

**California CABG Outcomes Reporting Program (CCORP)
Clinical Advisory Panel
Minutes of March 4, 2014**

The meeting was held at The Office of Statewide Health Planning and Development, 400 R Street, Sacramento, CA 95811

Clinical Advisory Panel Members present:

Ralph Brindis, M.D., FACC	James MacMillan, M.D.
Gordon L. Fung, M.D., MPH, Ph.D.	Rita Redberg, M.D.
Hon S. Lee, M.D.	Richard Shemin, M.D.
	J. Nilas Young, M.D.

Clinical Advisory Panel Members absent:

Cheryl Damberg, Ph.D.	Andrew Bindman, M.D.
-----------------------	----------------------

OSHPD Staff and Consultants present:

Robert David, OSHPD Director	Ron Spingarn, Deputy Director, OSHPD HID
Joseph Parker, Ph.D., Healthcare	Beth Herse, Senior Staff Counsel
Holly Hoegh, Ph.D., HOC	Ashley De Franco, OSHPD Legal Staff
Zhongmin Li, Ph.D., UCD Contractor	Eric Reslock, Assistant Director, OSHPD Office of Legislative and Public Affairs
Robert Springborn, Ph.D., HOC	Merry Holliday-Hanson, Ph.D., HOC
Dominique Ritley, MPH, UCD Contractor	Denise O'Neill, CCORP Data Manager, HOC
Geeta Mahendra, M.A., UCD Contractor	Sarah Park, MPH, HOC
Beate Danielsen, Ph.D., UCD Contractor	TaNisha Roby, MPH, HOC
Niya Fong, HOC	Jason Brandes, HOC
Limin Wang, HOC	Alysha Lal, HOC
Anthony Steimle, M.D., Consultant	

Others present:

William Bommer, M.D.	
----------------------	--

1. Call to Order Introductions

Ralph Brindis, M.D., Chairperson, called the meeting to order at 9:32 a.m. A quorum was present to conduct business.

2. Welcome and Introductions

People in attendance introduced themselves.

3. Approval of Minutes of October 15, 2013 Meeting

Minor changes were requested to the October 15, 2013 minutes. Dr. Shemin noted a reference to “vascular” surgeries should have referred to “valvular” surgeries. He also asked that the word surgeries to be replaced with operations or procedures. Pending those changes, the minutes were approved.

Action: Minutes approved with changes.

4. Director’s Report – Robert David, Director, Office of Statewide Health Planning and Development

Director David reported a significant increase in the interest of OSHPD data, its quality and transparency, likely due to the Affordable Care Act (ACA). OSHPD is recognized as a leader in collecting and providing data, and the director reported that numerous bills related to OSHPD have been introduced in the legislature. It is likely that some discussions and legislation will involve OSHPD.

The Governor’s budget was unveiled in January. Three OSHPD proposals, including one for approximately \$3 million dollars to expand the Song-Brown Program, which seeks to increase primary care capacity for underserved communities, are in the budget.

5. Office of Legislative and Public Affairs Report – Eric Reslock, OSHPD

Mr. Reslock provided a status update of the current legislative calendar. He noted that one emerging topic is healthcare data and pointed out AB 1558 (Hernández) which would authorize the University of California to house a voluntary all-payer-claims database. Ensuing CAP discussion related to OSHPD as the natural body to house such data.

Mr. Reslock also discussed SB 830 (Galgiani) which would require OSHPD to publish risk-adjusted outcome reports for percutaneous coronary interventions (PCI), including use of angioplasty or stents, and transcatheter valve procedures. The current bill language has little impact on OSHPD because OSHPD’s current reports already meet the bill requirements but Senator Galgiani’s office indicated that the bill will be amended.

Chairperson Brindis invited Dr. William Bommer, Vice-President of the California Chapter of the American College of Cardiology (ACC) and also the Northern California ACC Governor, to talk about SB 830. The Chair also reminded the Panel that it is not under their purview to take a position on this bill.

