State of Maryland
Department of Health

Nelson J. Sabatini
Chairman

Joseph Antos, PhD
Vice-Chairman

Victoria W. Bayless

John M. Colmers

James N. Elliott, M.D.

Adam Kane

Jack C. Keane

Health Services Cost Review Commission
4160 Patterson Avenue, Baltimore, Maryland 21215
Phone: 410-764-2605 · Fax: 410-358-6217
Toll Free: 1-888-287-3229
hscrc.maryland.gov

Donna Kinzer
Executive Director

Katie Wunderlich, Director
Engagement and Alignment

Allan Pack, Director
Population Based
Methodologies

Chris Peterson, Director
Clinical & Financial
Information

Gerard J. Schmith, Director
Revenue & Regulation
Compliance

550th MEETING OF THE HEALTH SERVICES COST REVIEW COMMISSION
April 11, 2018

EXECUTIVE SESSION
11:30 a.m.

(The Commission will begin in public session at 11:30 a.m. for the purpose of, upon motion and approval, adjourning into closed session. The open session will resume at 1:00 p.m.)

1. **Discussion on Planning for Model Progression – Authority General Provisions Article, §3-103 and §3-104**

2. **Update on Contract and Modeling of the All-payer Model vis-a-vis the All-Payer Model Contract – Administration of Model Moving into Phase II - Authority General Provisions Article, §3-103 and §3-104**

3. **Discussion of Administrative Processes – Authority General Provisions Article, §3-103 and §3-104**

PUBLIC SESSION
1:00 p.m.

1. **Review of the Minutes from the Public Meeting and Executive Session on March 14, 2018**

2. **New Model Monitoring**

3. **Docket Status – Cases Closed**

   2422A – University of Maryland Medical Center
   2430A - Johns Hopkins Health System

4. **Docket Status – Cases Open**

   2429R - Garrett Regional Medical Center
   2431R – Johns Hopkins Bayview Medical Center
   2432R – University of Maryland Medical Center
   2333A – Johns Hopkins HealthCare
   2334R – University of Maryland Medical Center

5. **Policy Update Report and Discussion**

   a. **TCOC Model Update**

   b. **Stakeholder Innovation Group Update**

   c. **Rate Update Factor Discussion**

   d. **National Payment Trends Affecting Hospitals**

6. **Legislative Update**

7. **Legal Report**

8. **Hearing and Meeting Schedule**

Additional Reports for Review

1. **Disclosure of the Hospital Financial and Statistical Data for FY 2017**

2. **Report on Nurse Support Program I Activities for FY 2017**

New Model Monitoring Report

The Report will be distributed during the Commission Meeting

Cases Closed

The closed cases from last month are listed in the agenda

H.S.C.R.C's CURRENT LEGAL DOCKET STATUS (OPEN)

AS OF MARCH 26, 2018

A: PENDING LEGAL ACTION : NONE
B: AWAITING FURTHER COMMISSION ACTION: NONE
C: CURRENT CASES:

Docket Number	Hospital Name	Date Docketed	Decision Required by:	Rate Order Must be Issued by:	Purpose	Analyst's Initials	File Status
2429R	Garrett Regional Medical Center	2/1/2018	7/3/2018	7/3/2018	Full Rate	GS	OPEN
2431R	Johns Hopkins Bayview Medical Center	3/2/2018	5/3/2018	7/30/2018	Partial	CK	OPEN
2432R	University of Maryland Medical Center	3/19/2018	4/18/2018	8/16/2018	Cancer Clinics	GS	OPEN
2433A	Johns Hopkins HealthCare	3/30//18	N/A	N/A	ARM	DNP	OPEN
2434R	University of Maryland Medical Center	4/3/2018	N/A	N/A	ARM	DNP	OPEN

PROCEEDINGS REQUIRING COMMISSION ACTION - NOT ON OPEN DOCKET

NONE

IN RE: THE PARTIAL RATE	*	BEFORE THE HEALTH SERVICES	
APPLICATION OF THE	*	COST REVIEW COMMISSION	
JOHNS HOPKINS BAYVIEW	*	DOCKET:	2018
MEDICAL CENTER	*	FOLIO:	2241
BALTIMORE, MARYLAND	*	PROCEEDING:	2431R

Staff Recommendation

April 11, 2018

I. **Introduction**

On March 2, 2018, Johns Hopkins Bayview Medical Center (the "Hospital"), a member of the Johns Hopkins Health System, submitted a partial rate application to the Commission pursuant to COMAR 10.37.10.03-1. The Hospital requests that its July 1, 2081 Medical Surgical Intensive Care (MIS) and Coronary Care (CCU) rates be combined effective July 1, 208, utilizing FY 2019 approved volumes and revenues.

II. **Staff Evaluation**

This rate quest is revenue neutral and will not result in any additional revenue for the Hospital as it only involves the combining of two revenue centers. The Hospital wishes to combine these two centers because he majority of the services provided relate to medical/surgical intensive care versus coronary care; the patients have similar staffing needs; and the nursing-to-patient staffing ratios for both patient populations are very similar. The Hospital's currently approved rates are as follows:

	Current Rate	Budgeted Volume	Approved Revenue
Medical Surgical Intensive Care	$,1755.02	10,094	$17,715,657
Coronary Care	$1,979.58	3,638	$7,201,329
Combined Rate	$1,814.52	13,732	$24,916.986

III. **Recommendation**

After reviewing the Hospital's application, the staff recommends as follows:

1. That the Hospital be allowed to consolidate its CCU rate into its MIS rate effective July 1, 2018;

2. That FY 2019 approved volume and revenue will be utilized to calculate the combined rate; and

3. That no change be made to the Hospital's Global Budget Revenue.

IN RE: THE APPLICATION FOR	*	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**	
DETERMINATION	*	**COMMISSION**	
JOHNS HOPKINS HEALTH	*	**DOCKET:**	**2018**
SYSTEM	*	**FOLIO:**	**2243**
BALTIMORE, MARYLAND	*	**PROCEEDING:**	**2433A**

Staff Recommendation

April 11, 2018

I. INTRODUCTION

On March 30, 2018, Johns Hopkins Health System ("System") filed a renewal application on behalf of its member hospitals, Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center, and Howard County General Hospital (the "Hospitals") requesting approval to continue to participate in a revised global price arrangement with Life Trac (a subsidiary of Allianz Insurance Company of North America) for solid organ and bone marrow transplants and cardiovascular services. The Hospitals request that the Commission approve the arrangement for one year beginning July 1, 2018.

II. OVERVIEW OF APPLICATION

The contract will continue to be held and administered by Johns Hopkins HealthCare, LLC ("JHHC"), which is a subsidiary of the System. JHHC will continue to manage all financial transactions related to the global price contract including payments to the System hospitals and to bear all risk relating to regulated services associated with the contract.

