Health Workforce Planning and Research: What Are the Issues?

Cluj School of Public Health

October 2, 2019

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CHWS
Center for Health Workforce Studies

The Center for Health Workforce Studies at the University at Albany, SUNY

- Established in 1996
- Based at the University at Albany School of Public Health
- Committed to collecting and analyzing data to understand workforce dynamics and trends
- Goal to inform public policies, the health and education sectors and the public
- Broad array of funders in support of health workforce research

Today's Presentation

- Changes in health care delivery: workforce implications
- Health workforce planning: who, where and why?
- CHWS: Health workforce research and monitoring

The Changing Health Care Landscape

Goals

- To expand access to basic health care services
- To provide high quality, cost-effective care
- To improve population health

What's Changing in Health Care?

- Shift in focus away from acute care to primary and preventive care
- Service integration: primary care, behavioral health and oral health
- Better coordination of care
- Payment reform, moving away from fee-for service and toward value based payment
    - incentives for keeping people healthy and penalties for poor outcomes, e.g., inappropriate hospital readmissions

Health Care Delivery Under Health Reform: Guiding Principles

- Patient-centered care
- Coordinated care across different providers
- Active management of transitions across care settings
- Increased provider communication and collaboration
- Clear accountability for the total care of the patient

Workforce Implications of Health Reform

- New models of care are emerging (e.g., Patient Centered Medical Homes, Accountable Care Organizations, Preferred Provider Systems)
- Team-based approaches to care are frequently used
- Team composition and roles vary, depending on the needs of the patient population and workforce availability
- Teams may include: physicians, NPs, PAs, RNs, social workers, LPNs, medical assistants, and community health workers, among others

Multidisciplinary Teams Appear to Have Positive Impacts on Patient Outcomes

- "The provision of comprehensive health services to patients by multiple health care professionals with a **collective identity** and **shared responsibility** who **work collaboratively** to deliver patient-centered care."

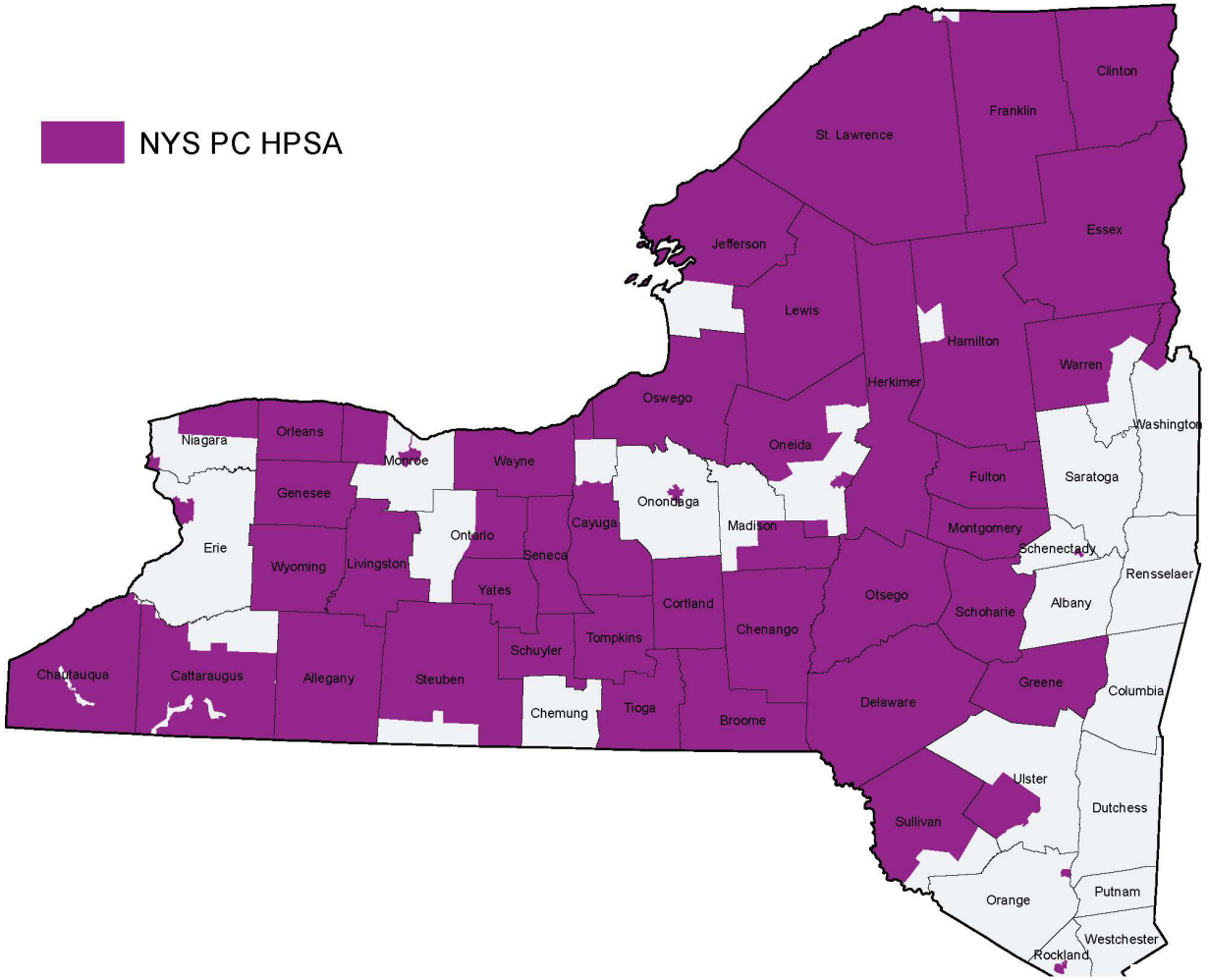
  Source: Interprofessional Education Collaborative Expert Panel. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel.* Washington, D.C.: Interprofessional Education Collaborative.

- Research suggests health care teams with greater cohesiveness and collaboration are associated with:
  - Higher levels of patient satisfaction
  - Better clinical outcomes
- The most effective and efficient teams demonstrate a substantial amount of scope overlap – i.e., shared responsibilities

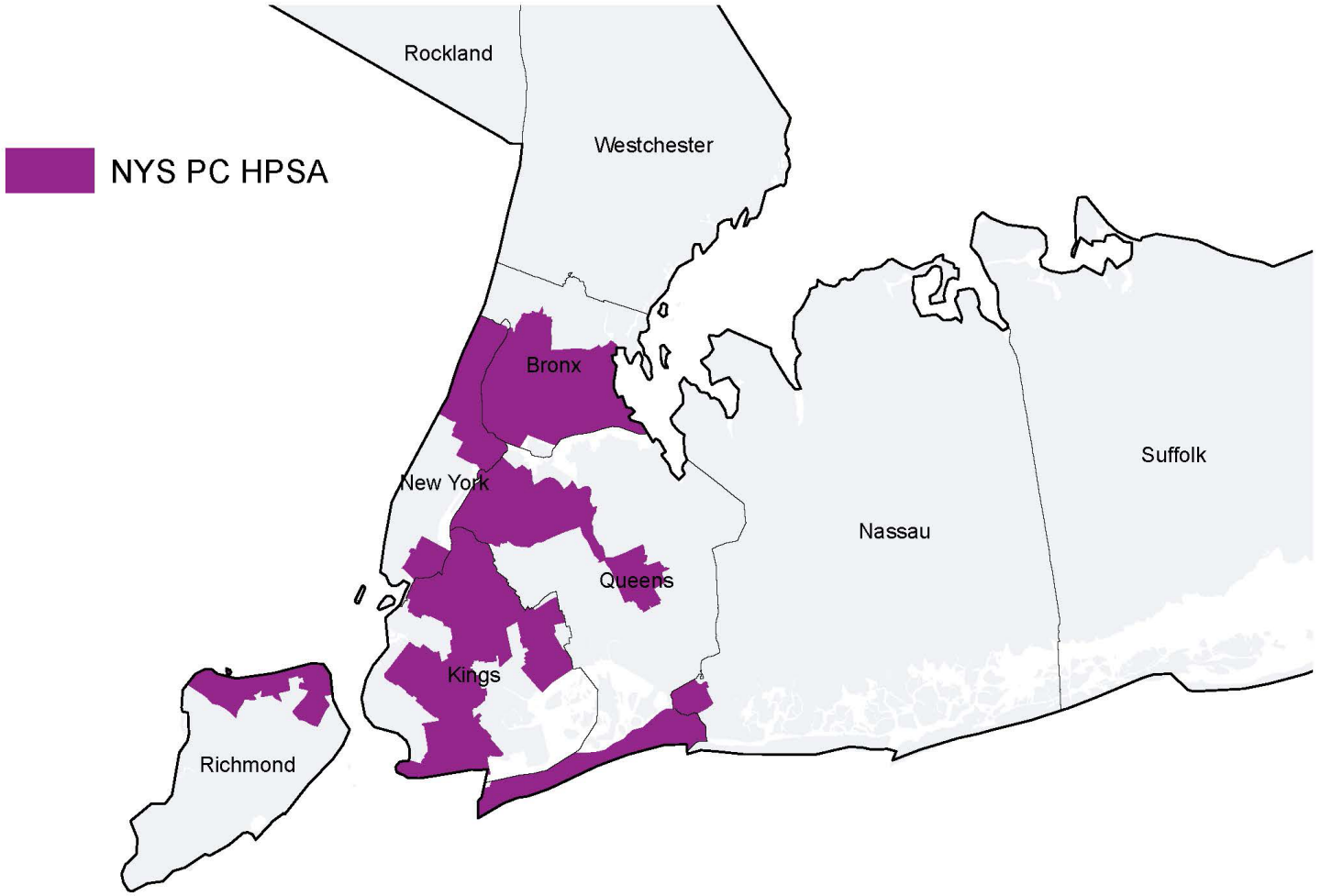
So What's the Problem?