Dr. Bommer shared that he worked with Senator Galgiani's office and the California Chapter of the ACC, the Society of Cardiac Angiography and Interventions, and the California Society of Thoracic Surgeons on developing this bill. The first step was to develop initial language that was acceptable to each professional association. Additional parties such as consumer groups and the California Hospital Association are also contributing to bill language revisions. The interested parties continue to fine-tune language and Dr. Bommer indicated that new draft language would expand the responsibilities of OSHPD. The Panel discussed the bill and shared their suggestions with Dr. Bommer. OSHPD agreed to review the composition of the clinical panels and the appeals processes of other states.

6. Program Director's Report – Holly Hoegh, Ph.D., CCORP

Dr. Hoegh acknowledged the work of Ed Fonner, Executive Director of the California Society of Thoracic Surgeons, who recently passed away. She outlined the four statutory duties of the Panel, three of which would be conducted at this meeting: review and approve changes to CCORP data elements, approve the risk adjusted models, and consult on report materials.

Dr. Hoegh presented slides that showed the volume and mortality rates for isolated CABG, Non-Isolated CABG, PCI and Valve procedures over time. She highlighted the high volume for PCIs in comparison to CABG procedures.

Dr. Hoegh presented crude and age-adjusted per capita utilization rates for CABG and PCI for both the U.S. and California. U.S. rates were higher for both procedures than California rates, but age-adjusting the rates narrowed the gap. In California, the highest rates appear to be in the central valleys and southern part of the state. OSHPD agreed to research what percent of CABGs are performed on out-of-state or country residents.

Dr. Bommer noted that the volume of PCI, approximately 42,000, is actually missing about 8,000 ambulatory PCIs. Dr. Brindis noted that this was another good reason for having access to clinical data to ensure an accurate PCI denominator.

The 2011 hospital level report was released to the public on February 19, 2014. For the first time, the report was released via Twitter.

The Panel discussed the timeliness of the public reports. Staff shared that the process would improve with the implementation of the online data collection system and quicker access to the State death file from the Department of Public Health. Dr. Hoegh discussed the timeliness of other states' public reports compared to California and noted that the annual audit adds time to the process. Dr. Shemin asked about whether the move to electronic medical records (EMRs) has made the CCORP audits easier. Dr. Hoegh noted some of the current challenges related to using EMRs, but expressed optimism that the audits would get easier.

Finally there was a discussion of how the program deals with out of state and international deaths. Staff noted that the State death file does not have enough information to link to CCORP data to determine deaths that occur outside of California, so some deaths may be missing, but it is likely a small number.

Dr. Hoegh discussed the plan for the next Panel meeting that will take place in July and will include the Panel's review of surgeon appeals for the 2011-2012 preliminary results.

7. Chair's Report - Ralph Brindis, M.D.

Dr. Brindis acknowledged Dr. Bommer's report on SB 830 and, in the interest of time, moved to the next agenda item.

8. Recommendations regarding changes to CCORP clinical data elements submitted by hospitals – Holly Hoegh, Ph.D., CCORP

Dr. Hoegh requested the Panel discuss and approve changes to the CCORP clinical data elements submitted by hospitals effective with July 1, 2014 discharges. The CCORP data elements are closely aligned with the Society for Thoracic Surgery (STS) data elements per statute and reduce the administrative reporting burden for hospitals. She noted that the CAP initially approved data elements in October 2013 based on draft STS revisions (and best available information at the time.) Today's proposed data elements are based on the final STS data elements approved by the Society in Spring 2014.

The Panel discussed the proposed changes, which included many minor wording changes. Dr. Shemin asked to revisit the data element "*reason for emergent procedures*", which the Panel decided to drop at the October meeting. Dr. Hoegh noted that in the final STS revisions this element has been replaced with "*reason for urgent or emergent reason*". She noted that in the past, CCORP could not use this data element because the reasons did not

correspond well with available clinical data. The Panel further discussed the advantages of retaining this data element. Dr. Steimle said much of this information is captured elsewhere and this is not used as a risk-adjustor, but it might be useful for the audit team. Dr. Shemin added that it speaks to appropriateness especially if CCORP moves to reporting on valvular procedures. It was noted that approximately 20 hospitals that do not report to STS would have an additional burden in reporting this data element.

Action: The CAP approved all proposed wording changes, adds, and drops to CCORP data elements, effective July 1, 2014, and chose to add the STS data element URGENT OR EMERGENT REASON.

