



## Emerging Programs, Data Resources and Measures for Hospitals

Chris Krawczyk, PhD



1



## Conflict of Interest Disclosure

Chris Krawczyk, PhD, reported no relevant financial relationships or relationships he has with ineligible companies of any amount during the past 24 months.



2



## Presenter

### **Chris Krawczyk, PhD** **Chief Analytics Officer** **HCAI**

Dr. Chris Krawczyk is Chief Analytics Officer with the Department of Health Care Access and Information (HCAI), Information Services Division. Dr. Krawczyk oversees strategic direction for analyses of healthcare quality, outcomes, utilization, and cost. Dr. Krawczyk also oversees data services and facilitates stakeholder engagement to increase the usefulness and impact of HCAI data products.



3

## Session Overview

### INTRODUCTION & BACKGROUND

- Outreach & Engagement
- Generational Model of Analysis (GMoD)
- Stakeholder Informed Requests

### OVERVIEW OF HCAI

- Mission & Vision
- Current HCAI Data, Analytics Capacities, and Data Products
- Data Release
- New Programs & Initiatives at HCAI

### DATA PRODUCTS SHOWCASE

- Live demonstration of selected data products

4

4

# Introduction & Background



restore. inspire. lead.

5

## Outreach & Engagement

### SUPPORT OUR STAKEHOLDERS

Better understand their needs and challenges

### CREATE QUALITY DATA PRODUCTS

Develop and promote quality data products  
our stakeholders' value

### FACILITATE ACCESS TO INFORMATION

Champion innovation, transparency, and facilitate access  
to information

6

6

# Generational Model of Data Analysis

## HCAI'S GOAL TO GROW ANALYTIC CAPABILITIES

To generationally enhance the usefulness of information being made available in response to our stakeholders and customer's requests

## ENGAGING STAKEHOLDERS AND CUSTOMERS

To generate business intelligence on the release of products  
To identify topics for future analytics

## INITIAL ANALYTICS AND PRODUCT RELEASE

Generationally improve the presentations of the information and continue to explore the topic by adding in more data, measures, and visualizations

# Stakeholder Engagements from 2018 - 2022



Cohort 1 Stakeholders

**2018 - 2019**

Worked with external Consultants  
Interviewed 43 stakeholders  
Developed engagement interview processes



Cohort 2 Stakeholders

**2019 - 2020**

19 interviews  
Developed Generational Model of Analysis



Cohort 3 Stakeholders

**2020 - 2021**

15 interviews  
Implemented Generational Model of Analysis from Cohort 1 & 2 stakeholders' feedback



Cohort 4 Stakeholders

**2021 - 2022**

24 interviews  
Implemented Generational Model of Analysis from Cohort 3 stakeholders' feedback

## Stakeholder Demographics



Hospitals

**2018 - 2022**

Conducted 54 interviews  
Interviewed 201 persons



Health Plans

**2018 - 2021**

Conducted 19 interviews  
Interviewed 70 persons



Other Public or Private Entities

**2018 - 2022**

Conducted 32 interviews  
Interviewed 106 persons



## Overview of HCAI



restore. inspire. lead.

Our mission is to expand equitable access to health care for all Californians – ensuring every community has the health workforce they need, safe and reliable health care facilities, and health information that can help make care more effective and affordable.

We have over 40 years of experience supporting informed decisions in health care with data transparency, analysis, and reporting.



11

11

## Current HCAI Healthcare Data and Reporting

### HCAI DATA COLLECTION

HCAI collects data from approximately 8,000 California licensed health facilities

### HCAI DATA REPORTS

HCAI provides over 150 publicly available reports, datasets, outcome and performance ratings, and unique special studies

### RISK-ADJUSTED DATA

Includes hospital outcome ratings for heart surgery, stroke, readmissions, hip fractures, and other procedures

### COST TRANSPARENCY DATA

Includes hospital and long-term care facility financials, hospital Chargemasters, and prescription drug costs

