Hospital Comments

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Dear Colleagues:

On behalf of California's Office of Statewide Health Planning and Development (OSHPD), I am pleased to preface our latest report on the outcomes of care in California's hospitals. These outcome studies, mandated by legislation (Assembly Bill 524) signed by Governor Wilson in 1991, are based on data routinely abstracted from hospital medical records and reported to OSHPD for every patient discharged from a California hospital.

This third report on heart attack mortality rates expands and improves upon earlier studies using a larger body of data, refined risk-adjustment methods, and linkage to death certificate information. The study, therefore, represents an important contribution in efforts to evaluate the quality of health care provided throughout the state.

OSHPD had overall responsibility for the project. Andra Zach, R.R.A., M.P.A., served as coordinator. The statistical studies were performed by a distinguished team of researchers from the University of California medical schools at Davis and San Francisco, led by Patrick S. Romano, M.D., M.P.H., and Harold S. Luft, Ph.D. In addition, the Project had the benefit of valuable suggestions from several advisory bodies: the California Health Policy and Data Advisory Commission; its technical advisory committee, made up of representatives of the health services research, hospital, nursing, medical, health information and consumer communities; and from a panel of clinical experts in the field of cardiovascular disease.

OSHPD's primary goal in conducting such studies on outcomes of care, and reporting the results, is to improve the quality of hospital care available to all California citizens. The report provides hospitals with systematic information about their patient care results in comparison to other facilities, and encourages them to examine their processes of care to determine those which result in the best outcomes.

The AB 524 legislation responded to needs expressed by health care purchasers, providers and consumers to have publicly available information that objectively compares hospital performance in patient care. The legislation called for selection of medical, surgical, and obstetrical conditions for study of outcomes of hospital care. The first conditions selected were heart attack (acute myocardial infarction), back surgery (cervical and lumbar disk excisions), and maternal outcomes of obstetrical care (vaginal and cesarean deliveries). Several reports related to these studies have already been published. A study on the outcomes of care of hip fractures is in progress.

The Office of Statewide Health Planning and Development has made a long-term commitment to provide public information describing the quality of care delivered in California hospitals and, eventually, in other settings of care as well. With the assistance of its advisory bodies and colleagues in the health care community, the Office seeks continued improvements in data collection and analytical methods so as to enhance our ability to evaluate the performance of California's health care institutions.

The Office welcomes your comments and suggestions regarding these reports.

Sincerely,

David Werdegar, M.D., M.P.H.
Director

California Hospital Outcomes Project

Report on Heart Attack, 1991-1993

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Acknowledgments

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Andra Zach, R.R.A., M.P.A. had overall responsibility for all aspects of the project, serving as liaison between OSHPD, the research team, and the included hospitals. OSHPD staff conducted the death certificate linkage and had primary responsibility for writing the *User's Guide.*

The contract team at UC Davis was supervised by Patrick S. Romano, M.D. and Julie Rainwater, Ph.D. The contract team at UC San Francisco was led by Harold S. Luft, Ph.D. Dr. Romano had primary responsibility for writing the *Technical Guide.* Dr. Luft and Dr. Romano had primary responsibility for writing materials accompanying the *Detailed Statistical Results.* Drs. Romano, Luft, and Rainwater, had primary responsibility for writing the *Hospital Guide*, with the assistance of Michael Schembri and Ben Chan, M.S.

Ben Chan, M.S. was responsible for most of the data processing and statistical analyses, with the assistance of Dr. Romano. Michael Schembri prepared the table for the *User's Guide* and provided programming for the *Detailed Statistical Results* and the *Hospital Guide*. Hong Zhou, Ph.D. consulted on statistical issues. Linda Remy, Ph.D., and Theodore Clay, M.S., created the study files from the OSHPD discharge data set.

Rebecka Levan, M.P.H., Leah Vriesman, M.H.A., M.B.A. and Gerald Kominsky, Ph.D. of UC Los Angeles provided suggestions for formatting and presentation style of the *User's Guide*.

A number of individuals provided guidance and advice in the design of the study and provided helpful comments on this or previous reports: Edward Hannan, Ph.D., Clifton Bailey, Ph.D., Lisa Iezzoni, M.D., Gregory S. Binns, Ph.D., along with members of the Technical Advisory Committee and the Clinical Panel.

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TABLE OF CONTENTS

Overview: Report on Heart Attack 1
The California Hospital Outcomes Project
Content of the Report on Heart Attack

Section 1: Summary of Hospital Letters.....3
The Study Includes Old Data (1991-1993) That Do Not Reflect Current Practices
Additional Risk Factors Should Have Been Included in the Models
Clinical Risk Factors (Comorbidities) Were Underreported
Some of the Cases Were Improperly Included
The Results Are Uninformative or Unreliable for Low-Volume Hospitals
Process of Care Data Are More Useful
Differences in Coding Practices May Affect the Validity of the Results
Hospitals Should Not Be Charged With Deaths that Occur After Discharge
Admission Practices Vary Widely Among Hospitals Without Catheterization Laboratories, Skewing the Population of AMI Patients at Some Hospitals

Section 2: Hospital Letters 11
Alhambra Hospital 12
Bay Harbor Hospital 13
City of Hope Medical Center..... 14
Columbia West Hills Medical Center 15
Daniel Freeman Marina Hospital 16
Daniel Freeman Memorial Hospital 17
Davies Medical Center 18
Doctors Medical Center, Pinole Campus 19
Fremont Medical Center..... 61
Friendly Hills Regional Medical Center 21
Garfield Medical Center..... 24
Henry Mayo Newhall Memorial Hospital 26
Huntington East Valley Hospital 28
Kaiser Foundation Hospital - Anaheim 33
Kaiser Foundation Hospital - Bellflower..... 33
Kaiser Foundation Hospital - Fontana 33
Kaiser Foundation Hospital - Harbor City 33
Kaiser Foundation Hospital - Hayward 29
Kaiser Foundation Hospital - Los Angeles..... 33
Kaiser Foundation Hospital - Martinez..... 29
Kaiser Foundation Hospital - Oakland 29
Kaiser Foundation Hospital - Panorama City..... 33
Kaiser Foundation Hospital - Redwood City 29
Kaiser Foundation Hospital - Richmond 29
Kaiser Foundation Hospital - Riverside..... 33
Kaiser Foundation Hospital - Sacramento 29
Kaiser Foundation Hospital - San Diego..... 33
Kaiser Foundation Hospital - San Francisco..... 29
Kaiser Foundation Hospital - San Rafael..... 29
Kaiser Foundation Hospital - Santa Clara..... 29
Kaiser Foundation Hospital - Santa Rosa 29

TABLE OF CONTENTS, continued

Kaiser Foundation Hospital - Santa Teresa Community Hospital 33
Kaiser Foundation Hospital - South Sacramento 29
Kaiser Foundation Hospital - South San Francisco 29
Kaiser Foundation Hospital & Rehab. Center- Vallejo 29
Kaiser Foundation Hospital - Walnut Creek 29
Kaiser Foundation Hospital - West Los Angeles 33
Kaiser Foundation Hospital - Woodland Hills 33
Kaweah Delta Health Care District 35
L.A. County/ Harbor-UCLA Medical Center 37
Little Company of Mary Hospital 38
Loma Linda University Medical Center 39
Mad River Community Hospital 41
Mercy American River Hospital/Mercy San Juan Hospital, American River Campus 42
Mercy American River Hospital/Mercy San Juan Hospital, San Juan Campus 42
Mercy General Hospital 44
Mercy Hospital & Health Services 45
Mercy Hospital of Folsom 48
Methodist Hospital of Sacramento 50
Natividad Medical Center 51
Nelson Holderman Memorial Hospital (Veterans Home of California) 54
NorthBay Healthcare 55
Paradise Valley Hospital 58
Petaluma Valley Hospital 59
Pomona Valley Hospital Medical Center 60
Rideout Memorial Hospital 61
Ridgecrest Community Hospital 63
Riverside Community Hospital 64
Saddleback Memorial Medical Center 65
Saint Agnes Medical Center 67
San Pedro Peninsula Hospital 69
Santa Clara Valley Health & Hospital System 70
Scripps Hospital East County 71
Selma District Hospital 72
South Bay Medical Center 73
Specialty Hospital of Southern California 75
Sutter Amador Hospital 76
Sutter Medical Center of Santa Rosa 77
Tulare District HealthCare System 78
USC Kenneth Norris Jr. Comprehensive Cancer Center and Hospital 79
USC University Hospital 80
VacaValley Hospital 55
Ventura County Medical Center 81
Victor Valley Community Hospital 83
Western Medical Center Anaheim 85
Western Medical Center Santa Ana 86

Overview

Report on Heart Attack

The California Hospital Outcomes Project is an initiative mandated by the State of California, and conducted by the Office of Statewide Health Planning and Development (OSHPD), to develop public reports comparing hospital outcomes for selected conditions treated in hospitals throughout the state.

The Report on Heart Attack is intended to encourage all California hospitals to improve their care and give credit to the hospitals that are the leaders. It can also help insurers, employers, and consumers to select hospitals based on quality of care.

The California Hospital Outcomes Project

Heart attacks (acute myocardial infarctions or AMIs) were chosen as one of the first conditions to be reported upon by the California Hospital Outcomes Project because they are important, common, and deadly. Every year approximately 40,000 heart attack patients are admitted to 400 California hospitals. More than 5,000 of these persons die.

The mortality rates published in previous heart attack reports have been used in many ways. Hospitals have used their results to evaluate and improve their quality of care. Payers have used the reports to contract with the best hospitals. Consumers have used the reports to make more informed decisions.

The results published in this report are useful because:

- **They have been risk-adjusted.** Patient age, sex, type of heart attack, and chronic diseases were used to adjust for differences in patient risk when calculating hospital mortality rates.
- **They have been validated.** A sample study showed that hospital data reported to OSHPD corresponds closely to clinical information in the medical record. Variations in the way hospitals report their data to OSHPD do not significantly affect hospital results. The validation study also showed that, in general, low-mortality hospitals treat heart attacks more aggressively than high-mortality hospitals.

Content of the Report on Heart Attack

This is the third report on heart attack. The first report was published in December of 1993 and the second report was published in May of 1996. This year's report includes heart attack cases from 1991 through 1993. Although 1991 and 1992 cases were included in last year's report, results

shown in the current report may be different because the methodology has been improved. These improvements include:

- Linking with Vital Statistics records to ascertain deaths occurring outside the hospital.
- Refining certain patient risk-factor definitions based on the findings of the 1996 validation study.
- Using six months of pre-heart attack hospital records to more completely describe patient risk factors.

This year's report consists of five components:

The *User's Guide* (Volume 1) is intended for all those interested in hospital performance including hospital staff, employers, government agencies, health plans, and insurance companies. This volume provides a brief description of the study background and methods. It also contains two tables that display the results for individual hospitals based on heart attacks that occurred between 1991 and 1993.

The *Technical Guide* (Volume 2) is intended for health services researchers, health care providers, and others interested in the statistical methods used to calculate risk-adjusted death rates.

The *Detailed Statistical Results* (Volume 3) contains the numerical results for individual hospitals upon which the classifications in the *User's Guide* are based. In addition, there are tables that aggregate the results to the county level. It also contains a graphical representation of both individual hospital and county-wide results, which can be used to examine annual trends. An electronic version of the tables is available on diskette.

The *Hospital Comment Letters* (Volume 4) is intended to give readers of the *Report on Heart Attack* an appreciation of its strengths and weaknesses from the hospitals' perspectives.

The *Hospital Guide* accompanied patient specific information that was sent to each hospital several weeks before the *Report on Heart Attack* was published. Hospitals used this information to prepare their comment letters, which are provided with each volume of the report. More importantly, hospitals and their physicians can use this information to target areas where heart attack care might be improved.

To obtain these documents contact:

Office of Statewide Health Planning and Development
Data User's Support Group
818 K Street
Sacramento, CA 95814
(916) 326-3802

Documents, excluding the *Hospital Guide*, are available on the internet at **http:\\www.oshpd.cahwnet.gov**

Section 1

Summary of Hospital Letters

The major issues raised by hospitals in these letters are summarized in this section, with the most frequently cited concerns listed first. There is a response to each issue, acknowledging the limitations of the study and describing the progress that the Office of Statewide Health Planning and Development (OSHPD) has made in addressing hospitals' concerns.

This report is one of many steps in a long and important process. OSHPD looks forward to working closely with hospitals over the next several years to improve the quality of the data and the scope of the medical conditions included in the studies.

The Study Includes Old Data (1991-1993) That Do Not Reflect Current Practices

Hospital Comments: Many hospitals pointed out that medical and surgical practices have changed significantly since 1991-1993. In addition, many hospitals described recent improvements in how they treat AMI patients. Hospitals questioned whether it was appropriate to use 1991-1993 data to advise consumers, purchasers, and providers of health care in 1997.

Response: Recent data are clearly more useful than older data in comparing hospital outcomes. However, there are two limiting factors. First, it takes 12 to 18 months for hospitals to submit, and for OSHPD to edit and compile, patient discharge abstracts. Another year is needed to develop risk-adjustment models and calculate outcome rates, followed by six months to solicit comments from hospitals and to prepare, print, and disseminate the official report. Therefore, data after December 31, 1993 could not be used in this year's report. However, OSHPD is examining alternatives to accelerate the process, based on recommendations from the California Health Information Committee. Second, most hospitals have too few cases in one year to provide meaningful results. When a hospital has very few cases in a given period, one has little confidence in its outcome statistics because chance variation is so important. By combining several years of data, hospital outcome statistics become more reliable and more useful.

Additional Risk Factors Should Have Been Included in the Models

Hospital Comments: Many hospitals noted that the risk-adjustment models omitted important predictors of mortality which were not available from discharge abstracts. These omitted risk factors may explain some of the observed variation in mortality rates across hospitals. In other words, certain hospitals had a disproportionate number of high-risk patients who could not be recognized as high-risk because of inherent limitations of the Patient Discharge Data.

The most commonly cited examples of this problem were "do not resuscitate" orders and pre-hospital cardiac arrests. Patients with severe medical problems frequently ask their doctors not to resuscitate them if their heart or lungs stop working. This decision is recorded in the medical record as a "do not resuscitate" (DNR) order. Patients with DNR orders have a high risk of death, both because of their underlying medical problems and because they are not candidates for life-prolonging interventions.

Other unmeasured risk factors for death after AMI that were mentioned in hospitals' comments include the time from onset of symptoms to arrival in the emergency room, physiologic measures such as the Killip classification, and contraindications to or refusal of therapies designed to limit infarct size, such as thrombolysis.

Response: It clearly would have been desirable to adjust for these risk factors, but OSHPD could not do so because of limitations in the Patient Discharge Data Set. Hospital comments in this area are especially appreciated, because California's Health and Safety Code provides a mechanism for adding new data elements to improve future outcome studies. Hospitals' suggestions in 1993 were incorporated into recommendations to the California legislature, some of which were adopted into law in 1994. This law authorized the creation of a new set of variables, effective January 1, 1996, indicating whether each diagnosis was present at admission. This bill also authorized OSHPD to collect information about DNR orders. In December, 1997 OSHPD will publish a notice of proposed changes to regulations to implement the collection of DNR information on discharges occurring on or after January 1, 1999.

In the meantime, it is not appropriate for hospitals to recalculate their death rates after excluding DNR patients because: (1) DNR patients are not pre-destined to die, but simply choose not to receive certain therapies; and (2) DNR orders may be written or discontinued at any time, even after patients experience complications, so they may reflect previous errors in the process of care. The AMI Validation Study showed that only 40 percent of DNR orders among AMI patients were written on or before the date of admission. Among the patients whose DNR orders were written at least one day after admission, 11 percent received thrombolytics and 15 percent underwent either angioplasty or coronary bypass graft surgery during the AMI hospitalization.

The AMI Validation Study identified four other clinical risk factors that would significantly improve the risk-adjustment models used in this report: heart rate and systolic blood pressure at presentation, cardiac arrest within 24 hours before presentation, and clinical evidence of shock at presentation. These results have been presented to the California Health Information Committee and may lead to future legislative or regulatory changes to the Patient Discharge Data Set.

Of course, unmeasured risk factors bias the results in this report only if they are distributed unevenly across hospitals. In fact, the AMI Validation Study found no evidence that patients at high-mortality hospitals are significantly higher risk, based on these physiologic factors, than patients at low-mortality hospitals. Unmeasured risk factors explain less than 10 percent of the difference in risk-adjusted death rates between these sets of hospitals.

Clinical Risk Factors (Comorbidities) Were Underreported

Hospital Comments: Many hospitals worked very hard to link data from this project with their own medical record systems, so that they could review individual medical records. Several facilities acknowledged that they had failed to code some clinical risk factors, because these diagnoses either did not affect reimbursement or seemed unimportant. Congestive heart failure, pulmonary edema, and shock are cited often as examples. If a hospital failed to code these diagnoses, OSHPD's estimate of that hospital's risk-adjusted death rate would be too high because the estimate of the expected death rate would be too low.

