# Nursing
the Future:

Ensuring A Healthy
California With The Diverse
Nursing Workforce We Need

January 2023

The Campaign for
College
Opportunity

# SHORTAGES IN CALIFORNIA'S NURSING WORKFORCE

Nurses play a central role in delivering patient care and advancing the health of California's population. Yet the state faces significant nursing workforce shortages over the next five years despite recent state and federal investments and improvement in the workforce shortages in other health professions.[1] The underrepresentation of Black and Latinx nurses in the healthcare workforce is also a public health concern in a state where 65% of the population is nonwhite and Latinx residents alone made up 39% of the total population in 2021.[2] Health professionals of color are more likely to provide culturally competent care and to practice in ethnically diverse communities, thereby reducing health disparities that those communities often suffer.[3]

## Frequently Used Abbreviations

**DEGREES**

**ADN** – Associate Degree in Nursing

**ADT** – Associate Degree for Transfer

**BSN** – Bachelor of Science in Nursing

**ELM** – Entry-Level Masters
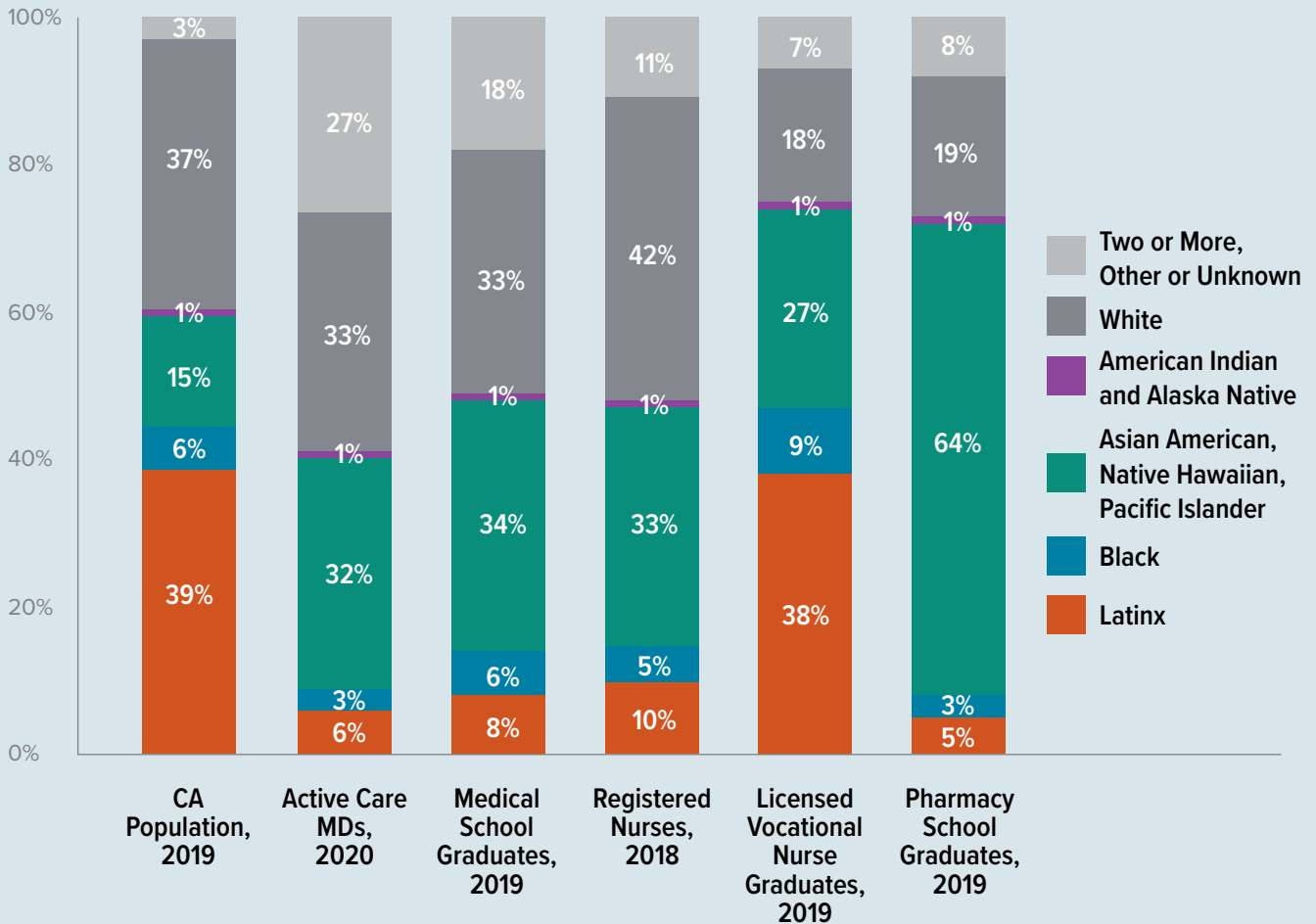
**NURSING CERTIFICATIONS**

**LVN** – Licensed Vocational Nurse

**RN** – Registered Nurse

**STATE AGENCIES**

**BRN** – California Board of Registered Nursing

**HCAI** – California Department of Health Care Access and Information

**Although Latinx Californians account for 39% of the state's population, only six percent of active care medical doctors and 10% of registered nurses in the state are Latinx.**

Figure 1. California General Population and Select Health Care Professionals by Race/Ethnicity.



