Regional Forecasts of the Registered Nurse Workforce in California

Summary of December 2018 report
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Background

In December, 2018, HealthImpact published a series of regional registered nurse (RN) supply and demand projections developed by UCSF. This document summarizes those reports.

The Supply and Demand Models

The supply model begins with the number of licensed RNs living in California. Projected inflows of RNs – primarily new graduates from California education programs – are added to the number of licensed RNs, and projected outflows – primarily retirements – are subtracted. The total labor supply of RNs is obtained by applying to the projected number of RNs data on the percentage of RNs who work in nursing, by age group.

Different measures of demand (or need) were considered in order to develop a range of plausible estimates of future demand for RNs. The approaches used were (1) fixed benchmarks based on current regional RN-to-population ratios, (2) fixed benchmarks based on U.S. RN-to-population ratios, (3) forecasts based on 2015 hospital patient days, employment in hospitals, and future population growth and aging, and (4) regional employment forecasts for 2024 published by the California Employment Development Department (EDD).

Figure 1 presents the baseline forecasts of FTE RN supply and the forecasts of FTE RN demand based on hospital patient days (OSHPD data) for each region of California. The RN labor markets in the Northern Counties and Southern Border will be fairly well-balanced, surpluses may emerge in the Sacramento, Los Angeles, and Inland Empire regions, and that shortages may develop in the San Francisco, Central Valley, and Central Coast regions.

Figure 1. Forecasted full-time equivalent supply and demand for RNs, 2035
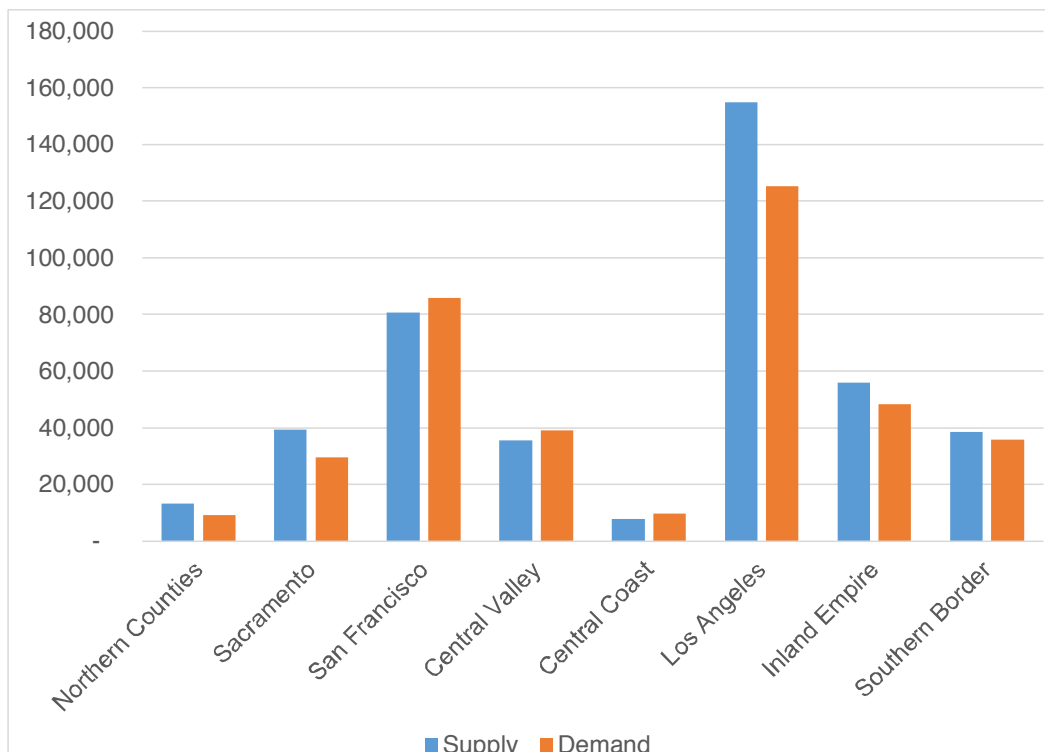
Comparisons across regions in RNs per population

It is possible that current employment levels are not adequate to meet population needs and do not indicate the number of RNs employers would hire if supply were adequate. A comparison of the current and projected number of RNs per 100,000 population in each region provides another perspective of the potential demand in each region. Figure 2 presents FTE RNs per 100,000 for 2018 and projected for 2035, and compares these ratios to the national 25th percentile and national average.

