Falling Behind

How Short-Staffing has Undermined Patient Care at Sonoma County's St. Joseph Hospitals

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A Report of the National Union of Healthcare Workers • NUHW.org

CONTENTS

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EXECUTIVE SUMMARY

This report evaluates the quality of patient care and staffing levels in nursing units at Santa Rosa Memorial Hospital and Petaluma Valley Hospital. The two hospitals—which together provide nearly half of Sonoma County's licensed hospital beds—are operated by the St. Joseph Health System, a chain with 14 hospitals, $5.6 billion in annual revenues, and 25,000 employees across three states.

Using government inspection reports, patient staffing records, and survey data from nursing staff, this study explores worsening staffing problems that undermine caregivers' ability to deliver quality care to patients. The National Union of Healthcare Workers (NUHW) represents more than 800 staff at the two hospitals, including Licensed Vocational Nurses, Certified Nursing Assistants, Unit Secretaries, and Telemetry Technicians.

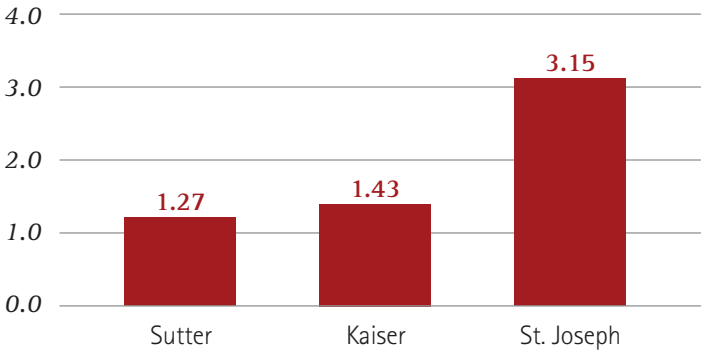
Findings

1. From 2011 to 2015, the California Department of Public Health's Licensing & Certification Division documented more violations of state and federal health standards at Santa Rosa Memorial Hospital than at any other hospital in Sonoma County. The agency inspects hospitals to assess their compliance with state and federal patient-care standards requiring, for example, hospitals to provide adequate nursing staffing levels to ensure safe care.

- Santa Rosa Memorial Hospital recorded 484 deficiencies, state enforcement actions, complaints, and facility-reported incidents from 2011 to 2015. Sutter Santa Rosa Regional Hospital and Kaiser Santa Rosa Medical Center recorded 85 and 110 incidents, respectively, during the same time period. St. Joseph's Petaluma Valley Hospital recorded 90 incidents.[1]

[*Figure 1*]

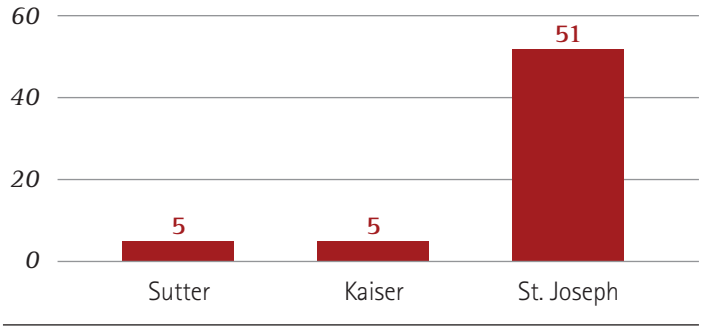
Regulatory Incidents per Occupied Bed
2011–15



Source: CDPH

[*Figure 2*]

Substantiated Complaints for Violations of California's Quality of Care/Treatment Standards
2011–15



Source: CDPH

- In Sonoma County, St. Joseph hospitals recorded ***twice*** as many regulatory incidents per occupied hospital bed than did hospitals operated by Sutter Health or Kaiser Permanente, the county's other two large hospital systems.
- Santa Rosa Memorial Hospital and Petaluma Valley Hospital recorded ***ten times*** as many violations of state standards governing the quality of care/treatment than did Kaiser or Sutter. Among other violations, the California Department of Public Health (CDPH) repeatedly cited the St. Joseph hospitals for failing to follow the hospitals' own rules requiring patient-care units to be staffed with adequate numbers of nursing and support personnel.

- State investigators documented multiple injuries suffered by patients at the two St. Joseph hospitals, including bedsores and patient falls. Such injuries are often associated with understaffed units. For example, investigators documented a fall by one "high risk" patient in an understaffed nursing unit after the patient attempted to get out of bed unassisted. The patient required surgery to repair the resulting hip fracture. The hospital's internal records documented that the unit was very understaffed at the time. Investigators discovered hand-written notes in hospital staffing records from the day when the patient's fall took place, stating: "Staffing horrible. Patient fall with serious injury, rapid decline in another patient with rapid transfer to ICU..."[2]

2. In an NUHW-administered survey conducted among nursing personnel, a majority of surveyed NUHW nursing personnel report that staffing levels at the two St. Joseph hospitals are "inadequate" and have "become worse" during the past three years. More than 95% report that "short staffing" frequently limits their ability to provide quality care to their patients. The following are some of the results of the survey completed by Licensed Vocational Nurses, Certified Nursing Assistants, Unit Secretaries, and Telemetry Technicians:

- 65% report that staffing levels are "inadequate" in their unit.
- 59% report that staffing levels have "become worse" during the past three years.
- 98% report that short staffing has "often" or "sometimes" limited their ability to provide quality care to their patients.
- Caregivers report increased patient loads, with more than half of the surveyed Nursing Assistants reporting they are responsible for 9 to 14 patients per shift.
- According to respondents, the top three reasons for worsening staffing levels are (a) "Patients have higher acuity," (b) "More patients/increased workload," and (c) "Inability to recruit and/or retain staff."

In narrative responses to open-ended survey questions, nursing personnel describe the effects of short-staffing on their patients.

> "Patients have been left alone/fallen/not been cleaned because of lack of staff and help. Patients are not being fed properly."

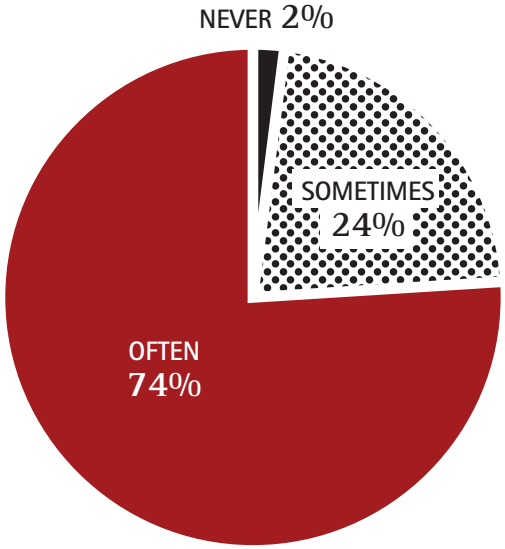
> "Patients don't get baths, teeth cleaned. It's very difficult keeping on a two-hour turn, and when you keep to it you can't ambulate the patient and our open-heart patients need to be up for all meals and ambulated four times a day."

> "A patient got a bed sore from not being turned due to high acuity, low staffing."

> "A patient was waiting to go to the bathroom with the call light on for 25 minutes. They wet their bed and were embarrassed. Patients are frequently asking, 'Where is everyone?'"

[*Figure 3*]

"Short staffing has limited your ability to provide quality patient care."



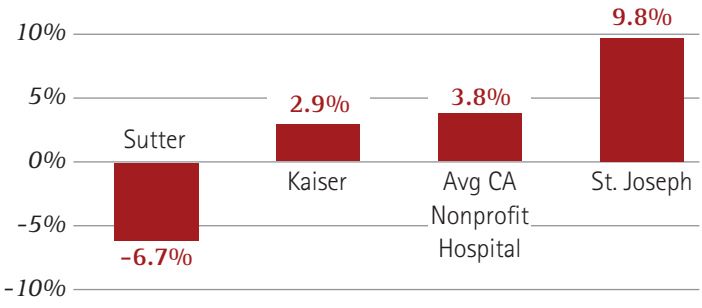
Source: NUHW Survey

- Government data confirm nursing personnel's reports about declining staffing levels. At Santa Rosa Memorial Hospital, nursing staffing levels—including Registered Nurses, LVNs, and Nursing Assistants—declined by 9.9% from 2011 to 2014, the most recent year for which data is available. Among only LVNs, CNAs, and Orderlies, staffing levels declined 15.5% at Santa Rosa Memorial Hospital during the same period, according to the California's Office of Statewide Health Planning and Development.

