



Health Workforce Data: ADN Opportunity Map

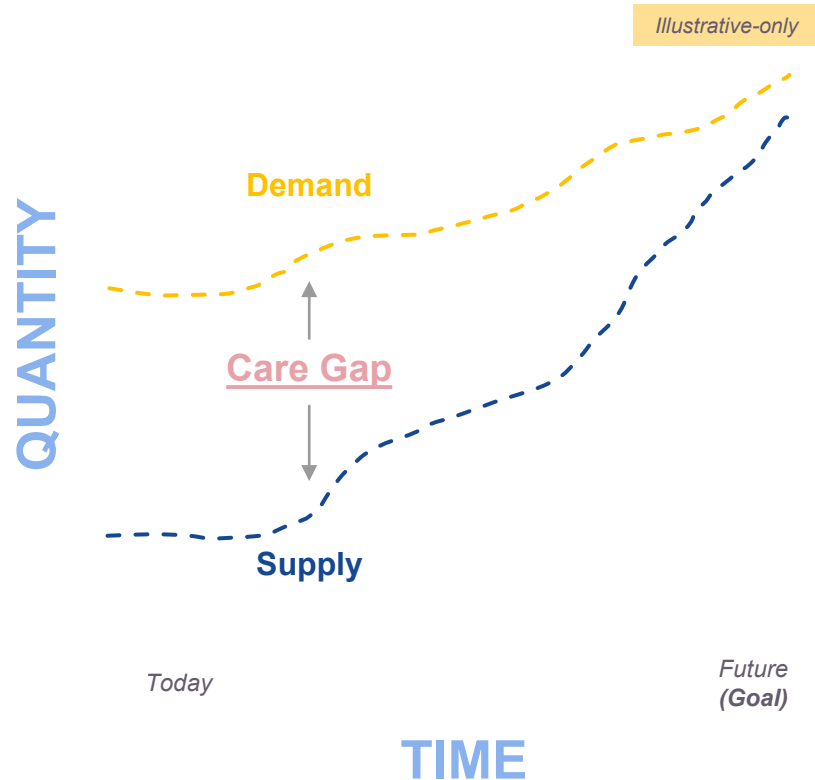
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NOVEMBER 20, 2024

Supply & Demand

Supply currently lags demand in today's complex healthcare labor market ...

... with this care gap being driven by key interrelated factors:



Total roles staffed / needed by specialty



Geographic distribution of providers & disease burden



Utilization patterns

(based on delivery channels available & care-seeking behavior)



Importance of culturally competent care



Insurance coverage



Education pipeline & licensure



Attrition rates

(e.g., migration, retirement, burnout)



Creating a detailed workforce model enables HCAI to **develop a targeted set of interventions to close the care gap** & focus on **investment avenues** with the **greatest lasting impact**

Additionally, it provides a replicable model for leverage across other use cases

Supply & Demand Modeling – 22 Roles

- Associate-level clinicians (BH-A)¹
 - Associate Clinical Social Worker
 - Associate Marriage and Family Therapist
 - Associate Professional Clinical Counselor
 - Registered Psychological Associate
- Non-prescribing licensed clinicians (BH-L)¹
 - Licensed Clinical Social Worker
 - Licensed Marriage and Family Therapist
 - Licensed Professional Clinical Counselor
 - Psychologist
 - Licensed Educational Psychologist
 - Psychiatrist
 - Psychiatric Mental Health Nurse Practitioner (PMHNP)
 - Substance Use Disorder Counselor (SUDC)
 - Peer Support Specialist (PSS)
 - Certified Wellness Coach (WC)

- Registered Nurses (RN)
 - Registered Nurse (RN)
 - Public Health Nurse (PHN)
 - Clinical Nurse Specialist (CNS)
- Midwives
 - Certified Nurse Midwife (CNM)
 - Licensed Midwife (LM)
 - Certified Registered Nurse Anesthetist (CRNA)
 - Nurse Practitioner (NP)
 - Licensed Vocational Nurse (LVN)

Note: The behavioral health professional ecosystem is especially complex, with many additional roles (e.g., MHRS, OTs, other qualified professionals, etc.) playing an important part in the care team & being critical to a well-functioning delivery model

Given the lack of sufficient data on these roles today, they have not been modeled in this version of the tool; however, these roles will be considered in our strategic interventions and are prioritized on our roadmap for future inclusion & data collection

1. In supply/demand modeling, demand for this set of roles has been calculated overall (combined) due to overlapping scopes of practice; supply results remain distinct across each role

Nursing County Level Data

The “Commuting Problem”



The percent of the workforce commuting across a regional border is small, but the percent commuting across a county border is much higher

This is particularly apparent in urban areas with high commuting rates and/or a high cost of living (e.g. Greater Bay area)

We received stakeholder feedback that county level data would only be meaningful if we could account for this migration somehow

RDC leveraged our unique access to workforce survey data and licensure data to create a solution that accounts for both regional and county level migration

Methodology for Commuting Adjustments

Objective

Our goal was to develop a way to account for the nursing workforce living in one county but working in another. By better representing supply based on practice location, false precision in county level supply is greatly reduced.

