

## Executive Summary

Percutaneous coronary intervention (PCI) is a major coronary revascularization strategy and is one of the most common hospital-based interventional procedures performed in the United States. Coronary artery bypass graft (CABG) and PCI are both interventions for the treatment of coronary artery disease. PCI procedures are less invasive than CABG and may result in quicker hospital discharge and return to daily activities.

California Health and Safety Code § 1256.01 authorizes the California Department of Public Health (CDPH) to certify hospitals that do not have on-site cardiac surgery and are licensed to provide cardiac catheterizations, to perform elective PCIs. These hospitals must meet specific requirements to perform elective PCIs for eligible patients. In addition, the Office of Statewide Health Planning and Development (OSHDP) is required to use data collected by the American College of Cardiology's National Cardiovascular Data Registry (NCDR) from certified hospitals to create annual reports for those hospitals.<sup>1</sup>

The *California Elective Percutaneous Coronary Intervention Program Report, 2018* includes results for 13 certified hospitals and is the third outcomes report on hospitals certified to perform PCIs without on-site cardiac surgery. The 2017 report included information on twelve certified hospitals.

In April 2018, NCDR implemented a major upgrade to their PCI data registry. The changes are such that many of the data elements, including those used as risk factors, are not compatible with the previous version. Data could therefore not be modeled across the full year of 2018. Accordingly, only results from April 2018 - December 2018 are included in this report and all subsequent references to the year 2018 refer to this time range.

The two hospital level outcome measures presented are risk-adjusted, which is a statistical technique that enables fair comparison of hospitals even though some hospitals treat sicker patients.

Risk-adjusted rates for the certified hospitals are compared to overall observed statewide rates derived from all 131 hospitals that performed PCIs in 2018 (13 certified hospitals and 118 non-program hospitals). Results are reported for elective and all PCIs which includes elective and primary PCIs. However, the report only identifies hospitals certified to perform PCIs without on-site cardiac surgery; it does not include information on hospitals with on-site cardiac surgery. Please note that individual hospitals from the two groups cannot be directly compared.

---

<sup>1</sup> California Health and Safety Code Section 1256.01(f)

The 13 certified hospitals in this report include:

- Clovis Community Medical Center<sup>2</sup>
- Emanuel Medical Center (Turlock)
- Highland Hospital (Oakland)
- Kaiser Foundation Hospital - Orange County - Irvine
- Kaiser Foundation Hospital - Roseville
- Kaiser Foundation Hospital - San Jose
- Kaiser Foundation Hospital - South Sacramento
- Kaiser Foundation Hospital - Walnut Creek<sup>3</sup>
- Kaiser Foundation Hospital & Rehab Center - Vallejo
- Los Alamitos Medical Center
- St. Rose Hospital (Hayward)
- Sutter Delta Medical Center (Antioch)
- Sutter Roseville Medical Center

The report includes two hospital-level risk-adjusted outcome measures:

*Mortality* includes all deaths that occurred at the facility where the PCI was performed regardless of length of stay or patient status (i.e., inpatient or outpatient).

*Post-PCI Stroke* includes all ischemic or hemorrhagic strokes that occurred after the PCI and did not resolve in 24 hours.

Risk-adjusted rates for post-PCI emergency coronary artery bypass graft (CABG) surgery were not calculated as data needed to derive the statewide rate for comparison were not available in the NCDR data registry. Information is provided on all PCI patients transferred from certified hospitals to other acute care hospitals for emergency or salvage CABG surgery.

Information in this report is made available to publicly inform about outcomes at elective PCI certified hospitals. This report will also assist in monitoring the safety and feasibility of PCIs performed at hospitals without on-site cardiac surgery in California. In addition, the information in this report will provide hospitals performance measures they can use in their review of internal processes of care and quality improvement activities, help payers and employers spend their healthcare dollars more wisely, and help consumers make more informed healthcare decisions.

---

<sup>2</sup> Clovis Community Medical Center data does not include PCIs for July 1, 2018 - September 30, 2018

<sup>3</sup> Kaiser Foundation Hospital - Walnut Creek data does not include PCIs for July 1, 2018 - December 31, 2018

## **Key Findings**

### ***Mortality Findings***

- The elective PCI mortality rate for certified hospitals was 0.13 percent compared to a statewide elective PCI mortality rate of 0.30 percent. There was one death for the 13 certified hospitals in 2018 compared to four deaths for the 12 certified hospitals in 2017.
- The all PCI mortality rate for certified hospitals was 2.09 percent compared to a statewide rate of 2.33 percent. There were 63 deaths for the 13 certified hospitals in 2018 compared to 89 deaths for the 12 certified hospitals in 2017.

### ***Post-PCI Stroke Findings***

- The elective PCI stroke rate for certified hospitals was 0.00 percent compared to a statewide rate of 0.11 percent. There were zero strokes for the certified hospitals in 2018 and 2017.
- The all PCI stroke rate for certified hospitals was 0.33 percent compared to a statewide rate of 0.36 percent. There were 10 strokes for the 13 certified hospitals in 2018 compared to 11 strokes for the 12 certified hospitals in 2017.

### ***Post-PCI Emergency CABG Surgery Findings***

- There were no emergency CABGs for the 13 certified hospitals in 2018. There was one emergency CABG for the 12 certified hospitals in 2017.
- There were six emergency CABGs for the 13 certified hospitals in 2018. There were also six emergency CABGs for the 12 certified hospitals in 2017.

Additional information about these outcome measures can be found in the OSHPD Technical Note.