9. Definition of Isolated CABG and Isolated Valve + CABG – Holly Hoegh, Ph.D., CCORP

Dr. Hoegh requested the CAP review the standing definition of isolated CABG. Dr. Steimle, consultant to OSHPD, continually reviews this definition for appropriate inclusions and exclusions and provides interpretation when complicated cases arise. Now that public reporting of isolated valve + CABG is being considered, it is important to review the definition of isolated CABG and clarify a definition for isolated valve + CABG.

Dr. Steimle asked for the surgeons' opinion on the distinction between plication of the left ventricle and resection of an aneurism. Dr. Parker noted that New York excludes patients with resection and plication from their isolated CABG definition but not their isolated valve + CABG definition.

Dr. Young felt that there was no added risk for plication, but there would be risk for resection and recommended not excluding plication from the definitions.

Dr. Steimle asked for feedback on MAZE procedures which are all currently included in the definition of isolated CABG. The Panel discussed in detail the levels of risk associated with the different types of MAZE procedures. It was noted that New York excludes surgical MAZE in both types of operations. The Panel agreed that cut and sew MAZEs should be evaluated for possible exclusion from the definitions or included as a risk factor in the model. The Panel recommended that OSHPD continue to include the procedures for now, but analyze a) cut and sew MAZE III; b) epicardial MAZES (left atrium not open); and c) include all others and determine whether risk-adjustment affects outcomes. Additionally, the CAP requested an assessment of the burden of collecting additional STS data elements to hospitals.

Dr. Steimle recommended that infundibulectomy and myomectomy with hypertrophic cardiomyopathy be excluded from the isolated CABG definition. The Panel requested that the definition of isolated valve + CABG be included as a future agenda item.

Action: The Panel approved removing plication from the list of exclusions and placing it on the list of inclusions in the definition of Isolated Valve + CABG and Isolated CABG effective July 1, 2014.

Action: The Panel approved infundibulectomy and myomectomy with hypertrophic cardiomyopathy as exclusions to the isolated Valve + CABG definition, effective July 1, 2014.

10. Results of the 2012 CCORP Audit - Beate Danielsen, Ph.D., University of California, Davis, OSHPD contractor

Dr. Danielsen presented results for the 2012 CCORP data audit, which is CCORP's final step to ensure data quality. The audit goals are to determine the quality of the coding of risk factors and outcomes reported to CCORP, to verify data quality in hospitals that have a poor response to CCORP's earlier steps to improve data integrity (i.e., hospital reviews of data discrepancy reports, and risk factor coding reports).

For 2012 data, CCORP audited 2,500 cases at 37 hospitals and of those 18 hospitals were potential "better than" or "worse than" outliers or near outliers. This cohort of hospitals also included 14 surgeons who were "better than" or "worse than" outliers or near outliers. CCORP also included three hospitals that had never been audited and two hospitals with potential coding issues. The cases that were audited included approximately 30 percent of all isolated and 15 percent of non-isolated CABG operations;). A minimum of 60 cases were audited at each facility and a maximum of 140. All cases with outcomes of death or post-operative stroke were audited. The remaining cases were selected proportional to the risk of death or stroke, so there is a bias towards selecting more severely ill patients. A total of 2,500 cases were audited.

Next, Dr. Danielsen noted problematic risk factors and complications. These included chronic lung disease, immunocompromised, liver disease, 3rd degree heart block, resuscitation, pre-op medications, and emergent status. Mitral insufficiency performed well, but had been a problem risk factor in the past. The Panel discussed which data elements are included in the risk models.

Dr. Danielsen presented the effect of the audit on performance status. For operative mortality, there were no “better-than-expected” outliers, and two pre-audit “worse-than-expected” outliers. One of two hospitals was confirmed as “worse-than-expected.” The other hospital changed from worse to no different. For post-op stroke one hospital changed from no different to worse, and one changed from worse to no different. In summary, Dr. Danielsen noted that overall coding quality continues to improve.

Dr. Brindis noted previous Panel discussions regarding the timeliness and cost of the public reports and whether CCORP could discontinue the audits or conduct them less frequently. Dr. Hoegh commented on how valuable the audit has been to hospitals and how they have used the results to improve their processes.