Approach

Compare the Address of Record (AoR) from the license data to the Primary Practice Address (PPA) reported in the HCAI License Renewal Survey

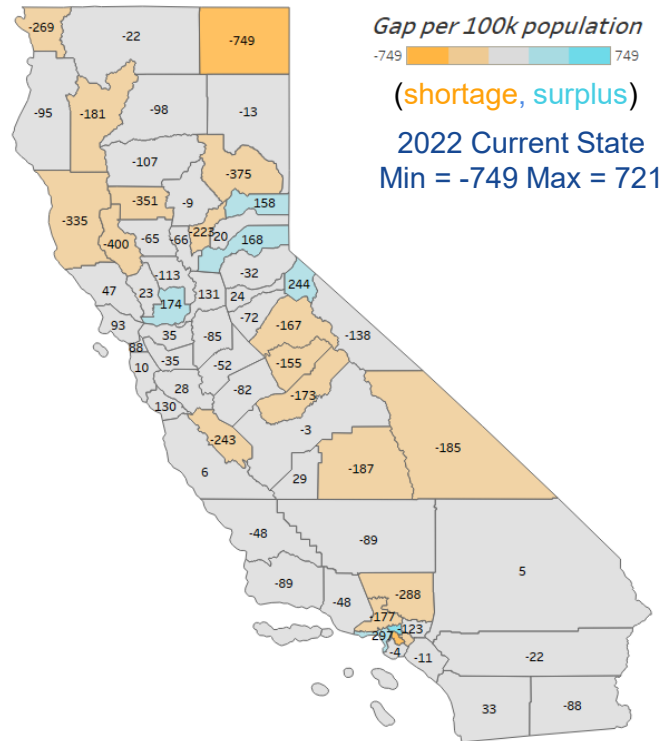
- For roles such as RN and LVN, we have a robust set of responses to analyze.¹
- For every respondent, the county/SPA from the AoR was compared to the county/SPA of the reported PPA. This creates a 'commuting matrix' showing the percentage of the workforce crossing county lines *from every county to every county*.
- Counties that did not have a representative sample were not adjusted.³ 54 counties for RNs and in 45 counties for LVNs were within our margin of error.²
- For roles where we did not have sufficient data for more than half the counties (NP, NA, Midwives), no adjustment was performed. The data will be re-examined at the next model refresh.

¹RN N=110,339, LVN N=24,757. Decline to State responses were not included. ²Based on 90% confidence interval, 15% margin of error based on sample size in each county.

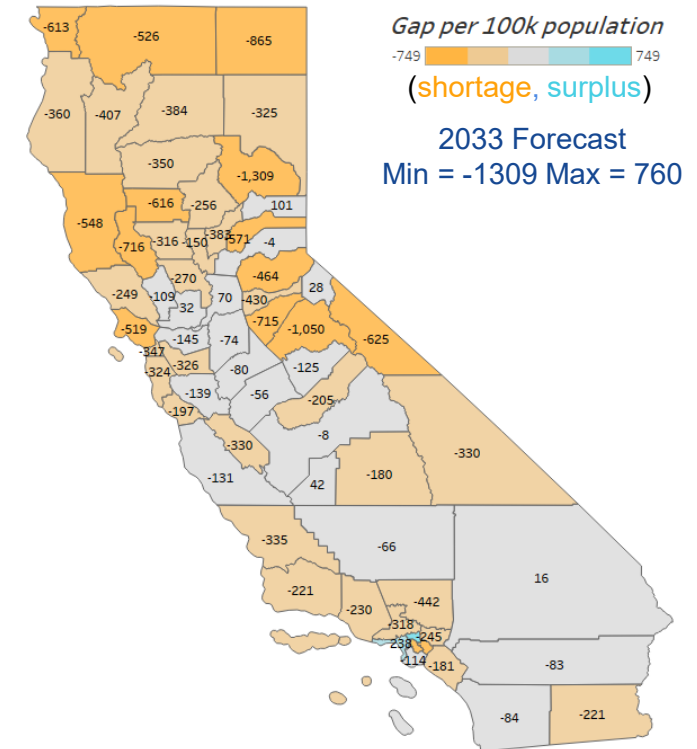
³RN = Alpine, Colusa, Sierra, Trinity unadjusted. LVN = Alpine, Amador, Calaveras, Colusa, Glenn, Inyo, Mariposa, Modoc, Mono, Plumas, Sierra, Trinity, Tuolumne unadjusted.