Legend:
- Two or More, Other or Unknown
- White
- American Indian and Alaska Native
- Asian American, Native Hawaiian, Pacific Islander
- Black
- Latinx

**CA Population, 2019:** Latinx 39%, Black 6%, Asian American/Native Hawaiian/Pacific Islander 15%, American Indian and Alaska Native 1%, White 37%, Two or More/Other or Unknown 3%

**Active Care MDs, 2020:** Latinx 6%, Black 3%, Asian American/Native Hawaiian/Pacific Islander 32%, American Indian and Alaska Native 1%, White 33%, Two or More/Other or Unknown 27%

**Medical School Graduates, 2019:** Latinx 8%, Black 6%, Asian American/Native Hawaiian/Pacific Islander 34%, American Indian and Alaska Native 1%, White 33%, Two or More/Other or Unknown 18%

**Registered Nurses, 2018:** Latinx 10%, Black 5%, Asian American/Native Hawaiian/Pacific Islander 33%, American Indian and Alaska Native 1%, White 42%, Two or More/Other or Unknown 11%

**Licensed Vocational Nurse Graduates, 2019:** Latinx 38%, Black 9%, Asian American/Native Hawaiian/Pacific Islander 27%, American Indian and Alaska Native 1%, White 18%, Two or More/Other or Unknown 7%

**Pharmacy School Graduates, 2019:** Latinx 5%, Black 3%, Asian American/Native Hawaiian/Pacific Islander 64%, American Indian and Alaska Native 1%, White 19%, Two or More/Other or Unknown 8%

Data Source: California Health Care Foundation (CHCF). 2021. Healthcare Almanac

As aging baby boomer nurses are retiring in larger numbers through the next decade, nursing schools must be able to graduate enough new nurses to replace them. Nursing shortages lead to increases in errors, overwork and burnout among nurses, and higher patient morbidity and mortality rates, potentially affecting patient care and safety as more nurses resign or exit the field.[4] Prior to the onset of the COVID-19 pandemic, nursing schools were on track to produce enough nurses to meet this demand. However, an acute shortage of nurses developed during the pandemic as turnover rates increased, especially among nurses who were already close to retiring and women nurses with young children. Concern rose about the ability of the health care workforce to meet patient needs during successive COVID-19 surge periods when cases spiked and overwhelmed or threatened to overwhelm available health care resources.[5] Additionally, factors such as mental health issues, burnout, fatigue, frustration, lack of appreciation and support, and feeling unsafe in the workplace contribute to nurses leaving the workforce even absent pandemic conditions.

Solving the unmet need for nurses in California, and doing so with racial equity in mind, has implications for the general health of the population that extend far beyond the ongoing COVID-19 crisis. Plans to bridge the gap should ensure that the nursing workforce more closely reflects the racial and ethnic demographics of the state's population. A diverse nursing workforce will help communities with historically higher nursing workforce shortages gain access to better health care and improved patient outcomes.

## Capacity of California Nursing Schools

Nursing is a high-wage occupation providing economically stable careers and strong growth potential. There were more than 350,000 registered nurses (RNs) in California in 2020, with projections estimating nearly 500,000 RNs would work in the state by 2035.[6] Prior to the COVID-19 health crisis, nursing schools both in-state and nationally were graduating approximately the number of RNs needed to fill positions left by retiring nurses.[7] Due to extreme pressures placed on the nursing workforce since the start of the pandemic, however, the state is now expected to experience a shortage of 40,567 full-time equivalent RNs through 2026, representing a gap of 14% of the current workforce need.[8]

Data gathered in California in late 2020 show that RNs who were close to retirement left the profession ahead of schedule rather than endure harrowing work conditions intensified by fear and insufficient staff that marked that period of the COVID-19 pandemic.[9,10] Nurses increasingly exited their jobs over the past two years through successive COVID-19 surges as they reported an increase in depression, burnout and heavy workloads.[11] It is unclear how much worse the trend toward earlier-than-planned retirement became among older nurses approaching retirement or to what extent younger nurses followed this pattern of earlier retirement and leaving the field as the pandemic progressed. What is clear is that nursing schools must now prepare more students for nursing careers than previously reported estimates.

## The number of newly enrolled nursing students declined substantially since 2018-2019.

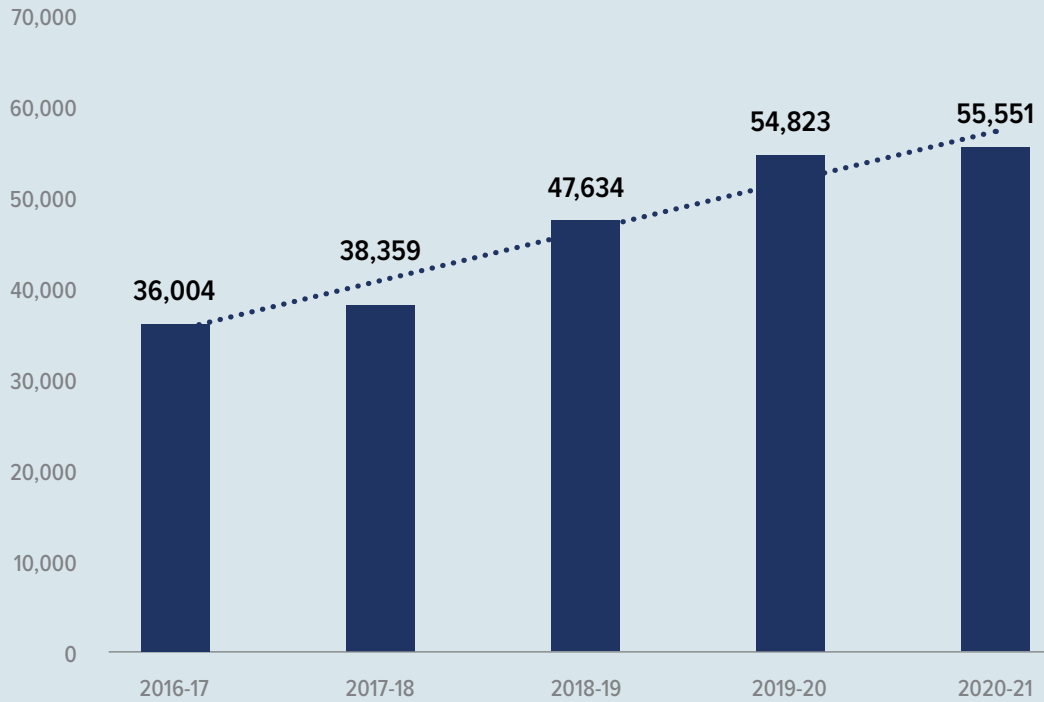Figure 2. Newly Enrolled Students - All California Nursing Schools.
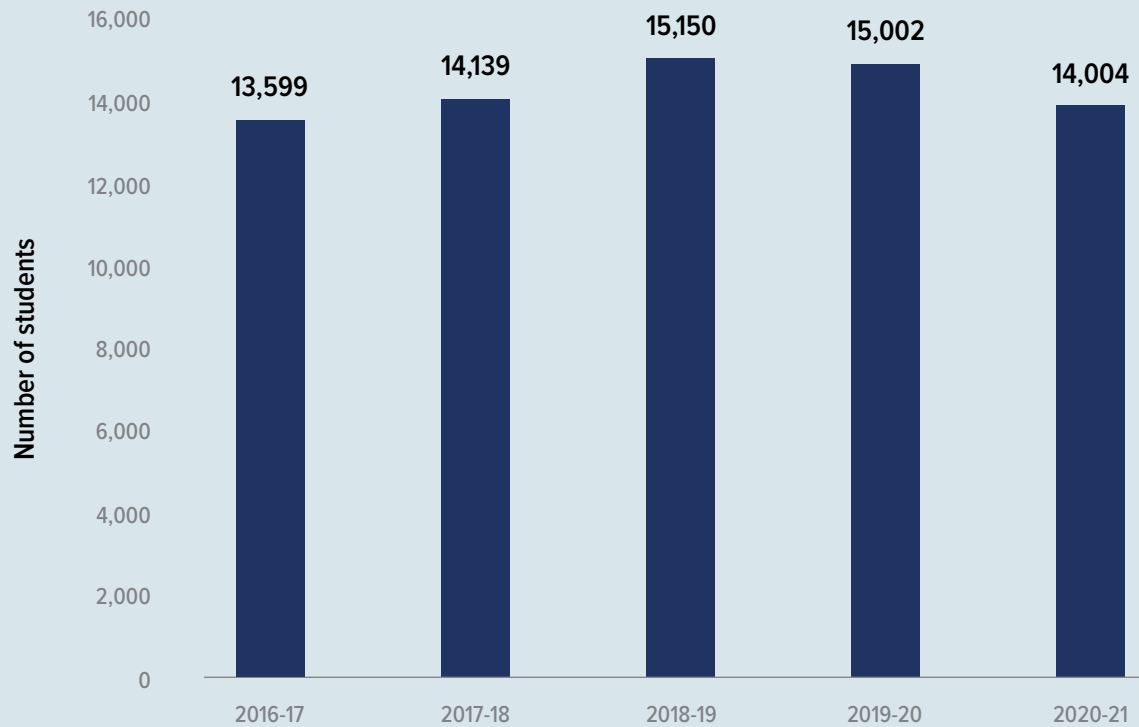