### ADDITIONAL STUDIES

Additional publicly released studies are available on timely health topics such as preventable hospitalizations, strokes, cancer surgery volume, and disparities

12

12



## HCAI's Healthcare Data Programs

<h3>Cost Transparency</h3> <p>Hospital and long-term care financials, Chargemasters, prescription drug costs, and more to support and advance healthcare cost transparency.</p> <p><a href="#">EXPLORE THIS TOPIC</a></p>	<h3>Healthcare Utilization</h3> <p>Patient-level administrative data abstracted from individual patient records and facility-level utilization data on healthcare services from hospitals and healthcare facilities.</p> <p><a href="#">EXPLORE THIS TOPIC</a></p>	<h3>Healthcare Quality</h3> <p>Reports based on healthcare utilization data to support higher quality, more efficient, and cost-effective patient care.</p> <p><a href="#">EXPLORE THIS TOPIC</a></p>
<h3>Healthcare Facility Attributes</h3> <p>Summary, license, safety, and construction information about California hospitals and healthcare facilities.</p> <p><a href="#">EXPLORE THIS TOPIC</a></p>	<h3>Healthcare Workforce</h3> <p>Information about healthcare professionals and colleges, California shortage areas, and HCAI programs to improve access to care.</p> <p><a href="#">EXPLORE THIS TOPIC</a></p>	<h3>Data Resources</h3> <p>Resources that help consumers navigate, use, and interpret HCAI and other related healthcare data.</p> <p><a href="#">EXPLORE THIS TOPIC</a></p>

13

## HCAI's Data Services: **Submit Data**

<h3>Patient-Level Administrative Data</h3> <p>Submit inpatient discharges, emergency department encounters, and ambulatory surgery encounters</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT DATA</a></p>	<h3>Facility Utilization Data</h3> <p>Submit utilization data for health facilities</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT DATA</a></p>	<h3>Financial Data</h3> <p>Submit annual and quarterly data for hospitals and long-term care facilities</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT DATA</a></p>	<h3>Coronary Artery Bypass Graft Data (CORG)</h3> <p>Submit coronary artery bypass graft (CABG) surgery data for hospitals</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT DATA</a></p>
<h3>Hospital Fair Pricing Policies</h3> <p>Submit healthcare financial assistance policies and application forms for hospitals</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT DATA</a></p>	<h3>Chargemaster Data</h3> <p>Submit chargemaster data for hospitals</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT DATA</a></p>	<h3>Hospital Community Benefit Plans</h3> <p>Submit Hospital Community Benefit Plans</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT REPORTS</a></p>	<h3>Prescription Drug (Rx) Cost Data</h3> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT REPORTS</a></p>
<h3>Hospital Supplier Diversity Reports</h3> <p>Submit Hospital Supplier Diversity Reports</p> <p><a href="#">LEARN MORE</a> <a href="#">SUBMIT DATA</a></p>	<h3>Health Care Payments Data</h3> <p>Submit Health Care Payments Data</p> <p><a href="#">LEARN MORE</a></p>	<h3>Other Report Submissions</h3> <p><b>Licensed Midwifery Report</b> Annual reporting of services by individual Licensed Midwives. Learn more at the <a href="#">Medical Board of California</a>.</p> <p><a href="#">Submit Licensed Midwifery Reports</a></p>	<h3>Patient Transfer Report</h3> <p>Reporting for medical procedures performed outside of a general acute care hospital resulting in the transfer of the patient to a hospital or emergency department. Learn more at the <a href="#">Medical Board of California</a>.</p> <p><a href="#">GET THE REPORTING FORM &gt;</a></p>

14

## HCAI's Data Services: **Request Data**

### Start Requesting Data

Log in or register to request data. Limited Data, Research Data, and Custom Data Analysis Requests are available.

[Log In or Register](#)

#### Limited Data Request

California Hospitals and Health Departments can now request Limited Data through the online request portal

[LEARN MORE](#)

#### Research Data Request

Eligible requestors from non-profit Universities can request non-public datasets

[LEARN MORE](#)

#### HCAI Data Pricing Policy

Learn more about HCAI's Data Pricing Policy

[LEARN MORE](#)

#### Data Documentation

Supplemental documents and information on HCAI's data.

