



## A Profile of New York State's Patient Care Nurse Practitioners



School of Public Health  
University at Albany, State University of New York



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Center for Health Workforce Studies  
School of Public Health, University at Albany  
State University of New York  
1 University Place, Suite 220  
Rensselaer, NY 12144-3445

Phone: (518) 402-0250  
Web: [www.chwsny.org](http://www.chwsny.org)  
Email: [info@chwsny.org](mailto:info@chwsny.org)

## PREFACE

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This report profiles active patient care nurse practitioners (NPs) in New York State. The data used in this analysis were drawn from information that NPs are required by law to provide at the time of their triennial certification reregistration. Since 2015, the Center for Health Workforce Studies (CHWS), working in collaboration with the New York State Department of Health (DOH) and New York State Education Department (SED), has assisted with the collection and analysis of this information.

This report was prepared by CHWS staff, including Kristen Stiegler, Robert Martiniano, Nafin Harun, Shen Wang, Gaetano Forte, and Jean Moore, with layout design by Leanne Keough and Matt Allegretti.

Established in 1996, CHWS is an academic research center based at the School of Public Health, University at Albany, State University of New York (SUNY). The mission of CHWS is to provide timely, accurate data and conduct policy-relevant research about the health workforce. The research conducted by CHWS supports and promotes health workforce planning and policymaking at local, regional, state, and national levels.

The views expressed in this report are those of CHWS and do not necessarily represent positions or policies of the School of Public Health, University at Albany, SUNY, DOH, or SED.

*November 2021*

## ACKNOWLEDGMENTS

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## SUGGESTED CITATION

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# EXECUTIVE SUMMARY

## BACKGROUND

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Nurse practitioners (NPs) are registered nurses with advanced education and clinical training who provide a wide array of health care services, including primary care and prevention, counseling, assessment, and management of acute and chronic illnesses. NPs play important roles in primary care delivery, particularly in underserved communities.

Since 2015, all NPs in New York State (NYS) have been required by law to provide additional information to the state at the time of their triennial certification reregistration. The requested information primarily focuses on demographic, educational, and practice characteristics and is designed to inform health workforce planning at the state, regional, and local levels.

The COVID-19 pandemic has had a substantial impact on the health care delivery system and the health workforce. In response to surging cases, NYS responded initially through the use of executive orders, to provide scope of practice and regulatory flexibility for health professionals including NPs and physician assistants, and through the redeployment of the health workforce to settings where need was greatest.<sup>1,2</sup>

This report is based on an analysis of information provided by NPs who renewed their registration between January 1, 2018, and December 31, 2020. A 22-question survey that asks about demographic, educational, and practice characteristics is included as part of NP recertification requirements. CHWS researchers conducted the analysis that served as a basis for this report, which profiles active patient care NPs in NYS. Attention is given to patient care NPs who provide primary care as well as those who work in the state's Health Professional Shortage Areas (HPSAs).

However, the analysis for this report did not include an assessment of pandemic impacts on NP practice. Key findings are summarized below.

## KEY FINDINGS

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### Patient Care NP Supply and Distribution

- There were an estimated 14,329 NPs in NYS
- Statewide, there were 74 NPs per 100,000 population, although regional distribution varied widely
  - The Finger Lakes and Central New York regions had the greatest supply of NPs (107 and 104 NPs per 100,000, respectively)
  - The Hudson Valley and North Country regions had the lowest supply of NPs (53 and 55 NPs per 100,000, respectively)

### Demographic Characteristics of Patient Care NPs

- Hispanic/Latinx (hereafter referred to as Hispanic) NPs remain underrepresented in the state's NP workforce compared with their presence in the state's population (5.3% vs 19.0%)
- The percentage of African American/Black, non-Hispanic (hereafter referred to as Black) NPs and American Indian or Alaskan Native (hereafter referred to as American Indian) NPs were comparable to their presence in the state's population (12.9% vs 14.3% and 0.1% vs 0.2%, respectively)
- NPs in younger age cohorts were more racially and ethnically diverse compared with older NPs

- Statewide, half of NPs were 50 years of age or older. About 35% of NPs working in the New York City region were 50 years of age or older, while more than half of NPs in all other regions were 50 years of age or older

## Patient Care NP Education

- The vast majority of NPs had a master's degree or higher as their highest NP degree
- About 88% of NPs received their NP training in NYS

## Current Patient Care NP Practice

- More than 60% of NPs worked in outpatient settings\*
- More than 22% of NPs worked in hospital inpatient settings, emergency department settings, or urgent care centers

## Patient Care NPs Working in Primary Care

- More than one-third of NPs provided primary care services†

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\* Outpatient settings include the following: health centers or clinics, including federally qualified health centers (FQHCs); rural health clinics; hospital outpatient care, including primary care and specialty care extension clinics; physician practices; independent NP practices; and state or county public health departments.

† A primary care NP is defined as a patient care NP who reported working in an outpatient setting as defined above, the specialty of that outpatient setting being one or more of the following: general practice, family practice, general internal medicine, obstetrics/gynecology, and/or general pediatrics.

## Patient Care NPs in HPSAs‡

- More than 43% of NPs in NYS worked in primary care HPSAs
- Forty-nine percent of NPs who identified as Black worked in primary care HPSAs
- Nearly half of primary care NPs worked in primary care HPSAs
- Of the NPs who worked in HSPAs:
  - 48% worked in health centers or clinics
  - 23% worked in hospital inpatient settings, including emergency departments and urgent care centers
  - 10% worked in physician offices

## Practice Requirements for Patient Care NPs

- More than 86% of NPs reported having more than 3,600 hours of qualifying practice experience, making them eligible for a collaborative relationship with a physician
- Of those eligible, 63% reported collaborative relationships with physicians in lieu of written practice agreements

## Future Plans of Patient Care NPs

- 95% of NPs reported no near-term plans to retire, to significantly reduce patient care hours, or to change practice locations either within or outside of the state

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‡ A primary care HPSA is a geographic area, population, or facility that has been designated as having a shortage of primary care providers and services. For more information, please visit the HRSA website on shortage designations and HPSAs: <https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation>.

## **LIMITATIONS**

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This report is based on data drawn from survey responses submitted by NPs who reregistered their certification between January 1, 2018, and December 31, 2020, and may not provide an accurate count of patient care NPs practicing in the state. Specifically, it does not include NPs who were newly certified between 2018 and 2020. It also may include NPs who stopped providing clinical services after their certification reregistration. Moreover, the data used in this analysis were self-reported and may contain inaccuracies. Finally, the analysis did not include an assessment of COVID-19 impacts on NP practice, despite the fact that scope of practice and licensing requirements, among other variables, were changed in response to COVID-19.

## **DISCUSSION**

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More than one-third of patient care NPs provided primary care services. The percentages of NPs who identified as Black or American Indian were similar to their respective proportions of the state's population, while the percentage of NPs who identified as Hispanic was low compared with their presence in the state's population.

Our research indicated that approximately half of primary care NPs worked in primary care HP-SAs. Moreover, nearly 50% of NPs who identified as Black worked in HPSAs. Further research could provide a better understanding of the NP workforce in underserved communities and could potentially inform programs and policies to increase access to needed services. In addition, future research opportunities could include studies of:

- Impacts of the COVID-19 pandemic on:
  - NP practice decisions
  - NP distribution
  - NPs serving vulnerable populations, especially those working in rural communities or with underserved populations
  - NP telehealth providers, including the number of and types of services provided and a regional analysis
  - NP providers of behavioral health services and the settings where these services are provided, including a regional analysis
- NPs working in federally qualified health centers (FQHCs)

## **CONCLUSIONS**

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This report presents a profile of the state's patient care NPs using data reported by NPs as they reregistered with the state between January 1, 2018, and December 31, 2020. An increasingly diverse state population requires a more diverse NP workforce that not only ensures adequate capacity but also supports the provision of culturally competent health care. Detailed information about NP supply and distribution furthers our understanding of the state's NP workforce and the contributions they make to health service delivery and access to care. Continued research on the NP workforce offers a better understanding of NP practice in underserved communities and in-depth insight into services provided. Moreover, understanding the NP workforce gives researchers an opportunity to learn more about impacts on patient outcomes and population health.





