

PLANNING AND STRATEGIC CONTROL FOR PUBLIC HEALTH IN ITALY

Convegno Costi Standard e Misurazione delle Performance nei Processi di Approvvigionamento.
 Impatto sul Modello delle Decisioni

Realizzato in Collaborazione con
 Associazione Triveneta Provveditori ed Economi (ATE), ARSS Veneto

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Palazzo della Gran Guardia, Verona, Italy
 30 September 2010

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TWO MAJOR THEMES

**WHERE IS THE HEALTH SYSTEM GOING?
 ARE YOU HAPPY ABOUT THESE DIRECTION?
 IF NOT, WHAT MUST YOU CHANGE?**

... HOW CAN ITALIAN LOCAL HEALTH UNITS PLAY A CREATIVE ROLE IN HELPING TO ADDRESS THE NEEDED CHANGES?

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**FORMULATING
 A HOSPITAL BUDGET:
 A TWELVE-STEP PROCESS**

**ONE THAT INVOLVES MANY STANDARD COSTS AT
 MANY DIFFERENT LEVELS**

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THE FIRST ELEVEN STEPS

Step 1. Define the Organizational Structure	One-Time
Step 2. Determine Cost Drivers and Controlling Forces for Each Department	One-Time
Step 3. Forecast Revenue from Clinical Care Departments	Annual
Step 4. Define Clinical Pathways and Step-Function & Fixed Costs for Clinical Care Departments	One-Time plus Annual Updates
Step 5. Determine Variable Cost per Resource Unit	
Step 6. Estimate Service Department Fixed Costs	Formula Driven
Step 7. Calculate Variable Cost per Case Type	
Step 8. Compute the Surplus (Deficit) for Each Clinical Care Department	
Step 9. Compute Contribution to Hospital Overhead	Annual Updates Formula Driven
Step 10. Estimate Administrative Service Costs	
Step 11. Compute Hospital's Clinical Surplus (Deficit)	

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Step 1. Define the Organizational Structure