3. At the same time that St. Joseph has reduced staffing levels and committed large numbers of patient-care violations, it has enjoyed profits that far surpass those of Sonoma County's remaining hospitals. Since July of 2010, St. Joseph's two hospitals have reported combined profits of $236 million, according to financial records.[3] In 2014 (the most recent year for which comparative data are available), the combined operating profit margin of St. Joseph's two hospitals was substantially higher than Sutter Santa Rosa Regional Hospital, Kaiser Permanente, and the average California nonprofit hospital.[4] Meanwhile, the wages and benefits St. Joseph pays to many of its caregivers are far lower than the other two hospital chains, undermining St. Joseph's ability to recruit and retain caregivers.

[*Figure 4*]

Operating Profit Margin
2014



Source: OSHPD and Kaiser Audited Financial Statements

RECOMMENDATIONS

Given the essential role of caregivers and the well-documented relationship between staffing levels and the quality of patient care, St. Joseph should adopt the following recommendations:

- Establish and systematically implement a staffing system in conjunction with nursing personnel that includes minimum staff-to-patient ratios for non-RN nursing personnel and an effective acuity-based staffing system in order to ensure that frontline caregivers can deliver timely, effective, and quality care to patients.
- Adopt caregivers' proposal to establish patient-care committees composed of equal numbers of frontline caregivers and hospital managers to investigate staffing problems and design workable solutions. The committees would be equipped with a dispute-resolution system including, if necessary, the use of a neutral, third-party expert to resolve disagreements. Such a system has already been adopted by dozens of hospitals across California.
- Improve the pay and benefits of St. Joseph employees to match those of Kaiser in order to enhance the recruitment and retention of a stable, qualified, and experienced workforce.

About NUHW

The National Union of Healthcare Workers is a democratic, worker-led union dedicated to improving the lives of caregivers and patients. Our mission is to hold healthcare corporations accountable to the public, to establish better working conditions and higher standards of care, and to give our members a stronger voice in the workplace. Founded in 2009, NUHW represents 11,000 healthcare workers in hospitals, clinics, and long-term care facilities in California including 1,200 caregivers at St. Joseph Health System.

I. SONOMA COUNTY'S ACUTE-CARE HOSPITALS

Sonoma County's approximately 500,000 residents rely on seven hospitals for acute-care services including emergency care, intensive care, surgeries, laboratory services, and women's health services, among others. Three large hospital chains—St. Joseph Health System, Kaiser Permanente, and Sutter Health—provide nearly 80% of the county's hospital beds. The remaining 20% of the hospital beds are operated by three small, community hospitals: Healdsburg District Hospital, Sonoma Valley Hospital, and Sonoma West Medical Center (formerly Palm Drive Hospital).

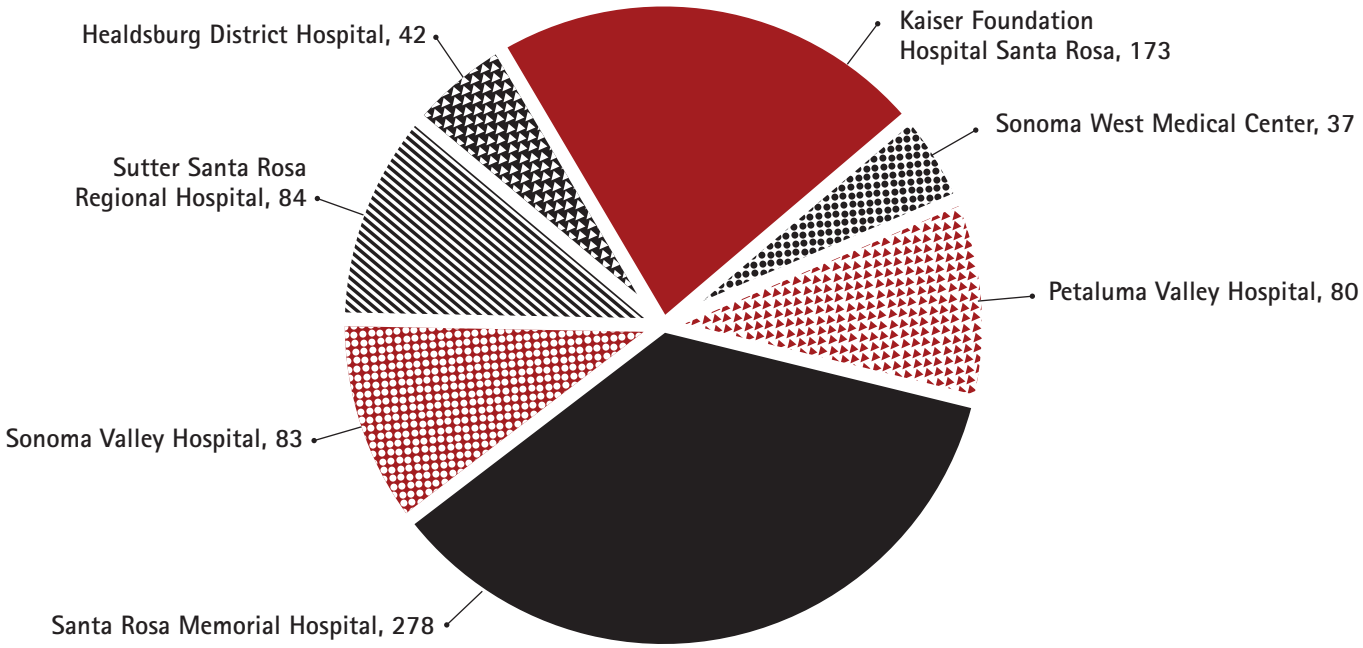
Among the county's hospital operators, St. Joseph is the largest. The company's two hospitals, which comprise nearly half of the county's licensed beds, are the following:

- Santa Rosa Memorial Hospital, with 278 beds, is the county's largest hospital. It provides emergency, medical, surgical, maternity, cardiac, and other services and operates the county's only trauma center, which also serves the residents of Napa, Mendocino, and Lake Counties. Its emergency room is the busiest in the county, with 35,000 visits in 2014.
- Petaluma Valley Hospital, with 80 beds, is the only hospital in Petaluma, the county's second-largest city. St. Joseph has leased and operated the hospital since 1997. The hospital provides medical, surgical, critical care, maternity, and emergency services.

The two hospitals' parent company, St. Joseph Health System, is headquartered in Southern California and operates a total of 14 hospitals with $5.6 billion in annual revenues and 25,000 employees across three states. The company is awaiting approval from the California Attorney General and the Federal Trade Commission to execute a merger with Providence Health & Services, a multi-state hospital chain headquartered in Renton, Washington. If approved, the merged company will become the third largest nonprofit health system in the United States with 50 hospitals, $20 billion in revenues, and 110,000 employees in seven states.[5]

[*Figure 5*]

Sonoma County's Acute-Care Hospitals by Licensed Beds



Source: OSHPD

II. GOVERNMENT INSPECTION RECORDS

NUHW analyzed records from five years of inspections performed by California's hospital oversight agency in order to investigate reports of substandard staffing levels at St. Joseph hospitals in Sonoma County. The California Department of Public Health's Licensing & Certification Division (CDPH), which licenses and regulates California's more than 300 acute-care hospitals, inspects hospitals to ensure compliance with state laws governing the care, safety, and privacy of patients. It also inspects hospitals on behalf of the federal Centers for Medicare and Medicaid Services (CMS) to ensure compliance with federal standards.

The California Department of Public Health (CDPH) conducts routine annual investigations of hospitals as well as investigations triggered by complaints and serious incidents that hospitals are required to "self-report" to the agency. If investigators discover violations, the agency notifies the hospital of these "deficiencies" and requires hospital administrators to prepare a "plan of correction" to remedy the violations. Serious violations are called "citations" or "state enforcement actions" and typically result in financial penalties imposed by the CDPH. Investigators' findings are recorded in formal written investigative records called "Statement of Deficiencies and Plan of Correction," which can be obtained from the CDPH. In addition, the CDPH publishes data regarding each hospital's regulatory performance, including the numbers of complaints, deficiencies, citations, and self-reported incidents.[6] All of these data and records are available to the public.

As part of its investigation, NUHW utilized CDPH data from January 1, 2011 through December 31, 2015 for Sonoma County's general acute-care hospitals to perform a comparative analysis of the hospitals' regulatory performance. In addition, NUHW visited the CDPH's Santa Rosa office and analyzed all of the available "Statements of Deficiencies and Plans of Correction" issued for the two St. Joseph hospitals. These latter records cover a four-year period from November of 2011 to November of 2015. Key findings include the following:

- From 2011 to 2015, St. Joseph hospitals recorded far more complaints, deficiencies, state enforcement actions, and facility self-reported incidents than did Sutter or Kaiser. Santa Rosa Memorial Hospital recorded 484 regulatory incidents, while Sutter Santa Rosa Regional Hospital and Kaiser Santa Rosa Medical Center recorded 85 and 110 incidents, respectively. Meanwhile, St. Joseph's Petaluma Valley Hospital recorded 90 incidents.