Response: OSHPD recognizes that the discharge data system has only recently been used to study outcomes at individual facilities, so hospitals may not have been expecting their discharge abstracts to be used for this purpose in 1991 and 1992. Indeed, some risk factors might have been construed as unimportant or irrelevant by the people responsible for abstracting and coding medical records. Many hospitals visibly improved their coding practices during and after 1993, when the first report of the California Hospital Outcomes Project was published.

By law, hospitals must report to OSHPD all diagnoses that "affect the treatment received and/or the length of stay."[1] Specifically, reportable diagnoses include "conditions that affect patient care in terms of requiring: clinical evaluation... therapeutic treatment... diagnostic procedures... extended length of hospital stay... increased nursing care and/or monitoring."[2] According to these guidelines, conditions that require inpatient evaluation or treatment (e.g., laboratory tests, medications) should **always** be reported. Hypertension, shock, diabetes, and congestive heart failure are clear examples of such conditions. Hospital coders should consult with their medical staffs to confirm that the risk factors in these models indeed affect the care of their patients.

Some of the Cases Were Improperly Included

Hospital Comments: Several hospitals pointed out that some of the patients included in this report did not have objective evidence of myocardial infarction. These patients may have been admitted for an acute cardiac

1. *The California Hospital Discharge Data Reporting Manual,* January 1985. Title 22, California Code of Regulations, Division 7, Chapter 10, §97212(e)(11)
2. *Coding Clinic*, Second Quarter 1990, 12-13; *ICD-9-CM Coding Handbook*, 1991 Revised Edition, 24.

complication, such as ventricular tachycardia, and assigned a presumptive secondary diagnosis of AMI. Other patients may have been admitted to "rule out myocardial infarction." If no alternative diagnosis, such as angina pectoris, is documented, official coding guidelines dictate that "rule out myocardial infarction" be coded as a principal diagnosis of AMI. Finally, a few AMI patients reportedly met one of the stated exclusion criteria, such as transfer from a skilled nursing facility, but were nonetheless included in the analysis.

Response: Misdiagnosed or miscoded AMIs are an important problem that has been explored in several previous studies. As much as possible has been done to identify and exclude these cases. Complete resolution of this problem will depend on future improvements in coding and reporting practices. In addition, physicians should be advised not to diagnose an AMI in the absence of at least one, and preferably two, clinical criteria (e.g., symptoms, electrocardiographic changes, enzyme elevations). Results from the AMI Validation Study show that only 3.1 percent of the included AMIs should have been coded with other principal diagnoses. This number is much lower than numbers that were reported from similar studies in the 1980s.

It appears that most of the unrecognized transfers are attributable to errors in reporting "source of admission." *The California Hospital Discharge Data Reporting Manual* states that "patients with two sources of admission must be coded according to the site of the patient's **first examination or treatment**." This sentence implies that patients transferred from an outlying hospital or SNF/ICF to a receiving hospital's emergency room should be assigned an admit source of hospital, SNF, or ICF. New regulations implemented on January 1, 1995 will eliminate the confusion between source categories and resolve this problem.

The Results Are Uninformative or Unreliable for Low-Volume Hospitals

Hospital Comments: Several hospitals with relatively few cases commented that the data have little value to them. A low-volume hospital is extremely unlikely to be classified as "significantly better than expected," no matter how outstanding its quality of care, because the role of chance is too great. Substantial concern was expressed about the unreliability of risk-adjusted mortality rates based on small numbers of patients. Several cancer hospitals and hospitals without emergency departments noted that their patient populations are not only small, but also highly atypical.

Response: It is true that some low-volume hospitals may provide outstanding care, but this hypothesis cannot be tested. No statistical method would permit characterization of low-volume hospitals as "significantly better than expected," unless an inordinately high risk of misclassifying larger hospitals is accepted. Of course, low-volume hospitals are also unlikely to be classified as "significantly worse than expected." This problem has nothing to do with the validity of the study; it is inherent to statistical analysis. In

response to similar comments from hospitals in previous years, OSHPD has included a new symbol (☑) to indicate those hospitals that had no deaths, but treated too few heart attack cases to be classified as significantly better than expected. Small hospitals were not excluded from this report because Californians are interested in the outcomes of care at all hospitals in the state, not just large hospitals. Only by examining the performance of all hospitals against statewide norms can current problems and opportunities be understood.

Process of Care Data Are More Useful

Hospital Comments: Many hospitals noted that they actively participate in Genentech's National Registry of Myocardial Infarction, the Health Care Financing Administration's (HCFA's) Cooperative Cardiovascular Project, or internal programs that monitor processes of care for AMI patients. Data describing the use of aspirin, beta blockers, and thrombolytic agents were widely felt to be more useful than data describing risk-adjusted mortality. Some hospitals urged OSHPD to link its data with process-of-care data from HCFA or California Medical Review, Inc.

Response: Neither risk-adjusted outcome studies nor process-of-care studies tell a complete story. Risk-adjusted outcome studies, such as the California Hospital Outcomes Project, help to identify the health care providers with best practices as well as the providers that deserve special attention. They provide a "bottom line" view of the effectiveness of health care, similar to the financial statement of a business or the transcript of a college graduate. However, they are quite difficult for hospitals and physicians to interpret. When a hospital or physician group is told that its risk-adjusted outcomes are worse than average, it immediately wants to know why, so it can fix the problem. Risk-adjusted outcome studies cannot answer this vital question. Hence, hospitals undertake process-of-care studies, alone or in collaboration with other institutions, to ascertain the reasons for better or worse outcomes. But process-of-care studies should not be used in isolation, because good processes do not always lead to good outcomes. Many of the factors that influence AMI outcomes are still poorly understood.

The AMI Validation Study found that low-mortality hospitals (identified in a previous edition of this report) started aspirin with 6 hours of presentation more often than intermediate and high-mortality hospitals (35 percent versus 25 percent and 26 percent, respectively). Low-mortality hospitals used heparin more often than other hospitals, among eligible patients (79 percent versus 60 percent and 70 percent, respectively). Finally, low-mortality hospitals performed or referred patients for early revascularization more often than other hospitals (9 percent versus 4 percent). Other studies have also confirmed the link between outcomes and processes of care for AMI patients. OSHPD strongly encourages hospitals to collect and disseminate process of care information, but its statutory mandate is to study risk-

adjusted outcomes, which are easier for consumers, purchasers, and payers to understand.

Differences in Coding Practices May Affect the Validity of the Results

Hospital Comments: Several hospitals noted that coding practices are quite variable across hospitals. Part of this variation relates to differences in the availability of important information in the medical record. The *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM), was never intended to be used for comparing hospital outcomes, so coding guidelines are often vague and allow physicians considerable discretion in diagnosing complications. In the absence of standard definitions, different coders may interpret ICD-9-CM in different ways.

Response: These concerns are well founded. Coding guidelines are vague in some areas, and therefore subject to interpretation. This problem was addressed by appointing a coding expert to each advisory panel and by carefully reviewing professional coding publications. In addition, OSHPD staff have worked very closely with hospitals, both directly and through the California Health Information Association, to improve the uniformity and validity of hospital discharge data. The AMI Validation Study showed that variations in reporting risk factors explain at most one-quarter of the difference in risk-adjusted death rates between high-mortality and low-mortality hospitals.

Hospitals Should Not Be Charged with Deaths that Occur after Discharge

Hospital Comments: Some hospitals expressed concern that when a patient died after being transferred from one hospital to another, the case was counted only once and the death was attributed to the first hospital. This approach was perceived as being unfair to hospitals that do not perform specialized procedures. Several hospitals were dismayed that all deaths occurring within 30 days of admission were counted, regardless of the immediate cause or location. Some of these deaths may not have been related to the patients' AMI, or to the quality of care during the AMI hospitalization. Extraneous factors, such as adherence to therapy and outpatient follow-up, may confound comparisons of total 30-day mortality.

Response: Rather than being a source of bias, the linkage of serial hospitalizations and the attribution of outcomes to primary facilities is a strength of this study. If this had not been done, the analysis would have been severely biased against hospitals that have open-heart surgery facilities. Referral centers would have shown high risk-adjusted mortality rates because all of their patients who died would have died at their facilities. Conversely, small hospitals would have shown very low risk-adjusted mortality rates because many of their patients who died would have died elsewhere. Linking serial hospitalizations created a "level playing field" so

that small hospitals and referral centers could be directly compared. In addition, the hospital that initially receives an AMI patient decides when, where, and how to transfer that patient. These community hospitals should share the responsibility for the ultimate outcomes of their patients.

In response to comments submitted by hospitals and researchers in previous years, OSHPD slightly modified the AMI outcome variable from 30-day inpatient mortality (12.5 percent frequency) to 30-day total mortality (14.6 percent frequency). This improvement removes any bias due to variation in the average length of stay across hospitals. Hospitals can no longer reduce their risk-adjusted mortality rates with early discharge of AMI patients.

Deaths among AMI patients for unrelated reasons cannot be excluded, for three reasons: (1) without detailed information about the date, severity, and treatment of each diagnosis, we cannot identify which diagnosis led to death; (2) the true cause of death can often be established only by autopsy, yet relatively few AMI fatalities are autopsied; and (3) the AMI is probably a contributing cause, even if it is not the underlying cause, of a substantial majority of these deaths. Previous studies have shown substantial error in the attribution of "cause of death" on death certificates, especially among patients with multiple contributing factors. These factors might be identifiable from the "multiple cause of death" file, but this file was not available when the present study began.

Admission Practices Vary Widely among Hospitals Without Catheterization Laboratories, Skewing the Population of AMI Patients at Some Hospitals

Hospital comments: Some hospitals without catheterization laboratories argue that they refer all AMI patients who are candidates for urgent catheterization directly from their emergency rooms (without admitting them first). As a result, the AMI patients that remain tend to be too ill to transfer. These hospitals implicitly speculate that other hospitals without catheterization laboratories may admit the same subset of patients who require urgent catheterization, if only for a few hours. This report is based entirely on inpatient data, and may therefore be biased.

Response: This concern is speculative, but may be quite valid. Since OSHPD does not collect emergency room data, there is no evidence to support or refute this argument. Ideally, the risk-adjustment models used in this report would fully account for the clinical differences between patients who are stable for transfer and those who are not. OSHPD recognizes, however, that its current risk-adjustment models are unlikely to meet this standard. Continued attention will be directed to improving the risk-adjustment models, and possibly collecting emergency room data, in future years.

Section 2

Hospital Letters

The law that created the California Hospital Outcomes project specified that hospitals and their medical staff be given 60 days to review a draft of this report, along with the patient data on which it is based. Hospitals and their chiefs of staff were encouraged, but not required, to submit written comments. These comments have been published as part of this report, so that readers can better appreciate this report's strengths and limitations.

Bay Harbor Hospital

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October 17, 1997

Office of Statewide Health Planning and Development
Attention: David Werdegar, MD, MPH
Office of the Director
1600 Ninth Street, Room 433
Sacramento, CA 95814

Dear Dr. Werdegar:

Bay Harbor Hospital is governed by our mission to deliver the highest quality of care. We respect the patient as an individual and their entitlement to information available to make an informed decision about the hospital they choose. We feel the OSHPD California Outcomes Project 1997 is a process that helps to support this objective. We commend your office in attempting to establish statewide quality of care criteria that may provide more objective benchmarks which can be used to improved the quality of care of AMI patients.

In reviewing our hospital specific data for AMI Mortality, our risk-adjusted rates were 19.8% and 21.6% for Models A and B, respectively. With the California mean at 14.6%, our hospital received a rating of "worse than expected" which obviously prompted concern. A thorough review of the medical records of the AMI deaths for 1991-1993 was performed. The severity of illness and comorbidities of the AMI deaths appear far greater than actually reported. We are currently reviewing the coding practices to ensure that future cases have complete and accurate coding.

Nevertheless, since 1993, significant strides have been made to improve both the quality and performance of our critical care unit and emergency unit in providing timely and appropriate care for AMI patients. This is clearly reflected in the Bay Harbor Hospital observed in-hospital death rate summarized below:

Year	In-Hospital Death Rate
1991	19.8%
1992	16.2%
1993	23.6%
1994	8.2%
1995	11.0%
1996	8.2%

As you point out in your *Report of Heart Attacks Users Guide*, there are limitations in this Outcomes Project in fully describing the quality of care given at hospitals. Although your recent AMI validation project does help to satisfy many of the questions that we had last year, the reliance upon the 1991-1993 data as a measure of today's hospital quality is suspect. We would encourage OSHPD to analyze and report data in a more timely manner. Hospitals, medical staffs and consumers would most benefit from current outcome findings.

We are proud of the quality care now given at Bay Harbor Hospital and we strongly endorse efforts to measure clinical outcomes that are accurately adjusted for severity of illness. As statistical incongruities are eliminated and more consistent criteria become available, this process will provide an invaluable tool in quality management and the improvement of patient care.

Very Truly Yours,

Linda Lawrence, RN, MBA
Vice President, Patient Care Service
for: Jack W. Weiblen, President,

City of Hope

N A T I O N A L M E D I C A L C E N T E R

October 8, 1997

David Werdegar, MD, MPH, Director
Health Policy and Planning Division
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
1600 Ninth Street, Room 350
Sacramento, California 95814

Dear Dr. Werdegar,

Thank you for the opportunity to respond to the "California Hospital Outcomes Reports" dated August 20, 1997. The report showed that in 1992 City of Hope had seven (7) cases listed with acute myocardial infarction admissions. Of the seven (7) cases, there was one (1) death. The one (1) death showed a risk adjusted death rate of 17.8% which is above the statewide norm of 14.6%.

The City of Hope National Medical Center is a tertiary hospital with the designation of "Clinical Cancer Center" by the National Cancer Institute. Patients admitted to this facility are often compromised due to the nature of their disease and the complex treatment they receive.

In the City of Hope data set there is one (1) mortality. The following is a summary of that case:

A 67 year old caucasian female with multiple complex diagnoses:

- Debulking surgery for her stage III ovarian adenocarcinoma followed by chemotherapy treatment (1984)
- Mastectomy surgery for her breast cancer followed by radiation treatment (1988)
- Diabetes Mellitus with organ damage - (Insulin dependent)
- Atherosclerotic Heart Disease - History of CAD with previous acute MI.

There were inherent risks associated with the complexity and severity of this patients diagnosis.

Again, I must emphasize that City of Hope is a cancer center and while the institution is equipped to treat myocardial infarction, this is not a frequent admitting diagnosis and therefore the low numbers i.e. seven (7) admissions with this diagnosis, one (1) mortality with this diagnosis. City of Hope had a total of 4,231 admissions in 1992 therefore, the mortality rate for myocardial infarction is .023%.

If you have any questions, please call me at (626) 359-8111 extension 3457.

Sincerely ,

Donna Sollenberger

Donna Sollenberger
Executive Vice President and Chief Operating Officer

1500 EAST DUARTE ROAD, DUARTE, CALIFORNIA 91010-0269 (
A National Cancer Institute Designated Clinical Cancer Research Center

COLUMBIA West Hills Medical Center

7300 Medical Center Drive
West Hills, California 91307
Phone (818) 712-4100
COLUMBIA's home page is *http://www.columbia.net*

October 7, 1997

David Werdegar, MD, MPH
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, California 95814

Dear Dr. Werdegar:

Thank you for providing COLUMBIA West Hills Medical Center with the opportunity to review the information drafted out of the OSHPD Heart Attack Outcomes Study (1991 – 1993).

We at COLUMBIA West Hills Medical Center are pleased to learn that the OSHPD evaluation outcome showed no significant difference than expected. However, since our commitment for improving patient care is our priority, AMI patients are monitored on a continuous basis for different patient care modalities.

Thank you again for making COLUMBIA West Hills Medical Center participant in this important outcome project.

Sincerely:

Gordon Dowds, MD
Chief of Medical Staff

DANIEL FREEMAN HOSPITALS INC.

333 North Prairie Avenue
Inglewood, CA 90301
(310) 674-7050

October 8, 1997

RECEIVED
OCT 17 1997
Office of Statewide Health
Planning and Development

David Werdegar, M.D., M.P.H.
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 Ninth Street, Suite 400
Sacramento, California 95814

Re: California Hospital Outcomes Project - Acute Myocardial Infarction

Dear Dr. Werdegar:

On behalf of Daniel Freeman Marina Hospital, I appreciate the opportunity to review the data from the California Hospital Outcomes Project on Acute Myocardial Infarction. Our organization is committed to cooperative and collaborative efforts in improving the quality of patient care.

We have noted the small sample size for our Marina facility which could limit the analysis of the data into significant information. We also recognize that the usefulness of any data is dependent upon the timeliness of data collection, evaluation, and reporting. While the variables studied are relevant, the findings are outdated. Practice patterns have changed since 1993, and, therefore, it is difficult to utilize this information in any comparative manner that is meaningful.

Thank you for the opportunity to comment on these findings. We look forward to any efforts that would be helpful in producing more timely reports.

Sincerely,

Joseph W. Dunn, PhD
Chief Executive Officer
Office of the President

DANIEL FREEMAN HOSPITALS INC.