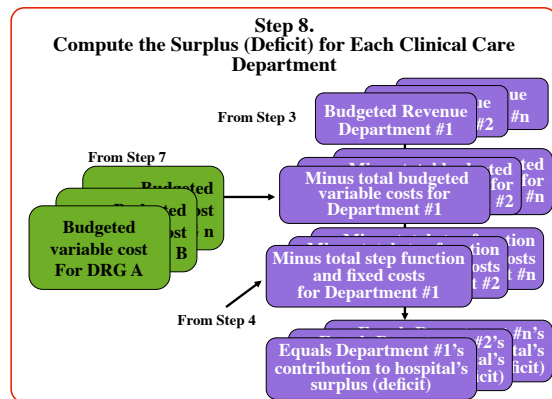
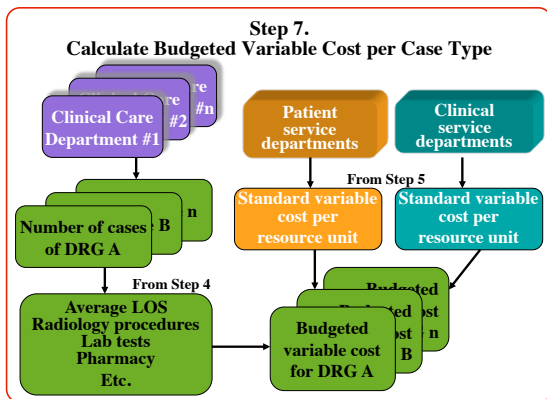
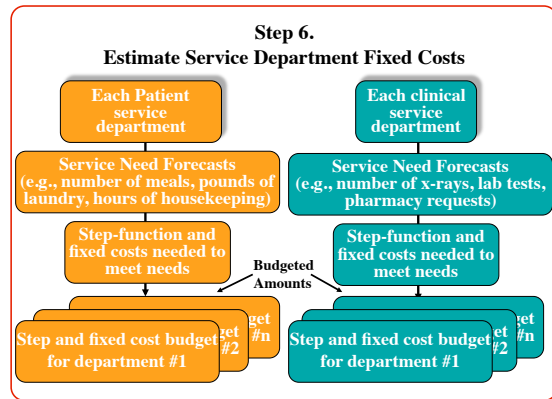
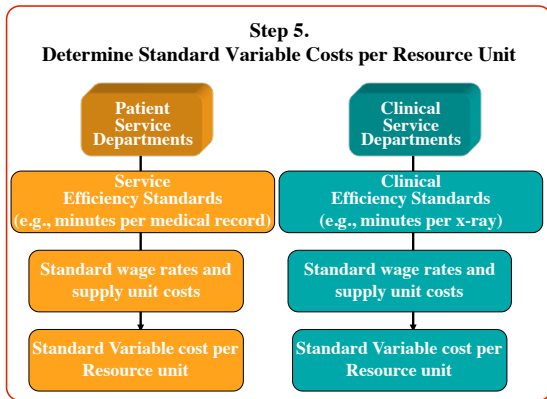
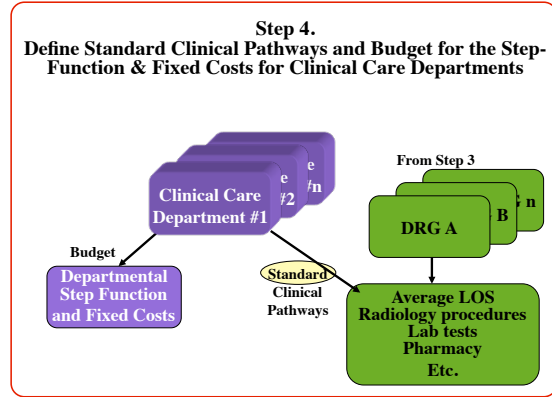
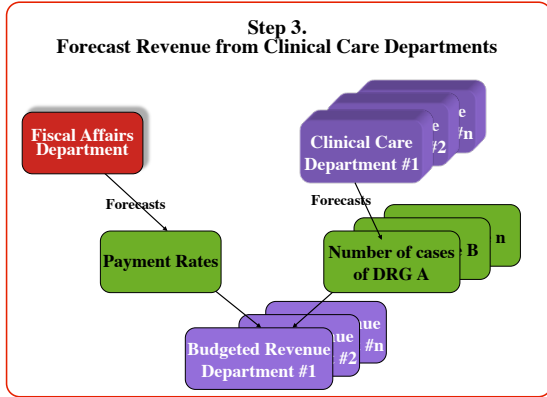
Hospital			
Administrative Service Departments	Patient Service Departments	Clinical Service Departments	Clinical Care Departments
Billing Fiscal Legal	Dietary Laundry Housekeeping Plant Maintenance Medical Records	Radiology Pathology Anesthesiology Pharmacy Social Services	Surgery Medicine Ob/Gyn Pediatrics Emergency