[*Figure 6*]

Regulatory Incidents per Hospital & Occupied Bed
2011-15

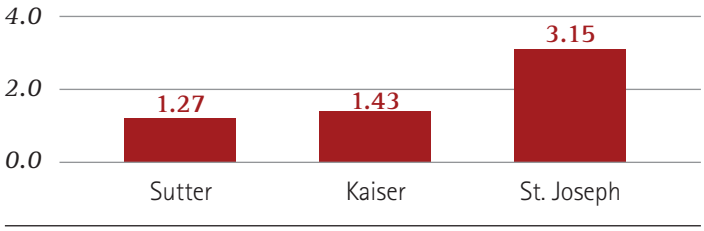
Hospital	CDPH Incidents	Occupied Hospital Beds (average)	CDPH Incidents per Occupied Hospital Bed
Santa Rosa Memorial Hospital	484	157	3.1
Petaluma Valley Hospital	90	25	3.6
Sutter Santa Rosa Regional Hospital	85	67	1.3
Kaiser Foundation Hospital - Santa Rosa	110	77	1.4

Source: CDPH and OSHPD. CDPH incidents include complaints, deficiencies, state enforcement actions, and facility self-reported incidents.

- On a per-bed basis, the St. Joseph hospitals recorded ***twice*** as many regulatory incidents as did Sutter or Kaiser.[7] Larger hospitals may reasonably expect to commit more regulatory incidents due to their higher patient volumes. Consequently, NUHW calculated regulatory incidents on a per-occupied-hospital-bed basis in order to adjust for the hospitals' varying sizes.

[*Figure 7*]

Regulatory Incidents per Occupied Bed
2011–15

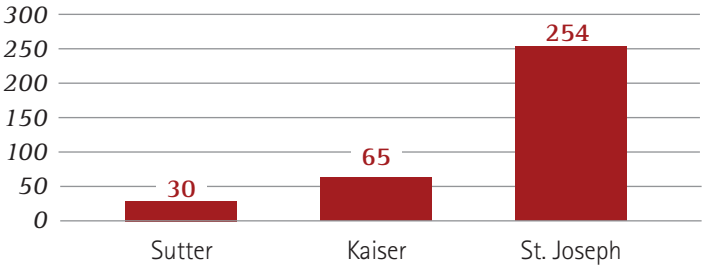


Source: CDPH

- During the five-year study period, the public filed far more complaints about St. Joseph hospitals than for Sutter or Kaiser. In fact, the CDPH received at least 400% more complaints about St. Joseph hospitals than it did for Sutter or Kaiser.

[*Figure 8*]

Complaints Filed with CDPH
2011–15

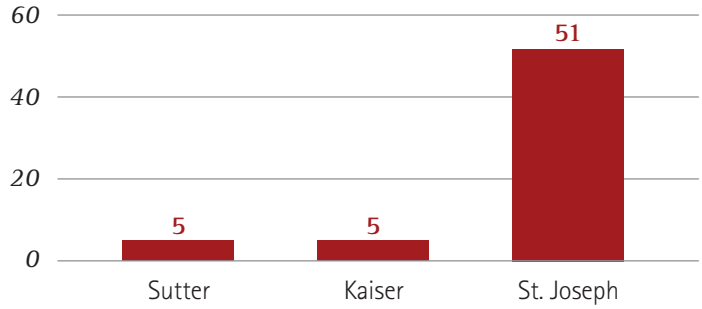


Source: CDPH

- St. Joseph hospitals were cited for far more "substantiated complaints" than were Kaiser or Sutter. The CDPH, after receiving a complaint, investigates the complainant's allegations and indicates whether or not the allegations are "substantiated" by finding violations of state and federal laws. During the study period, St. Joseph hospitals recorded 90 substantiated complaints as compared to 14 at Kaiser and 12 at Sutter.
- St. Joseph hospitals committed at least ***ten times*** as many substantiated complaints of "Quality of Care/Treatment" standards than did Kaiser or Sutter. The CDPH classifies each hospital's violations according to categories ranging from "Billing" and "Pharmaceutical Services" to "Quality of Care/Treatment" and "Facility Staffing." Among their violations, the St. Joseph hospitals were cited repeatedly for failing to follow the hospitals' own rules requiring patient-care units to be staffed with adequate numbers of nursing and support personnel.

[*Figure 9*]

Substantiated Complaints for Violations of California's Quality of Care/Treatment Standards
2011–15



Source: CDPH

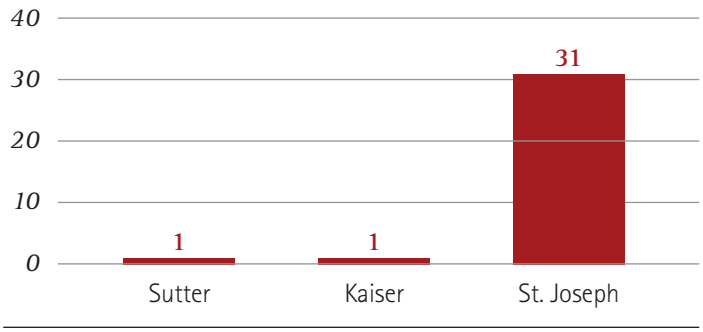
Inside a CDPH Investigation at St. Joseph

In 2012, the CDPH cited Santa Rosa Memorial Hospital for "fail[ing] to ensure that adequate staffing was provided to meet the nursing care needs of the patients resulting in Patient 1 falling and sustaining a broken hip," according to a "Statement of Deficiencies and Plan of Correction" issued by the CDPH.[8] The patient had arrived at the hospital's emergency room after a fall at home and was subsequently admitted to one of the hospital's nursing units with injuries including "multiple rib fractures" and complaints of "chest and neck pain, and shortness of breath." The nursing unit, however, was understaffed, according to an investigation by the CDPH. The patient, who had already been assessed as having a high risk of falls, attempted to get out of bed unassisted, fell, and fractured her hip, which required surgery. An internal hospital staffing document "indicated that the required staffing hours for the shift were 58.9. The staffing hours provided were 48" — indicating the unit had nearly 20% fewer staff than required by the hospital's own acuity-based staffing system. "Staff Nurse C stated that she had requested additional staff at the beginning of the shift but there was no additional staff available," according to the government investigation. "Hand written on the bottom of that staffing document was the following: 'Staffing horrible. No secretary provided so lead was tied to desk with calls and orders and unable to assist nurses. 3 transfer/admits. Patient fall with serious injury, rapid decline in another patient with rapid transfer to ICU...'" Due to these violations, in 2012 the CDPH cited Santa Rosa Memorial Hospital for "fail[ing] to ensure that adequate staffing was provided to meet the nursing care needs of the patients."

- St. Joseph hospitals committed far more violations of California's staffing standards than did Sonoma County's other two hospital chains. According to CDPH records, St. Joseph committed ***thirty times*** more substantiated complaints of "Facility Staffing" standards than did Kaiser or Sutter.

[*Figure 10*]

Substantiated Complaints for Violations of California's Facility Staffing Standards
2011-15



Source: CDPH

- From 2011 to 2015, state investigators documented multiple care problems and injuries suffered by patients at the two St. Joseph hospitals, including hospital-acquired pressure ulcers ("bedsores") and patient falls. These problems are often associated with understaffed hospitals. For example, investigators documented a fall by one "high risk" patient in an understaffed nursing unit after the patient attempted to get out of bed unassisted.

Appendix B contains excerpts from CDPH "Statement of Deficiencies and Plan of Correction" forms that provide more details about the patient-care violations for which St. Joseph hospitals were cited.

Staffing Levels & Patient Care

In order to care for patients who are often critically ill, hospitals must ensure that every patient receives the correct care, every single time. Integral to this process is the adequate staffing of hospital departments with trained, experienced teams of caregivers. Over the last few decades, however, many hospitals have reduced staffing levels and boosted workloads in order to increase their bottom lines. In health care, where staffing costs are the greatest part of a health facility's expenditures, such changes can have profoundly harmful effects on the quality of care received by patients.

