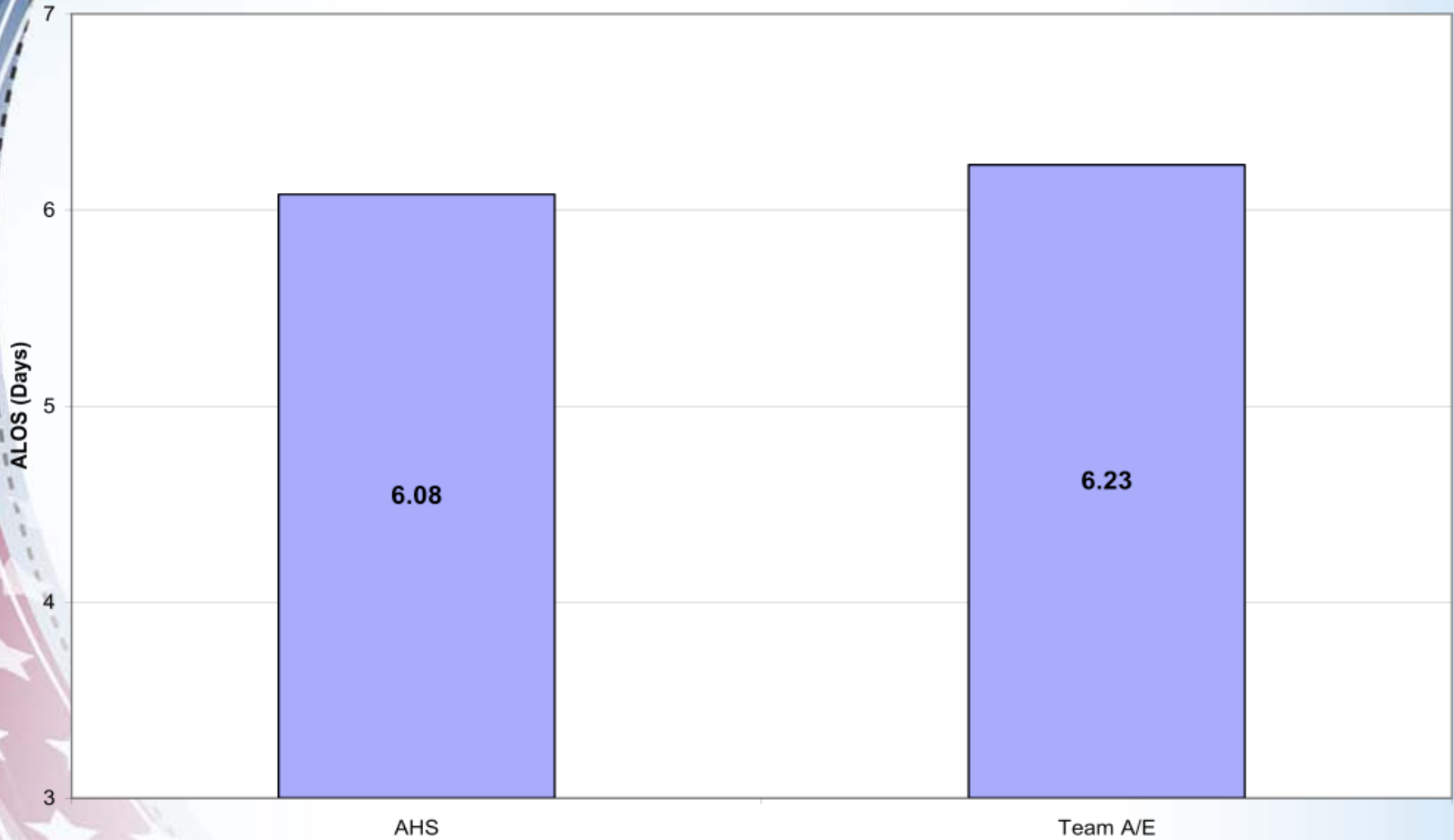
Academic Hospitalist Service

Data Collected

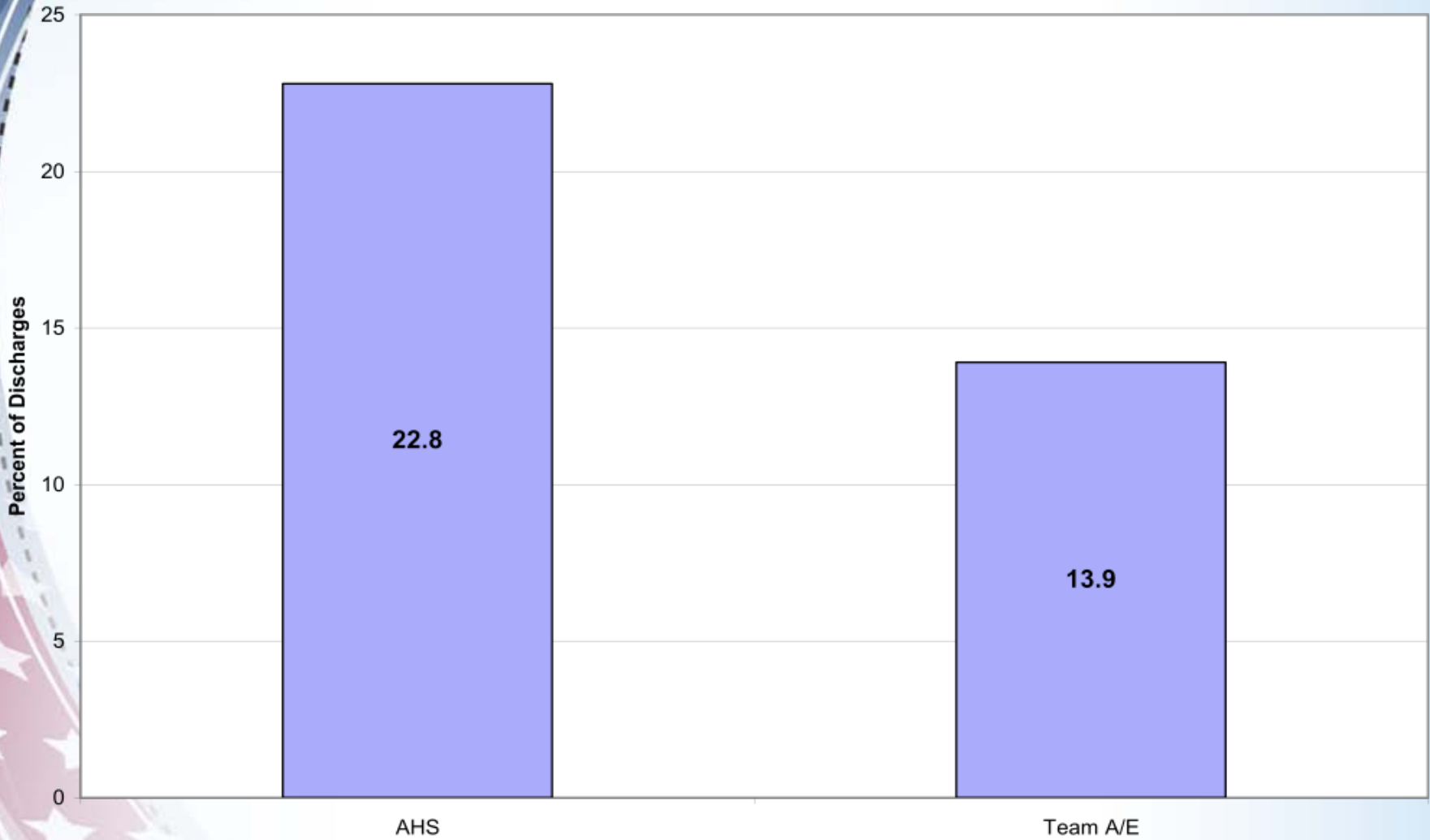
- Compared data between AHS and 2 other medical teams that do not have an NP on their care teams.
- LOS
- Pre-noon Discharges
- Readmission Rates