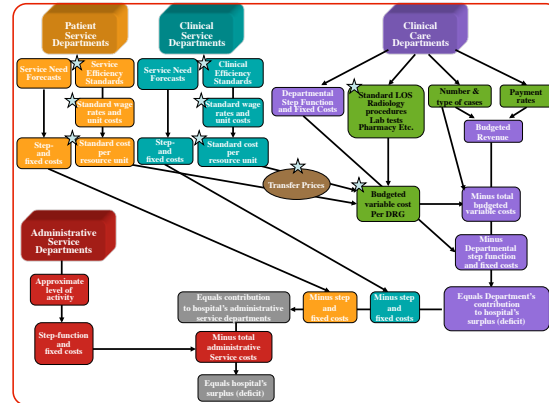
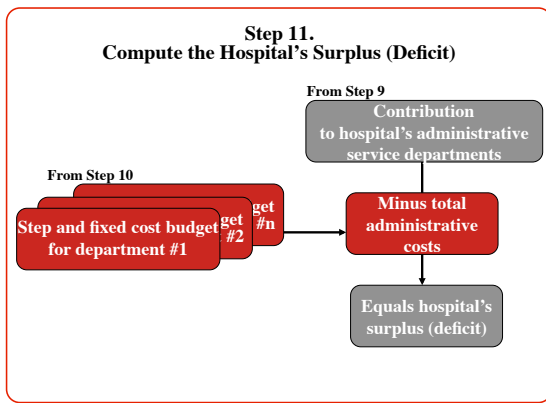
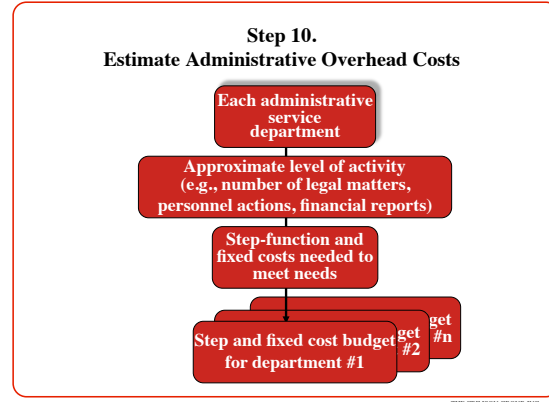
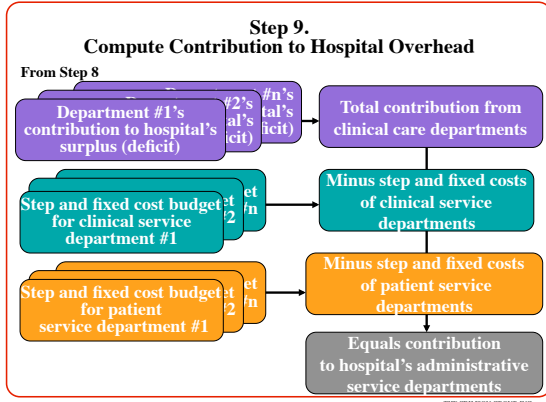
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Step 2. Determine Cost Drivers and Controlling Forces for Each Department

	Examples	Cost Driver	Controlling Force
Administrative Service Departments	Billing Legal	Bill Hour	Admission Request
Patient Service Departments	Dietary Laundry Medical Records	Meal Pound Record	Day of care Day of Care Admission
Clinical Service Departments	Radiology Pathology Pharmacy Social Services	Procedure Test Prescription Hour	MD Order MD Order MD Order MD Order
Clinical Care Departments	Surgery Medicine Emergency	Case (by DRG) Case (by DRG) Case type	Admission Admission Visit

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A SIMPLE EXAMPLE

STEP 3	Forecast Revenue				
	DRG A	DRG B	DRG C	DRG D	Total
DEPARTMENT #1					
Forecast number of cases	250	400	300	200	
Expected revenue per case	€ 3,900	€ 2,600	€ 2,020	€ 3,200	
Total Revenue	€ 745,000	€ 1,040,000	€ 606,000	€ 1,040,000	€ 3,431,000
STEP 4	DEFINE STANDARD PATHWAYS AND STEP-FUNCTION AND FIXED COSTS FOR DEPARTMENTS				
STEP 4.A	STANDARD CLINICAL PATHWAYS:				
	DRG A	DRG B	DRG C	DRG D	
Resources from Clinical Service Departments					
No. of patient days per case	10	5	6	12	
No. of x-rays per case	5	1	2	2	
No. of CBCs per case	10	5	3	2	
Resources from Patient Service Departments					
No. of meals per case	30	15	18	36	
No. of pounds of laundry per case	15	7.5	9	18	
No. of medical records per case	1	1	1	1	
STEP 4.B	STEP-FUNCTION AND FIXED COSTS AT FORECAST VOLUME AND MIX				
Step-function costs (e.g., nursing)	€ 900,000				
Fixed costs (e.g., departmental administration)	1,100,000				
TOTAL STEP AND FIXED COSTS AT ESTIMATED VOLUME AND MIX	€ 2,000,000				