- Inadequate primary care and behavioral health capacity
- Maldistribution of available workforce
- Health professions students are not consistently exposed to team-based models of care or trained in emerging functions
- Scope of practice restrictions
  - Health professionals not always allowed to do what they are trained and competent to do
  - Shared responsibility (scope overlap) needed for team-based care is challenging to achieve

Primary Care Health Professional Shortage Areas in Upstate New York



Primary Care Health Professional Shortage Areas in New York City



Are We Training the Health Workforce for Team-based Practice?

- Health professions education and training typically occurs in **disciplinary siloes**
- The **focus on specialized clinical roles** can interfere with delegation and collaboration on teams
- Doctors, nurses, and others get **little guidance on how to interact effectively** with each other in support of team care
- There's **limited exposure to newer models of care** that demonstrate use of group-based decision making

Are We Training the Health Workforce for Emerging Functions?

- Effective chronic disease management
- Patient engagement
  - Health coaching
  - Motivational interviewing
- Care coordination
- Population health
- Data analytics

State Perspectives on Health Workforce Planning

State Responsibilities That Require Health Workforce Planning

- May play key roles in health reform initiatives
- Support state funded health professions education and training programs
- Regulate health service delivery
- Provide or support the provision of local public health services
- Offer incentive programs to address need in underserved areas
- Administer state health insurance programs

New York's Health Reform Programs

	Delivery System Reform Incentive Payment (DSRIP) Program	State Health Innovation Plan (SHIP) State Improvement Model
Goals	• Large-scale reform of the delivery system accountable for safety net patients • 25% reduction in avoidable hospital use over 5 years	• Integrated, value-based care through population health-based care delivery models and payment innovation • 80% of New Yorkers impacted within 5 years
Scope	• All providers that qualify as Safety Net providers, along with coalitions (PPS) of other proximate providers • All Medicaid patients attributed to those coalitions	• All primary care practices • All payers • All New Yorkers
Units	• Provider Performing Systems (PPSs)	• Primary care practices (of any size or affiliation)
Payment models	• Provider incentive payments based on project milestones and outcomes; Value Based Payment	• Range of payment models, unique to payers but aligned across them, including P4P, shared savings, capitation, etc.

?

What are some of the unmet needs (clinical or non-clinical) of Medicaid patients that contribute to inappropriate ED visits or hospitalizations?

Social Determinants of Health

- "the conditions in which people are born, grow, live, work, and age"

WHO Commission on Social Determinants of Health . Generva: WHO 2008. Closing the gap in a generation: health equity through action on the social determinants of health. CSDH final report.

- The influence of social and socio-economic factors on health status and health outcomes, including:
  - Demographics
  - Educational attainment
  - Income
  - Employment
  - Community
- Protective social factors: social support, self-esteem, self-efficacy

Hot Spotting

- From mapping crime to mapping the location of health care super utilizers
  - Between 2002 and 2008, 900 people in two buildings in Camden NJ accounted for over 4,000 hospital visits and $200 million in health care bills
  - 1% of 100,000 people using Camden's medical facilities accounted for 30% of its costs
- ED visits and hospital admissions are often failures of prevention and timely and effective care

The hot spotters: can we lower medical costs by giving the neediest patients better care? Atul Gawande. **New Yorker**. 2011 Jan : 40–51.

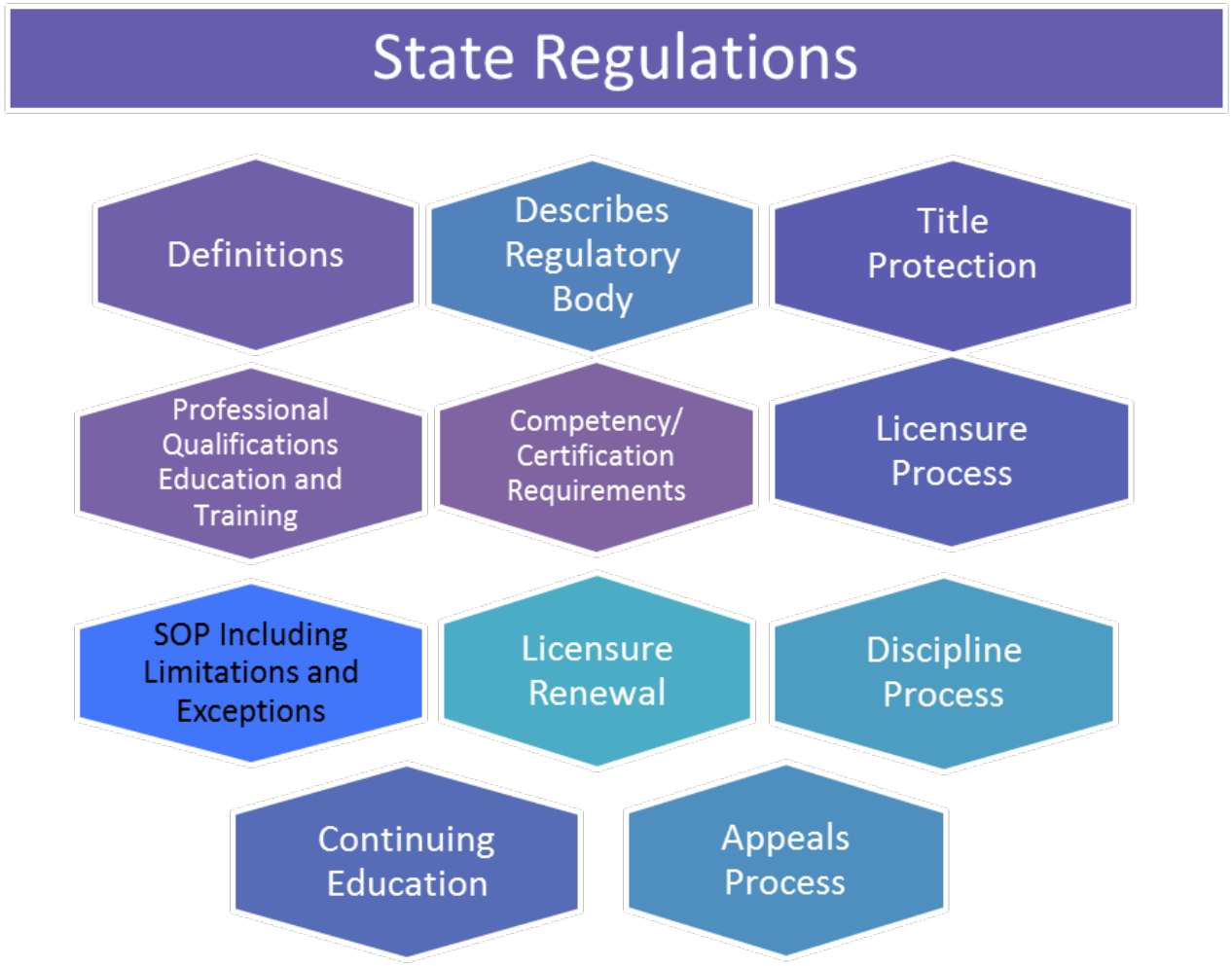
Who Are the Super Utilizers?

- Multiple co-morbidities – diabetes, asthma, CHF
- Unhealthy life style
  - Tobacco, alcohol and substance abuse
- Unstable housing
- Limited income
- Non-compliance with treatment

Workforce Strategies to Address the Needs of Super Utilizers

- Community health workers
- Care coordinators
- Care managers
- Peer support workers
- Health educators

In the U.S., States Are Primarily Responsible for Regulating Health Professions



Interest in Scope of Practice Regulation is Increasing

- Key goal in health care in the U.S. is expanded access to basic health services
- Anticipated growth in demand for high-quality, cost-effective basic health services, particularly for underserved populations
- Restrictive scopes of practice are sometimes seen as an access barrier to needed health services

What is Scope of Practice?

- Professional scope of practice, i.e. professional competence, describes the services that a health professional is trained and competent to perform
- Legal scope of practice, based on state-specific practice acts, define what services a health professional can and cannot provide under what conditions
- Legal scope of practice and professional competence overlap, but amount of overlap varies by state and by profession

Issues With State Based Health Professions Regulation

- Mismatches between professional competence and state-specific legal scopes of practice
- Lack of uniformity in legal scopes of practice across states for some health professions
- Lack of flexibility to support shared responsibility (scope overlap)
- The process for changing state-specific scope of practice is slow and adversarial