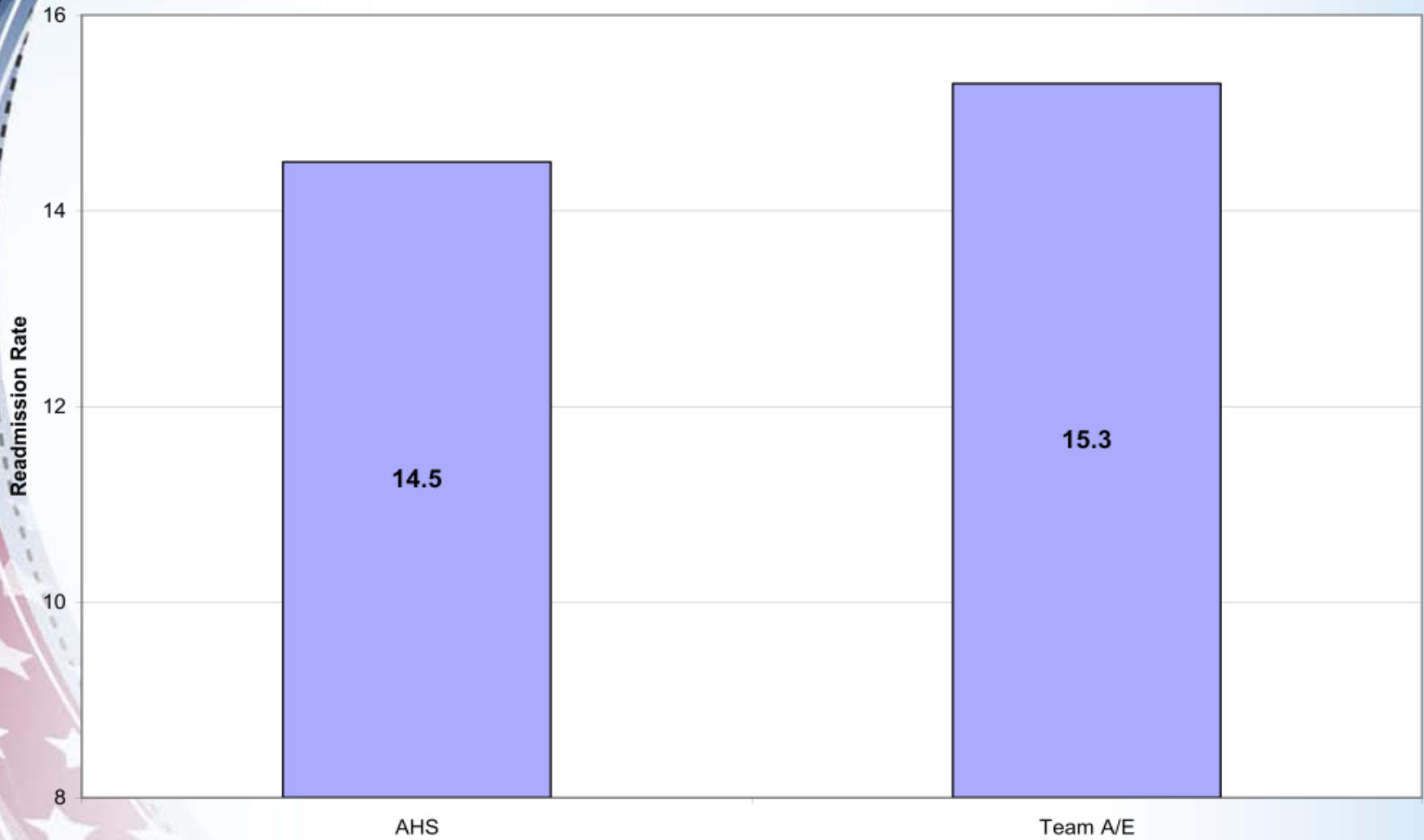
Inpatient ALOS by Team, CY11



Percent of Discharges before Noon by Team, CY11



30-Day Readmission Rate by Team, FY11



Oncology Inpatient NP Service

- 2009 Cancer Center charged with developing an inpatient service in response to ACGME requirements.
- Goal: provide inpatient coverage for 14 medical oncology inpatient beds
- Cancer Center team in collaboration with the Oncology Nursing service developed a new inpatient NP service



