

**PLANNING AND STRATEGIC CONTROL FOR PUBLIC HEALTH IN ITALY**

**WHY YOU SHOULD BE VERY WORRIED ABOUT YOUR FUTURE**

David W. Young, D.B.A.  
 Professor of Management, Emeritus  
 Health Sector Program, Boston University School of Management  
 •  
 Visiting Lecturer  
 Programs for Chiefs of Clinical Service and Leadership Development  
 Harvard School of Public Health  
 •  
 Visiting Professor  
 Facoltà di Economia Aziendale • Università di Bologna and Università di Pisa

1 March 2011

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**TWO MAJOR THEMES**

**WHERE IS THE ITALIAN 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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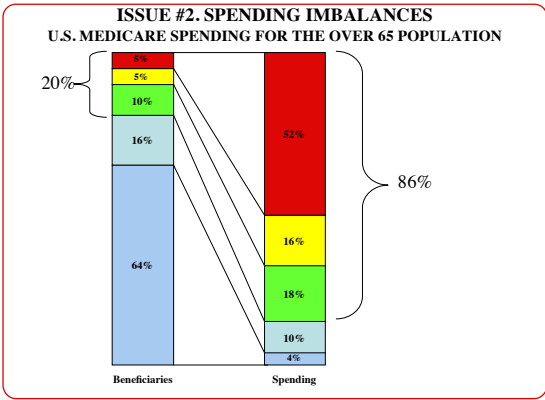
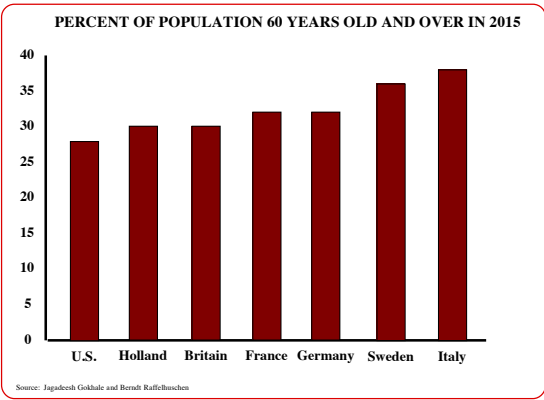
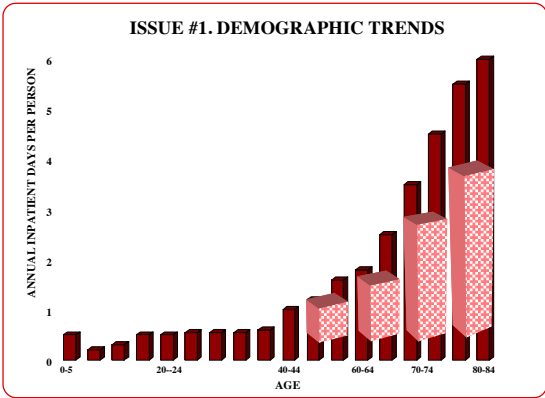
**THE CHALLENGE**

