American Hospital Association
Annual Survey Database

Introduction to AUPHA members
November 2023

Please Email
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With Any Questions
Today’s Speakers

ANDY CHAO
American Hospital Association

- Director of Data Products
- 25 years of experience managing digital information products
- 10 years serving Higher Education

BRENT FULTON, PH.D., MBA
University of California, Berkeley

- Associate Research Professor of Health and Economics and Policy
- Associate Director of the Nicholas C. Petris Center on Health Care Markets and Consumer Welfare
AGENDA

- History – Surveying Hospitals since 1946
- Survey Contents – A general census of all hospitals in the US and US territories
- Survey Principles and Process – Comprehensive and Trustworthy
- Annual Survey Data in Academia – Often Cited
- How UC Berkeley uses AHA Data
The AHA is a 125 year-old national organization that advocates on behalf of ~5000 hospitals/health care systems, and the communities and patients they serve.

For the past 70 years, we have conducted an annual survey of hospitals and systems that we use for our own advocacy and that we make available as data files for use by researchers and analysts in academic, governmental, healthcare, and adjacent markets.
Overview
**Unique Value: Annual Survey Database (ASDB)**

**ASDB** is a comprehensive census of United States hospitals. The most trusted resource for health care delivery research and trends analyses.

**ASDB** offers an annual snapshot of hospital-specific data on all ~6,300 U.S. hospitals and 400+ systems.

**ASDB** includes over 1,300 data fields on organizational structure, personnel, hospital facilities, utilization & services.

**ASDB** supports unparalleled, detailed, cross-sectional and longitudinal analyses.
AHA Annual Survey Database History

Since 1946
Comprehensive, primary research initiative conducted by the American Hospital Association

Available Back To 1980
Electronic Annual Survey Databases (ASDBs) support unparalleled longitudinal research

Consistent Over Time
Yet evolving to include topics such as hospitals’ adoption of new technologies and services to support social and economic community needs
Overview of Major Sections

1. General Information – geography, system affiliation, organizational structure
2. Utilization Rates – Admissions, Total Visits, Number of Beds
3. Facilities and Services – Types of Services Provided
4. Insurance & Alternative Payment Models
5. Financial – Expenses
6. Staffing rates – clinical and administrative
7. Addressing Patient Social Needs and Community Social Determinants of Health
## Overview of Major Sections

### Hospital General Information
- Address/Contact Info
- Contract Management
- Designations, Accreditations & Approvals
- Geographical Information
- National Provider Identification
- Organizational Structure
- Purchasing
- Reporting
- Systems Info
- Partnerships

### Beds & Utilization
- Facility & Service Bed Numbers
- Hospital Unit Numbers
- Include/Exclude Utilization Estimates
- Inpatient Utilization Numbers
- Nursing Home Numbers
- Outpatient Utilization Numbers
- Total Facility & Adjusted Numbers
- Changes During Reporting Period

### Financials
- % of Hospital Net Patient Revenue
- Employee Benefits
- Include/Exclude Estimates
- Information Technology
- Payroll Expenses

### Facilities & Services
- Behavioral Health
- Cardiovascular Care
- Community Improvement/Outreach
- Emergency, Trauma or Urgent Care
- Endocrinology/Endoscopic services
- Extended/Long-term Care
- General Medical & Surgical
- Infectious Diseases
- Oncology
- Orthopedics
- Other Facilities & Services
- Pain Management
- Pediatrics
- Physical Medicine & Rehabilitations
- Diagnostic & Therapeutic Radiology
- Surgical Services
- Telehealth
- Transplant
- Women’s Health
- Substance Use Disorder Services
- Biocontainment

### Physicians
- Hospital Ownership Share
- Intensivists Employment Model
- Joint Venture Services
- Number of Hospitalists
- Number of Physicians
- Physician Ownership Share
- Parent Corporation Ownership Share
- Insurance Ownership Share
- Physician-Organization Arrangements