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STEP 5	DETERMINE STANDARD VARIABLE COST PER RESOURCE UNIT				
STEP 5.A	CLINICAL SERVICE DEPARTMENTS	DRG A	DRG B	DRG C	DRG D
STANDARD EFFICIENCY PROTOCOLS	No. nursing minutes per patient day	40	30	20	40
	No. technician minutes per x-ray	20	20	20	20
	No. technician minutes per CBC	10	10	10	10
	No. units of nursing supplies per patient day	10	3	5	8
	No. units of supplies per x-ray	3	3	3	3
	No. units of supplies per CBC	4	4	4	4
STANDARD WAGE RATES AND UNIT SUPPLY COSTS	Cost per minute for nurses	€ 0.50	€ 0.50	€ 0.50	€ 0.50
	Cost per minute for x-ray technicians	0.20	0.20	0.20	0.20
	Cost per minute for lab technicians	0.20	0.20	0.20	0.20
	Cost per unit for nursing supplies	3.50	3.50	3.50	3.50
	Cost per unit for x-ray supplies	5.00	5.00	5.00	5.00
STANDARD VARIABLE COST PER RESOURCE UNIT IN CLINICAL SERVICE DEPARTMENTS	Patient day	€ 35	€ 26	€ 28	€ 48
	X-Ray	19	19	19	19
	CBC	10	10	10	10
STEP 5.B	PATIENT SERVICE DEPARTMENTS				
STANDARD EFFICIENCY PROTOCOLS	No. minutes per meal	10	10	10	10
	No. minutes per pound of laundry	1	1	1	1
	No. minutes per medical record	5	5	5	5
	No. units of ingredients per meal	5	5	5	5
	No. units of laundry supplies per pound	2	2	2	2
	No. units of supplies per medical record	2	2	2	2
STANDARD WAGE RATES AND UNIT SUPPLY COSTS	Cost per minute for meals	€ 0.25	€ 0.25	€ 0.25	€ 0.25
	Cost per minute for laundry	0.15	0.15	0.15	0.15
	Cost per minute for medical records	0.30	0.30	0.30	0.30
	Cost per unit for dietary supplies	1.50	1.50	1.50	1.50
	Cost per unit for laundry supplies	0.30	0.30	0.30	0.30
VARIABLE COST PER RESOURCE UNIT IN PATIENT SERVICE DEPARTMENTS	Meals	€ 10	€ 10	€ 10	€ 10
	Laundry	1	1	1	1
	Medical Records	4	4	4	4

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STEP 6 ESTIMATE SERVICE DEPARTMENT STEP AND FIXED COSTS AT FORECASTED VOLUME						
STEP 6A CLINICAL SERVICE DEPARTMENTS						
	STEP	FIXED	TOTAL			
Nursing	€ 300,000	€ 300,000	€ 1,100,000			
Radiology	150,000	700,000	850,000			
Laboratory	220,000	500,000	720,000			
Total			€ 2,790,000			
STEP 6B PATIENT SERVICE DEPARTMENTS						
	STEP	FIXED	TOTAL			
Dietary	€ 180,000	€ 400,000	€ 580,000			
Laundry	100,000	300,000	400,000			
Medical Records	150,000	200,000	350,000			
Total			€ 1,330,000			
STEP 7 CALCULATE VARIABLE COST/CASE						
	DRG A	DRG B	DRG C	DRG D		
From Clinical Service Departments						
Nursing	€ 550	€ 128	€ 165	€ 576		
Radiology	95	19	38	57		
Laboratory	100	50	30	120		
From Patient Service Departments						
Dietary	€ 300	€ 150	€ 180	€ 360		
Laundry	16	8	9	19		
Medical Records	4	4	4	4		
TOTAL VARIABLE COST PER CASE	€ 1,064	€ 358	€ 426	€ 1,135		