# TECHNICAL REPORT

## BACKGROUND

Nurse practitioners (NPs) are registered nurses (RNs) with advanced education and clinical experience who provide a wide array of health services. NPs play increasingly important roles in the delivery of primary care services across New York State (NYS), particularly in underserved communities. Since 2015, all NPs in NYS are required by law to provide, via a brief survey, additional information to the state at the time of their triennial certification reregistration. The survey focuses on demographic, educational, and practice characteristics and was developed to support more effective health workforce planning in the state.

The COVID-19 pandemic has had a widespread impact on the health care delivery system and the health workforce. In response to surging cases, NYS responded initially with a variety of approaches to ensure adequate health workforce capacity and with strategies to expand access to care for needed services. Through the use of executive orders to provide scope of practice and regulatory flexibility, NYS temporarily relaxed regulatory limitations by expanding NPs' scope of practice and waived supervisory or collaborative practice agreement requirements. The state also temporarily suspended required licensing, certification, and mandatory credentialing renewals.<sup>1,2</sup> These expansions allowed the recruitment of out-of-state health professionals, including individuals from Canada, to assist with acute care services.<sup>1,2</sup>

This report presents an in-depth analysis of the state's active patient care NPs, including distribution, practice characteristics, education, demographics, and retirement intentions at the time of reregistration.

## METHODS

An NP practicing in NYS must be licensed by the state as an RN and certified as an NP in one or more of 16 different NP specialties.\* NPs must re-register every 3 years for each certification held, and in any given year, approximately one-third of currently certified NPs in the state reregister. Effective September 1, 2015, all NPs in NYS were required by law to provide additional information to the state at the time of reregistration. The Center for Health Workforce Studies (CHWS), in collaboration with the NYS Education Department (SED) and the NYS Department of Health (DOH), developed a brief, 22-question survey to collect the required information from NPs. The survey asks about demographic, educational, and practice characteristics and is included as part of NP reregistration requirements. Most respondents complete the survey online. A paper copy of the survey (Appendix) is also available for NPs unable to complete the survey online.

On a quarterly basis, CHWS creates a data set based on responses from the previous 3 months (including survey data from the paper copies, which are manually entered into the data set). To ensure data quality, the data are carefully processed, which includes validating license numbers as well as validating and correcting, if applicable, inconsistent data. In addition, practice addresses are geocoded and linked to a county, region, and state.

The most recent quarterly data set is combined with previous data sets, and NPs with multiple submissions are identified. For those NPs with

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\* Nurse practitioner specialty areas comprise acute care, adult health, college health, community health, family health, gerontology, holistic nursing, neonatology, obstetrics and gynecology, oncology, palliative care, pediatrics, perinatology, psychiatry, school health, and women's health.<sup>3</sup>

multiple submissions, the last survey submitted is kept and all other submissions removed. A 3-year data set that includes the most recent NP survey responses over the 3-year period is compiled. For the purposes of this analysis, a data set was developed that included patient care NPs working or volunteering in NYS in positions that require NP certification.

This report is based on NP survey data collected between January 1, 2018, and December 31, 2020. During that period, 21,994 surveys were completed. Of those respondents, 14,329 were identified as active patient care NPs who worked in NYS (Table 1).

**TABLE 1. Identifying Active Patient Care NPs in NYS**

Steps in process	Retained	Removed
Surveys received	21,994	
Multiple submissions		1,821
Unique NPs	20,173	
Out of state, inactive, retired		4,094
Active NPs in NYS	16,079	
Practicing in NYS but not providing patient care		1,750
Active patient care NPs in NYS	14,329	

## Definitions and Notes

### Patient Care

Patient care is defined as working or volunteering in positions providing clinical care and requiring NP certification.

### Outpatient Setting

Outpatient settings include the following:

- Health centers or clinics, including:
  - Federally qualified health centers (FQHCs)
  - Hospital outpatient care, including primary care and specialty care extension clinics
  - State and county public health departments
- Physician practices
- Independent NP practices

### Primary Care NP

A primary care NP is defined as a patient care NP who reported working in an outpatient setting as defined above, the specialty of that outpatient setting being one or more of the following: general practice, family practice, general internal medicine, obstetrics/gynecology, and/or general pediatrics.

### Regions

For regional analysis, NYS Department of Labor (NYS DOL) regions are used (Figure 1). The counties encompassed by each NYS DOL region are listed in Table 2.

**FIGURE 1. NYS Department of Labor Regions**



**TABLE 2. NYS Department of Labor Regions by County**

NYS DOL region	Counties
Capital District	Albany, Columbia, Greene, Rensselaer, Saratoga, Schenectady, Warren, Washington
Central New York	Cayuga, Cortland, Madison, Onondaga, Oswego
Finger Lakes	Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, Yates
Hudson Valley	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester
Long Island	Nassau, Suffolk
Mohawk Valley	Fulton, Herkimer, Montgomery, Oneida, Otsego, Schoharie
New York City	Bronx, Kings (Brooklyn), New York (Manhattan), Queens, Richmond (Staten Island)
North Country	Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, St. Lawrence
Southern Tier	Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tioga, Tompkins
Western New York	Allegany, Cattaraugus, Chautauqua, Erie, Niagara

### *Health Professional Shortage Areas*

Health Professional Shortage Areas (HPSAs) are federal designations that identify communities or counties with shortages of primary care providers (primary care HPSAs), dentists (dental HPSAs), or psychiatrists (mental health HPSAs).<sup>†</sup> Specifically, primary care HPSAs have shortages of general practitioners, family practitioners, internists, obstetricians/gynecologists, and/or general pediatricians who work in outpatient settings as defined above.