Registered Nurses – County Level Forecast

Largest regional shortage in Northern and Sierra coming from 21 counties; overall statewide shortages in 38 counties and 6 SPAs



Largest regional shortage still in Northern and Sierra coming from 23 counties; overall projected shortages increased to 51 counties and 6 SPAs

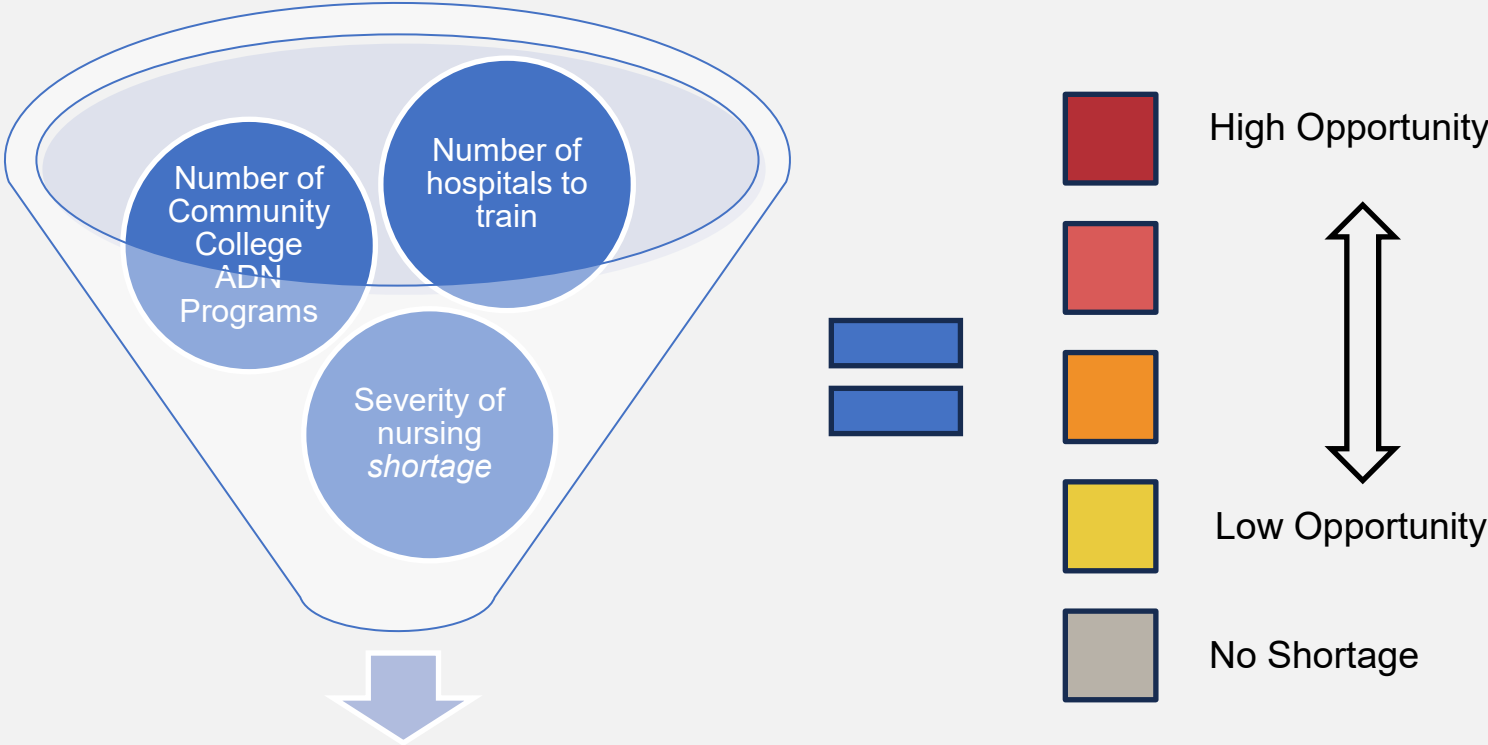


Note: 2033 plotted on same scale as 2022 for equal comparison. 2033 Min/Max may be outside 2022 scale range

HCAI Opportunity Score

- Use case: Where can CCC invest in new AND programs in CA?
- Enrichment of the supply and demand data through the adding:
 - Community College data
 - Training Site data (Hospitals)
 - Registered Nursing Gap
- This overlay gives us a metric of opportunity to build new ADN programs have a high shortage of RNs, with few existing training programs, and enough hospitals available for new students to gain valuable experience and complete their training.