State to State SOP Variation: Nurse Practitioners

View the interactive version online:
www.bartonassociates.com/np-laws

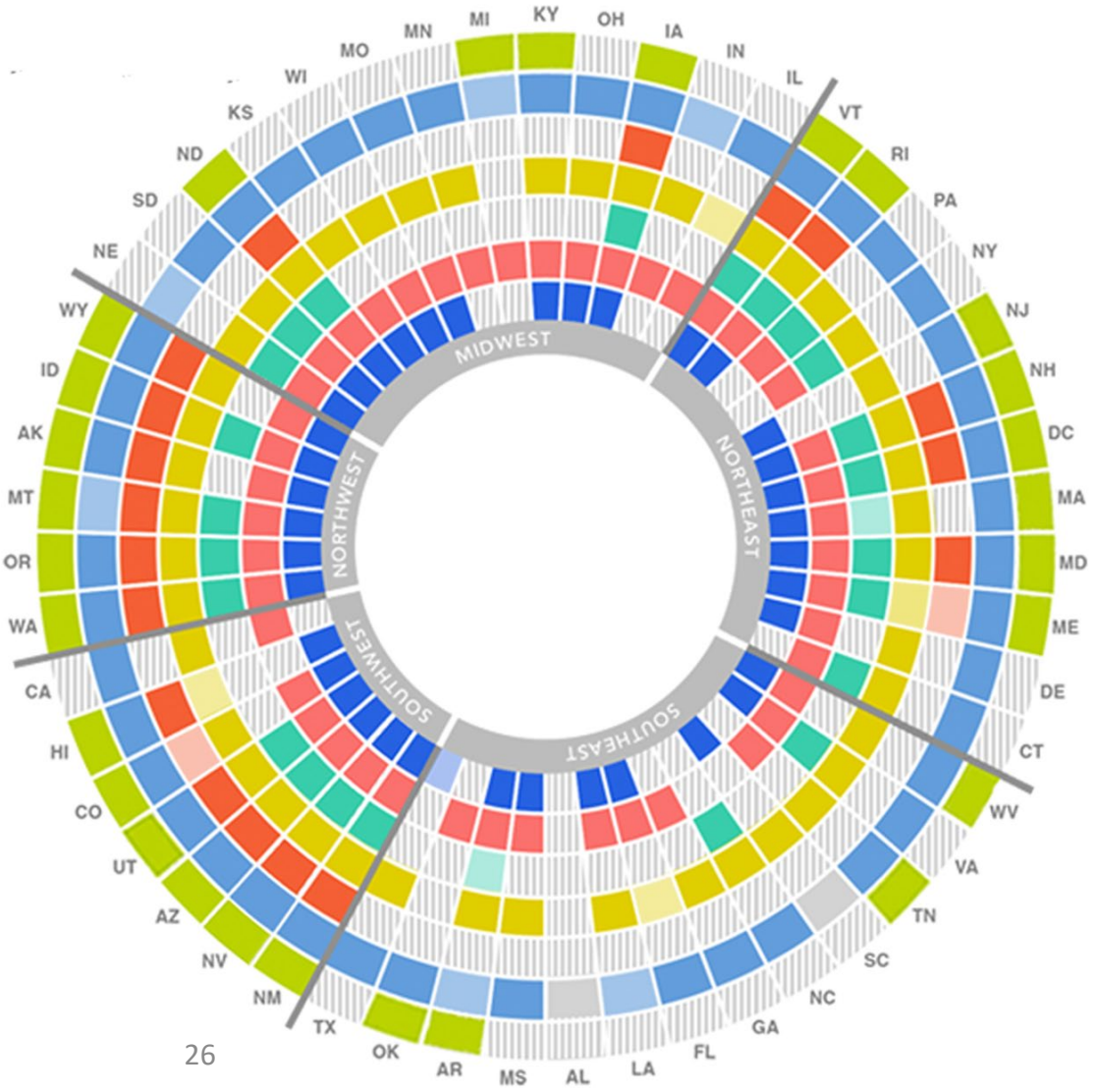
BARTON ASSOCIATES

DISCLAIMER

This chart is for informational purposes only and is not for the purpose of providing legal advice. You should contact the applicable nursing board or your attorney for specific legal advice.

RESOURCES

AANP - www.aanp.org
The 2012 Pearson Report - www.webnponline.com
The Nurse Practitioner's 24th Annual Legislative Update - www.tnpj.com



State to State SOP Variation: Creates Opportunities for Comparative Effectiveness Research

- Traczynski J, Udalova V. **Nurse practitioner independence, health care utilization, and health outcomes** [Internet]. Madison (WI): University of Wisconsin; 2013 Mar 15 [cited 2013 Oct 9].
  - Available from: http://www.lafollette.wisc.edu/research/health_economics/Traczynski.pdf

- Spetz, Joanne, Stephen T. Parente, Robert J. Town, and Dawn Bazarko. **Scope-Of-Practice Laws For Nurse Practitioners Limit Cost Savings That Can Be Achieved In Retail Clinics**. *Health Affairs* 32, no. 11 (2013): 1977-1984.

SOP Restrictions Limit Shared Responsibility and Delegation

- Emerging titles
  - Dental therapists
  - Advanced dental hygienist therapists
  - Community paramedics
- Shared responsibilities
  - Pharmacists administering flu shots
  - Home health aides administering prepackages medication

SOP Policy Reform Strategy
Alaska Dental Health Aide Therapist (DHAT)
Targeting Underserved Populations

- Started in 2003
- Only serves Alaskan tribal communities
- Trainees recruited from local tribal communities
- Education: certificate program with 20 months plus 400 hours of supervised clinical training
- DHATs provide a range of OH services including: prevention, education, diagnosis and treatment of dental caries, basic restorative care

Alaska Dental Health Aide Therapist (DHAT) Evaluation Findings

- DHATs provide safe, competent, and appropriate care
- Tribal communities in Alaska report increased access to oral health care
  - Reduction in wait times
  - Reduced travel times
- Patients are very satisfied with care from DHATS
- Wide acceptance of DHATs in the communities they serve

Dental Therapy: New Strategy for Affordable Dental Services

- Recognized in 5 states: Minnesota (2009); Maine (2014); Vermont (2016); Arizona (2018); Michigan (2018) , New Mexico (2019); Idaho (2019); Nevada (2019; Connecticut (2019).
- Recognized in tribal communities in Alaska, Washington State, and Oregon.
- Other states considering DT legislation include Florida, Kansas Massachusetts, North Dakota, Ohio and Wisconsin.
- In some states where DTs are recognized, enabling legislation requires that a certain percentage of the DT's caseload be considered 'underserved'
- Evaluations to date find that DTs provide high quality, safe and cost- effective care.

oralhealthworkforce.org
https://www.pewtrusts.org/en/research-and-analysis/articles/2016/04/5-dental-therapy-faqs

States Are Adopting Their Own Strategies to Expand Access to Needed Health Services

+ Designed to address local needs and considers factors unique to that state
- Continues to contribute to state-to-state variation in SOP, training, qualifications for similar titles
  - More convergence in these emerging models across states is likely over time

Developing a Tool to Measure Dental Hygiene SOP Variation

- Scope of practice (SOP) varies considerably by state
  - different models of public health supervision practice
- Permitted tasks and required supervision differ by state and these differences impact service delivery
- Dental Hygiene Professional Practice Index (DHPPI):
  - Developed in 2001 and used to score state dental hygiene scope of practice in 2001 and again in 2014
- DHPPI contains numerous variables grouped into 1 of 4 categories:
  - Regulation, supervision, tasks, and reimbursement
- Numerical scoring based on each state's law and regulation
  - Possible composite score from 0-100

State DHPPI Scores in 2014

- Descriptive analysis

  2001 scores -10 in West Virginia, 97 in Colorado
  2014 scores -18 in Alabama and Mississippi, 98 in Maine.
  Mean score on the DHPPI 43.5 (2001)↑ 57.6 (2014)

- Factor Analysis

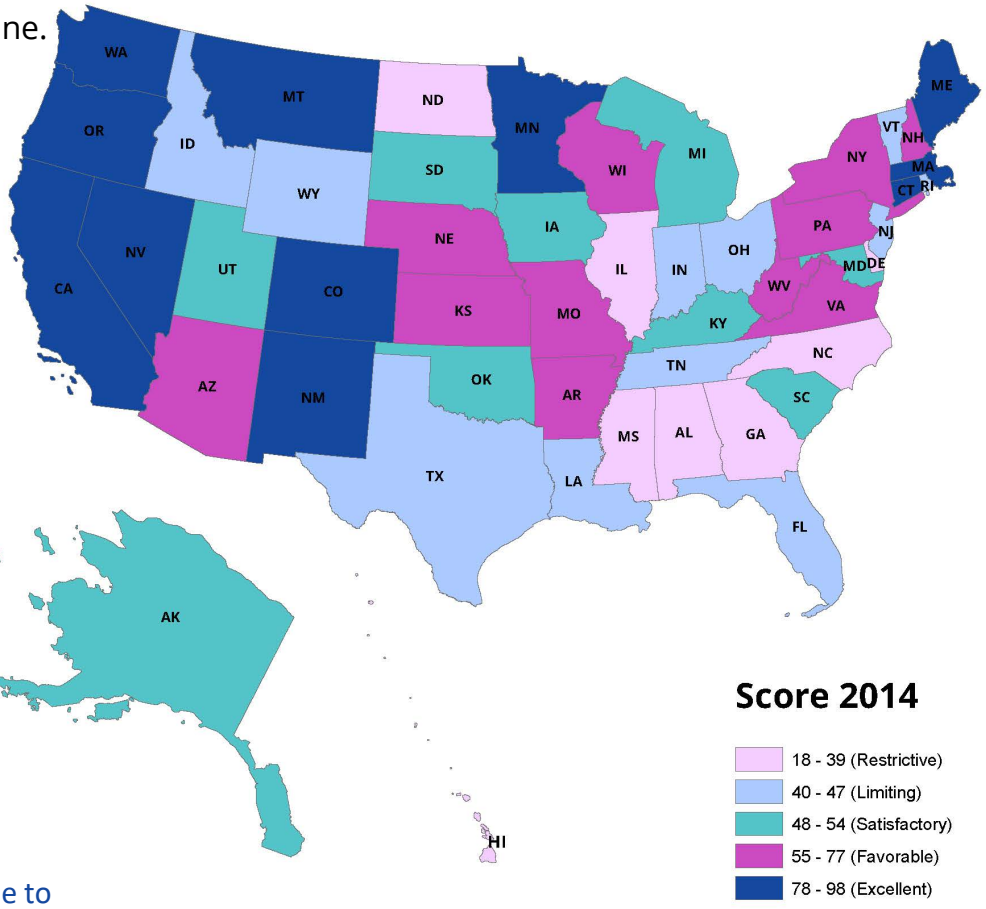
  In 2014, exploratory and confirmatory factor analysis confirmed that the component structures were all aspects of the overarching concept (in this case scope of practice)

- Statistical analysis

  In 2001, SOP was positively but not significantly associated with the percent of the population in a state having their teeth cleaned by a dentist or dental hygienist in the past year.