## FINDINGS

### Supply and Distribution of Patient Care NPs

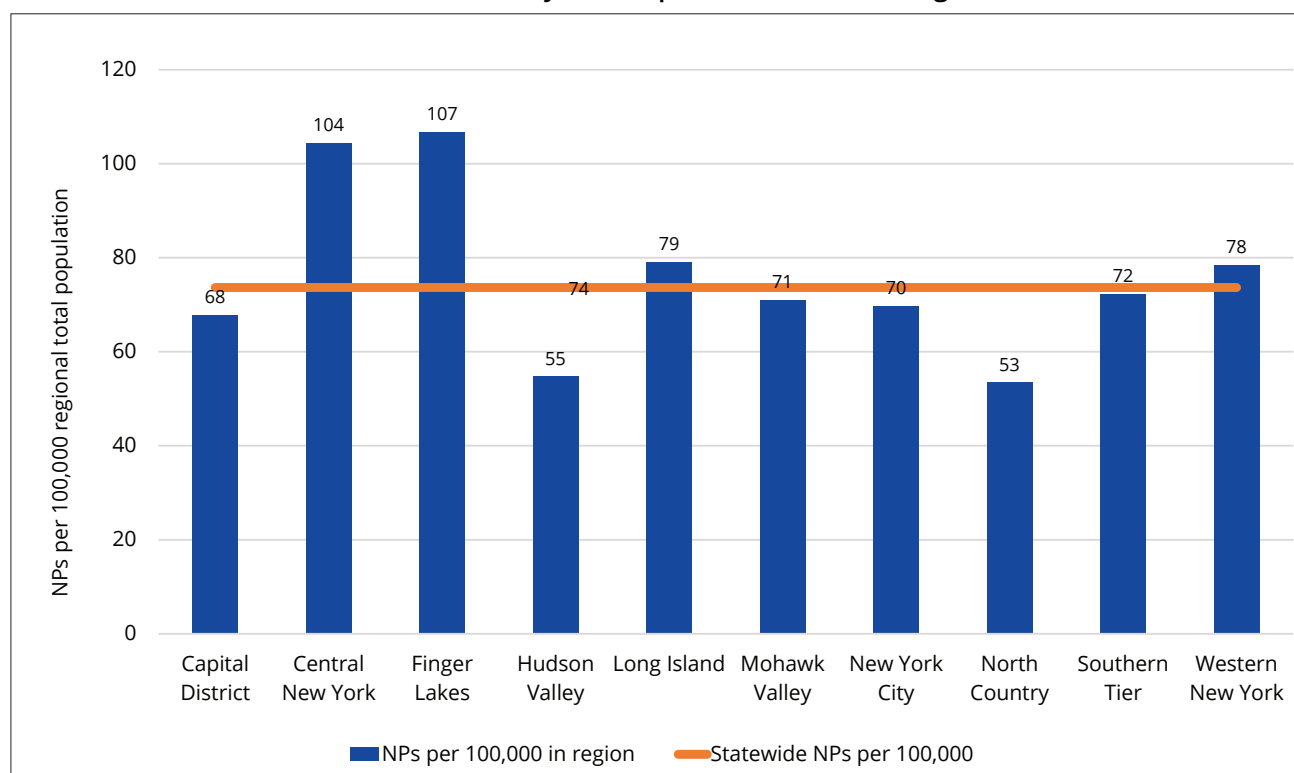
There was wide variability in the distribution of patient care NPs across regions of the state. There were 14,329 NPs who provided patient care in NYS, or about 74 NPs per 100,000 population.<sup>‡</sup> Regions with the greatest supply of NPs included the Finger Lakes region (107 NPs per 100,000) and the Central New York region (104 NPs per 100,000) (Figure 2). Regions with the lowest supply of NPs included the North Country (53 NPs per 100,000) and Hudson Valley (55 NPs per 100,000) regions.

<sup>†</sup> For more information on HPSAs, see <https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation#hpsas>.

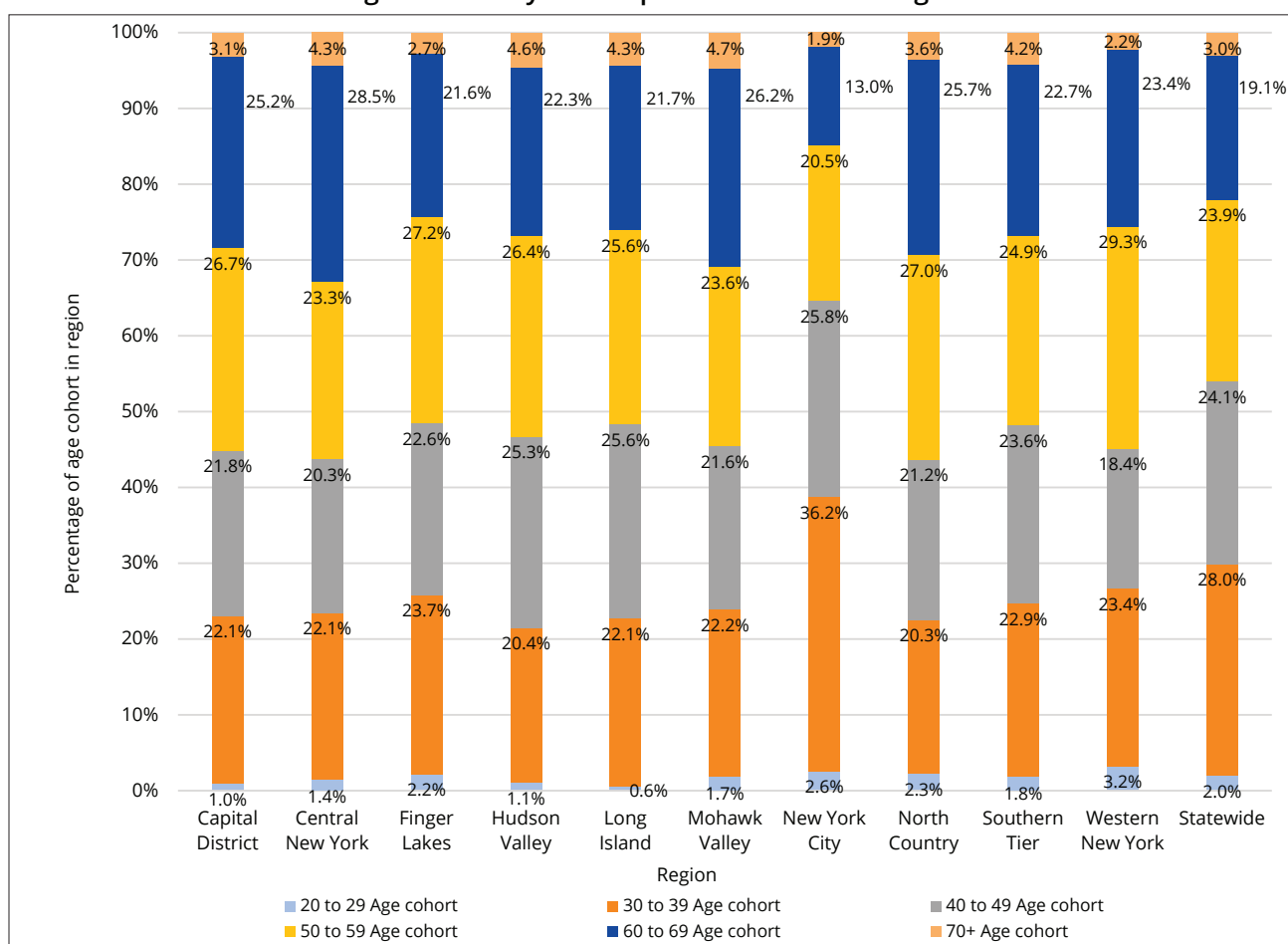
<sup>‡</sup> The statewide rate includes those NPs for whom county or region of principal setting could not be determined because the address had inaccurate or missing information.



**FIGURE 2. Estimates of Patient Care NPs by NYS Department of Labor Region**



**FIGURE 3. Patient Care NP Age Cohorts by NYS Department of Labor Region**



## Demographic Characteristics of Patient Care NPs

### Age

In most regions, more than half of patient care NPs were 50 years of age or older (Figure 3). The only exception was the New York City region, where only 35% of NPs were 50 years of age or older.

### Gender

The vast majority of NPs (92%) were female.

### Race/Ethnicity

The state's NPs were not as racially and ethnically diverse as the general population of NYS. Hispanic NPs were underrepresented in the state's NP workforce relative to their presence in the state's population (5.3% vs 19%). The percentage of African American/Black, non-Hispanic (hereafter referred to as Black) NPs was comparable to their presence in the state's population (12.9% vs 14.3%), as was the percentage of American Indian/Alaskan Native (hereafter referred to as American Indian) NPs (0.1% vs 0.2%). In contrast, NPs who identified as White, non-Hispanic (hereafter referred to as White) and Asian or Pacific Islanders (hereafter referred to as Asian) were overrepresented in the NP workforce (68% and 11%, respectively) relative to their presence in

the state's population (56% and 8%, respectively) (Table 3).

