**Office of Health Care Affordability**
**Health Care Workforce Stability Standards**
**Adopted June 2024**

## The Office of Health Care Affordability's Mission and Purpose

In 2022, the California Health Care Quality and Affordability Act (SB 184, Chapter 47, Statutes of 2022) established the Office of Health Care Affordability (OHCA) within the Department of Health Care Access and Information (HCAI). Recognizing that health care affordability has reached a crisis point as health care costs continue to grow, OHCA's enabling statute emphasizes that it is in the public interest that all Californians receive health care that is accessible, affordable, equitable, high-quality, and universal.

Health care spending in California reached $10,299 per capita and $405 billion overall in 2020, up 30% from 2015.[1] Californians with job-based coverage are facing higher out-of-pocket costs, with the share of workers with a large deductible ($1,000 or more) increasing from 6% in 2006 to 54% in 2020.[2] For the fourth consecutive year, the 2024 California Health Care Foundation California Health Policy Survey reports that more than half of Californians (53%) – and nearly three-fourths (74%) of those with lower incomes (under 200% of the federal poverty level) – reported skipping or delaying at least one kind of health care due to cost in the past 12 months.[3] Among those who reported skipping or delaying care due to cost, about half reported their conditions worsened as a result. Further, high costs for health care disproportionately affect Black and Latino Californians who report they had problems paying or could not pay medical bills (40% and 36%, respectively, compared to White Californians at 25%).[3]

OHCA has three primary responsibilities to achieve its mission of improved consumer affordability:

1. Slow health care spending growth through collection and reporting on total health care expenditure data and enforcing spending targets set by the Board;

[1] "Health Expenditures by State of Residence, 1991-2020," Data sets, *Health Accounts by State of residence*, September 2023, https://www.cms.gov/data-research/statistics-trends-and-reports/national-health-expenditure-data/state-residence.
[2] Heidi Whitmore and Jennifer Sartorius, "California Employer Health Benefits: Are Workers Covered?," California Health Care Almanac, California Health Care Foundation, August 2021. https://www.chcf.org/wp-content/uploads/2021/08/CAEmployerHealthBenefitsAlmanac2021.pdf.
[3] Jen Joynt, Rebecca Catterson, and Emily Alvarez, "The 2024 CHCF California Health Policy Survey," California Health Care Foundation, January 31, 2024. https://www.chcf.org/publication/2024-chcf-california-health-policy-survey/.

2. Promote high-value health system performance; and
3. Assess market consolidation.

OHCA promotes high-value system performance through its work in five focus areas: (1) primary care investment, (2) behavioral health investment, (3) alternative payment model (APM) adoption goals and standards, (4) quality and equity measurement, and (5) workforce stability. Across all these areas, the goal is to reorient the health care system towards greater value with the vision of creating a sustainable health care system that provides high-quality, equitable care to all Californians.

As part of its work to promote high-value health system performance, OHCA proposes the Workforce Stability Standards and Metrics described below for Board consideration.

**Statutory Requirements**

As described in the OHCA enabling statute, the statutory requirements related to monitoring health care workforce stability include:

- Monitor the effects of spending targets on health care workforce stability, high-quality jobs, and training needs of health care workers.
- Use a transparent process that allows for public input.
- Highlight best practices and discourage practices harmful to workers and patients.
- Monitor health care costs while promoting health care workforce stability, including the competitive wages and benefits of frontline health care workers and the professional judgment of health professionals acting within their scope of practice.
- Monitor health care workforce stability with the goal that workforce shortages do not undermine health care affordability, access, quality, equity, and culturally and linguistically competent care.
- Promote the goal of health care affordability, while recognizing the need to maintain and increase the supply of trained health care workers.
- On or before July 2024, in consultation with the Board and with input from organized labor, health care entities, and other entities with expertise in health care workforce, develop standards to advance the stability of the health care workforce. The purpose of the standards is to assist health care entities in implementing cost-reducing strategies that advance the stability of the health care workforce, and without exacerbating existing health care workforce shortages.[4]

[4] These requirements are summarized from Health and Safety Code Section 127506, subdivision (a), Health and Safety Code Section 127506, subdivision (b), Health and Safety Code Section 127506, subdivision (c).

In addition to developing standards to advance the stability of the health care workforce, the statute identifies additional requirements related to health care workforce stability:

- The Director shall enforce the spending targets against health care entities in a manner that ensures compliance with targets, allows each health care entity opportunities for remediation, and ensures health care entities do not implement performance improvement plans in ways that are likely to erode access, quality, equity, or workforce stability.[5]
- OHCA may require a health care entity to implement a performance improvement plan that identifies the causes for spending growth and shall include specific strategies, adjustments, and action steps the entity proposes to implement to improve spending performance during a specified time period. The Director shall not approve a performance improvement plan that proposes to meet cost targets in ways that are likely to erode access, quality, equity, or workforce stability. The workforce stability standards described above may be considered in the approval of a performance improvement plan.[6]
- The Board approves standards to advance the stability of the health care workforce that may apply in the approval of performance improvement plans.[7]
- If data indicate adverse impacts on cost, access, quality, equity, or workforce stability from consolidation, market power, or other market failures, the Director may, at any point, require that a cost and market impact review be performed on a health care entity.[8]

The statute further outlines OHCA's authority to collect data from health care entities:

- Notwithstanding any other state or local law, OHCA shall collect data and other information it determines necessary from health care entities, except exempted providers, to carry out the functions of the office. OHCA may also enter into a data sharing agreement with state agencies that collect payer and provider financial data or other data or information about the health care workforce.[9]
- OHCA shall obtain data from existing state and federal data sources and from regulated entities to effectively monitor impacts to health care workforce stability and training needs such as overall trends in the health care workforce, including, but not limited to, statewide and regional workforce supply, unemployment and wage data, trends and projections of wages and compensation, projections of workforce supply by region and specialty, training needs, and other future trends in the health care workforce. OHCA may request additional data from health care

[5] Health and Safety Code Section 127502.5, subdivision (a).
[6] Health and Safety Code Section 127502.5, subdivision (c)(1).
[7] Health and Safety Code Section 127501.11, subdivision (b)(5).
[8] Health and Safety Code Section 127502.5, subdivision (g).
[9] Health and Safety Code Section 127501.4, subdivision (a)(1).

entities if it finds that the data is needed to effectively monitor impacts to health care workforce stability and training needs.[10]

## Background

To support the development of workforce stability standards, OHCA contracted with the Institute for Health Policy Studies and Healthforce Center at the University of California, San Francisco (UCSF). Work began in summer 2023 with a literature review to summarize current evidence and initiatives on workforce stability. Key findings of that review included the absence of any consensus definition of health care workforce stability or any literature assessing the impact of mandatory or voluntary health care spending targets on health care workforce stability.

