

**Economic Impact Report
For Sacramento Area
Hospitals**

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Executive Summary

- This report, commissioned by the Hospital Council of Northern and Central California, estimates the economic impact of hospital spending in the greater Sacramento area (Sacramento, Yolo, Placer, El Dorado, Yuba, and Sutter counties). All data reported is in 2012 dollars.
- Hospitals and hospital-related spending in the Greater Sacramento Area generate \$11.7 billion in spending annually and 84,176 jobs.

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	43,006	3,476,604,408	3,806,346,360	6,195,816,851
Indirect Effect	13,566	626,653,736	1,322,527,722	1,947,002,961
Induced Effect	27,605	1,198,068,489	2,286,401,700	3,595,527,104
Total Effect	84,176	5,301,326,632	7,415,275,781	11,738,346,916

- Hospitals and other medical establishments in the greater Sacramento area provide a wide variety of employment opportunities. The wages and salaries for these health care professionals are 70 percent higher than the average for California. Hospital and health care spending also generates jobs for less skilled workers.
- The projected growth for jobs in the greater Sacramento area from 2008-2018 is substantially higher in health care. The State of California projects a 10.5 percent growth in overall employment over this period. However, health care jobs will grow by 26 percent and hospital jobs by 21.2 percent.
- Employment in the health industry is more stable and less cyclical – during recessions fewer jobs are lost in health care than in many other sectors. Health care supports jobs requiring a wide variety of education and experience levels, not just those intended for white-collar professionals.
- The greater Sacramento area’s hospitals provide \$808.5 million in charity and unreimbursed care.
- Hospitals will generate a substantial portion of construction jobs over the next 3-5 years, generating \$173 million in total economic impacts per year and 1,175 jobs.

Introduction

The purpose of this report, commissioned by the Hospital Council of Northern and Central California, is to estimate the economic impact of hospitals and hospital-related spending in the greater Sacramento area (Sacramento, Yolo, Placer, El Dorado, Yuba, and Sutter counties). Virtually all of the data used in this report is publicly available, most of it vetted through California State audits. In a small number of cases where data was not publicly available, individual hospitals provided specific data. The report uses standard techniques (i.e., input-output analysis and *IMPLAN*) to estimate these impacts using government-generated data for the greater Sacramento area and the Sacramento Metropolitan Statistical Area (MSA). This report begins with a summary of all the economic impacts of hospitals and related spending followed by a more detailed discussion of how these estimates were derived. All data reported is in 2012 dollars.

Economic Impact of Hospital and Related Spending

Table 1 below summarizes the analysis contained in this report. Overall, hospitals in the greater Sacramento area generate \$11.7 billion annually in total economic output and 84,176 jobs.

Table 1: Economic Impact of Hospital Spending in the Greater Sacramento Area: 2012

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	43,006	3,476,604,408	3,806,346,360	6,195,816,851
Indirect Effect	13,566	626,653,736	1,322,527,722	1,947,002,961
Induced Effect	27,605	1,198,068,489	2,286,401,700	3,595,527,104
Total Effect	84,176	5,301,326,632	7,415,275,781	11,738,346,916

The total economic impact can be broken down into individual components. The *direct* spending of \$6.2 billion represents the amount of dollars that go directly through the hospital to pay salaries, buy supplies etc. Of this amount, \$3.5 billion represents labor income – paid to employees or other service providers to the hospital. However, in addition to this direct spending, there are indirect and induced impacts, often referred to as “multiplier effects.”

Employment

Hospitals and other medical establishments in the greater Sacramento area provide a wide variety of employment opportunities. Table 2 below presents occupational data for California from the California Employment Development Department. As one can see, health care practitioners and technical professionals earn, on average, \$41.82 an hour or \$86,990 per year in salary, usually including significant benefits as well. In contrast, the average wage in California is \$24.68 per hour and \$51,334 per year. The wages and salaries for these health care professionals is 70 percent higher than the average for California. Hospital and health care spending also generates jobs for less skilled workers, also shown at the bottom of Table 2 (Healthcare Support Occupations).

As shown in Table 3, (p. 5) according to the California Employment Development Department, the projected growth rate for jobs in the greater Sacramento area from 2008-2018 is substantially higher in health care than for all occupations. Overall, the State projects a 10.5 percent growth in employment over the ten-year period. However, health care jobs are projected to grow by 26 percent and hospital jobs by 21.2 percent.

Moreover, employment in the health industry also tends to be more stable and less cyclical – during recessions fewer jobs are lost in health care than in many other sectors. Health care supports jobs requiring a wide variety of education and experience levels, not just those intended for white-collar professionals.

Table 2: Health Care Wages and Salaries in California (2011)

(Source: CA Employment Development Dept.)

Occupational Title	Mean Hourly Wage	Mean Annual Wage
Total all occupations	\$24.68	\$51,334
Healthcare Practitioners and Technical Occupations	\$41.82	\$86,990
Dentists, General	\$71.56	\$148,832
Dietitians and Nutritionists	\$31.70	\$65,944
Pharmacists	\$57.93	\$120,488
Anesthesiologists	\$112.32	\$233,613
Family and General Practitioners	\$81.92	\$170,389
Internists, General	\$90.47	\$188,186
Obstetricians and Gynecologists	\$104.34	\$217,046
Pediatricians, General	\$80.79	\$168,035
Psychiatrists	\$87.13	\$181,240
Surgeons	\$102.33	\$212,836
Physicians and Surgeons, All Other	\$93.44	\$194,356
Physician Assistants	\$45.67	\$94,980
Registered Nurses	\$42.65	\$88,714
Occupational Therapists	\$41.11	\$85,510
Physical Therapists	\$41.25	\$85,801
Respiratory Therapists	\$33.14	\$68,933
Speech-Language Pathologists	\$39.94	\$83,068
Medical and Clinical Laboratory Technologists	\$36.86	\$76,686
Medical and Clinical Laboratory Technicians	\$20.62	\$42,887
Radiologic Technologists and Technicians*	\$32.20	\$66,972
Emergency Medical Technicians and Paramedics	\$17.62	\$36,650
Pharmacy Technicians	\$18.17	\$37,805
Surgical Technologists	\$23.80	\$49,514
Licensed Practical and Licensed Vocational Nurses	\$24.61	\$51,200
Medical Records and Health Information Technicians	\$19.27	\$40,076
Healthcare Practitioners and Technical Workers, All Other*	\$35.29	\$73,397
Healthcare Support Occupations	\$14.71	\$30,600
Home Health Aides	\$11.14	\$23,154
Nursing Aides, Orderlies, and Attendants	\$13.61	\$28,297
Occupational Therapist Assistants	\$29.27	\$60,888
Physical Therapist Assistants	\$28.14	\$58,533
Physical Therapist Aides	\$13.34	\$27,738
Medical Assistants	\$15.23	\$31,678
Medical Transcriptionists	\$20.66	\$42,979
Healthcare Support Workers, All Other*	\$17.50	\$36,401