Since 1991, when the National Center for Nursing Research convened an invitational conference on patient care outcomes research and effective nursing practice, myriad studies have cited overarching evidence linking nurse staffing levels to the quality and safety of patient care. The relationship of nurse staffing levels to the delivery of quality patient care was a major finding in a seminal report issued by the Institute of Medicine (1996). The report found that, "Nursing is a critical factor in determining the quality of care in hospitals and the nature of patient outcomes."[9]

A 2003 report released by United States Department of Health and Human Services' Agency for Healthcare Research and Quality (AHRQ), which reviewed 26 independent studies on the relationship between nurse staffing levels and measures of patient safety, found that lower nurse-to-patient ratios were associated with higher rates of nonfatal adverse outcomes, including hospital acquired pressure ulcers, nosocomial infections, and patient falls.[10] A 2004 report released by the AHRQ found that, "Hospitals with low nurse staffing levels tend to have higher rates of poor patient outcomes such as pneumonia, shock, cardiac arrest, and urinary tract infections..."[11]

Acuity-Based Staffing Systems

Among other tools, hospitals rely on acuity-based staffing systems to establish appropriate staffing levels on nursing units. In a given unit, the acuity level of each patient is assessed and assigned a numerical value. The values are inputted into a proprietary staffing software that yields a recommended number of staff to be assigned to care for the unit's patients.

Santa Rosa Memorial Hospital uses the GRASP acuity system, which produces a percentage-based figure indicating whether a unit's planned staffing level can meet the needs of the unit's patients.[12] The number is called a "utilization percentage." In a given unit, for example, a utilization percentage greater than 110% indicates that the unit is understaffed and that additional staff should be assigned to the unit.

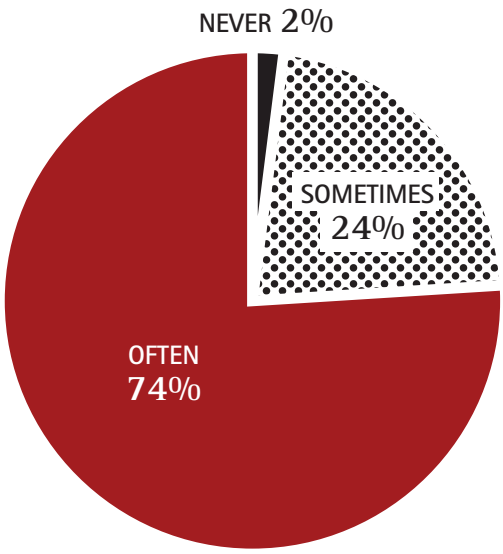
From 2011 through 2015, CDPH repeatedly cited Santa Rosa Memorial Hospital for failing to add staff to units despite the utilization percentage surpassing 110%. In some cases, utilization percentages exceeded 160%—indicating severe understaffing—without the hospital adding sufficient staff to care for patients.[13]

III. SURVEY OF NURSING PERSONNEL

A majority of surveyed NUHW nursing personnel report that staffing levels at the two St. Joseph hospitals are "inadequate" and have "become worse" during the past three years. In December 2015 and January 2016, NUHW conducted a written survey among Certified Nursing Assistants ("Care Partners"), Licensed Vocational Nurses, Unit Secretaries ("Care Partner III") and Telemetry Technicians at the two St. Joseph hospitals in order to document their experiences regarding staffing levels and patient care. More than 95% of the respondents report that "short staffing" has "often" or "some-times" limited their ability to provide quality care to their patients. The survey also posed open-ended questions to capture details from respondents. The following are a mix of statistical and narrative results from the survey. Appendix A contains a copy of the survey instrument.

[*Figure 11*]

"Short staffing has limited your ability to provide quality patient care."



Source: NUHW Survey

65% report that staffing levels are "inadequate" in their unit.

Q *How are the staffing levels in your unit or department?*

A

Category	Percent
Inadequate	65%
Adequate	14%
Good	21%
Excellent	0%

"Patients have been left alone/fallen/not been cleaned because of lack of staff and help. Patients are not being fed properly."

"Not all patients get care like they're supposed to, like getting baths and getting their teeth brushed. Sometimes there's only one Care Partner on the floor who has to do vitals, pass lunch or breakfast, and answer call lights."

92% report that staffing levels have "become worse" during the past three years.

Q *How has the level of staffing in your unit or department changed over the last three years?*

A

Category	Percent
Became Worse	59%
Stayed the Same	33%
Improved	8%

"It takes longer to answer the patient call light. Folks try to get up on their own, some patients have fallen as they try to get up."

98% report that short staffing has "often" or "sometimes" limited their ability to provide quality patient care.

Q *Short staffing has limited your ability to provide quality patient care*

A

Category	Percent
Often	74%
Sometimes	24%
Never	2%

"Patients don't get baths, teeth cleaned. It's very difficult keeping on a two-hour turn, and when you keep to it you can't ambulate the patient and our open-heart patients need to be up for all meals and ambulated four times a day."

Top three reasons for worsening staffing levels: "Patients have higher acuity," "More patients/increased workload," and "Inability to recruit and/or retain staff."

Q *If staffing levels have become worse, why have they become worse? (check all that apply)*

A

Category	Percent
Patients Have Higher Acuity	61%
Increased Workload	54%
More Patients	52%
Inability to Recruit and/or Retain Staff	48%
Coworkers Quit, Retired, Absent, Not Replaced	31%
Broken Equipment	30%
Floating	26%
Change in Job Duties	24%
On the Job Injuries	17%
Change in Policy	15%
Other	15%

"When we are understaffed I don't get to help all my patients with a shower, I fall behind turning patients, I can't get them up for all meals, I can't walk them in the hallways. If we have too many patients that need assistance, they may need to wait until they can be assisted."

Caregivers report increased patient loads, with more than half of the Nursing Assistants reporting they are responsible for 9 to 14 patients per shift.

Q *If applicable, how many patients are you typically responsible for on one shift? How many patients were you typically responsible for one year ago?*

A

Category	Currently (Percent)	One Year Ago (Percent)
Not Applicable	6%	4%
0-2	2%	0%
3-5	13%	13%
6-8	13%	19%
9-11	31%	22%
12-14	26%	17%
15-17	11%	7%
18-20	15%	17%
21-23	17%	17%
24+	11%	9%

"A patient got a bed sore from not being turned due to high acuity, low staffing."

"One day a patient called for bathroom assistance and she had to wait 10 minutes. We and the Care Partners were assisting other patients and the patient pooped in the bed. The patient was so angry, and I don't blame them."

59% report that staffing levels have "become worse" during the past three years.

Q How has the level of staffing in your unit or department changed over the last three years?

A

Category	Percent
Became Worse	59%
Stayed the Same	33%
Improved	8%

"It takes longer to answer the patient call light. Folks try to get up on their own, some patients have fallen as they try to get up."

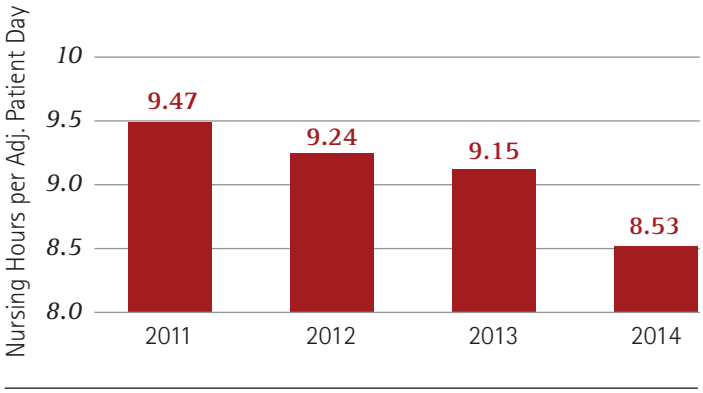
IV. STATE DATA ON STAFFING REDUCTIONS AT ST. JOSEPH

Government data confirm nursing personnel's reports about declining staffing levels. At Santa Rosa Memorial Hospital, nursing staffing levels—including Registered Nurses, Licensed Vocational Nurses (LVNs), and Certified Nursing Assistants (CNAs)—declined by 9.9% from 2011 to 2014, the most recent year for which data is available. Among only LVNs, CNAs, and Orderlies, staffing levels declined by 15.5% at Santa Rosa Memorial Hospital during the same period, according to California's Office of Statewide Health Planning and Development (OSHPD).[14]

The figures were obtained from annual staffing and patient utilization data published by OSHPD. Like other California hospitals, Santa Rosa Memorial annually submits data to the agency detailing the number of patients treated in both inpatient and outpatient settings. It also reports the number of hours of caregiving performed by various classes of hospital employees, such as Registered Nurses, Licensed Vocational Nurses, and Aides and Orderlies. Using these data, NUHW calculated the number of nursing staff hours per patient for each year from 2011 through 2014. In order to adjust for changes in patient acuity levels from year to year, NUHW adjusted the annual figures by the hospital's Case Mix Index, a methodology commonly employed in such analyses of hospital industry data. More details are available in the Methodology section below.