A review of available datasets and metrics that could be used to operationalize workforce stability standards identified the publicly available California and national data sources described in the Workforce Stability Metrics section of this report, as well as several data sources that OHCA could consider pursuing through data use agreements with the relevant organizations. Twenty-nine datasets were reviewed: 10 of which are recommended for inclusion at this time, 8 are recommended for investigation and consideration in future updates to the Workforce Stability Metrics, and 11 are not recommended due missing data elements or overlap with recommended datasets. These data sources and OHCA's recommendations for inclusion are summarized in **Appendix A**. At the organization level, data collected by HCAI is some of the most reliable in the United States; limitations to HCAI data include long lag time for reporting and lack of data on most ambulatory settings. At the labor market level, the sources identified in the Workforce Stability Metrics section of this report were deemed to be the most reliable and relevant sources available.

In late fall 2023, OHCA and UCSF conducted interviews with 8 workforce experts to learn how spending targets might affect the workforce and to solicit recommendations for standards and metrics. Interviews with 15 stakeholders representing health care entities, organized labor, and consumers were designed to understand their perspectives on the workforce stability standards. Input from these interviews was distilled into a set of guiding principles OHCA used to develop its draft standards, alongside statutory requirements. These guiding principles are listed in **Appendix B**.

Informed by this initial work, OHCA and UCSF developed draft Workforce Stability Standards and Metrics, which were presented to the Health Care Affordability Advisory Committee on March 19, 2024. Additional interviews with 13 workforce experts and stakeholders, along with surveys of 10 others, were conducted to gather feedback on these draft standards. Revised draft standards were presented to the Health Care Affordability Board on April 24, 2024 and to the Health Care Affordability Advisory Committee on May 14, 2024. OHCA received public comment on the Workforce Stability

[10] Health and Safety Code Section 127501.4, subdivision (j)(1).

Standards and Metrics from April 24 to May 24, 2024. Feedback from all these sources was incorporated into the final Standards.

## Context

California currently faces significant health care workforce shortages that vary across occupations and regions.[11,12,13] There is a geographic imbalance in the supply of the health care workforce members, with some regions such as the Central Valley facing lower supply over a long period of time. Shortages of health care workers contribute to lack of access to needed services, including preventive services, delays in receiving appropriate care, and preventable hospitalizations. In addition, the racial and ethnic composition and linguistic competencies of workers in high wage health care occupations do not reflect those of the state's population. Ensuring universal access to high quality, equitable health care will require investment to address these shortages and inequities as well as monitoring to enable effective planning for future workforce needs. Additionally, a stable workforce helps to ensure continuity of care for patients, which has been shown to improve outcomes while also reducing the cost of care.[14,15,16]

Other states that have implemented cost growth benchmarks and targets – or are in the process of doing so – have not considered workforce stability in their programs. There has been some attention given to the supply of health professionals as a driver of cost growth, but no state has considered the importance of the stability of the health care workforce as part of setting targets and monitoring performance improvement plans.

OHCA's statute emphasizes that efforts to slow health care spending growth should not undermine health care affordability, access, quality, equity, and culturally and linguistically competent care. A central tenet of OHCA's health care workforce stability standards is that they are not at odds with the goal of slowing the growth of health care spending. In fact, recognizing the health care workforce as an organizational

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[11] "Meeting the Demand of Health: Final Report of the California Future Health Workforce Commission," California Future Health Workforce Commission, 2019. https://futurehealthworkforce.org/wp-content/uploads/2019/03/MeetingDemandForHealthFinalReportCFHWC.pdf.

[12] Kristine A. Himmerick, Ginachukwu Amah, Susan Chapman, and Healthforce Center at UCSF. "The State of the California Medical Laboratory Technician Workforce," Healthforce Center at UCSF, (2017): 1-25, https://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/UCSF%20MLT%20Report%202017.pdf.

[13] Joanne Spetz, Lela Chu, and Lisel Blash. "Forecasts of the Registered Nurse Workforce in California," *Philip R. Lee Institute for Health Policy Studies*, (2022): 1-26, https://www.rn.ca.gov/pdfs/forms/forecast2022.pdf.

[14] Denis J Pereira Gray et al., "Continuity of Care With Doctors—a Matter of Life and Death? A Systematic Review of Continuity of Care and Mortality," *BMJ Open* 8, no. 6 (June 1, 2018): e021161, https://doi.org/10.1136/bmjopen-2017-021161.

[15] Yung-Hsiang Chao et al., "Effects of Continuity of Care on Hospitalizations and Healthcare Costs in Older Adults With Dementia," *BMC Geriatrics* 22, no. 1 (September 2, 2022), https://doi.org/10.1186/s12877-022-03407-7.

[16] Anna Nicolet et al., "Association Between Continuity of Care (COC), Healthcare Use and Costs: What Can We Learn From Claims Data? A Rapid Review," *BMC Health Services Research* 22, no. 1 (May 16, 2022), https://doi.org/10.1186/s12913-022-07953-z.

asset rather than an expense can yield benefits. Investing in a well-trained and well-compensated workforce can enhance the quality of care, decrease staff turnover, and reduce reliance on contract labor. These improvements can collectively lower health care costs and improve patient outcomes. For example, many studies have demonstrated a strong relationship between higher nurse-to-patient ratios in hospitals, better patient outcomes, and lower rates of turnover and burnout.[17] Recent research in both the US and other countries has documented the potential for investment in hospital nurse staffing to generate net cost savings through reduced rates of adverse events, shorter lengths of stay, and lower readmission rates.[18,19,20] Similarly, increasing nursing home employment of nursing and social service staff is a cost-effective investment to reduce deficiency citations, and high rates of employment of contract staff are associated with worse patient and workforce outcomes.[21] In addition, implementation of interdisciplinary care teams for high-risk older patients has been shown to reduce overall costs.[22]

Maintaining a stable health care workforce includes investing in the education and training of new workers and retention of those already in the field. Shortages of health care workers lead to rapid increases in wages because employers compete against each other for scarce labor, which strains budgets and creates pressure to reduce staffing.[23, 24, 25] Rapid wage increases also generate rising health care costs, which increase health insurance premiums and impact state and federal insurance programs. These wage and cost increases may occur without improving health care quality or

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[17] Matthew D. McHugh and Chenjuan Ma, "Wage, Work Environment, and Staffing: Effects on Nurse Outcomes," *Policy, Politics & Nursing Practice/Policy, Politics, & Nursing Practice* 15, no. 3–4 (August 1, 2014): 72–80, https://doi.org/10.1177/1527154414546868.