[VIEW DATA DOCUMENTATION](#)

#### Custom Data Analysis Request

Customized aggregate data reports

[LEARN MORE](#)

### Publicly Available Data

#### Annual Financial Disclosure Reports

##### HOSPITAL ANNUAL FINANCIAL DISCLOSURE REPORT

This report is filed annually by each hospital licensed by the State of California. The information collected includes the type of ownership, number of beds, balance sheets and income statements, revenues by payer, and expenses by natural classification.

##### LONG-TERM CARE ANNUAL FINANCIAL DISCLOSURE AND MEDI-CAL COST REPORT

This report is filed annually by each skilled nursing, intermediate care, mentally disordered/developmentally disabled and congregate living health facility licensed by the State of California. The information collected includes the type of ownership, number of beds, balance sheets and income statements, revenues by payer, and expenses by natural classification.

You can search for Annual Reports for individual health facilities on [SIERA](#).

#### Quarterly Financial and Utilization Reports

This report is filed quarterly by each hospital licensed by the State of California. The information collected includes summary financial and utilization information.

You can search for Quarterly Reports for individual health facilities on [SIERA](#).

#### CHHS Open Data Portal

The California Health and Human Services Agency (CHHS) has launched its Open Data Portal initiative in order to increase public access to one of the State's most valuable assets - non-confidential health and human services data. Its goals are to spark innovation, promote research and economic opportunities, engage public participation in government, increase transparency, and inform decision-making. "Open Data" describes data that are freely available, machine-readable, and formatted according to national technical standards to facilitate visibility and reuse of published data.

The portal offers access to standardized data that can be easily retrieved, combined, downloaded, sorted, searched, analyzed, redistributed and re-used by individuals, business, researchers, journalists, developers, and government to process, trend, and innovate.

[Visit Open Data Portal](#)

15

15

## New Programs & Initiatives at HCAI

- Health Care Payments Data (HPD) Program
- Patient Level Data Regulatory Update
- AB 1204 Hospital Equity Measures Reporting Program
- Office of Health Care Affordability (OHCA)
- California Health Workforce Research Data Center (Research Data Center)

16



16

# Health Care Payments Data (HPD) Program



17

## HPD System Overview

- The HPD will be a large research database of healthcare administrative data
- The HPD System will begin with collecting four core file types:
  1. Medical claims and encounters
  2. Pharmacy claims
  3. Member eligibility
  4. Provider
- The HPD System will begin with collecting data from:
  1. Commercial and Medicare Advantage health plans and insurers
  2. Department of Health Care Services (Medi-Cal)
  3. Centers for Medicare and Medicaid Services (Medicare FFS)
- HPD uses the NAHDO [APCD Common Data Layout](#) for data file formats

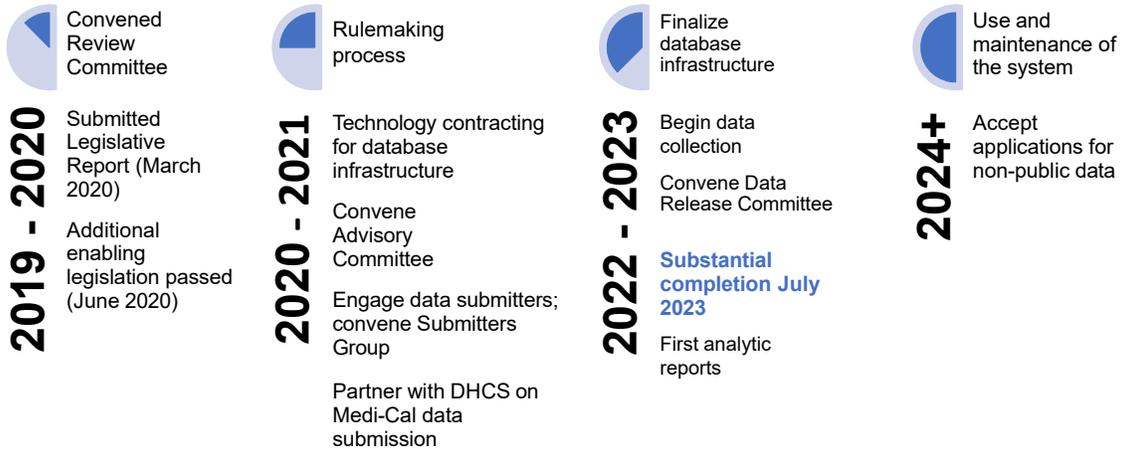
### The HPD Program will establish:

- Approach to accept data from voluntary submitters
- Approach to incorporate other data (beyond claims)
- Public information portfolio of public reports
- Procedures for appropriate access to non-public data
- Long-term funding plan

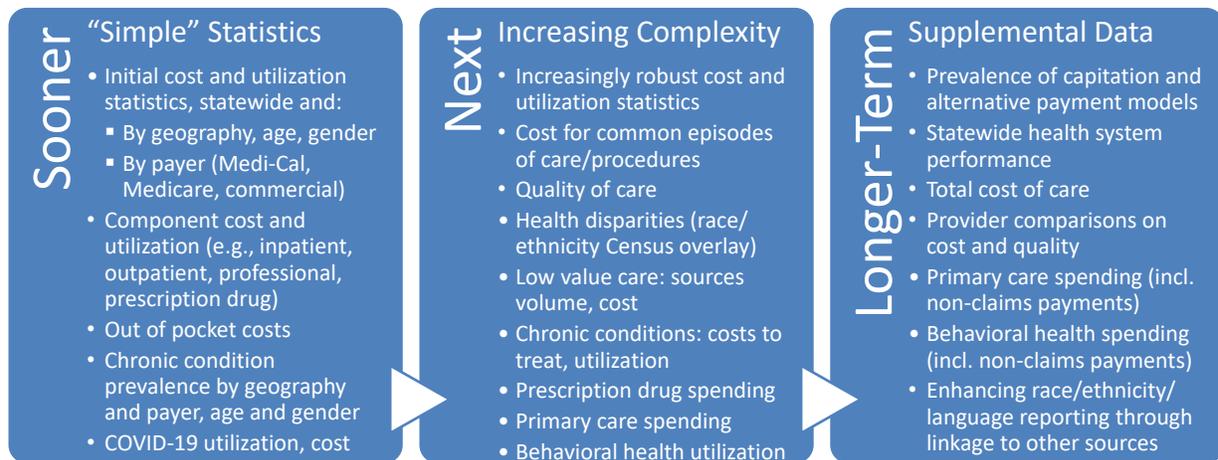
18

18

# HPD Timeline



# Framework for Public Reporting Priorities



# Patient Level Data Regulatory Update



21

## Patient Level Data Regulatory Update

- HCAI has amended its regulations to make reporting requirement changes that will take effect with 2023 discharges and encounters.
- Includes:
  - Patient Address
  - Social Determinants of Health
  - Source of Admission
  - Minor non-substantive wording changes to the Disposition of Patient data element

22

22

## Patient Address

- Enhance current ZIP Code data element to include collection of full patient address and a housing indicator.
- Consistent with national standards
- Patient Address will include:
  - Address number and street name
  - City and state
  - ZIP Code or Country Code, if non-US resident
  - Housing status indicator identifying patients experiencing homelessness

23

23

## Why Patient Address?

- Usefulness of ZIP Code data is limited.
- ZIP Codes cross census-designated boundaries and do not reflect a uniform geographic or population size.
- Patient address enhance the precision, accuracy, and utility of data in many different use cases.
  - Allow for a better understanding of social determinants and health disparities within neighborhoods, census tracts, cities, and counties.
  - Research of diseases and associated local exposures such as cancer due to contaminated ground water.
  - Opportunity to increase accuracy of evaluating distance traveled for care.