333 North Prairie Avenue
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(310) 674-7050

RECEIVED
OCT 17 1997
Office of Statewide Health
Planning and Development

October 8, 1997

David Werdegar, M.D., M.P.H.
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 Ninth Street, Suite 400
Sacramento, California 95814

Re: California Hospital Outcomes Project - Acute Myocardial Infarction

Dear Dr. Werdegar:

On behalf of Daniel Freeman Memorial Hospital, I appreciate the opportunity to review the data from the California Hospital Outcomes Project on Acute Myocardial Infarction. Our organization is committed to cooperative and collaborative efforts in improving the quality of patient care.

The usefulness of any data is dependent upon the timeliness of data collection, evaluation, and reporting. While the variables studied are relevant, the findings are outdated. Practice patterns have changed since 1993, and, therefore, it is difficult to utilize this information in any comparative manner that is meaningful.

Thank you for the opportunity to comment on these findings. We look forward to any efforts that would be helpful in producing more timely reports.

Sincerely,

Joseph W. Dunn, PhD
Chief Executive Officer
Office of the President

DAVIES MEDICAL CENTER

October 15, 1997

David Werdegar, M.D., M.P.H.
Director, Health Policy and Planning Division
Office of Statewide Health Planning and Development
1600 Ninth Street, Room 350
Sacramento, California 95814

Dear Dr. Werdegar:

We have reviewed the California Hospital Outcomes report and appreciate the opportunity to respond. We acknowledge the Office's significant efforts in improving the presentation of the data and appreciate the favorable ranking. We are concerned, however, that it may be unrealistic for facilities with relatively small sample size to achieve a rating that is significantly better than expected.

Statewide data analysis is commendable, and is one of many sources that we use to continually assess and monitor the quality of care that our staff and physicians provide. Thank you for providing us with the individual cases for our more detailed review and analysis. We appreciate this additional source for our learning.

Sincerely,

Greg Monardo
President

Stephen Follansbee, M.D.
Chief of Staff

Philip J. O'Keefe, M.D.
Chairman, Performance Improvement Committee

Abraham Aronow, M.D.,
Chairman, Utilization Management Committee

Castro & Duboce, San Francisco, California 94114 (415) 565

Doctors
Medical Center
Tenet California HealthSystem

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Pinole, CA 94564-2578
Tel 510.724.5000
http://www.tenethealth.com

October 16, 1997

David Werdegar, M.D., M.P.H.
Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 433
Sacramento, CA 95814

Dear Dr. Werdegar:

Thank you for providing the opportunity to comment on the California Hospital Outcomes Project, Heart Attack Outcomes 1991-93.

We recognize that the statistical analysis performed in this study is of exceptional quality, we are, however, concerned about the accuracy of the data being analyzed. As noted in the technical appendix, Model A is conservative and contains fewer risk factors whereas Model B is more comprehensive and includes important but potentially biased risk factors. It is highly influenced by clinical judgement and coding variations.

During the three-year period the number of "observed" deaths was 46 but further review of these medical records produced the following important findings:

1. Two of the patients had no evidence of a Myocardial Infarction - one had Congestive Heart Failure with normal cardiac enzymes and the other had Liver Cancer, confirmed by autopsy.

2. Five patients died in less then three hours from time of arrival to the emergency department. If these patients had remained in the emergency department, their deaths would not have been included in this study. To the extent that the practice of holding patients in the emergency department varies from hospital to hospital, and given that the likelihood of survival increases with time during the hospital stay, there is selection bias in the data. This is an excellent example of how patterns of care do not correlate with quality of care but certainly can effect reportable outcomes!

TENET.

3. Many examples of under coding were identified, particularly in patients who died within 24 hours. Frequently we did not code risk factors, such as cardiogenic shock, coma and seizures, thus falsely predicting a lower expected death rate. This is obviously a coding practice that we must change in order to provide accurate data for Model B.

An independent statistical analysis by Praxton Analytics Corporation pointed out for us that "During 1992, the confidence interval for Doctors Hospital's death rate did not include the state death rate. There were 14 observed deaths in 1992. If that number was 12, rather than 14, the confidence interval would have included the state's death rate. With just two outcomes swinging the assessment of performance, the application of the model to a single hospital is tenuous. For the 1991-1993 period as a whole, the difference of just three adverse outcomes changes the assessment of Doctors Hospital to **not significantly different than average**. Correcting the death total from 46 to 44, and considering the chance that even one of the patients that died early could have just as easily not been admitted underscores how sensitive - not robust - the statistics are."

In view of the limitations of this study we are confident that our community will continue to recognize the excellent quality of care provided at Doctors Hospital of Pinole.

Sincerely,

Gary Sloan
Chief Executive Officer

GS:rb/mioshpd.ltr

Friendly Hills Regional Medical Center

October 20, 1997

Office of Statewide Health Planning and Development
Health Policy Planning Division
1600 9th Street, Room 350
Sacramento, California 95814

Dear Dr. Werdegar:

We are pleased to once again have the opportunity to preview the results of the California Hospital Outcomes Project's 1991-1993 Report on Heart Attack. The efforts of this initiative are important as a preliminary attempt to develop public reports comparing hospital outcomes for selected conditions treated in hospitals throughout the state. While we recognize the importance of this State and OSHPD sponsored initiative, we feel that the study includes some major flaws. The results incorrectly, unfairly and unfavorably represent Friendly Hills Regional Medical Center's AMI mortality rate for the reasons set forth below.

- We are not confident that risks associated with the principal diagnosis of AMI were coded/captured accurately during the years studied. Retrospective coding audits conducted in years prior to 1996 revealed coding accuracy rates of only 33% with DRG assignment accuracy of only 77%. One coding audit adjusted the case mix from an original of 1.4043 to 1.5464. The majority of the coding errors were attributed to omission of secondary diagnoses or risk factors and omission of significant procedures.

  Our failure to code significant comorbidities such as hypertension, diabetes, congestive heart failure, renal disease, and the like made our patients appear lower risk than they actually were. Therefore, due to coding errors our risk adjusted death rate was significantly overstated in the study.

- The study did not take into account factors such as the presence of Advanced Directives and associated Do Not Resuscitate (DNR) orders. 57% of the patients reported as expired in the study sample had DNR orders present. Because these patients had expressed the desire to forgo heroics and life sustaining treatment, we feel that these do not feel that these deaths should be included in the study.

  The inclusion of cases with DNR orders present is a significant flaw in the study. We feel very strongly that cases with DNR orders should be excluded from subsequent studies.

1251 West Lambert Road, La Habra, California 90631
562/694-4711 • 714/992-2100

- Overall 45% of Friendly Hills patients are over the age of 60 years. Market studies reveal that the average age of the patients in our cachement area is greater in comparison to surrounding communities. From the sample selected for this study the average age was 70.7. The average age of the patients reported as expired was 77.7 years.

  The literature supports the fact that mortality rate from AMI increases as age and associated risk factors increase. Because Friendly Hills Regional Medical Center's patient base includes such a large percentage of older patients, we are placed at an unfair advantage in comparison to other facilities. The study would be more useful if mortality rates were reported and compared by age category.

- Because of the advanced average age of our patients, it is likely that our patients are sicker. Presence of missing variables such as low systolic blood pressure and low heart rate at presentation, shock and cardiac arrest within 24 hours more than likely present in our patients and had a significant adverse impact on our mortality rate.

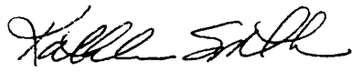
- We feel that comparing community hospitals without tertiary care to others that have capability for emergent angiography, angioplasty, bypass etc. is a significant flaw in the study. A significant percentage of Friendly Hills Regional Medical Center patients are transferred to a higher level of care directly from the Emergency Department because we do not have the capability to do cardiac angiography, angioplasty or bypass. Attributing adverse outcomes to the original facility places that facility at an unfair advantage. It is highly probable that the death could be attributed to treatment received after transfer.

We do not believe that the data is an accurate representation of outcomes relevant to our current protocols. Utilizing data that is 5 to 7 years old is not useful in predicting current outcomes. Many improvements in therapies, process and protocols including the widespread use of thrombolytics have enhanced our outcomes. We are proud of our positive patient outcomes and the work of our Thrombolytic Performance Improvement Team which has drastically reduced our "door to drug" time.

We do not believe that the study is an accurate representation of Friendly Hills Regional Medical Center's outcomes for AMI patients. For future studies, additional consideration should be given to factors such as patient age, clinical characteristics such as systolic blood pressure, shock at presentation, cardiac arrest within the previous 24 hours and DNR orders and availability of urgent angiography, angioplasty and bypass surgery.

Thank you once again for the opportunity to preview the study results. We hope that you will take our comments into consideration in subsequent study design.

Sincerely,



Kathleen Smith, Administrator
Guy Paquet MD, Medical Director
Marvin Rice MD, Chairman of the Board, CEO Friendly Hills HealthCare Network
Diana Meyer, RN, MSN, Director for Patient Care Services
Lynne Harshey RN, BSN, CPHQ, Regional Director, Quality Management

cc: David Mintz
Joyce Hawthorne

GARFIELD MEDICAL CENTER

Tenet California HealthSystem

September 30, 1997

RECEIVED OCT 0 6 1997

David Werdegar, M.D., M.P.H.
Director
Office of Statewide Health Planning and Development
1600 9th Street, Room 433
Sacramento, CA 95814

SUBJECT: California Hospital Outcomes Report; Garfield Medical Center

Dear Dr. Werdegar:

This is in response to your letter dated August 20, 1997 regarding California Hospital Outcomes Report in the area of AMI mortality. Under Model A, Garfield was ranked significantly worst then expected while under Model B we were ranked as not significantly different then expected.

Our review of the Model A Data showed that Garfield Medical Center experienced 247 Acute MI over the 3-year period. During this time there were 49 mortalities out of the 247 patients. To reach the OSHPD assigned mortality rate of 23.5% at least 9 patients had to expire within 30 days after discharge from GMC. OSHPD has not identified which of the remaining 198 patients did expire after leaving Garfield.

Please note that Model A accounts for differences among patients, not differences in the quality of care received. Model A also includes fewer risk factors. Thus, the risk factors included in Model B, Garfield Medical Center did quite well.

There were only 2 patients admitted from an ECF. Only one patient was a "No Code" on admission. Fourteen patients admitted for hospitalization under Model A were "No Code." Thus, the good results in Model B.

Over the past 3 years our mortality data has improved secondary to:

- Increased ordering practices of:
  ASA
  Beta Blockers
  Ace Inhibitors

525 N. Garfield Avenue / Monterey Park, California 91754 / (818) 573-2222

Accredited by the Joint Commission on Accreditation of Hospitals

- Decreased ordering practices of calcium channel blockers.
- Increased use of thrombolytic (started now by E.R. physician)
- Increased performance of Coronary Angiograms and PTCAs with possible CABGs.
- Development of a Critical Pathway for AMI patients.

Garfield is pleased to be part of the California Hospital Outcomes Project and appreciates the opportunity to response.

Sincerely,

Patrick Petre
Chief Operating Officer

PP0930D:kb

. . . Committed to your good health

Henry Mayo Newhall Memorial Hospital

23845 McBean Parkway Valencia California 91355-2083 Telephone (805) 253-8000

CALIFORNIA HOSPITALS OUTCOMES PROJECT

Henry Mayo Newhall Memorial Hospital (HMNMH) is a 227-bed, non-profit community hospital located in the Santa Clarita Valley. Seven percent (7%) of the population served by the Hospital are people 65 years and older.

According to the information from the Office of Statewide Health Planning and Development (OSHPD), HMNMH's observed mortality rate for acute myocardial infarctions for admissions between 1991 through 1993 was below our expected rate for both models utilized. HMNMH's observed mortality rate was 10.9% under model A versus an expected rate of 15.2%, and the observed mortality rate was 11.0% under model B versus an expected rate of 16.9%. HMNMH's rate was also below the statewide rate.

The OSHPD data has confirmed the high quality of care provided at HMNMH, as our observed mortality rates were all below our predicted rates.

Medical Staff committees are responsible to monitor the care provided to patients. The HMNMH Intensive Coronary Care Unit/Definitive Observation Unit Committee has established care protocols for acute myocardial infarctions and monitors the care provided. Through the collaborative efforts of the ICCU/DOU Committee, the Emergency Services Committee, and Hospital staff, a "Code Heart" program was implemented in February 1995. This emergency response team of physicians, nurses, and technicians immediately assemble in the Emergency Department upon notification of a potential heart attack victim's arrival to the Hospital to assure that thrombolytic therapy is started without delay to prevent further damage to the heart. Our internal monitoring demonstrates that the time interval from the patient's arrival to the Emergency Department to the time of administration of thrombolytic therapy has been cut in half since the program was initiated. The ICCU/DOU Committee has previously reviewed the outcomes data provided by OSHPD and will continue to do so.

In addition to the review of the OSHPD data which is several years old, the Hospital has contracted with a physician Board Certified in Pulmonary Medicine and Critical Care to serve as Medical Director for critical care services and recently installed the APACHE III System, a comprehensive decision support computer system for use in the Intensive Coronary Care Unit (ICCU) and Definitive Observation Unit (DOU) in order to access concurrent information about the quality of care provided to critical care patients, including patients with acute myocardial infarction. The System provides information on a concurrent and daily basis regarding the severity of illness of patients in the ICCU and DOU, predicts responses to therapy in terms of standard outcome measures like mortality and length of stay, compares the actual performance of the ICCU and DOU to predicted performance and monitors the resource consumption of ICCU

and DOU patients. These ongoing review processes provide the Hospital and Medical Staff with feedback mechanisms to continually improve our care and services.

Our goal is to continue to deliver the highest standard of care possible and do it within a community hospital setting. We are proud to maintain our Emergency Heart Care Program accreditation from the American Heart Association. We appreciate our community's support and always welcome comments and requests for further information.

a:\970830.1

October 17, 1997

Huntington
East Valley Hospital
An affiliate of Southern California Healthcare Systems

Andra Zach
Health Policy & Planning Division
Office of Statewide Health
Planning & Development
Health Policy & Planning Division
1600 9th St., Room 350
Sacramento, CA 95814

Dear Ms. Zach:

Thank you for the opportunity to respond to the "California Hospital Outcomes Report on Heart Attacks - 1991-93." I would like to note that the hospital's name,during 1991-1993, was Glendora Community Hospital. In April 1995, the hospital changed ownership and went from a for-profit to a not-for-profit status. Since then the hospital has undergone many changes in administration, medical staff, management and nursing leadership.

We have reviewed the data, and like many other acute care hospitals, take care of many patients with "Do Not Resuscitate" orders. And, as you indicate in your report, DNR status is not currently in the California data base. Additionally, we have identified coding difficulties during that time period that suggest that risk factors may not have been appropriately noted.

Huntington East Valley Hospital has been reviewing patients admitted with chest pain, as part of our quality initiatives. We have made many changes consistent with current standards of care, including prescribing aspirin and beta blockers, as appropriate upon discharge and instituted new laboratory tests to more accurately identify the presence of myocardial infarction. We were one of the first hospitals in the San Gabriel Valley to initiate this technology. Additionally, as part of our being certified as a member of the Emergency Heart Care Program of the American Heart Association (1996-1998), we are continuously reviewing our patient care outcomes.

Again, we appreciate being able to respond to this study.

Sincerely,

June Levine

June Levine, RN, MSN, CNA
Vice President, Operations/Nursing

JL:tm

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(818) 335-0231 · Fax (818) 335-5082

Western
Medical Center
Santa Ana

1001 North Tustin Avenue
Santa Ana, CA 92705-3577
(714) 835-3555

October 9, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 400
Sacramento, CA 95814

Western Medical Center Santa Ana appreciates the opportunity to respond to the Annual Report of the California Hospital Outcomes Project published by the Office of Statewide Health Planning and Development (OSHPD). We support the State's effort to better inform the public regarding the quality of health care being delivered in California hospitals. Unfortunately, the usefulness of the 1991-1993 Acute Myocardial Infarction Study is limited since the data reported primarily uses ICD-9-CM codes, a coding and classification system which does not recognize the severity of the patients' illness, has vague and consistently changing guidelines and is not uniformly reported by California hospitals and health care facilities. The severity of illness indexing or risk adjusting utilized in this study is dependent on coding of pre-admission diagnoses. Additionally, the statistical data that has been published has a very low probability of being related to the quality of care that a patient would receive at a given hospital.

Western Medical Center Santa Ana conducts extensive reviews of all mortalities and complications as a significant part of our Continuous Quality Improvement Program. The Medical Staff has taken opportunities to identify and improve patient outcomes. We believe our review processes provide continuous feedback that allows us to meet and exceed quality of care standards. Additionally, it should be mentioned that Western Medical Center Santa Ana added a Chest Pain Center in 1993 in order to better serve cardiac patients.

Thank you for the opportunity to respond to the California Hospital Outcomes Project Report prior to publication. We are aware OSHPD continues in their effort to improve the methodology of reporting.

If you have questions please feel free to contact me at (714) 953-3610.

Very Truly Yours,

Richard E. Butler
Chief Executive Officer

REB:dc

The Permanente Medical Group, Inc.