[18] Karen B Lasater et al., "Valuing Hospital Investments in Nursing: Multistate Matched-cohort Study of Surgical Patients," *BMJ Quality & Safety* 30, no. 1 (March 27, 2020): 46–55, https://doi.org/10.1136/bmjqs-2019-010534.

[19] Aileen Murphy et al., "Estimating the Economic Cost of Nurse Sensitive Adverse Events Amongst Patients in Medical and Surgical Settings," *Journal of Advanced Nursing* 77, no. 8 (May 5, 2021): 3379–88, https://doi.org/10.1111/jan.14860.

[20] Timothy M. Dall et al., "The Economic Value of Professional Nursing," *Medical Care* 47, no. 1 (January 1, 2009): 97–104, https://doi.org/10.1097/mlr.0b013e3181844da8.

[21] John R. Bowblis and Amy Restorick Roberts, "Cost-Effective Adjustments to Nursing Home Staffing to Improve Quality," *Medical Care Research and Review* 77, no. 3 (June 8, 2018): 274–84, https://doi.org/10.1177/1077558718778081.

[22] F. Cardwell Feagin et al., "Does Interdisciplinary Care Team Care Management Improve Health Quality and Demonstrate Cost-Effectiveness?," *Medical Care Research and Review* 81, no. 1 (September 7, 2023): 19–30, https://doi.org/10.1177/10775587231197846.

[23] George J. Borjas, "Labor Market Equilibrium" and "Compensating Wage Differentials," in *Labor Economics*, Sixth Edition. (New York, NY: McGraw-Hill, 2013), 144-203. http://students.aiu.edu/submissions/profiles/resources/onlineBook/q3e6P2_Labor_Economics-_6th_Edition.pdf

[24] Joanne Spetz and Ruth Given, "The Future of the Nurse Shortage: Will Wage Increases Close the Gap?," *Health Affairs* 22, no. 6 (November 1, 2003): 199–206, https://doi.org/10.1377/hlthaff.22.6.199.

[25] Addie Fleron, Aneesh Krishna, and Shubham Singhal, "The Gathering Storm: The Transformative Impact of Inflation on the Healthcare Sector," McKinsey & Company, September 19, 2022, https://www.mckinsey.com/industries/healthcare/our-insights/the-gathering-storm-the-transformative-impact-of-inflation-on-the-healthcare-sector.

worker well-being and in fact may worsen both. Investing in initiatives to address health care workforce shortages can improve workforce stability without inflating overall health care spending.

**Definition of Workforce Stability**

OHCA's charge to establish workforce stability standards encompasses two levels: (1) the organization level and (2) the market level.

Workforce stability in health care at the organization level refers to the effective management of staff turnover, retention, and training, aiming to create a resilient workforce that consistently delivers high-value, equitable care. It encompasses having an optimal number of skilled professionals and fostering a supportive, sustainable work environment. This stability is not only about retaining skilled staff but also about maintaining a workforce that can meet the organization's needs effectively and efficiently while also recognizing the need for career and professional development of health care workers and ensuring that health care jobs are high-quality jobs.

Health care workforce stability at the market level is the equilibrium between supply and demand within health care labor markets. Shortages in the health care workforce can lead to staffing challenges that affect patient care, trigger rapid wage increases (thereby elevating health care costs), and intensify competition for talent among organizations. This competition can destabilize the workforce across the market because employers actively recruit employees from one another, further aggravating the shortage. Alternatively, an oversupply of health care workers can result in decreased wages and benefits, as well as higher levels of unemployment among health care professionals. A well-adjusted health care labor market is characterized by sufficient job openings for newly qualified workers and those seeking to move between organizations, working conditions that promote low turnover and limited use of contract workers, and sustainable growth in wages and benefits. In such a market, employers can offer attractive job opportunities, simultaneously supporting their workers and maintaining their financial health. This balance is crucial for sustaining the quality and accessibility of patient care.

Health care workforce practices at the organization level are intertwined with market level workforce stability. For example, if organizations provide workers with well-paid jobs, good working conditions, and opportunities for professional growth, interest in that occupation will be heightened, leading to greater market level supply. Similarly, if organizations support health care workforce education programs by providing clinical placements, this supports stable market level supply. Conversely, if there is a shortfall of education opportunities for an occupation, the market level supply may be diminished, creating challenges for individual organizations to hire enough staff and ensure reasonable workloads. Thus, tracking both organization level and market level workforce stability is important to achieving OHCA's mission.

## Scope and Limitations of Workforce Stability Standards

OHCA interprets the legislation to exclude the supervisory workforce, including physicians, dentists, and pharmacists because the statute uses the language "nonsupervisory health care workforce" or "frontline health care workers" in several areas. Stakeholders representing a range of perspectives have encouraged OHCA to consider including physicians, dentists, and pharmacists in its standards, citing the importance of tracking the primary care workforce and the changing healthcare landscape in which many physicians are now employees subject to similar working conditions as other health care workers. OHCA intends to use HCAI data to understand trends in the physician workforce and may consider including physicians in the Workforce Stability Standards and Metrics in the future.

Publicly available organization level data for many ambulatory settings, including physician offices, ambulatory surgery centers, and others, are quite limited at the present time. Similarly, publicly available data on the behavioral health and oral health care workforce is limited by the fact that most behavioral health care and dental care is delivered in settings not monitored in the publicly available data sources. OHCA is investigating how to address these important data gaps and will incorporate new data sources for monitoring the health care workforce in ambulatory settings as they become available.

## Accountability for Workforce Stability Standards

To achieve workforce stability in the context of spending targets, OHCA has adopted a set of best practice standards for health care entities to implement. Health care entities should develop and maintain these practices and track related key performance indicators (KPIs) to identify areas for improvement, allocate resources more effectively, and support a stable and responsive workforce. Currently, evidence does not exist to support specific performance expectations for these KPIs. OHCA is investigating reporting mechanisms within HCAI that could be used to collect data from health care entities on the KPIs listed below to establish baseline performance and inform potential future performance expectations. Because developing standard definitions for the KPIs and establishing data collection procedures through a publicly transparent process will require more time than was available before the statutory deadline to adopt workforce stability standards, these initial Workforce Stability Standards do not include a mechanism for reporting or tracking entities' performance on the KPIs.