24

24

# AB 1204 Hospital Equity Measures Reporting Program



25

## AB 1204 Legislative Intent

- Recognizes disparate impact of the COVID-19 pandemic and need for further data on access, quality, and outcomes of care.
- Data could be used to analyze these disparities by age, sex, race, ethnicity, language, disability status, sexual orientation, gender identity, payor, and socioeconomic status.
- Data would contribute to well-informed health policy and public health response and would improve the overall health of individuals and communities in the state.

26

26

## Hospital Statutory Requirements: Annual Equity Reports - Content

### CONTENT – MEASURES

- Analysis of health status and the disparities in access to care for patients based on age, sex, race, ethnicity, language, disability status, sexual orientation, gender identity, and payor.

### CONTENT – HEALTH EQUITY PLAN

- Plan to achieve disparity reduction for disparities identified in the data.
- Includes measurable objectives and specific timeframes in which disparities identified need to be addressed.<sup>^</sup>
- Addresses the 10 widest disparities in health care quality for vulnerable populations<sup>^</sup> in terms of access, or outcomes and performance across all the 6 priority areas.

<sup>^</sup> as recommended by the Advisory Committee

27



27

## Hospital Statutory Requirements: Annual Equity Reports - Administrative Aspects

- All hospitals that meet the definition of “Hospital” under 127371(d) are subject to the Medical Equity Disclosure Act.
- Posted on the hospital website including the words “Equity Report”
- First reports due September 30, 2025\*
- Hospital systems, with more than one hospital, must submit an equity report that is disaggregated at the individual hospital level and aggregated across all hospitals in the system.

\*Note: Due dates are set per statute as the CMS Health Equity Measures were finalized in August 2022.

28



28

## Statutory Requirements: Advisory Committee

### MEASURES DEVELOPMENT

- Make recommendations on the appropriate measures that hospitals are required to report in their annual equity reports. (Due December 31, 2022\*)

### HEALTH EQUITY PLANS

- Advise in identifying the 10 widest disparities in health care quality for vulnerable populations, in terms of access or outcome and priority performance areas
- Provide recommendations on the measurable objectives and specific timeframes in which disparities for vulnerable populations identified in the data need to be addressed.
- After first year reporting, make a second set of recommendations regarding the submitted hospitals' health equity plans. (Due September 30, 2027\*)

\*Note: Due dates are set per statute as the CMS Health Equity Measures were finalized in August 2022.

29



29

## Statutory Requirements: HCAI

- Convene and staff advisory committee
- Build out regulations that establish a reporting schedule and format for collection of reports including the measures that will need to be applied to the reports
- Establish a system to collect and annually post reports on the HCAI website
- Annually post a report that identifies hospitals that did not submit equity reports
- Provide technical assistance to hospitals in applying the measures as specified in the regulations

30



30



31

# Office of Health Care Affordability (OHCA)

restore. inspire. lead.

32

## Office of Health Care Affordability (OHCA)

- The provisions of the California Health Care Quality and Affordability Act (2022) are the enabling statutes for the Office.
- The Office of Health Care Affordability is charged with collecting data on total health care expenditures, analyzing the health care market for cost trends and drivers of spending, creating a state strategy for controlling the cost of health care and improving affordability for consumers and purchasers, and enforcing cost targets.
- The Health Care Affordability Board, comprised of experts, will advise on key activities of the Office and approve specific aspects of the initiative such as the methodology for setting cost targets and the statewide cost targets themselves.

33



33

## Key Activities of the Office of Health Care Affordability (OHCA)

- Increase public transparency on total health care spending in the state
- Set an overall statewide cost growth target and specific targets for different sectors of the health care industry
- Enforce compliance with the cost targets
- Promote and measure quality and equity through performance reporting
- Set a statewide goal for adoption of alternative payment models and develop standards for use by payers and providers during contracting
- Measure and promote a sustained systemwide investment in primary care and behavioral health
- Monitor and address health care workforce stability
- Increase public transparency on health care consolidation, market power, and other market failures