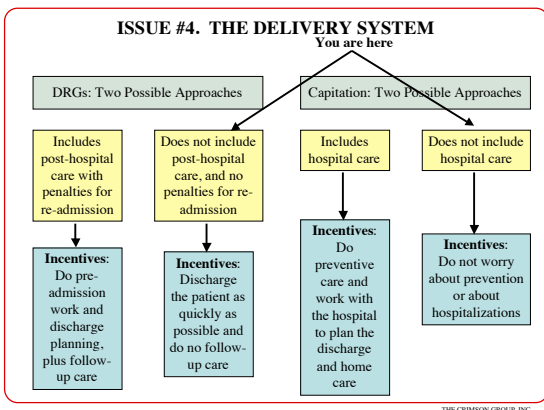
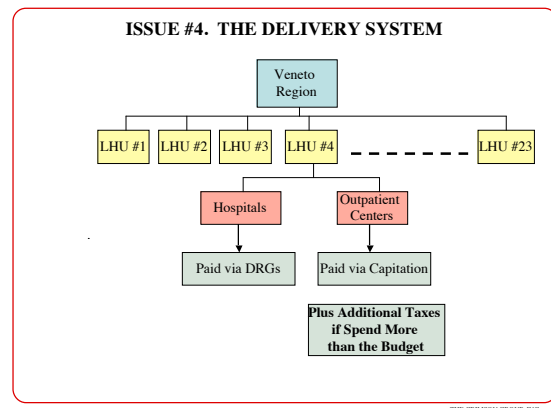
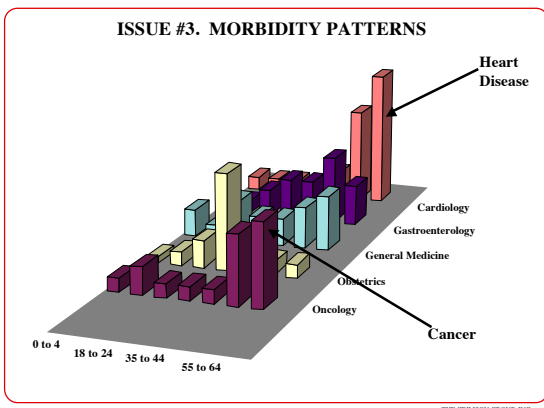
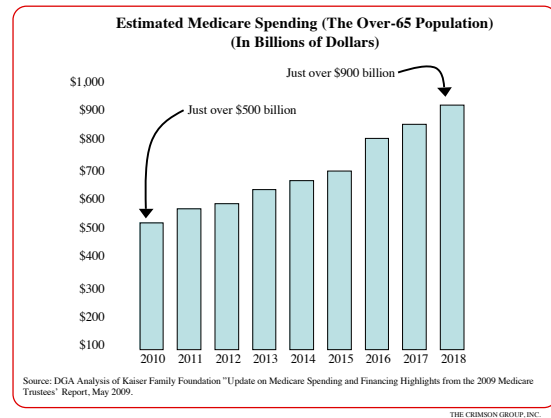
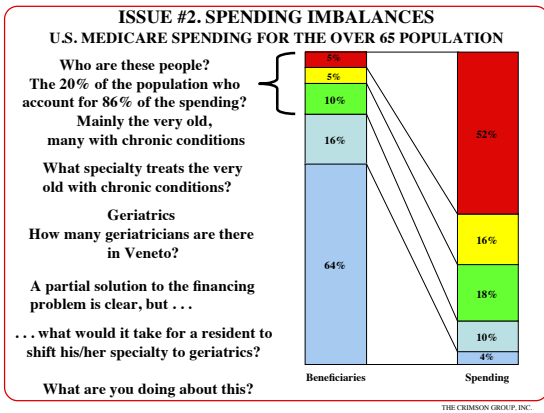
**FOUR ISSUES CONFRONT YOUR HEALTHCARE SYSTEM**

THEY WILL BECOME INCREASINGLY SERIOUS  
**AND COSTLY** IN THE NEXT 5 TO 8 YEARS

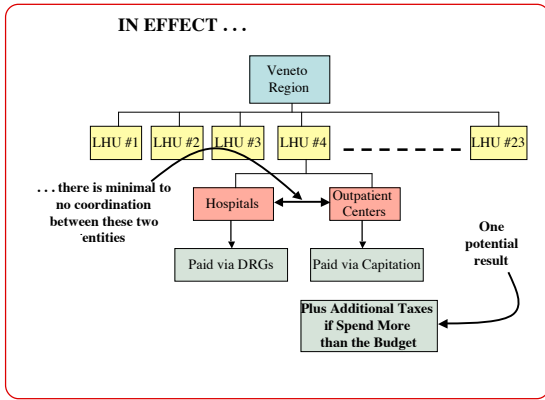
**DEMOGRAPHIC TRENDS  
 SPENDING IMBALANCES  
 MORBIDITY PATTERNS  
 A DYSFUNCTIONAL DELIVERY SYSTEM**

