

HOSPITALS: PATIENT ACTIVITY AND FINANCIAL PROJECTIONS
(MODELING)

	<u>Page</u>
I. Introduction	1
II. Model Features	1
III. Use of the Model Projections	2
IV. Procedures, Reports, and Scheduling of Projections	3
A. Procedures	3
B. Reports	3
C. Scheduling	3
V. Maintenance of the Model	4
VI. Quality Control	4
Appendix I: Teaching Hospital's Operating Budget Statistics	6
Appendix IA: Analysis of Hospital Reserve and Other Capital Improvements Funds	7
Appendix II: Supplemental Schedule for Debt Capacity Report	8
Appendix III: Hospital Patient Activity and Financial Projections, Summary of Local and Systemwide Assumptions	9
Appendix IV: Schedule of Reporting Hospital Financial Information, Fiscal year 1993-1994	11

HOSPITALS: PATIENT ACTIVITY AND FINANCIAL PROJECTIONS
(MODELING)

I. INTRODUCTION

Dramatic changes in health care delivery and reimbursement policies require that hospital management function effectively in a competitive market. These changes have increased the need to develop ways to assist hospital management to test alternatives and select the one most suited for current and future needs. To meet these needs, a hospital forecasting model is used to assist in long-range financial planning and the assessment of current financial status of both capital and operating resources.

Forecasting models can be broadly defined as systems (manual or automated) that use mathematical representations to predict future performance. They are generally composed of financial and statistical information to allow analysis of productivity and resource use. Forecasting models are particularly suited to computerization because they require the processing of large amounts of information most of which would be impractical to process manually. Computerized modeling systems also allow the user to quickly simulate the outcome of various alternatives. They are often interactive, time-sharing systems that allow the user to see the results of various changes within a short period of time.

One goal of the UC hospital forecasting model is to assure that a comparable methodology is used by each hospital in determining projections and that projections follow a consistent set of Universitywide assumptions. The primary purpose of using a model is to develop, test, and present alternative financial results for a variety of operating and financial environments in a consistent and meaningful way.

The purpose of this Accounting Manual chapter is to explain the process, capabilities, uses, reporting requirements, control process, and maintenance (i.e., changes or enhancements) of the UC hospital forecasting model.

II. MODEL FEATURES

The University's teaching hospitals utilize a computerized

model to simulate patient statistics, costs, and revenues in a very detailed fashion under variable assumptions and changing reimbursement programs. The following are a few features of the model:

- a) a significant tool in the planning for future operations because it allows management to evaluate the financial impact of certain alternative courses of action and thereby lead to management decisions that directly affect the level of future expenditures.
- b) can provide patient and financial data for up to 13 years including 3 years of actual and 10 year of projected data.
- c) provides consistent reporting of data elements (i.e., a consistent definition of terms are used).
- d) allows for flexibility to meet the broad range of individual hospital needs, particularly for reimbursement.
- e) permits a hospital to change individual or multiple variables for different scenarios.
- f) provides summary and detailed reports of the assumptions and statistics used.
- g) provides year-end financial statements (Income Statement and Balance Sheet) for each year.
- h) provides profit and loss statement by sponsors.

III. USE OF THE MODEL PROJECTIONS

Although the model can be used at any time by each hospital for its own purpose, there are scheduled times that projections of annual data are required at the Office of the President (OP). Each hospital can run the model for its own purpose (e.g., internal budgeting, feasibility studies, the impact of a third-party payor contract, etc.). Model runs are required by the Office of the President for projections included in the six monthly presentations of the Hospital Activity and Financial Status Report to The Regents (pages: 6, Assumption Highlights, and 7, Full Year Original Budget and Managements' Current Projection for the Full Year) and for preparation of the annual Regents' Budget request, in conjunction with the Governor's Budget, and as part of the University's annual budget negotiating process. The model

is used for preparing both the Original Budget and Current Projection for the Full Year presented in the Monthly Statement of Operation. Also, the model is run for special projects requested by the hospital directors or by the Office of the President, e.g., the Debt Capacity Report. All model runs use consistent data definitions for comparable and reliable historical and projected data.

IV. PROCEDURES, REPORTS, AND SCHEDULING OF PROJECTIONS

A. PROCEDURES

There are two major categories of assumptions used for each model run. These are the Universitywide assumptions and the local hospital assumptions. The Universitywide assumptions, which are common to all hospitals, are developed by the OP Budget Office and coordinated within the OP and among the teaching hospitals. Input for the assumptions is often provided by the California Association of Hospitals and Health Systems and the Association of American Medical Colleges.