34



34

# California Health Workforce Research Data Center (Research Data Center)



35

## Research Data Center (RDC)

### ASSEMBLY BILL 133

Created the Health Workforce Research and Data Center

### CENTRAL SOURCE

For health workforce and education data

### ANNUAL REPORT TO THE LEGISLATURE

HCAI will produce an annual report to the Legislature on:

- Supply, demand, and gaps in the pipeline
- Educational capacity and employment trends
- Diversity of the workforce
- Inform state policy to address workforce issues

36

36

## Research Data Center Priorities

Build a robust health workforce data system that integrates a variety of data sources:

- Workforce data
- Education data
- Economic data
- Census data
- Grant program data
- Geospatial data

Work with stakeholders to identify high-value data products to develop and publish to a public facing portal.

37



37

## Workforce Data

Data collection integrated into the license renewal process.

Collects a standard set of information from every licensee every two years:

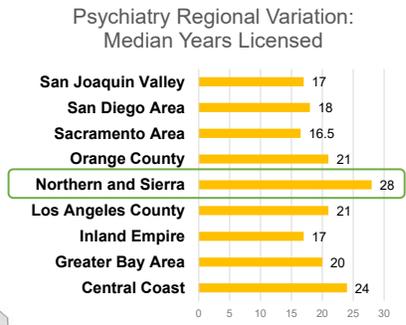
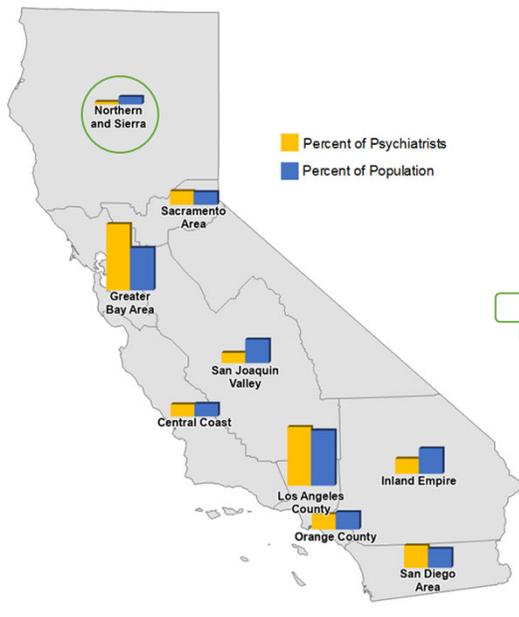
- Practice location
- Hours spent in direct patient care
- Specialty
- Race/Ethnicity
- Languages spoken
- Retirement plans
- Education background

38



38

# Geographic Trends



39

\*Responses from existing Clearinghouse database for licenses active as of June 1, 2021.



39



# Data Products Showcase



restore. inspire. lead.