### Social Needs & Social Determinants of Health
- Patient Programs/Strategies
- Social Needs Screening
- Outcomes of Social Determinants of Health and Patient Social Needs Activities
- Partnerships with External Partners
- Decision Making and Strategic Planning

### Staffing
- Advance Practice Registered Nurses
- Full Time Employees
- Full Time Equivalent - Calculated
- Full Time Equivalent - Reported
- Include/Exclude Estimates
- Number of Intensivists
- Number of Physicians Not Employed (NE) or Under Contract with Privileges
- Number of Total Employed (TE) Physicians with Privileges
- Number of Total Group Contract (TG) Physicians with Privileges
- Number of Total Individual Contract (TC) Physicians with Privileges
- Number of Total Privileged (TP) Physicians
- Part Time Employees
- Recruiting foreign-educated nurses from
- Vacancies
- Workforce

### Supplemental Information
- Virtual Care
- Executive Contacts
- Insurance & Alternative Payment Models
- Utilization by Payer

### Financials
- % of Hospital Net Patient Revenue
- Employee Benefits
- Include/Exclude Estimates
- Information Technology
- Payroll Expenses
Survey Principles and Process
Guiding Principles

- The AHA has always valued rigorous primary data collection, research and analytical functions as critical to its mission.
- Bad data are harmful – process to flag and resolve anomalies
- Significant resources have been expended on the data program across time in order to “do it right.”
- Self reporting bias dilemma – convince us that you responded correctly to the Annual Survey.
- Estimation for non-respondents informed by research and statistical analysis
Survey Distribution

The universe of hospitals to be surveyed includes approximately 6,300 hospitals representing AHA member and non-member institutions.

Surveys are distributed in February

Collection to final processing is February - September

Final Cleaning and Estimation September - October

Release to public November - December
Data Assessment & Cleaning

- Hundreds of reliability and validity checks applied to individual survey responses.
- Results are evaluated by the responding hospital prior to submission and data center staff after submission.
- Hospitals are contacted for clarification regarding questionable data.
Customers
AHA Data Customers

**Government (Federal and State)**
- Agency for Health Research & Quality (AHRQ)
- Centers for Disease Control & Prevention (CDC)
- Centers for Medicare & Medicaid Services (CMS)
- Office of the National Coordinator (ONC)
- Bureau of Labor Statistics
- Census Bureau

**Universities**
- ~100 Colleges and Universities
- Central Libraries
- Medical Schools
- Schools of Public Health
- Business Schools
- Individual Professors

**Non Profits**
- Professional Associations
- Societies
- Foundations
- Think Tanks

**Corporations**
- Consultancies
- Pharmaceutical
- Insurance Companies
- Medical Devices
Academic Use Cases
AHA Survey Data in Academia

Recent Scholarly Works

~100 Colleges and Universities subscribe to ASDB
- Central Libraries
- Medical Schools
- Schools of Public Health
- Business Schools

Value proposition in an academic setting
- Trusted and authoritative
- Longitudinal
- Available for use through our platform or as a data file for use with other statistical tools

Often cited
- >1000 references listed in PubMed
- ~7000 references to AHA and survey since 2020 in Google Scholar
AHA at University of California, Berkeley, and other institutions
Academic Research Using the American Hospital Association’s Annual Survey Database

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Association of University Programs in Health Administration
Webinar
November 15, 2023
The AHA Annual Survey Database has been used in a wide range of studies on hospitals

- Organizations
  - Governance / ownership
  - Specialization
  - Independent vs part of hospital systems
  - Health systems
  - Clinically integrated networks
  - New hospitals and closures
- Services, including specialty services and telemedicine
- Physician arrangements
- Accountable care organizations
- Beds, utilization, and payer mix
- Information technology
- Social drivers of health
I highlight some academic studies on hospital organizational governance, system membership, and tele-ICU capabilities