NPs in younger age cohorts were more racially and ethnically diverse than older NPs (Figure 4). More than 38% of NPs under the age of 50 were members of racial and ethnic minority groups compared with only 25% of NPs 50 years of age or older.

### Education and Training

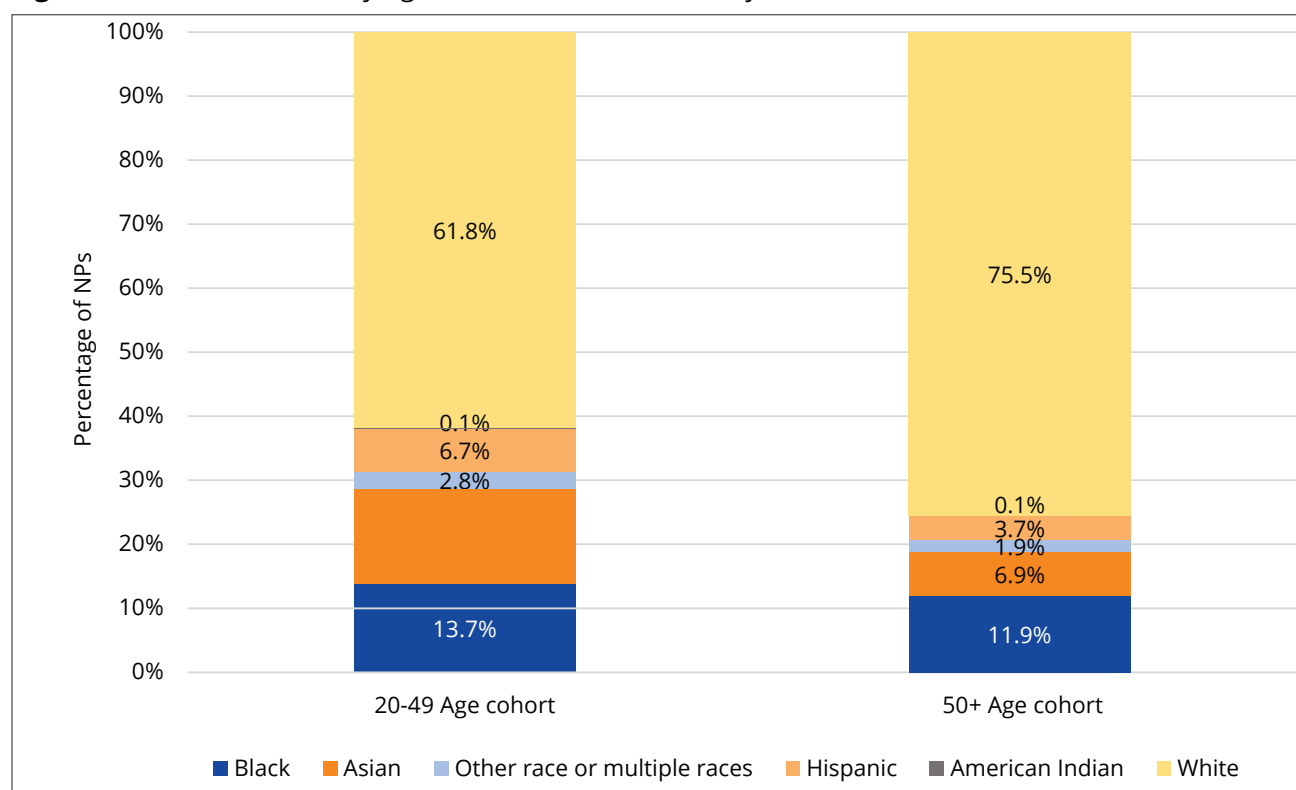
More than 78% of NPs graduated from registered nursing education programs in NYS; about 17% graduated from programs in other US states, and about 5% graduated from RN education programs outside of the US. Nearly 3% reported an NP certificate as their highest degree, while nearly 90% of NPs reported holding a master's degree or post-master's certificate as their highest NP degree (Table 4). Nearly 8% reported a doctorate as their highest degree. About 88% of all NPs received their NP training in NYS.

**TABLE 3. Race/Ethnicity of NYS Patient Care NPs Compared With the NYS Population**

Race/ethnicity	Patient care NPs, N (%)	NYS population, <sup>a</sup> N (%)
White	9,758 (68.1%)	10,883,812 (55.6%)
Black	1,849 (12.9%)	2,790,504 (14.3%)
Hispanic	761 (5.3%)	3,720,983 (19.0%)
Asian	1,602 (11.2%)	1,633,539 (8.4%)
American Indian	15 (0.1%)	46,034 (0.2%)

<sup>a</sup> Source: US Census Bureau, American Community Survey, 5-Year Estimates 2015-2019.

**Figure 4.** Patient Care NPs by Age Cohort and Race/Ethnicity



**TABLE 4.** Highest NP Degrees/Certificates Held by NYS Patient Care NPs

Types of NP degrees and/or certificates	Percentage of all patient care NPs
Certificate program	2.5%
Master's degree	79.7%
Post-master's certificate	10.1%
Doctor of Nursing Practice degree	7.7%

## Practice Settings

Nearly 60% of NPs worked in outpatient settings, such as health centers or clinics (including FQHCs); hospital outpatient care, including both primary care and specialty care; physician practices; independent NP practices; and state or county public health departments (Table 5). More than 22% of NPs worked in hospital inpatient set-

tings, emergency department (ED) settings, or urgent care centers.

Nursing homes and long-term care facilities had the highest percentages of NPs who identified as Black, representing nearly one-quarter of those who worked in those settings. Sixteen percent of NPs who worked in nursing home and long-term care facilities identified as Asian.

## Hours Worked

More than half of NPs (56%) worked 40 or more hours per week, with 45% working 40 to 49 hours per week and 11% working 50 hours or more per week (Table 6). Older NPs tended to work fewer hours, with 46% of NPs 60 years of age or older working at least 40 hours per week compared with 70% of NPs between the ages of 20 and 29.

**TABLE 5. Principal Employment Settings of Patient Care NPs in NYS by Region**

Principal employment setting	Capital District	Central New York	Finger Lakes	Hudson Valley	Long Island	Mohawk Valley	New York City	North Country	Southern Tier	Western New York	State-wide
Health center or clinic	36.4%	38.0%	41.5%	30.4%	31.3%	50.1%	48.9%	54.1%	50.4%	32.0%	<b>41.3%</b>
Hospice	0.1%	0.1%	0.5%	0.8%	0.6%	0.9%	0.4%	0.0%	0.2%	0.6%	<b>0.4%</b>
Hospital inpatient/ ED/urgent care center	19.6%	22.1%	22.2%	22.3%	25.5%	13.7%	23.5%	9.0%	13.0%	21.9%	<b>22.4%</b>
Independent NP practice	7.0%	3.5%	3.5%	5.8%	6.4%	2.9%	2.8%	3.6%	5.3%	3.6%	<b>4.1%</b>
Nursing home/ long-term care	4.0%	4.1%	8.7%	5.9%	3.6%	6.4%	5.0%	1.4%	5.7%	4.6%	<b>5.0%</b>
Physician practice	21.1%	19.1%	10.4%	19.5%	20.2%	11.1%	8.4%	19.8%	15.4%	23.5%	<b>14.3%</b>
Other setting	11.7%	13.2%	13.2%	15.3%	12.4%	14.9%	11.0%	12.2%	9.9%	13.8%	<b>12.3%</b>