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- ### ISSUE #4. THE DELIVERY SYSTEM
- The results:
1. Outpatient centers (the territories) do not worry about prevention because the capitation payment does not include the cost of hospital care
  2. When a patient is hospitalized the hospital tries to discharge him or her as soon as possible because the DRG payment does not include the cost of follow-up care. That is the responsible of the outpatient centers
  3. In effect, a patient is a hot potato who everyone is trying to toss to someone else
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**CONCLUSIONS**

THERE ARE A DISPROPORTIONATE NUMBER OF PEOPLE CURRENTLY IN THEIR EARLY 60s, WHO WILL DEMAND INCREASINGLY LARGE AMOUNTS OF INPATIENT CARE AS THEY GROW OLDER

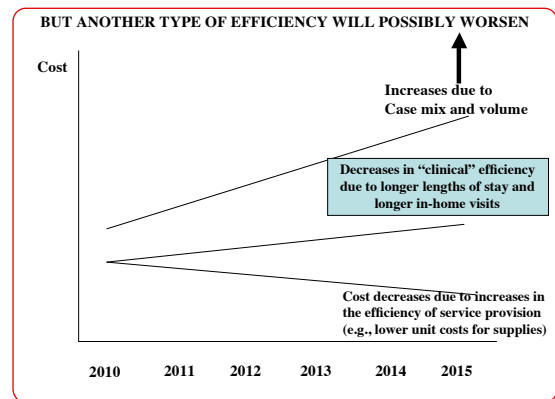
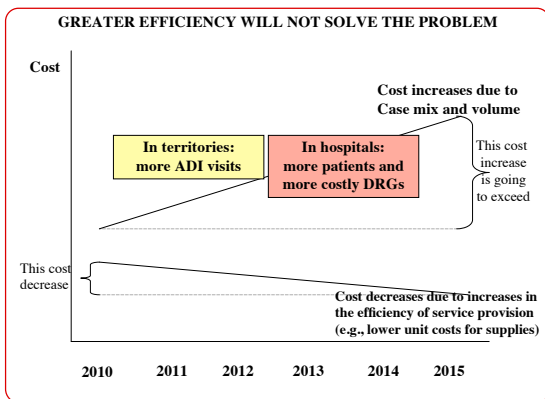
SINCE THEY LIVE LONGER THAN THEIR ANCESTORS, THEY WILL BECOME PART OF THE HIGH COST SEGMENT OF THE HEALTH SYSTEM

THEIR CARE WILL BE LARGELY IN AREAS SUCH AS CARDIOLOGY AND ONCOLOGY—AREAS THAT DO NOT LEND THEMSELVES EASILY TO A SHIFT TO OUTPATIENT CARE

THEY ALSO WILL DISPLAY AN INCREASING INCIDENCE OF CHRONIC CONDITIONS, THEREBY INTENSIFYING COST PRESSURES IN OUTPATIENT SETTINGS

RESULT: INTENSE PRESSURES ON COSTS AND A FRAGMENTED DELIVERY SYSTEM THAT DOES NOT HAVE THE INCENTIVES NEEDED TO SLOW THE RATE OF COST GROWTH

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**IN ADDITION TO WORKING TO IMPROVE EFFICIENCY, HOW CAN YOU SOLVE THESE PROBLEMS?**

**TO BEGIN, YOU MUST RECOGNIZE THAT COSTS ARE DRIVEN BY FIVE FACTORS, AND . . .**

**. . . YOU MUST REDESIGN THE PAYMENT MECHANISMS IN LHUs TO PROVIDE THE APPROPRIATE INCENTIVES ON BOTH THE OUTPATIENT AND INPATIENT SIDES**