Data Source: The 2020-21 California Board of Registered Nursing (BRN) Annual School Survey

## The number of qualified applicants to California's nursing programs has grown over the past five years.

Figure 3. Qualified Applicants to California Nursing Programs.



Data Source: The 2020-21 California Board of Registered Nursing (BRN) Annual School Survey

The California Board of Registered Nursing (BRN) approved 139 nursing schools in the state, offering 147 pre-licensure programs in 2021.[12] Together, these schools enrolled 14,004 new students in the 2020-21 academic year, a significant drop (-8%) from the high of 15,150 newly enrolled pre-licensure students in 2018-19 after two years of growth (see Figure 2), despite steady increases in the number of qualified applicants (see Figure 3). This decline is primarily due to the effects of the pandemic.[13]

Forty-three California nursing schools (29%) offer Bachelor of Science in Nursing (BSN) programs and 92 schools (63%) offer Associate Degree in Nursing (ADN) programs and LVN-to-ADN programs for licensed vocational nurses (LVN) to become RNs. Most are public schools (69%) versus private (31%). Nineteen BSN programs are offered at California State University (CSU) campuses, and seven CSUs also offer Entry-Level Master's (ELM) in Nursing programs offering graduate nursing education for students who already hold

bachelor's degrees in non-nursing disciplines. Ten CSU campuses also offer ADN-to-BSN programs in partnership with their local community colleges. Four University of California (UC) campuses (Los Angeles, Davis, Irvine, and San Francisco) offer ELMs and two of these (UCLA and Irvine) also offer BSNs.

The criteria for acceptance at nursing programs has changed as the CSU and UC systems dropped the SAT/ACT standardized test admissions requirement during the pandemic. CSUs rely on multi-factor admission scores as of fall 2021 to evaluate students' grade point average (GPA), leadership and extracurricular activities, and life experience, such as being first generation or low-income. The expectation is that low-income and minority students will benefit, and student cohorts will become more diverse.

Seventy-seven of the 115 California Community Colleges campuses offering registered nursing programs in 2017-18 enrolled 12,900 students.[14] In spite of the state's need for nurses and a supply of potential nurses seeking to enroll in nursing programs, colleges in the state do not have the capacity to enroll all students seeking a nursing credential. Due to high demand for the limited number of spaces available, many over-subscribed programs rely on a first-come, first-served approach, a lottery system, or rigorous prerequisite courses to admit qualified applicants. For example, the two largest nursing programs in the system that year, Riverside City College, and Fresno City College, both used the multi-criteria enrollment process that incorporates an applicants' degrees, GPA, relevant work, and life experience to assess their qualifications for admission.

## The BSN as the Baseline Nursing Degree

The 2020-21 academic year marked the first time there were more BSN than ADN enrollments in the state as the demand for BSNs expands. The preferred entry degree in the healthcare industry has been the BSN since 2011 when the Institute of Medicine (IOM) recommended increasing the number of registered nurses with BSN degrees to 80% by 2020.[15] Research shows that BSN-prepared nurses demonstrate stronger problem-solving and leadership skills and are better prepared for professional practice.[16] Employers increasingly prefer hiring BSN-prepared nurses, including hospitals trying to gain or maintain Magnet status for excellence in nursing and patient outcomes. A BSN-trained RN generally enjoys greater job security, more earning potential, and more opportunities to move into management and leadership positions or various nursing specialties. Over half (57%) of all nurses in the U.S. held a BSN or higher in 2018, up from 49% in 2010.[17] **In California, 54% of RNs had a bachelor's degree or higher in 2010 and 61% by 2018, an increase of seven percentage points in eight years which underscores that the BSN is the new floor credential for nursing.[18]**