**TABLE 6. NP Patient Care Hours per Week by Age Cohort**

Patient care hours per week	20-29 Age cohort	30-39 Age cohort	40-49 Age cohort	50-59 Age cohort	60+ Age cohort	All ages
0-9	1.8%	2.9%	3.8%	4.4%	8.9%	<b>4.8%</b>
10-19	3.6%	3.9%	5.4%	5.2%	9.7%	<b>5.8%</b>
20-29	5.7%	9.7%	10.3%	10.3%	15.2%	<b>11.1%</b>
30-39	19.2%	24.3%	22.2%	20.9%	20.4%	<b>22.0%</b>
40-49	63.7%	51.8%	46.2%	43.5%	34.4%	<b>44.9%</b>
50+	6.0%	7.4%	12.1%	15.7%	11.5%	<b>11.4%</b>

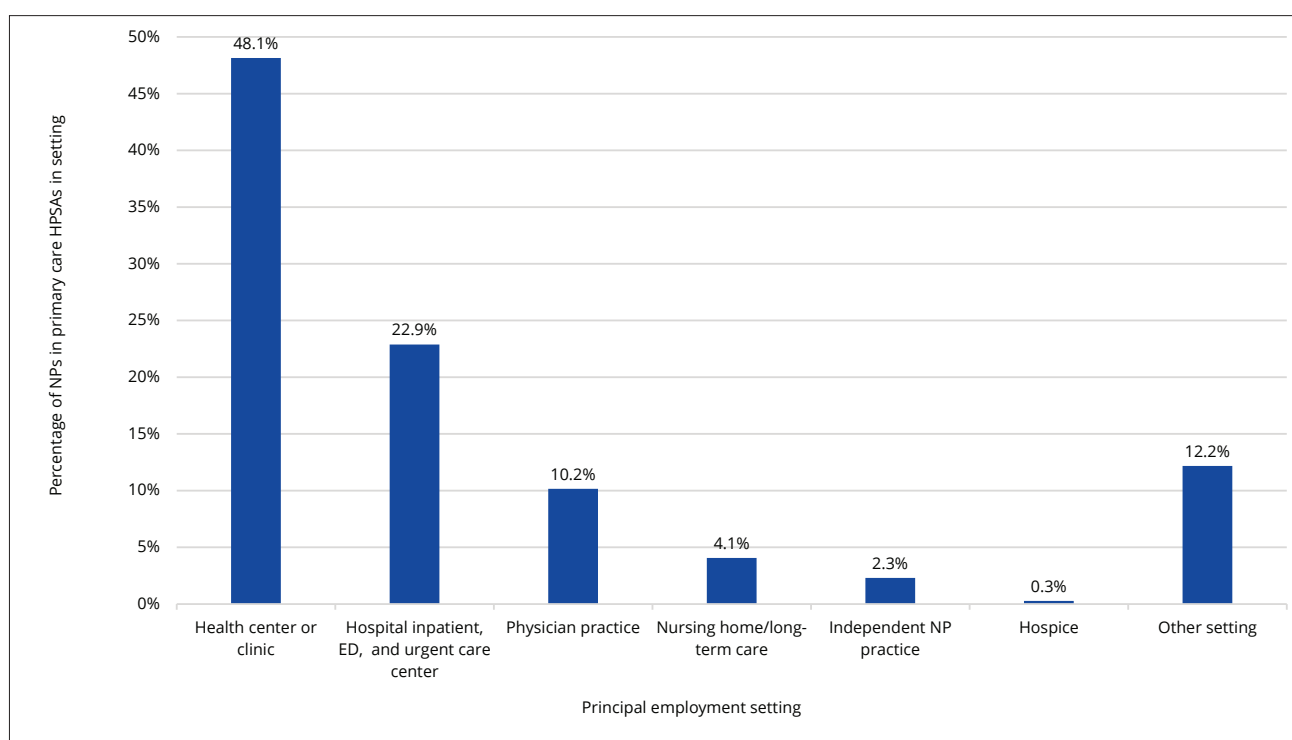
## Primary Care NPs

More than one-third (35%) of NPs in NYS provided primary care services, based on both their practice specialty and setting. The remainder worked in hospitals, nursing homes, or other medical specialties in private practices, such as dermatology or endocrinology (60%), or in mental health services (6%). The proportion of NPs who worked in primary care was similar across most racial/ethnic groups (Table 7).

**TABLE 7. Race/Ethnicity of Primary Care NPs Compared With NPs in Other Specialties**

Race/ethnicity	Primary care NPs, N (%)	Mental health NPs, N (%)	Other NPs, N (%)
White	3,425 (35.1%)	619 (6.3%)	5,714 (58.6%)
Black	694 (37.5%)	(69 3.7%)	1,086 (58.7%)
Hispanic	286 (37.6%)	28 (3.7%)	447 (58.7%)
Asian	446 (27.8%)	47 (2.9%)	1,109 (69.2%)
American Indian	8 (53.3%)	1 (6.7%)	6 (40.0%)
Other, multiple races	115 (33.4%)	23 (6.7%)	206 (59.9%)
<b>All patient care NPs</b>	<b>4,974 (34.7%)</b>	<b>787 (5.5%)</b>	<b>8,568 (59.8%)</b>

**FIGURE 5. Patient Care NPs in Primary Care HPSAs by Principal Employment Setting**



## Primary Care Health Professional Shortage Areas

Although only 25% of the state's population resides in federally designated primary care HPSAs,<sup>4</sup> slightly more than 43% of all patient care NPs in NYS worked in primary care HPSAs. Moreover, nearly half of primary care NPs worked in primary care HPSAs. Of the NPs who worked in HPSAs (Figure 5):

- 48% worked in health centers or clinics
- 23% worked in hospital inpatient settings, including emergency departments and urgent care centers
- 10% worked in physician offices

Forty-nine percent of NPs who identified as Black worked in primary care HPSAs; in contrast, only 41% of NPs who identified as Asian worked in primary care HPSAs.

## Practice Requirements for Patient Care NPs

Beginning January 1, 2015, the NYS Nurse Practitioners Modernization Act<sup>§</sup> allowed NPs with more than 3,600 hours of qualifying practice experience to have collaborative relationships with one or more physicians in lieu of written practice agreements.<sup>4</sup> Upwards of 86% of NPs reported having more than 3,600 hours of qualifying practice experience. Of those eligible NPs, more than 63% reported having collaborative relationships with physicians in lieu of written practice agreements.