III. FEE DEVELOPMENT

The hospital portion of the global rates, which was originally developed by calculating mean historical charges for patients receiving the procedures for which global rates are to be paid, has been adjusted to reflect recent hospital rate increases. The remainder of the global rate is comprised of physician service costs. Additional per diem payments, calculated for cases that exceeded a specific length of stay outlier threshold, were similarly adjusted.

IV. IDENTIFICATION AND ASSESSMENT RISK

The Hospitals will continue to submit bills to JHHC for all contracted and covered services. JHHC is responsible for billing the payers, collecting payments, disbursing payments to the Hospitals at their full HSCRC approved rates, and reimbursing the physicians. The System

contends that the arrangement among JHHC, the Hospitals, and the physicians holds the Hospitals harmless from any shortfalls in payment from the global price contract. JHHC maintains that it has been active in similar types of fixed fee contracts for several years, and that JHHC is adequately capitalized to bear the risk of potential losses.

V. STAFF EVALUATION

The staff found that the experience under the arrangement has been favorable for the last year. Staff believes that the Hospitals can continue to achieve a favorable performance under the arrangement.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospitals' application for an alternative method of rate determination for solid organ and bone marrow transplant services for the period beginning July 1, 2018. The Hospitals must file a renewal application annually for continued participation.

Consistent with its policy paper regarding applications for alternative methods of rate determination, the staff recommends that this approval be contingent upon the execution of the standard Memorandum of Understanding ("MOU") with the Hospitals for the approved contract. This document would formalize the understanding between the Commission and the Hospitals, and would include provisions for such things as payments of HSCRC-approved rates, treatment of losses that may be attributed to the contract, quarterly and annual reporting, confidentiality of data submitted, penalties for noncompliance, project termination and/or alteration, on-going monitoring, and other issues specific to the proposed contract. The MOU will also stipulate that operating losses under the contract cannot be used to justify future requests for rate increases.

IN RE: THE APPLICATION FOR	*	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**	
DETERMINATION	*	**COMMISSION**	
UNIVERSITY OF MARYLAND	*	**DOCKET:**	**2018**
MEDICAL CENTER	*	**FOLIO:**	**2224**
BALTIMORE, MARYLAND	*	**PROCEEDING:**	**2434A**

Staff Recommendation

April 11, 2018

I. INTRODUCTION

University of Maryland Medical Center (the Hospital) filed an application with the HSCRC on April 3, 2018 for an alternative method of rate determination, pursuant to COMAR 10.37.10.06. The Hospital requests approval from the HSCRC to continue to participate in a global rate arrangement for heart, liver, kidney, lung, and pancreas transplants, SPK services, blood and bone marrow transplants and VAD services for a period of one year with Cigna Health Corporation beginning June 1, 2018.

II. OVERVIEW OF APPLICATION

The contract will continue be held and administered by University Physicians, Inc. ("UPI"), which is a subsidiary of the University of Maryland Medical System. UPI will manage all financial transactions related to the global price contract including payments to the Hospital and bear all risk relating to services associated with the contract.

III. FEE DEVELOPMENT

The hospital portion of the global rates was developed by calculating historical charges for patients receiving the procedures for which global rates are to be paid. The remainder of the global rate is comprised of physician service costs. Additional per diem payments were calculated for cases that exceed a specific length of stay outlier threshold.

IV. IDENTIFICATION AND ASSESSMENT OF RISK

The Hospital will continue submit bills to UPI for all contracted and covered services. UPI is responsible for billing the payer, collecting payments, disbursing payments to the Hospital at its full HSCRC approved rates, and reimbursing the physicians. The Hospital contends that the arrangement between UPI and the Hospital holds the Hospital harmless from any shortfalls in payment from the global price contract.

V. STAFF EVALUATION

The staff found that the Hospital’s experience under this arrangement for the previous year was favorable.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospital's application for an alternative method of rate determination for heart, liver, kidney, lung, and pancreas transplants, SPK services, blood and bone marrow transplants and VAD services, for a one year period commencing June 1, 2018. The Hospital will need to file a renewal application to be considered for continued participation.

Consistent with its policy paper regarding applications for alternative methods of rate determination, the staff recommends that this approval be contingent upon the execution of the standard Memorandum of Understanding ("MOU") with the Hospital for the approved contract. This document would formalize the understanding between the Commission and the Hospital, and would include provisions for such things as payments of HSCRC-approved rates, treatment of losses that may be attributed to the contract, quarterly and annual reporting, confidentiality of data submitted, penalties for noncompliance, project termination and/or alteration, on-going monitoring, and other issues specific to the proposed contract. The MOU will also stipulate that operating losses under the contract cannot be used to justify future requests for rate increases.

Policy Update Report and Discussion

Staff will present materials at the Commission Meeting.

Legislative Update

The Legislative Update will be presented at the Commission Meeting

Title 10 MARYLAND DEPARTMENT OF HEALTH

Subtitle 37 HEALTH SERVICES COST REVIEW COMMISSION

Chapter 01 Uniform Accounting and Reporting System for Hospitals and Related Institutions

Authority: Health-General Article, §§ 19-207, 19-211, 19-212, 19-215 – 19-217, 19-218, 19-220, 19-224, and 19-303, Annotated Code of Maryland

NOTICE OF PROPOSED ACTION

The Health Services Cost Review Commission proposes to amend Regulation .02 under COMAR 10.37.01 Uniform Accounting and Reporting System for Hospitals and Related Institutions. This action was considered and approved for promulgation by the Commission at a previously announced open meeting held on April 11, 2018, notice of which was given pursuant to General Provisions Article, § 3-302(c), Annotated Code of Maryland. If adopted, the proposed amendments will become effective on or about July 12, 2018.

Statement of Purpose

The purpose of this action is to update the Commission's manual entitled "Accounting and Budget Manual for Fiscal and Operating Management" (August, 1987), which has been incorporated by reference.

Comparison of Federal Standards

There is no corresponding federal standard to this proposed action.

Estimate of Economic Impact

The proposed action has an economic impact.

Opportunity for Public Comment

Comments may be sent to Diana M. Kemp, Regulations Coordinator, Health Services Cost Review Commission, 4160 Patterson Avenue, Baltimore, Maryland 21215, or (410) 764-2576, or fax to (410) 358-6217, or email to diana.kemp@maryland.gov. The Health Services Cost Review Commission will consider comments on the proposed amendments until May 29, 2018. A hearing may be held at the discretion of the Commission.

.02 Accounting System; Hospitals.

A. The Accounting System.

(1)-(2) (text unchanged)
(a)-(u) (text unchanged
(v) Supplement 22 (March 3, 2014); [and]
(w) Supplement 23 (July 28, 2015)[.]*; and*

(x) Supplement 24 (April 12, 2018).