The CSU campuses that offer streamlined ADN-to-BSN programs partner with community colleges to allow students to concurrently enroll, transfer with an ADN degree, and minimize the time to graduate with a BSN degree. ADN-to-BSN programs represent an important alternative to Associate Degree for Transfer (ADT) programs that make it easier for students to transfer and earn associate and baccalaureate degrees from California Community Colleges and the CSUs but are less available in health fields which tend to be more complex, high-unit undertakings.[19] These programs also effectively expand the capacity of impacted CSU

nursing programs to allow more students to earn BSN degrees. **Given that low-income and minoritized students are more likely to initially enroll in community colleges, the ADN-to-BSN transfer pathway can help build and diversify the registered nurse workforce and its leadership while helping to minimize the amount of time and associated costs of longer pathways toward the BSN or higher degree.**

## Diversity in the Nursing Pipeline and Workforce

A racially and ethnically diverse nursing workforce that reflects the population it cares for is vital to ensure quality patient care and access.[20] California's large minority population represents a reservoir of potential talent to draw from to educate future nurses who can provide culturally competent care. As shown in Figure 1, both RN education programs and the RN workforce in the state are increasingly diversified. However, 5.5% of the RN workforce is Black although Black residents comprise 6.5% of the state population. Latinx RNs were markedly underrepresented in California in 2018 at only 9.6% of all RNs, despite comprising nearly 40% of the population of the state.[21]

Moreover, Latinx RNs with BSN degrees tend to take a circuitous route to attaining that degree. Latinx RNs are the least likely demographic to obtain a BSN as their initial degree (27%), and the most likely to have first obtained an ADN (68%). In the 2020-21 academic year, the highest demographic of new ADN enrollments were Latinx (33%), compared to white (30%), Asian (16%), Filipino (7.7%) and Black (5.3%) students. By contrast, Filipino RNs were the most likely to earn BSNs as their initial degree (71%) and to be younger when they complete their RN degree. Black nurses were the most likely to obtain an ELM as their initial RN degree (7.1%) and were on average older at RN completion than other demographics.[22] As degree creep, or the rising minimum requirement to work in a field, increases toward BSN and higher degrees, the implications for lower levels of pay and career advancement and for higher student debt are concerning for those who take longer to attain BSNs.

Newly enrolled cohorts of nursing students have diversified since the 2010-11 academic year (see Figure 4). Of the newly enrolled pre-licensure students in 2020-21, 71% were minority enrollments, up from 60% in 2010-11. The proportion of Latinx newly enrolled nursing students has increased the most, comprising 29% of all newly enrolled students, up from 19% in 2010-11, while white students have decreased from 40% to 29% in the same interval. Other demographics have shifted only slightly during the same period. The proportions of Filipino and Black students have decreased, while that of Asian students (not including Filipino students) have increased marginally.[23,24]

## Nursing students are increasingly diverse.

Figure 4. Diversity Among Newly Enrolled Nursing Students.
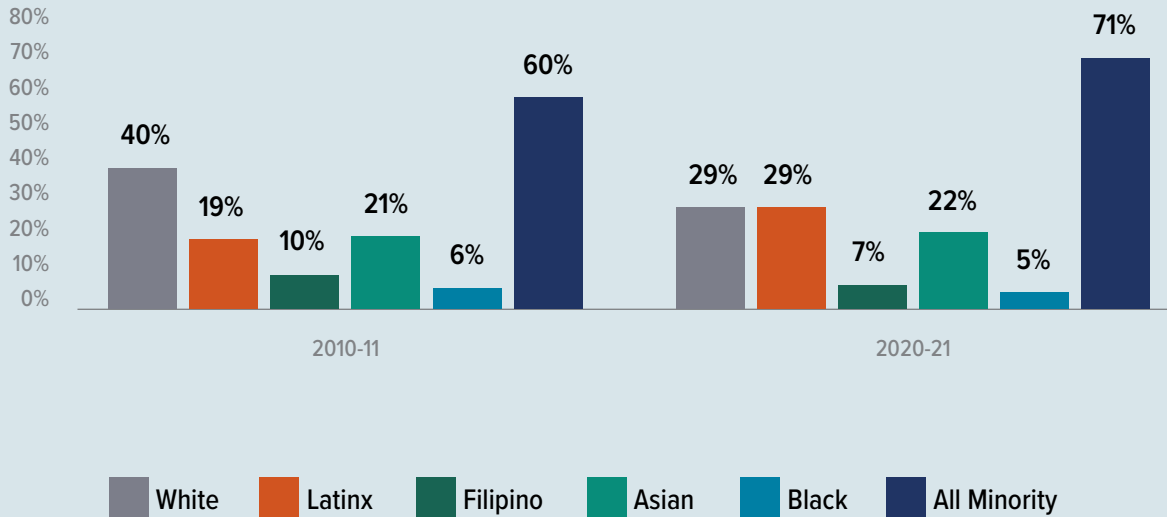


Data Source: California Board of Registered Nursing School Survey Interactive Dashboard. (2022).

**Around 30% of currently employed RNs are over 55 years old and are likely to retire in the next decade.** In 2018, 56% of RNs aged 55-64 years were white, and 65% of RNs 65 years and older were white.[25] Conversely, the race/ethnicity of RNs under the age of 35 is only 35% white, with RNs of color except Black RNs (2.5%) more evenly represented between 11% and 19% of all RNs under 35. The percentage of RNs with active licenses who speak a language besides English stood at 43%. Filipino (17%) and Spanish (12%) were the most spoken languages besides English. Regions of the state with the most diversity are the Los Angeles metropolitan area, the Bay Area, the Central Valley, and the Inland Empire, where Asian, Black and Latinx RNs with active licenses were more likely to work in 2018. White RNs with active licenses predominated in the state's northern counties (80%; see Figure 5).[26] Filipino RNs are well represented in all but the Northern Counties and the Central Coast.