Publicly available data outlined in the Metrics section will be analyzed at the entity and market levels. Synthesizing and publicly reporting on market level metrics and on comparative performance of organizations on organization level metrics and will allow OHCA and others to identify workforce trends and performance outliers.

OHCA recognizes that this initial set of standards is a starting point for ongoing work to ensure stability of the health care workforce in the context of spending targets. OHCA has statutory authority to collect data needed to carry out the functions of the office,

which include monitoring the effects of cost targets on health care workforce stability.[26] In the future, OHCA will consider updating its Workforce Stability Standards and Metrics, incorporating baseline data and potential new data collection opportunities. OHCA will evaluate the possibility of requiring reporting on the KPIs and setting specific performance expectations into its workforce stability standards, taking administrative burden into consideration. OHCA will provide regular updates to the Health Care Affordability Advisory Committee and Board as this work progresses.

Although OHCA does not have direct enforcement authority for these Workforce Stability Standards, the Standards may be used to inform development of standards that may apply in Performance Improvement Plans for entities not meeting the spending targets.

### OHCA Workforce Stability Standards

The following are the OHCA Workforce Stability Standards to advance the stability of the health care workforce. These standards are best practices that health care entities should implement to ensure workforce stability.

1. **Monitor a priority set of key performance indicators of health care workforce stability.** Relevant indicators to monitor include:
    - Turnover rates;
    - Retention rates;
    - Vacancy rates;
    - Contract and temporary labor use rates;
    - Time to fill vacant positions;
    - Percentage of employees eligible for benefits (e.g., health benefits, paid time off, and retirement);
    - Employee engagement, including assessing for job satisfaction, burnout, and moral injury;
    - Investment in continuing education, professional development, and training programs; and
    - Diversity of workforce and languages spoken in relation to the population served.
2. **Develop formal processes to adapt to changing workforce conditions.** Establish policies and procedures to adjust hiring, training, and other practices based on the key performance indicators and market level influences. Actively engage staff who will be impacted by these policies in the development process.

[26] Health and Safety Code Section 127501.4, subdivision (a)(1): “Notwithstanding any other state or local law, the office shall collect data and other information it determines necessary from health care entities, except exempted providers, to carry out the functions of the office.”

3. **Allocate resources for professional development for health care workers** to strengthen the current and future workforce. Such training includes developing new skills to adapt to changing health care delivery models that support affordability, access, quality, equity, and culturally and linguistically competent care, sponsoring clinical placements, and supporting advancement of entry-level and non-clinical workers (e.g., housekeeping staff) to other occupations within the organization through career ladders.
4. **Increase use of interdisciplinary health care teams to support worker engagement and improve affordability, access, quality, and equity.** Interdisciplinary teams promote effective use of team members' diverse skill sets to deliver high-quality, patient-centered care. Examples of interdisciplinary team care include integrated behavioral health in primary care settings and using community health workers to address social needs.
5. **Prioritize hiring, employee advancement, and care delivery practices that ensure culturally and linguistically competent care.** Access to high-quality, equitable care across all communities requires a health care workforce that represents California's people, speaks their languages, and understands their cultures. Prioritize hiring, employee advancement, and care delivery practices that advance equitable care. Use regional demographic data to align the workforce with the needs of the populations served.
6. **Monitor and address workplace safety and violence.** Continually monitor workplace safety and violence and implement policies and procedures to ensure safe working conditions for all health care workers. A safe workplace supports employee well-being and workforce stability, ultimately improving the quality of patient care.

### OHCA Workforce Stability Metrics

OHCA will use the following Workforce Stability Metrics to track data about workforce stability. The listed metrics are captured in publicly available datasets and address both categories of workforce stability defined above: the organization level and the labor market level.

### Organization Level Metrics and Data Sources

Workforce stability within health care entities will be tracked using data currently reported to HCAI. The purpose of this tracking is to establish baseline data on the adopted metrics, monitor the workforce of health care entities as they work to achieve the spending targets, highlight best practices, and discourage practices harmful to workers and patients.

The entities under OHCA's purview include providers, payers, and integrated delivery systems. However, only provider entities and fully integrated delivery systems, as

defined in statute, are included in the Workforce Stability Metrics.[27,28] Payers are excluded because they do not typically employ health care workers themselves.

The organization level metrics will include only those entities for which data are now collected and readily available:

- Hospitals, including acute, emergency, ambulatory, ancillary, clinic, rehabilitation, and long-term care facilities;
- Nursing homes and skilled nursing facilities; and
- Licensed community clinics.

[27] Health and Safety Code Section 127500.2, subdivision (h).
[28] Health and Safety Code Section 127500.2, subdivision (q).

**Table 1** provides information about the data source and metrics that will be used for hospitals. The data source is the HCAI Hospital Annual Financial Disclosure Reports, which have been collected for nearly 50 years and provide detailed information about staffing and wages, including about contract personnel. The data can be used to ascertain workloads (measured as the ratio of staffing to patient volume), wages, and labor costs. Table 1 lists the occupations and specific metrics to be tracked, which OHCA can use to measure trends over time and look for outliers. This information will support OHCA's assessment of workforce stability associated with job quality and workforce adequacy (i.e., workload, wages, and contract personnel use) and labor cost.

**Table 1. Data Sources and Metrics for Hospitals**

| Data Source | HCAI Hospital Annual Financial Disclosure Reports | |
|---|---|---|
| **Occupations** | • Technical and specialist staff<br>• Registered nurses<br>• Licensed vocational nurses<br>• Aides and orderlies<br>• Clerical & other administrative staff | • Environmental & food service staff<br>• Other staff<br>• Registry nursing personnel<br>• Other contracted staff |
| **Metrics** | • Average hours per patient day for daily hospital services over the fiscal year, for each occupation<br>• Average hours per emergency department visit over the fiscal year<br>• Average hours per clinic visit over the fiscal year<br>• Average hours per clinical laboratory test over the fiscal year<br>• Average hourly pay rate for daily hospital services, per occupation<br>• Average hourly pay rate for ambulatory services, per occupation<br>• Average hourly pay rate for ancillary services, per occupation | • Contract nursing personnel hours divided by total nursing hours, for daily hospital services, over the fiscal year<br>• Average hourly rate of contract nursing personnel divided by average hourly rate of staff registered nurses<br>• Salaries, wages, and benefits costs as percentage of total operating expenses<br>• Salaries & wages per adjusted patient day<br>• Benefits per adjusted patient day |

**Table 2** summarizes the data source and metrics that will be used for nursing homes and skilled nursing facilities. The data source is the HCAI Long-term Care Facility Integrated Disclosure and Medi-Cal Cost Report Data. The data can be used to measure workloads (measured as the ratio of staff productive hours divided by resident days), wages, and labor costs. Table 2 lists the occupations and specific metrics to be tracked, which OHCA can use to measure trends over time and look for outliers. This information will support OHCA's assessment of workforce stability associated with job quality and workforce adequacy (i.e., workload, wages, and temporary staff use) and labor cost.