  Research question in 2014: Is SOP associated with population oral health outcomes?

  Used multilevel logistic modeling with the DHPPI an BRFSS data controlling for state and individual level factors including community water fluoridation, demographic and socioeconomic factors.

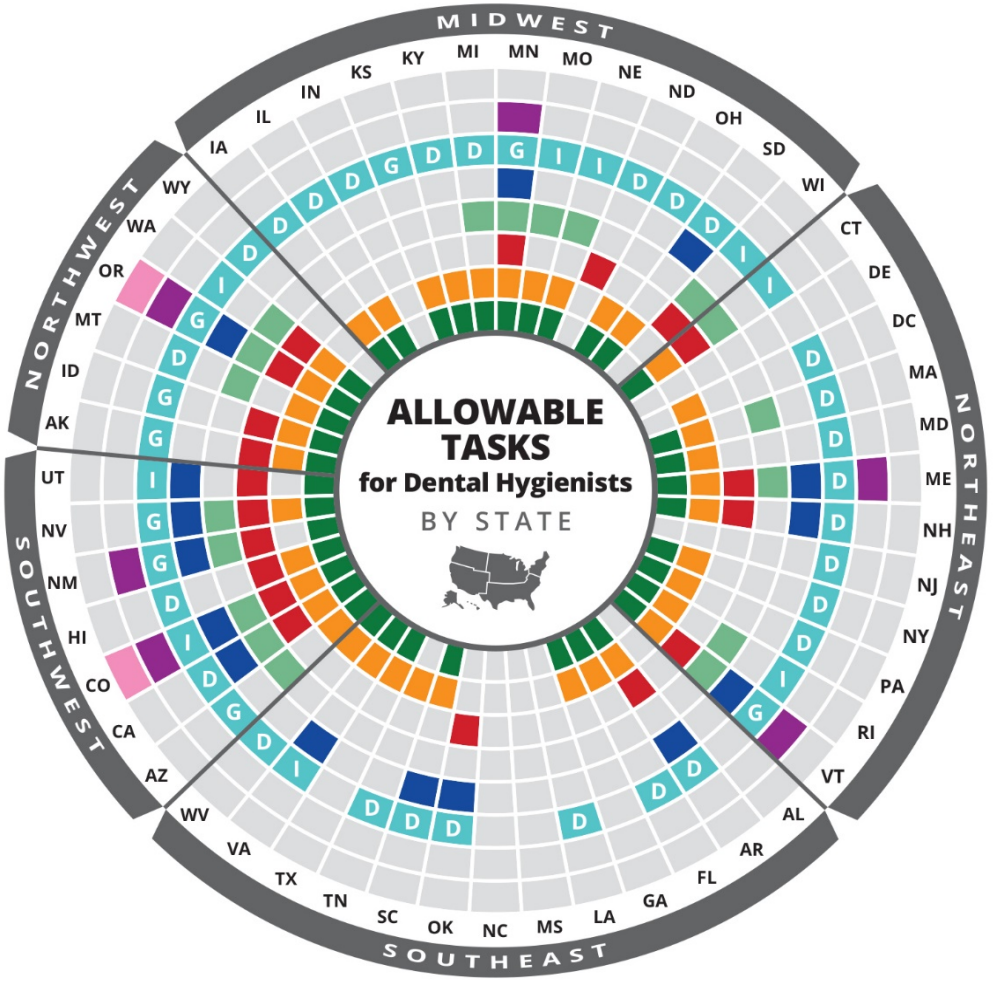


Finding: More expansive SOP for DHs in states was positively and significantly associated ($p<0.05$) with having no teeth removed due to decay or disease among individuals in those states (published in December 2016, *Health Affairs*)

Developing a Dental Hygiene SOP Infographic: Why and How

- Research finds that broader SOPs for DHs are associated with better oral health outcomes
- There is substantial variation in DH SOP across states, but no easy way to help policy makers understand these differences
- Researchers developed an infographic that depicts state variation in scope of practice for select dental hygiene functions
  - With an emphasis on those functions that support community based practice

Variation in Dental Hygiene Scope of Practice by State



The purpose of this graphic is to help planners, policymakers, and others see differences in legal scope of practice across states, particularly in public health settings.

Research has shown that a broader scope of practice for dental hygienists is positively and significantly associated with improved oral health outcomes in a state's population.[1,2]

- Dental Hygiene Diagnosis
- Prescriptive Authority
- Local Anesthesia
  - D Direct I Indirect* G General
- Supervision of Dental Assistants
- Direct Medicaid Reimbursement
- Dental Hygiene Treatment Planning
- Provision of Sealants
- Direct Access to Prophylaxis
- Not Allowed / No Law

* In Colorado, indirect supervision requires only preapproval, not the presence of a dentist.

Sources: 1. Langelier M, Baker B, Continelli T. *Development of a New Dental Hygiene Professional Practice Index by State, 2016.* Rensselaer, NY: Oral Health Workforce Research Center, Center for Health Workforce Studies, School of Public Health, SUNY Albany; November 2016. 2. Langelier M, Continelli T, Moore J, Baker B, Surdu S. Expanded Scopes of Practice for Dental Hygienists Associated With Improved Oral Health Outcomes for Adults. *Health Affairs.* 2016;35(12):2207-2215.

http://www.oralhealthworkforce.org/wp-content/uploads/2017/03/OHWRC_Dental_Hygiene_Scope_of_Practice_2016.pdf

OHWRC
Oral Health Workforce Research Center

This work was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS), under the Health Workforce Research Center Cooperative Agreement Program (U81HP27843). The content and conclusions presented herein are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Last Updated February 2017.

Federal Support for Health Workforce Planning

Health Resources and Services Administration

- To support more informed health workforce decision making through available health workforce data, projections and information
- To promote equitable supply and distribution of well-prepared health workers to ensure access to high quality, efficient care for the nation

National Center for Health Workforce Analysis

- Cooperative Agreements with Health Workforce Research Centers
  - UAlbany School of Public Health New York – oral health workforce, technical assistance
  - UNC, North Carolina – workforce innovation
  - University of Michigan – behavioral health
  - GW, Washington DC – workforce innovation, health equity
  - WWAMI, Washington State – allied health, health equity
  - UCSF, California – long term care

FQHCs and Integration of Oral Health with Primary Care

- Integrated service provider, federally funded
- Elements of successful integration:
  - Interoperable EHRs connecting medical and dental records
  - Team based care with cross-trained providers
  - Oral health workforce innovations
    - Dental therapists
    - Advanced dental hygienists
    - Community dental health coordinators
  - Knowledge of 'local circumstances' in planning OH strategy

Health Workforce Research in New York

Health Workforce Research Questions of Interest Are Changing

- Tended to be siloed: how many? where? do we have enough?
- Now we ask broader questions: what do patients need; what are the best workforce strategies to deliver these services?
- Examples of studies:
  - State-specific oral health access issues and potential workforce strategies
  - Use of telehealth services by providers in New York, barriers and facilitators
  - Medicaid claims analysis to better understand commuting patterns for care

Health Workforce Data Collected in New York

- **Supply:** Re-registration surveys
- **Pipeline:** Nursing Deans, Doctors completing GME training in NY
- **Demand:** Surveys of HR Directors in hospitals, nursing homes, home health agencies, clinics