Table 3: Employment Projections for Sacramento MSA County by Field

(Source: CA Employment Development Dept.)

Industry Title	Annual Average Employment		Employment Change	
	2008	2018	Numerical	Percent
Total Employment	985,100	1,088,500	103,400	10.5
Health Care and Social Assistance	86,500	109,000	22,500	26.0
Ambulatory Health Care Services	30,000	40,700	10,700	35.7
Hospitals (Private)	29,300	35,500	6,200	21.2
Nursing and Residential Care Facilities	14,100	17,100	3,000	21.3

Charity Care

The greater Sacramento area's hospitals also provide a significant amount of unreimbursed and charity care for members of the community. Table 4 below summarizes this care.

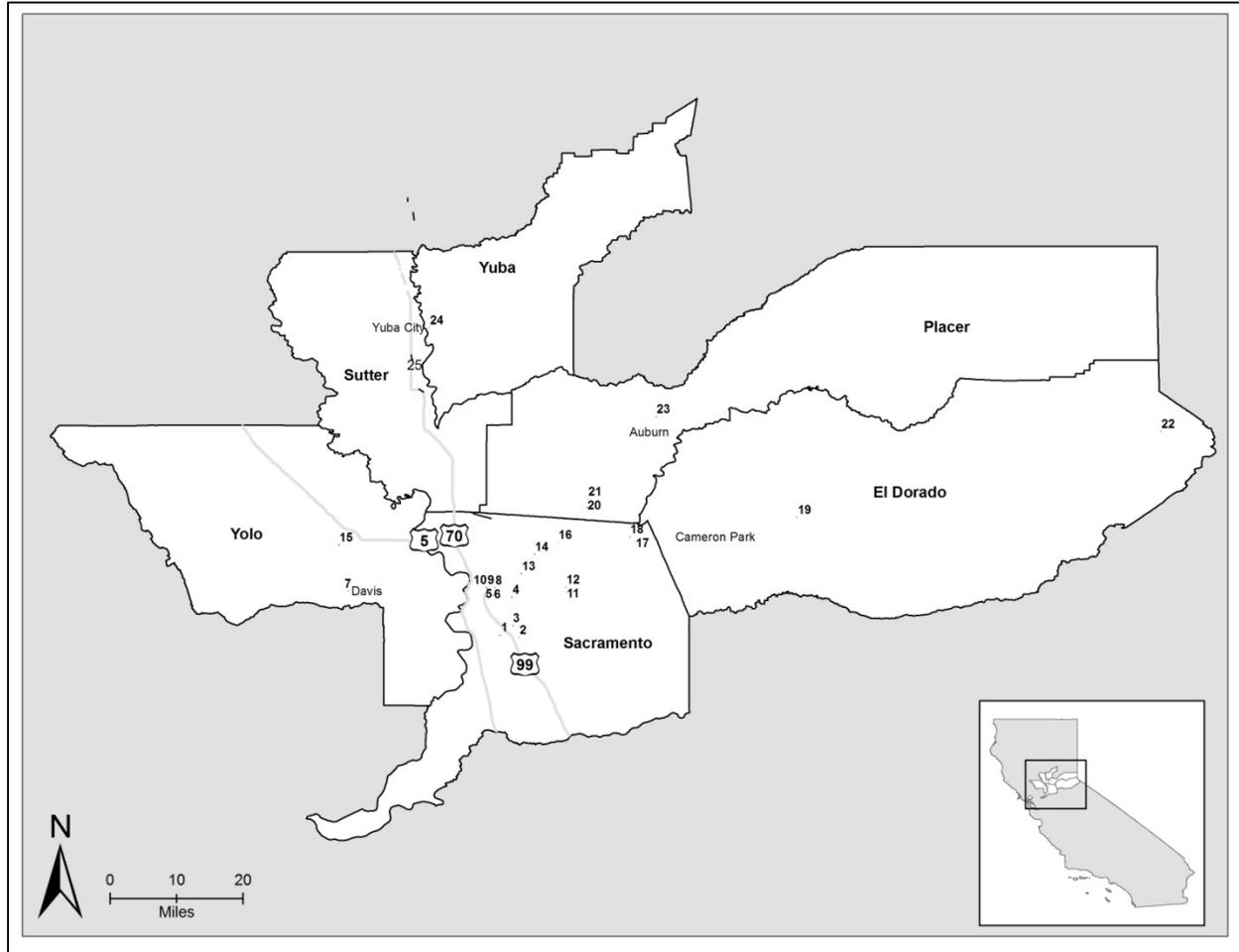
Table 4: Charity/Unreimbursed Care Costs Greater Sacramento Area Hospitals

(Source: Hospital Council of Northern California, 2009 data updated for inflation)