[*Figure 12*]

CMI-Adjusted Productive Hours of Nursing Staff per Adjusted Patient Day
Santa Rosa Memorial Hospital



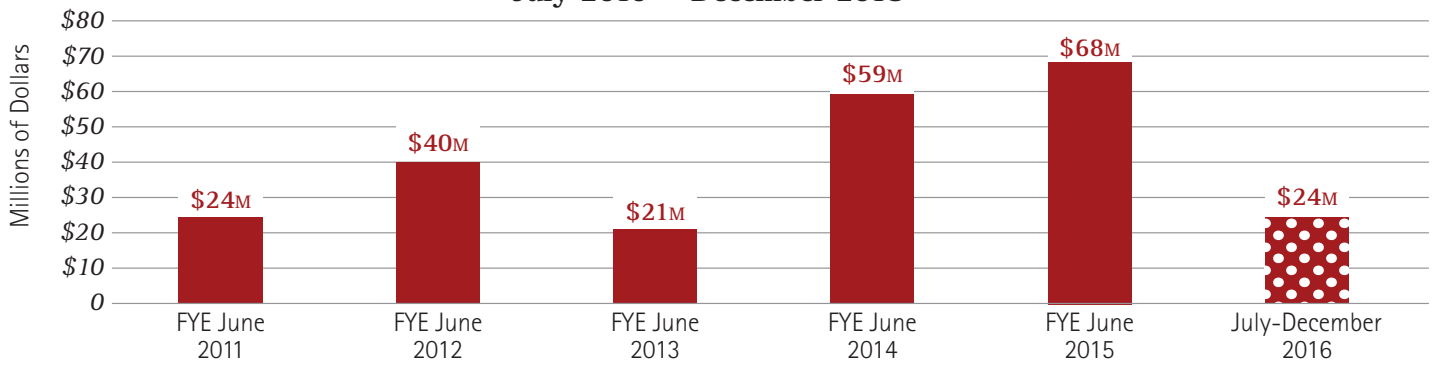
Source: OSHPD

V. DECLINING CARE AND RISING PROFITS

At the same time that St. Joseph has reduced staffing levels and recorded large numbers of patient-care violations, it has also enjoyed rising profits that surpass those of comparable hospitals. Since July of 2010, Santa Rosa Memorial Hospital and Petaluma Valley Hospital have reported $236 million in profits, according to OSHPD.[15]

[*Figure 13*]

Combined Profits of Santa Rosa Memorial and Petaluma Valley Hospitals
July 2010 – December 2015



Source: OSHPD

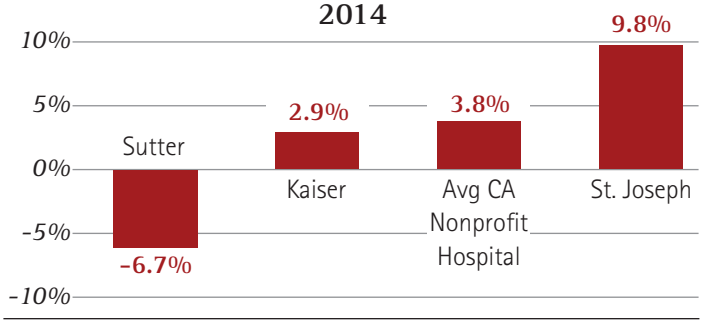
The two hospitals' combined profits have nearly tripled in recent years, from $24 million in 2011 to $68 million in 2015.

The two St. Joseph hospitals report profit margins far greater than those at comparable hospitals. In 2014 (the most recent year for which comparative data is available), the combined operating profit margin of St. Joseph's two hospitals was 9.8%, nearly triple the statewide average for nonprofit hospitals. The St. Joseph hospitals far outpaced Sutter Santa Rosa Regional Hospital and Kaiser Permanente with respect to their operating profit margin.[16]

Meanwhile, St. Joseph pays wages and benefits to many of its caregivers that are far lower than its competitor hospitals, thereby undermining St. Joseph's ability to recruit and retain caregivers. For example, Santa Rosa Memorial Hospital's starting hourly wage rates for Licensed Vocational Nurses and Certified Nursing Assistants are 35% and 33% ***lower***, respectively, than Kaiser's. In addition, Kaiser's health and retirement benefits are far superior to those at Santa Rosa Memorial Hospital, which nonetheless is attempting to reduce benefits for its caregivers.[17]

[*Figure 14*]

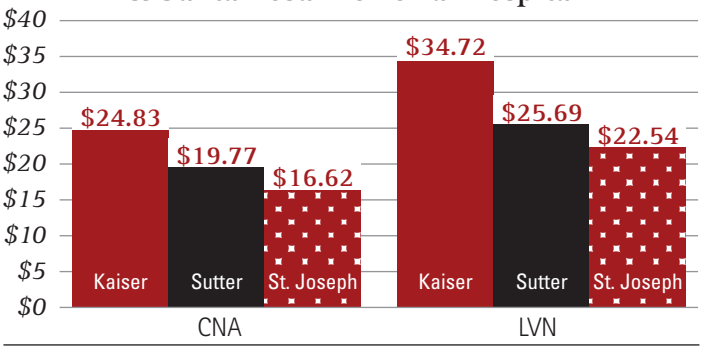
Operating Profit Margin
2014



Source: OSHPD and Kaiser Audited Financial Statements

[*Figure 15*]

Starting Hourly Wage Rates for LVNs & CNAs
At Kaiser Santa Rosa, Sutter Santa Rosa, & Santa Rosa Memorial Hospital



Source: Collective Bargaining Agreements

VI. RECOMMENDATIONS

Given the essential role of caregivers and the well-documented relationship between staffing levels and the quality of patient care, St. Joseph should adopt the following recommendations:

- Establish and systematically implement a staffing system in conjunction with nursing personnel that includes minimum staff-to-patient ratios for non-RN nursing personnel and an effective acuity-based staffing system in order to ensure that frontline caregivers can deliver timely, effective, and quality care to patients.
- Adopt caregivers' proposal to establish patient-care committees composed of equal numbers of frontline caregivers and hospital managers to investigate staffing problems and design workable solutions. The committees would be equipped with a dispute-resolution system including, if necessary, the use of a neutral, third-party expert to resolve disagreements. Such a system has already been adopted by dozens of hospitals across California.
- Improve the pay and benefits of St. Joseph's employees to match those of Kaiser in order to enhance the recruitment and retention of a stable, qualified, and experienced workforce.

METHODOLOGY

The information presented in this report is based on the analysis of survey results, California Department of Public Health (CDPH) records, California's Office of Statewide Health Planning and Development (OSHPD) data, and a review of literature regarding the relationship of hospital staffing levels to patient outcomes.

CDPH Records

Public records from the California Department of Public Health's Licensing & Certification Division (L&C) were gathered by staff at the National Union of Healthcare Workers (NUHW).

CDPH data regarding each hospital's compliance with patient-care laws—including the numbers of complaints, deficiencies, enforcement actions, and facility self-reported incidents—were captured from the CDPH's "Health Facilities Consumer Information System" website, https://hfcis.cdph.ca.gov/search.aspxin, on March 25, 2016. CDPH uploads these data on its website as it completes its surveys and investigations. The CDPH does its best to ensure that the information presented on its website is accurate and timely, according to the CDPH. The records captured by NUHW staff were the most current and accurate data at that time. NUHW captured data for the period of January 1, 2011 through December 31, 2015. The data were imported into Excel and analyzed to obtain multiyear statistics quantifying the numbers of complaints, deficiencies, enforcement actions, and facility self-reported incidents at each hospital. In order to compute per-occupied-bed figures, NUHW calculated each hospital's average number of occupied beds for 2011 through the most currently available quarter in 2015 by utilizing statistics published by OSHPD. Annual figures on each hospital's occupied beds were obtained from the agency's "Hospital Annual Financial Data," which are publicly available on OSHPD's website at http://oshpd.ca.gov/HID/Hospital-Financial.asp. Quarterly occupied bed figures were obtained from OSHPD's "Quarterly Financial Data: Complete Data Set," and are publicly available on the agency's website at: http://www.oshpd.ca.gov/HID/Products/Hospitals/QuatrlyFinanData/CmpleteData/default.asp.