**Table 2. Data Sources and Metrics for Nursing Homes and Skilled Nursing Facilities**

| Data Source | HCAI Long-term Care Facility Integrated Disclosure and Medi-Cal Cost Report Data | |
|---|---|---|
| **Occupations** | • Geriatric nurse practitioners<br>• Registered nurses<br>• Licensed vocational nurses<br>• Nurse assistants<br>• Technicians and specialists<br>• Psychiatric technicians<br>• Other | • Social workers<br>• Activity program leaders<br>• Housekeeping<br>• Laundry and linen<br>• Dietary<br>• Social services<br>• Activity staff |
| **Metrics** | • Productive hours per resident day, overall and for selected departments<br>• Average wages<br>• Percent of total hours from temporary staff, overall and by occupation<br>• Labor turnover<br>• Personnel costs as percentage of total operating expenses | |

**Table 3** summarizes the data source and metrics that will be used for community clinics. The data source is the HCAI Primary Care Clinic Annual Utilization Data. This annual dataset can be used to measure workloads, measured as the ratio of staff full-time equivalents (FTEs) per patient encounter. Information about wages or earnings are not provided in this dataset. Table 3 lists the occupations and specific metrics to be tracked, which OHCA can use to measure trends over time and look for outliers. These data will support OHCA's assessment of workforce stability associated with job quality and workforce adequacy (i.e., workload and temporary staff use). Of note, several workforce data elements will be added to the Primary Care Clinic Annual Utilization Report in the future, pursuant to Health and Safety Code section 128910 (SB 779, Chapter 505, Statues of 2023). OHCA will track these additional metrics when data becomes available.

**Table 3. Data Sources and Metrics for Community Clinics**

| Data Source | HCAI Primary Care Clinic Annual Utilization Data | |
|---|---|---|
| **Occupations** | • Visiting nurses<br>• Registered dental hygienists – alt practice<br>• Licensed clinical social workers<br>• Other billable providers<br>• Other Comprehensive Perinatal Services Program (CPSP) providers<br>• Registered dental hygienists (not alt practice)<br>• Registered dental assistants<br>• Marriage and family therapists | • Registered nurses<br>• Licensed vocational nurses<br>• Medical assistants<br>• Patient education staff<br>• Substance abuse counselors<br>• Billing staff<br>• Other admin staff |
| **Metrics** | • Staff full-time equivalents (FTEs)<br>• Contract FTEs<br>• Volunteer FTEs<br>• Staff FTEs as percent of total FTEs<br>• Staff FTEs per patient encounter | |

### Labor Market Metrics and Data Sources

The status of the health care workforce labor markets will be monitored using data currently collected by state and federal organizations to track supply, demand, education capacity, wages, and diversity. The labor market metrics support the identification of emerging workforce shortages by tracking trends in employment and graduations from training programs, which can identify slowdowns in growth, shrinking health care worker-to-population ratios, and rising unemployment within health care occupations. Together, these data can guide investments in training programs to increase supply and help prevent workforce shortages that undermine health care affordability, access, quality, equity, and culturally and linguistically competent care. In addition, the labor market level metrics can provide insight into the racial, ethnic, gender, and language diversity of the health care workforce.

Market level metrics include data that provide information about current supply of licensed health professionals, current numbers of health care workers employed (by industry, if desired), racial, ethnic, and gender diversity of health care workers, wages, numbers and diversity of new graduates from post-secondary education programs, and projected employment. When possible, these metrics will be tracked by region within California (see **Appendix C**).

**Table 4** provides information about the primary data sources for information about the licensed health professional workforce in California: California Licensure Board records and HCAI license renewal surveys. California's health care workforce licensing boards gather information at the time of initial licensure and then conduct a survey designed by HCAI at the time of license renewal. These data provide information that can be used to track the total supply of licensed professionals, their employment, race/ethnicity, and languages spoken, thus addressing workforce stability priorities of workforce adequacy (number licensed, age distribution, employment status, hours worked per week, practice settings, and retirement plans) and equity (race/ethnicity, gender identity, languages spoken, self-identified disability status).

**Table 4. Data on Current Supply, Employment, and Diversity of Licensed Health Professionals**

| Data Source | California Licensure Board records and HCAI license renewal surveys | |
|---|---|---|
| **Geographic Level** | • Statewide<br>• Census Bureau-defined Core Based Statistical Areas (CBSAs) and Combined Statistical Areas (CSAs)<br>• Counties<br>• California Economic Strategy Panel regions | |
| **Occupations** | • Physician Assistants<br>• Advanced Practice Registered Nurses<br>• Registered Nurses<br>• Licensed Vocational Nurses<br>• Licensed Clinical Social Workers<br>• Licensed Marriage and Family Therapists | • Licensed Professional Clinical Counselors<br>• Occupational Therapists<br>• Physical Therapists<br>• Psychologists<br>• Respiratory Therapists<br>• Clinical Laboratory Scientists<br>• Medical Laboratory Technicians |
| **Metrics** | • Number licensed<br>• Age distribution<br>• Race/ethnicity<br>• Gender identity<br>• Current employment status<br>• Languages spoken | • Self-identified disability status<br>• Average number of hours worked per week<br>• Primary practice setting<br>• Secondary practice setting<br>• Retirement plans |

**Table 5** provides information about market level data available for unlicensed health care occupations in the American Community Survey, which is the largest survey conducted by the Census Bureau and thus the most useful for studying counties and regions. Single-year estimates can be obtained statewide and for counties, although counties and occupations for which the number of survey respondents are too few to report valid estimates are suppressed (e.g., Imperial County). People working in health care occupations that do not require licensure can be identified, although some occupations are aggregated (e.g., nursing aides, psychiatric aides, and home health aides). These data can be used to track workforce stability with respect to workforce adequacy (number employed, age distribution, usual hours worked per week), job quality (wage or salary income), and equity (gender, race/ethnicity, languages spoken, disability).