Item	El Dorado	Placer	Sacramento	Sutter	Yolo	Total
Medicare	\$ 51,329,523	\$ 45,868,133	\$ 160,146,316	\$ 1,013,831	\$ 12,709,668	\$ 271,067,471
Medi-Cal	\$ 30,722,876	\$ 20,277,388	\$ 250,848,855	\$ 313,222	\$ 6,822,770	\$ 308,985,111
Bad Debt	\$ 7,755,384	\$ 6,556,933	\$ 52,344,813	\$ 170,455	\$ 3,768,150	\$ 70,595,736
County Indigent	\$ 8,517,747	\$ 6,293,488	\$ 44,069,221	\$ -	\$ 4,034,218	\$ 62,914,674
Charity	\$ 4,479,453	\$ 12,856,526	\$ 73,383,330	\$ 99,711	\$ 4,138,066	\$ 94,957,086
Total	\$ 102,804,983	\$ 91,852,469	\$ 580,792,535	\$ 1,597,220	\$ 31,472,872	\$ 808,520,078

Overall, the greater Sacramento area's hospitals provide \$808.5 million in charity and unreimbursed care. Moreover, this number is likely to increase substantially over time as health care costs rise.

An Overview of Hospitals in the Greater Sacramento Area



Legend

- | | | |
|---|---|---------------------------------------|
| 1. Methodist Hospital of Sacramento | 10. Sutter Memorial Hospital | 19. Marshall Medical Center |
| 2. Sierra Vista Hospital | 11. Sacramento VA Medical Center | 20. Kaiser Medical Center - Roseville |
| 3. Kaiser Medical Center – So. Sacramento | 12. VA Northern California Health Care System | 21. Sutter Roseville Medical Center |
| 4. Sutter Center for Psychiatry | 13. Kaiser Medical Center - Sacramento | 22. Barton Memorial Hospital |
| 5. Shriners Hospitals for Children | 14. Heritage Oaks Hospital | 23. Sutter Auburn Faith Hospital |
| 6. U.C. Davis Medical Center | 15. Woodland Healthcare | 24. Rideout Memorial Hospital |
| 7. Sutter Davis Hospital | 16. Mercy San Juan Hospital | 25. Fremont Medical Center |
| 8. Mercy General Hospital | 17. Mercy Hospital of Folsom | |
| 9. Sutter Medical Center, Sacramento | 18. Kindred Hospital | |

Figure 1: Hospitals and Hospital Campuses in the Greater Sacramento Area

The greater Sacramento area has twenty-five major hospitals (Figure 1 above) as well as a number of smaller hospitals.

Description of Hospitals in the Sacramento Area

This section provides a brief description of most of the hospitals in the Greater Sacramento area. A few smaller hospitals and most long-term care facilities were left out of the description, but all hospitals reporting to OSHPD plus the VA hospital, are included in this report.

Barton Memorial Hospital

Barton Memorial Hospital is situated on the south shore of beautiful Lake Tahoe nearly 6,200 feet above sea level. Since opening in 1963, Barton Memorial Hospital has expanded its services to serve both its residents and the thousands of visitors to Lake Tahoe. Today, Barton Health has 147 members on the medical staff serving 62 licensed acute care beds as well as an array of physician practices. Physician specialties include cardiology, family practice, general surgery, gynecology, internal medicine, obstetrics, pediatrics, orthopedics, urology, rheumatology, cosmetic surgery and otolaryngology. Nearly 950 employees work in 65 departments to provide outstanding health care for our rural community.

The Tahoe Center for Orthopedics, a service of Barton Health, is a comprehensive center of excellence combining forces with the leading surgeons in Lake Tahoe region. The Center focuses on prevention, assessment, treatment and rehabilitation of musculoskeletal injuries including spine, joint replacement, sports medicine and rehabilitation. The Center is also home to the Barton Lake Tahoe Orthopedics Sports Medicine Fellowship – a nationally accredited fellowship program training surgeons from around the world.

Fremont-Rideout Health Group

Fremont-Rideout Health Group is a non-profit community-based health system comprised of two acute-care hospitals: Rideout Memorial Hospital, with 149 licensed beds and a Level III Emergency Department and STEMI-designated receiving center, and Fremont Medical Center with 132 licensed beds; the Heart Center at Rideout; the Cancer Center affiliated with UC Davis Medical Center; The Fountains, a 145-bed Skilled Nursing facility, which includes a 24-bed Rehab unit; outpatient clinics and a host of ancillary services including senior living services, home health, hospice and durable medical equipment. Located throughout Yuba, Sutter and Nevada Counties, Fremont-Rideout's health system employs more than 1,800 employees and has approximately 263 physicians on the medical staff. We believe that not-for-profit healthcare is in the best interest of the community.

Heritage Oaks Hospital

Built in 1988, Heritage Oaks Hospital has long been highly regarded as an integral part of the greater Sacramento and northern California mental health community. Conveniently located in the northern part of Sacramento, minutes from downtown and just off of I-80 East, Heritage Oaks is a private, fully accredited 125-bed acute psychiatric facility offering a full range of individually tailored treatment services, care and support to adolescents, adults and senior adults. Services include: Inpatient psychiatric and dual diagnosis services for adolescents, adults and seniors; adult outpatient psychiatric and dual diagnosis services at three convenient locations; professional leadership from Sacramento's finest psychiatrists and clinicians; 24-hour confidential, no-cost assessments

Kaiser Permanente Roseville Medical Center

The Roseville Medical Center features one of the largest and most comprehensive pediatric teams in Greater Sacramento—with more than 50 pediatric specialists in fields such as oncology, neurosurgery, cardiology, and intensive care. A full complement of labor and delivery services is provided, as well as the largest neonatal intensive care unit in Placer County. Our team of board-certified neonatologists, respiratory therapists, specially trained nurses, and other clinical specialists remains onsite to ensure that we give children every chance to thrive. Other specialized care includes services at our certified Primary Stroke Center; surgical procedures to correct the spine; brachytherapy (for patients with prostate cancer); and emergent coronary angioplasty, which can save the lives of heart attack patients without surgery, provided in our state-of-the-art Interventional Services Suite. A wide variety of inpatient, outpatient, emergency, and specialty services are also provided. In addition, lab, X-ray, and Pharmacy are offered in one convenient location. A team of more than 4,700 employees and 500 physicians is ready to serve patients, and the entire health care team—from nurses and optometrists to pharmacists and surgeons—has access to electronic health records that allow everyone to view up-to-date and complete patient information.