(3)-(5) (text unchanged)

B. D. (text unchanged)

NELSON SABATINI
Chairman
Health Services Cost Review Commission

State of Maryland
Department of Health

Nelson J. Sabatini
Chairman

Joseph Antos, PhD
Vice-Chairman

Victoria W. Bayless

John M. Colmers

Adam Kane

Jack C. Keane

James N. Elliott, M.D.

Health Services Cost Review Commission
4160 Patterson Avenue, Baltimore, Maryland 21215
Phone: 410-764-2605 · Fax: 410-358-6217
Toll Free: 1-888-287-3229
hscrc.maryland.gov

Donna Kinzer
Executive Director

Katie Wunderlich, Director
Engagement and Alignment

Allan Pack, Director
Population Based
Methodologies

Chris Peterson, Director
Clinical & Financial
Information

Gerard J. Schmith, Director
Revenue & Regulation
Compliance

TO: Commissioners

FROM: HSCRC Staff

DATE: April 11, 2018

RE: Hearing and Meeting Schedule

May 9, 2018 — To be determined - 4160 Patterson Avenue
HSCRC/MHCC Conference Room

June 13, 2018 — To be determined - 4160 Patterson Avenue
HSCRC/MHCC Conference Room

Please note that Commissioner's binders will be available in the Commission's office at 11:15 a.m.

The Agenda for the Executive and Public Sessions will be available for your review on the Thursday before the Commission meeting on the Commission's website at http://hscrc.maryland.gov/Pages/commission-meetings.aspx.

Post-meeting documents will be available on the Commission's website following the Commission meeting.

Nurse Support Program I (NSP I)
Outcomes Evaluation FY 2013-2017 Update

April 11, 2018

Health Services Cost Review Commission

4160 Patterson Avenue
Baltimore, Maryland 21215
(410) 764-2605
FAX: (410) 358-6217

This is an update report for the Commission's information. No action is required.

LIST OF ABBREVIATIONS

AD	Associates Degree in Nursing
BSN	Baccalaureate Degree in Nursing
EBP	Evidence-Based Practice
FTE	Fulltime Equivalent Employee
FY	Fiscal Year
GBR	Global Budget Revenue
HSCRC	Health Services Cost Review Commission
HRSA	Health Resources and Services Administration
IOM	Institute of Medicine
LPN	Licensed Practical Nurse
MS/MSN	Master’s Degree/Master’s in Nursing Degree
NESP	Nurse Education Support Program
NRP	Nurse Residency Program
NSP I	Nurse Support Program I
QI	Quality Improvement
RN	Registered Nurse

EXECUTIVE SUMMARY

Nurse Support Program I (NSP I) Outcomes Evaluation FY 2013-2017

Highlights

- Hospitals continued to invest extensively in nurse residency and orientation programs in FY 2017.
- For the last three consecutive fiscal years, retention rates for hospitals offering nurse residency programs (NRPs) for newly licensed registered nurses (NLRN) have held around 92 percent compared to retention rates for hospitals not offering NRPs retention rates which have remained, on average, at 85 percent.
- Hospitals offering one-year NRPs preferred hiring BSN nurses whereas hospitals not offering NRPs were more likely to hire associates degree nurses.
- Unlike prior FYs, hospitals did not fund nurse refresher classes in FY2017.
- In FY 2017, turnover rates for hard-to-fill RN positions were higher for experienced RNs when compared with NLRNs, however, the overall turnover rate remained consistent with previous years.
- Between FYs 2013 to 2017, more than 3,000 RNs received financial assistance towards advanced nursing degree programs. Of those nurses, approximately 685 graduated from these programs.
- Between FYs 2013 to 2017, hospitals added 381 new RNs to the workforce.
- There was a nine (9) percentage point growth (more than 400) in the number of certified RNs in Maryland for FY 2017.
- Hospitals continued to invest in continuing education in FY 2017. Of interest, educational offerings focused on building leaders and teams as opposed to previous years where the focus was on quality and patient safety. .
- In FY 2017, 17 hospitals were pursuing either Magnet® or Pathway to Excellence® designation, up from 13 hospitals in FY 2014.
- More than 200 Evidenced-based Practice and Quality Improvement projects and approximately 12 research studies were funded by NSP in FY 2017.
- In FY 2017, vacancy rates rose two percentage points. Correspondingly, hospitals used an additional 150 agency RN FTEs equating to $30,000,000 compared to the previous year.

Summary

Hospitals continue to successfully retain newly licensed nurses through residency and orientation programs in FY 2017. Additionally, retention of newly hired RNs has remained constant at 86 percent for three consecutive years. However, experienced RNs participating in hard-to-fill orientation programs are more likely to leave their position and overall hospital vacancy rates rose in FY 2017, adversely affecting agency costs. These data may suggest an exodus of experienced nurses occurring at hospitals.

Interestingly, hospitals are putting new emphasis on leadership, team building, and healthy work environment, unlike prior years where the focus was on quality and patient safety programs. Programs like these may foster professional advancement, create safe work environments, and enhance retention of the experienced RNs. Additionally, strong emphasis should continue to be placed on advancing nursing education, certification, and programs designed to promote nursing excellence.

Programs Supported Through the NSP I

More than $85 million of NSP I funds were invested in RNs at participating hospitals between FYs 2013 and 2017. A comparison of actual project, administrative, and total expenditures for the five years revealed that administrative expenses increased from 50 percent of total expenses in FYs 2013 and 2014; to 57 percent in FYs 2015 and 2016; to a high of 62 percent by FY 2017.

During the five years, hospitals spent the highest percentage of funds on programs supporting Education and Career Advancement (Figure 1). An analysis of spending by individual programs found more than 40 percent of NSP I funds were invested in nurse residency and orientation programs (Figure 2). With the advent of the Global Budget Revenue (GBR) payment methodology, funding by hospitals for quality improvement, evidence-based practice, and research programs substantially increased from five (5) percent of total expended dollars in the previous years to more than 13 percent in FYs 2015 and 2016, then declined in FY 2017 to three (3) percent. Additionally, the amounts allocated to nursing excellence programs also declined in FY 2017. However, funding for continuing education for nurses substantially increased to 18 percent in FY 2017. Although the percentage of total funds for tuition assistance declined in FYs 2015 and 2016, amounts had increased again by FY 2017. Furthermore, the amount of tuition assistance supporting nursing students doubled from less than $500,000 in FY 2015, to almost one million in FY 2016, then stabilized at approximately $800,000 in FY 2017. The increased interest by hospitals for nursing students may suggest concerns about older RNs leaving the workforce and potential of RN nursing workforce shortage in Maryland.

In FYs 2013 and 2014, staff found an unexplained variance of 30 percent when comparing reported program expenditures (i.e., the sum of individual program expenses) with the reported total expenditures. NSP I coordinators attributed the variance to misunderstanding the question, lack of knowledge of NSP I expenditures, inadquate assistance from financial officers, and excluding funds for programs that appeared not to fit into one of the listed categories.