- **Long-term trends in financing and ownership of hospitals**

- **Long-term trend in hospitals becoming part of systems**

- **AHRQ’s Compendium of U.S. Health Systems**
  - Contreary et al., “Consolidation and Mergers among Health Systems in 2021: New Data from the AHRQ Compendium,” *Health Affairs Forefront*, 2023

- **Hospitals’ participation in Clinically Integrated Networks (CINs)**

- **Hospital’s Tele-Intensive Care Unit (ICU) Capabilities**
The share of hospitals that are for-profit has increased during the past 30 years

Notes: Authors’ analysis of published data from American Hospital Association’s Annual Survey of Hospitals (1946-2020) as well as American Medical Association annual hospital survey (1923-1924 and 1934–1945), adjusted for comparability. The Methods section and Appendix Exhibit 1 provide details on methods. Source: Gaffney et al. 2023
The share of hospitals becoming part of systems has increased to 67%

Notes: For the period 1950–79 the shares were based on all nonfederal hospitals, and for the period 1980–2019 the shares were based on all community hospitals. No yearly data were available for the period 1980–97, so we assumed a linear increase, based on the mean being 37 percent for 1984–91. No data were available for 2005–8, so we also assumed a linear increase during this period.

The geographic breadth of hospital systems increased from 2009 to 2019

Notes: Percentages might not sum to 100% because of rounding. The nine census divisions are contained in four census regions. The total number of hospitals was 5,008 in 2009 and 5,141 in 2019; the total number of systems was 358 in 2009 and 368 in 2019.

Figure source: Authors’ analysis of data from the American Hospital Association Annual Survey Database 2009 to 2019.

Source: Fulton et al. 2022
AHRQ’s Compendium of U.S. Health Systems shows how health systems have changed over time

Exhibit 2: Flows of systems into and out of the AHRQ Compendium, 2018 to 2021

Notes: “Other reason for new system” category comprises systems that split off from other systems, and systems that first appeared in our data sources as a system after 2018.
Source: Authors’ analysis of data for 2018 and 2021 from the Agency for Healthcare Research and Quality’s Compendium of U.S. Health Systems, which uses the AHA Annual Survey Database and IQVIA Onekey.
Source: Contreary et al. 2023
One-third of hospitals participate in clinically integrated networks, with larger, not-for-profit, and metropolitan hospitals being more likely to participate.

Figure 1: Hospitals' Participation in Clinically Integrated Networks Logistic Regression Results

Notes: Results of main multivariable regression specification presented as average marginal effects on the predicted probability of clinically integrated network participation. Whiskers around point estimates represent 95% CIs.

Figure Source: Authors' analysis of 2019 American Hospital Association Annual Survey Database

Source: Hague et al. 2023
About one-fourth of hospitals had tele-ICU services in 2018, but that share significantly varied by state

Figure: Distribution of telehealth services at hospitals across U.S. states and territories in 2018

Notes: ICU = intensive care unit. Proportion of hospitals with ICU beds that reported availability of tele-ICU services (presented as percentage of all ICU-equipped hospitals in each state/territory that responded to the American Hospital Association survey).

Figure Source: Authors’ analysis of 2018 American Hospital Association Annual Survey Database

Source: Jain et al. 2020
Summary

- AHA’s Annual Survey Database has been used in a wide range of academic studies on hospitals
- Survey’s strengths include its long history, annual updates, high response rates, and comprehensiveness
- As with all data, it should be validated for your particular application. For example:
  - AHRQ’s Compendium of U.S. Health Systems uses both the AHA Survey and IQVIA’s Onekey
  - If available, specialty datasets can be used to compare results
    • Boggs et al. “Evaluation of the American Hospital Association Annual Survey for health services research in emergency medicine,” *JACEP Open*. 2022
References

Contact us to learn about academic discounts

email us at: AHADATAINFO@AHA.ORG
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Questions?