Oncology Inpatient NP Service

Evaluated 3 models of practice:

- Hospitalist Model
 - Physician whose primary practice is hospital medicine
- Moonlighter Model
 - Physician who has a primary job and works extra shifts as a secondary job
- Nurse Practitioner Model
 - Dedicated inpatient NP providing inpatient care.



Oncology Inpatient NP Service

Advantages of an Inpatient NP service:

- Collaboration and continuity with oncology Attendings and outpatient NP's
- Dedicated to an identified oncology unit
- Patient satisfaction
- Quality and safety
- Ability to decrease LOS
- Enhancement of multidisciplinary practice

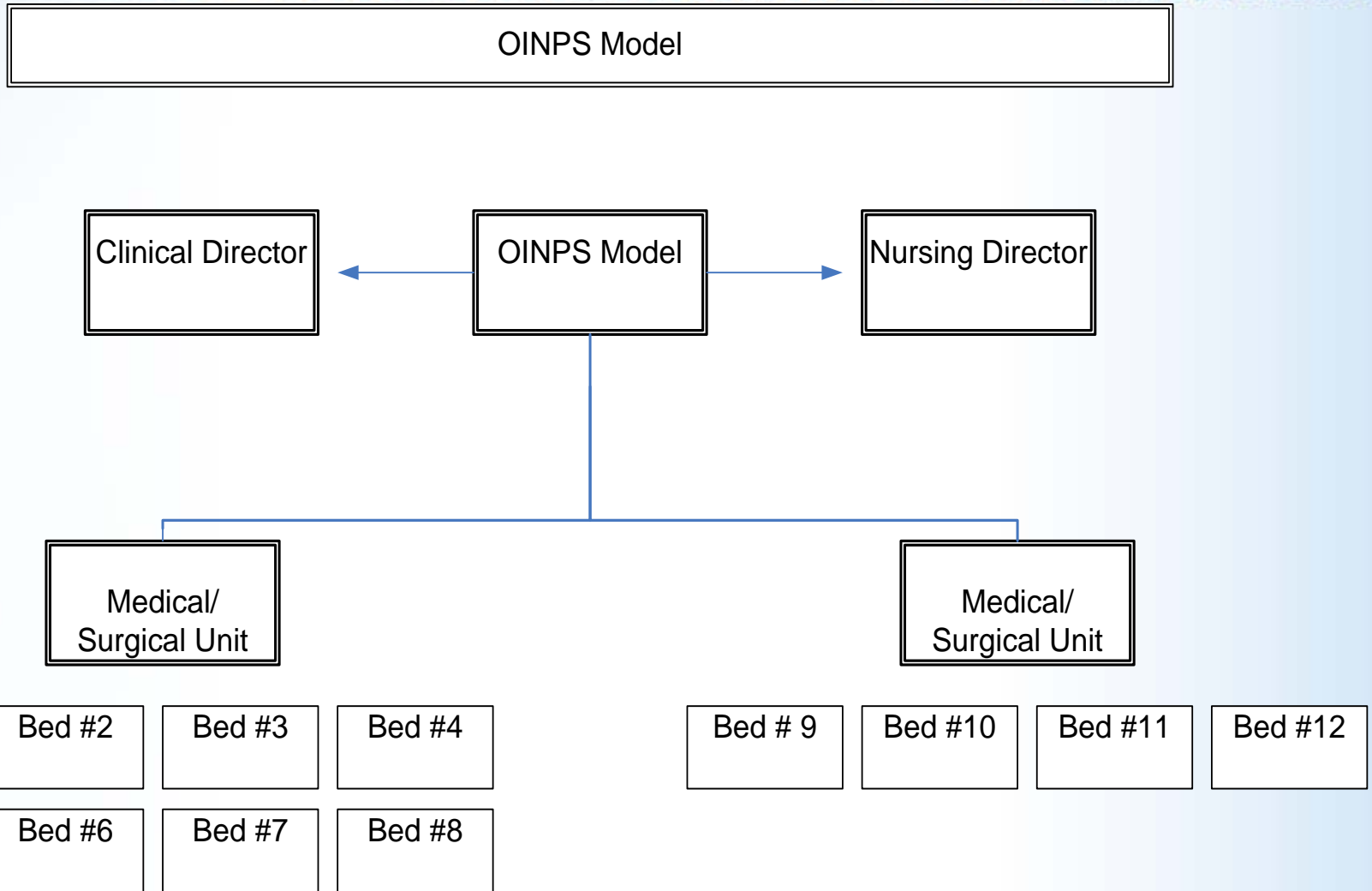


Figure 2. OINPS Model

Oncology Inpatient NP Service

Patient Population

- Solid tumor, lymphoma and sarcoma patients
- Admitted for acute care symptoms or medical management related to disease progression, treatment or end of life.
- Required to have a stable cardiopulmonary status.
- Admitted from outpatient practices, oncology infusion unit, emergency department, home or outside hospital

Oncology Inpatient NP Service

June 2010

- 14 medical oncology beds (2 units)
- 12 hour shifts, 24/7 service
- 9.5 FTE's approved
- Staffing: 7a-7p two NPs
 - 7p-7a one NP
 - 3p-3a one NP

Oncology Inpatient NP Service

Worked closely with HR Recruiter

- Master's degree in nursing
- NP certification, preparation in either adult, family or acute care educational track
- Oncology experience preferred
- Acute care inpatient experience required
- ACLS required

Oncology Inpatient NP Service

Characteristics of NP Candidates

- Motivated
- Self-directed, ability to grow and develop their role