To improve reporting of program expenses in FY 2015, an explaination of funding for the "Other" category was required. Additionally, extensive education was provided to NSP I

coordinators to improve the reporting of end-of-the-year expenses. Although expense reporting substantially improved and no unexplained variances were found, the amount of expenses reported in the "Other" category was still concerning. In FY 2017, more than 20 hospitals cited the use of funds for programs outside the recommended categories, accounting for more than 11 percent of NSP I expenditures. HSCRC staff will continue to work with hosptials to further reduce the percent of expenditures in the "Other" category for the next reporting period.

Figure 1: Percent of NSP I Funds Invested in Future of Nursing Program Aims, FYs 2013 - 2017

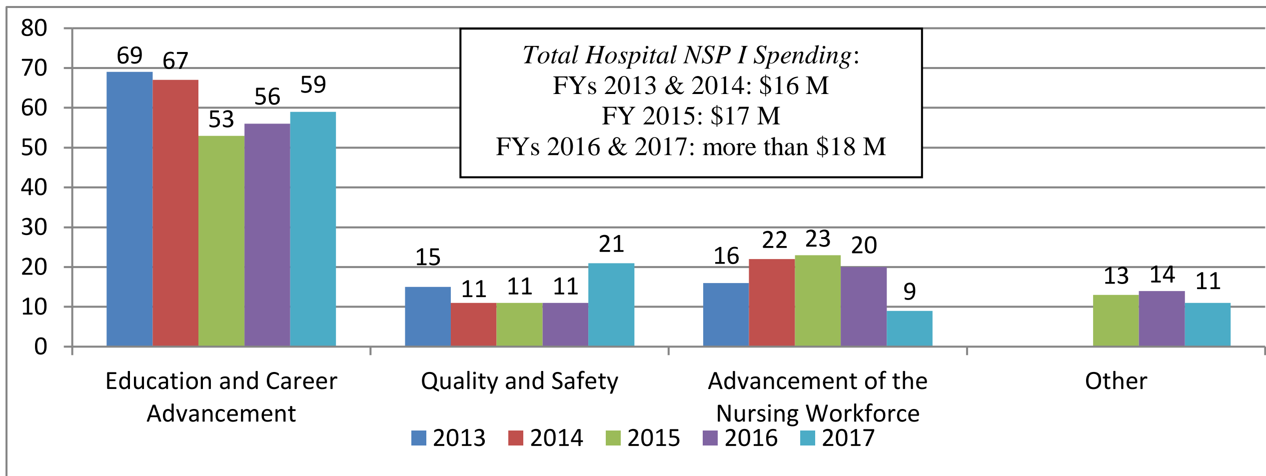
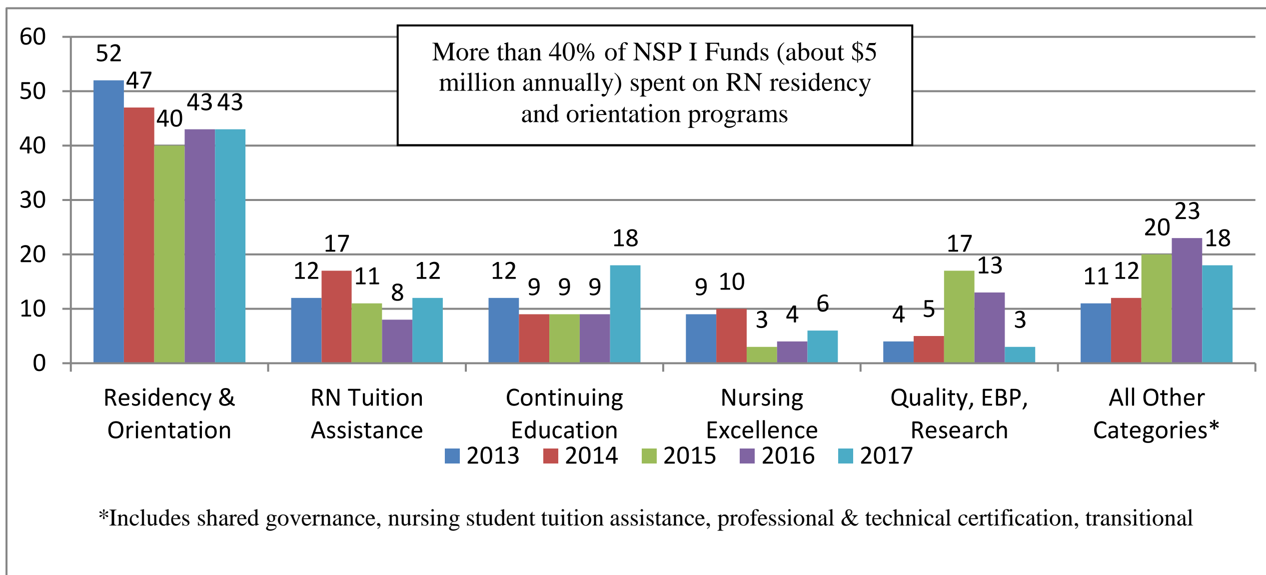


Figure 2: Percent of Total Expenditures for NSP I Top Funding Categories, FYs 2013 - 2017



Increasing Bedside Nurses through RN Transition into Practice Programs

The concept of nurse residency programs emerged in an effort to prevent newly licensed RNs from leaving their employer or the profession entirely. Nurse residency programs for newly

licensed RNs improve their organization, management, communication, and clinical skills. Additionally, NRPs improve nurse retention and reduce hospital costs associated with attrition[1]. Unlike other professions in medicine, transition programs (referred to as residencies) have not been mandated by the nursing profession to integrate new graduates into the workplace. Maryland is recognized nationally as a leader in the nurse residency program; having one of the only statewide collaborative models with 24 participating hospitals and financial support through the NSP I.

Approximately half of the responding hospitals invested NSP I funds into nurse residency programs (NRP) over the five years. Through NSP, hospitals were able to fund program coordinators and instructors; nurse residents' or other staff salaries that facilitate resident attendance; and program expenses such as educational materials. More than 7,600 newly licensed RNs participated in nurse residency programs supported by NSP I between FYs 2013-2015. Voluntary turnover rates for hospitals offering a NRP were between six (6) and ten (10) percentage points lower than hospitals not offering NRPs (Figure 3). Cost savings due to decreased attrition (cost to recruit and retain a replacement RN) is estimated at $88,000 per RN[2]. Thus, the cost savings at NRP hospitals for approximately 200 fewer nurses leaving the workforce equates to an annual statewide cost saving of $17.6 million by hospitals investing in residency programs. This program alone demonstrates the far-reaching impact NSP I has had on bedside hospital nurse retention.