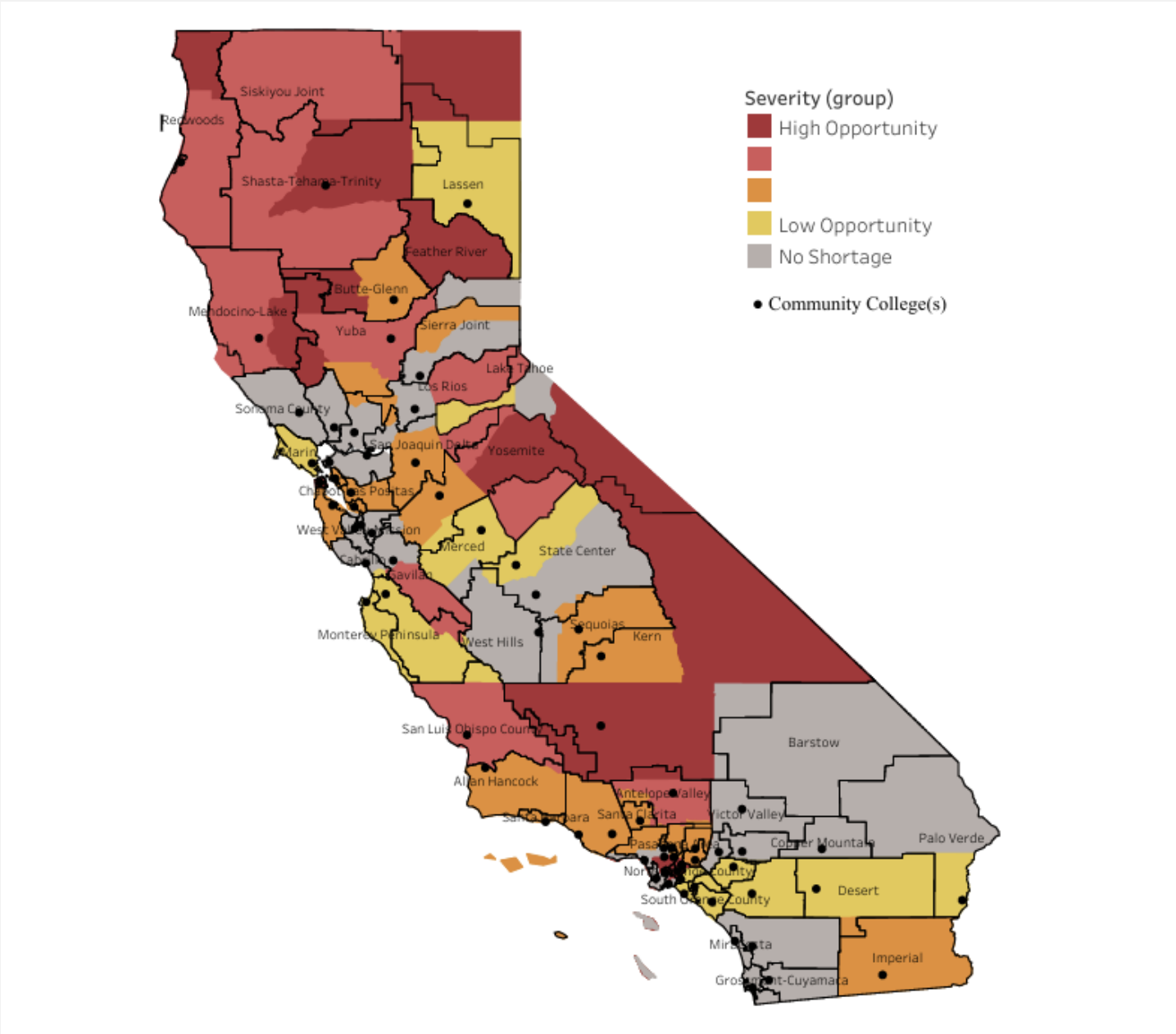
Opportunity Scores



Opportunity Score

- Points given to each category: 0 -5
- Average of points = Opportunity Score

Opportunity Map



Future Insights



This can be expanded to other roles and programs. Within licensed Behavioral Health and Nursing Professions



This can be expanded with HCAI program data– HCAI has over 50 programs with reported training site and awardee information. Future analysis can help reveal the impact of HCAI and external funding



Long Term initiative considerations– HCAI S/D model projects 10 years into the future, these maps can be tuned based on outcome driven goals