- Flexible
- Ambitious
- Leadership skills
- Resilient, ability to adapt to change
- Collaborative team player

Oncology Inpatient NP Service

- By April 2010, 9.5 full-time and part-time NPs were hired
 - 39 hr work week
 - 36 hr work week
 - 24 hr work week
- Diverse NP and nursing experience:
 - Oncology, acute care medicine, emergency, neuro ICU, primary care
 - Experienced NPs
 - Novice NP with solid nursing experience

Oncology Inpatient NP Service Orientation

10-12 week orientation

- Developed in collaboration with Clinical Director and Oncology Nursing Director of NP service
- Orientation started before service “went live”
 - NP Credentialing
 - Shadow experiences with Oncology Attendings, NPs and resident teams
 - Operations of inpatient processes
 - Educational Curriculum
 - Simulation Lab
 - Education of new service to Cancer Center Clinicians, DOM, Admitting, ED, other services.

Oncology Inpatient NP Service Orientation

Organizational and Operational Processes

- Admissions/Discharges
- Clinical Assessments
- Multidisciplinary Rounds
- Daily plan of care
- Daily documentation
- Order writing
- Consults
- Billing procedures

Oncology Inpatient NP Service Orientation

Development and recognition of
inpatient NP Role

- Important new member of the team
- Integrated into the unit and staff
- Collaborates with Multidisciplinary team:
MD Attendings, Nurses, Case Managers,
- Social worker and other disciplines

Oncology Inpatient NP Service Orientation

Educational Curriculum, weekly classes

- Infectious disease
- Renal disease
- Oncologic emergencies
- Chemotherapy overview
- Pulmonary diagnoses
- Cardiac diagnoses