A standard

STEP 8 COMPUTE THE SURPLUS (DEFICIT) FOR EACH CLINICAL CARE DEPARTMENT				
Revenue	€ 745,000	€ 1,040,000	€ 606,000	€ 1,040,000
Minus Variable Costs	266,063	143,150	127,785	227,080
Equals Contribution to Step and Fixed	€ 478,938	€ 896,850	€ 478,215	€ 812,920
Minus Step and Fixed Costs				2,000,000
Equals Contribution to Clinical and Patient Service Step and Fixed Costs				€ 2,666,923
STEP 9 COMPUTE CONTRIBUTION TO HOSPITAL OVERHEAD				
Contribution from Clinical Care Departments (assumes 10 with same contribution)	€ 6,669,225			
Minus Step and Fixed Costs of Clinical Service Departments	2,670,000			
Minus Step and Fixed Costs of Patient Service Departments	1,330,000			
Equals Contribution to Hospital Overhead	€ 2,669,225			
STEP 10 ESTIMATE ADMINISTRATIVE SERVICE COSTS				
Legal		€ 250,000	€ 400,000	€ 650,000
Human Resources		300,000	600,000	900,000
Fiscal Affairs		300,000	850,000	1,150,000
Total				€ 2,700,000
STEP 11 COMPUTE HOSPITAL'S CLINICAL SURPLUS (DEFICIT)				
Contribution to Hospital Overhead	€ 2,669,225			
Minus Estimated Administrative Costs	2,700,000			
Equals Hospital's Surplus (Deficit)	€ (30,775)			

What do we do about this?

- ### Step 12. Fix It
1. Define the Organizational Structure
 2. Determine Cost Drivers and Controlling Forces for Each Department
 3. Forecast Revenue from Clinical Care Departments
 4. Define Clinical Pathways and Step-Function & Fixed Costs for Clinical Care Departments
 5. Determine Variable Cost per Resource Unit
 6. Estimate Service Department Fixed Costs
 7. Calculate Variable Cost per Case Type
 8. Compute the Surplus (Deficit) for Each Clinical Care Department
 9. Compute Contribution to Hospital Overhead
 10. Estimate Administrative Service Costs
 11. Compute Hospital's Clinical Surplus (Deficit)

- ### Step 12. Fix It
3. Forecast Revenue from Clinical Care Departments
 4. Define Clinical Pathways and Step-Function & Fixed Costs for Clinical Care Departments
 5. Determine Variable Cost per Resource Unit
 6. Estimate Service Department Fixed Costs
 10. Estimate Administrative Service Costs

OPTIONS	
Cost Driver	Option
Case Mix	Reduce the incidence or don't treat certain diagnoses Not in the hospital's control
Volume	Don't treat all patients with certain diagnoses
Resources Per Case	Treat certain case types with a more cost-effective mix of resources
Cost Per Resource Unit	Provide resources in a less expensive way
Fixed Facility Costs	Invest in lower cost capital, reduce size/salaries of administrative staff

THE IRONY

IF THE TERRITORIES DO A BETTER-THAN-EXPECTED JOB OF KEEPING PEOPLE HEALTHY, THERE WILL BE FEWER INPATIENTS

AS A RESULT, THE HOSPITAL'S REVENUE FALLS

IF EACH INPATIENT MAKES A FINANCIAL CONTRIBUTION TO THE HOSPITAL'S SURPLUS, THE DECLINE IN INPATIENTS WORSENS THE HOSPITAL'S FINANCIAL PERFORMANCE. SO . . .

. . . PRAY THAT THE TERRITORIES DO A BAD JOB!