Kaiser Permanente Sacramento Medical Center

The Kaiser Permanente Sacramento Medical Center is home to our Neurosurgery center of expertise—the largest in the Greater Sacramento area—which is dedicated to providing world-class therapies for neurosurgical disorders, while our Neurointerventional Suite is devoted to the treatment of vascular and other diseases of the brain, spinal cord, head, and neck. Our medical center has also been certified as a Primary Stroke Center by The Joint Commission, which monitors quality standards at health care organizations nationwide. Our stroke center offers advanced care for patients with coronary artery disease, heart failure, and stroke. Our Center for Reproductive Health provides highly specialized fertility services and was awarded accreditation by the College of American Pathologists for exceeding standards on more than 600 measures. Our oncology clinical trials program gives patients access to leading-edge cancer treatments. The facility and its associated medical offices provide a wide variety of inpatient, outpatient,

emergency, and specialty services, and patients can take care of their lab, X-ray, and pharmacy needs under one roof. Nearly 3,800 employees and 500 physicians are ready to serve patients, and the entire health care team—from nurses and optometrists to pharmacists and surgeons—has access to an electronic health record that allows everyone to view up-to-date and complete patient information.

Kaiser Permanente South Sacramento Medical Center

The Kaiser Permanente South Sacramento Medical Center is home to the south area's only Level II Trauma Center. The 217-bed hospital serves nearly 200,000 members residing in the South Sacramento and Elk Grove areas. In addition to operating one of the area's busiest emergency departments, the South Sacramento Medical Center offers a variety of specialty care services, including minimally-invasive robotic surgery, bariatric surgery services, neurosurgery, head and neck surgery, maxillofacial surgery, a cochlear implant program, a cardiac catheterization lab, sports medicine, an outpatient pain management center, and a dedicated Latino Health Center and sleep lab. Other specialized care includes services at its certified Primary Stroke Center. A team of nearly 3,000 employees and 400 physicians focuses on patient-centered care and has access to an electronic health record that allows everyone to view up-to-date and complete patient information.

Kindred Hospital - Sacramento

Kindred Hospital is a CMS certified, Joint Commission-accredited and state licensed Long-Term Acute Care hospital with 39 beds (6 ICU) that specializes in providing extended acute care for medically complex patients. As a potential partner with all acute care hospitals in Northern CA, Kindred Hospital Sacramento provides the following types of care: pulmonary care (ventilator management and weaning), complex wound care, intensive short-term rehabilitation, dialysis, IV antibiotic therapy and pain management. Kindred helps to reduce the cost, trauma and risk of short-term hospital re-admission by being staffed, equipped and through its specialized interdisciplinary care team, to respond to changes in medical conditions.

Marshall Medical Center

Marshall Medical Center is a community based not-for-profit medical center located on the Western Slope of El Dorado County. Marshall features one of only three level III trauma centers in the Sacramento/North Coast region and provides inpatient care at Marshall Hospital, a 105 bed acute care facility in Placerville, providing emergency department/trauma, birth Center, surgical services and advanced diagnostic imaging, among many other services. Marshall also operates several outpatient campuses and

physician offices in Placerville, Georgetown, Cameron Park and El Dorado Hills, spanning primary care and many specialties, including Hematology/Oncology, Cardiology, Orthopedics and OB/GYN. As one of the few remaining independent, not-for-profit medical centers in California, Marshall prides itself on providing excellent, comprehensive and compassionate care close to home.

Mercy Hospital of Folsom

Mercy Hospital of Folsom, a Dignity Health member, is an expanding 106-bed general acute care not-for-profit hospital providing medical surgical, intensive care, emergency, obstetrics and rehabilitation services to the growing communities of Folsom, El Dorado Hills, Cameron Park, Shingle Springs and Rescue. Its compassionate team provides patient services ranging from outpatient surgery to inpatient care delivered in our Medical Surgical, Progressive Care and Intensive Care units. It offers comprehensive orthopedic services including orthopedic surgery, inpatient and outpatient rehabilitation, and specialty care for injuries and diseases of the bones, joints, ligaments, tendons, muscles and nerves. Its newly remodeled Family Birth Center features an excellent medical and nursing team, with private birthing suites and soothing amenities where labor, delivery and recovery occur in one room. Care includes award-winning lactation training and support. Our 25-bed all-private-room Emergency Department provides care for life-threatening emergencies as well as minor urgent-care medical problems, with 24-hour access to state-of-the-art digital diagnostic imaging services. Mercy Folsom also supports two free family clinics designed for those who need primary healthcare, but are without health insurance, are low income and live in the hospital's service area. As the community's partner in health, Mercy Folsom takes pride in providing programs to support health and promote healthy lifestyles. Our Growing Well with Mercy program reaches thousands of area students and families with health-focused messages each year.

Mercy General Hospital

Located in the heart of Sacramento, California's capitol, Mercy General Hospital is a not-for-profit nationally recognized center for quality tertiary care and research. It provides a wide range of health, social and support services with special advocacy for the poor and underserved. It includes the nationally recognized Mercy Heart & Vascular Institute and The Joint Commission-certified Stroke Programs. It is accredited as a Certified Chest Pain Center with PCI, the only Sacramento-area hospital with this distinction. It also holds the distinction of housing the first CARF (Commission on Accreditation of Rehabilitation Facilities)-accredited Acute Rehabilitation Unit in the

region. Mercy General also is a respected center for maternity care, orthopedics, spine care, eye surgical care and oncology. Within Mercy General's parent organization Dignity Health, which has 40 hospitals in three western states, Mercy General Hospital is #1 in cardiac volume; #3 in average daily census; #1 in total surgeries; #6 in babies delivered; highest patient severity/CASE Mix Index.