Health Professions Supply Data

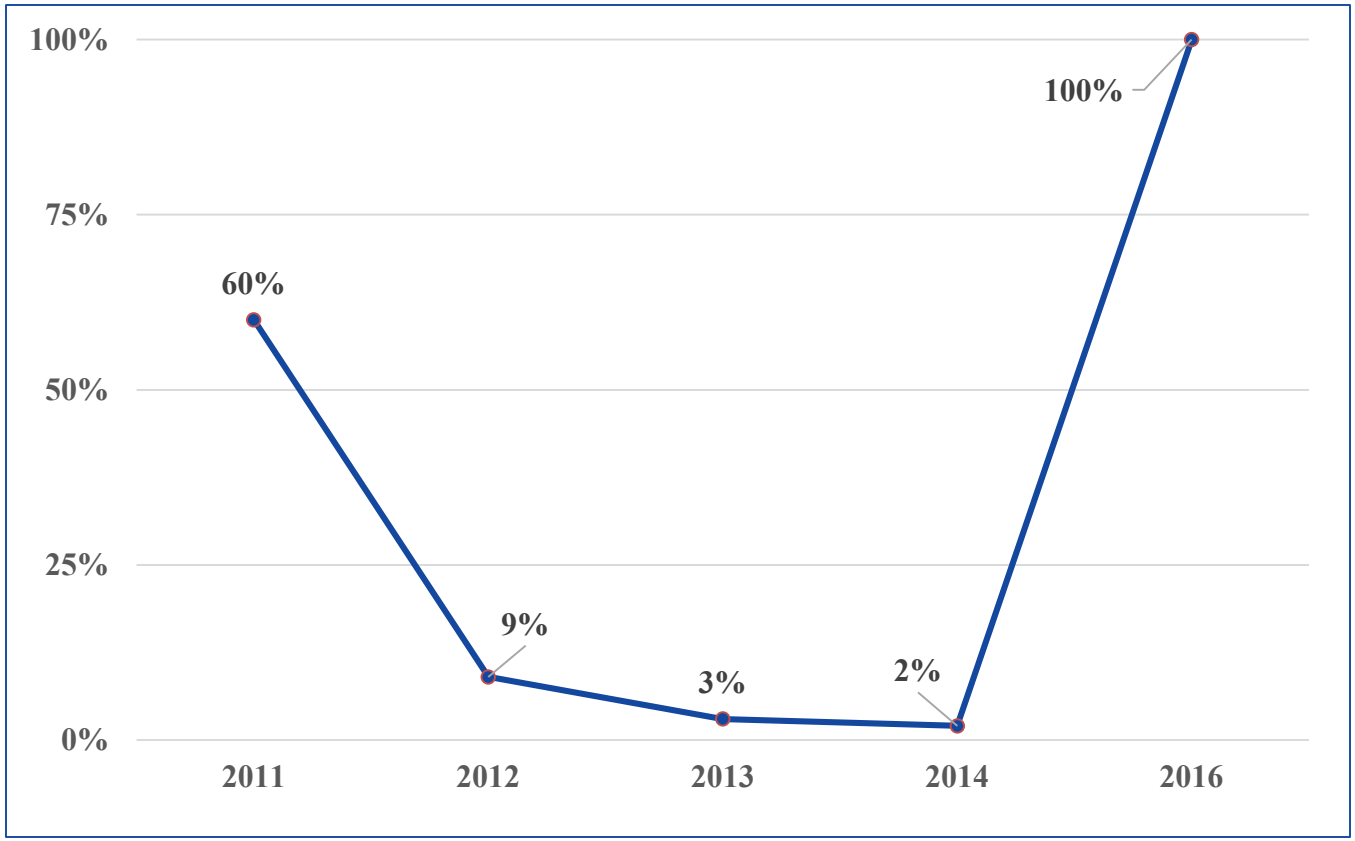
Surveys of :

- Newly trained physicians
- Licensed
  - physicians
  - nurse practitioners (mandatory)
  - physician assistants
  - midwives
  - registered nurses
  - dentists
  - dental hygienists

Nurse Practitioners
Mandatory NP Re-Registration Survey

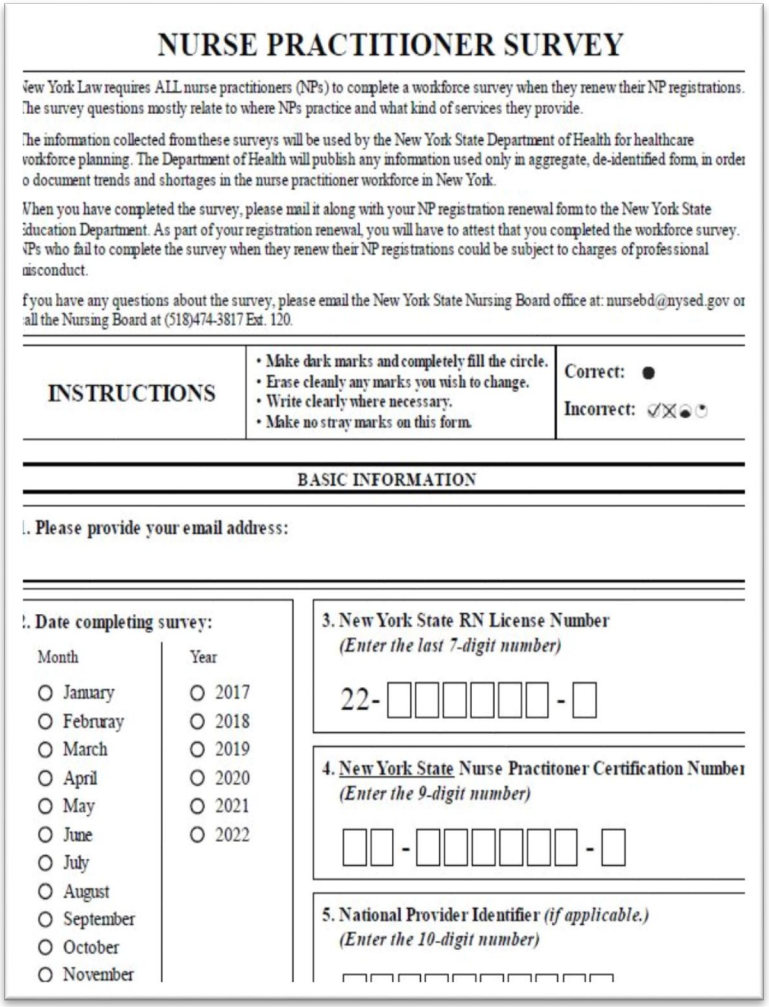
- Effective September 1, 2015, NPs licensed in NY are required by law to provide information to the state at the time of license renewal
  - Renew their licenses every three years for **each** NP certification held
- DOH, SED and CHWS worked collaboratively on survey design and data collection
- CHWS downloads survey responses quarterly and cleans the data
- Aggregated data drawn from NP survey responses are required by law to be made available publicly

Nurse Practitioner Re-registration Survey Annual Response Rates, 2011-2016



The NP Re-registration Survey

- Based on federal Minimum Data Set recommended guidelines
- Includes 22 questions
  - Licensure
  - Demographics
  - Education
  - Practice characteristics
  - Future plans
  - Collaborative practice



NURSE PRACTITIONER SURVEY

New York Law requires ALL nurse practitioners (NPs) to complete a workforce survey when they renew their NP registrations. The survey questions mostly relate to where NPs practice and what kind of services they provide.

The information collected from these surveys will be used by the New York State Department of Health for healthcare workforce planning. The Department of Health will publish any information used only in aggregate, de-identified form, in order to document trends and shortages in the nurse practitioner workforce in New York.

When you have completed the survey, please mail it along with your NP registration renewal form to the New York State Education Department. As part of your registration renewal, you will have to attest that you completed the workforce survey. NPs who fail to complete the survey when they renew their NP registrations could be subject to charges of professional misconduct.

If you have any questions about the survey, please email the New York State Nursing Board office at: nursebd@nysed.gov or call the Nursing Board at (518)474-3817 Ext. 120.

INSTRUCTIONS

- Make dark marks and completely fill the circle.
- Erase cleanly any marks you wish to change.
- Write clearly where necessary.
- Make no stray marks on this form.

Correct: ●

Incorrect: ✓ X ◒ ◔

BASIC INFORMATION

1. Please provide your email address:

2. Date completing survey:

Month	Year
○ January	○ 2017
○ February	○ 2018
○ March	○ 2019
○ April	○ 2020
○ May	○ 2021
○ June	○ 2022
○ July	
○ August	
○ September	
○ October	
○ November	

3. New York State RN License Number
(Enter the last 7-digit number)
22-□□□□□□-□

4. New York State Nurse Practitoner Certification Number
(Enter the 9-digit number)
□□-□□□□□□-□

5. National Provider Identifier *(if applicable.)*
(Enter the 10-digit number)
□□□□□□□□□□

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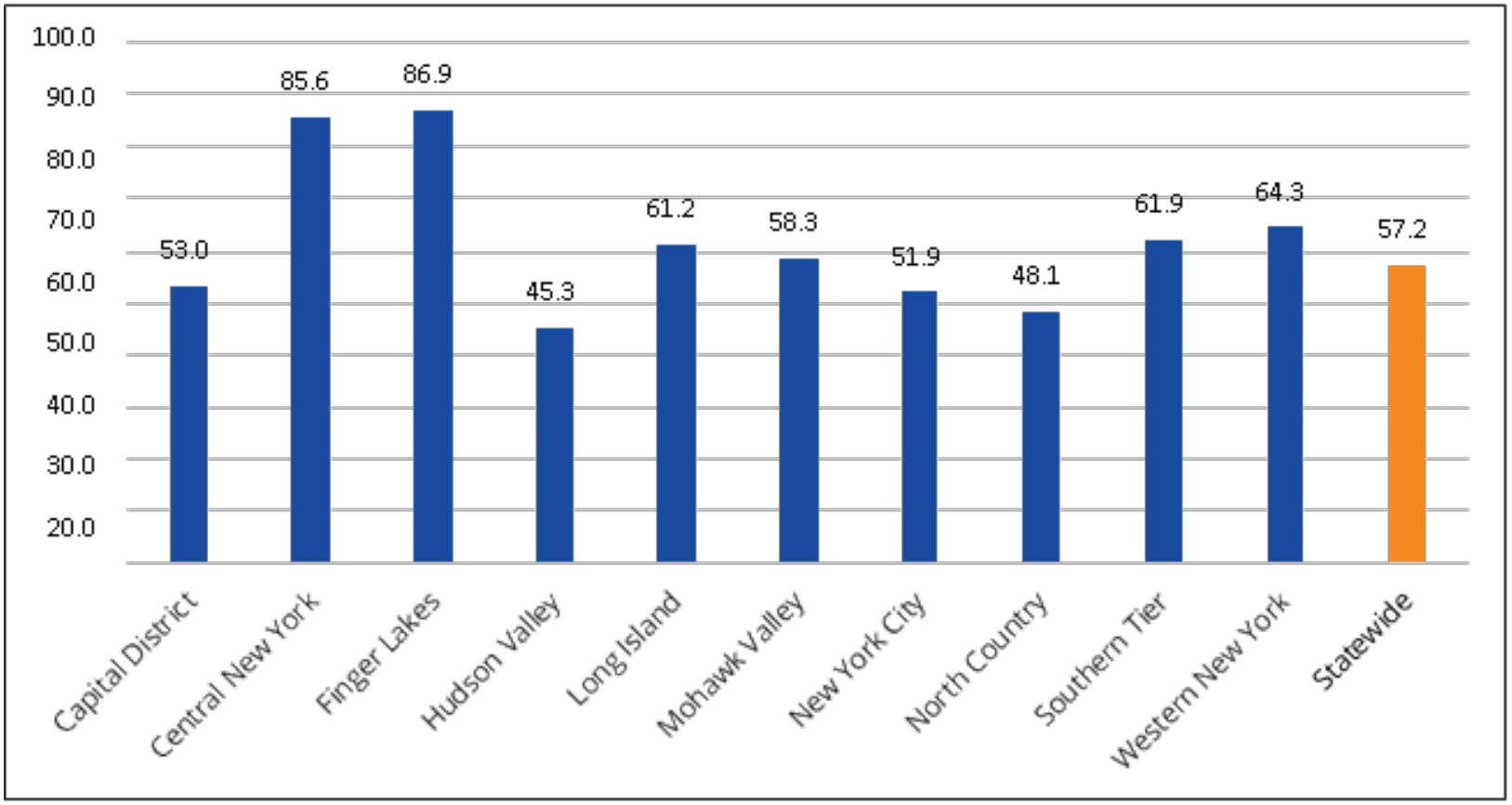
Supply Data Describes Regional Supply and Distribution Trends