THIS ELIMINATES ONE MORE OPTION

Step 3. ~~Forecast Revenue from Clinical Care Departments~~

Step 4. ~~Define Clinical Pathways and Step-Function & Fixed Costs for Clinical Care Departments~~

Step 5. ~~Determine Variable Cost per Resource Unit~~

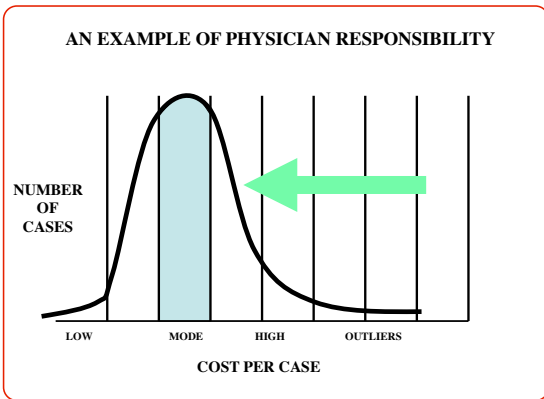
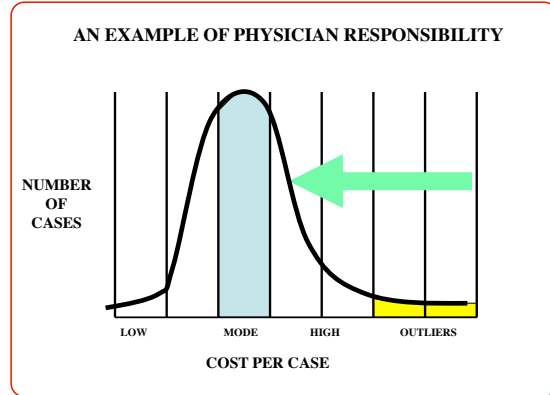
Step 6. ~~Estimate Service Department Fixed Costs~~

Step 10. ~~Estimate Administrative Service Costs~~

This is the responsibility of physicians

These are the responsibility of administrators

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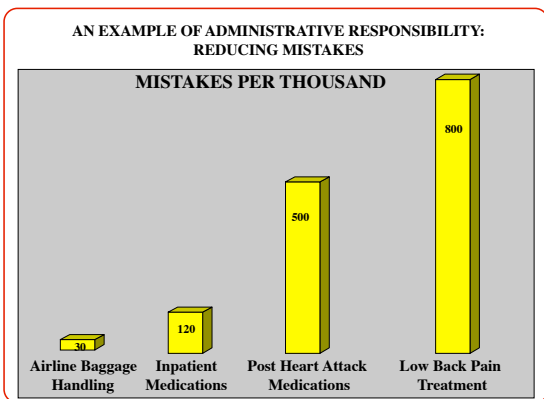
Treatment for Long-Term Chronic Conditions in Last 2 Years of Life
Quality of Care is Rated Similar

Most Aggressive Care NYU Langone Medical Center New York		Most Conservative Care Scott & White Memorial Hospital Texas	
Days in Ward	42	Days in Ward	12
Days in ICU	12	Days in ICU	4
Primary Care Visits	34	Primary Care Visits	23
Specialist Visits	97	Specialist Visits	18
Dollars Spent	\$105,067	Dollars Spent	\$44,090

More than double!

Source: Weisberg, John E. et. al., Dartmouth Atlas of Health Care, 2008

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A THIRD EXAMPLE OF ADMINISTRATIVE RESPONSIBILITY:

Step 6. ~~Estimate Service Department Fixed Costs~~

REDUCE

Step 10. ~~Estimate Administrative Service Costs~~

TO REDUCE THESE COSTS YOU NEED TO THINK ABOUT MATTERS SUCH AS CENTRALIZING CERTAIN SERVICES (FOR EXAMPLE, INFORMATION TECHNOLOGY) AND REDUCING THE CARRYING COST OF YOUR INVENTORY

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SOME EXAMPLES

SEATTLE CHILDREN'S HOSPITAL IMPROVED INVENTORY CONTROL, AND SAVED \$23 MILLION IN ONE YEAR

AKRON CHILDREN'S HOSPITAL IMPROVED SCHEDULING FOR ITS MRI DEPARTMENT AND REDUCED WAITING TIME FROM 25 DAYS TO 2 DAYS

SEATTLE CHILDREN'S HOSPITAL BEGAN TO DO MORE SURGERIES ON FRIDAYS SO AS TO USE BEDS THAT WERE FREE ON THE WEEKENDS, THEREBY USING ITS CAPACITY MORE EFFICIENTLY