40

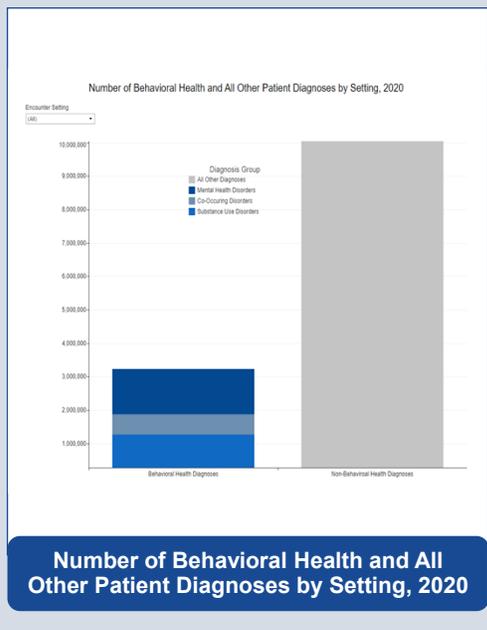
# Featured Releases

41

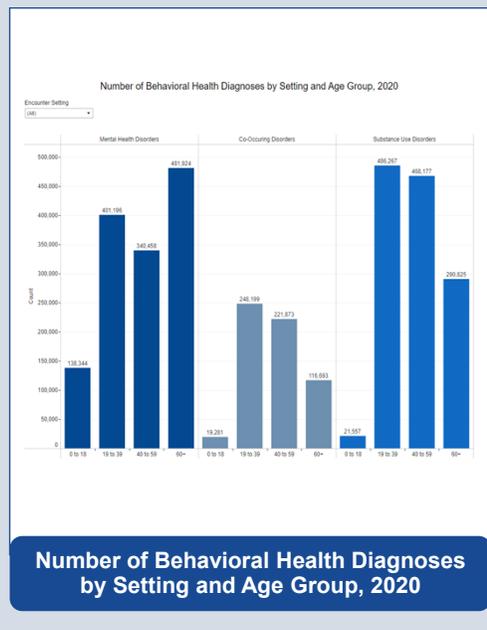
[hcai.ca.gov/visualizations](https://hcai.ca.gov/visualizations)

41

## Behavioral Health Data



Number of Behavioral Health and All Other Patient Diagnoses by Setting, 2020



Number of Behavioral Health Diagnoses by Setting and Age Group, 2020

42



42

# COVID-19 Hospital Utilization Trends



restore. inspire. lead.

43

### Hospital Utilization Trends

The visualization below focuses on statewide utilization trends in inpatient discharges, emergency department treat and release, and ambulatory surgeries beginning in 2018. The sharp downward trend in all three settings begins after January 2020 with the introduction of COVID-19 and ends in a low point in April 2020 before beginning to rise again. Utilization at the emergency department remained low in late 2020 relative to previous years. Inpatient discharges and ambulatory surgeries rebounded nearly to levels typically seen pre-pandemic.

**Hospital Utilization Trends**

### Utilization Trends by Health Category

This visualization displays utilization trends in the same settings as above but focuses on trends in key health-related topics. A sharp decline in utilization is seen starting after January 2020 across nearly all patients. Trends in hospital utilization of the business population were much less affected.

By default, this visualization displays a handful of selected health-related topics and hospital utilization trends among inpatient discharges in 2020-2021. The dropdown filter can be used to change the settings, select to more health-related topics as desired, and change the time span of focus. All trends reflect encounters and not unique patients.

**Utilization Trends by Health Category**

### In-Hospital Mortality Trends by Diagnosis Type

This visualization focuses on mortality trends and diagnosis breakdown in inpatient discharges, emergency department treat and release, and ambulatory surgeries in 2020. Patients experiencing cardiac arrest, pneumonia, and obesity demonstrated a greater burden of COVID-19 as a primary diagnosis. COVID-19 was more often present as a primary diagnosis in deaths among inpatient discharges than in emergency department deaths.

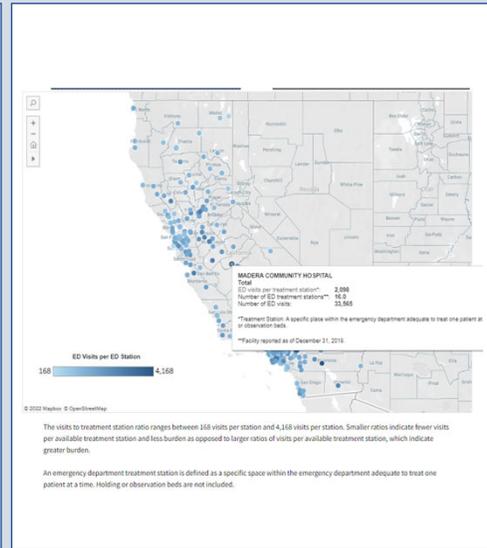
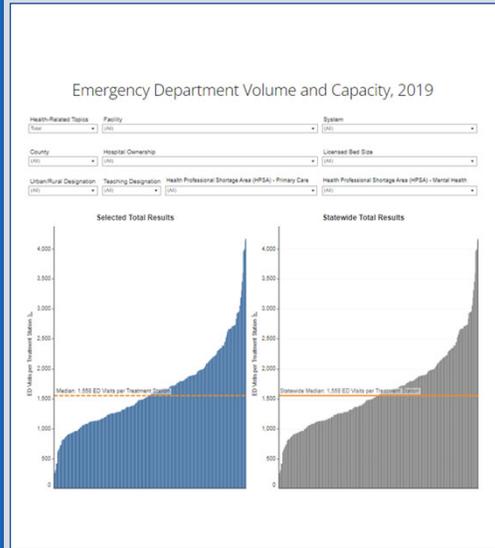
The diagnosis legend is meant to demonstrate a breakdown of how each diagnosis was assigned. For example, among in-hospital deaths including a cancer diagnosis, the breakdown includes a count of cancer as primary diagnosis, cancer as a secondary diagnosis with COVID-19 as the primary diagnosis, and cancer as a secondary diagnosis with an primary diagnosis unrelated to COVID-19.