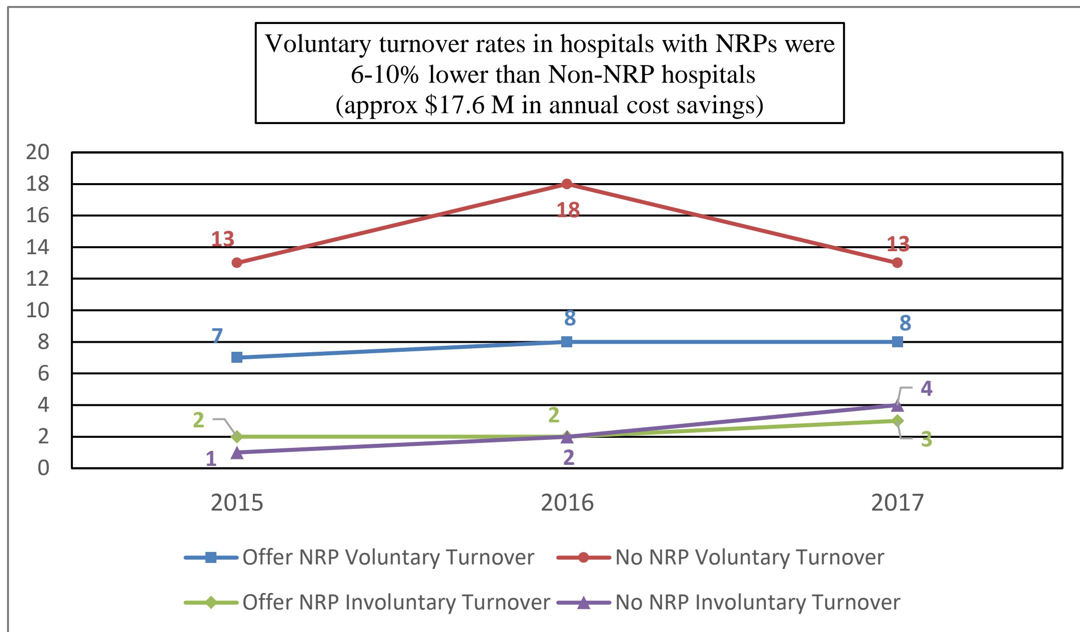
When comparing hospital hiring practices for baccalaureate-prepared (BSN) and associates degree (AD) RNs, it was found that hospitals offering one-year nurse residency programs preferred hiring BSN nurses. In fact, BSNs were almost twice as likely to be hired compared to their AD counterparts, whereas, hospitals with no residency program are more likely to hire AD RNs. The hospitals offering no residency program are also more likely to be smaller and more rural.

---

[1] National Academies of Sciences, Engineering and Medicine. *Assessing Progress on the Institute of Medicine Report The Future of Nursing*. Washington, DC: The National Academies Press; 2015. http://www.nationalacademies.org/hmd/Reports/2015/Assessing-Progress-on-the-IOM-Report-The-Future-of-Nursing.aspx. Accessed May 26, 2017.

[2] Jones, C. B. Revisiting Nurse Turnover Costs: Adjusting For Inflation. *JONA*. 2008; 38(1): 11-18.

Figure 3: Comparison of Hospital Turnover Rates for 1-Year Nurse Residency vs No Nurse Residency Program, FY 2015 - 2017



Decreasing Turnover Rates for Hard-to-Fill Critical Need Positions

Nationally, nurse leaders are struggling with transitioning newly licensed RNs and experienced RNs to hard-to-fill specialty clinical roles and critical leadership roles. Areas of greatest need for RNs in Maryland are the emergency department, adult critical care/intermediate care, perioperative, women and infant health, and medical-surgical specialties. Maryland hospital workforce data, collected from hospital Chief Nursing Officers, also identified nurse manager, director, and nursing professional development practitioner (hospital-based nurse educator) as difficult roles to fill[3]. Furthermore, respondents cited a continued need for experienced clinical bedside nurses.

Over the five years, about half of the hospitals reported using NSP I funds to support the implementation of orientation programs for hard-to-fill positions. But unlike nurse residency programs, poorly reported outcome metrics associated with the orientation programs make it difficult to examine the impact of these funds. As discussed in the HSCRC NSP I interim outcome evaluation report[4] that was presented to the Commission in February 2017, turnover rates for nurses participating in orientation programs increased 25 percentage points between FYs 2013 and 2014. Further analysis and discussions with NSP I coordinators indicated that the

---

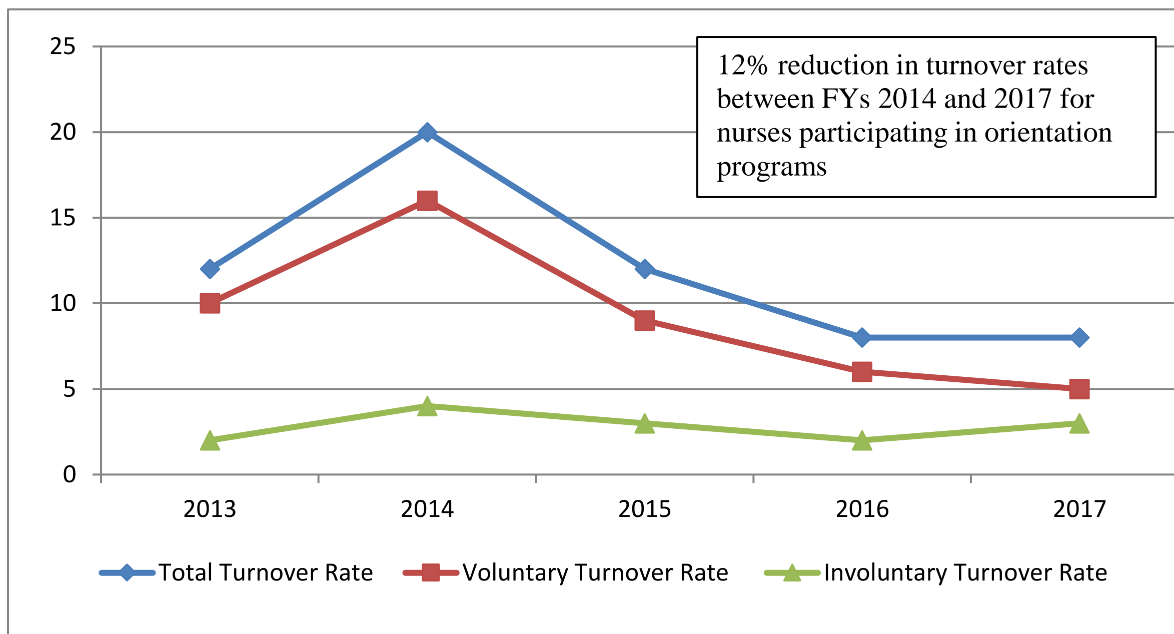
[3] Daw, P. & Warren, J. I. *Transforming the Future Nursing Workforce: Innovative Statewide Opportunities.* Podium presentation at the Maryland Nurses Association 113th Annual Convention "Every Nurse A Leader" Conference Center At The Maritime Institute Linthicum Heights, MD October 13-14, 2016

[4] Health Services Cost Review Commission. *Nurse Support Program I Outcomes Evaluation FY 2013-2014 and Recommendations for the Future, February 8 2017*; http://www.Hscrc.State.Md.Us/Documents/Commission-Meeting/2017/02/HSCRC-Public-CM-Pre-Meeting-Packet-2017-02-02.Pdf. 2017. Web. Apr. 30 2017.

turnover data may have been overstated. For this final analysis, inaccurate data were removed and the turnover rates declined from a high of 20 percent in FY 2014 to 8 percent in FYs 2016 and 2017 (Figure 4).