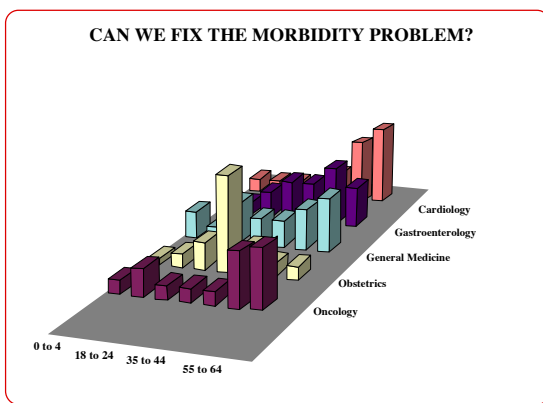
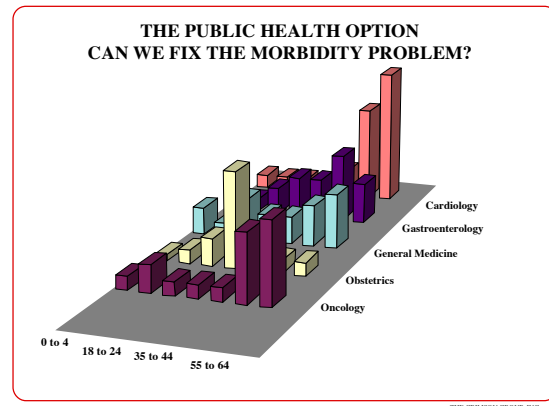
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**HEALTH CARE COST DRIVERS**

Cost Driver	Examples	Controlling Force(s)
Case Mix	Diabetes, cancer, heart disease . . .	Environment, genetics, health habits. <b>Public Health</b>
Volume	10,000 cases diabetes, 15,000 cases cancer . . .	Environment, genetics, health habits.
Resources Per Case	8 outpatient visits, 2 glucose tests, 2 CBCs . . .	Physicians, clinical protocols, available technology. <b>Operations</b>
Cost Per Resource Unit	\$40 per OPD visit, \$25 per glucose test, \$12 per CBC . . .	Service-providing units.
Fixed Facility Costs	Plant & equipment depreciation; managerial & administrative staffing.	Senior management, physicians, health policy. <b>Strategy</b>

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OPTIONS AND CONSEQUENCES		
Cost Driver	Option	Consequences
Case Mix	Reduce the incidence or don't treat certain diagnoses	Morbidity may improve, or some patients will suffer and/or die prematurely.
Volume	Don't treat all patients with certain diagnoses	
Resources Per Case	Treat certain case types with a more cost-effective mix of resources	More outpatient care and shorter lengths of stay in hospitals. Perhaps fewer tests and procedures.
Cost Per Resource Unit	Provide resources in a less expensive way	Lower wages, lower supply prices, greater efficiency. Result is fewer staff and/or different skill mixes.
Fixed Facility Costs	Invest in lower cost capital, reduce size/salaries of administrative staff	Less technology, fewer administrators, less qualified administrators.



**BUT ...**  
**... DO PEOPLE WANT TO IMPROVE THEIR HEALTH?**

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**HEALTH INDICATORS IN MASSACHUSETTS**  
**A RELATIVELY "HEALTHY" STATE**

	MA %	MA Rank
overweight	52	4 <sup>th</sup>
obese	17	5 <sup>th</sup>
Any exercise in past month	76	13 <sup>th</sup>
fruit and vegetable consumption	31	4 <sup>th</sup>
current smoker	20	8 <sup>th</sup>

1 = best; 50 = worst

Source: Massachusetts Department of Public Health

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- Leading causes of death in the United States**
- Tobacco: 435,000 deaths, 18.1 % of total U.S. deaths
  - Poor diet and physical inactivity: 400,000 deaths, 16.6%
  - Alcohol consumption: 85,000 deaths, 3.5%
  - Microbial agents: 75,000
  - Toxic agents: 55,000
  - Motor vehicle crashes: 43,000
  - Incidents involving firearms: 29,000
  - Sexual behaviors: 20,000
  - Illicit use of drugs: 17,000
- Almost 35% here
- Source: Journal of the American Medical Association
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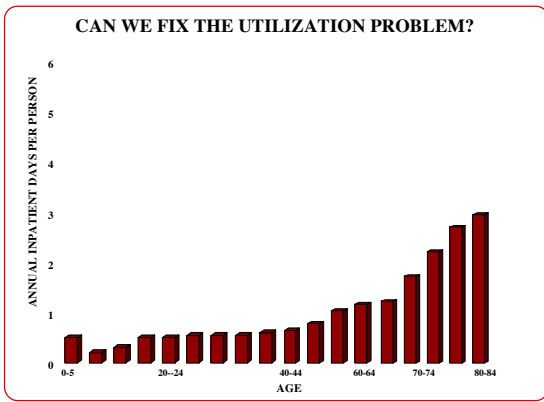
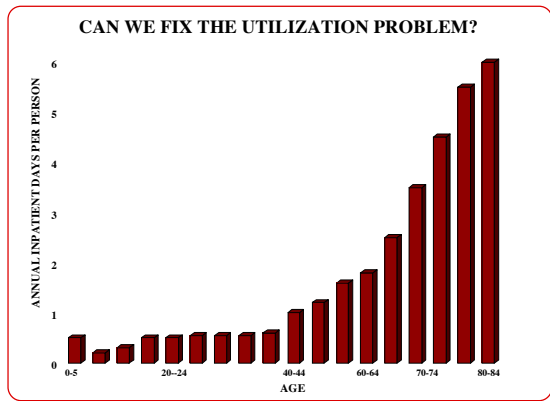