# The diversity of California's nursing workforce varies by region but needs improvement everywhere.

Figure 5: Race/Ethnicity of RNs by Region.
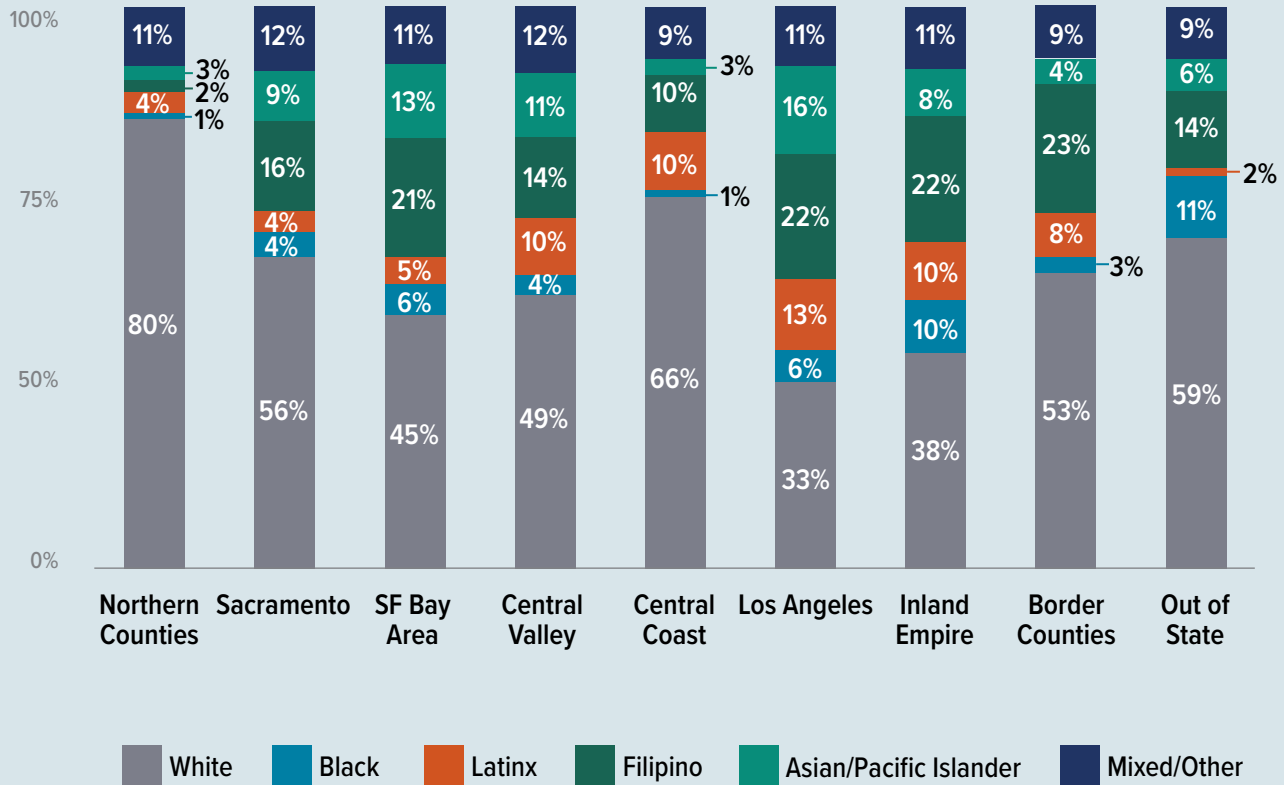


Data Source: California Board of Registered Nursing, 2018 Survey of Registered Nurses

As older RNs retire, the remaining RN population will be increasingly diverse but also less experienced. Hospitals and other healthcare facilities should implement measures to retain older RNs for as long as possible to ensure that the quality of patient care is not compromised when they lose the deep well of knowledge of experienced RNs for new and less experienced RNs. Even part-time retention could help to alleviate shortages while also helping to onboard and mentor younger hires.[27] Structured graduate internships for RNs would aid new graduates in adapting to their positions. Additionally, structured exit processes for nurses who are retiring or leaving the profession would allow them to mentor nurses and contribute to patient care at reduced hours to alleviate the impact of their loss on the health care system.

## Effects of the Pandemic on the Nursing Pipeline and Workforce

During the pandemic, public RN education programs stalled in growth, and some even shrank as they skipped cohorts, admitted fewer students, and struggled to pivot to online modes of instruction. Community colleges and, to a lesser extent, CSUs experienced enrollment declines over the course of the pandemic. More schools made offers of admission that students were not accepting because they refused to attend "Zoom schools" for nursing. California's community colleges had little in-person instruction in 2021.

Unlike public nursing schools, programs in private colleges have continued to grow, as has the rate of graduation from for-profit schools.[28] For-profit nursing schools can be appealing to nontraditional students seeking greater flexibility and lower eligibility criteria. However, the for-profit college expectation of earning and maximizing stakeholder profits does not necessarily guarantee quality in their programs nor prioritize good student outcomes.[29] Data on for-profit schools suggest a lower return on investment (ROI) compared to nonprofits: a higher debt burden, lower value of the degree on the job market, and longer time, if ever, to recoup the cost of earning a credential or degree.[30,31,32]

Forty percent of the 147 programs in the state enrolled fewer students in 2020-21 than in the previous year. The most common reason cited by schools was an inability to secure clinical placements for all students.[33] Nursing education and student training were also disrupted as classes switched from in-person to online instruction during the pandemic, and clinical positions were cancelled or postponed, making it difficult for students to complete clinical training requirements. Enrollments in RN education programs were forecast to increase in the 2022-23 year, but a continuing shortage of full-time faculty and a lack of opportunities for students to earn required clinical practice that developed during the pandemic may continue to curtail enrollments.[34] **Capacity issues at nursing schools and clinical training sites will have to be overcome to ensure that larger numbers of qualified new nurses can be produced as workforce demands have shifted.**

Recruitment of qualified nursing faculty at the California Community Colleges is hindered by high workloads and the non-competitive salaries they offer. Practicing RNs earn considerably more than faculty, on average $113,000 compared to $60,000 annually. Many are also practicing nurses who are burned out after more than two years of the pandemic. Rigorous BRN credentialing requirements further constrain the pool of qualified potential faculty, although hospitals have been identified as a resource for prospective faculty.[35]

Faculty across the country also exhibit a lack of diversity.[36] In California, 50% of RN faculty were white in 2020-21, down from 65% in 2011-12 (see Figure 6). The number of Latinx nursing faculty has steadily increased since 2010-11 as demand for nursing degrees has swelled and with it the number of faculty statewide. Yet the percentage has held steady at 11-12% between the 2015-16 and 2020-21 academic years, as the percentage of Asian faculty rose from 11% to 17%. Black faculty has also held relatively steady, rising from 9% to 10%, while Filipino faculty fluctuated but started and ended at 7% during these same time intervals. Asian faculty have greater representation in private nursing schools compared to public schools (21% vs. 10%), while Filipino faculty have less (3% vs. 7%).