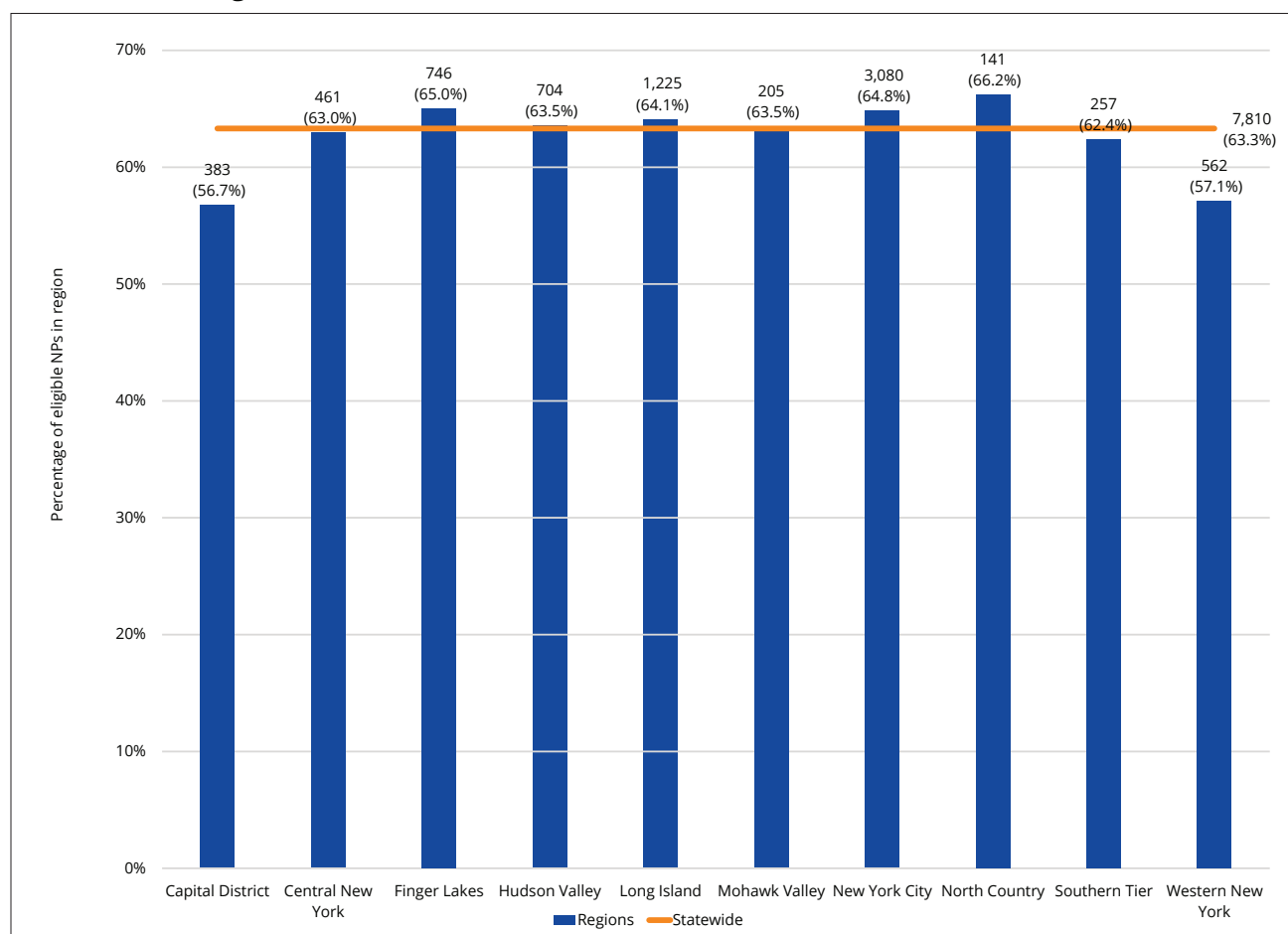
Most NYS regional percentages of eligible NPs with collaborative relationships with physicians

were similar to the statewide percentage (ie, around 63%). The North Country region had the highest percentage of NPs reporting collaborative relationships with physicians (66%), followed by the Finger Lakes and New York City regions (both around 65%). The Capital District and Western New York regions had the lowest percentages of NPs reporting collaborative relationships with physicians (both around 57%) (Figure 6).

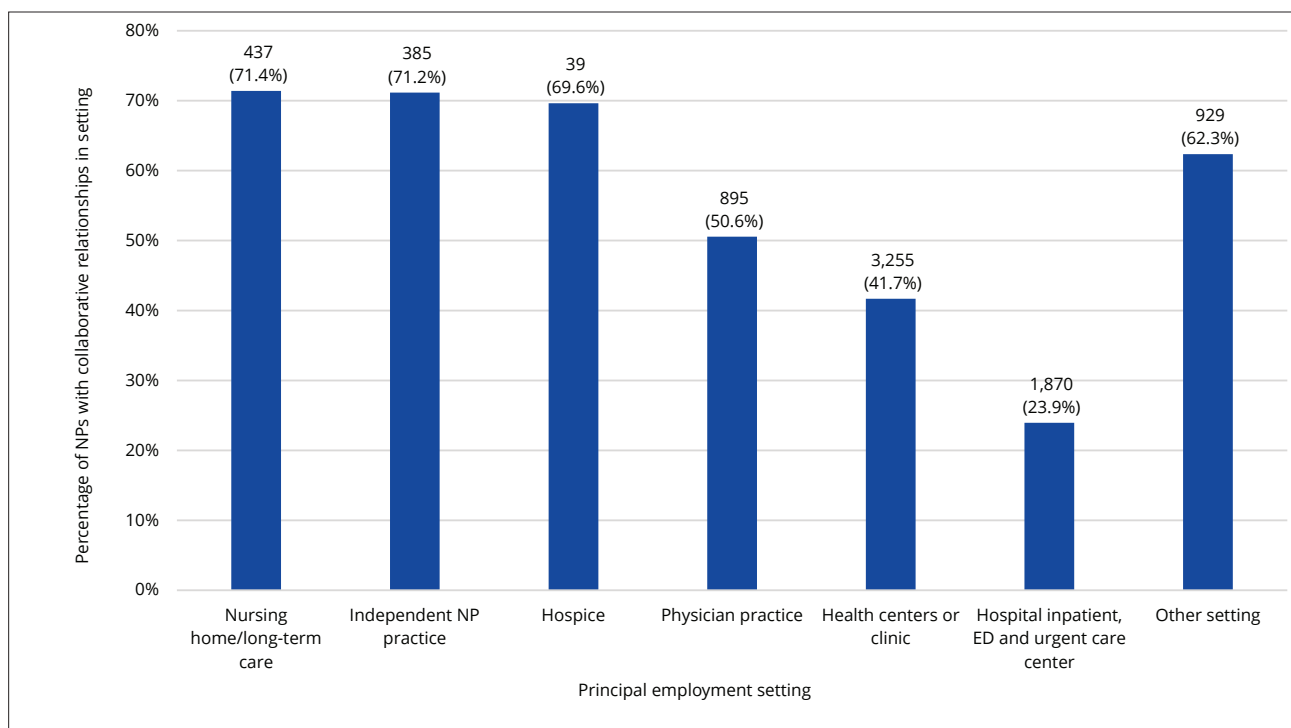
The settings with the highest percentage of eligible NPs who had collaborative relationships with licensed physicians were nursing homes/long-term care settings and independent NP practices (each about 71%) (Figure 7). In contrast, slightly less than 51% of NPs employed in physician practices had collaborative relationships.

§ Please see NYS Education Law, Article 139, §6902: <http://www.op.nysed.gov/prof/nurse/article139.htm>.

**FIGURE 6. Eligible Patient Care NPs With Collaborative Relationships With Physicians by NYS Department of Labor Region**



**FIGURE 7. Eligible Patient Care NPs With Collaborative Relationships With Physicians by Principal Employment Setting**



## Future Practice Plans

At the time of reregistration, more than 95% of NPs reported no plans to make significant changes to their professional activities within the next 12 months. However, about 2% indicated plans to retire within the next 12 months, and 3% reported plans to reduce their hours within the next 12 months. Additionally, 4% reported plans to move their practice to another location within the state, and another 3% planned to move their practice out of the state.