### HEALTH CARE COST DRIVERS?

Cost Driver	Examples	Controlling Force(s)
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Fixed Facility Costs	Plant & equipment depreciation; managerial & administrative staffing.	Senior management, physicians, health policy.

Utilization/Efficiency

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### TO REDUCE UTILIZATION, A LHU NEEDS TO THINK CREATIVELY ABOUT DISEASE MANAGEMENT STRATEGIES

- OUTPATIENT VERSUS INPATIENT TREATMENT
- PHARMACEUTICALS RATHER THAN SURGERY
- PRE-ADMISSION ACTIVITIES TO SHORTEN LENGTH OF STAY
- IN-HOME CARE TO SHORTEN LENGTH OF STAY

Territories                      Hospitals

**BUT IT IS HARD TO DO THIS WHEN THERE IS NO COORDINATION BETWEEN OUTPATIENT AND INPATIENT SERVICES**

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**MOREOVER, YOU NEED TO REMEMBER SEVERAL IMPORTANT ELEMENTS WHEN YOU BEGIN TO THINK ABOUT STANDARDS:**

- A HOSPITAL CAN EXERT SOME CONTROL OVER THE COST OF TREATING A GIVEN DRG (LENGTH OF STAY, TESTS, PROCEDURES, ETC.)  
**... BUT IT HAS LITTLE CONTROL OVER EITHER THE NUMBER OR MIX OF DRGS THAT IT IS ASKED TO TREAT. THAT IS A RESULT OF MORBIDITY PATTERNS, OVER WHICH THE TERRITORIES (AND PATIENTS THEMSELVES) HAVE MORE CONTROL**
- THE TERRITORIES CAN EXERT SOME CONTROL OVER THE EFFICIENCY OF A HOME VISIT (HOW LONG IT TAKES) AND THE MEDICAL SUPPLIES THAT ARE USED FOR THE VISIT ...  
**... BUT THEY HAVE LITTLE CONTROL OVER THE NUMBER OF PATIENTS WHO NEED A HOME VISIT. THAT IS A RESULT OF PATIENTS HEALTH-RELATED BEHAVIOR AND THE GENERAL AGING OF THE POPULATION**

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**IN ADDITION, THE COST OF TREATING A GIVEN DRG IS A COMBINATION OF:**

- THE RESOURCES USED TO TREAT THE PATIENT: LENGTH OF STAY, TESTS, PROCEDURES, ETC.)  
**WHICH ARE CONTROLLED LARGELY BY PHYSICIANS AND THEIR ORDERING PATTERNS**
- THE COST OF EACH RESOURCE UNIT, SUCH AS A LAB TEST OR A DAY OF CARE  
**WHICH ARE CONTROLLED BY ADMINISTRATIVE PEOPLE (NURSE MANAGERS, LAB MANAGERS, DIETARY MANAGERS, HOUSEKEEPING MANAGERS, ETC.)**  
**AND WHICH ARE A RESULT OF A COMBINATION OF WAGE RATES, SUPPLY UNIT COSTS, PRODUCTIVITY AND EFFICIENCY**

In effect ...