NUHW obtained CDPH "Statement of Deficiencies and Plan of Correction" forms for both Santa Rosa Memorial Hospital and Petaluma Valley Hospital. Paper copies of these documents are stored at the CDPH's Redwood/Santa Rosa district office in Santa Rosa, California. The district office, which stores "Statement of Deficiencies and Plan of Correction" forms for the most recent four years, made forms from November 2011 to November 2015 available for NUHW's review. On November 24 and December 1, 2015, an NUHW analyst visited this CDPH district office, reviewed these records and conducted a content analysis of each deficiency and citation referencing violations of state and federal patient care standards. A single "Statement of Deficiency and Plan of Correction" report can contain multiple deficiencies and citations within it. After reading every "Statement of Deficiency and Plan of Correction" for each hospital within the designated date range, the analyst scanned the forms and coded the deficiencies and citations.

Survey Data

From December 1, 2015 through January 31, 2016, NUHW conducted a survey of NUHW-represented nursing personnel at Santa Rosa Memorial Hospital and Petaluma Valley Hospital, including Licensed Vocational Nurses, Certified Nursing Assistants, Unit Secretaries, and Telemetry Technicians. This 20-question survey was distributed in paper format to NUHW nursing personnel at each facility. Fifty-four completed surveys were collected. Forty-eight completed surveys were collected from nursing personnel at Santa Rosa Memorial Hospital, while six completed surveys were collected from nursing personnel at Petaluma Valley Hospital. Across the two hospitals, completed surveys were obtained from 54 individuals, or approximately 40% of those eligible to participate in the survey. A copy of the survey instrument is attached in Exhibit A.

Survey Analysis Procedure

Of the survey's twenty-one questions, five utilized a Likert Scale form, seven utilized discrete categories, six utilized continuous categories, and three used open-ended questions.

Likert Scale

Five questions—questions one (1), two (2), three (3), four (4), and five (5)—measured respondents' experiences regarding

staffing levels in their respective nursing units/departments. These questions were presented on a three- and four-point scale system, respectively, and were analyzed for (1) level of agreement, (2) value and relevance, and (3) frequency.

Discrete Nominal and Discrete Interval Categories

Six survey questions—questions eight (8), ten (10), twelve (12), fourteen (14), fifteen (15), and sixteen (16)—use discrete nominal categories presented in "Yes/No/Other" format. These questions were analyzed for (1) frequency and (2) value and relevance. One survey question—question 2a—utilized a discrete multiple response variable. Here, respondents answering "Became Worse" to question two (2), were asked to select all the categories presented in question 2a to explain why they felt staffing levels in their respective unit or department had worsened over the past three years. These questions were analyzed for frequency.

Continuous Categories

Six questions—questions six (6), 6a, 6b, thirteen (13), 13a, and 13b—utilized continuous variables. Here, respondents were asked to offer a value for number of patients for whom they are/were responsible on a shift, and the number of times their respective hospital removed them from a shift and replaced them with a registry/agency/traveller nurse. These questions were analyzed for (1) count and (2) frequency.

Open-Ended Questions

Three survey questions—questions seven (7), nine (9), and eleven (11)—are open-ended questions. Respondents answering these questions had no length limitation. Responses to open-ended questions were reviewed individually and coded. Here, based on the responses supplied, codes were defined, labels assigned, and a numerical code was created in order to facilitate data analysis.

OSHPD Data

California's Office of Statewide Health Planning and Development (OSHPD) publishes a variety of financial, utilization, staffing, and other data for California hospitals. NUHW utilized OSHPD data to evaluate the hospitals' financial performance and to analyze changes in staffing levels and patient occupancy rates during the five-year period.

NUHW used both annual and quarterly financial reports, which are available online at the OSHPD website. Quarterly financial data can be found at http://www.oshpd.ca.gov/HID/Products/Hospitals/QuatrlyFinanData/CmpleteData/default.asp and https://siera.oshpd.ca.gov/FinancialDisclosure.aspx, while annual financial data can be found at http://www.oshpd.ca.gov/HID/Hospital-Financial.asp#Complete. OSHPD provides these data in the form of downloadable Excel files. NUHW reviewed OSHPD annual data for the years 2010-2014, with the latter being the most recent year for which such data are available. For 2015, this report relies on OSHPD's quarterly financial reports from its program called SIERA (System for Integrated Electronic Reporting and Auditing), which can be found at https://siera.oshpd.ca.gov/FinancialDisclosure.aspx. Here, the fourth fiscal quarter of 2015 is the last period for which such data are available.

With respect to NUHW's analysis of historical changes in hospital staffing levels, NUHW computed a statistic (CMI-Adjusted Productive Hours of Nursing Unit Personnel per Adjusted Patient Day) by utilizing the following statistics from the same OSHPD annual data noted above: "Adjusted Patient Days" and "Productive Hours" for Licensed Vocational Nurses, Aides and Orderlies, and Registered Nurses. In order to adjust for changing acuity levels among patients during the four-year period, NUHW adjusted each figure by the hospital's "Case Mix Index (CMI)" for the given year. Figures for hospitals' Case Mix Index were obtained from OSHPD at: http://www.oshpd.ca.gov/HID/Products/PatDischargeData/CaseMixIndex/. Hospital industry analysts commonly utilize the Case Mix Index for such purposes.

APPENDIX A

Quality Patient Care at St. Joseph Health System

NUHW
NATIONAL UNION OF HEALTHCARE WORKERS

NUHW is circulating this survey to better understand staffing levels at your hospital. Adequate staffing improves and maintains the quality of care that we are able to provide to our patients. Please fill out this **confidential** and **anonymous** survey. Thank you for your time and participation!

Name: _____ (optional) Job Title: _____

Unit/Department: _____ Shift: _____ Hospital: _____

Years of Service at St. Joseph: _____ Years of Service in the Healthcare Industry: _____

Email: _____ (optional) Home/Cell: _____ (optional)

OVERALL STAFFING

1. How are the staffing levels in your unit or department?

☐ *Excellent* ☐ *Good* ☐ *Adequate* ☐ *Inadequate*

2. How has the level of staffing in your unit or department changed over the last three years?

☐ *Improved* ☐ *Stayed the Same* ☐ *Became Worse*

2a. If staffing levels have become worse, why have they become worse? (circle all that apply)

☐ More Patients
☐ Patients have Higher Acuity
☐ On the Job Injuries
☐ Broken Equipment
☐ Coworkers who Quit/Retire/Call in Sick were not replaced
☐ Change in Job Duties
☐ Change in Policy
☐ Increased Workload
☐ Floating
☐ Inability to Recruit and/or Retain Staff
☐ Other_____

3. Short staffing has limited your ability to provide quality patient care:

☐ *Often* ☐ *Sometimes* ☐ *Never*

4. Short staffing has limited your ability to complete assigned work:

☐ *Often* ☐ *Sometimes* ☐ *Never*

5. Short staffing has limited your ability to take your regularly scheduled breaks or meals:

☐ *Often* ☐ *Sometimes* ☐ *Never*

6. (If applicable) How many patients are you typically responsible for on one shift? _____
   6a. How many were you responsible for 1 year ago? _____
   6b. How many were you responsible for 3 years ago? _____

7. Please provide additional comments here about the effects of understaffing on your patients:
_____
_____
_____

8. Are you aware of specific patients who have been injured due to short staffing?
☐ *Yes* ☐ *No* ☐ *Other:* _____

9. If you do know of specific patients whose care has been compromised due to short staffing, please explain. What happened? Why do you think it happened?
_____
_____
_____

10. Have you been injured on the job due to short staffing and overwork?
☐ *Yes* ☐ *No* ☐ *Other:* _____

11. If you have been injured on the job due to short staffing, please explain your situation:
_____
_____
_____

USE OF REGISTRY/AGENCY/TRAVELER

12. Have you ever had the hospital call you off a shift and had a Registry/Agency/Traveler work in your department during your shift?
☐ *Yes* ☐ *No* ☐ *Other:* _____

13. If so, how many times has that happened? _____
   13a. In the last month? _____ 13b. In the last year? _____

USE OF VOLUNTEERS

14. Does the hospital use volunteers in your department?
☐ *Yes* ☐ *No* ☐ *Other:* _____

15. If so, do volunteers perform patient care work that is typically done by paid staff?
☐ *Yes* ☐ *No* ☐ *Explanation:* _____

16. Have you ever been called off a shift and had a volunteer work in your department during your shift?
☐ *Yes* ☐ *No* ☐ *Other:* _____

APPENDIX B

The following are excerpts from CDPH "Statement of Deficiencies and Plan of Correction" forms documenting patient-care violations committed by Santa Rosa Memorial Hospital. NUHW obtained the forms during an on-site visit to CDPH's Santa Rosa office in November and December of 2015.

(1) CDPH Complaint Investigation CA00384525 at Santa Rosa Memorial Hospital (survey completed on February 26, 2014)

The following reflects the findings of the California Department of Public Health during a COMPLAINT INVESTIGATION...