## LIMITATIONS

This report is based on data drawn from survey responses submitted by NPs who reregistered their certification between January 1, 2018, and December 31, 2020. The data set does not include information on all NPs certified to practice in NYS. Specifically, it does not include NPs who

were newly certified between 2018 and 2020. The data set also may include those NPs who stopped providing clinical services after their certification reregistration. Moreover, the data used in this analysis were self-reported and may contain inaccuracies. Finally, the analysis did not include an assessment of COVID-19 impacts on NP practice, despite the fact that scope of practice and licensing requirements, among other variables, were changed in response to COVID-19.

## DISCUSSION

This report presents a profile of NYS NPs based on data drawn from a mandatory reregistration survey. Of the more than 14,300 NPs in NYS, more than half (56%) worked 40 or more hours per week. The distribution of NPs varied widely by region, with more than 100 patient care NPs per 100,000 in the Finger Lakes and Central New York regions, but only 70 patient care NPs per 100,000

in the New York City region and 55 per 100,000 in the Hudson Valley region. Sixty-one percent of NPs worked in outpatient settings, with higher percentages of NPs in predominantly upstate rural regions working in health centers, including FQHCs. More than one-third of NPs in the state reported providing primary care services.

NPs play a crucial role in expanding access to health services. As the state's population grows and becomes more diverse, an NP workforce that closely represents the racial and ethnic composition of the state's population not only ensures an adequate supply of health workers, but also supports the delivery of culturally competent health care. The findings presented in this report indicate some progress, as younger NPs are more racially and ethnically diverse than older NPs, and the percentages of Black and American Indian NPs were similar to their respective percentages in the state's population. However, Hispanic NPs remain significantly underrepresented relative to their presence in the statewide general population. In addition, the representation of NPs identifying as Black and/or Hispanic relative to their presence in regional populations varied considerably, highlighting areas of the state where disparities remain. Significantly, nearly 50% of Black NPs worked in primary care HPSAs, bringing much-needed services to vulnerable and underserved populations statewide.

NPs in NYS were predominantly female and had a median age of 48 years, while just under half of all NPs statewide were 50 years of age or older. At the time of reregistration, more than 90% of NPs in the state reported no near-term plans to retire, to significantly reduce patient care hours, or to change practice locations either within or outside of the state.

However, the COVID-19 pandemic has put incredible strain on the entire health care workforce. Despite emergency action taken by the

state via executive orders to modify licensure requirements, relax supervisory requirements, and expand practice authority, simultaneous furloughs in some areas in combination with surges and high demand for health care professionals in others may have forced some health professionals to change their current practice plans or location.<sup>1,5</sup> Consequently, future practice plans for many NPs may be drastically altered due to the pandemic, which may in turn impact access to care for underserved and vulnerable populations. Regions with existing HPSAs could be impacted more significantly by a reduction of available NPs. Nevertheless, while the contributions of NPs to the response to the pandemic are invaluable, the analysis for this report did not study the pandemic's effect on NP practice.

Our research indicated that approximately half of primary care NPs worked in primary care HPSAs. A better understanding of demographics and practice characteristics of the NP workforce, and who is more likely to work in HPSAs, could help planners and policymakers target resources to increase the number of NPs working in vulnerable or underserved communities. Additional future research opportunities include:

- Impact of the COVID-19 pandemic on:
  - NP practice decisions
  - NP distribution
  - NPs serving vulnerable populations, especially those NPs working in rural communities or with underserved populations
  - NP telehealth providers, including the number of and types of services provided and a regional analysis
  - NP providers of behavioral health services and the settings where these services are provided, including a regional analysis
- NPs working in FQHCs



## CONCLUSIONS

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This report presents a profile of NPs practicing in NYS based on data drawn from a mandatory survey of NPs reregistering their state certification between January 1, 2018, and December 31, 2020. NPs play a crucial role in expanding access to health services, particularly to underserved and vulnerable communities. Furthermore, an increasingly diverse state population requires a more diverse NP workforce that not only ensures adequate capacity but also supports the provision of culturally competent health care. Detailed information about NP supply and distribution as well as demographic, educational, and practice

characteristics furthers our understanding of the state's NP workforce and the contributions they make to health service delivery in the state. Of course, the COVID-19 pandemic has had a devastating effect on the nation's health and health care system and will require monitoring of the state's NP workforce to understand the full impact of the pandemic on NPs. Continued research on the NP workforce promises to offer a better understanding of NP presence and practice in underserved communities and in-depth insight into services provided. Moreover, understanding the NP workforce gives researchers an opportunity to learn more about impacts on patient outcomes and population health.







# REFERENCES

## REFERENCES

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# APPENDIX

## APPENDIX: NURSE PRACTITIONER SURVEY

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# 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 are used by the New York State Department of Health for health workforce planning. The Department of Health will publish any information used only in aggregated, 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: ✓ ✗ ○ ●

## BASIC INFORMATION

### 1. Please provide your email address:

### 2. Date completing survey:

Month

- ☐ January
- ☐ February
- ☐ March
- ☐ April
- ☐ May
- ☐ June
- ☐ July
- ☐ August
- ☐ September
- ☐ October
- ☐ November
- ☐ December

Year

- ☐ 2017
- ☐ 2018
- ☐ 2019
- ☐ 2020
- ☐ 2021
- ☐ 2022

### 3. New York State RN License Number

Profession Code: 22

License Number:

### 4. New York State Nurse Practitioner License Number

Profession Code:

License Number:

### 5. National Provider Identifier (If applicable.) (Enter the 10-digit number)

## PERSONAL INFORMATION

### 6. Year of Birth

### 7. Gender:

- ☐ Male
- ☐ Female

### 8. Ethnicity: Are you Hispanic/Latino?

- ☐ Yes
- ☐ No

**9. Race: (Mark all that apply.)**

- |   |  |
|---|--|
| <input type="radio"/> African American/Black        | <input type="radio"/> Asian/Pacific Islander |
| <input type="radio"/> American Indian/Alaska Native | <input type="radio"/> White                  |
| <input type="radio"/> Other (specify): _____        |  |

**EDUCATIONAL INFORMATION**

**10. What educational program(s) did you complete for your NP preparation? (Mark all that apply.)**

- ☐ Certificate Program (no Master's Degree)
- ☐ Master's Degree
- ☐ Post Master's Certificate
- ☐ Doctor of Nursing Practice Degree
- ☐ Other (specify): \_\_\_\_\_

**11. Location of Education:**

Location of high school from which you graduated?

- ☐ New York
- ☐ Other State in the U.S.
- ☐ Outside the U.S.

Location of first RN school from which you graduated?

- ☐ New York
- ☐ Other State in the U.S.
- ☐ Outside the U.S.

Location of first NP education program from which you graduated?

- ☐ New York
- ☐ Other State in the U.S.
- ☐ Outside the U.S.