Mercy San Juan Medical Center

Mercy San Juan Medical Center, a Dignity Health member, is a nationally recognized not-for-profit hospital located in Carmichael, California, serving the areas of north Sacramento County and south Placer County. It is one of the area's largest and most comprehensive medical centers. It is a Level II Trauma Center and has one of the busiest Emergency Departments in the region, with more than 68,000 emergency visits a year and more ambulance traffic than any other local hospital. A highly trained team of specialists using the latest technology provides advanced services in cardiology, neuroscience, cancer, orthopedics and robotic surgery. Mercy San Juan's Level III neonatal intensive care unit is ranked among the world's elite in survival outcomes. Mercy San Juan also has the only hospital-based hyperbaric oxygen (HBO) unit in the region.

Methodist Hospital of Sacramento

Methodist Hospital of Sacramento, a Dignity Health member, is a not-for-profit 162-bed facility serving southern Sacramento County including Elk Grove and Galt. Its renovated Emergency Department provides 29 private rooms. The campus also includes Bruceville Terrace, a 171-bed sub-acute nursing facility, and Mercy Family Health Center, where doctors and residents offer comprehensive one-stop service for patients of all ages, including primary and urgent care, X-rays, labs and access to hospital specialists. A "Blue Distinction Center for Knee and Hip Replacement," Methodist's Orthopedics and Sports Medicine offers the latest in orthopedic care and technology, including the MAKO robotic surgical system. The Family Birth Center features large private rooms and comforting amenities along with a Level II neonatal intensive care unit. The nationally recognized Bariatric Surgery Program performs three types of weight-loss surgery. An accredited and nationally recognized three-year residency program, the Methodist Family Practice Residency Program provides specialty training in primary care family practice.

Shriners Hospitals for Children-Northern California

Shriners Hospitals for Children - Northern California is a regional pediatric medical center devoted to transforming the lives of children through expert care and research.

Located just minutes from downtown Sacramento in the heart of a growing medical community, the Northern California Shriners Hospital is a destination choice for parents whose children have orthopedic problems, spinal cord injuries, burns, scars from any cause, and cleft lip and palate. The distinguished medical team works collaboratively to ensure that every child they serve benefits from exceptional care and expertise. The professionals at Shriners Hospitals for Children – Northern California know that a child’s path to independence begins with access to the finest specialized medical care. Admission to the program is based on two criteria – age (under 18) and diagnosis. The collaborative approach to care extends to the scientific and clinical research program, where doctors and scientists united by a quest for cures are working together to find new ways to improve outcomes for children with burn injuries, nerve degeneration, cerebral palsy, cleft lip and palate and other childhood disorders. Since opening its doors in 1997, more than 45,000 children have benefited from the gift of specialized care provided by Shriners Hospitals for Children – Northern California.

Sierra Vista Hospital

Sierra Vista Hospital has a current capacity of 120 beds providing inpatient as well as outpatient behavioral health services to the Sacramento Region. Currently the hospital is divided into 6 units: Two 24 bed units (one of which is an Adolescent population), two 20 bed units, a 19 and a 13 bed unit. Additionally, within our in-patient hospital, Sierra Vista has 8 licensed detoxification beds. In addition, Sierra Vista provides a continuum of care through our on-site outpatient services. These services consist of three adult programs: Partial Hospitalization (PHP), Intensive Outpatient Program (IOP) and a Chemical Dependency Intensive Outpatient Program.

Sutter Auburn Faith Hospital

Sutter Auburn Faith Hospital is a community based, not-for-profit, acute care hospital. As part of the Sutter Health network of care, Sutter Auburn Faith has provided more than 40 years of caring and excellence to Auburn and the surrounding foothill communities. This hospital offers many comprehensive programs and services including endoscopy, cancer care, 24-hour emergency services, infusion therapy and wound care, to name a few. In addition, Sutter Auburn Faith Hospital has been recognized by numerous organizations for outstanding clinical performance including excellence in patient safety and health care quality.

Sutter Center for Psychiatry

Since 1958, Sutter Center for Psychiatry has been the regional leader in providing inpatient and outpatient psychiatric and mental health services to adults, adolescents

and children. It is the only not-for-profit psychiatric hospital in the Sacramento region that is part of an integrative health care system, and is the only psychiatric hospital in Northern California outside the Bay Area to provide services for all ages: children 2-11, adolescents 12-17 and adults 18-up. Sutter Center for Psychiatry is one of three campuses of Sutter Medical Center, Sacramento, which is the flagship medical center of Sutter Health, Northern California's largest health care network.

Sutter Davis Hospital

Named in 2011 as one of the top 100 hospitals in the United States by Thomson Reuters, Sutter Davis Hospital is a community-based, acute-care hospital located in the heart of Davis. As part of the Sutter Health network of care, this technologically advanced hospital offers a full array of inpatient and outpatient services and community outreach programs to the residents of Davis and surrounding communities in Yolo and eastern Solano counties. The 48-bed hospital sits on a 20-acre medical campus and has been caring for the health care needs of the community for more than 40 years. Sutter Davis services include cardiac rehabilitation, women's services, neurology and orthopedics, to name a few. Sutter Davis has received national acclaim for commitment to service and high standard for quality, and was also recently named one of the Best Places to Work in Healthcare.