Based on interview, and record review, the hospital failed to staff the medical/surgical nursing units to meet the acuity needs of the patients resulting in the potential for unmet nursing care needs, and/or staff fatigue and increased potential for omissions and errors...

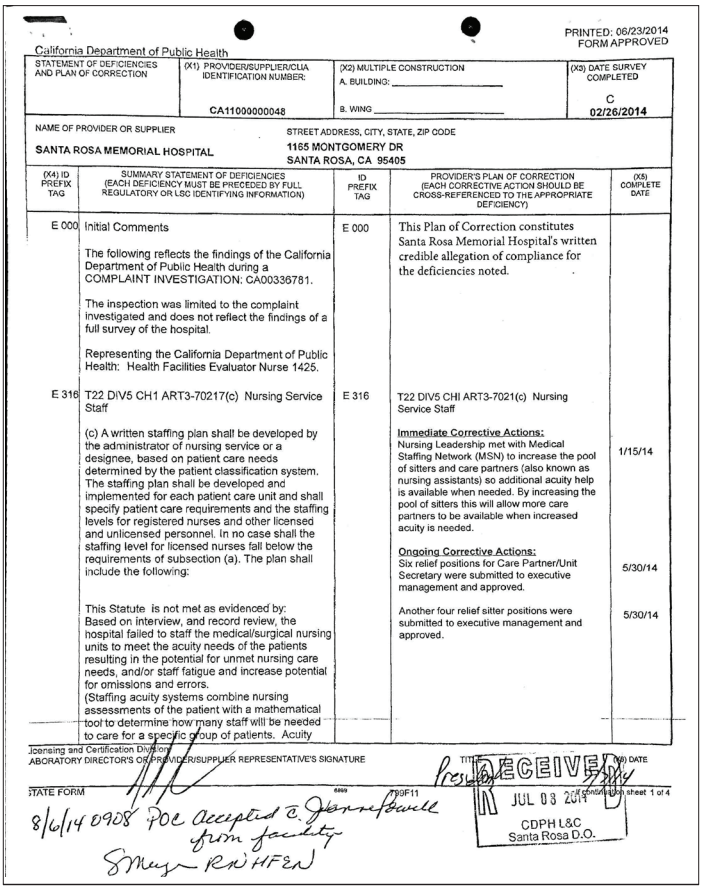
During an interview and document review on 2/25/14... the documents indicated the number of staff required for each specific nursing unit required for the specific census of the shift. Additionally, the documents indicated what the acuity utilization needed for each unit in the form of a "utilization percentage." Administrative Staff B stated additional staff was to be provided for a utilization percentage greater than 105.1%. Administrative Staff B stated the additional staff provided would be a Care Partner (non licensed staff).

On 1/19/14 night shift each of the following nursing units require the addition of staff members based on high acuity:

Unit Acuity
1C 130.7%
3E 160.3%
4N 143.4%
4W 123.0%

3E, 4N and 4W were provided 4 hours (not 8 hours) of additional staff. 1E did not receive additional staffing.

During an interview with Administrative Staff B, on 2/25/14, 2:05 p.m., she stated that increased staffing was indicated and not provided.



PRINTED: 06/23/2014
FORM APPROVED
California Department of Public Health

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER:	(X2) MULTIPLE CONSTRUCTION	(X3) DATE SURVEY COMPLETED
	CA11000000048	A. BUILDING: _____ B. WING _____	C 02/26/2014

NAME OF PROVIDER OR SUPPLIER	STREET ADDRESS, CITY, STATE, ZIP CODE
SANTA ROSA MEMORIAL HOSPITAL	1165 MONTGOMERY DR SANTA ROSA, CA 95405

(X4) ID PREFIX TAG	SUMMARY STATEMENT OF DEFICIENCIES (EACH DEFICIENCY MUST BE PRECEDED BY FULL REGULATORY OR LSC IDENTIFYING INFORMATION)	ID PREFIX TAG	PROVIDER'S PLAN OF CORRECTION (EACH CORRECTIVE ACTION SHOULD BE CROSS-REFERENCED TO THE APPROPRIATE DEFICIENCY)	(X5) COMPLETE DATE
E 000	Initial Comments The following reflects the findings of the California Department of Public Health during a COMPLAINT INVESTIGATION: CA00336781. The inspection was limited to the complaint investigated and does not reflect the findings of a full survey of the hospital. Representing the California Department of Public Health: Health Facilities Evaluator Nurse 1425.	E 000	This Plan of Correction constitutes Santa Rosa Memorial Hospital's written credible allegation of compliance for the deficiencies noted.	
E 316	T22 DIV5 CH1 ART3-70217(c) Nursing Service Staff (c) A written staffing plan shall be developed by the administrator of nursing service or a designee, based on patient care needs determined by the patient classification system. The staffing plan shall be developed and implemented for each patient care unit and shall specify patient care requirements and the staffing levels for registered nurses and other licensed and unlicensed personnel. In no case shall the staffing level for licensed nurses fall below the requirements of subsection (a). The plan shall include the following: This Statute is not met as evidenced by: Based on interview, and record review, the hospital failed to staff the medical/surgical nursing units to meet the acuity needs of the patients resulting in the potential for unmet nursing care needs, and/or staff fatigue and increase potential for omissions and errors. (Staffing acuity systems combine nursing assessments of the patient with a mathematical tool to determine how many staff will be needed to care for a specific group of patients. Acuity	E 316	T22 DIV5 CHI ART3-7021(c) Nursing Service Staff **Immediate Corrective Actions:** Nursing Leadership met with Medical Staffing Network (MSN) to increase the pool of sitters and care partners (also known as nursing assistants) so additional acuity help is available when needed. By increasing the pool of sitters this will allow more care partners to be available when increased acuity is needed. **Ongoing Corrective Actions:** Six relief positions for Care Partner/Unit Secretary were submitted to executive management and approved. Another four relief sitter positions were submitted to executive management and approved.	1/15/14 5/30/14 5/30/14

Licensing and Certification Division
LABORATORY DIRECTOR'S OR PROVIDER/SUPPLIER REPRESENTATIVE'S SIGNATURE — TITLE — (X6) DATE

RECEIVED JUL 03 2014 CDPH L&C Santa Rosa D.O.

STATE FORM 6899 7899F11 If continuation sheet 1 of 4

8/6/14 0908 POC accepted via Jennifer Smith from facility
S Meyer RN HFEN

St. Joseph's patient-care violations are detailed in dozens of reports issued by the California Department of Public Health.

(2) CDPH Abbreviated Standard Survey Santa Rosa Memorial Hospital (survey completed on June 16, 2014)

The following reflects the findings of the California Department of Public Health during an ABBREVIATED STANDARD SURVEY...

Based on interview and record review, the facility failed to follow its policy and procedure to use acuity system for staffing (Acuity system was a staffing system [that] combined nursing assessments of the patient with a mathematical tool to determine how many staff was required to care for a specific group of patients. Acuity numbers above certain levels indicated that more staff was required than the minimum staffing ratio described in the regulation). This failure had the potential for unmet nursing care needs, and/or staff fatigue and increase potential for medical errors.

During an interview on 5/7/14, at 9:45 a.m., in the Step-Down

Unit, regarding staffing, Management Staff A stated that the unit did not use acuity system for staffing. She stated that the unit only used 1:3 ratios (one nurse to three patients) for staffing.

During an interview on 5/7/14, at 10:20 a.m., in the Step-Down Unit, regarding staffing, Management Staff B stated that the acuity system was not well established in the Step-Down Unit. She also stated that the unit did not use acuity system for staffing.

When Administrative Staff A was asked for staffing policy and procedure for the Step-Down Unit, she provided a document titled "Step-Down ICU (Intensive Care Unit) Scope of Service," undated. The document indicated "Department Staffing... The ICU Lead RN (Registered Nurse) identifies assignments based on patient need and RN competency. Assessed needs are determined by acuity system..."

(3) CDPH Complaint Investigation CA00269881 at Santa Rosa Memorial Hospital (survey completed on January 4, 2012)

The following reflects the findings of the California Department of Public Health during a COMPLAINT INVESTIGATION...

Based on staff interview, and document review, the hospital failed to provide adequate staffing in the ED to ensure that intensive care unit (ICU) patients held in the emergency department (ED) were cared for at a ratio of one registered nurse to two patients, and that ED staff could take rest breaks. This failure creates the potential for unmet patient care needs due to unavailability of staff, and/or increased potential for staff errors due to staff fatigue.