## California nursing faculty is overwhelmingly white.

Figure 6: Race/Ethnicity of California Faculty.
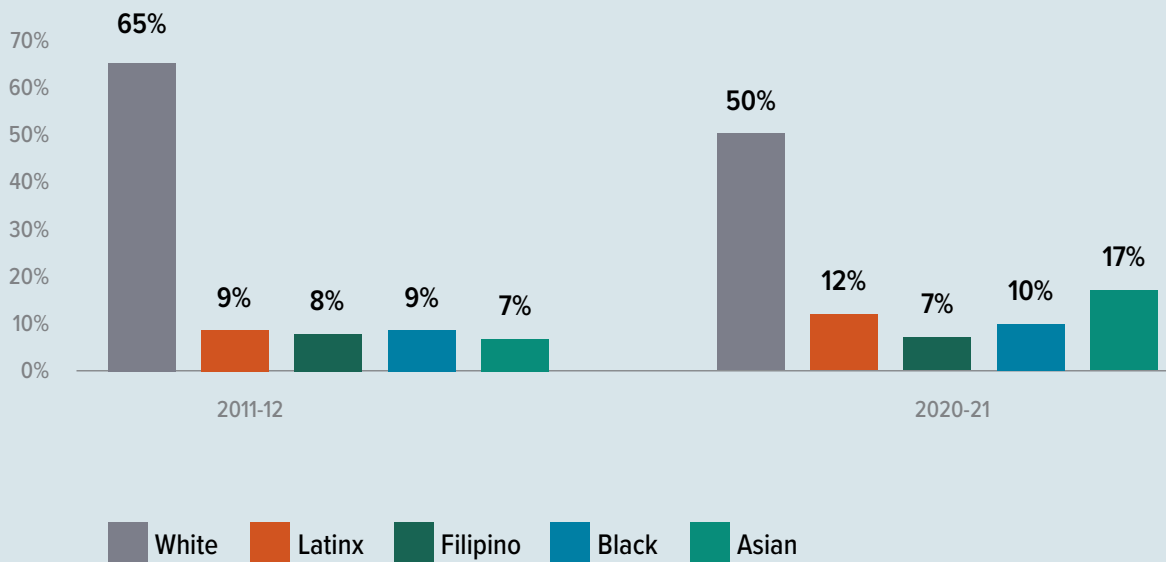


Data Source: California Board of Registered Nursing, 2018 Survey of Registered Nurses

Exacerbating the trend toward a workforce shortage, a large number nurses across the country quit their regular jobs and took travel nurse assignments that could pay as much as double a regular salary, thus leaving many healthcare institutions that could not compete with those salaries short of staff. Another toll inflicted by the pandemic is a significant rise (19%) in the cost of labor for hospitals as the nursing shortage and competitive wages for travel nurses also caused wages to rise. Hospitals report that inflationary pressures on the cost of supplies, drugs, and medical equipment also increased, jeopardizing the financial health of some hospitals that were already struggling before the pandemic.

California's heavily unionized hospital RN workforce enjoys many protections, with the highest wages of any state. The average annual salary for a registered nurse in California was $124,000 in 2021, and highest in the Bay Area.[37] Travel nursing is more attractive in regions where regular nursing pay is substantially less or for newly licensed RNs who earn lower salaries or who have been unable to find a job after graduation. A more experienced nurse in California would have to consider the trade-off of losing seniority, changing health insurance, and being away from home to perhaps earn only 10-20% more, likely dampening the effect in this state.

As the pandemic wanes and the demand for travel nurses and opportunities for them to earn surge pay lessens, nurses can expect that hospitals will be eager to hire them to fill empty positions. One uncertainty is whether nurses accustomed to higher pay will return to regular positions with lower salaries, particularly in high-need communities catering to lower-income patients and patients of color. This may result in deeper local or regional shifts in unemployment rates and surpluses for nurses that will most adversely impact patient and community outcomes in rural and low-income areas.

## The Variability of Unmet Need

California is a large, diverse state economically and geographically, with wide variations in population density and racial and ethnic makeup. **Nursing shortages can vary considerably by region. Statewide data point to a surplus of nurses in large urban cities, like San Francisco and Sacramento, and a shortage of nurses in smaller cities, such as Bakersfield and Palm Springs, and more conspicuously in rural areas of the state.** Measures to convince nurses to relocate from areas of the state with surpluses to areas with shortages are proving insufficient, leaving the needs of local populations unmet. And even as the nursing profession experienced rising salaries with a tightening labor market during the pandemic, minority nurses were still more likely to be unemployed than their white counterparts.[38]

Despite accepted workforce shortage figures, the nursing shortage is neither easily measured nor well defined. Many factors can affect the balance between enough and too few nurses to meet the need. For example, the numbers of nurses who are licensed to work is different from the numbers of nurses who

choose to work, as shown during the pandemic. Nursing licensing requirements serve as a barrier to entry that preclude rapid adaptation to workforce shortage through wage or benefit increases. California hospitals also have minimum staffing ratios for RNs that they cannot replace with non-licensed personnel.

Importantly, statewide numbers mask the geographic variation in areas with shortages and those with a surplus of nurses, with some studies finding difficult regional job markets, particularly in the Bay Area and the Sacramento region where nurse surpluses leave few openings for new graduates.[39] Discussions about shortages should reconcile these conflicting conditions when new nurses are graduating and are not being hired.

## Qualified Applicants Are Not Being Admitted to Nursing Schools

Most qualified applicants (73% or 39,821 applicants) were not accepted to California nursing programs in 2019-20 and 72% were not accepted in 2020-21. As there are no data on how many applications each individual submitted or how many individuals were not accepted at any California nursing school, it is difficult to know the unmet need for student capacity with precision. But the numbers are likely significant based on an increasing interest in nursing combined with small declines in some school programs over the past two years.

Data are available on how many applications California nursing schools receive and how many students are accepted, but only minimal information is gathered on waitlists. Reports of sometimes years-long waits at many programs, especially for ADN and LVN-to-ADN programs, persist.[40] Data are also not available on the number of schools to which students typically apply. Anecdotal evidence points to most students applying to multiple schools, and nursing counselors recommend applying to a minimum of three to four schools.[41]

Data on the capacity of California's nursing schools to accommodate students can be misleading. The number of individuals who are qualified but were not accepted at a given school is skewed by individuals who might have applied to various schools and been accepted at only one school. If the average qualified student applies to three or four schools, then statistically that student is more likely to be accepted to at least one of them, but there are few publicly available data to demonstrate this pattern. Due to a lack of data, we do not know with certainty how many qualified individuals were not accommodated at any schools state wide. This creates additional challenges to policymakers and stakeholders in their attempts to address the capacity constraints of California's nursing programs.