Sutter Medical Center, Sacramento

Providing quality health care since 1923, Sutter Medical Center, Sacramento is the flagship of Northern California's largest health network, Sutter Health. The community-based, not-for-profit, 823-bed medical center consists of two acute-care facilities – Sutter General and Sutter Memorial hospitals – and a psychiatric hospital, the Sutter Center for Psychiatry, as well as Sutter Oaks Midtown nursing home and Sutter SeniorCare elderly day program. Sutter Medical Center, fully accredited by the Joint Commission and honored by numerous organizations for outstanding clinical performance, provides comprehensive urgent and non-urgent care to 215,000 patients annually. Sutter Medical Center is currently in the midst of a \$724 million construction project that will join its two acute-care facilities and outpatient services into the most comprehensive medical community in the Sacramento region. Scheduled to be completed in November 2013, the expanded Sutter Medical Center campus will include the new Anderson Lucchetti Women's and Children's Center, a renovated Sutter General Hospital, the new Sutter Capitol Pavilion medical office building and outpatient services center, and renovation of Sutter Cancer Center, all connected by a series of spanning structures and bridges.

Sutter Roseville Medical Center

Sutter Roseville Medical Center is a community based, not-for-profit, acute care hospital. As part of the Sutter Health network of care this medical center, which serves Roseville and the surrounding communities, has a full array of services and programs designed to meet a growing community. Services include: a Level II Trauma Center, Family Birth Center, Neonatal Intensive Care Unit and the Sutter Rehabilitation Institute. As the Placer area expands, Sutter Roseville continues to provide additional physicians, hospital beds, and programs and services to sufficiently serve the number of growing Placer County residents.

Tahoe Forest Health System

Tahoe Forest Health System is not-for-profit and located in Truckee, California and Incline Village, Nevada. With a strong focus on quality, performance excellence, innovation, and excellent patient care, Tahoe Forest Health System was recently named one of America's Top 100 Critical Access Hospitals. Tahoe Forest Health System offers a diverse range of outpatient services including home health/hospice, physical therapy/rehab/occupational health, skilled nursing/extended care, children's center, health clinic, medical fitness center, pharmacy, cancer center and physician multi-specialty clinics.

Tahoe Forest Health System is a UC Davis designated Rural Center of Excellence, a UC Davis Cancer Care Network affiliate, a UC Davis Rural Prime medical education partner, a CAPE/California Council for Performance Excellence gold level award recipient, two-time Pathway to Excellence in Nursing recipient, and is a certified Baby Friendly hospital.

UC Davis Medical Center

UC Davis Medical Center is a comprehensive academic medical center where clinical practice, teaching and research converge to advance human health. The 631-bed acute-care hospital offers the full range of inpatient and outpatient services, from neonatal intensive care and transplant services to primary care and hospice care. Centers of excellence include the National Cancer Institute-designated UC Davis Cancer Center; the region's only level-1 pediatric and adult trauma centers; a regional burn center; and the UC Davis Children's Hospital. The medical center serves a 33-county, 65,000-square-mile area that stretches north to the Oregon border and east to Nevada. It further extends its reach through the award-winning telemedicine program, which gives remote, medically underserved communities throughout California unprecedented access to specialty and subspecialty care.

Detailed Breakdown of Economic Impacts

Hospitals

This section contains a more detailed breakdown of the economic impact numbers presented at the beginning of the report. To estimate the economic impact of greater Sacramento area hospitals, this study used official audited information reported to the State of California's Office of Statewide Health and Planning Development (OSHPD).¹ Since the latest data available was for 2010, we used 2010 audited financial disclosure reports. However, this data was updated for inflation using the Bureau of Labor Statistics estimate for inflation in the hospital sector between 2010 and 2012.² A few hospitals in this study are either not required to provide audited reports (i.e., the VA hospitals) or reports were incomplete. In these cases, we estimated revenues based on the number of hospital beds, census patient days, etc.

To estimate the economic impact of each hospital, this report used each hospital's "net patient revenue," including expenditures for salaries, wages and employee benefits; purchased goods, services and supplies; and expenditures on research and education. The accounting statements also include depreciation under net patient revenues; we subtracted this item since it is not related to direct economic impact (i.e., spending).

It is important to note that this data only includes services provided by the hospital, not all medical services. For example, if a patient goes to UC Davis Medical Center, the expenditures by the hospital are included in this economic impact. However, physicians also bill for services provided outside of the hospital and these fees are not included. Table 5 below summarizes the basic data used to estimate economic impact and other pertinent data.

¹ Reports are available at: <http://www.oshpd.ca.gov/afpdfs/default.aspx>.

² See <http://www.bls.gov/cpi/#publications>.

Table 5: Selected Data for Greater Sacramento Area Hospitals

(Source: 2010 CA Office of Statewide Health Planning and Development and Bureau of Labor Statistics for Inflation Adjustment)