**In-Hospital Mortality Trends by Diagnosis Type**

44

44

# Emergency Department Volume and Capacity, 2019



## Hospital Financial Data Interactive Series:

1. Hospital Financials
2. Hospital Utilization
3. Hospital Average Costs



restore. inspire. lead.

### Total Assets by Year and Category

The sum of total assets from all California hospitals by year, and those of individual counties, cities, or facilities. Total assets is the sum of the following categories:

- Current Assets
- Net Property, Plant, and Equipment
- Assets Under Construction
- Construction in Progress
- Intangible Assets
- Investments and Other Assets

County: [CA] City: [San Diego]

Facility Name: [San Diego]

Category	Value
Current Assets	\$1,482,979,739
Net Property, Plant, and Equipment	46,438,201,582
Assets Under Construction	12,761,127,058
Construction in Progress	19,342,205,658
Intangible Assets	1,744,971,281
Investments and Other Assets	14,847,268,342

### Total Annual Licensed Beds by Type of Care

County: [CA] City: [San Diego]

Facility Name: [San Diego]

Type of Care	Count
Acute	62,094
Open Care	1,815
Rehabilitation	1,143
Long-term Care	1,719
Residential	275

Note: "Licensed Beds" (including beds placed in suspense and nursery business) refers to the number of such beds stated on the hospital license at the end of the reporting period. This dashboard contains data relevant to all comparable hospitals in California.

### Gross Patient Revenue per Adjusted Discharge by Year

County: [CA] City: [San Diego]

Facility Name: [San Diego]

Category	Value
Hospicare - Traditional	\$104,888.07
Hospicare - Managed	\$85,527.64
Health-Care - Traditional	\$88,310
Health-Care - Managed	\$79,381
County Indigent - Combined	\$48,151
Third Party - Traditional	\$58,454
Third Party - Managed	\$63,982
Other Indigent	\$71,902
All Other Payers	\$60,746

Note: This visualization displays the gross patient revenue per adjusted discharges by year, representing adjusted total charges per patient stay, with adjustments by payer category. "Adjusted discharge" is a scaling factor to account for inpatient care volume, and is calculated by dividing a facility's gross patient revenue by the gross patient revenue, and multiplying by total discharges. The "County Indigent - Combined" payer category includes both traditional and managed care. This visualization contains data relevant to all comparable hospitals in California.

**Financial Series  
Part 1 – Hospital Financials**

**Financial Series  
Part 2 – Hospital Utilization**

**Financial Series  
Part 3 – Hospital Average Cost and Profitability Delivering Patient Care**

2022 HQI Annual Conference
restore.inspire.lead.

# Questions



## Thank you

Chris Krawczyk, PhD  
HCAI Chief Analytics Officer  
[chris.krawczyk@hcai.ca.gov](mailto:chris.krawczyk@hcai.ca.gov)

Wade Luele  
HCAI Healthcare Payments Data  
[wade.luele@hcai.ca.gov](mailto:wade.luele@hcai.ca.gov)

Holly Hoegh, PhD  
Manager, Quality and Performance Section  
[holly.hoegh@hcai.ca.gov](mailto:holly.hoegh@hcai.ca.gov)