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SAN JOSE
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SANTA CLARA
SANTA ROSA
S. SACRAMENTO
S. SAN FRANCISCO
STOCKTON
VALLEJO
WALNUT CREEK

October 20, 1997

Dr. David Werdegar, Director
Office of Statewide Health Planning and Development
Office of the Director
1600 9th St., Room 433
Sacramento, Ca. 95814

Dear Dr. Werdegar:

The Kaiser Permanente Medical Care Program, and The Permanente Medical Group, would like to thank the Office of Statewide Health Planning and Development (OSHPD) for giving us this opportunity to comment on the latest release of OSHPD's Acute Myocardial Infarction (AMI) Mortality Report. KPNCR has made improving the quality of care for AMIs a goal for every facility and employee. To give one example, our Santa Clara hospital has made a number of changes in care, including implementing a Thrombolytic Protocol, collecting data prospectively on AMIs, making cardiologists the primary attending physician for AMI patients, improving the documentation of care and opening a Chest Pain Center for rapid evaluation of patients with Chest Pain.

We applaud the effort by OSHPD to measure hospital quality and are pleased that our San Francisco, Walnut Creek and Santa Rosa hospitals earned stars on this report. However, we continue to have concerns about this analysis. We would like to discuss timeliness, trending, validity, and future efforts in regard to this report.

First, hospitals need timely data. In the past few years mortality post-AMI has decreased significantly. This latest report (1991-1993) is too old to be useful for improving quality of care. We are currently calculating statewide mortality on 1995 data to meet our clinicians' need for more timely data.

Secondly, this report included deaths that occurred post hospital discharge. We do not think this expansion is particularly useful for AMI mortality. We would have preferred the same AMI mortality measure to allow for trending.

Thirdly, two-thirds of this data was reported on in earlier versions of this report, but the time periods were slightly different in the different versions. Reports with slightly different time periods make it difficult to compare the results from the old and new model for validation. Our rough comparison found substantial variation, a difference of up to 9%, between the different models. Which result should be believed?

Risk factors such as coma and epilepsy have very large coefficients in these models. This suggests the AMI may have been the immediate cause of a death which was long expected due to other conditions. Similarly, some patients with malignancies are included as AMI deaths. These cases should be excluded from the analysis since these deaths do not represent poor quality hospital care. Also, the diskettes for all KPNCR hospitals contained *no values at all for SEPSIS.* Is this an error in the spreadsheets or in the model?

The attached chart shows observed, expected and risk-adjusted mortality rates for the KPNCR hospitals and the statewide average. The first bars represent observed AMI mortality rates, the lighter bars expected mortality rates, and the line graph the risk adjusted mortality rates for the 1991-1993 period. The first point demonstrated by this table is that *all of KPNCR hospitals had observed AMI mortality rates lower than the state rate*, shown at the far right of the chart. The Kaiser Foundation Hospital in Santa Teresa's observed AMI mortality rate was over 2 percentage points lower than the state average. The chart shows that this hospital's observed mortality rate was very comparable to other hospitals, but its *expected mortality was much lower than most of the other hospitals and the statewide average.* This made the risk-adjusted rate very high for this hospital. The question is, were the patients at Santa Teresa really so low risk, or does the data for Santa Teresa incorrectly make them appear low risk due to incomplete data?

Dr. Ethan Daniels, a cardiologist at Santa Teresa, reviewed 21 cases of "AMI deaths" as defined by OSHPD's study for 1993. Of the 22 cases that were classified as such, 21 hospital charts were reviewed and the emergency room/EMS records, history and physical dictations, nursing notes and laboratory data/testing served as the primary source of information. In four cases the patient had no evidence of myocardial infarct and died as a result of other causes, and the other cases concern additional co-morbid conditions and circumstances that were not coded originally. His findings are summarized below.

CASES INCORRECTLY CODED AS MYOCARDIAL INFARCTIONS

Patient 342: Patient with known CAD, seen in ER with wide-complex tachycardia and demise. The ejection fraction was at or less than 20%, and the patient died of ventilatory failure. In review it was clear that the patient had long-standing heart and lung problems, and did not suffer a myocardial infarction. (Peak M:B fraction less than 6%, under 20 units), and had no symptoms or significant EKG findings to suggest that a myocardial infarction was the cause of the presentation or the reason for the death. Though this case was coded as an MI who died in the hospital, *no risk factors at all were listed in the OSHPD data for this patient, not even congestive heart failure the second diagnosis.*

Patient 349: Patient was admitted in a full-code state after 40 minute down-time. There was no increase in M:B CPK or any significant EKG finding to suggest that the patient suffered an MI. The patient was then allowed to die because of non-recovery from the prolonged event.

Patient 345: Patient admitted after full arrest in field. Marked increase in CPK but no significant M:B fraction (less than 1%.) EKG did not support the diagnosis of acute myocardial infarction.

Patient 386: The patient presented in the ER in extremis and over the initial part of the hospitalization developed an extremely dense CVA, which eventually lead to the patients' demise. Again, EKG findings and cardiac
enzyme reports do not support the diagnosis of acute MI as the cause of admission or demise.

CASES LACKING CODING OF RISK FACTOR CONDITIONS

Patient 336: Add: Pulmonary Edema
Patient 348: Add: Congestive Heart Failure, Pulmonary Edema, Anterior MI, Hypertension
Patient 357: Add: Anterior MI, Acute Renal Failure (No urine output) Patient had diabetes in hospital, unsure if present long-time.
Patient 404 : Add: Diabetes Chronic Renal Failure
Patient 308: Add: Diabetes, Hypertension, Acute Renal Failure
Patient 410 Add: Diabetes, Chronic Renal Failure
Patient 335: Add: Ventricular Tachycardia
Patient 378: Add: Diabetes, Chronic Renal Failure
Patient 325: Add: Central Nervous System Disorder (dementia) Also, this patient was in the terminal phase of illness.
Patient 372: Add: Coma, Diabetes
Patient 430 : Add: Shock, Coma

The above cases vividly illustrate the serious problem inherent in using old data collected for administrative purposes to assess quality of hospital care. When this data was collected in 1991 - 1993, hospitals were not careful that the data were 100% complete because there was no real incentive to do so. Review of some of these cases has found that risk factors were not always coded, and some patients included in the study were terminally ill prior to the AMI.

In recent years KPNCR has undertaken a major effort to correct and improve the documentation and coding of all of our data. We feel confident that current data are much more reliable than data from the early 1990's. The release of the earlier hospital outcome report may have stimulated similar efforts in other hospitals. Because problems with incomplete data will always limit the validity of reports on data from the early 1990's, we urge OSHPD to put more effort into ensuring that current hospital discharge data is of higher quality, and *to jump to 1996 data for the next report, to make it more timely and of better quality.*

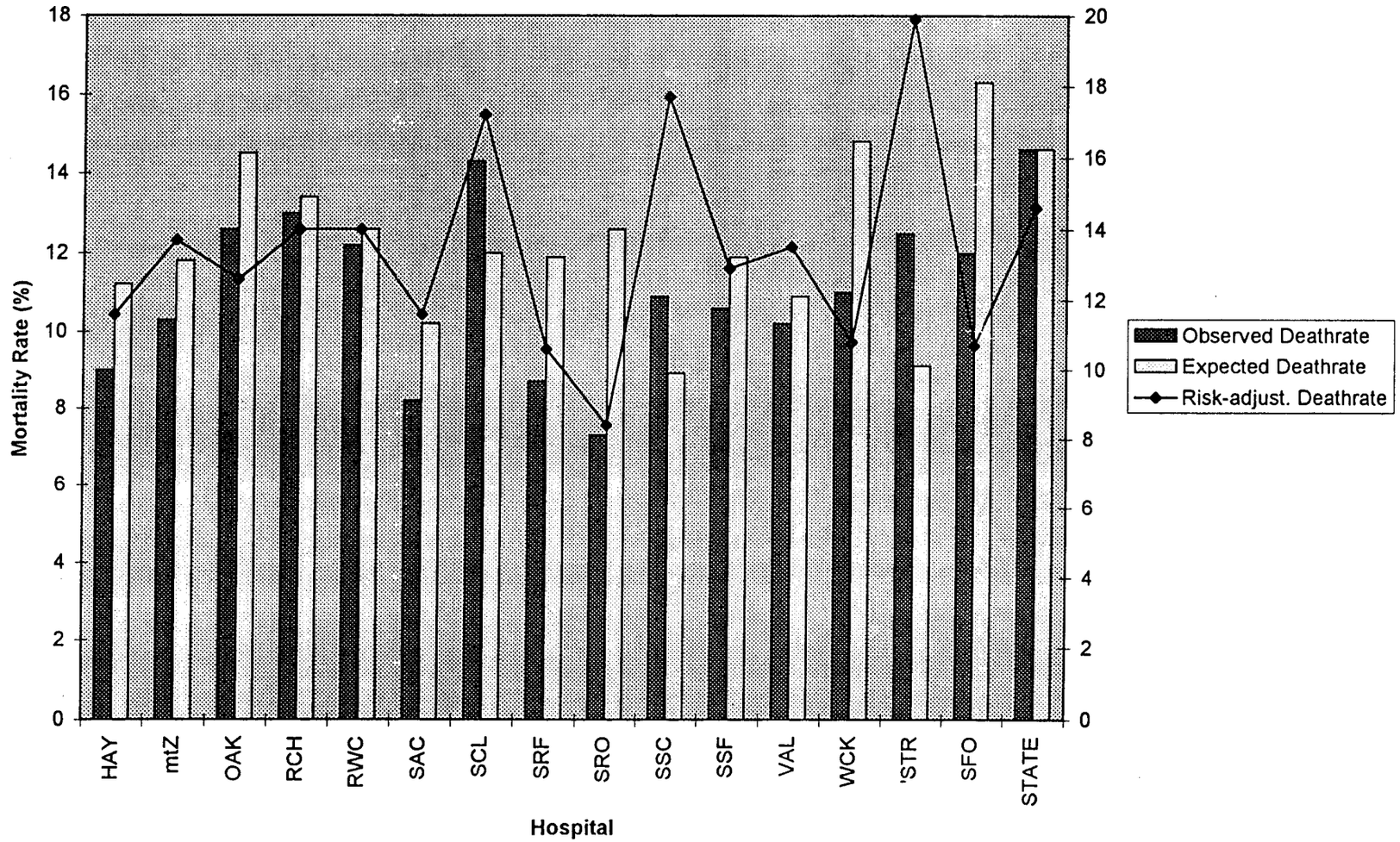
Finally, though this is the Hospital Outcomes Project, we suggest that OSHPD consider reporting on some *process* measures of quality. For example, numerous studies have shown that quick delivery of thrombolytics is an important predictor of survival post-AMI. This was also a recommended measure from the Clinical Panel OSHPD convened last year. This would make a strong process measure of quality, even if done only on a sample of cases. It doesn't have all the risk adjustment problems that outcome studies do. It would also have a clear link to quality improvement.

Sincerely,

Richard Rabens, M.D., Director
Department of Quality and Utilization
The Permanente Medical Group

Joyce Berger
Sr .Vice President , Operations
Kaiser Foundation Health Plan
and Hospitals

Observed, Expected and Risk Adjusted AMI Mortality Rates



Medical Care Program
Walnut Center
Pasadena, California 91188

October 20, 1997

David Werdegar, MD, M.P.H.
Office of Statewide Health Planning and Development
Office of the Director
1600 9th Street, Room 433
Sacramento, California 95814

Dear Dr. Werdegar:

The Kaiser Permanente Medical Care Program would once again like to thank the Office of Statewide Health Planning and Development (OSHPD) and its contractors in their effort to assess quality of care in California hospitals. We are pleased that these results continue to reflect the high-quality care provided at Kaiser Foundation Hospitals, especially at our San Diego hospital, but are concerned that methodological issues may be masking excellent performance at our other hospitals.

Our hospitals have extensive quality improvement and peer review programs in place, as well as a Regional Cardiac Services Committee to facilitate regionwide review and sharing of successful or innovative practices. All hospitals have in-house cardiologists readily available to hospital patients. We have regional guidelines in place for the prevention and treatment of AMI. Our efforts at monitoring our processes of care show that most AMI patients at our hospitals, eligible for thrombolytic or other pharmacologic therapy, appropriately receive such treatment.

In recent years, our hospitals have established or expanded programs for ensuring AMI patients receive the highest quality care. Examples of these strategies include: the use of preprinted orders for the administration of thrombolytics, beta-blockers, lipid-lowering medications, and aspirin; care paths; preprinted discharge orders for medications; case management programs; cholesterol clinics; and patient education. We expect that the results of these efforts will enhance the standing of Kaiser Foundation Hospitals in future reports.

In our review of the methodology used to obtain these results, we identified some issues on which we would like to elaborate. We share these issues with you in the hope that you will consider them when planning future reports of this nature.

First, the results are based on data that are over four years old and do not reflect current practices. For example, a case management program for patients with coronary artery disease has been developed in the past year at two of our hospitals. Second, the methodological change in the mortality measure from past reports prevents comparisons over time.

OSHPD spent considerable time and resources validating its previous measure of mortality, 30-day in-hospital mortality. In this current report the outcome measure has been changed to 30-day mortality, regardless of where the death occurred, a measure that has not been validated by OSHPD. We believe that 30-day mortality introduces too many unmeasured intervening variables that are beyond the control of the hospital (e.g., the likelihood that a patient who has been discharged and is experiencing adverse events will return to the hospital is influenced by the patient's level of education, support network, proximity to hospital care, transportation resources, etc.) It also raises the issue of patient compliance with the treatment protocol outside the hospital setting. Hospitals may not have the opportunity to provide additional care to patients who have been discharged.

However, we recognize that hospitals are responsible for ensuring that patients are discharged in a stable condition. The earlier measure, 30-day in-hospital mortality, may have rewarded hospitals for discharging patients too early. A compromise might be to measure 15-day mortality. Deaths that occur in this time frame, regardless of location, might better reflect care and processes available at hospitals and limit the influence of the intervening variables mentioned above. If further changes in the outcome measure are made it would be helpful to simultaneously report the past measure to allow for comparisons over time. Also, new outcome measures should be validated prior to the release of reports.

In closing, we would like to remind readers of this report to keep in mind the limitations we and others have raised. The Kaiser Permanente Medical Care Program is committed to quality improvement and looks forward to seeing the results of our efforts accurately and fairly reported in future reports.

Sincerely,

Edgar T. Carlson
Senior Vice President
Operations Development for Southern California

Joel D. Hyatt, MD
Assistant Medical Director, Clinical Services
Southern California Permanente Medical Group

Kaweah Delta Health Care District

October 13, 1997

Office of Statewide Health
Planning and Development
Health Policy and Planning Department
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Sir:

Results of OSHPD's third report on MI mortality covering patients admitted to Kaweah Delta Health Care District have been reviewed by the medical staff. The methodology employed has also been reviewed. Discussion with our cardiology staff has resulted in the following observations:

1. The risk adjustment methodology is reasonable and leads to calculated, expected mortality rates that are not unexpected. However, these rates have wide confidence intervals.

2. The observed mortality rates at Kaweah Delta Health Care District are within these confidence intervals.

3. The inclusion of patients with principle diagnoses presumed to represent AMI complications, when a secondary diagnosis of AMI (ICD-9 codes of 410.0 and 410.1) is used, is problematic. We believe this inclusion of patients distorts the mortality rate measurement reasonably attributed to AMI. Patients with these "complications" have very high mortality rates and many have no reasonable evidence of AMI despite the fact that they receive this diagnosis.

4. The most important criticism that can be leveled, however, is that these mortality rates reflect patients treated long ago, 1991 through 1993. Our internal measures show this mortality rate to be decreasing; in 1996 the AMI mortality rate at Kaweah Delta Health Care District was approximately 8%. This contrasts sharply with 16.4% rate in 1991-1993. If the public is to make judgments of hospital quality, they will be acting on information that is outdated.

400 West Mineral King • Visalia, CA 93291-6263 • 209 625 2211 • FAX 209 635 4021

5. Another important criticism is the lack of process measures considered in recognizing facilities as "better than expected." **We believe that process measures can also identify facilities that are providing care that is "better than expected."** Such measures are widely reported and include appropriateness of drug use, acutely and at discharge, timeliness of drug use, and other process measures.

6. CMRI evaluation of such process measures has been demonstrated superior performance at Kaweah Delta Health Care District with respect to the use of aspirin, ACE inhibitors, and Beta-Blockers, as well as avoidance of Calcium Channel Blockers for patients with low ejection fractions.

If you have any questions regarding this response, please call me at 209)625-7221. Thank you.

Sincerely,

Tom Johnson
Chief Executive Officer

Little
Company
of Mary
Hospital
affiliated with
Little Company of
Mary Health Services
4101 Torrance Blvd.
Torrance, CA 90503
(310) 540-7676

October 17, 1997

Office of Statewide Health Planning and Development
Attention: David Werdegar, MD, MPH
Office of the Director
1600 Ninth Street, Room 433
Sacramento, CA 95814

Dear Dr. Werdegar,

Little Company of Mary Hospital is governed by our mission to deliver the highest quality of care. We respect the patient as an individual and their entitlement to information available to make an informed decision about the hospital they choose. We feel the OSHPD California Hospital Outcomes Project 1997 is a process that helps to support this objective.