Staff B stated that the usual assignment in the ED was 3 to 4 patients per RN and that holding ICU patients in the ED was a "daily occurrence." Staff B stated that there was no additional staffing provided for ICU patients and that sometimes the RN taking care of the ICU patient also had two other patients. When trauma cases came in it was necessary for some nurses to take five patients to allow the trauma nurse to be one on one with their patient. "The lead nurses are supportive but can only do so much."

Hand written on the staffing sheet dated 12/14/11 was, "multiple pts, (no) beds, holding 2 ICU, (no) breaks, last ICU admit to floor @1500 (3 p.m.)." Also written on the staffing sheet were the names of five staff members who did not get a lunch break...

During an interview on 12/19/11 at 12:30 p.m., Staff C stated that when the census was high in the ED, the patient acuity was high, and/or there were ICU patients in the ED, management was notified of the situation and help was requested. But help did not always come. Additionally, patients on gurneys in the hallway were not always listed on the staffing assignment sheet so a nurse may have additional patients in the hall. The problem was the worst on evening and night shifts.

(4) CDPH Complaint Investigation CA00272526 and CA00284221 at Santa Rosa Memorial Hospital (survey completed on December 13, 2011)

The following reflects the findings of the California Department of Public Health during a COMPLAINT INVESTIGATION...

Based on staff interview, and document review, the hospital failed to follow their policy for organizing staff meal and rest breaks on the two telemetry units. This failure resulted in the potential for staff fatigue and increased risk of unmet patient needs and/or increased possibility of staff error. (A telemetry unit is a specialty unit where patients wear heart monitors. It is necessary for someone to observe the monitors at all times to make sure that nursing staffing respond when a patient has a life threatening heart rate or rhythm. A telemetry technician is an unlicensed staff member who has been trained to watch the monitors and to inform the nurses when monitors indicate a patient has a problem)...

Licensed Staff A stated that all the nurses were trained and qualified to watch the monitors and that when there was no technician scheduled a nurse could perform the duties. If there was no nurse available to perform the technician duties then the lead nurse was expected to watch the monitors and perform the unit secretary functions. On days when that happened the staff nurses had no one to relieve them for lunch.

During an interview on 12/13/11 at 11:45 a.m., Licensed Staff B verified that the lead nurse was expected to watch the monitors when there was no available telemetry technician and that on those days the nursing staff, including the lead nurse, was told by managers that they would not be able to take lunch breaks.

When asked how the staff managed to work 12 hours without a break Staff B stated that they just, "do it." Staff B stated that nurses might go into a room for a quick snack and then get right back to their patients...

ENDNOTES

1. California Department of Public Health. "Health Facilities Consumer Information System." Data captured at https://hfcis.cdph.ca.gov/search.aspxin on March 25, 2016.
2. California Department of Public Health, Licensing & Certification Program. "Complaint CA00278407. January 5, 2012.
3. California's Office of Statewide Health Planning and Development (OSHPD). "Audited Annual Financial Data, Pivot Profiles." Sacramento, CA: 2010-2014; and OSHPD. "Quarterly Financial Data: Complete Data Set." Sacramento, CA: 2015.
4. California's Office of Statewide Health Planning and Development (OSHPD). "Audited Annual Financial Data, Pivot Profiles." Sacramento, CA: 2014. Per California law, Kaiser is exempt from reporting hospital-specific data to OSHPD. Consequently, the operating margin for Kaiser displayed in the accompanying bar chart is from Kaiser Foundation Health Plan/Hospitals, Inc.'s audited financial statement for the year ended December 31, 2014.
5. Patti Payne. "Merger Will Make Providence Third-Largest Nonprofit Health System in US." Puget Sound Business Journal. Seattle, WA. March 4, 2016.
6. California Department of Public Health. "Health Facilities Consumer Information System." Data captured at https://hfcis.cdph.ca.gov/search.aspxin on March 25, 2016. See Methodology Section for more details.
7. California Department of Public Health. "Health Facilities Consumer Information System." Data captured at https://hfcis.cdph.ca.gov/search.aspxin on March 25, 2016; California's Office of Statewide Health Planning and Development (OSHPD). "Audited Annual Financial Data, Pivot Profiles." Sacramento, CA; and OSHPD. "Quarterly Financial Data: Complete Data Set." Sacramento, CA: 2015.
8. California Department of Public Health, Licensing & Certification Program. "Complaint CA00278407. January 5, 2012.
9. Institute of Medicine. "Nursing Staff in Hospitals and Nursing Homes: Is it Adequate?" National Academy Press. Washington DC: 1996 (see p. 92); see also, Kane, Robert L., Tatyana Samliyan, Christine Mueller, Sue Duval, Timothy J. Wilt. "Nurse Staffing and Quality of Patient Care." Agency for Healthcare Research and Quality. Rockville, MD: 2007; and, Page, Ann. "Keeping Nursing Safe: Transforming the Work Environment of Nurses." National Academy Press. Washington DC: 2004.
10. In order to improve the quality and delivery of health care services, the Agency for Health Research and Quality has sponsored a series of reports that are based on rigorous, comprehensive reviews of relevant scientific literature. These reports are developed and written by outside research and academic organizations. The goal of these reports is to provide the scientific foundation that public and private organizations can use to develop their own clinical practice guidelines, quality measures, review criteria, and other tools to improve the quality and delivery of health care services. See, Hickman, David H., Susan Severance, Adrianne Feldstein, Leslie Ray, Paul Gorman, Sherrie Schuldheis, William R. Hersh, Kathryn P. Krages, and Mark Helfand. "The Effect of Healthcare Working Conditions on Patient Safety." AHRQ, No. 03-E031. Agency for Healthcare Research and Quality. Rockville, MD: 2003; see also, Needleman, Jack Needleman, Peter Buerhaus, Soeren Mattke, Maureen Stewart, an Katya Zelevinsky. "Nurse-Staffing Levels and the Quality of Care in Hospitals." *New England Journal of Medicine*. 346.22 (2002): pp. 1715-1722; Horn SD, Buerhaus P, Bergstrom N, Smout RJ. "RN Staffing Time and Outcomes of Long-Stay Nursing Home Residents: Pressure Ulcers and Other Adverse Outcomes Are Less Likely as RNs Spend More Time on Direct Patient Care." *American Journal of Nursing* 105.11 (2005): pp. 58-70.
11. Stanton, Mark W. "Hospital Nurse Staffing and Quality of Care." *Research in Action* 14 (March 2004): pp. 1-11. Pub No. 04-0029. Agency for Healthcare Research and Quality. Rockville, MD.

12. Generally speaking, the GRASP system evaluates the categories of tasks that nurses perform in providing patient care and identifies how much nursing time is required for each task. By totaling the time required for all tasks, one quantifies nursing care units required by all patients. For further explanation on the GRASP acuity system, see: Schroeder, Richard E., Arvin M. Rhodes, and Robert E. Sheilds, "Nurse Acuity Systems: CASH vs. GRASP (A Determination of Nurse Staff Requirements)." *Nursing Forum* 21.2 (1984): pp. 72-77.

13. California's Department of Public Health, Licensing & Certification Program. "Complaint CA00384525. February 26, 2014.

14. California's Office of Statewide Health Planning and Development (OSHPD). "Audited Annual Financial Data, Pivot Profiles." Sacramento, CA: 2011-2014; OSHPD. Case Mix Index. Excel file captured at http://www.oshpd.ca.gov/HID/Products/PatDischargeData/CaseMixIndex/ in March 2016.

15. California's Office of Statewide Health Planning and Development (OSHPD). "Audited Annual Financial Data, Pivot Profiles." Sacramento, CA: 2010-2014; OSHPD. "Quarterly Financial Data: Complete Data Set." Sacramento, CA: 2015; OSHPD. "Financial Disclosure Reports: Hospital Quarterly". System for Integrated Electronic Reporting and Auditing (SIERA). Sacramento, CA: 2015.

16. California's Office of Statewide Health Planning and Development (OSHPD). "Audited Annual Financial Data, Pivot Profiles." Sacramento, CA: 2014. Per California law, Kaiser is exempt from reporting hospital-specific data to OSHPD. Consequently, the operating margin for Kaiser that is displayed in the accompanying bar chart is from Kaiser Foundation Health Plan/Hospitals, Inc.'s audited financial statement for the year ended December 31, 2014.

17. Collective Bargaining Agreement between Santa Rosa Memorial Hospital and NUHW (pay scale effective May 2014); Collective Bargaining Agreement between Kaiser Permanente and SEIU-UHW (pay scale effective October 2015); and Collective Bargaining Agreement between Sutter Santa Rosa Regional Hospital and SEIU-UHW (pay scale effective January 2015).

National Union of Healthcare Workers

5801 Christie Ave., Suite 525

Emeryville, CA 94608

NUHW.org