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**... YOU NEED TWO SETS OF STANDARDS IN A HOSPITAL:**

- RESOURCES PER CASE (LENGTH OF STAY, TESTS, PROCEDURES, ETC.)  
**... THESE ARE CONTROLLED BY PHYSICIANS**
- COST PER RESOURCE UNIT (BED DAY, X-RAY, LAB TEST, ETC.)  
**... THESE ARE CONTROLLED BY ADMINISTRATIVE PEOPLE, INCLUDING NURSES, X-RAY TECHNICIANS, LABORATORY ADMINISTRATORS, ETC.**

AND ...

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**... YOU NEED TWO SETS OF COSTS:**

- **FULL COST**  
**... FOR AN OVERALL ASSESSMENT OF HOW YOU ARE DOING ON EACH DRG (REVENUE MINUS FULL COST)**
- **DIRECT (OR VARIABLE) COST**  
**... FOR ASSESSING THE PERFORMANCE OF PHYSICIANS AND ADMINISTRATIVE PEOPLE IN CONTROLLING COSTS.**

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**THANK YOU!**

**PLEASE SHARE YOUR THOUGHTS**

[DavidYoung204@cs.com](mailto:DavidYoung204@cs.com)  
[www.davidyoung.org](http://www.davidyoung.org)

**Or contact:**  
**The Crimson Group, Inc.**  
Suite 323  
1770 Massachusetts Avenue  
Cambridge, Massachusetts 02138  
[www.thecrimsongroup.org](http://www.thecrimsongroup.org)

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PLANNING AND STRATEGIC CONTROL FOR PUBLIC HEALTH IN ITALY

BUDGETING AND PERFORMANCE MEASUREMENT USING AN ACTIVITY-BASED (OR COST-DRIVER) APPROACH

David W. Young, D.B.A.  
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 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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A HOSPITAL OR A CLINICAL DEPARTMENT CAN PREPARE AN EXPENSE BUDGET USING AN ACTIVITY-BASED (OR COST-DRIVER) APPROACH

THE ACTIVITIES (COST DRIVERS)

CASE MIX  
 VOLUME  
 RESOURCES PER CASE  
 VARIABLE COST PER RESOURCE UNIT  
 FIXED COSTS

ACTIVITIES (COST DRIVERS) & CONTROLLING FORCES

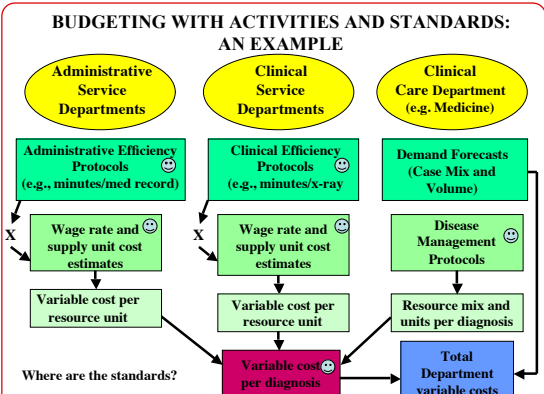
Cost Driver	Examples	Controlling Force(s)
Case Mix	Diabetes, liver cancer, heart disease . . .	Environment, genetics, health habits, public health measures
Volume	1,000 cases diabetes, 500 cases cancer . . .	
Resources Per Case	8 outpatient visits 2 glucose tests, 2 CBCs . . .	Physicians, clinical standards, available technology.
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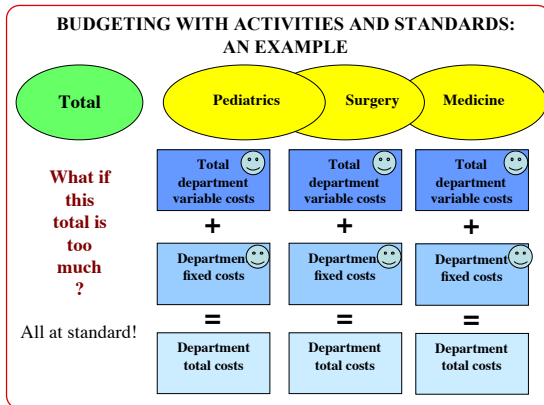
HOW DO WE MAKE IT HAPPEN?