Estimated Count of Patient Care NPs per 100,000 in New York State by Region



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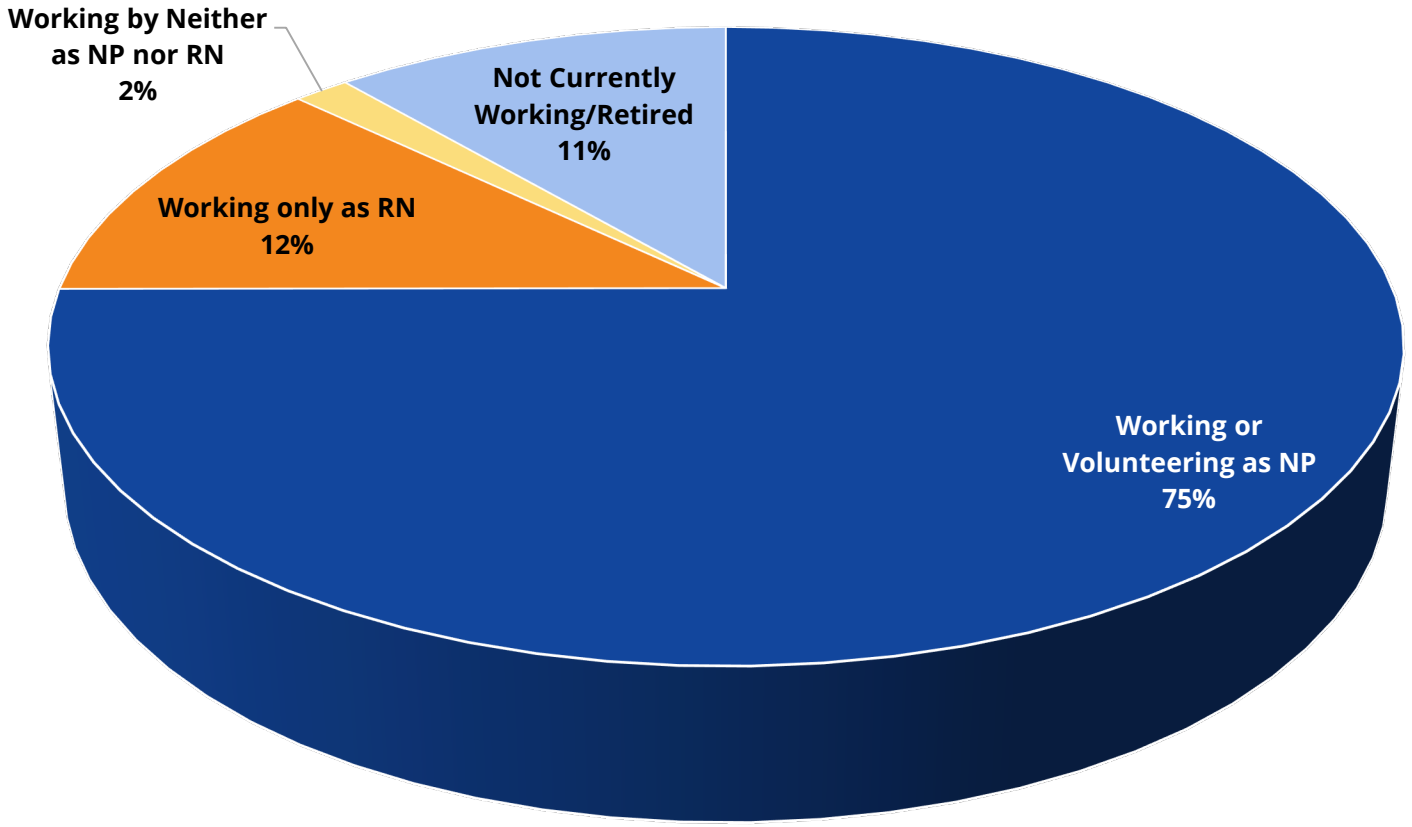
75% of the State's NPs are Actively Practicing in New York



The New York Resident Exit Survey

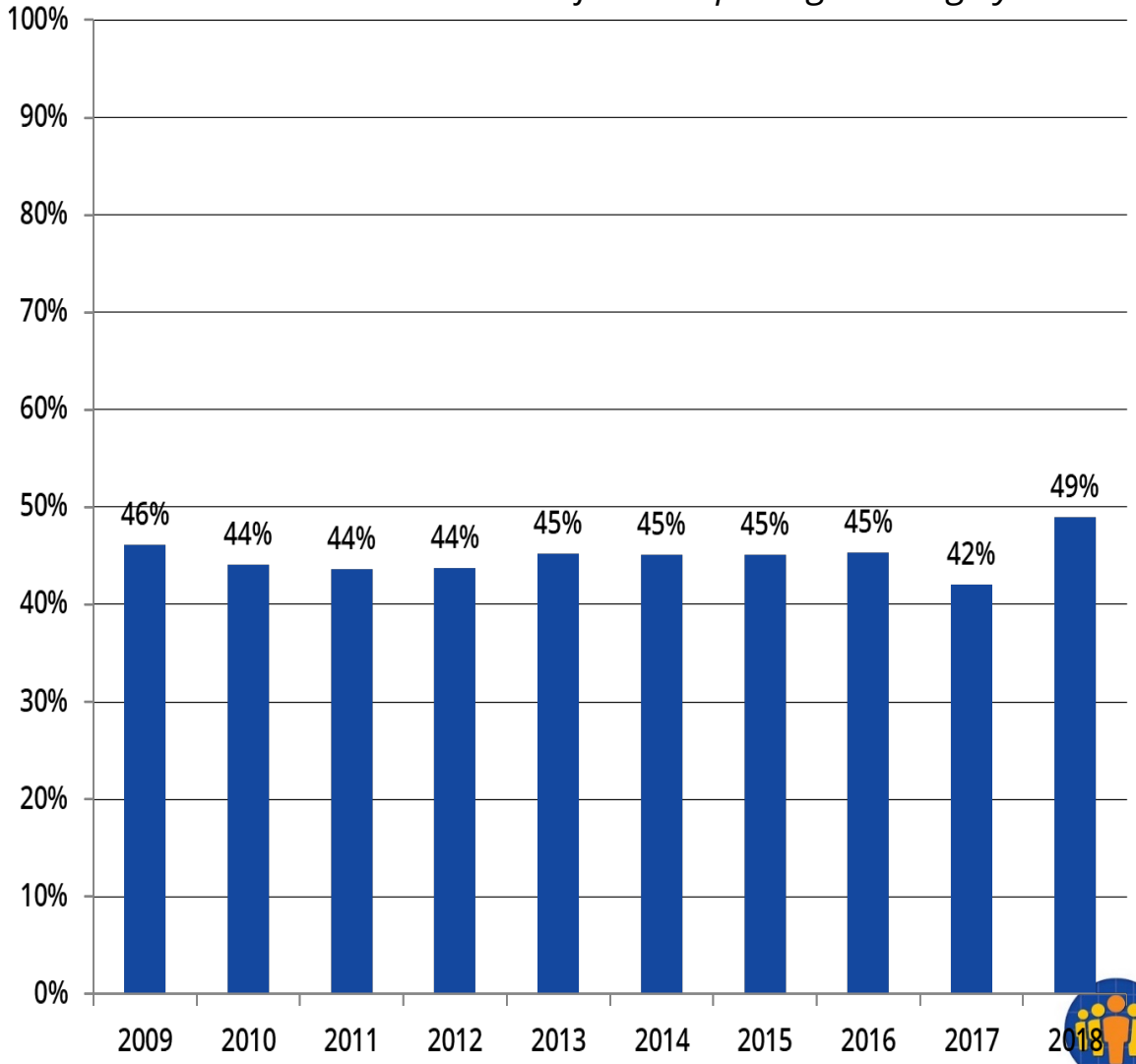
- Conducted annually since 1998 (except for 2004 and 2006)
- A survey of all residents and fellows completing training in New York (approximately 5,000 annually)
- Substantial support and assistance from GME directors and programs directors
- Average annual response rate greater than 60%
- Survey asks about:
  - Demographics and background
  - Post-graduation plans
  - Characteristics of post-graduate employment
  - Job search experience
  - Impressions of new physician job market