Of interest in FY 2017, NLRN voluntary and involuntary turnover rates (five and two percent, respectively) were less than the voluntary and involuntary turnover rates (nine and four percent, respectively) for experienced RNs. Despite issues with the data, this downward trend suggests orientation programs are positively impacting hard-to-fill RN turnover rates.

Figure 4: Turnover Rates for NSP I-Supported Orientation Programs, FYs 2013 - 2017



Preparing a Highly Educated RN Workforce

It can become imperative for RNs to achieve higher levels of education due to demands for new and expanded RN roles to provide care across the health care continuum, as well as, shortages of RNs as primary care providers, faculty, and researchers. Strong research evidence has linked lower mortality rates, fewer medication errors, and positive outcomes to nurses prepared at the baccalaureate and graduate degree levels[5]. Quality patient care hinges on a well-educated, highly functioning, motivated nursing workforce. The IOM Future of Nursing report called for 80 percent of RNs to hold a BSN degree by 2020 and a doubling of doctoral-prepared RNs.[6]

Through NSP I, the pool of BSN, master's degree and doctoral RNs in Maryland hospitals has substantially increased over the past 10 years of reporting. Between FYs 2007 and 2012, about

---

[5] American Association of Colleges of Nurses. *Creating a More Highly Qualified Nursing Workforce.* http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-workforce. 26 May 2017.
[6] IOM (Institute of Medicine). *Future Directions of Credentialing Research in Nursing: Workshop Summary.* Washington, DC: The National Academies Press, 2015.

25 hospitals invested $8.5 million in tuition assistance supporting approximately 800 RNs. Similarly, between FYs 2013 and 2017, 17 to 22 hospitals invested almost $9 million in tuition assistance; allowing approximately 3,000 RNs to obtain financial assistance towards advanced nursing degrees. Of those nurses receiving assistance in the last five years, approximately 685 graduated from nursing programs (73 percent with BSNs and 24 percent with MS/MSNs). Additionally, six RNs graduated with doctoral degrees in nursing. Furthermore, the student attrition rate has remained between two (2) and four (4) percent during this period.

These successes may be partially attributed to the synergistic effects of the NSP I and II programs. NSP II grants have funded programs for RNs to easily transition into BSN, MS/MSN, and doctoral programs. For example, NSP II programs that are helping to facilitate this movement are the newly-funded Associate-to-Bachelor's nursing programs that facilitate duel enrollment in an AD nursing program at a community college and the BSN degree at a partner nursing school. Another NSP II program uses shared resources among hospital and schools of nursing to increase the pool of nurse clinical instructors, while advancing the numbers of masters-prepared RNs in the hospitals. Since its initial funding in FY 2006, the NSP II program has grown from two to 19 participating hospitals in FY 2017.

Increasing the Nursing Pipeline

Between FYs 2013 and 2017, financial support for nursing students by hospitals increased almost fivefold and added 381 new RNs to the workforce. Anecdotally, hospitals reported using NSP I funds beyond the traditional tuition assistance. Hospitals paid wages for student time while attending classes; stipends for incidentals such as textbooks and fees; and supported hospital-based externship and internship programs. More than half of the approximately 652 nursing students funded through NSP I graduated from their basic licensure programs. Of those graduating, approximately 68 completed associate degree programs, 257 completed baccalaureate degree programs and 51 completed generic master's degree programs[7]. Student nurse attrition rates also fell by six (6) percentage points, from seven (7) percent to less than one (1) percent over the five years.

Hiring practices for newly graduated nurses whose education was funded by NSP I funds have increased from 85 percent in FY 2013 to 100 percent by FY 2017. This suggests that hospitals are hiring more new graduates to fill positions being vacated by older counterparts as they start to exit the workforce with the improving economy.

Advancing Lifelong Learning through RN Certification and Continuing Education

As described in the previous 5-year renewal report to the Commission in July 2017, Maryland hospitals continue to encourage RNs to obtain specialty and technical certification and participate in continuing education classes. Certified nurses can positively impact their workplace, peers, and patients[8]. Hospitals employing certified wound care nurses were found to

---

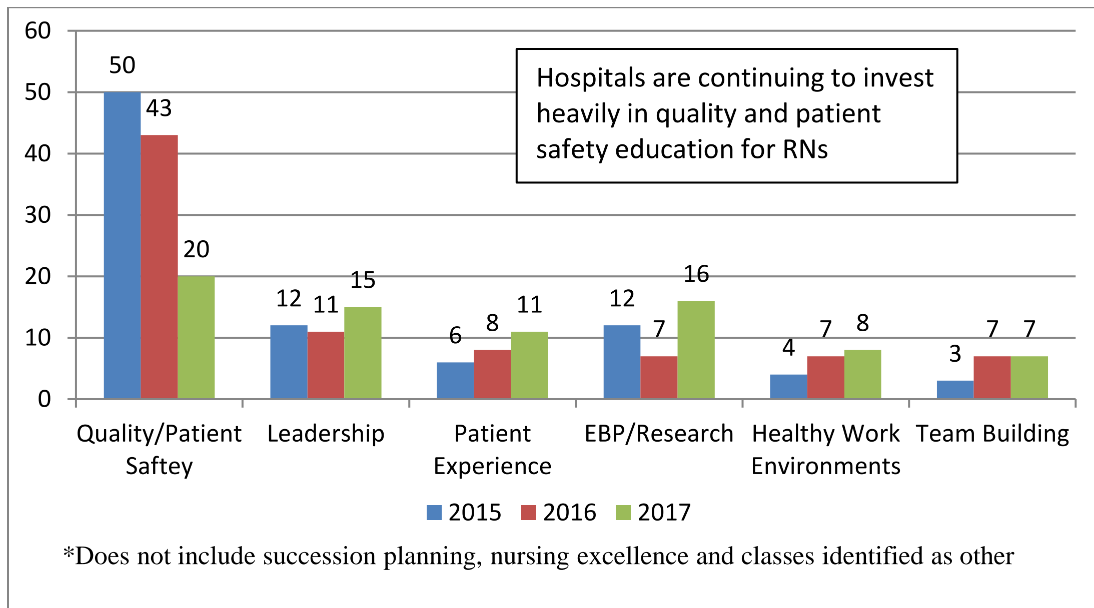
[7] Data by degree type was not reported for all new nursing graduates by hospitals
[8] IOM (Institute of Medicine). *Future Directions Of Credentialing Research In Nursing: Workshop Summary*. Washington, DC: The National Academies Press, 2015.

have better RN pressure ulcer assessment and prevention practices and lower rates of pressure ulcers[9]. Approximately 2,800 RNs completed technical and professional certifications between FYs 2007 and 2012. In the last five years, more than 4,200 RNs obtained initial technical or recertification. Overall, hospitals reported increases upwards of 19 percentage points in the number of professional specialty and/or technical certified nurses between FYs 2013 and 2017.