If Universitywide and local assumptions for a particular model run will not have a significant impact on the projections from the previous model run, a hospital may elect to utilize the previous model run as the current projections.

B. REPORTS

The primary report required by the OP from each model run is the OP Budget Office's Table 2-A, i.e., the Teaching Hospital's Operating Budget Statistics (see Appendix I) and the Analysis of the Teaching Hospital's Reserve and other Capital Improvement Funds (see Appendix I-A). Table 2-A information is used by the OP Budget Office and by the OP Office of Hospital Accounting for internal and external reporting purposes. Other information provided from Table 2-A is used to complete the Debt Capacity Report, which is prepared by the OP Office of Business Analysis. Appendix II is a Supplemental Schedule which is to be prepared as part of the model run each time the Debt Capacity Report is prepared. The projections also are used to determine the viability of individual capital

IV. PROCEDURES, REPORTS, AND SCHEDULING OF PROJECTIONS (Cont.)

B. REPORTS (Cont.)

projects and for the University's Debt Capacity Report. Another report required with each model run is a List of Assumptions (see Appendix III). The List of Assumptions is used to assure consistency of application of the Universitywide assumptions and to review the reasonableness of the local hospital assumptions. OP may request special reports from the runs of the model. The definition of terms used to prepare the pro-forma Income Statement and the Balance Sheet from the model are found in Accounting Manual chapter H-576-67, Hospitals: Reporting Requirements.

C. SCHEDULING

The schedule for the six standard model runs per fiscal year is prepared by the OP Office of Information Systems and Administrative Services (IS&AS) and coordinated with the OP Budget Office and the OP Office of Hospital Accounting. The schedule assigns a case number for each model run, a sign-off date for the Universitywide assumptions to be provided the hospitals by the OP, a due date of the model projections to be received at the Office of the President, the fiscal years covered by the model run, the purpose of the model run, the mailing date to The Regents of some of the projections provided, and the date of The Regents meeting.

The schedule of model runs is prepared annually by the Associate Vice President--IS&AS and distributed annually to the hospitals and interested OP staff in June. The 1992-1993 schedule is presented Appendix IV.

V. MAINTENANCE OF THE MODEL

Procedures for adding, deleting or changing data elements and data definitions will be established by the Associate Vice President--IS&AS and the Hospital Finance Directors or their designees. Requests for any changes from the hospitals or the Office of the President shall be sent to the Associate Vice President--IS&AS. All modifications and upgrades of the model, including changes to the data elements shall be presented to the Hospital Data Forecasting Workgroup (Model Workgroup) for a recommendation to the Hospital Financial Management Committee which has the final say. The Model Workgroup will be chaired by the Associate Vice President--IS&AS or designee and consist of one member from IS&AS, the OP Budget Office, Office of the Vice President--Health Affairs and Office of Hospital Accounting

in the Office of the President. Each hospital will be represented by the Hospital Finance Director or his/her designee on the Workgroup. The Hospital Finance Director, acting as chairperson of the Hospital Finance Management Committee, should serve on the Model Workgroup.

The Model Workgroup should meet as needed but no less than twice a year to review requests for modifications, upgrades, or changes to the data elements. The Model Workgroup determines the appropriate definition of all new data elements. The chairperson and the Workgroup report to the Hospital Financial Management Committee in order to keep the hospital directors informed or to seek advice from the directors, when needed.

VI. QUALITY CONTROL

In order to assure the Office of the President that the integrity of the model is being maintained and that procedures established in this Accounting Manual chapter are being complied with, an audit should be performed by the University's internal auditors. The auditors should perform a compliance audit annually to verify that the UC hospitals are all using the same version of the Model. Further, the audit should determine whether the hospitals and the Office of the President are following the procedures established in this Accounting Manual chapter. The audit reports are to be submitted to the Senior Vice President--Administration, the Hospital Finance Directors, and the Associate Vice President--IS&AS. The Associated Vice President--IS&AS is responsible for distributing the reports to the Model Workgroup. Following instructions from the Hospital Finance Directors, the Model Workgroup will be responsible for submitting a written response to the audit comments. A draft of the written response shall be reviewed by the Hospital Finance Directors before being sent by the Model Workgroup to the Associate Vice President--IS&AS, who in turn will send copies to the Senior Vice President--Administration, the auditors, and the Hospital Finance Directors.

Historical note: Original Accounting Manual chapter published 12/1/92; analyst--John Turek.