**12. What year did you graduate from your first NP education program?**

Year:

**13. For which NP specialties are you certified in New York? (Mark all that apply.)**

- |   |  |   |
|---|--|---|
| <input type="radio"/> 01-Acute Care       | <input type="radio"/> 07-Holistic Medicine     | <input type="radio"/> 13-Perinatology   |
| <input type="radio"/> 02-Adult Health     | <input type="radio"/> 08-Neonatology           | <input type="radio"/> 14-Psychiatry     |
| <input type="radio"/> 03-College Health   | <input type="radio"/> 09-Obstetrics/Gynecology | <input type="radio"/> 15-School Health  |
| <input type="radio"/> 04-Community Health | <input type="radio"/> 10-Oncology              | <input type="radio"/> 16-Women's Health |
| <input type="radio"/> 05-Family Health    | <input type="radio"/> 11-Palliative Care       |   |
| <input type="radio"/> 06-Gerontology      | <input type="radio"/> 12-Pediatrics            |   |

Using the numbers above, please indicate your primary practice specialty:

**PRACTICE AND SERVICE INFORMATION**

**14. What best describes your current work status? (Mark all that apply.)**

- ☐ Working in at least one position that requires NP certification
- ☐ Volunteering in a position requiring NP certification
- ☐ Working in a position that only requires RN licensure, but not NP certification
- ☐ Working, but neither as an RN nor NP
- ☐ Not currently working
- ☐ Retired



**15. For all NP positions held, indicate the average number of hours currently spent per week on each major activity. (Exclude overtime.)**

	None	1-9	10-19	20-29	30-39	40-49	50+
Primary care*	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other patient care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*\*Primary care is defined as first contact and continuing care, including basic or initial diagnosis and treatment, health supervision, management of chronic conditions, preventive health services, and appropriate referral(s).*

**\*\*\*If you do not spend any time providing patient care, STOP here.\*\*\***

**16. NP Patient Care Practice Location(s)**

*Please indicate the location(s) where you spend the most time providing patient care. List the address(es) of the practice location(s), including zip code. Also, indicate the average number of patient care hours per week you spend at each location.*

**a. Principal Practice Location**

		<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
Practice/Facility/Organization Name	City/Town	State
Number	Street	
	Zip Code	
	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	Avg Patient Care Hours per week: <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>

**Which best describes your principal work setting? (Select only one.)**

- |  |   |   |
|--|---|---|
| <input type="radio"/> Health center or clinic, including federally qualified health center | <input type="radio"/> Hospital inpatient/emergency department | <input type="radio"/> Physician practice                    |
| <input type="radio"/> Hospice  | <input type="radio"/> Independent NP practice                 | <input type="radio"/> State/county public health department |
| <input type="radio"/> Hospital outpatient primary care                                     | <input type="radio"/> Nursing home/long-term care             | <input type="radio"/> Urgent care center                    |
| <input type="radio"/> Hospital outpatient specialty care                                   | <input type="radio"/> Other (specify) _____                   |   |

**b. Secondary Practice Location**

		<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
Practice/Facility/Organization Name	City/Town	State
Number	Street	
	Zip Code	
	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	Avg Patient Care Hours per week: <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>

**Which best describes your secondary work setting? (Select only one.)**

- |  |   |   |
|--|---|---|
| <input type="radio"/> Health center or clinic, including federally qualified health center | <input type="radio"/> Hospital inpatient/emergency department | <input type="radio"/> Physician practice                    |
| <input type="radio"/> Hospice  | <input type="radio"/> Independent NP practice                 | <input type="radio"/> State/county public health department |
| <input type="radio"/> Hospital outpatient primary care                                     | <input type="radio"/> Nursing home/long-term care             | <input type="radio"/> Urgent care center                    |
| <input type="radio"/> Hospital outpatient specialty care                                   | <input type="radio"/> Other (specify) _____                   |   |

**17. If you practice in a private physician office and/or an independent NP practice, please indicate the specialty(ies) of the principal and, as applicable, secondary location(s). (Mark all that apply.)**

	Principal	Secondary
Allergy and Immunology	<input type="radio"/>	<input type="radio"/>
Dermatology	<input type="radio"/>	<input type="radio"/>
Family Medicine	<input type="radio"/>	<input type="radio"/>
General Practice	<input type="radio"/>	<input type="radio"/>
Internal Medicine (General)	<input type="radio"/>	<input type="radio"/>
Cardiovascular	<input type="radio"/>	<input type="radio"/>
Endocrinology, Diabetes, and Metabolism	<input type="radio"/>	<input type="radio"/>
Geriatrics	<input type="radio"/>	<input type="radio"/>
Infectious Disease	<input type="radio"/>	<input type="radio"/>
Medical Oncology	<input type="radio"/>	<input type="radio"/>
Other Internal Medicine Subspecialty	<input type="radio"/>	<input type="radio"/>
Obstetrics/Gynecology	<input type="radio"/>	<input type="radio"/>
Occupational Medicine	<input type="radio"/>	<input type="radio"/>
Otolaryngology	<input type="radio"/>	<input type="radio"/>
Pediatrics (General)	<input type="radio"/>	<input type="radio"/>
Pediatric Subspecialty	<input type="radio"/>	<input type="radio"/>
Psychiatry	<input type="radio"/>	<input type="radio"/>
Surgery (General)	<input type="radio"/>	<input type="radio"/>
Surgery Subspecialty	<input type="radio"/>	<input type="radio"/>
Other (specify)	<input type="radio"/>	<input type="radio"/>

**18. In the next 12 months, you plan to:**  
(Mark all that apply.)

- ☐ Retire from patient care
- ☐ Significantly reduce patient care hours
- ☐ Move to another location in NY and continue practicing
- ☐ Move to another state and continue practicing
- ☐ None of the above

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### COLLABORATING PHYSICIANS AND RELATIONSHIPS

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**19. Do you have more than 3,600 hours of experience practicing as a certified nurse practitioner in NY State or another state, or working as a nurse practitioner for the United States Veteran's Administration, the United States Armed Forces, or United States Public Health Service?**

- ☐ Yes (Please continue survey.)
- ☐ No (Please STOP here and return the survey.)

**20. If you have more than 3,600 hours of nurse practitioner practice experience, which best describes how you practice? (Select only one.)**

- ☐ You practice pursuant to written practice protocols and written practice agreement with a collaborating physician.
- ☐ You practice and have collaborative relationships with one or more NY State licensed physicians qualified to collaborate in the specialty involved or with a NY State Department of Health licensed hospital that provides services through licensed physicians qualified to collaborate in the specialty involved and having privileges at such institution. A collaborative relationship means that you communicate, as required by State Education Department regulation, with the qualified physician for the purposes of exchanging information, as needed, in order to provide comprehensive patient care and to make referrals as necessary.

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THANK YOU FOR COMPLETING THIS SURVEY. RETURN COMPLETED SURVEY IN THE ENVELOPE PROVIDED.

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## About the Authors

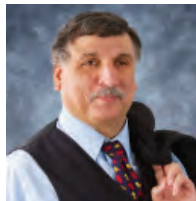
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### **Kristen Sitegler, MPA**

*Senior Project Coordinator, Center for Health Workforce Studies*

Ms. Stiegler coordinates the DSRIP survey process, coordinates and compiles the tracking report, and oversees New York work and reports.



### **Robert Martiniano, DrPH, MPA**

*Senior Program Manager, Center for Health Workforce Studies*

Dr. Martiniano has an extensive background in health workforce research and program management, including 11 years at the New York State Department of Health.



### **Nafin Harun, MA**

*Research Analyst, Center for Health Workforce Studies*

Mr. Harun assists in the analyses of provider shortage areas and works to develop applications, maps, and other data visualizations.



### **Shen Wang, MPA, MPH**

*Research Associate, Center for Health Workforce Studies*

Mr. Wang specializes in data and model analysis, database management, and GIS, network, and system dynamic analysis.



### **Gaetano Forte, MSHS**

*Assistant Director, Center for Health Workforce Studies*

Mr. Forte is the Assistant Director and has worked at CHWS since 1998. He oversees all research projects, working with the project directors to ensure that research is conducted at the highest level of quality, in a timely manner, and in accordance with the agreements between CHWS and its funders.



### **Jean Moore, DrPH**

*Director, Center for Health Workforce Studies*

Bringing over a decade of experience as a health workforce researcher, Dr. Moore has been the director of CHWS since 2004.



School of Public Health | University at Albany, SUNY  
1 University Place, Suite 220 | Rensselaer, NY 12144-3445

[www.chwsny.org](http://www.chwsny.org)