Hospital	County	Available Beds	Total Census Patient Days	Outpatient Visits	Hospital Net Benefits
BARTON MEMORIAL HOSPITAL	EL DORADO	117	25,240	98,665	\$104,830,578
MARSHALL MEDICAL CENTER (1-RH)	EL DORADO	105	27,442	351,392	\$179,269,736
KAISER FND HOSP - SACRAMENTO/ROSEVILLE-EUREKA	PLACER	340	80,918	-	\$268,998,787
SUTTER AUBURN FAITH HOSPITAL	PLACER	80	13,822	69,437	\$98,179,037
SUTTER ROSEVILLE MEDICAL CENTER	PLACER	313	77,537	124,709	\$403,874,426
HERITAGE OAKS HOSPITAL	SACRAMENTO	125	26,286	3,110	\$25,170,922
KAISER FND HOSP - SACRAMENTO/ROSEVILLE-MORSE	SACRAMENTO	581	136,483	179,757	\$459,671,457
KAISER FND HOSP - SOUTH SACRAMENTO	SACRAMENTO	161	42,340	83,660	\$127,378,838
KINDRED HOSPITAL - SACRAMENTO	SACRAMENTO	39	10,924	-	\$22,272,840.54
MERCY GENERAL HOSPITAL	SACRAMENTO	342	87,401	110,346	\$434,816,988
MERCY HOSPITAL - FOLSOM	SACRAMENTO	85	17,463	47,623	\$124,958,849
MERCY SAN JUAN HOSPITAL	SACRAMENTO	315	86,600	202,980	\$408,617,470
METHODIST HOSPITAL OF SACRAMENTO	SACRAMENTO	333	90,326	81,051	\$178,217,553
SHRINERS HOSPITALS FOR CHILDREN NORTHERN CALIF.	SACRAMENTO	60	8,931	20,057	\$37,927,040
SIERRA VISTA HOSPITAL	SACRAMENTO	112	25,348	5,233	\$22,522,051
SUTTER CENTER FOR PSYCHIATRY	SACRAMENTO	69	17,846	16,208	\$21,664,772
SUTTER GENERAL HOSPITAL & SUTTER MEMORIAL HOSPITAL	SACRAMENTO	623	161,501	184,042	\$808,797,554
UNIVERSITY OF CALIFORNIA DAVIS MEDICAL CENTER	SACRAMENTO	563	164,572	956,016	\$1,078,908,452
WOODLAND MEMORIAL HOSPITAL	YOLO	108	16,860	65,771	\$105,507,408
RIDEOUT MEMORIAL HOSPITAL	YUBA	281	52,161	173,636	\$224,023,713
SUTTER SURGICAL HOSPITAL NORTH VALLEY	SUTTER	14	1,623	2,529	\$18,704,559
SUTTER-YUBA P.H.F.	SUTTER	16	3,257	-	\$2,440,813
SUTTER DAVIS HOSPITAL	YOLO	48	8,651	37,728	\$89,512,029
SUTTER OAKS NURSING CENTER - MIDTOWN	SACRAMENTO	100	-	-	\$79,117,290
EL DORADO COUNTY P H F	EL DORADO	10	2,186	-	\$2,747,015
TELECARE PLACER COUNTY PSYCHIATRIC HEALTH FACILITY	PLACER	16	4,312	-	\$2,543,773
CRESTWOOD PSYCHIATRIC HEALTH FACILITY-CARMICHAEL	SACRAMENTO	12	3,292	-	\$2,455,088
SACRAMENTO COUNTY MENTAL HEALTH TREATMENT CENTER	SACRAMENTO	50	20,491	-	\$23,467,366
VALLEY DIVISION - SACRAMENTO VA MEDICAL CENTER	SACRAMENTO	60	-	-	\$206,336,901
NORTH VALLEY BEHAVIORAL HEALTH	SUTTER	16	5,066	-	\$1,812,205
SEQUOIA PSYCHIATRIC CENTER	SUTTER	16	4,555	-	\$3,546,749
TOTAL		5,110	1,223,434	2,813,950	5,568,292,260

In Table 5 above, the sum of all the hospital net benefits (defined above), \$5.7 billion, represents spending by the greater Sacramento area’s hospitals. In addition, there are indirect and induced impacts, often referred to as “multiplier effects.” The *indirect impact* is a product of spending by the local, regional or state companies from which the hospital purchases goods and services. The *induced impact* represents the impact of

routine household spending by hospital employees – for rent, food, clothing, transportation, etc. – and by the employees of its suppliers.

Intuitively, if these hospitals were to close, the City would not only experience an economic contraction from the loss of wages and services directly paid for by these hospitals, the greater Sacramento area also would lose the spending by hospital employees and other members of the workforce who provide services to hospitals as well as the spending on other industries who provide inputs to these hospitals.

To estimate the interaction of the greater Sacramento area’s hospitals with the rest of the area’s economy, economists use input/output analysis, which estimates the interactions of different industries as well as additional consumer spending. These interactions vary from industry to industry and region to region. To analyze these impacts, this report uses *IMPLAN* software³, which is based on the Bureau of Economic Analysis’ Input Output models. (See the technical Appendix for more details.) The specific data used in this analysis is based on actual data collected by the U.S. Government applicable to the City/County of The greater Sacramento area. This data was run through an input/output model generated in *IMPLAN* and the results of this analysis are presented in Table 5 below.

The net result of the analysis is summarized in Table 6 below. Adding in direct, indirect and induced impacts, the total economic impact on hospital spending in the greater Sacramento area is \$10.6 billion.

Table 6: Total Economic Impact of the Greater Sacramento Area’s Hospitals

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	33,928	3,137,912,827	3,412,942,114	5,568,292,260
Indirect Effect	12,306	568,303,621	1,212,085,949	1,775,056,538
Induced Effect	24,929	1,082,013,195	2,064,898,913	3,247,231,791
Total Effect	71,163	4,788,229,643	6,689,926,974	10,590,580,589

³ See www.implan.com.

Construction Over a 3-5 Year Horizon

Many of the greater Sacramento area’s hospitals will be in a building boom over the next four years due to new hospital construction and refurbishing existing hospitals. As a result, these hospitals will be a significant driver in the construction industry, generating a large number of jobs. Since construction tends to be “lumpy” – it occurs in fits and starts – estimating average yearly construction costs is more difficult. This study collected data from each hospital with significant construction plans in the next four years. The major projects in the area slated over the next five years include a \$261 million project by the Fremont Medical Center in Yuba County, a \$32 million cancer center in Sacramento for UC Davis Medical Center (already under construction) and a \$46 million addition at Marshall Medical Center in El Dorado County. In addition, most hospitals will spend a small part of their budget on routine maintenance.

For this study we have conservatively estimated that \$400 million will be spent on construction over the next 3-5 years, or \$100 million per year. Table 7 below summarizes construction spending for an average year.

Table 7: Hospital Construction Spending Impacts (2012-2015)

(Source: Each Respective Hospital and *IMPLAN* estimates)

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	637	39,904,317	49,149,316	100,000,000
Indirect Effect	193	11,008,252	16,460,658	28,624,408
Induced Effect	345	14,941,475	28,527,614	44,841,747
Total Effect	1,175	65,854,044	94,137,589	173,466,155

As shown in Table 7 above, the total construction expenditures per year will average \$173 million when one includes the indirect and induced impacts, generating 1,175 (yearly) jobs and \$65.9 million in labor income.