# The Challenges of Inadequate Nursing Data

National data on the nursing workforce have limited granularity. Nursing data disaggregated by race/ethnicity are likewise limited.[42] Although US Census data are disaggregated into geographic areas that group cities or counties in areas of over 50,000 people, nursing data at the national level are generally not. Rather, Census nursing data are available at large regional levels that combine more than one state.[43] California and Nevada data are aggregated because Nevada lacks enough data points to run complex statistical models. However, as most of the population of that region is in California, regional conclusions are probably reflective of California as a whole.

Current statewide surveys rely on outdated geographic parameters that require additional merging and splitting of counties to account for population density and where patients go for major medical care. Most people work in the same region where they live, but people near county borders will commute across borders. These data are generally not of good enough quality to identify commuting patterns among nurses, as the state of North Carolina has done.[44] Their online maps show the geographical locations where nursing school graduates work. For example, graduates of The University of North Carolina at Chapel Hill land in a much wider area of the southeast and, even of the US, than the graduates of that state's community colleges. Ideally nurses in California would be asked where they are employed during routine re-licensure, which the new California Department of Health Care Access and Information (HCAI) may start to require soon, so that work locations of nursing graduates could uncover commuting patterns and identify regional and hyperlocal workforce shortages or surpluses.

# POLICY RECOMMENDATIONS

The many gaps in the capacity of the current nursing workforce will need to be overcome if California is to build a future workforce that can provide the health care it needs. The pandemic has only accelerated the urgent need for action by government, education, and health organizations. Additionally, securing a nursing workforce that mirrors the diversity of the state is essential to providing culturally competent care that meets all patients' needs.

We offer the following recommendations to help California reach its nursing workforce goals:

- **Public colleges and universities should prevent barriers to admission for qualified nursing applicants** by facilitating referrals to schools with open spaces for qualified applicants not admitted to their campuses due to space limitations.

- **California colleges should increase access to accelerated nursing degree pathways** that will increase the number of graduates and reduce their time to degree.

- **With additional funding, the State should scale partnerships between the CSUs and California Community Colleges to expand ADN-to-BSN programs** that simplify and streamline the path to earning a BSN and graduate more workforce ready nurses.

- **The share of federal funding to support high quality nursing education should grow to reflect projected workforce shortages**, and the national Nurse Corps Loan Repayment should consider forgiving 100% of student loans for nurses serving in a high need area.

- **The California Cradle-to-Career Data system should capture and make publicly available data on students who are eligible but not accepted to any California nursing school** in order to accurately assess unmet need and target additional resources. This data should be disaggregated by race/ethnicity and region.

- **The California Department of Health Care Access and Information should ask nurses where they are employed during routine re-licensure**, in order to identify regional and local shortages, as well as commuting patterns for current nurses.

- **The state should invest in California's nursing faculty, raising faculty salaries and other forms of compensation** to ensure these positions are competitive with the labor market alternatives for qualified faculty members. This may include working in partnership with the health industry, who rely on the graduates of these programs.

- **The state should invest in clinical training sites** to ensure that growth in classroom capacity is accompanied by growth in students' ability to attain the clinical hours required for degree and certification requirements.

# ACKNOWLEDGMENTS

# ENDNOTES

1    Powers, PE. (January 14, 2022). Progress Since the California Future Health Workforce Commission: State Policy and Budget Actions on Priority Recommendations. California Health Care Foundation.

2    U.S. Census Bureau QuickFacts. Retrieved from https://www.census.gov/quickfacts/fact/table/CA,US/PST045221

3    IOM (Institute of Medicine), National Academies of Sciences. (2004). In the Nation's compelling interest: Ensuring diversity in the health care workforce. Washington, DC: The National Academies Press.

4    Buerhaus, P. I. (2021). Current nursing shortages could have long-lasting consequences: Time to change our present course. Nursing Economics, 39(5), 247-250.

5    Frogner BK, Dill JS. Tracking Turnover Among Health Care Workers During the COVID-19 Pandemic: A Cross- sectional Study. JAMA Health Forum. 2022;3(4):e220371.

6    Spetz J. (May 2020). Forecasts of the Registered Nurse Workforce in California 2020. San Francisco, CA: Philip R. Lee Institute for Health Policy Studies & Healthforce Center at UCSF.

7    Spetz J. (June 2017). Forecasts of the Registered Nurse Workforce in California 2017. San Francisco, CA: Philip R. Lee Institute for Health Policy Studies & Healthforce Center at UCSF.

8    Spetz, J, Chu, L, Blash, L. (2021). The Impact of the COVID-19 Pandemic on California's Registered Nurse Workforce: Preliminary Data. San Francisco, CA: UCSF Health Workforce Research Center on Long-Term Care.

9    American Nurses Foundation. Pulse on the Nation's Nurses COVID-19 survey series: Year one COVID-19 impact assessment. February 2021.

10   Spetz, J, Chu, L, Blash, L. (2021). The Impact of the COVID-19 Pandemic on California's Registered Nurse Workforce: Preliminary Data. San Francisco, CA: UCSF Health Workforce Research Center on Long-Term Care.

11   Spetz J, Chu L. (2022). 2020-2021 Survey of Registered Nurses. Sacramento, CA: California Board of Registered Nursing.

12   Blash L, Spetz J, (February 2022). 2020-2021 Annual School Report: Data Summary for Pre-Licensure Nursing Programs. Sacramento, CA: California Board of Registered Nursing.

13   Ibid.

14   2019 Nursing Educational Programs Report. (July 25, 2022). California Community Colleges Chancellor's Office. Sacramento, CA.

15   IOM (Institute of Medicine), National Academies of Sciences. (2011). The Future of Nursing: Leading Change, Advancing Health. Washington, DC: The National Academies Press.

16   Fact Sheet: The Impact of Education on Nursing Practice. (July 2021). Washington D.C.: American Association of Colleges of Nursing.

