

**California CABG Outcomes Reporting Program (CCORP)
Clinical Advisory Panel
Minutes of March 19, 2013**

The meeting was held at the Sierra Health Foundation, 1321 Garden Hwy., Sacramento

Clinical Advisory Panel Members present:

James MacMillan, M.D.	Cheryl Damberg, Ph.D.
Andrew Bindman, M.D.	Fredrick Grover, M.D.
Keith Flachsbart, M.D.	Timothy Denton, M.D.
Ralph Brindis, M.D.	

Clinical Advisory Panel Members absent:

Robert Brook, M.D.	Coyness Ennix, Jr., M.D.
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OSHPD Staff and Consultants present:

Joseph Parker, Ph.D., Healthcare Outcomes Center (HOC) Manager	Beth Herse, Senior Staff Counsel
Holly Hoegh, Ph.D., HOC	Robert Springborn, Ph.D., HOC
Robert David, OSHPD Director	Zhongmin Li, Ph.D., UCD Contractor
Jason Brandes, HOC	Anthony Steimle, M.D., Consultant
Denise O'Neill, HOC	Mary Moseley, MA, HOC
Dominique, Ritley, MPH, UCD Contractor	Beate Danielsen, Ph.D., UCD Contractor
Geeta Mahendra, MA, UCD Contractor	

Others present:

Joseph Carey, M.D., CASTS	Eddie Fonner, CASTS
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1. Call to Order and Introductions

Ralph Brindis, M.D., Acting Chair, called the meeting to order at 9:40 a.m. A quorum was present to conduct business.

2. Introductions

People in attendance introduced themselves.

3. Approval of Minutes of August 14, 2012

The minutes were approved unanimously.

4. Director's Report – Robert David

Robert David reported that the Governor's budget is being vetted by the legislature. California now has revenue increases from the tax initiative that passed in November and the upturn in the state's economy, so this year's budget does not include staff furloughs and salary reductions. The department should return to full staffing and more work accomplished beginning July 1.

The Affordable Care Act has brought increased interest and funding to the department's workforce programs. The legislative deadline for new bills is past, and divisions within OSHPD are analyzing many bills.

The Director gave background information on the nomination process for the CAP. Two groups provided nominations and OSHPD is working closely with a third group. Once nominations are complete, he shall appoint the nine members and select a Chair. Some existing CAP members will continue to serve and provide much needed knowledge and history transfer to new members.

The Director called attention to the letter in the meeting packet which was sent to the CABG surgery teams at hospitals thanking them for their work. The letter was requested at the last CAP meeting and signed by Chair Robert Brook, M.D. and the Director.

The Director then awarded resolutions to each of the current CAP members who have all served at least 10 years on the panel. He thanked each member for taking a new program and overseeing its growth into highly respected yearly public outcomes reports.

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

Dr. Hoegh identified statutory duties of the panel to be exercised at this meeting: review and approve risk adjustment model and consultation on public report contents.

She presented a slide showing volume of isolated CABG, Non-Isolated CABG, PCI and Valve Surgery over time. Isolated CABG volume is half the amount of 10 years ago but appears to be leveling. A slide of in-hospital Mortality Rates for the same procedures showed mortality for PCI going up and CABG surgeries declining. Other states reporting isolated CABG volume and in-patient mortality have also shown decreases.

The 2009-2010 public report should be released in April. Medical chart re-abstraction for 2011 data has been completed and analyzed. The hospital level report will be discussed at this meeting with approval of risk models and recommendations for report layout and content. Year 2012 data collection has begun. For 2014, we expect changes in some definitions due to STS data element revisions.

6. Results of the 2011 CCORP Audit – Beate Danielsen, Ph.D., UCD

This year's audit was particularly challenging because CCORP data changed mid-year along with the mid-year change in STS data elements. The focus was on the second half of the year, so data elements new or changed for the second half were not audited for the first half.

The goals of the data audit were to determine if over or under-coding of risk factors led to hospital outlier status; to verify data quality in hospitals with poor response to earlier data discrepancy and risk factor coding reports from CCORP; and to assess the quality of new data elements collected starting from July 2011.

CCORP processed 16,292 CABG's for 122 hospitals in 2011, which included 12,411 isolated and 3,881 non-isolated. Eighteen hospitals were selected for audit by mortality/stroke outlier or near outlier status, coding problems, and hospitals never audited. For each of the 18 hospitals, primary cases were selected proportional to isolated CABG volume for a minimum of 60 and maximum of 140 isolated CABG cases and up to 10% of non-isolated CABG. All in-hospital deaths as well as post-operative stroke were selected with priority given to surgeries performed in the second half of 2011. Patients were also selected proportionately to predicted death or post-op stroke risk.

Dr. Danielsen summarized the audit findings including missing values. The new variables of total albumin and bilirubin as well as PA systolic pressure were missing for a very large percentage of cases. Dr. Parker noted that not getting this information from nearly everyone means these data elements cannot be used as risk adjustment factors in the model.

Dr. Danielsen explained the metrics used for comparing audited and CCORP data, key audit findings for coding of risk factors, coding of new variables, and coding of complications and process measures. Pre-audit data showed no "better" status for hospitals and post audit data showed the same. Pre-audit data showed two "worse" hospitals and post audit reduced that number to one. Left Main Disease and diabetes control were captured well but the audit showed low sensitivity for liver disease

and Coumadin/warfarin use. She suggested INR in combination with liver disease and diabetes control might be used as possible risk factors in future modeling.

Dr. Danielsen believes stroke may be under-reported. There is considerable agreement between administrative data and the CCORP data. Inaccuracies are due to miscoded hospital data and occasional auditor differences.