Long-Term Care and Home Care for the Elderly and Clinics

Although some of the hospitals discussed above provide long-term care, there are a number of other smaller facilities in the area that also provide such care. The data for

these facilities (Long Term Care) is also reported to the Office of Statewide Health and Planning Development (OSHPD).⁴

Table 8 provides estimates the economic impact of long term care facilities (other than the hospitals) reporting in the greater Sacramento area – there are over sixty such facilities. The total impact is \$975 million, as well as 11,849 additional jobs.

Table 8: Total Economic Impact of Non-Hospital Long-Term Care Facilities

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	8,449	299,071,703	344,582,653	528,026,783
Indirect Effect	1,068	47,386,931	94,070,583	143,458,454
Induced Effect	2,332	101,210,077	193,158,881	303,742,447
Total Effect	11,849	447,668,711	631,812,117	975,227,685

Conclusion

This study has estimated the economic impact of hospital and hospital-related expenditures in the greater Sacramento area. Overall, hospitals and hospital-related spending generate \$11.7 billion in spending annually and 84,176 jobs. Moreover, hospitals and other medical establishments in the greater Sacramento area provide a wide variety of employment opportunities. The wages and salaries for these health care professionals is 70 percent higher than the average for California. Hospital and health care spending also generates jobs for less skilled workers.

The projected growth for health care jobs in the greater Sacramento area from 2008-2018 is substantially higher in health care. The State of California projects a 10.5 percent growth in overall employment over this period. However, health care jobs will grow by 26 percent and hospital jobs by 21.2 percent. Employment in the health industry is more stable and less cyclical – during recessions fewer jobs are lost in health care than in many other sectors. Health care supports jobs requiring a wide variety of education and experience levels, not just those intended for white-collar professionals. The greater Sacramento area’s hospitals also provide \$808.5 million in charity and unreimbursed care. Hospitals will generate a substantial portion of construction jobs over the next 3-5 years, generating \$173 million in total economic impacts per year and 1,175 jobs.

⁴ Reports are available at: <http://www.oshpd.ca.gov/afpdfs/default.aspx>.

Technical Appendix

Input-Output Analysis

Input-output (I/O) was designed to analyze the transactions among the industries in an economy. These models are largely based on the work of Wassily Leontief. Detailed I/O analysis captures the indirect and induced interrelated circular behavior of the economy. For example, an increase in the demand for health services requires more equipment, more labor, and more supplies, which, in turn, requires more labor to produce the supplies, etc. By simultaneously accounting for structural interaction between sectors and industries, I/O analysis gives expression to the general economic equilibrium system. The analysis utilizes assumptions based on linear and fixed coefficients and limited substitutions among inputs and outputs. The analysis also assumes that average and marginal I/O coefficients are equal.

IMPLAN

IMPLAN is a computer program developed by the United States Forest Service to construct I/O accounts and models. Typically, the complexity of I/O modeling has hindered practitioners from constructing models specific to a community requesting an analysis. Five different sets of multipliers are estimated by *IMPLAN*, corresponding to five measures of regional economic activity. These are: total industry output, personal income, total income, value added, and employment. Two types of multipliers are generated. Type I multipliers measure the impact in terms of direct and indirect effects. Direct impacts are the changes in the activities of the focus industry or firm, such as the closing of a hospital. The focus business changes its purchases of inputs as a result of the direct impacts. This produces indirect impacts in other business sectors. However, the total impact of a change in the economy^{A-3} consists of direct, indirect, and induced changes. Both the direct and indirect impacts change the flow of dollars to the state, region, or county's households. Subsequently, the households alter their consumption accordingly. The effect of the changes in household consumption on businesses in a community is referred to as an induced effect. To measure the total impact, a Type II multiplier is used. The Type II multiplier compares direct, indirect, and induced effects

Like other input-output models, *IMPLAN* calculates the flow of payments for goods

and services across different industry sectors, and between households and industries. It can be envisioned simply as a table with hundreds of rows and columns, with all industries (plus households) listed down the side as producers; and the same industries (and households) listed across the top as consumers. Spending by any consumer industry – in this case, the University – is allocated across all of the producing industries and the household sector. Each of these producer industries in turn purchases its own distinct set of inputs from other industries and households in order to produce the output it sells.

Table A1: Economic Multipliers Applied to Hospitals

Type of Multiplier	Direct	Induced	Indirect
Employment	Hospital employees and those providing services directly to hospitals	Retail and Service jobs generated by employee spending.	Jobs created by indirect suppliers of services to hospitals (e.g., ambulance repair service).
Income	Employee/service provider Income.	Retail/Service Income	Supplier income.
Output	Hospital Expenditures	Retail/Service Expenditures	Supplier Expenditures

However, in addition to this direct spending, there are indirect, and induced impacts, often referred to as “multiplier effects.” The *indirect impact* is a product of spending by the local, regional or State companies from which the hospital purchases goods and services. The *induced impact* represents the impact of routine household spending by hospital employees – for rent, food, clothing, transportation, etc. – and by the employees of its suppliers. Table 2 above provides an illustration of these multipliers.

Intuitively, if these hospitals shut down, the City would not only experience an economic contraction due to the loss of wages and services directly paid for by these hospitals, The greater Sacramento area would also lose the spending by hospital employees and other members of the workforce who provide services to hospitals, as well as the spending on other industries who provide inputs to these hospitals.

To estimate the interactions of the greater Sacramento area’s hospitals with the rest of the City’s economy, economists use input/output analysis, which estimates the interactions of different industries as well as additional consumer spending. These interactions vary from industry to industry and region to region. To analyze these

impacts, we use *IMPLAN* software⁵, which is based on the Bureau of Economic Analysis' Input Output models. (See the technical Appendix for more details.) The specific data used in this analysis is based on actual data collected by the U.S. Government applicable to the City/County of The greater Sacramento area. This data is run through an input/output model generated in *IMPLAN* software and presented in the tables in this report.

⁵ See www.implan.com.

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