HOW DO WE BEGIN THINKING MORE CREATIVELY ABOUT DISEASE MANAGEMENT STRATEGIES?

A POSSIBLE MANAGEMENT CONTROL RESPONSE:  
 BUILD BUDGETS FROM THE BOTTOM UP, AND USE ACTIVITIES (OR "COST DRIVERS") TO HELP MAKE COST REDUCTION DECISIONS STRATEGICALLY

WHAT DOES THIS MEAN?





**MANAGEMENT CONTROL  
MEETS  
DEPARTMENTAL STRATEGY**

**THERE ARE ONLY FIVE OPTIONS  
WILL THEY BE SELECTED BY DESIGN  
OR DEFAULT?**

**IF BY DESIGN, WHO CHOOSES?**

**OPTIONS AND CONSEQUENCES**

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**SOME SIMPLE EFFICIENCY (COST PER RESOURCE) 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 BELL VUE 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

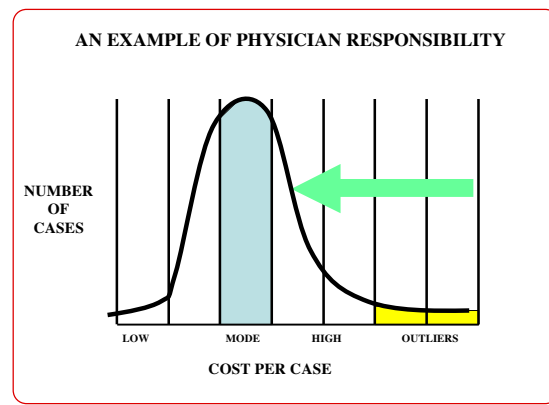
Source: Julie Weed, "Factory Efficiency Comes to the Hospital," *The New York Times*, 9 July 2010

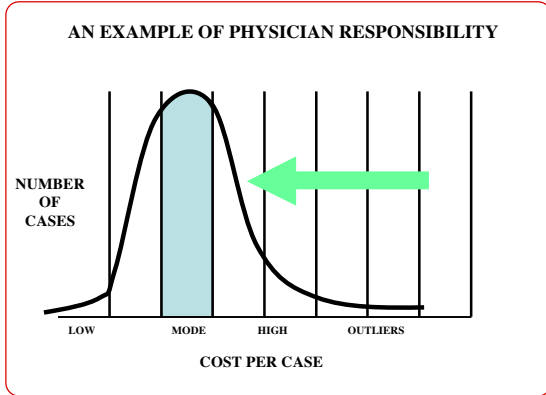
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**DISEASE MANAGEMENT STRATEGIES FOCUS ON RESOURCES PER CASE, BUT ...**

**... TO CHANGE RESOURCES PER CASE YOU MUST INVOLVE PHYSICIANS.**

**HOW DO YOU DO THAT?**





**Example of New Inpatient Utilization Pattern**  
**48 YEAR OLD PRESENTING WITH ATYPICAL CHEST PAIN, POSITIVE SMOKING AND FAMILY HISTORY, AND NORMAL EKG**

CURRENT PATTERN		OPTIONAL PATTERN	
Admit to Telemetry	\$2,800	Admit to Observation Unit	\$1,000
ALOS = 2.2 days		ALOS = 23 hours	
Daily EKG x 3	\$225	EKG x 2	\$150
Enzymes and Full Bloods	\$175	Enzymes and Limited Bloods	\$75
Cardiology Consult	\$150	Cardiology Consult	\$150
Echo	\$350	Echo	\$350
Thallium Stress Test	\$450	Non-Thallium Stress Test	\$125
<b>TOTAL COST</b>	<b>\$4,150</b>	<b>TOTAL COST</b>	<b>\$1,850</b>

**AT AN INCIDENCE RATE OF 5/1000, THE PURCHASER WOULD SAVE \$3.5 MILLION ANNUALLY**

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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: Wennberg, John E. et al., *Dartmouth Atlas of Health Care*, 2008

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**Low Cost Lessons from Grand Junction, Colorado**  
**Medicare Results Compared to Population Overall**