A SURGICAL FACILITY IN BELLVUE WASHINGTON REDESIGNED PATIENT AND SUPPLY FLOWS AND WAS ABLE TO REDUCE THE PATIENT AREA NEEDED IN A NEW BUILDING, THEREBY ALLOWING IT TO SAVE \$20 MILLION FROM THE ORIGINAL COST ESTIMATE

Source: Julie Weed, "Factory Efficiency Comes to the Hospital," *The New York Times*, 9 July 2010

BUT THAT'S ONLY THE FIRST TASK: BUILDING THE BUDGET AND MAKING THE TRADEOFFS TO BRING IT INTO BALANCE WITH AVAILABLE RESOURCES.

BUT . . .

. . . ANYONE CAN BALANCE A BUDGET THE HARD PART IS BALANCING THE ACTUALS!

HOW DO YOU DO THAT?

AMONG OTHER THINGS, YOU ALSO NEED A WELL-DESIGNED REPORTING SYSTEM

SPENSER REHABILITATION HOSPITAL REPORTING HIERARCHY
(In Thousands of Dollars)
For Month of June 2002

FIRST LEVEL REPORT: MACRO PROGRAM ANALYSIS
For Board and Senior Management

Surplus (Deficit)	Actual		Over or (under) budget		VARIANCE ANALYSIS								
	This Month	Year to date	This Month	Year to date	Revenue	Price	Payer Mix	Volume/Mix	Volume/Mix	Expense	Net	Utilization	Unit Cost
	\$2,110	\$12,030	\$1,135	\$355									
Department - SRH	24,828	147,280	(710)	(2,990)	(50)	(320)	150	(90)	60	(250)	(150)		
Department	1,235	7,570	1,235	2,170									
Research	1,180	7,045	95	75									
Education	3,990	18,990	(255)	55									
Nutrition	4,120	24,175	160	(230)									
Development	2,245	13,680	180	(160)									
Administration	3,630	22,965	(70)	(730)									
Total direct	\$23,635	\$234,705	\$1,000	\$3,655									

SECOND LEVEL REPORT: PRODUCT LINE ANALYSIS
For Board and Senior Management

Product Line	Actual		Over or (under) budget		VARIANCE ANALYSIS								
	This Month	Year to date	This Month	Year to date	Revenue	Price	Payer Mix	Volume/Mix	Volume/Mix	Expense	Net	Utilization	Unit Cost
Brain Injury	\$5,340	\$35,845	\$6,625	\$1,380									
Spinal Cord Injury	3,310	19,605	(30)	(65)	(10)	(50)	200	(100)	100	(50)	(20)		
Stroke Rehabilitation	3,115	18,085	90	(75)									
Post-polio Rehabilitation	5,740	33,615	(65)	(165)									
Pediatric Rehabilitation	7,020	40,110	(80)	185									
Total direct	\$24,525	\$147,280	(710)	(2,990)									

SPENSER REHABILITATION HOSPITAL REPORTING HIERARCHY
(In Thousands of Dollars)
For Month of June 2002

THIRD LEVEL REPORT: DRG ANALYSIS
For Senior Management and Program Managers

DRG	Actual		Over or (under) budget		VARIANCE ANALYSIS								
	This Month	Year to date	This Month	Year to date	Revenue	Price	Payer Mix	Volume/Mix	Volume/Mix	Expense	Net	Utilization	Unit Cost
Spinal Cord Injury	\$895	\$5,400	\$119	\$75	0	0	200	(150)	50	160	(91)		
DRG 2	1,030	7,000	170	(50)									
DRG 3	760	4,500	(100)	(50)									
DRG 4	625	2,705	(165)	(27)									
Total	\$3,310	\$19,605	\$119	\$75									

FOURTH LEVEL REPORT: DRG ANALYSIS BY PHYSICIAN
For Program Managers and Physician Chiefs