All regions of California now have FTE RN-per-100,000 ratios below the national 25th percentile, but there is notable variation across regions. The lowest RN-to-population ratios in 2018 are in the Central Coast, Central Valley, and Los Angeles regions, while the highest ratios are in the Sacramento, San Francisco, and Southern Border regions. By 2035, several regions are projected to have RN-to-population ratios that exceed the current national average: Northern Counties, Sacramento, Los Angeles, and Inland Empire; the ratio in the Southern Border region will nearly equal the national average and the ratio in the San Francisco region will reach the current national 25th percentile by 2035. However, the Central Valley and Central Coast will remain far below the national 25th percentile, and the RN-per-100,000 ratio is projected to decrease in the Central Coast region between 2018 and 2035.

Figure 2. Full-time equivalent RNs per 100,000 population, 2018 and 2035
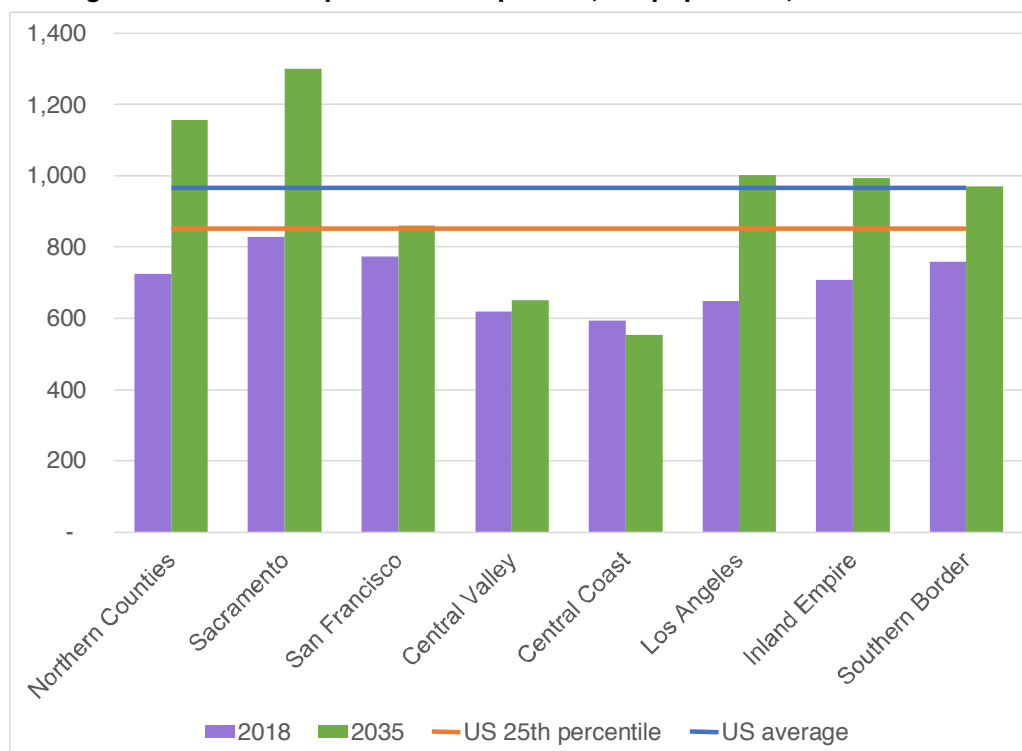
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