Health status	Worse than some areas with higher Medicare costs
CABG surgeries (2005)	60%
Inpatient coronary angiographies (2005)	55%
Inpatient days during last 2 years of life (2005)	61%
Use of Medicare services (2009)	81%
Position among 404 U.S. geographic areas for service use (2009)	9th
Per enrollee expenditures for Medicaid beneficiaries (compared to state average)	37%
Family doctors (versus national average)	185%
Days in hospital during last 6 months of life	60%
Days in hospice	174%
Deaths in hospitals	50%

**Explanatory Factors**

- Leadership by the primary care community (culture of incentives for cost control)
- Payment system involving a risk pool for PCPs (15% withhold)
- Data on cost profiles for specialists (reduced referrals to high resource utilizers)
- Physician fees for Medicaid equal to those for other patients (led to reduced use of ED)
- Regionalization of services (one tertiary care hospital that is fed by secondary hospitals)
- Primary care providers paid for inpatient visits (led to improved continuity of care)
- Robust end of life care (including an emphasis on hospice services)

Source: Bodenheimer, Thomas, and David West, "Low Cost Lessons from Grand Junction, Colorado," *New England Journal of Medicine*, September 30, 2010.

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**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**

**YOU NEED TO COMPUTE THE VARIANCE BETWEEN THE  
 STANDARD (IN THE BUDGET) AND THE ACTUAL**

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

FIRST LEVEL REPORT: MACRO PROGRAM ANALYSIS		Over or under budget		VARIANCE ANALYSIS			
For Board and Senior Management		This Year	This Year	Revenue		Expense	
Surplus (Deficit)	Actual	Month to date	Month to date	Price	Volume	Price	Volume
				Per Payer Mix	Per Payer Mix	Per Payer Mix	Per Payer Mix
				Net	Net	Net	Net
				Utilization	Utilization	Utilization	Utilization
				Unit Cost	Unit Cost	Unit Cost	Unit Cost
Inpatient-Weborg	\$3,110	\$10,010	(\$1,315)	\$53			
Inpatient - SRH	<b>24,232</b>	<b>147,280</b>	<b>(7,110)</b>	<b>2,290</b>	(50)	(320)	150
Outpatient	1,235	7,570	(125)	1,210			
Research	1,180	7,045	95	75			
Education	3,790	18,900	(235)	181			
Ambulance	4,120	25,175	160	(53)			
Development	2,245	13,680	180	(16)			
Administration	3,630	22,965	(70)	(72)			
Total direct	\$42,635	\$254,705	\$(1,020)	\$(3,625)			

SECOND LEVEL REPORT: PRODUCT LINE ANALYSIS		Over or under budget		VARIANCE ANALYSIS			
For Board and Senior Management		This Year	This Year	Revenue		Expense	
Surplus (Deficit)	Actual	Month to date	Month to date	Price	Volume	Price	Volume
				Per Payer Mix	Per Payer Mix	Per Payer Mix	Per Payer Mix
				Net	Net	Net	Net
				Utilization	Utilization	Utilization	Utilization
				Unit Cost	Unit Cost	Unit Cost	Unit Cost
Product Line							
Brain Injury	\$5,340	\$35,845	\$(625)	\$(1,380)			
Spinal Cord Injury	<b>5,210</b>	<b>19,695</b>	<b>(80)</b>	<b>457</b>	(10)	(50)	200
Stroke Rehabilitation	3,115	18,085	90	185			
Post-polio Rehabilitation	5,740	33,635	(65)	(40)			
Podiatric Rehabilitation	7,020	40,110	(80)	185			
Total direct	\$24,232	\$147,280	\$(670)	\$(2,000)			

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**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**

[DavidYoung204@cs.com](mailto:DavidYoung204@cs.com)  
[www.davidyoung.org](http://www.davidyoung.org)

**Or contact:**  
**The Crimson Group, Inc.**  
**Suite 323**  
**1770 Massachusetts Avenue**  
**Cambridge, Massachusetts 02138**  
[www.thecrimsongroup.org](http://www.thecrimsongroup.org)

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