Oncology Inpatient NP Service

Ongoing Education

- Clinical Director meets with NP team twice a week to review patients or discuss specific topics
- Daily Multidisciplinary Rounds provides education
- Simulations every 4-6 months
- NP educational programs offered monthly

Oncology Inpatient NP Service

Summary

- June 2010, continues to evolve
- Initially 14 NP Beds, expanded to 28 Beds September 2011
- 2 oncology units: Medical Oncology and BMT/Leukemia
- Currently 15.5 FTEs
- 4 NPs 7a-7p, 1 NP 11a-11p

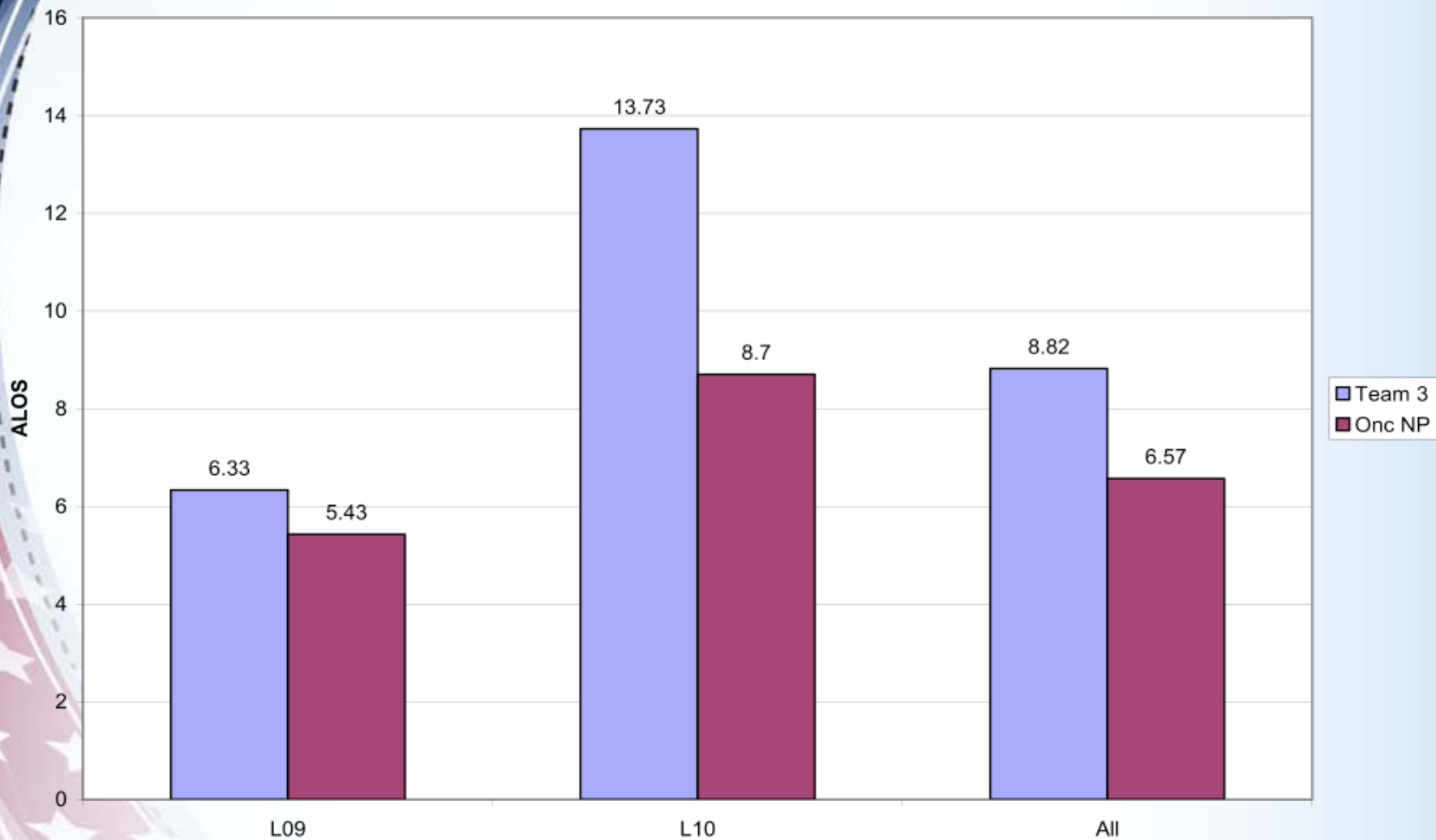
Oncology NP Data Collection

Comparison to Resident Team 3

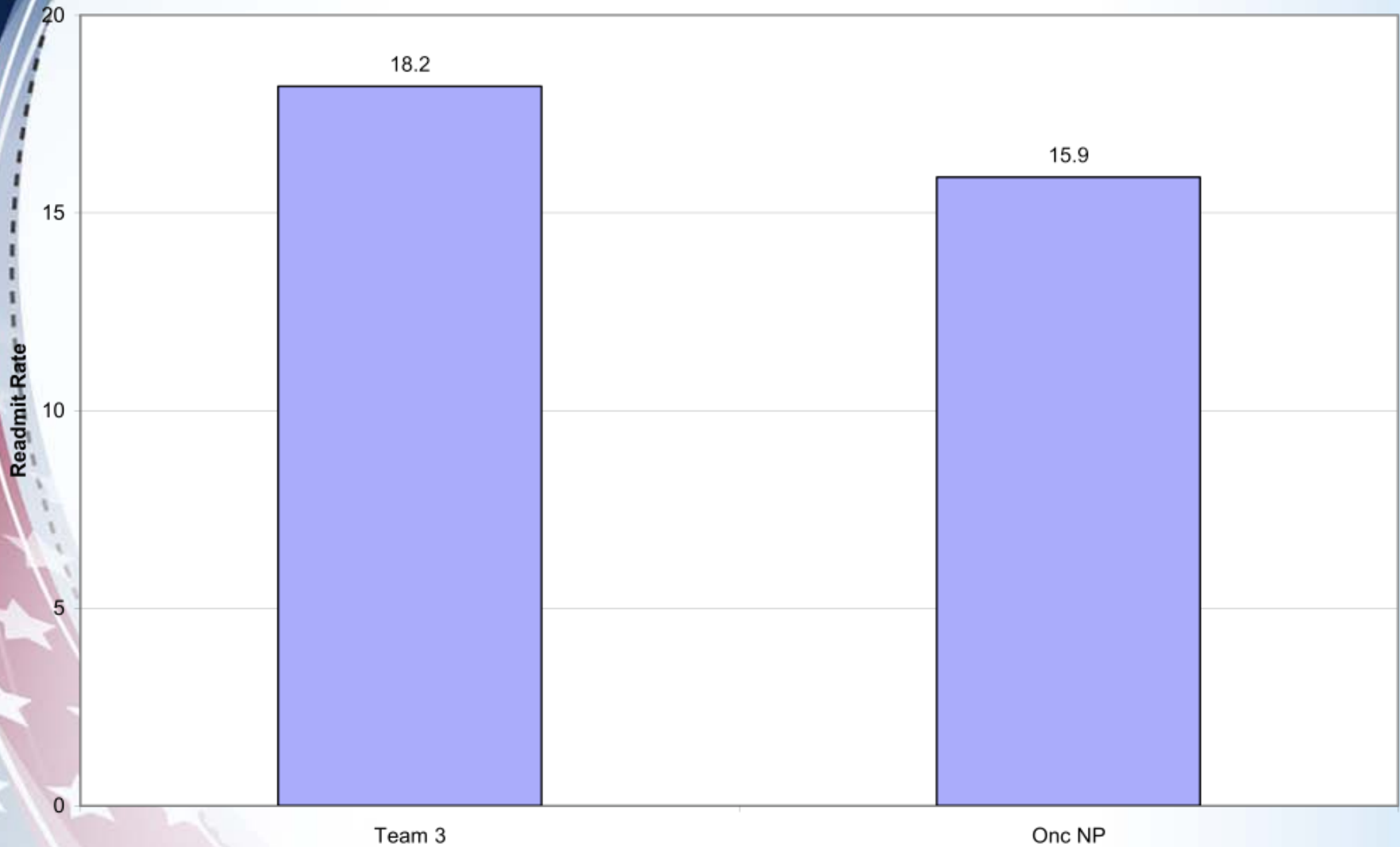
- LOS
- Readmission Rate



ALOS for Oncology NP Team Compared to Housestaff Team by Oncology Unit



30 Day Readmit Rate, Oncology NP Team Compared to Housestaff Team



Nurse Practitioner Survey

- Informal Survey of AHS and Oncology Nurse Practitioners
- n=16 NPs
- Demographics
 - 9.41 Years as a RN
 - 5.22 Years as a NP
 - 1.82 Years in current role

Nurse Practitioner Survey

How satisfied are you with the NP model in which you work?

Overall satisfaction was excellent (n=16)

- 0% very dissatisfied or dissatisfied
- 6% (1) somewhat dissatisfied
- 19% (3) somewhat satisfied
- 63% (10) satisfied
- 13% (2) very satisfied

Nurse Practitioner Survey

What are your favorite aspects of your role?

- The patients
- Autonomy
- Part of a strong team