**Table 5. Data on Current Employment and Diversity of Unlicensed Health Care Workers**

| Data Source | US American Community Survey | |
|---|---|---|
| **Geographic Level** | • Statewide<br>• Large counties | |
| **Occupations** | • Nursing, psychiatric, and home health aides<br>• Occupational and physical therapist assistants and aides<br>• Other healthcare support occupations<br>• Substance abuse and behavioral disorder counselors | |
| **Metrics** | • Number employed<br>• Gender<br>• Race/ethnicity<br>• Age distribution<br>• Presence of self-care, ambulatory, and cognitive difficulties | • Languages spoken<br>• Total earnings<br>• Wage or salary income in past 12 months<br>• Usual hours worked per week |

**Table 6** summarizes data from the Bureau of Labor Statistics Occupational Employment and Wage Estimates, which provides state-level information about employment and wages for dozens of health care occupations. The data are released annually and can be used to track many occupations that are not detailed in the American Community Survey. These data can be used to track workforce stability with respect to adequacy (employment) and job quality (wages and earnings).

**Table 6. Bureau of Labor Statistics Data on Employment and Wages of Health Care Workers**

| Data Source | US Occupational Employment and Wage Statistics |
|---|---|
| **Geographic Level** | • Statewide |
| **Occupations** | • Dietitians and Nutritionists<br>• Physician Assistants<br>• Occupational therapists<br>• Physical therapists<br>• Radiation therapists<br>• Respiratory therapists<br>• Speech-language pathologists<br>• Registered nurses<br>• Nurse anesthetists<br>• Nurse midwives<br>• Nurse practitioners<br>• Audiologists<br>• Dental hygienists<br>• Clinical laboratory techs<br>• Cardiovascular techs<br>• Diagnostic medical sonographers<br>• Nuclear medicine techs<br>• Radiologic techs<br>• Magnetic resonance imaging techs<br>• Emergency medical techs<br>• Paramedics<br>• Dietetic technicians<br>• Pharmacy techs<br>• Psychiatric techs<br>• Surgical techs<br>• Ophthalmic medical techs<br>• Licensed vocational nurses<br>• Medical records specialists<br>• Opticians, dispensing<br>• Orthotists and prosthetists<br>• Hearing aid specialists<br>• Health techs, all other<br>• Surgical assistants<br>• Home health and personal care aides<br>• Nursing assistants<br>• Orderlies<br>• Psychiatric aides<br>• Occupational therapy assistants<br>• Occupational therapy aides<br>• Physical therapist assistants<br>• Physical therapist aides<br>• Dental assistants<br>• Medical assistants<br>• Medical equipment preparers<br>• Medical transcriptionists<br>• Pharmacy aides<br>• Phlebotomists<br>• Health care support workers, all other |
| **Metrics** | • Employment<br>• Median hourly wage<br>• Mean hourly wage<br>• Annual mean earnings |

**Table 7** includes data from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS), which provides information about all postsecondary education programs that receive any federal funding, including federal student loans. The data can be used to track inflows of health workers for whom postsecondary education is required. The key metrics that can be used to support analysis of workforce stability are training and adequacy (awards/degrees conferred) and equity (race/ethnicity, gender, and non-US residents).

**Table 7. Integrated Postsecondary Education Data System Data on Health Worker Graduates**

| Data Source | US Integrated Postsecondary Education Data System |
|---|---|
| **Geographic Level** | • Statewide<br>• Census Bureau-defined Core Based Statistical Areas (CBSAs) and Combined Statistical Areas (CSAs)<br>• Counties<br>• California Economic Strategy Panel regions |
| **Occupations** | • Dozens of program classifications, in category "51. Health Professions and Related Clinical Services" and "42.28 Clinical Psychology," and "44.07 Social Work" |
| **Metrics** | • Awards/degrees conferred<br>• Awards/degrees by race/ethnicity<br>• Awards/degrees by gender<br>• Awards/degrees to non-US-residents |

Registered nursing is the largest licensed profession in health care and accounts for up to half of most hospitals' labor force. Thus, tracking this occupation is particularly important as a barometer of workforce stability. There are detailed data on California's registered nursing workforce, including biennial surveys of registered nurses, annual surveys of nursing education programs, and biennial projections of statewide and regional supply and demand, that can be used by OHCA. The Board of Registered Nursing Biennial Survey provides information related to workforce adequacy, training, job quality, and equity (see **Table 8**). The Annual Schools Survey supports tracking of training, workforce adequacy, and equity (see **Table 9**). The Projections of Supply and Demand allow for tracking of workforce adequacy (see **Table 10**).

**Table 8. Data on Current Supply and Employment of Registered Nurses**

| **Data Source** | **California Board of Registered Nursing (BRN) Biennial Survey of Registered Nurses** | |
|---|---|---|
| **Geographic Level** | • Statewide<br>• California BRN regions (based on California Economic Strategy Panel regions) | |
| **Occupations** | • Registered nurses | |
| **Metrics** | • Job satisfaction<br>• Profession satisfaction<br>• Hours worked per day<br>• Hours worked per week<br>• Overtime per week<br>• On call hours per week<br>• Employment intentions<br>• Employment relationship in principal position<br>• Hours worked in principal position<br>• Job title in principal position<br>• Total annual earnings in principal position | • Benefits provided by principal position<br>• Data on additional nursing jobs<br>• For those not working: year last worked<br>• For those not working: why not working<br>• For those not working: employment intentions<br>• Change in employers, positions, or intensity of work<br>• Country of birth<br>• Location of RN education |

**Table 9. Data on Registered Nurse Education**

| Data Source | California Board of Registered Nursing (BRN) Annual Schools Survey | |
|---|---|---|
| **Geographic Level** | • Statewide<br>• California BRN regions (based on California Economic Strategy Panel regions)<br>• Counties | |
| **Occupations** | • Registered nurses | |
| **Metrics** | • Number of programs<br>• Number of admission spaces<br>• Number of qualified applications<br>• Admission rate (note: this is school-by-school; it is not known how many applicants statewide are not admitted to any program)<br>• Barriers to program expansion<br>• New student enrollments<br>• Race/ethnicity, gender, and age distribution of new enrollments<br>• Projected new student enrollment for next 2 years | • Number of completions<br>• Race/ethnicity, gender, and age distribution of completions<br>• On-time completion rate<br>• Attrition rate<br>• First-time board exam passage rate<br>• Number of full-time faculty<br>• Number of part-time faculty<br>• Number of faculty vacancies |

**Table 10. Projections of Supply and Demand for Registered Nurses**

| Data Source | California Board of Registered Nursing (BRN) Projections of Supply and Demand |
|---|---|
| **Geographic Level** | • Statewide California BRN regions (based on California Economic Strategy Panel regions) |
| **Occupations** | • Registered nurses |
| **Metrics**<br>**Appendices** | • Projected supply of registered nurses (low, best, and high)<br>• Projected demand for registered nurses to maintain current FTE per capita<br>• Projected demand adjusted for population aging<br>• Projected demand from California Employment Development Department |

### Other Data Sources Under Consideration

OHCA will continue to evaluate data sources not currently included in the above tables, including sources listed in Appendix A, that can add value to its workforce stability monitoring efforts. OHCA will provide an update to the Health Care Affordability Board in Fall 2024 on its evaluation of data sources and provide recommendations for metrics to be added to its Workforce Stability Metrics, if any.