11. Mortality as a risk-adjusted outcome for isolated CABG procedures – Zhongmin Li, Ph.D., University of California, Davis, OSHPD contractor

Dr. Li presented the statistics for calculating risk-adjusted operative mortality. He reviewed the methods for developing the risk model including application of bivariate analysis and using administrative data from 2012 to develop a parsimonious model. The refined model included 25 risk factors, of which 15 were significant. The c-statistic was 0.806.

Action: The Clinical Advisory Panel approved the isolated CABG mortality risk-adjustment model for the 2012 report.

12. Post-operative inpatient stroke as a risk-adjusted outcome for isolated CABG surgery– Zhongmin Li, Ph.D., University of California, Davis, OSHPD contractor

Dr. Li presented the risk-adjustment model for inpatient post-operative stroke. The model is based on 2011-2012 combined data and included 22 risk factors, of which 8 were significant. The model is similar to last year, except for the addition of left main disease. Two years of data are combined to achieve greater statistical stability; the model performed well. The c-statistic of 0.718 is higher than last year. OSHPD agreed to conduct background research on the STS data elements that make up atherosclerosis of the ascending aorta and present information at a future Panel meeting.

Action: The Clinical Advisory Panel approved the post-op inpatient stroke risk-adjustment model for the 2012 report.

13. Hospital readmission as a risk-adjusted outcome for isolated CABG surgery – Zhongmin Li, Ph.D., University of California, Davis, OSHPD contractor

Dr. Li presented the risk-adjustment model for 30-day readmission. The model included 22 risk factors, of which 8 were significant. The c-statistic was 0.653. The model included two new risk factors: diabetes control and MELD.

Action: The Clinical Advisory Panel approved the readmission risk-adjustment model for the 2012 report.

14. Preliminary methods and risk-adjusted mortality model of Isolated CABG + Valve Outcomes – Zhongmin Li, Ph.D., University of California, Davis, OSHPD contractor

Dr. Li presented basic statistics to show the volume and mortality trends for valvular procedures performed between 1997 through 2012. He incorporated previous Panel recommendations into the model including: use of multiple years of data, selection of a homogenous cohort for risk adjustment and public reporting, and exclusion of cases with pulmonic or tricuspid valve procedures. The model included 25 risk factors, of which 13 were significant. The c-statistic was 0.755, which is comparable to New York. The model also included 4 interaction terms. The Panel discussed the homogenous cohort created by including only aortic valve replacements.

Dr. Parker noted concerns about the quality of the 2011 data. He explained that OSHPD had time to work with hospitals regarding submissions of CABG + valve cases for 2012, but that it was too late to do this for 2011. He shared that there could be up to 150 cases missing from the 2011 data. The panel expressed concern about the completeness of the 2011 data and recommended revisiting the model next year with 2012-2013 data..

Action: The Clinical Advisory Panel DID NOT approve the release of a risk-adjusted mortality public report for Isolated Valve plus CABG using 2011-2012 data.

15. Upcoming CCORP hospital and surgeon level report – Holly Hoegh, Ph.D., CCORP

Dr. Hoegh stated that statute requires the Panel to advise OSHPD-CCORP on the contents of the public report. The next report is hospital- and surgeon-level report. The proposed contents include:

2012 risk-adjusted isolated CABG mortality rates for hospitals

2011-2012 risk-adjusted isolated CABG mortality rates for surgeons
2011-2012 risk-adjusted isolated CABG post-operative inpatient stroke rates for hospitals
2012 risk-adjusted isolated CABG readmission rates for hospitals
2012 internal mammary artery usage rates for hospitals

Action: The Clinical Advisory Panel approved the contents of the 2012 CCORP hospital and surgeon CABG outcomes report.

16. Presentation of Price Transparency Initiatives and CABG Surgery Price-Related Information - Joseph Parker, PhD

Dr. Brindis noted that this presentation will be moved to another meeting

17. Preliminary analysis of per capita CABG and PCI volume - Holly Hoegh, PhD

This topic was included in Dr. Hoegh's program update

18. Discussion of potential agenda topics for next meeting - Joseph Parker, PhD

Dr. Lee requested a future agenda item related to using data to improve quality of life.

19. Public Comment

There was no public comment.

Dr. Brindis adjourned the meeting at 2:58 p.m.