As you point out in your *Report of Heart Attacks Users Guide*, there are limitations in this Outcomes Project in fully describing the quality of care given at hospitals. Although your recent AMI validation project does help to satisfy many of the questions that we had last year, the reliance upon this 1991-1993 data as a measure of today's hospital quality is suspect. We would encourage OSHPD to analyze and report data in a more timely manner. Hospitals, medical staffs and consumers would most benefit from current outcome findings.

We are proud of the quality care given at LCMH and we support all efforts directed at accurately identifying and improving quality medical care.

Very truly yours,

Mark Costa
President, Little Company of Mary Hospital

LOMA LINDA UNIVERSITY MEDICAL CENTER

Office of the President
& Chief Executive Officer

11234 Anderson Street
Post Office Box 2000
Loma Linda, California 92354
(909) 824-4308
FAX: (909) 478-4308

October 20, 1997

Office of Statewide Health Planning & Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

RE: 1997 OSHPD Heart Attack Report

TO WHOM IT MAY CONCERN:

Thank you for forwarding the results of the OSHPD Heart Attack Reports for years 1991, 1992, and 1993. We have found this information very helpful for our internal use in assessing our current practices. In reviewing the actual medical records for the mortality cases from calendar year 1993, we have found some inaccuracies in the data used to calculate disease severity. In each case the inaccuracy would lead the disease severity score for the patients to appear less than it actually was. There were three sources of inaccurate information. The first two are related to the way the information was coded internally from our medical records staff and these issues are being addressed locally. The third is related to the severity model.

The first source of error was in principle diagnostic coding. Several patients were coded with ICD 9 410.7, for subendocardial myocardial infarction when in fact review of the record revealed that they had identifiable transmural infarctions.

A second type of inaccuracy resulting from internal coding practices was a failure to include all concomitant diseases in an accurate fashion. For example, one patient who had to be intubated in the Emergency Room due to pulmonary edema did not have coding that reflected either the intubation or the pulmonary edema.

The third potential source of inaccuracies in the data has to do with the lack of subdivisions of congestive heart failure. Many of our patients in the mortality group had severe congestive heart failure with ejection fractions below 25%. Unfortunately, with the current model there is no way to differentiate these patients from the patients with CHF of mild degree and good residual ejection fractions.

We are confident that correcting the above inaccuracies related to our internal coding would have a favorable effect on our risk-adjusted mortality rates. Thank you again for allowing us to respond to the presentation of the original data. Please let us know if we can provide any further information to you.

Sincerely,

J. David Moorhead, M.D.
President and CEO

JDM/sjr

Mad River Community Hospital
3800 JANES RD. P.O. BOX 1115
ARCATA, CALIFORNIA 95518
TELEPHONE: 707-822-3621

October 15, 1997

Ms. Andra Zach, RRA, MPA
California Hospital Outcomes Project
Office of Statewide Health and Planning Development
717 K Street
Sacramento, California 95814

Re: Acute Myocardial Infarction Review, 1991 to 1993

Dear Ms. Zach:

Your recent survey reported that we had 33 deaths out of 159 cases of myocardial infarction between the above mentioned years. These 33 patient records were reviewed by the Department of Internal Medicine. There were no medical quality of care issues identified during this review. It was found that 13 of these patients (39%) presented to the Emergency Room with irreversible brain damage and maintained a pulse long enough to be admitted to our acute care facility. Coding for anoxic or hypoxic encephalopathy was included in the discharge coding.

It is our contention that this may represent an acclamation of aggressive, well-trained emergency crews as well as citizens highly trained in CPR in our community. Seventy percent of our population lives within a six-minute response time for our emergency medical response teams which adds to our cardiac resuscitation percentage.

These types of cases should be eliminated from the database not only for our hospital, but statewide. Removing these 13 cases from the database would bring the mortality rate for Mad River Community Hospital down to 13.7%.

We need the statewide percentages for patients admitted to California hospitals with a pulse and anoxic encephalopathy to confirm our hypothesis. Your help in providing this information would be greatly appreciated.

Sincerely,

Lawrence A. Senffner, M.D.
Chairman
Department of Internal Medicine

LAS:jrlm
cc: Douglas A. Shaw
Administrator

Mercy American River/Mercy San Juan Hospital

October 16, 1997

David Werdegar, M.D., M.P.H.
OSHPD
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

RE: California Hospital Outcomes Project

Dear Dr. Werdegar:

Mercy Healthcare Sacramento (MHS) is committed to ongoing clinical quality improvement. We support the analytic approach undertaken by the Office of Statewide Health Planning and Development (OSHPD). The California Outcomes Project provides a unique opportunity to evaluate our performance in relationship to hospitals across the state. In addition, MHS is asking its respective medical staffs to review the information provided.

We call the reader's attention to certain issues to be addressed by the research team:

1. The data released in this report reflects patient care rendered from 1991 - 1993. Due to the age of this data, its uses are significantly limited.

2. The presentation of the two models (Model A and Model B) is confusing. We recommend the OSHPD select only one model for future reporting.

3. We continue to support OSHPD's decision not to report ranks for hospitals. The wide confidence intervals associated with the estimates of risk-adjusted outcomes lead to similarly wide confidence intervals associated with the corresponding ranks. As a consequence of these wide confidence intervals, we believe that the hospital ranks are too uncertain to validly order hospitals.

4. The format of the data returned to the facilities needs improvement. We recommend that OSHPD provide the patient medical record number in the report, rather the identifying patients by social security number alone.

☐ **American River Campus**
4747 Engle Road
Carmichael, CA 95608
Phone 916/484-2222

☐ **San Juan Campus**
6501 Coyle Avenue
Carmichael, CA 95608
Phone 916/537-5000

☐ **Surgery Center**
6660 Coyle Avenue
Carmichael, CA 95608
Phone 916/965-1936

A Division of Catholic Healthcare West

5. As indicated in the report, the Do Not Resuscitate (DNR) status of patients is not a risk factor which was available for this reporting period (1991-1993). We believe that this information may have significantly altered the report's outcomes for hospitals which treat a high percentage of DNR patients.

Thank you for allowing us to respond.

Sincerely,

Michael J. Uboldi
Vice-President/
Chief Operating Officer

Richard Nybakken, M.D.
Chief of Medical Staff

Mercy Hospital of Folsom

October 16, 1997

David Werdegar, M.D., M.P.H.
OSHPD
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

RE: California Hospital Outcomes Project

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MERCY 1896 100 A CENTURY OF CARING

1650 Creekside Drive
Folsom, CA 95630
(916) 983-7400

A Division of Catholic Healthcare West

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Thank you for allowing us to respond.

Sincerely,

Donald C. Hudson
Vice-President/
Chief Operating Officer

Jay Draeger, M.D.
Chief of Medical Staff

Mercy General Hospital

October 16, 1997

David Werdegar, M.D., M.P.H.
OSHPD
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

RE: California Hospital Outcomes Project

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Thank you for allowing us to respond.

Sincerely,

Thomas A. Petersen,
Vice President/ Chief Operating Officer

Michael A. Davis, M.D.
Medical Staff President

1996 MERCY 100 A CENTURY OF CARING

4001 J Street
P.O. Box 19254
Sacramento, CA 95819-9990

A Division of Catholic Healthcare West

MERCY HOSPITAL
& HEALTH SERVICES

October 16, 1997

David Werdegar, M.D., M.P.H., Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 - 9th Street, Room 350
Sacramento, CA 95814

Dear Dr. Werdegar:

Thank you for the opportunity to comment on the California Hospitals Outcomes Project. Mercy Hospital and Health Services (MHHS) welcomes the opportunity to discuss the quality of our care and services.

While we support the concept and use of valid and reliable data comparison, we have discovered that reports such as the RAMO analysis do not provide the true picture of clinical care within a facility. This is of special concern when reports such as these are disseminated to the general public with the expectation that this information can be utilized as an indicator of quality.

In reviewing our hospital specific data for acute myocardial infarction, we note that we met the parameters of Model A. However, in Model B, when additional demographic and clinical indicators were evaluated, we received a "significantly worse than expected" rating. Through an intensive assessment of what is now four to six year-old data, we discovered many issues that have no bearing on the quality of clinical care that a patient actually receives. Following is a summary of our findings.

Technical/Coding Issues

- 96.2% of the patients in Model B were coded as urgent, as compared to 60.4% of the patients in the statewide statistics. We believe this factor had a strong influence on the risk adjustment, and is thus borne out by the difference in the ratings for the two models. According to the study, urgent was given the same risk adjusted rating as elective, therefore, miscoding related to the type of admission would have significantly affected the overall risk adjustment for this patient population.

- According to the study, MHHS had 42 observed deaths out of 229 patients.

- Of these 42 deaths, *seven* were not reviewed due to insufficient information from the report, however, we know they did not expire as patients of MHHS.

2740 M Street, Merced, California 95340-2880, 209-384-6444, Facsimile 209-722-2902
Sponsored by the Dominican Sisters of Kenosha, WI

- *Six* patients had been miscoded and should not have been included in the study due to an origin of Skilled Nursing Facility (3) or other acute care hospitals(3).

- *One* patient had a primary diagnosis other than AMI.

- *One* patient was miscoded, and was not actually an AMI.

- *One* patient had actually expired at home, was bathed and dressed in cultural clothing prior to the EMS call being placed.

After an extensive review of technical and coding issues we have concluded that, had the coding more accurately reflected the clinical condition of the patient, MHHS would have met or exceeded the parameters established for rating of AMI patient care.

<u>Clinical Issues</u>

- Of the twenty-six patients that expired during the sample size, 53.5% had ***Do Not Resuscitate*** or ***Limited Resuscitation orders***. MHHS is a strong advocate for patient self-determination and we actively provide patients and families with information related to critical decisions. The majority of patients in this study had lengths of stay less than one day and were brought to the hospital in a critical or a terminal state. We do feel that we have an obligation to care for patients' spiritual well-being with the same enthusiasm as we care for their physical well-being. Therefore, we believe that vital information such as code status should be an appropriate part of any quality study related to mortality.

MHHS had significant variation in the demographic and clinical characteristics of its patient population as compared to the statewide average. Those differences are as follows:

	MHHS	***State***
Age	76	67.3
Female	65.4%	36.9%
White	92%	78.3%
Renal Failure, Acute	10%	3.7%
Diabetes, Complicated	24.1%	18.7%
Pulmonary Edema	20.7%	8.1%
Inferior MI	27.6%	19.8%

- MHHS patient population was 8.7 years or 13% older than the statewide average. In addition, MHHS had a predominately female population. Recent studies released by the American Heart Association report that while more men have heart attacks each year, women have lower changes of surviving them. Their findings showed that 44% of women who have heart attacks will die within one year compared to 27% of men.

While we at MHHS understand and support the need for comparative clinical outcomes data, we have concluded that reports generated from financially driven reports such as those used in this study, call in to question the validity of any such data. Our analysis demonstrated that the coding practices of non-clinically based individuals had a strong influence on our reported clinical outcomes. In addition, it is apparent that as a facility, we serve a population that recent research has shown to be "at risk" for increased mortality. We strongly respect life and provide patients with an opportunity to participate in decisions regarding a quality existence. We are leaders in our community in issues related to patient self-determination and end of life decisions. We do not feel that we should receive adverse public scrutiny for our beliefs, nor do we feel a financially-driven model accurately reflects our philosophy.

It is with a full understanding of the public's need for information that we express our intent to support and participate in studies such as this one in the future. Again, thank you for the opportunity to present this response.

Sincerely,

Kelly C. Morgan
President and Chief Executive Officer

mf

c: Donald Mason, M.D., Chief of Staff
Wesley Root, M.D., Medical Director of Medical Affairs
Ed Schroeder, President/CEO, St. Joseph's Regional Health System
Jill Magri, Vice President of Clinical Services
Peggy Joseph-Potter, Administrative Director of Quality Services

Methodist Hospital of Sacramento

October 16, 1997

David Werdegar, M.D., M.P.H.
OSHPD
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

RE: California Hospital Outcomes Project

Dear Dr. Werdegar:

Mercy Healthcare Sacramento (MHS) is committed to ongoing clinical quality improvement. We support the analytic approach undertaken by the Office of Statewide Health Planning and Development (OSHPD). The California Outcomes Project provides a unique opportunity to evaluate our performance in relationship to hospitals across the state. In addition, MHS is asking its respective medical staffs to review the information provided.

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4. The format of the data returned to the facilities needs improvement. We recommend that OSHPD provide the patient medical record number in the report, rather the identifying patients by social security number alone.

5. As indicated in the report, the Do Not Resuscitate (DNR) status of patients is not a risk factor which was available for this reporting period (1991-1993). We believe that this information may have significantly altered the report's outcomes for hospitals that treat a high percentage of DNR patients.

Thank you for allowing us to respond.

Sincerely,

Stanley C. Oppegard,
Vice President/ Chief Operating Officer

Richard D. DeFelice, M.D.
President of the Medical Staff

1996 MERCY 100 A CENTURY OF CARING

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A Mercy Healthcare Sacramento Hospital

NATIVIDAD MEDICAL CENTER

Friendly People — Family Medicine

1330 Natividad Rd.
P.O. Box 81611
Salinas, Ca 93912
(408) 755-4111

RESPONSE TO OSHPD - REPORT ON HEART ATTACK 1991 TO 1993

Several goals are clearly stated in this 217-page report plus computer diskette. The primary goal is "to improve the quality of hospital care available to all California citizens." This "Report on Heart Attack 1991 - 1993" documents the mortality rate for cases coded as myocardial infarction during those years and, using elaborate techniques to link data bases, is able to capture 30-day mortality rates if patients are coded properly and if they die in California. This is an ambitious project and, given the above variables, collects large amounts of information which is useful as a starting point. It also has pitfalls. It depends on how the data is handled.

It is my thesis that the information in its current form is quite unfriendly to use. If a few more data points are abstracted from charts or if linked to another data base (such as Cooperative Cardiovascular Project from California Medical Review, Inc. (CMRI)), more practical and easily applied information would be obtained to help hospitals and physicians achieve the above goals.

Reviewing the information from the Natividad Medical Center in Salinas, using either model A or model B, our mortality rate is not significantly different than expected from California as a whole. This is also true of two other hospitals in Monterey County with whom we interact.

Currently it is our practice to identify high risk patients in our emergency room, even prior to admission to the hospital, and send them directly to the Cath Lab. I cannot be sure if this information would be captured in this study and yet we are providing state of the art care for these patients with some outstanding results. These patients would otherwise be likely to have poor outcomes. Our hospital would not be given credit for numbers of patients seen and properly treated. Currently these patients are transferred to another hospital for the Cath Lab part of their care.

Also, reviewing the computer diskette, 17 of our 116 patients (15%) had no social security number. Including the hospital medical record number would be very useful to review cases or even see they were included in the data. Also, as the diskette was printed out, all dates of birth are crossed out and do not print. This makes it virtually impossible to use the information. There is no key provided to the various columns so that sex, race, pay source, disposition, etc., are not easy to analyze. In short I find the information difficult to use. I find our ability to identify patients from this information cumbersome and frustrating. To me, this is the start of a work in progress and, if it is to be useful to clinicians, must be decoded significantly. Including medical record numbers would be a large help.

Using this report we only have raw data and a statistical analysis of death rates from myocardial infarction. While this is a hard data point and the ultimate one, it is only a starting point. For research and health care planning activity, it would be logical to look at yearly death rates. This information is already available to you.

As a health care provider, I (and others) need guidance as to how to improve our results. This report would be more helpful if it included a few more data points or merged information with another data base such as the CMRI study alluded to earlier. It would be quite useful to see additional information for Q-wave myocardial infarction (aspirin use, thrombolytic use, PTCA use, ACE inhibitor use, beta blocker use, smoking advice). This points us in a given direction and gives us a "report card" on how we are doing.

Reviewing Table 2.1 of page 6 in the Technical Guide, it seems counter intuitive that "never smoked" is a risk factor for death in myocardial infarction and "currently smoking" has a protective effect. A history of prior CHF and hypertension is also protective. I don't understand this.

In summary, I am pleased that our hospital is not an outlier with a high mortality rate for myocardial infarction. I have some concerns about whether this report captures all our information as cases which have high expected mortality go directly to a Cath Lab. In its current format, this report is of little use to me as I cannot easily identify those patients who died because medical record numbers are not included. We do not code by social security

number and 15% of our patients did not have one. Additional information as alluded to in the body of this response would be helpful. The report is a good starting point and certainly captured my attention. We all wish to improve our treatments.

Thank you,

JOHN SCHATZ, M.D., F.A.C.C.
Chief of Cardiology
Natividad Medical Center

HOWARD H. CLASSEN
CHIEF EXECUTIVE OFFICER
NATIVIDAD MEDICAL CENTER

dme d10-07/t10-07-97

NORTHBAY HEALTHCARE
A Non-Profit NorthBay Healthcare System Affiliate

October 16, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, California 95814

RE: Report on Heart Attack, 1991-1993
OSHPD Data

Dear Dr. Werdegar:

Our organization has reviewed in detail the Report on Heart Attack, 1991 - 1993. In review of the inclusion and exclusion criteria detailed in the Technical Guide, Vol. 2., we believe that five cases at VacaValley Hospital (484001) and seven cases from NorthBay Medical Center (481357) were incorrectly included in this study. These cases do not meet the established criteria and are described in brief below.