### Data Collection from Organizations

In response to stakeholder feedback about the importance of mandatory reporting by organizations on the Key Performance Indicators (KPIs) in Workforce Stability Standard One, HCAI is currently evaluating the necessary steps and timeline to update existing HCAI reports (see Tables 1 – 3) to include some or all KPIs. OHCA will update the Health Care Affordability Board in Fall 2024 on its progress developing new data collection approaches to augment the currently publicly available sources listed in Tables 1 – 10.

## Appendix A: Summary of Data Sources Evaluated

| *Name of Data Set* | *Description* | *Data Availability* | *Level (Organization or Market)* | *Types of Metrics* | *OHCA Action* |
|---|---|---|---|---|---|
| **HCAI Datasets** | | | | | |
| HCAI Hospital Annual Financial Disclosure Reports | Staffing, average wage, utilization, and financial data for all non-federal hospitals, for fiscal year | Public use file | Organization (hospitals) | See Table 1 | Included in adopted metrics |
| HCAI Hospital Quarterly Financial Data | Utilization and financial data for all non-federal hospitals, quarterly | Public use file | Organization (hospitals) | Discharges<br>Patient Days | Not included because missing key data elements |
| HCAI Long-term Care Facility Integrated Disclosure and Medi-Cal Cost Report Data | Staffing, average wage, utilization, and financial data for nursing homes and skilled nursing facilities, for fiscal year | Public use file | Organization (nursing homes) | See Table 2 | Included in adopted metrics |
| HCAI Primary Care Clinic Annual Utilization Data | Employee, contract, and volunteer FTEs for multiple occupations, patient encounters, for community clinics, for fiscal years. New variables added in 2027 including vacancies, wages, and demographics of workforce | Public use file | Organization (clinics) | See Table 3 | Included in adopted metrics |
| HCAI Home Health Agencies & Hospice Annual Utilization Report | Numbers of visits by each staff type, operating costs, for home health and hospice agencies, for fiscal years | Public use file | Organization (home health & hospice) | Number of hospice RN visits<br>Operating costs for nursing care | Not included because missing key data elements |
| HCAI License Renewal Surveys | Surveys conducted as part of license renewal process | Public web displays; microdata would require intra-agency MOU | Market (state, county, local) | See Table 4 | Included in adopted metrics |

| ***Name of Data Set*** | ***Description*** | ***Data Availability*** | ***Level (Organization or Market)*** | ***Types of Metrics*** | ***OHCA Action*** |
|---|---|---|---|---|---|
| **Other California Agency Datasets** | | | | | |
| Department of Civil Rights Pay Data Reporting Program | For private employers with 100+ employees: pay, job category, race, ethnicity, gender of employee | Public-use website at state level; employer-level data would require MOU/DUA | Organization (all types) | Employee gender mix<br>Employee race-ethnicity mix<br>Distribution of pay by race-ethnicity | Investigating for future inclusion in metrics |
| EDD Worker Adjustment and Retraining Notification (WARN) Data | 60-day notices provided by employers before facility closing or mass layoff, for employers with 100+ employees | Publicly available Excel & PDF | Organization (all types) | Number of workers to lose jobs | Investigating for future inclusion in metrics |
| Workers' Compensation Information System (WCIS) | Records of all worker's compensation first reports of injury | Public with request | Organization (all types) | Injury rates per employer<br>Types of injuries per employer | Investigating for future inclusion in metrics |
| Employment Development Department Quarterly Payroll Data | Quarterly payroll records for all employees covered by unemployment and disability insurance systems. Data include industry of employer but not occupation of employee. | Private | Organization (all types) | Total quarterly earnings for each employee<br>Turnover (calculated by linking data over time) | Not included due to extensive resources required to transform the data so that turnover can be estimated and missing data by occupation |
| California Community Colleges Clinical Placement Reporting (SB 1348) | Annual number of students receiving training at individual clinical sites for multiple allied health programs | Publicly available PDF reports | Organization (community colleges, health care provider) | Number of students in placement per employer<br>Number of students in placements per school/program | Not included because the data only includes health care worker education programs at community colleges, does not include RNs, and does not contain data on the locations of employers that offer clinical placements |
| Licensure Board Data | Records of each licensed health professional | Private | Market (state, county, local) | See Table 4 | Included in adopted metrics |
| Board of Registered Nursing Biennial Survey of RNs | Sample survey of California-licensed RNs, conducted every 2 years | Public-use data file | Market (state, 9 regions) | See Table 8 | Included in adopted metrics |

| ***Name of Data Set*** | ***Description*** | ***Data Availability*** | ***Level (Organization or Market)*** | ***Types of Metrics*** | ***OHCA Action*** |
|---|---|---|---|---|---|
| Board of Registered Nursing Annual Schools Survey | Annual survey of all approved RN education programs in California | Public-use data file | Market (state, county, 9 regions) | See Table 9 | Included in adopted metrics |
| Board of Registered Nursing Forecasts | Biennial projections of RN supply and demand | Public report | Market (state, 9 regions) | See Table 10 | Included in adopted metrics |
| DMHC & DHCS Network Adequacy reports | Compliance with DMHC & DHCS network adequacy standards for full service and behavioral health plans | Public-use data file | Organization (health plans) | Compliance with network adequacy standards for non-physician mental health providers, primary care providers, psychiatrists, and specialist physicians | Investigating for future inclusion in metrics |
| Franchise Tax Board | Data reported on state income tax returns | Aggregate data publicly reported | Market | Earnings | Not included because publicly reported data are aggregated at the zip code level with no information about industry or occupation |
| **Federal Datasets** | | | | | |
| U.S. American Community Survey | Annual survey of individuals on their demographics, household characteristics, employment, and other characteristics | Public use file | Market (state and some counties) | See Table 5 | Included in adopted metrics |
| Bureau of Labor Statistics Occupational Employment and Wage Statistics | Annual surveys of employers | Public use file | Market (state, metro areas) | See Table 6 | Included in adopted metrics |
| U.S. Integrated Postsecondary Education Data System (IPEDS) | Data for all postsecondary institutions that receive any federal funding | Public use file | Market (state, county, local) | See Table 7 | Included in adopted metrics |
| CMS Payroll-Based Journal data | Nursing home worker-level data on employee hours and contract hours for multiple | Public use file | Organization (nursing homes) | Hours for RNs<br>Contract hours for RNs<br>Staff hours per resident day | Not included due to overlap with other sources |