- Continuity of care
- Critical thinking and decision making

Nurse Practitioner Survey

Favorite Aspects of the role

- “Always connecting with patients and families. This is the nursing part of nurse practitioner”
- “Love inpatient medicine, the autonomy and the varied clinical diagnoses we see”
- “Team atmosphere, direct patient interaction and care”
- “Constantly changing patients, medical conditions, working with other disciplines and learning how to care for new diagnoses”
- Collaboration between attendings & NPs – immediate coverage/backup if patient decompensate

Nurse Practitioner Survey

What are the least favorite aspects of your role?

- Change in expectations
- Night shifts
- Numerous admissions and discharges
- Assignment load
- Sporadic education

Nurse Practitioner Survey

Least Favorite Aspects of the role

- Limited coverage from other NPs for sickness and vacations due to the small size of our team
- Difficult to be part of hospital-wide committees due to our irregular schedule
- Challenge of caring for private patients only versus caring for both house and private patients

Nurse Practitioner Survey

Please rate your satisfaction with your relationships with staff nurses (rating scale - excellent to poor)

94% ACNPs rated relationships with staff nurses as good to excellent

Summary

- The opportunity to develop and implement 2 ACNP models of care helped create and shape the direction of innovative models of patient care
- These models were intended to
 - Improve patient satisfaction
 - Positively impact the patients LOS
 - Facilitate meeting ACGME requirements

Summary cont'd

- We are well aligned with the IOM report on the Future of Nursing
- Two areas that this report focuses on include:
 - How nurses can best contribute to healthcare delivery
 - Nurses should be full partners, with physicians and other health professionals

We feel that we are well on our way to reaching those goals



AONE

45TH ANNUAL MEETING & EXPOSITION

★ Boston, Massachusetts ■ March 21-24, 2012 ★

On the Precipice of Change The Courage to Lead

Questions & Comments
All Welcome!

References

- IOM (Institute of Medicine). (2011). The future of nursing: Leading change, advancing health. Washington, DC: The National Academies Press.
- Howie JN, Erickson M. Acute care nurse practitioners: Creating and implementing a model of care for an inpatient general medical service. *Am J Crit Care*. 2002;11(5):448-458.

References cont'd

- Brown A, Besunder J, Bachman M. Development of a pediatric intensive care unit nurse practitioner program. *J Nurs Admin.* 2008;38(7/8):355-359.
- Kleinpell R, Ely W, Grabenkort R. Nurse practitioners and physician assistants in the intensive care unit: an evidence-based review. *Crit Care Med.* 2008;36(10):2888-2897.