An examination of the number of nurses obtaining professional certification shows a consistent increase in FYs 2015, 2016, and 2017 by nine (9) percentage points. More than 400 RNs obtained professional nursing specialty certification or recertification in FY 2017, alone. RNs obtained professional certification in multiple specialty nursing areas; ranging from medical-surgical to women's health, wound care, and nurse executive certifications.

Another method to foster lifelong learning is providing ongoing continuing education. Almost half of the hospitals over the course of the five years reported the use of NSP I to support continuing education programs for RNs. More than 16,000 RNs attended educational programs focused on topics associated with goals of the quadruple aim (better quality, better health, lower cost, and healthier workforce). Quality and patient safety classes comprised more than 40 percent of the educational offerings in FYs 2015 and 2016. In FY 2017, offerings for education to build leaders and teams began to emerge. (Figure 5).

Figure 5: Number of Classes for NSP I Top Internal & External Continuing Education Categories, FYs 2015 - 2017



*Does not include succession planning, nursing excellence and classes identified as other

---

[9] Boyle, D. K., Bergquist-Beringer, S. & Cramer, E. Relationship of Wound, Ostomy, and Continence Certified Nurses and Healthcare-Acquired Conditions in Acute Care Hospitals. *J Wound Ostomy Continence Nurs.* 2017; 44(3):283-292. DOI: 10.1097/WON.0000000000000327

Advancing the Practice of Nursing

Between FYs 2012 and 2017, eight (8) hospitals in Maryland have successfully achieved Magnet® and one has achieved Pathway to Excellence® designation with funding from the NSP I program. Of those hospitals, six were re-designated as Magnet® hospitals between FYs 2013 and 2014 and one in FY 2016. Seventeen hospitals are pursuing either Magnet® or Pathway to Excellence® designation in FY 2017, up from 13 in FY 2014. Magnet designated hospitals with the initial and re-designation dates are listed below.

- Anne Arundel Medical Center (2014)
- Mercy Medical Center (2011, 2016)
- Sinai Hospital of Baltimore (2008; 2013)
- MedStar Franklin Square Medical Center (2008; 2013)
- Johns Hopkins Hospital (2003; 2008; 2013)
- University of Maryland Medical Center (2009; 2014)
- UM Shore Medical Center at Easton (2009; 2014)
- UM Shore Medical Center at Dorchester (2009; 2014)

Pathway to Excellence

- Union Hospital of Cecil County (2016)

Advancing Nursing Science

The NSP I supports research studies, evidence-based practice (EBP), or quality improvement (QI) projects to build the science of nursing and improve patient care outcomes. The numbers of hospitals involved in QI, EBP, or research studies grew from five (5) in FY 2013 to ten (10) in FY 2017 and the expended funds increased almost seven-fold. More than 200 EBP and QI projects and approximately 12 research studies were funded by NSP in FY 2017. Much of the funding supported nurse residents and RN teams in conducting QI/EBP projects.

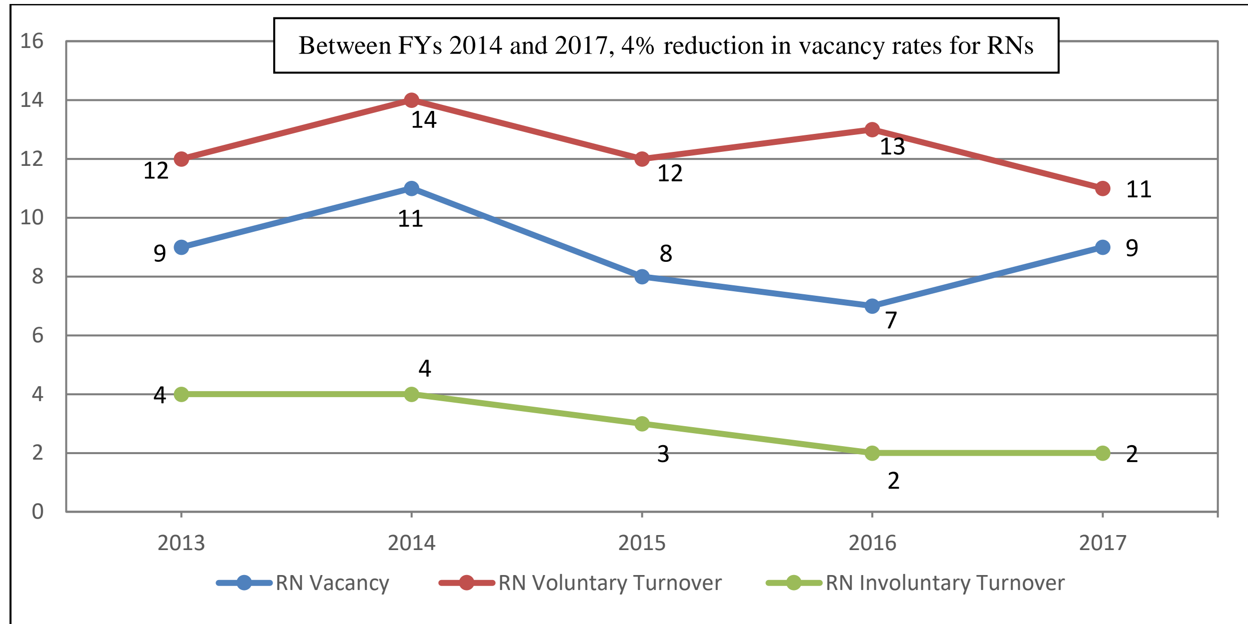
Improving Hospital Vacancy & Turnover Rates While Reducing RN Agency Costs

Although vacancy rates decreased by four (4) percentage points between FY 2014 and FY 2016, a slight upturn occurred in FY 2017. Voluntary retention rates also rose in FY 2017 by two (2) percentage points (Figure 6). New hire RN retention rates have remained steady at approximately 86 percent since FY 2015.