Physician	Actual		Over or (under) budget		VARIANCE ANALYSIS								
	This Month	Year to date	This Month	Year to date	Revenue	Price	Payer Mix	Volume/Mix	Volume/Mix	Expense	Net	Utilization	Unit Cost
DRG 1	\$245	\$1,300	\$35	(65)	0	0	150	(100)	50	40	(45)		
Physician 1	300	1,775	20	(20)									
Physician 2	150	780	35	165									
Physician 3	200	1,545	99	(145)									
Total	\$895	\$5,400	\$119	\$75									

SPENSER REHABILITATION HOSPITAL REPORTING HIERARCHY
(In Thousands of Dollars)
For Month of June 2002

FIFTH LEVEL REPORT: PHYSICIAN ANALYSIS BY DRG
For Director of Medical Staff

Physician	Actual		Over or (under) budget		VARIANCE ANALYSIS								
	This Month	Year to date	This Month	Year to date	Revenue	Price	Payer Mix	Volume/Mix	Volume/Mix	Expense	Net	Utilization	Unit Cost
DRG 1	\$245	\$1,300	\$35	(65)	0	0	150	(100)	50	(40)	(45)		
DRG 2	90	560	(25)	(60)									
DRG 3	75	350	(20)	(80)									
DRG 4	45	280	15	95									
DRG 5	35	110	(5)	(30)									
Total	\$490	\$2,600	\$70	(130)									

SIXTH LEVEL REPORT: DRG ANALYSIS BY PHYSICIAN AND COST CENTER
For Physician Chiefs and Physicians

Physician	Actual		Over or (under) budget		UTILIZATION VARIANCE ANALYSIS BY DEPARTMENT						
	This Month	Year to date	This Month	Year to date	Lab	Rad	Pharm	PT	Routine Case	Other	Test
Physician 1	\$245	\$1,300	\$35	(65)	10	(50)	20	50	(50)	(20)	(40)
Physician 2	300	1,775	20	(20)							
Physician 3	150	780	35	165							
Physician 4	200	1,545	99	(145)							
Total	\$895	\$5,400	\$119	\$75							

IF YOU CAN'T REPORT ON ACTUAL RESULTS IN THIS OR A SIMILAR WAY, DON'T BOTHER TO BUILD A BUDGET.

JUST PRAY!

THIS IS CALLED THE "GOD WILL PROVIDE" THEORY OF BUDGETING

IS IT HARD TO BUDGET AND REPORT SO AS TO
PLAN AND MANAGE COSTS BETTER?

YES

CAN IT BE DONE?

YES

IS IT NECESSARY TO ASSURE THAT A LHU DOES THE
BEST JOB IT CAN OF PROVIDING HEALTHCARE
SERVICES TO THE POPULATION FOR WHICH IT IS
RESPONSIBLE?

YES

SO . . . WHY ISN'T IT BEING DONE?

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IT WAS TRIED ONCE, AND IT COULD BE TRIED AGAIN
FOR DETAILS ON THE LAST EFFORT SEE:

*Centro Italiano Sviluppo**

A €5 million experimental project that involved 10 local health units
situated in 4 regions of Northern Italy that covered between 50,000 and
200,000 people.

At least two reasons why the project didn't succeed:

1. Too many LHUs. One would have been enough to demonstrate the process and learn about the difficulties
2. They didn't have today's IT technology

* Case study available from The Crimson Press Curriculum Center

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IT'S TIME TO TRY AGAIN
YOU ARE RUNNING OUT OF TIME

GOALS OF THE PROJECT

1. Link decision making between the territories and the hospitals
2. Change the financing methodology to provide incentives to shift care to the outpatient side whenever appropriate
3. Build inpatient and outpatient budgets using cost drivers
4. Develop reports on actual performance that have an action orientation
5. Decentralize operational decision-making within the hospitals and territories to those close to the action, *including physicians*
6. Consider which services and activities can be centralized at the regional level so as to increase efficiency and enhance consistency from one LHU to the next

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THANK YOU!

PLEASE SHARE YOUR THOUGHTS

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