7. Mortality as a risk-adjusted outcome for isolated CABG surgery – Zhongmin Li, Ph.D., UCD

Dr. Li presented basic statistics to show non-adjusted, observed volume, and outcomes for number of isolated CABG cases, in-hospital mortality, operative mortality, 30-day readmission, and post-op stroke. He reviewed the methods for developing risk models including application of bivariate analysis and using available data to develop a parsimonious model. Finally, he applied the refined model to 2011 data with missing values imputed. Handouts included tables of risk factors for 2011 and 2010-11, including the risk models for inpatient mortality—2011, 30-day readmission—2011, and post-operative stroke—2010-2011. Finally, he presented a graph showing the mortality model performance for 2011.

Action: The Clinical Advisory Panel approved the mortality model.

8. Post-operative inpatient stroke as a risk-adjusted outcome for isolated CABG – Zhongmin Li, Ph.D., UCD

The model is identical to last year's report. Two years are combined for greater statistical significance, and the model performed well. Dr. Li presented a graph of how the stroke model performed using 18 risk factors.

Action: The Clinical Advisory Panel approved the post-op inpatient stroke model.

9. Hospital readmission as a risk-adjusted outcome for isolated CABG surgery – Zhongmin Li, Ph.D., UCD

The readmission model performed well. Dr. Li presented a graph of how the readmission model performed using 16 risk factors.

Action: The Clinical Advisory Panel approved the readmission model.

10. Upcoming CCORP hospital level report – Holly Hoegh, Ph.D.

Dr. Hoegh stated that part of statute requires the panel to advise OSHPD on the contents of the public report. The next report is hospital-only. We propose including 2011 risk-adjusted isolated

CABG readmission and mortality rates for hospitals, 2011 internal mammary artery usage rates for hospitals, and 2010-2011 risk-adjusted isolated CABG post-operative stroke rates for hospitals.

Action: The Clinical Advisory Panel approved the upcoming CCORP hospital report contents

11. Definition of Isolated CABG

Not covered.

12. Discussion of potential agenda topics for next meeting – Joseph Parker, Ph.D.

Dr. Parker thanked Anthony Steimle, M.D. for all his help over the years providing consultation on CCORP data elements.

Dr. Parker stated that he would review topics previously discussed by the CAP, which may need to be revisited. Dr. Brindis would then lead “Blue Sky” brainstorming about future directions for CCORP.

The first topic was improvement of report timeliness. He brought forward the idea of auditing every other year instead of annually. For the most part, the panelists were in favor of keeping the annual audit. He also suggested a slimmed down web-based report, which was well received by the panel as a means to release the report earlier.

The second topic was reporting exclusions and inclusions. The other CABG reporting states establish a volume threshold for reporting surgeon and/or hospital outcomes. The group didn’t reach consensus but leaned toward maintaining the current risk-adjustment strategy. The panel also discussed excluding patients who refuse blood products from public reporting. Dr. Grover will provide Dr. Parker with an STS list of California hospitals which perform high levels of bloodless surgeries. Excluding cardiogenic shock patients was not a priority for the panel. They felt that exclusion of salvage was as far as the exclusion should be.

The third topic was additional outcome measures to consider. The mandate for CCORP is to report on all CABG surgeries, but we currently do not report on non-isolated CABG. In that light, the addition of CABG+Valve would appropriately move the program toward compliance with statute. The group expressed interest in selecting several common valve surgeries which accompany CABG. Alternative risk models were discussed. CABG related infections were discussed but there was little interest in pursuing research on such a measure. Some members expressed interest in process measures; however, state law does not give CCORP authority to collect and report them. The panel did express interest in CCORP reporting back to the panel with potential complications composite measures, which might include a unique, non-STS composite measure and/or one that addresses operative success.

The next portion of the discussion was Blue Sky brainstorming led by Dr. Brindis. The purpose was to create a wish list of ideas and activities then drill down to address legal and financial constraints.

The first idea was appropriateness. Everyone thought the program should report on PCI as well as CABG. As to appropriateness, OSHPD could determine how many people should be getting CABG or PCI but not getting it and vice versa. Securing this data and analyzing it would cost quite a lot of money. Joseph Carey M.D., from the audience, representing the California Society of Thoracic Surgeons was asked about his work with combined outcomes at one year after PCI and CABG. He noted marked reduction in adverse events after PCI and CABG, except the last five years has seen little improvement.

Dr. Steimle stated mortality at one year would be difficult to collect on the scale of CCORP data but revascularization might be possible. Also, we don't have the granularity of data to make an accurate accounting necessary for appropriateness, such as patient choice. Dr. Flachsbart stated that revascularization at each site would be of interest to the consumer. Comparing hospital to hospital might be useful and could bypass unique individual patient concerns.

Cost transparency was also suggested as well as reporting on isolated valves. There was also a desire to collect and report data to hospitals and physicians and not the public (which cannot be done in a public reporting program). Dr. Grover suggested the group not enter the expanded territory of cardiac surgery before securing PCI public reporting.

On request from the panel, CCORP staff reported interest in new outcomes measures or composite complications. These measures would further understanding of the data and is within the scope of CCORP statute. The panelists also discussed with Dr. Parker and the OSHPD staff attorney, Beth Herse, how to go about expanding reporting. Expansion to collect clinical data for procedures other than CABG would require legislative changes. Dr. Parker stated that with the PCI CAMPOS project under CDPH, the advisory board members took information back to their professional societies to pursue legislative changes.

Ms. Herse stated that every time OSHPD reports physician level outcomes on a specific procedure a new independent clinical panel must be established. No risk-adjusted outcomes using administrative data from the administrative patient discharge data can be done at the surgeon level, as that dataset does not contain physician identifiers.

13. Public comment

There were no public comments.

14. Adjourn

The meeting adjourned at 3:02 pm