The overall hospital vacancy rate decreased by four (4) percentage points between FYs 2014 and 2016, then increased by two (2) percentage points in FY2017. Conversely, the hospital voluntary turnover rate declined by two (2) percentage points in FY 2017, indicating improved retention of RN staff by hospitals. Despite improved hospital retention of RNs, agency nurse usage increased by 17 percent between FYs 2016 and 2017 (from 854 to 1,001 FTEs), costing hospitals $138 million. The uptick in agency costs may be related to specific geographic locations experiencing RN workforce losses as evidenced by the higher vacancy rate. Hospitals continue to report

difficulty filling emergency, critical care, and perioperative care RN positions and hospitals pay premium dollars to agency services to fill these holes.

Figure 6: Overall Hospital RN Vacancy & Turnover Rates, FY 2013 - 2017



Update on Status of Recommendations for the NSP I for FY 2018 - 2022

The future growth of the national nursing workforce (RNs per capita) is projected to vary significantly; ranging from zero growth in New England to 40 percent growth in the West South and Central Region. Growth forecasts for the Mid-Atlantic Region suggest less than 10 percent growth in RN FTEs and only eight (8) percent growth in RN FTEs per capita. Unlike other fast growing regions in the nation with a projected surplus of nurses, Maryland is projected to be one of the slowest growth regions and projected to have workforce shortfall by 2030[10]. The HSCRC's investment in nursing practice and education is as timely and relevant today as it was decades ago. Transforming nursing in Maryland will, by virtue of the sheer numbers in hospitals, have far-reaching statewide effects on the quality and safety of the state's hospitals.

To ensure continuous program improvement, the following programmatic changes were recommended at the June 2017 Commission Meeting, and updates on the status of these recommendations are highlighted below.

[10] Aurbach, D. I., Buerhaus, P. I., & Staiger, D. O. How Fast will the Registered Nurse Workforce Grow Through 2030? Projections in Nine Regions of the Country. *Nursing Outlook,* 2017, 65 (1), 116-122. DOI: http://dx.doi.org/10.1016/j.outlook.2016.07.004

Recommendation 1: Broaden the NSP goal to include all <u>hospital-based</u> RNs.

As health care transitions from a focus on episodic, acute care to population health, new health care models and delivery systems are being introduced to provide high-quality, patient-centered care across the care continuum. Global and national trends are calling for nurse leaders to prepare staff for new and expanding roles that come with new competencies for nurses. Initiatives that expand and encourage partnerships between academic and hospital nurse leaders to prepare nurses for present and future roles and produce the nurse with the right skill sets to meet new care delivery models/workforce requirements in Maryland should continue to be promulgated by NSP I and II.

Update: The NSP goal was broadened to include all hospital-based RNs, and data collection for FY 2018 will include metrics that address programs to increase the number of nurse leaders and nurse educators.

Recommendation 2: Redefine categories for eligible funding.

A well-educated nursing workforce is fundamental to transforming the nursing profession and will address the increasing demand for safe, high-quality, and effective health care services. Bedside RNs are being asked to rapidly transition from a focus on discharge planning to another setting, to providing continuity of care across the health care continuum. With the new health care demands, nurses will have new innovative roles and acquire new skill sets, including the need for strong leadership skills. Future RNs will need to fill a variety of leadership roles from the bedside to the C-suite. It is recommended that a new leadership category is added to the NSP I initiatives and many of the current programs are redefined to keep up with projected health care trends.

Further, the current quality and retention rates of transition to specialty practice programs, such as to the emergency department, are problematic. Continued investment in practice transition programs and recording of outcome metrics are required to determine their effectiveness in retaining RNs.

Finally, new options for hospital-based nursing student programs, such as externships and internships, need to be made available to increase the nursing pipeline. As the economy improves and older RNs exit the workforce, significant geographical shortages of health care providers and nurses are projected. It is also recommended that innovative academic-practice models that maximize the capacity for the preparation of new RNs continue to be funded through NSP I and NSP II.

Update: With the assistance of the Advisory Board, HSCRC staff drafted guidelines that outlined the categories that was eligible for funding, as well as, examples for each category. A processes was established to review program descriptions prior to the beginning of the fiscal year to ensure funds are being used appropriately.

Recommendation 3: Establish NSP I Advisory Board.

HSCRC staff have continuously improved processes for NSP I. However, greater ownership and oversight is required by hospital leaders to strengthen and improve NSP I. An Advisory Board, consisting of key stakeholders, is recommended to advise HSCRC staff about programmatic improvements, monitor hospital programs for alignment with the NSP I goal, and evaluate outcome metrics and make recommendations.

Update: The NSP I Advisory Board was established and 2 members were designated as co-chairs. The Advisory Board has recommended a number of initiatives including instituting a summit for hospitals to showcase NSP I initiatives; developing educational materials to publicize the NSP to RN's in the State; disseminating the Annual Report to participating hospitals; producing educational materials for Human Resources on collecting NSP I data; and updating the HSCRC website to be a resource for Coordinators.

Recommendation 4: Establish categories of initiatives not eligible for funding.

From this analysis, it is evident many hospitals are not using NSP I funds as intended. Program guidelines to include a comprehensive list of approved programs are recommended, as well as, mandatory hospital education about the NSP program. A formal review process of hospital program applications by an Advisory Board should lessen this issue.

Update: With the assistance of the Advisory Board, HSCRC staff drafted guidelines that outlined the categories that was eligible for funding, as well as, examples for each category. A processes was established to review program descriptions prior to the beginning of the fiscal year to ensure funds are being used appropriately.

Recommendation 5: Revise forms to align with the data collection tool.

Hospital respondents expressed confusion about the reporting forms which they believed contributed to problems with reporting data accurately. It is recommended that forms be reviewed and revised as needed, guidelines developed, and education provided to hospitals prior to the next funding cycle.

Update: HSCRC staff and the Advisory Board reviewed and revised all the data collection tools to reduce confusion and improve reporting accuracy. The HSCRC convened a required training for all NSP I coordinators in February to review the Budget and Program Descriptions forms. Another training will be held in September 2018 to review the data collection tool for FY 2018 data.

Recommendation 6: Develop and implement a new data reporting and analytic tool.

This analysis identified the need for hospitals to improve the reporting of organizational metrics. HSCRC staff met with NSP I coordinators to discuss issues with reporting and methods to improve their ability to provide reliable and accurate data. Although staff developed a complete instructional guide, added and revised operational definitions, and offered a live educational webinar (which was recorded for later viewing) to NSP I coordinators, issues persisted. New online systems allowing for real-time data entry are recommended to improve accuracy of data.

Update: HSCRC has procured a database developer to create an online data collection tool to collect the FY 2019 NSP I data. The online tool will have better functionality than the current tool and will allow multiple users from the same hospital to enter information.