17   Campaign for Action Dashboard. Retrieved from https://campaignforaction.org/resource/campaign-dashboard-indicators/

18   Campaign for Action Dashboard. Retrieved from https://campaignforaction.org/resource/campaign-map-show-nurses-progress-earning-bsn-degree/

19   Reddy, V, Morales, J. (April 2022). Critical Condition: Prescriptions for Improving Transfer Pathways in the Health Professions. Los Angeles, CA: Campaign for College Opportunity.

20   Reddy, V, Morales, J. (April 2022). Critical Condition: Prescriptions for Improving Transfer Pathways in the Health Professions. Los Angeles, CA: Campaign for College Opportunity.

21   Spetz J, Chu l, Blash L. Diversity of California's Nursing Workforce Chartbook. San Francisco, CA: California Board of Registered Nursing by the University of California, San Francisco.

22   Ibid.

23   California Board of Registered Nursing School Survey Interactive Dashboard. Retrieved from https://www.rn.ca.gov/forms/rnsurvey201718.shtml

24   Blash L, Spetz J, (February 2022). 2020-2021 Annual School Report: Data Summary for Pre-Licensure Nursing Programs. Sacramento, CA: California Board of Registered Nursing.

25   Spetz J, Chu L. (May 2020). California Board of Registered Nursing 2018 Survey of Registered Nurses. Sacramento, CA: California Board of Registered Nursing.

26  Spetz J, Chu I, Blash L. Diversity of California's Nursing Workforce Chartbook. San Francisco, CA: California Board of Registered Nursing by the University of California, San Francisco.

27  Joanne Spetz, PhD, Professor, Department of Family and Community Medicine and School of Nursing at UC San Francisco. Director and Brenda and Jeffrey L. Kang Presidential Chair in Healthcare Finance, Philip R. Lee Institute for Health Policy Studies (IHPS), UCSF.

28  Ibid.

29  Whitman, D. (May 26, 2021). Treat For-Profit Colleges Differently Because They Are Different. The Century Foundation TCF. United States.

30  Siqueiros M, Reddy V, Itzkowitz, M. (2020). The Personal Payoff of a College Education in California's Colleges and Universities. Los Angeles, CA: Campaign for College Opportunity. Available at: https://collegecampaign.org/portfolio/personal-payoff-2020/

31  Cellini SR, Turner N. (Spring 2019). Gainfully Employed? Assessing the Employment and Earnings of For-Profit College Students Using Administrative Data. J of Human Resources. Vol 54, no 2, 342-370.

32  Minority Nurse. October 16, 2018). Are For-Profit Nursing Schools a Good Choice? Retrieved from https://minoritynurse.com/are-for-profit-nursing-schools-a-good-choice/

33  Blash L, Spetz J, (February 2022). 2020-2021 Annual School Report: Data Summary for Pre-Licensure Nursing Programs. Sacramento, CA: California Board of Registered Nursing.

34  Apen LV, Rosenblum R, Solvason N, Chan GK. Nursing Academic Leadership: An Urgent Workforce Shortage in Nursing Education, Nursing Education Perspectives: 9/10 2021; 42(5):304-309.

35  Collaborating for the Future Nursing Workforce: Sharing Resources for Nursing Education Hospital and College Partnerships. (2022). Oakland, CA: HealthImpact.

36  Preparing Nurse Faculty, and Addressing the Shortage of Nurse Faculty and Clinical Preceptors. (January 2021). National Advisory Council on Nurse Education and Practice. 17th Report to the Secretary of Health and Human Services and the U.S. Congress.

37  Bureau of Labor Statistics. Retrieved from https://www.bls.gov/oes/current/oes291141.htm

38  Buerhaus PI, Staiger DO, Auerbach DI, Yates MC, Donelan K. Nurse employment during the first fifteen months of the COVID-19 pandemic. Health Aff (Millwood). 2022;41(1):79-85.

39  Blash L, Spetz J, (February 2022). 2020-2021 Annual School Report: Data Summary for Pre-Licensure Nursing Programs. Sacramento, CA: California Board of Registered Nursing.

40  Ibid.

41  Joanne Spetz, PhD, Professor, Department of Family and Community Medicine and School of Nursing at UC San Francisco. Director and Brenda and Jeffrey L. Kang Presidential Chair in Healthcare Finance, Philip R. Lee Institute for Health Policy Studies (IHPS), UCSF. (April 19,2022). Personal Interview.

42  Auerbach DI, Staiger DO, & Buerhaus PI. (2021). Inaccurate Estimates of the Racial and Ethnic Composition of the Registered Nurse Workforce in the 2018 National Sample Survey of Registered Nurses. Nursing Economics, 39(4), 171-179.

43  Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services.

44  See North Carolina Nursing Supply & Demand at https://ncnursecast.unc.edu/

**The Campaign for College Opportunity**

| **LOS ANGELES OFFICE** | **SACRAMENTO OFFICE** | **WASHINGTON, D.C. OFFICE** |
|---|---|---|
| 1149 S. Hill Street, Ste. 925 | 1512 14th Street | 1016 16th Street NW, Suite 100 |
| Los Angeles, CA 90015 | Sacramento, CA 95814 | Washington, D.C. 20036 |
| Tel: (213) 744-9434 | Tel: (916) 443-1681 | Tel: (202) 293-2828 |
| Fax: (877) 207-3560 | Fax: (916) 443-1682 | |

www.**collegecampaign**.org

facebook.com/**collegecampaign**      @**CollegeOpp**      bit.ly/CollegeOpp-LinkedIn

**FOLLOW US AT**
post.news/collegeopp

**SIGN UP FOR OUR NEWSLETTER**
bit.ly/CollegeOppNews

## BOARD OF DIRECTORS

| | |
|---|---|
| **Estela Mara Bensimon,** Chair | **Rob Lapsley** |
| **Sonya Christian,** Vice Chair | **Irma Rodriguez Moisa** |
| **Maria Anguiano,** Treasurer | **Juan Sánchez Muñoz** |
| **Vincent Pan,** Secretary | **Maria Ott** |
| **Edward Bush** | **Thomas A. Saenz** |
| **Lena Carew** | **Joseph Villela** |
| **Paul Granillo** | **J. Luke Wood** |