Changing Demographics and Practice Settings for New Physicians

	NY Residents/Fellows, 1998	NY Residents/Fellows, 2018
Percent Female	36%	50%
Percent URM	13%	15%
Principal Practice Setting		
Solo	4%	2%
Group	47%	38%
Hospital	31%	53%
Other	8%	5%

Less than Half of New Physicians Plan to Practice in New York After Completing Training

In-State Retention After Completing Training by Year



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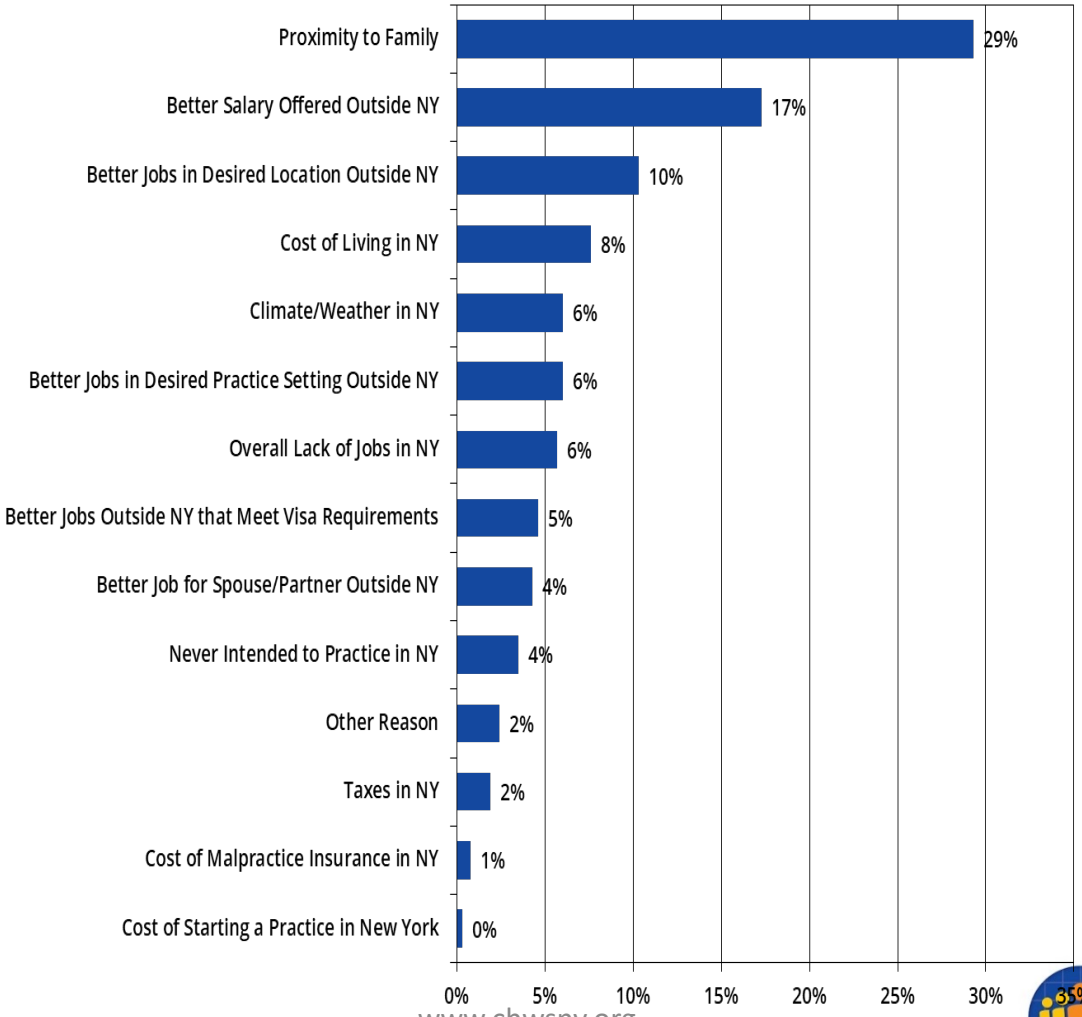
Proximity to Family Was the Most Frequently Cited Reason for Leaving New York to Practice

Principal Reason for Practicing Outside New York in 2018



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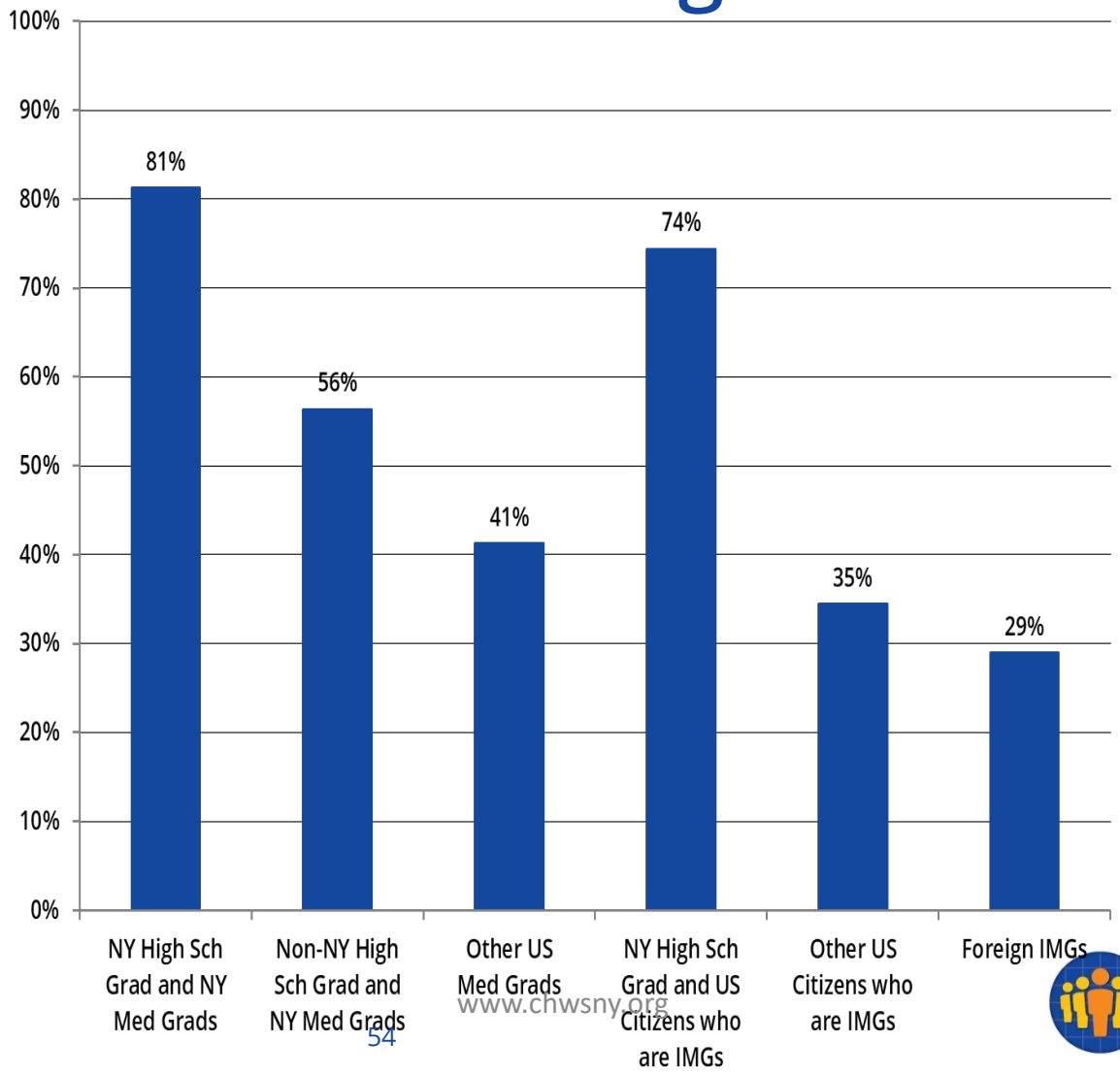
Likely to Practice in the State After Completing Training

In-State Retention After Completing Training by High School Location, Medical School Location, and Citizen