VacaValley Hospital (484001):

Case #1
This patient was admitted from a convalescent and rehabilitation center, with a Do Not Resuscitate status. Meets exclusion criteria.

Case #2
This patient was admitted from a convalescent and rehabilitation center. Meets exclusion criteria.

Case #3
This patient was admitted to the hospital with chest pain. There was no evidence of myocardial infarction by EKG and cardiac enzyme review. The patient had acute cardiopulmonary arrest, with unsuccessful resuscitation. Inclusion criteria not met.

Case #4
This patient admitted with upper gastrointestinal bleed and a known case of portal hypertension. Patient complained of chest pain, and subsequent EKGs and cardiac enzyme review were negative. The discharge summary states, "Chest pain, possible myocardial infarction," however, this was not supported in the review of EKG's and enzymes report, which were negative. Inclusion criteria not met.

1200 B. Gale Wilson Boulevard
Fairfield, CA 94533-3587
Telephone 707/429-3600

Case #5

Patient with metastatic breast cancer admitted following a seizure. The discharge summary reports acute myocardial infarction, however, the EKG and CPK enzymes were non-diagnostic for an acute myocardial infarction. Inclusion criteria not met.

The following cases are from NorthBay Medical Center (481357):

Case #1

Patient admitted with abdominal pain, confirmed on autopsy to be acute diffuse bowel infarction. During hospitalization, the patient was hypotensive, and the 12-lead EKG demonstrated inferior and left wall myocardial infarction, age indeterminate. The ST segment elevations were concave, suggestive more of localized pericardial irritation. Patient's cardiac enzymes were negative for myocardial necrosis. Autopsy confirms no evidence of myocardial infarction. Cause of death was sepsis due to acute bowel infarction. Inclusion criteria not met.

Case #2

Patient admitted with syncopy and end-stage pulmonary emphysema and later experienced a cardiopulmonary arrest. EKGs and cardiac enzymes do not reveal any evidence of myocardial infarction. Inclusion criteria not met.

Case #3

Patient admitted from nursing home. Meets exclusion criteria.

Case #4

Patient admitted with acute exacerbation of COPD. CPK enzymes drawn 2 days later, revealed mild elevation with positive MB fraction. Patient was diagnosed to have a non-Q wave myocardial infarction with poor left ventricular function. The patient had a cardiopulmonary arrest and died. This patient should be excluded as the admitting diagnosis was acute exacerbation of COPD. Inclusion criteria not met.

Case # 5

Patient admitted with severe metabolic acidosis related to liver and renal failure. Patient developed hypotension during dialysis and experienced a cardiopulmonary arrest. Patient had a Do Not Resuscitate status. The Discharge Summary reports probable acute myocardial infarction with cardiogenic shock. EKGs and cardiac enzymes demonstrate no evidence of myocardial infarction. Inclusion criteria not met.

Cases #6

Patient had an acute myocardial infarction 3 months prior to being admitted to NorthBay Medical Center having experienced a sudden cardiac event. Patient had a down time of approximately 11 minutes and suffered serious cerebral anoxic injury. Patient's 12-lead EKG on admission demonstrates acute inferior and left wall myocardial infarction, age indeterminate. The patient's enzymes were negative for myocardial necrosis. The Discharge Summary reported acute myocardial infarction with cardiac arrest however, there was no evidence of myocardial necrosis by enzyme criteria. The patient's EKG may be revealing a previous infarction and/or infarction pattern secondary to severe anoxic cerebral injury. Inclusion criteria not met.

Case #7

The social security number and birthdate reported in the OSHPD data do not match any patient in our current medical records data. The patient with this identified social security number is still alive. No patients with the identified birthdate expired in 1991 according to medical record review.

We believe the above noted cases should not be included in this study for the stated reasons. When the observed death rate is recalculated, NorthBay Medical Center's observed rate is 12.8% and VacaValley Hospital's rate is 10.2 %. These rates are significantly below the 14.6% statewide death rate.

Our organization is dedicated to continuous quality improvement. We consistently monitor internal and external data and strive to improve the quality of care for our cardiac patients.

Sincerely,

Deborah Sugiyama, President
NorthBay Healthcare

Terrell Van Aken, MD
Chief of Staff
NorthBay Healthcare-Hospital Division

ParadiseValley
HOSPITAL

2400 East Fourth St.
National City, CA
91950-2099
619-470-4321

October 15, 1997

David Werdegar, MD, MPH, Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Dr. Werdegar,

Thank you for the opportunity to respond to the results of the OSHPD heart attack outcomes study. After careful review of the information, as well as review of the medical records, we have identified some areas of concern.

On every medical record that was reviewed, it was determined that the severity of illness codes, which did affect the risk of adjusted mortality rate, had not been coded on each case. Missing codes included: pulmonary edema (PULEDEMI), paroxysmal ventricular tachycardia (PVENTACI), coma (COMAI), complete atrioventricular block (COATRBLI), congestive heart failure (CHFB), hypertension (HTB), and shock (SHOCKI).

The Medical Records Department has modified its data abstraction process to also include information that would support the severity of illness of our patients. We will also be reviewing the information provided in this study in greater detail with the ICU/Medicine Committee and the Quality Improvement Committee.

Please let us know if we can provide further information.

Respectfully submitted,

Eric Martinsen

Eric Martinsen
President & CEO

cc: Richard Stennes, M.D., Chief of Staff
June Beaumont, Director, Clinical Information & Quality

PETALUMA VALLEY HOSPITAL
400 North McDowell Boulevard ▪ Petaluma CA 94954 ▪ 707 / 778-1111

October 15, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Colleagues:

We have reviewed the data presented in the draft reports sent to us a few weeks ago and find the Petaluma Valley Hospital data to be consistent with our own findings as we have continued to study acute MI. We at PVH appreciate the opportunity to participate in the AMI study conducted by OSHPD and find the reports to be impressive in their level of detail.

We would like to comment on some improvements to the later states of the study. In this era of increased efforts at reducing length of stay, there is a great tendency to transfer patients to other levels of care or acuity, which previously had taken them out of the study. Subsequent deaths were not accounted for (nor were hospitals always aware of ultimate patient outcomes). However, looking at deaths within 30 days regardless of location, be it skilled nursing, home or acute care; gives a much more accurate picture of post-MI mortality than looking only at deaths during acute hospitalization. In addition, adjusting for risk factors present on admission vs. factors that are likely complications of care/treatment, provides for a more realistic measure of complexity and risk. The efforts at risk-adjustment are appreciated, particularly as PVH is one of the participants with smaller volumes as well as high average ages and thus subject to much statistical variation.

Again, we appreciate the opportunity to participate in this study and look forward to the final report.

Sincerely,

PETALUMA VALLEY HOSPITAL

Neil E. Martin
President/CEO

Pomona Valley Hospital Medical Center

October 20, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th St., Room 350
Sacramento, CA 95814

Dear Doctor Werdegar:

Pomona Valley Hospital Medical Center (PVHMC) received the data analysis from the Office of Statewide Health Planning and Development (OSHPD) on Acute Myocardial Infarction (AMI) Mortality.

This report reflects our state adjusted AMI mortality rate was higher than expected. This report was referred to our Cardiac Services Committee for review and analysis. Our Cardiac Services Committee is a multidisciplinary group that reports to our Medical Executive Committee. Additionally our Performance Improvement Coordinating Committee reviewed these study results.

PVHMC provides a comprehensive cardiac care program for our region. We take care of both community patients and referrals from other areas. We have a Performance Improvement Program in place that continually monitors treatment provided with actions taken when we identify opportunities to improve. Our care of MI patients was reviewed and certified by the Emergency Heart Care Committee of the Greater Los Angeles Heart Association and we received a full three year certification (1996-1998). PVHMC adheres to the American Heart Association (AHA) guidelines in our Cardiac Intensive Care Unit (CICU).

Since 1992, we have been participating in an ongoing study with the National Registry of MI (NRMI) funded by Gentech. We also participated in the Cooperative Cardiovascular Project organized by the Health Care Financing Administration.

PVHMC is committed to delivering excellent care to all of our patients. Beyond our own internal and external monitoring, we plan to continue to analyze data provided us by OSHPD and participate in future studies.

Sincerely,

Jeffrey M. Rieker, M.D.
President, Medical Staff

1798 North Garey Avenue • Pomona • California 91767 • (909) 865-9500

Ridgecrest Community Hospital

Personally we care . . .
. . . Professionally we serve

October 17, 1997

Ms. Andra Zach
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, California 95814

Dear Ms. Zach:

Please find this letter to be a reply to your recent request for input from the institutions participating in your "AMI Outcomes" study. Our institution, Ridgecrest Community Hospital (RCH) in Kern County, wishes to dispute your publication of our data, as currently represented, in the public compendium. Our concerns are virtually identical to those voiced in our letter of reply to your first publication, a letter dated 7/18/95.

During the study period, RCH established a relationship with an invasive center, as we had neither invasive cardiology nor cardiothoracic surgery at our small, rural hospital. Thus, following this date, we transferred all (potential) AMI patients to another center for admission. These patients were never "admitted" to our facility, and thus would not reflect on our statistics. The only patients we kept (admitted) were those too unstable to transfer, and as can be readily seen, the mortality rate of AMI patients too unstable for transfer would naturally be higher than the unselected AMI population. Evaluation of our institution, aside institutions without such a transfer policy, would be both unfair and misleading. For details of our in-house analysis of this issue, please see the aforementioned letter.

During your last publication cycle, we received no reply from your office regarding our concerns. Obviously, we feel that we have valid criticisms of your publication plans, and we would appreciate an appropriate change in your plans for publishing our data. Still, should you chose to again ignore our concerns, we would at least like the courtesy of a reply and our analysis as to why you have chosen to disregard the issues raised. As mentioned, we received no such courtesy two years ago.

Thank you in advance for your considerations on these matters.

David A. Mechtenberg
Chief Executive Officer

Lawrence N. Cosner, Jr., M.D.
Quality Improvement Committee Chair

zach.doc.sck

1081 North China Lake Boulevard Ridgecrest CA 93555 (619) 446-3551

RIDEOUT
MEMORIAL HOSPITAL

October 14, 1997

Health Policy and Planning Division
Office of Statewide Health Planning and Development
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Sirs:

We have reviewed the draft of the 1997 Report of the California Hospitals Outcomes Project and would like to see the following comments published with the report.

One of the stated goals of the Outcomes Project, is to provide the public with information that objectively compares hospitals according to the quality of their care. We are concerned that data used for this study, which will not be made public until late in 1997, encompasses hospital discharge data from 1991-1993! Although we appreciate the difficulties of completing such a comprehensive study using more timely data, we have great concerns that the public will interpret this data as representing the current state of quality care within the facilities. *It is imperative that this be clearly stated in the limitations of the study.* Over the last several years, hospitals have moved from quality assurance to continuous quality improvement; data is assessed on a continual basis and strategies implemented and modified continuously to improve processes and outcomes. Any report focusing on outcomes of patients who were discharged 4 years ago does not take into account the improved patient outcomes, which have been achieved through quality improvement efforts.

We are also concerned that the implication of this study to the lay public may be that patient outcomes, such as mortality, are solely due to the interventions initiated by the medical personnel treating the patient, when in fact the patient's own health maintenance and willingness to comply with the treatment regime are also key to long term survival! Patients who are noncompliant with the recommended treatment plan post discharge, may experience higher 30 day mortality. This is then attributed back to the index hospitalization, yet this has nothing whatsoever to do with the quality of care provided during the initial hospitalization for acute MI. As for the risk adjustment methodology, we feel that Model A is of limited value, since it includes only those clinical risk factors likely to be present on admission; Model B more realistically factors in comorbidities that will significantly impact the outcome of the AMI patient. Neither model, however, identifies other important factors that have the potential to significantly increase mortality. These include, but may not be limited to: 1) delays in patient presentation which result in significant loss of myocardium prior to arrival at the hospital, 2) contraindications to thrombolytic therapy which limit the effective interventions available to reduce morbidity and mortality and 3) patients who refuse aggressive intervention to limit infarct size.

A Member of
The Fremont-Rideout Health Group

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P.O. Box 2128
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916/749-4300

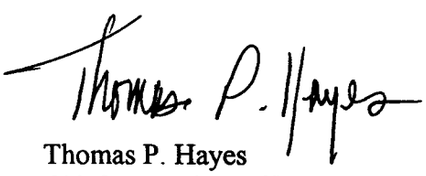
In addition, we have concerns that by "linking serial hospitalizations that comprise a single episode of care," mortality rate can be adversely affected when a patient is transferred for interventional therapy that is not available at the referring facility (such as coronary artery bypass graft surgery or percutaneous transluminal angioplasty which each carry additional risks). Rideout Memorial Hospital performs diagnostic cardiac catheterizations only, but must refer all patients requiring CABG or PCTA to Sacramento area hospitals. According to the design of this study, mortalities occurring in those facilities as a complication of interventional therapy would adversely affect mortality data for Rideout Memorial Hospital! Also, it is not completely clear whether deaths due to unrelated causes, occurring within 30 days of an initial hospitalization for an AMI, would factor into the overall mortality rate for AMI's. Certainly, a death attributed to a pre-existing condition, such as cancer or chronic obstructive pulmonary disease, should be excluded from the mortality data for AMI.

Care of the MI patient with specific emphasis on patients receiving thrombolytic therapy has been one of many quality improvement efforts in place at Rideout Memorial Hospital since 1989, well before the initial data from the Outcomes Project was published. In 1993, our facilities joined the National Registry for Myocardial Infarction (NRMI). This has allowed us to compare hospital-specific data to the cumulative data for both California and the Nation. A multi-disciplinary group consisting of physicians, ER and ICU nursing staff, and representatives from Pharmacy and Cardiology continues to meet at least quarterly. Our quality improvement efforts have been successful and we can demonstrate improved time to treatment and reduced in-hospital mortality rates. While our results are reflected as "not significantly different than expected", we are confident that our current mortality rate for AMI patients is at or below the threshold established by the Outcomes Project. All mortalities are reviewed and deaths of MI patients have been evaluated on a case by case basis by the MI task force. The MI task force continues to seek strategies to improve the outcome for patients experiencing acute myocardial infarction and is currently focusing on concomitant medication therapy, recognizing its importance in survival rates post MI.

The data from the OSHPD California Hospitals Outcome Project is only one of many reports that we utilize to assist us in our performance improvement efforts. Despite the concerns listed above, we do take this data seriously and have shared the information with the Director of Quality and Risk Management, Director of Medical Quality Improvement, the Critical Care Nurse Manager, the physician chair of the Acute MI task force and the appropriate medical staff departments for the purpose of continuing to improve the outcomes for our patients.

Thank you for the opportunity to review the draft of the Outcomes Project and to respond with comments to be printed in the final published report.

Sincerely,



Thomas P. Hayes
Chief Executive Officer, Fremont-Rideout Health Group
Rideout Memorial Hospital

Riverside Community Hospital
an affiliate of
COLUMBIA

August 29, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

SUBJECT: CALIFORNIA HOSPITAL OUTCOMES REPORTS

Riverside Community Hospital appreciates the opportunity to comment on the OSHPD heart attack outcomes study.

Although some individuals at Riverside Community Hospital cite inconsistencies of a minor nature in the risk-adjustment model and patient characteristics used as risk variables, the consensus is these minority opinions do not warrant a request for change in methodology at this time.

We look forward to future outcome data in light of our recent development and implementation of clinical pathways at our institution concerning diagnosis and treatment of acute myocardial infarction.

Sincerely,

Nancy J. Bitting

Nancy J. Bitting
President/CEO

NJB/pb

4445 Magnolia Avenue, Riverside, CA 92501, Telephone 909-788-3000

SADDLEBACK
MEMORIAL
MEDICAL CENTER

24451 Health Center Drive
Laguna Hills, California 92653
(714) 837-4500

October 10, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, room 350
Sacramento, CA 95814

Reference: Response to California Hospital Outcomes Report

To Whom it May Concern:

We at Saddleback Memorial Medical Center would like to comment on the 1997 California Hospital Outcomes Project Report on Heart Attack for 1991-1993.

We feel the data is valuable to us, in that it provides external benchmarks on acute myocardial infarction and essential risk stratification models for comparison. However, the age of the data is a major weakness. With rapidly changing technology for the care of the acute MI patient, there is an implicit need for current data in order to evaluate the utility of new technology.

Saddleback Memorial Medical Center is a participant in the National Registry of Myocardial Infarction 2, which provides benchmarking and outcome data on myocardial infarction patients. Our hospital data is presented along with comparative data from the Nation, California, and like hospitals. (Hospitals of the same size, with the same diagnostic and interventional cardiology capabilities throughout the nation). We feel that this data is the most current data available for myocardial infarction benchmarking. NRMI 2 provides risk adjusted and non risk adjusted outcomes for mortality and length of stay using a modified TIMI 2B risk stratification.