APPENDIX I: TEACHING HOSPITAL'S OPERATING BUDGET STATISTICS

UNIVERSITY OF CALIFORNIA			
Teaching Hospitals			
Operating Budget Statistics			
_____ Campus			
	1993-94	1994-95	1995-96
	<u>Actual</u>	<u>Projected</u>	<u>Projected</u>
<u>PROGRAM STATISTICS</u>			
<u>Inpatient Utilization:</u>			
Licensed Bed Capacity			
Average Available Bed Capacity			
Percentage of Bed Occupancy			
Admissions			
Length of Stay			
Number of Days of Care:			
Adult Days:			
Medicare			
Medi-Cal			
County			
Private Insurance			
Contract			
Non-Sponsored			
Total Adult Days	_____	_____	_____
Newborn Days			
<u>Outpatient:</u>			
Clinic Visits:			
Hospital Clinic			
Other Clinics (Specify)			
Total Clinic Visits	_____	_____	_____
Emergency Visits	_____	_____	_____
Total Visits	_____	_____	_____
<u>FTE Staff (Excluding House Staff)</u>	_____	_____	_____
<u>FINANCIAL STATISTICS (000'S)</u>			
<u>Summary of Revenue & Expense:</u>			
Gross Patient Revenue	\$ _____	\$ _____	\$ _____
Deductions from Revenue:			
Contractual & Admin. Allowances:			
Medicare			
Medi-Cal			
County			
Private Insurance			
Contract			
SB 855 Funds	()	()	()
Admin. Allowances			
Total Contractual & Admin. Allowances	_____	_____	_____
Provision for Uncollectibles			
Teaching Allowances			
Total Revenue Deductions	_____	_____	_____
Net Patient Revenue	_____	_____	_____
Other Operating Revenue:			
Clinical Teaching Support			
County Tobacco Tax Funds			
Other			
Total Other Operating Revenue	_____	_____	_____
Total Operating Revenue	_____	_____	_____
Operating Expense	_____	_____	_____
Net Operating Gain (Loss)	_____	_____	_____
Non-Operating Income	_____	_____	_____
Prior Year Adjustments	_____	_____	_____
Prior Year SB 855 Funds	_____	_____	_____
Net Gain (Loss)	\$ _____	\$ _____	\$ _____

HOSPITALS: Patient Activity and Financial
Projections (Modeling)

H-576-61

Page 7

ACCOUNTING MANUAL

APPENDIX I-A: ANALYSIS OF HOSPITAL RESERVE AND OTHER CAPITAL
IMPROVEMENTS FUNDS

UNIVERSITY OF CALIFORNIA
Teaching Hospitals
Analysis of Hospital Reserve and Other Capital Improvement Funds
Campus
(dollars in thousands)

	1993-94	1994-95	1995-96	1996-97	1997-98
	<u>Actual</u>	<u>Project'd</u>	<u>Project'd</u>	<u>Project'd</u>	<u>Project'd</u>
<u>BEGINNING BALANCE 7/1</u>					
<u>SOURCES OF FUNDS:</u>	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
Current Year Gain (Loss)					
Depreciation(Building)					
Depreciation(Equipment)					
Other (Specify)	_____	_____	_____	_____	_____
<u>TOTAL SOURCES OF FUNDS</u>	_____	_____	_____	_____	_____
<u>APPLICATION OF FUNDS:</u>					
<u>Facilities:</u>					
Major Capital Improvements: (list by project or attach list; separate into approved and planned projects)					
Minor Capital Improvements	_____	_____	_____	_____	_____
<u>Total Facilities Expenditures</u>	_____	_____	_____	_____	_____
<u>Equipment:</u>					
Replacement					
Additional					
Other	_____	_____	_____	_____	_____
<u>Total Equipment Expenditures</u>	_____	_____	_____	_____	_____
<u>Amortization of Loans:</u> (list by loan)					
	_____	_____	_____	_____	_____
<u>Total Amortiz.of Loans</u>	_____	_____	_____	_____	_____
<u>Other Expenditures:</u> (list)					
	_____	_____	_____	_____	_____
<u>Total Other Expenditures</u>	_____	_____	_____	_____	_____
<u>TOTAL APPLICATIONS OF FUNDS</u>	_____	_____	_____	_____	_____
<u>ENDING BALANCE 6/30</u>	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

HOSPITALS: Patient Activity and Financial
Projections (Modeling)

H-576-61

Page 9

ACCOUNTING MANUAL

APPENDIX III: HOSPITAL PATIENT ACTIVITY AND FINANCIAL PROJECTIONS SUMMARY OF LOCAL AND
SYSTEMWIDE ASSUMPTIONS

UNIVERSITY OF CALIFORNIA

Teaching Hospitals

_____ Medical Center

Hospital Patient Activity and Financial Projections

Summary of Local and Systemwide Assumptions

Case # _____

Fiscal Year:*

1. Patient Census:

In patient Days/Outpatient Visits: Provide the percentage change (increase or decrease) in patient volume from the prior year and the reasons why, e.g., added facilities or programs, changes in average length of stay or case mix intensity.