| ***Name of Data Set*** | ***Description*** | ***Data Availability*** | ***Level (Organization or Market)*** | ***Types of Metrics*** | ***OHCA Action*** |
|---|---|---|---|---|---|
| | occupations; turnover can be obtained | | | | |
| Health Center Program Uniform Data System | FQHC FTEs for multiple occupations, costs of clinical and non-clinical services, payer mix | Web system to obtain staffing data; microdata may be available upon request | Organization (clinics) | Cost of medical personnel<br>Number of dental hygienist FTEs | Not included due to overlap with other sources |
| Occupational Safety and Health Administration (OSHA) Integrated Management Information System | Data reported from Cal-OSHA inspections and enforcement activity | Public websites | Organization (all types) | Number of complaints<br>Number of accidents<br>Number of violations<br>Fines paid | Investigating for future inclusion in metrics |
| U.S. Current Population Survey | Monthly survey used to track the workforce, the primary source for national employment and unemployment statistics | Public use file | Market (state) | Turnover rates per occupation<br>Average wages per occupation | Not included due to overlap with other sources |
| U.S. Current Population Survey - ASEC supplement | Household composition, educational attainment, income sources, health insurance coverage, poverty, and geographic mobility | Public use file | Market (state) | Health insurance coverage rates<br>Percent of workers in poverty | Not included due to overlap with other sources |
| US Census Department Longitudinal Employer Household Dynamics | Longitudinal data that links employers and households | Public use file aggregated at the 2 digit industry level “health care and social assistance.” More detailed data could be accessed through a Federal Statistical Research Data Center (FSRDC) | Organization (all types) | Turnover<br>Employer history data | Not included because the public use data do not disaggregate health care organizations from social service organizations; extensive resources required to analyze data through a FSRDC and requires a lengthy approval process |

| ***Name of Data Set*** | ***Description*** | ***Data Availability*** | ***Level (Organization or Market)*** | ***Types of Metrics*** | ***OHCA Action*** |
|---|---|---|---|---|---|
| HRSA Workforce Projection Dashboard | Online dashboard for 46 occupations. The projections estimate future supply and demand for each occupation | Public use file | Market (state) | Projected FTE RN demand<br>Projected FTE RN supply | Not included due to overlap with other sources and data quality concerns |
| HRSA National Sample Survey of Registered Nurses | National survey of RNs and nurse practitioners conducted every 4 years | Public use file | Market (state) | Percent of RNs employed in hospitals<br>RN job satisfaction | Not included due to overlap with other sources and data quality concerns |
| Internal Revenue Service | Data reported on income tax returns | Publicly reported data are aggregated by at the zip code level with no information about industry or occupation | Market | Earnings | Not included due to extensive resources required to analyze data through a Federal Statistical Research Data Center (FSRDC) and requires a lengthy approval process |
| **Other Data Sources** | | | | | |
| National Academy for State Health Policy Hospital Cost Tool | Hospital staffing, labor costs, other costs, utilization, based on reports to CMS | Public use file | Organization (hospitals) | Direct patient care labor cost<br>Direct patient care contracted labor cost as % of total labor cost | Not included due to overlap with other sources |
| Hospital Association of Southern California Quarterly Vacancy and Turnover Survey | Quarterly hospital data on hiring, turnover, and vacancies, by occupation | Private | Organization (hospitals) | Staff RN involuntary turnover rate<br>MRI Tech vacancy rate | Investigating for future inclusion in metrics |
| American Hospital Association Annual Survey of Hospitals | Staffing, utilization, and organizational characteristics for all hospitals | Available for purchase | Organization (hospitals) | FTE RNs per patient discharge<br>Number of RN vacancies | Investigating for future inclusion in metrics |
| California Primary Care Association Compensation and Benefits Survey | Voluntary survey of community health centers with data on staffing, compensation and benefits | Aggregated summary report available for purchase<br>Unclear if organization-level data can be obtained | Organization (clinics) | Unknown; report must be purchased to see metrics | Not included due to overlap with other sources |

## Appendix B: Guiding Principles

Based on its content expert and stakeholder interviews, OHCA developed the following set of guiding principles to inform its development of workforce stability standards and selection of metrics for monitoring the standards:

- Address current workforce shortages and challenges impacting workforce stability (e.g., provider shortages in behavioral health occupations or in rural and underserved urban areas);
- Monitor for emerging workforce shortages and plan for future workforce needs;
- Incorporate flexibility to accommodate differences between settings, occupations, and regions;
- Compare workforce composition across similar health care entities;
- Track graduations from health professions education programs, licensure requirements, and time to licensure to improve match between workers entering workforce and need;
- Promote diversity in the workforce and address population need for culturally and linguistically competent care;
- Track the impact of spending targets on most vulnerable health care workers (e.g., unlicensed direct care and long-term care workers) and those who serve vulnerable populations (e.g., disabled, elderly, safety net);
- Consider tradeoffs of prioritizing monitoring of highest-cost, most-regulated settings (e.g., hospitals) compared to least-regulated settings (e.g., physician offices and other ambulatory care sites) that may need greater oversight;
- Monitor indicators of understaffing or training gaps at the facility level, such as sentinel safety events or worker's compensation claims;
- Balance reporting burden for health care entities with the value of additional data to meet OHCA's statutory requirements and goals.

## Appendix C: Regions of California

Regions of California will be defined in several ways, as labor markets for each type of worker vary in their geographic size.

California has 58 counties, each of which can be considered a distinct geographic area. However, workers often commute across county lines. Thus, the U.S. Census Bureau has designated groups of counties as Core Based Statistical Areas (CBSAs) and Combined Statistical Areas (CSAs), which define metropolitan and micropolitan areas that are adjacent and have what the Census Bureau calls “employment interchange” meeting specified thresholds.

The California Economic Strategy Panel regions were created as part of the California Regional Economies Project and were designed to provide regional employment data for workforce investment and economic development planning. There are 9 regions that consist of two or more contiguous counties.