Saddleback Memorial Medical Center is located in close proximity to Leisure World, a retirement community with a population of approximately 18,000. The majority of our patient population are Medicare or Medicare HMO recipients. SMMC's average age of patients coded 410.X1 is 75. We also have a higher percentage of patients presenting with a Killip Classification of 3 or greater. The percentage of females with myocardial infarction at our institution is 44%. (NRMI 2 September 1997). All of these indicators were identified as risk factors for in hospital or 30 day mortality by OSHPD. (Report on Heart Attack 1991-1993, Technical Guide, Page 6.) We also identified in the current OSHPD results that DNR was excluded as an indicator. We can hypothesize that because of our significantly older myocardial infarction population, our percentage of DNR patients would likely be higher than the state, and therefore we would have a higher percentage of mortality. However we do not currently track DNR as an indicator.

Our NRMI 2 data has consistently shown that we care for a very high risk myocardial infarction population at Saddleback. September 1997 NRMI data shows the following:

Mean Age of Myocardial Infarction Patient:

- SMMC: 75
- California: 69
- Nation: 68

Percent of Females with Myocardial Infarction:

- SMMC: 44%
- California: 38%
- Nation: 40%

Killip Classification- Percent of patients presenting with Class 3 or greater:

- SMMC: 31%
- California: 10%
- Nation: 9%

In response to the risk stratification models, we feel Saddleback is best represented by Model B, which uses pulmonary edema and shock as indicators. Our NRMI 2 data consistently shows a larger percentage of patients with a Killip Classification greater than 3, as compared to California, the nation, and like hospitals.

Despite SMMC's higher risk population as outlined above, our mortality rate per NRMI 2 data (non risk adjusted) is equal to that of the comparative data. The current OSHPD report demonstrates that Saddleback's risk adjusted death rate for Model A and B for all years combined is lower than the statewide death rate.

At Saddleback, our focus is on quality. Our Outcomes Management and Collaborative Practice program has been nationally recognized and we are cited as a reference by JCAHO.

For more information regarding our Collaborative Practice/Outcomes Management Program, or regarding the above response, please feel free to contact me at (714) 452-3622. Once again we thank OSHPD for our data and the opportunity to respond.

Sincerely,

Nolan Draney, Chief Executive Officer

San Pedro
Peninsula
Hospital
1300 West Seventh St.
San Pedro, CA 90732
(310) 832-3311

October 17, 1997

Office of Statewide Health Planning and Development
Attention: David Werdegar, MD, MPH
Office of the Director
1600 Ninth Street, Room 433
Sacramento, CA 95814

Dear Dr. Werdegar,

San Pedro Peninsula Hospital is governed by our mission to deliver the highest quality of care. We respect the patients as individuals and their entitlement to information available to make an informed decision about the hospital they choose. We feel the OSHPD California Outcomes Project 1997 is a process that helps to support this objective.

As you point out in your *Report of Heart Attacks Users Guide*, there are limitations in this Outcomes Project in fully describing the quality of care given at hospitals. Although your recent AMI validation project does help to satisfy many of the questions that we had last year, the reliance upon this 1991-1993 data as a measure of today's hospital quality is suspect. We would encourage OSHPD to analyze and report data in a more timely manner. Hospitals, medical staffs and consumers would most benefit from current outcome findings.

We are proud of the quality care given at SPPH and we support all efforts directed at accurately identifying and improving quality medical care.

Very truly yours,

John M. Wilson
President

JMW:mrb

Scripps Hospital East County

1688 East Main Street
El Cajon, California 92021

Voice: (619) 440-1122
Facsimile: (619) 444-5012

October 14, 1997

David Werdegar, MD, MPH
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

RE: 370697 Scripps Hospital-East County

Dear Dr. Werdegar:

This letter is in response to the most recent OSHPD outcomes study for Acute Myocardial Infarction Mortality. The data in the report summarizes 1991 through 1993 data, which is attributed to Scripps Hospital East County. There are additional facts that need to be considered in the analysis of this data.

- In 1991 and 1992, EPIC Healthcare Group owned the hospital and it was known as Valley Medical Center.
- On March 17, 1993, the hospital was purchased by ScrippsHealth, and became licensed as Scripps Hospital East County.
- 27 out of 36 months included in the study occurred when the hospital was owned by EPIC Healthcare Group and therefore should not be published under Scripps Hospital East County.
- During the nine months of 1993 when ScrippsHealth took over ownership of the hospital they immediately implemented policy and procedures changes and began to develop a new administrative team and culture. The entire medical staff was required to reapply for privileges and underwent the credentialing process.
- Data from this study for 1993 showed a statewide death rate of 14.0 which falls within the risk adjusted death rate range of 11.6 to 25.9 calculated for this hospital. This data would thus be summarized as not significantly different than expected.

In conclusion, data from the years 1994 through 1996, after ScrippsHealth purchased the hospital shows an observed death rate for patients admitted with a diagnosis of acute myocardial infarction of 17.3% (not risk adjusted). This rate is considerably lower than the observed death rate of 21.0% for the years 1991 through 1993 in the OSHPD report.

Thank you for your consideration of these facts and your amendment of the published report to reflect this information.

Sincerely,

Deborah Dunne
Administrator

Selma
District
Hospital

1141 Rose Avenue, Selma, CA 93662-3293 • (209) 891-1000 • FAX (209) 891-2212

September 22, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, California 95814

Dear Sirs,

I have received the draft report of the most recent OSHPD heart attack outcomes study for review. In response to the request for comment, the methodology and design of the study appear sound. However, based on an issue with the coding of the data from Selma District Hospital, our cases were not included in the study. Therefore, it had little direct relevance to us.

We have reviewed the data for comparison purposes and reviewed our coding practices on the bases of the rejection of data, to seek any opportunity for continuous improvement.

We look forward to continue working with the Office of Statewide Health Planning and Development to further ensure the provision of quality health care to the communities we serve.

If you have any questions or if I may be or any assistance, please feel free to contact me at (209) 891-1000.

Thank you,

Terrence A. Curley
Chief Executive Officer

South Bay Medical Center

Tenet Healthcare System

October 21, 1997

David Werdegar, MD, MPH
Director
Health Policy and Planning Division
Office of Statewide Health Planning and Development
1600 9th Street, Room 400
Sacramento, CA 95814

Dear Dr. Werdegar:

Thank you for providing South Bay Medical Center the opportunity to respond to the results of the California Hospital Outcomes Project Report on Heart Attack 1991-1993. We have had the data reviewed by our Quality Council and are pleased to observe that the data is consistent with our perception that patients with heart attacks are well managed at our medical center. South Bay Medical Center is committed to provide only the highest quality healthcare to our patients and supports the principle of communicating appropriate and meaningful quality of care information to our consumers.

South Bay Medical Center recognizes and embraces the pioneering efforts of OSHPD to compare the quality of healthcare services throughout California hospitals. There are however many confounding variables which must be controlled in this research opportunity. We hope you will consider the following suggestions in making the research more consistent:

- The validity of conclusions based on this methodology is critically dependent on the validity and reliability of the coded risks and complications on hospital discharge records and on the consistency of coding across hospitals. The ICD-9-CM coding guidelines are vague and subject to interpretations by the coders. Due to the lack of standards in coding medical records, major differences in coding practices exist that could significantly impact statistics. We believe that OSHPD should expand their efforts to include research where standardized definitions of risk and complication are applied to patients and compared with recorded codes. The release of inaccurate and misleading data will only serve to harm the public interest and irrevocably and unfairly damage the reputation of individual health care providers.

- Although we recognize that the Office of Statewide Health Planning and Development is attempting to provide information about hospital care quality to the consumer, the consumer needs to understand that in the case of Acute Myocardial Infarction, mortality rates alone cannot be looked upon as a reliable overall quality indicator.

514 North Prospect Avenue, Redondo Beach, CA 90277 310 376-9474

- A further shortcoming of the study is with regard to transfers. Patients who require more extensive invasive procedures must be transferred out of South Bay Medical Center. These procedures could contribute to the mortality rate; and yet, the mortality rate is charged to the transferring hospital.

- Some of these patients had complications that existed before the patient was admitted to our medical center and this was not taken into account for the study. It seems that the data does not distinguish between problems or conditions present on admission from those which developed during the hospital stay; nor does the data distinguish between a minor or expected complication and a major complication. It is simply misleading to the public to treat minor transient complications in the same manner as severe and clinically significant major complications.

In conclusion, we recognize that measuring and reporting conditions related to patient care is difficult to quantify. Continued improvements in patient care will allow us to continue to better serve our patients. The California Hospital Outcomes Project Report on Heart Attack 1991-1993 has been a valuable experience for all entities involved in the study. We thank you for the opportunity to present our comments on the results of the study and look forward to participating cooperatively and productively in future analyses.

Sincerely,

Jerry Happel
Chief Executive Officer

Dr. Ronald Ruby
Chief of Staff

14900 E. Imperial Highway
La Mirada, CA 90638
(562) 944-1900
(562) 906-3455 fax

September 5, 1997

Mr. David Werdegar, MD, MPH
Director
Office of Statewide Health Planning and Development
1600 Ninth Street, Room 433
Sacramento, CA 95814

Dear Mr. Werdegar:

Subject: California Hospital Outcomes Reports

This data (1991-1993) reflects La Mirada Medical Center not our hospital. Specialty Hospital of Southern California did not own or operate this facility for the period reflected in these statistics.

Specialty Hospital of Southern California is a Long Term Acute Hospital whereas La Mirada Medical Center was an Acute Medical Surgical Short Term Acute Hospital.

It is my request that the name, Specialty Hospital of Southern California, not be associated with this data, as that would be inaccurate and misleading.

Thank you for your attention to this matter.

Sincerely,

William L. Pegler
Regional CEO – California

WLP:pmc

Dedicated to the Health of the Whole Community

SANTA CLARA VALLEY
HEALTH & HOSPITAL SYSTEM

Robert Sillen
Executive Director
2220 Moorpark Avenue
San Jose, California 95128
Tel (408) 885-4030
Fax (408) 885-4051

October 15, 1997

David Werdegar, M.D., M.P.H., Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, #350
Sacramento, CA 95814

RE: Response to the OSHPD Risk-Adjusted Outcomes Study Results

Dear Dr. Werdegar:

Thank you for this opportunity to review and respond to Santa Clara Valley Medical Center's (SCVMC) outcome study results for mortality following an acute myocardial infarction (AMI). We acknowledge the need and importance of assessing the effectiveness of health care systems and are in general agreement with our risk adjusted outcomes for OSHPD's third report.

We look forward to collaborating with you in future outcome studies.

Sincerely,

Robert Sillen
Executive Director

cc: Ira Lubell, MD, MPH
Anne Moses

Santa Clara Valley Health & Hospital System is owned and operated by the County of Santa Clara.

Saint Agnes Medical Center

October 20, 1997

David Werdeger, M.D., M.P.H.
Office of the Director
Office of Statewide Health Planning and Development
1600 Ninth Street, Room 433
Sacramento, California 95814

Top 100 National Benchmark Hospital

National Quality Leader

Excellence In Business Award Winner

Top Five Business Award Winner

Dear Dr. Werdeger,

On behalf of Saint Agnes Medical Center I would like to thank you for the opportunity to comment on the preliminary draft of the 1997 Heart Attack Mortality Study. We participate in the care of many patients who have suffered heart attacks, and we share your goals of improving the quality of hospital care for all California citizens.

If indeed your model, data and analyses are correct, we are certainly interested in doing all we can to examine our processes of care and determine those which result in the best outcomes. Since 1993, which is the most recent data included in your study, there have been many improvement efforts undertaken at Saint Agnes Medical Center regarding cardiac care. We have implemented a chest pain protocol in the Emergency Department that assures consistent care for each patient presenting there. We also have created a Cardiovascular Performance Improvement Committee and Action Team which has worked diligently over the past year to study and improve our process of caring for heart attack patients. This has resulted in the implementation of several clinical pathway protocols for our cardiac patients. Saint Agnes Medical Center is devoted to compassionate, high quality healthcare.

Since receiving the preliminary draft of your findings, we have spent many hours trying to validate your model and reviewing the data that you used. We have performed coding validation studies on a sample of the records, engaged in detailed analysis of the statistical model, reviewed the variables used to predict mortality, and conducted an objective physician review of a sample of the death charts that were included in your study. As a result of our analysis, we have substantial concerns regarding the accuracy of your report.

- Review of coding practices revealed that Acute Myocardial Infarction may not have been the principal diagnosis on two of the records sampled.
- On every record sampled at least one comorbid condition and complication was identified that matched the secondary diagnoses in your Model B.
- Thirty one percent (31%) of sampled records indicated the patient was discharged alive to home. Although death occurred within thirty (30) days post discharge, we are unable to determine if the death was related to the AMI.
- Our coded data revealed that at least 49% of the sampled patients had congestive heart failure, whereas your model indicated that 27% of our patients had documented congestive heart failure.
- Patients who were transferred to an alternate level of care, i.e., home health, were included but according to the definition of the model, should not have been.
- A sample of the 157 medical records credited with a heart attack death were reviewed by a contracted physician to evaluate the quality of care provided to those patients. The majority of these patients had end-stage diseases, cardiac and otherwise, which precluded any heroics. All but three had a cardiologist involved in their terminal care or had a cardiology evaluation in the month

1303 East Herndon Avenue • Fresno, CA 93720 • (209) 449-3000
A Member of the Holy Cross Health System

preceding the terminal event. The model suggests that it may have been the largest single contributor to AMI death; Do Not Resuscitate orders and/or "comfort care only" treatment modalities. With the inclusion of this variable the Saint Agnes expected mortality rating would be significantly higher, as over one-third of our patients in the study had "comfort care only" or Do Not Resuscitate (DNR) orders in the patient record. Thirty-seven percent (37%) of the records reviewed indicated comfort care measures, Do Not Resuscitate (DNR) and/or a living will document. These are life decisions that cannot be captured by an ICD 9 CM code number.

- A database used for a study of this type should be created with that purpose in mind. Data collection must include variables that are not currently included in the State mandated discharge record abstract and medical record coding practices must be standardized across all hospitals in the State in order to create a database that has any potential to support a model for quality comparisons.
- The risk-adjustment methodology is not sound and tested. As acknowledged by the State, the possibility that an adverse outcome was the result of a variable not currently in Model A or B does exist.
- Two variables, one in AMI with no prior admissions and one in the prior admission model, behave in an erratic manner. In one model, the above variables reduce the likelihood of death, while the same variable in the second model increases the likelihood of death. It is very abnormal that the same variable can reduce the likelihood of death in Model A while increasing the likelihood of death in Model B (variables PRCABG and SITEINF).

Due to the above-identified concerns with your study, please reconsider your plans to release this report to the public. Using coded data, which is intended for billing purposes, to assess quality of care is fraught with inaccuracies and problems. We recommend that future studies use data that are more appropriate for the evaluation of quality care.

Again, we applaud your efforts to improve the quality of care provided to the citizens of our great state. Please be assured that even though we have concerns with the accuracy of your report, we intend to continue to focus on the quality care our patients receive and to make improvements wherever possible.

Sincerely,

Sister Ruth Marie Nickerson, CSC

Sister Ruth Marie Nickerson, C.S.C.
President and Chief Executive Officer

Sutter Amador
Hospital

A Sutter Health
Affiliate

810 Court Street
Jackson
CA 95642-2198
(209) 223-7500

October 16, 1997

David Werdegar, MD, MPH
Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Dr. Werdegar:

Thank you for the opportunity to review the OSHPD data on heart attack outcomes. The people that reviewed the information included the Chief of Staff, the Medical Director of Quality Management for the Emergency Department, the Nursing Executive, the Quality Management Director and the Director of Medical Records.

We reviewed the detailed statistical results and specifically the comparisons between Models "A" and "B." Although we found most of the data interesting, we feel that Model "B" is a better representation of our facility's performance because of our patient population and patient characteristics. We, therefore, request that Model "B" be used when disseminating this data.

Thank you again for giving us an opportunity to review the data and respond accordingly.

Sincerely,

V. Scott Stenberg
Chief Executive Officer
Sutter Amador Hospital (030786)

VHA
United to Improve
America's Health℠

Sutter Medical Center
of Santa Rosa

A Sutter Health
Affiliate

3325 Chanate Road
Santa Rosa
CA 95404-1797
(707) 576-4000

October 17, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Department
1600 9th Street, Room 350
ATTN: Andye Zach
Sacramento, CA 95814

Dear Ms. Zach:

Thank you for the OSHPD Acute MI Mortality Data for the State of California. The endeavor required a tremendous amount of effort.

Our hospital was not an outlier, which is reassuring. But we would like to be outstanding with a death rate indicating exceptional performance. Therefore, Sutter Medical Center of Santa Rosa instituted a task force in 1994 to look at thrombolytic medication administration. We elected to participate in the National registry on AMI (NRMI) study for benchmarking. Our door to drug time has greatly improved to an average of less than 30 minutes. The task force expanded to include parameters for inpatient evaluation and treatment of AMI in 1996. Sutter Medical Center of Santa Rosa will continue to evaluate and improve AMI care until we are listed as having outstanding results in the OSHPD report.

I do have a couple of comments about the relevance of this data to individual hospitals in guiding performance improvement.

It is now 1997, almost 1998. The data covers 1991 - 1993. In healthcare today there is a need for more current data so that results could be distributed in a more timely fashion to actually be helpful in guiding clinical improvement activities.