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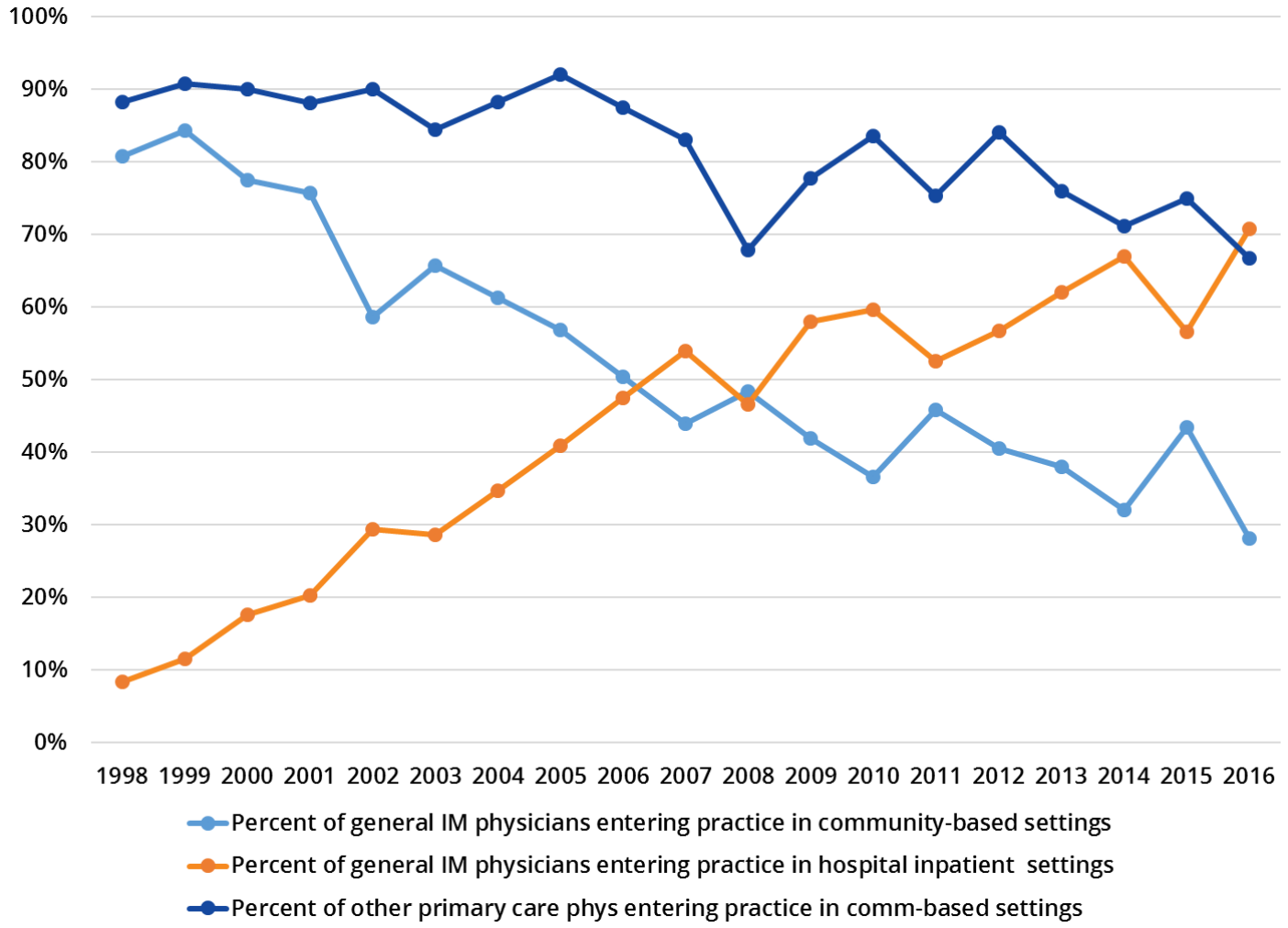
More New PC Physicians Plan to Work in Inpatient Settings in New York



Source: Center for Health Workforce Studies

Important/Very Important Job Characteristics

	Not at all Important	Of little importance	Important	Very Important
Predictable start and end time each workday	3.7%	8.2%	47.3%	40.8%
Length of each workday	3.1%	7.2%	50.6%	39.1%
Frequency of overnight calls	2.7%	5.0%	39.8%	52.5%
Frequency of weekend duties	2.3%	5.0%	41.6%	51.1%

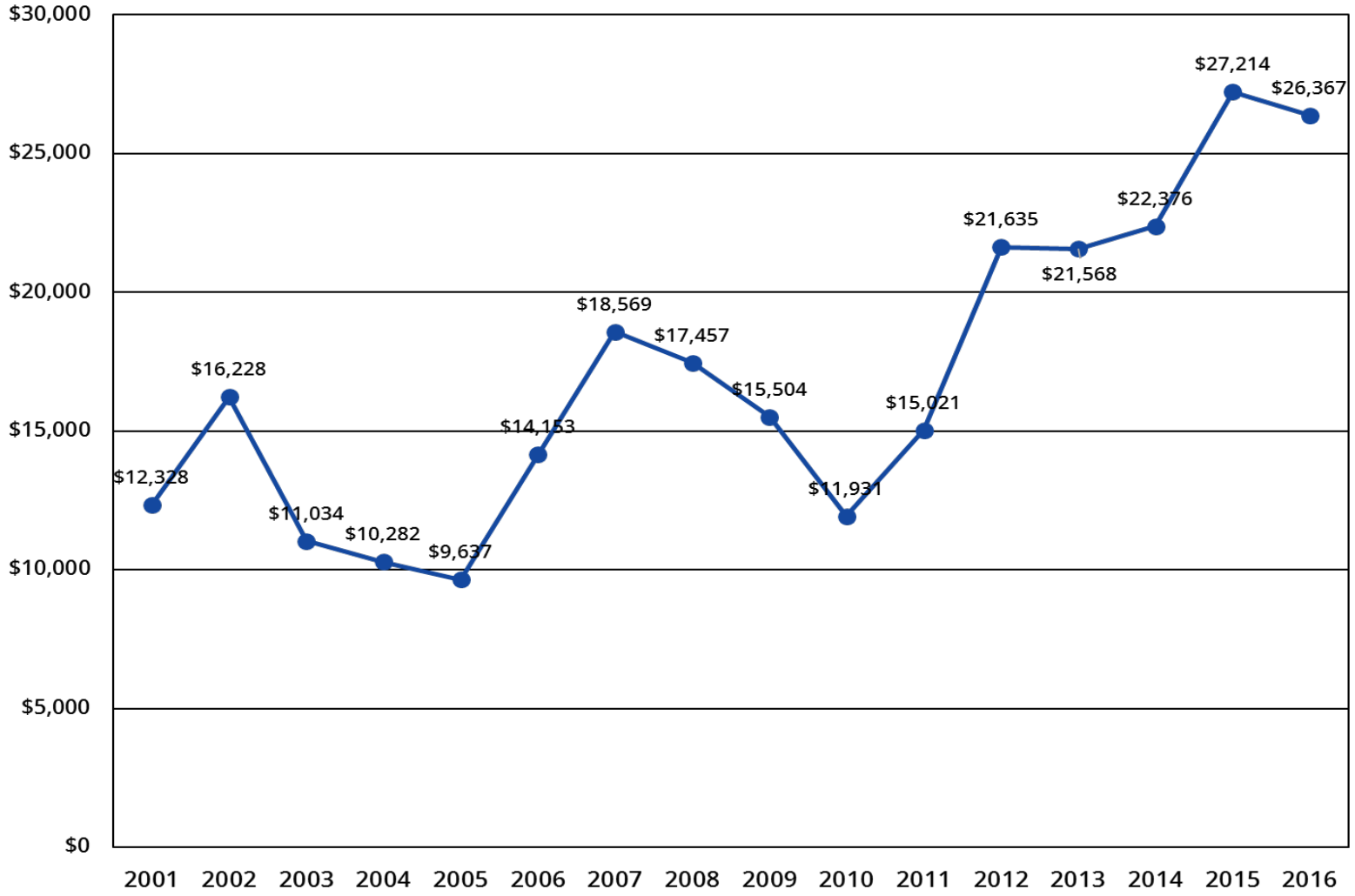
Measuring Relative Demand by Specialty

- Difficulty finding a satisfactory practice position
- Changing plans due to limited practice opportunities
- Number of job offers
- Assessment of regional job market
- Assessment of national job market
- Change in starting income over time

Relative Demand by Individual Specialty

- Highest Relative Demand
  - Family Medicine
  - Emergency Medicine
  - General Internal Medicine
- Lowest Relative Demand
  - Pathology
  - Radiology
  - Pediatric Subspecialties

Gender Differences in Physician Income*, 2001-2016



*in 2016 Dollars

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Gender Differences in New Physician Income by Primary Care Specialties, 2014-2016

	Income Difference	Significance
Family Medicine	-$20,134	.0001
General IM	-$15,214	.0000
General Pediatrics	-$2,759	.0000
Obstetrics/Gynecology	-$12,697	.0001

The Future of RN Workforce in NY

- Currently there is a relative balance between the supply of and demand for registered nurses (RNs) in New York State, with the supply of RNs being slightly greater than the demand
- Demand for RNs in New York is expected to grow between 2015 and 2025, but supply should be sufficient to meet demand
- Supply/demand balance could be influenced by:
  - New state law, BSN in 10, requires RNs to obtain a baccalaureate degree (BSN) or higher in nursing within 10 years of initial licensure
  - The impact of changes in health care on future demand for RNs
  - declining demand for RNs in acute care could be offset by an increase in demand for RNs in ambulatory care

Demand Surveys Provide Evidence of HWF Recruitment and Retention Issues

- Involves collaborations with provider associations
- NY providers reported:
  - All providers: experienced RNs hard to recruit, but newly trained RNs are not
  - Hospitals: Hard to recruit and retain clinical laboratory technologists, HIT staff and medical coders
  - Nursing homes and home health: Hard to recruit occupational therapists, physical therapists, speech language pathologists, dieticians/nutritionists
  - Community health centers: Hard to recruit dentists, geriatric nurse practitioners and psychiatric nurse practitioners

Case Studies on the Use of Telehealth Services by NY Providers

- Providers used a variety of telehealth applications to expand access to needed services:
  - Behavioral health
  - Home care monitoring
  - Diabetes self management
  - Pediatric primary care
  - Wound care

As We Plan for the Future

- Use data and evidence to inform decisions
- Build strategic partnerships
- Explore innovative approaches to training and service delivery
- Evaluate the impacts of these efforts on cost, quality and access to care
- Disseminate findings from evaluation studies to further refine programs

Thank You