Patient Sponsor Mix: Specify reasons for changes from the prior year in sponsor mix in inpatient days or outpatient visits.

2. Operating Expense:

List the main local and systemwide assumptions made in projecting change (increase or decrease) in operating expenses including:

Salary Range Increase:

Represented: ____% staff; effective _____;
_____ House Staff; effective _____

Non-Represented: ____% staff; effective _____

Salary Merit Increase: average _____%; effective _____

Employee Benefits: _____% of salaries; or
other method (explain)

Other Expenses:

Interest: annual percentage rate on STIP Loan ____%;
other loans (specify) _____%

Malpractice Insurance: annual amount \$ _____

Other Expenses: average _____%

3. OPERATING REVENUE:

List the main local and systemwide assumptions made in projecting changes (increases or decrease) in patient revenue from the prior year including:

Charges (rates): average ____% change; effective _____

Payment rates for government-sponsored programs:

Medicare: systemwide assumptions or other (specify)

Medi-Cal: ____% change in per diem; effective _____
_____ change in outpatient rate; effective _____

County Programs: ____% change and reason

Clinical Teaching Support: ____% change and reason

Tobacco Tax Funds: ____% change and reason

Other Patient Revenue: ____% change, source, and reason

*Either provide a separate narrative list for each fiscal year or indicate for each category, e.g., patient census, operating expense, operating revenue, the assumptions used for that category in each projected fiscal year.

APPENDIX III: (Cont.)

4. Non-Operating Income, Prior Year Adjustments, and Other:

Indicate the source and amount of each item.

5. Other Assumptions:

List other assumptions that impact the projection of patient activity or financial statistics, e.g., completion of and debt service on capital improvement projects.

HOSPITALS: Patient Activity and Financial
Projections (Modeling)

H-576-61

Page 11

ACCOUNTING MANUAL

* APPENDIX IV: SCHEDULE OF REPORTING HOSPITAL FINANCIAL INFORMATION
FISCAL YEAR 1993-1994

CASE NUMBER	OP/HOSPITALS SIGN-OFF ASSUMPTIONS	FILE DUE AT OFFICE OF PRESIDENT	PERIOD COVERED	PURPOSE	MAILING	REGENTS MEETING
51	Aug. 6 (FRI)	Aug. 30 (MON)	92-93 Projected Actual 93-94 Projection* 94-95 Projection*	94-95 Regents' Budget	Oct. 6 (WED)	Oct. 14 (THURS)
52	Oct. 1 (FRI)	Oct. 25 (MON)	92-93 Final** 93-94 Projection* 94-95 Projection*	93-94 Hospital Financial Activity Report (Sept. 30**) 94-95 Governor's Budget	Nov. 5 (FRI)	Nov. 18-19
53	Dec. 3 (FRI)	Jan. 5 (WED)	92-93 Actual 93-94 Projection* 94-95 Projection*	93-94 Hospital Financial Activity Report (Nov. 30**) 94-95 Governor's Budget and Legislative Analyst's Review	Jan. 10 MON.	Jan. 20-21
54	Feb. 4 (FRI)	Feb. 28 (MON)	92-93 Actual 93-94 Projection* 94-95 Projection*	93-94 Hospital Financial Activity Report (Jan 31**) Legislative Hearings on 94-95 Governor's Budget	Mar. 7 (MON)	Mar. 17-18
55	Mar. 31 (THURS)	Apr. 25 (MON)	92-93 Actual 93-94 Projection* 94-95 Projection*	93-94 Hospital Financial Activity Report (Mar. 31**) Legislative Hearings on 94-95 Governor's Budget	May 6 (FRI)	May 19-20
56	Jun. 3 (FRI)	Jun. 27 (MON)	92-93 Actual 93-94 Projection* 94-95 Projection*	93-94 Hospital Financial Activity Report (May 31**) Legislative Hearings on 94-95 Governor's Budget	Jul. 8 (FRI)	Jul. 14-15

* Model-generated projections.

** Year to date (YTD) actual financial data.

Information Management