I must say the data from NRMI is much more helpful in guiding our efforts. I do realize that OSHPD is collecting screening parameters in a large number of general indicators much different than the very focused NRMI study looking only at AMI performance. Thank you for your efforts.

Sincerely,

Cliff Coates
Chief Executive Officer
CC:rs

Residency Education in
Affiliation with
University of California
School of Medicine

ALHAMBRA HOSPITAL
100 SOUTH RAYMOND AVE. P.O. BOX 510 ALHAMBRA, CALIFORNIA 91802
TELEPHONE (818) 570-1606

October 16, 1997

David Werdegar, MD, MPH, Director
Office of Statewide Health Planning & Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

RE: California Hospital Outcomes Report

Dear Dr. Werdegar

Alhambra Hospital is submitting a response to the data published in the California Hospital Outcomes Report (Heart Attack, dated 08/20/97).

After review of all the cases for each of the three year periods, we have found the following:

- Additional risk factors were not coded in 65% of the cases
- 40% of the cases had "Do Not Resuscitate" orders
- 71% of the cases were over 70 years of age
- 29% of the patient's had a full arrest in the field prior to admission, several resulting in anoxic brain damage, which is not considered a risk factor in the study.

Our concern continues to be the age of the data being used and the failure to exclude those cases with "Do Not Resuscitate" orders.

If you have further questions, please do not hesitate to call.

Sincerely,

Tim McGlew, CEO

TMc/eqm

Tulare District HealthCare System

869 Cherry Street
Tulare, California 93274
(209) 688-0821

Robert M. Montion
Chief Executive Officer

Board Of Directors
Joe Adair
Parmod Kumar, M.D.
Patricia Ross
LeRoy Trippel
John White, M.D.

October 17, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, California 95814

Subject: California Hospital Outcomes Reports

To Whom It May Concern:

After review of the data that was presented and review of all the records that pertained to patient deaths during the study period, it is our belief that the risk adjusted death rate is not representative of our true Myocardial Infarction patients. The coding methods utilized during those time periods and into 1995 do not reflect all the co-morbidities nor the pre-existing medical conditions that our MI patients had. In the death reviews alone, all records reviewed for coding information indicated multiple co-morbidities and other medical conditions that would have been contributing factors and were not routinely coded. Examples were those of patients who were admitted for CHF or COPD and the patient coded during the hospitalization. The MI was coded as the primary diagnosis thereby excluding the other diagnosis. Also there is evidence that bradycardias, other arrhythmias, and diabetes were not routinely added to the MI diagnosis as contributing or extenuating circumstances. Of substantial note, as well, is the no code blue status of many of these patients. Of the 29 charts reviewed, 11 were a no code blue status upon admission or within hours of the original code event. It is unfortunate that the data does not truly reflect the appropriate MI population cared for at TDHS. Our current coding practices which will be reflected at the start of the 1995 will more accurately reflect our MI patient population.

Also of note, with the focus on Advanced Directives, a mandated requirement, many more patients are considering their resuscitative status and making that known when entering the healthcare facility. It does seem ironic that facilities are required to inquire of the resuscitative status of all patients and respect the wishes of patients yet still have data included in studies that do not reflect the impact of the resuscitative status for the MI patient.

Thank you for the opportunity to respond to the Outcomes Report.

Sincerely,

Robert M. Montion

Robert M. Montion
CEO

RMM/kw

DEPARTMENT OF HEALTH SERVICES
COUNTY OF LOS ANGELES · HARBOR-UCLA MEDICAL CENTER
(310) 222-2101

BRUCE STABILE, M.D.
ACTING MEDICAL DIRECTOR

TECLA A. MICKOSEFF
ADMINISTRATOR

October 22, 1997

David Werdeger, M.D., MPH Director
Health Policy and Planning Division
Office of Statewide Health Planning
and Development
1600 Ninth Street, Room 400
Sacramento, California 95814

Subject: California Hospital Outcomes Report

Dear Dr. Werdeger:

A review of our data submitted on acute myocardial infarctions for the period 1991-1993 was conducted. Based upon our review, it appears that the site (specific anatomic site of the heart) infarcted was not provided on a number of cases as indicated in our December 1995 response. Since that time, our documentation and coding practices have been revised. Quality control measures are now in place. Data submitted for discharges after July 1996 should meet the State's requirements for inclusion in future studies.

If there are any questions, please call Carlene Boyle, Administrative Director of Quality Improvement at (310) 222-2047.

Sincerely,

Tecla A. Mickoseff
Administrator

TAM:cr

1000 WEST CARSON STREET
TORRANCE, CALIFORNIA 90509

NORRIS

USC/Kenneth Norris Jr.
Comprehensive Cancer
Center
and Hospital

1441 Eastlake Ave
P.O. Box 33804
Los Angeles
California 90033-0804
Tel. 213.764.3000

October 10, 1997

David Werdegar, M.D., M.P.H
Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Dr. Werdegar:

We have read and evaluated the draft report of the California Hospital Outcomes Project and the risk-adjusted outcome rates of our Hospital plus the accompanying data. In response, we offer the following comments:

USC/Kenneth Norris Jr. Cancer Hospital is a cancer speciality hospital. Our emphasis is in cancer treatment and prevention research. The patient mix is significantly different from other acute care hospitals. There were 4 cases of acute myocardial infarction from 1991 to 1993. Because of the extremely small sample sizes at our Hospital, it is very difficult to demonstrate a conclusive casual relationship between the observed outcomes and the quality of care provided by our hospital.

Since our hospital is specialized in cancer treatment, the patient population of acute myocardial infarction will remain very small in the future. Because of the continuous extreme small sample sizes, it is unlikely that the data will yield a meaningful indicator of the quality of our hospital care.

In conclusion, we acknowledge the sincere attempt to measure outcomes of medical care and appreciate the opportunity to present this response. USC/Kenneth Norris Jr. Cancer Hospital as part of one of the Nation's 26 NCI designated comprehensive cancer centers provides the utmost in high quality cancer patient care, this fact however, cannot be reflected through the diagnoses and procedures currently measured by the California Hospital Outcomes Project report.

Sincerely,

Adrianne Bass

Adrianne Bass
Hospital Administrator

CC: Paul Morrow, M.D.
Chief of Medical Staff

NORRIS

USC/Kenneth Norris Jr.
Comprehensive Cancer
Center
and Hospital

1441 Eastlake Ave
P.O. Box 33804
Los Angeles
California 90033-0804
Tel. 213.764.3000

October 10, 1997

David Werdegar, M.D., M.P.H
Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Dr. Werdegar:

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Sincerely,

Adrianne Bass

Adrianne Bass
Hospital Administrator

CC: Paul Morrow, M.D.
Chief of Medical Staff

USC
UNIVERSITY
HOSPITAL
Tenet HealthSystem

October 17, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
Attention: Andra Zach
1600 9th Street, Room 350
Sacramento, CA 95814

Dear Ms. Zach,

USC University Hospital (USCUH), a 284-bed research, referral, and tertiary care teaching hospital, opened May 20, 1991, and was licensed for cardiovascular surgery in September, 1991. The data collection period for the Office of Statewide Health Planning and Development *Report on Heart Attack* included patients admitted with acute myocardial infarction (heart attack) from January 1, 1991, through, December 1, 1993. USCUH was open and licensed for cardiovascular surgery for two years and four months rather than the full three years of the data collection period. In addition, as predicted, the hospital census at opening was initially low, as programs were still being developed.

Patients with acute onset of chest pain are taken to their nearest emergency department. Of note, USCUH does not provide emergency services; therefore, initial admissions for acute myocardial infarction are rare. USCUH does receive patients from other acute care hospitals for revascularization after myocardial infarction. These patients' outcomes were linked to the original admitting hospital, not to USCUH.

As a result of the referral nature of our business, a shortened data collection period, and the low census on opening, only six cases met inclusion criteria for analysis for the *Report on Heart Attack*. Due to the small number of cases evaluated, although no deaths occurred, these results were not statistically significant, meaning that it is very likely that the difference in USCUH observed and expected outcomes occurred by chance. Therefore, the data can't be used to accurately evaluate the care provided at USC University Hospital.

Sincerely,

Lee Domanico
Chief Executive Officer

LD:sew

nursecom\corresp\Ann\OSHPD letter 101797

We're advancing medicine.

Richard K. Eamer Medical Plaza
1500 San Pablo Street
Los Angeles, CA 90033
213/342-8500

VCMC Ventura County Medical Center

Associated with the UCLA School of Medicine

A Division of the Ventura County Health Care Agency

RICHARD O. ASHBY, M.D.
Medical Director

October 1, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, CA 95814

Re: OSHPD Report on Heart Attack, 1991-1993

To Whom It May Concern:

The Ventura County Medical Center (VCMC) is pleased to have received the materials and the reports involving myocardial infarction (MI) patients treated in the years 1991-1993. We recognize the tremendous effort and the great dedication it took to produce this report, and commend the Office of Statewide Health Planning and Development for these efforts. It certainly puts into perspective the issue of MI treatment, and gives a solid answer, statewide, to several important questions.

We were, of course, very interested in the statistical representation of our hospital. We have researched the individual cases, and thank you for the information you provided which allowed us to identify these 16 deaths. These 16, spread over three (3) years, were among the total of 132 cases which were reviewed.

Our intensive review of each death raised several issues, which we believe may not have been covered in your statistical review. Notably:

- At least two (2) patients were young men who appeared to have been treated at our hospital for drug addiction and endocarditis, and released. It isn't clear how the diagnosis of AMI was attached to these patients.

- At least three (3) patients were brought to our hospital after a "full code resuscitation," in the field, and subsequently died. Our experience with full code resuscitation, performed in the field, then brought to our E.R., is that they almost always have a poor outcome. There are many factors to be considered in such cases, but the main one may be that patients who have an MI and who resuscitate well are immediately taken to a receiving hospital with a cardiac catheterization lab, rather

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than to the VCMC. We work very closely with that facility, to assure that patients who may need immediate catheterization are taken there first, without coming to our hospital. On the other hand, "full code" as well as "DNR" patients are often selectively brought to us, purposely and at the exclusion of the other facility.

- Similarly, patients who come to our ER with acute MIs, and who are good candidates for catheterization procedures, such as angioplasty, are often transferred immediately from our E.R. to the facility with the cardiac lab. They are not admitted to our hospital, and although the results of treatment may be very good, they do not appear on our statistics.

- Finally, as the "safety net hospital" for this region, we feel that we receive a selection of patients which is inherently more risky, and which is substantively more difficult in which to anticipate a good outcome. We recognize that such variations were considered in this study, but the numbers of cases are so small that the addition or subtraction of just one (1) patient can markedly change the statistical presentation.

Again, we realize that the comment "we get sicker patients" is facile, and can in fact be counterproductive. We offer the comment only to draw attention to the small numbers involved, and indicate, as above, that we may be dealing with a model which has some internal flaws. This may lead to an inadvertent skewing of the results, and because of these factors it would be difficult, (if not erroneous), to draw specific inferences.

That being said, we greatly appreciate these data. We will continue to analyze them, and to derive further information about the care we give, and the quality of it. We trust such studies will help us improve our care, in all areas, and that it will be further reflected in studies which OSHPD may undertake in the future.

Most sincerely,

Samuel Edwards, M.D.
Administrator, VCMC

Richard Ashby, M.D.
Medical Director, VCMC

cc with OSHPD summary report:
VCMC Department of Medicine
VCMC Executive Committee
VCMC Oversight Committee

STATE OF CALIFORNIA PETE WILSON, Governor

DEPARTMENT OF VETERANS AFFAIRS
VETERANS HOME OF CALIFORNIA
POST OFFICE BOX 1200
YOUNTVILLE, CALIFORNIA 94599-1297
(707) 944-4506
(707) 944-5005

→ Andy

October 6, 1997

David Werdegar, M.D., M.P.H., Director
Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 350
Sacramento, California 95814

Dear Dr. Werdegar:

We are in receipt of the draft report of the most recent OSHPD heart attack outcomes study which was sent to us for review and comments.

We have reviewed the report and find the results to be adequate and would like to thank you for providing us with this important information.

If we can be of further assistance, please call me at (707) 944-4506.

Thank you.

Diana Koin MD

DIANA KOIN, M.D.
Chief Medical Officer

DK:gh

VICTOR VALLEY
Community Hospital

October 15, 1997

David Werdeger, M.D., MPH
Director
Health Policy and Planning Division
Office of Statewide Health Planning and Development
1600 Ninth Street, Room 400
Sacramento, CA 95814

re: California Hospital Outcomes Project: Acute Myocardial Infarction

Dear Dr. Werdeger:

Victor Valley Community Hospital's response to California's Hospital Outcomes Project, Acute Myocardial Infarction, directs its attention at several key issues surrounding the study.

The 1991-1993 time frame for Victor Valley Community Hospital marked a distinct period in the treatment of Cardiac patients. Prior to that, the Hospital's large, semi-rural, catchment area required all patients needing invasive cardiac procedures to be transported over 50-70 miles. The establishment of our Cardiac Catheterization and Open Heart Surgical Program in November, 1990, ultimately resulting in a profound, broad based improvement of professional strategies and outcomes. Cardiac patients on the High Desert were now admitted to our service. From the end of 1991 forward, our Quality Improvement efforts successfully improved "time to treatment," and thus, reduced in-hospital mortality. These efforts resulted in 1993's "outcomes data," placing the hospital in the "significantly better than expected" category. We are extremely proud of that result and are confident our continued efforts at performance improvement will reflect overall high quality of care.

Our success in this quality improvement effort is further dramatized when effects of demographics and comorbidities are explored. The hospital is a federally

15248 Eleventh Street • Victorville, California 92392 • (760) 245-8691

identified "Disproportionate Share" facility for both Medi-Care and Medi-Cal. Our patients are elderly, very sick, and represent clearly, an underserved population. Generally they are sicker than those treated by the other hospitals in the area. Furthermore, the majority of mortality patients in all three years of the OSHPD study exceeded 70 years of age.

Finally, the utilization of ICD-9-CM codes as a primary data collection source adds measurably to the confusion surrounding the results. The lack of standardization of coding procedures and the variation of coding practices imposes an enormous burden on the conclusions. It clearly negates the uniformity sought by risk adjusting the information. Certainly, the omission of "Do Not Resuscitate(DNR)" orders and the inability to capture this statistic has been already identified by OSHPD as a significant weakness in their study. The undercoding possibility leaves the outcome data fraught with potential error, especially when data is five years old, and the overwhelming consensus agrees that the quality of coding practices between facilities is based on vague coding guidelines and reimbursement-driven coding practices. As such, a single or a few outcome indicators may not truly reflect a hospital's quality of care and may only serve to jeopardize reliable, professional discovery.

We are proud of the quality care given at Victor Valley Community Hospital and support all efforts directed at accurately identifying quality medical care.

Sincerely,

Ralph L. Parks, FACHE
CEO/Administrator

15248 Eleventh Street • Victorville, California 92392 • (619) 245-8691

Western Medical Center Hospital Anaheim

1025 South Anaheim Boulevard
Anaheim, CA 92805
(714) 533-6220

October 9, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 400
Sacramento, CA 95814

Western Medical Center Anaheim appreciates the opportunity to respond to the Annual Report of the California Hospital Outcomes Project published by the Office of Statewide Health Planning and Development (OSHPD). We support the State's effort to better inform the public regarding the quality of health care being delivered in California hospitals. Unfortunately, the usefulness of the 1991-1993 Acute Myocardial Infarction Study is limited since the data reported primarily uses ICD-9-CM codes, a coding and classification system which does not recognize the severity of the patients' illness, has vague and consistently changing guidelines and is not uniformly reported by California hospitals and health care facilities. The severity of illness indexing or risk adjusting utilized in this study is dependent on coding of pre-admission diagnosis. Additionally, the statistical data that has been published has a very low probability of being related to the quality of care that a patient would receive at a given hospital.

Western Medical Center Anaheim conducts extensive reviews of all mortalities and complications as a significant part of our Continuous Quality Improvement Program. The Medical Staff has taken opportunities to identify and improve patient outcomes. We believe our review processes provide continuous feedback that allows us to meet and exceed quality of care standards. Additionally, it should be mentioned that Western Medical Center Anaheim has a comprehensive Cardiovascular program in order to better serve cardiac patients.

Thank you for the opportunity to respond to the California Hospital Outcomes Project Report prior to publication. We are aware OSHPD continues in their effort to improve the methodology of reporting.

If you have questions feel free to contact me at (714) 953-3610.

Very Truly Yours,

Richard E. Butler
Chief Executive Officer

REB:mv

cc: Doug Norris, COO

Western Medical Center Hospital Anaheim

1025 South Anaheim Boulevard
Anaheim, CA 92805
(714) 533-6220

October 9, 1997

Office of Statewide Health Planning and Development
Health Policy and Planning Division
1600 9th Street, Room 400
Sacramento, CA 95814

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Thank you for the opportunity to respond to the California Hospital Outcomes Project Report prior to publication. We are aware OSHPD continues in their effort to improve the methodology of reporting.

If you have questions feel free to contact me at (714) 953-3610.

Very Truly Yours,

Richard E. Butler
Chief Executive Officer

REB:mv

cc: Doug Norris, COO