

PRICING THE SERVICES OF HOSPITALS IN THE AGE OF “CONSUMER-DIRECTED” HEALTH CARE

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FUTURE HOSPITAL CARE: HOW WILL WE PAY THE BILL?

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In this presentation, I shall seek to accomplish three tasks:

- 1. to describe as best I understand it how American hospitals currently price their services;**
- 2. in the process, to explore the pros and cons of price discrimination;**
- 3. finally, to propose a hospital pricing scheme that might be compatible with what is now euphemistically advocated as “Consumer Directed Health Care,” but for the main part has remained merely health insurance with high deductibles injected into an opaque market environment.**

PRICING THE SERVICES OF HOSPITALS IN THE AGE OF “CONSUMER-DIRECTED” HEALTH CARE

I. THE CURRENT HOSPITAL PRICING SYSTEM

A. American fiction: the “chargemaster”

OVERARCHING IT ALL IS THE HOSPITAL'S "CHARGE MASTER"

That charge master shows a list price for every minute procedure that might possibly be delivered by the hospital, along with a price for every conceivable supply-item that might be used in the process of treatment, like this:

{ P₁, P₂, P₃, . . . P₅₈₇, P₅₈₈, P₅₈₉, . . . P₅₀₈₈, P₅₀₈₉, . . .
P₉₃₈₉, P₉₃₉₀, P₉₃₉₁, . . . P₁₂₃₆₁, P₁₂₃₆₂, P₁₂₃₆₃, . . . etc., etc., all
the way to . . . , P₁₉₃₃₆, P₁₉₃₃₇, P₁₉₃₃₈ }

P₇₆₅₈, for example, might be the list price for a "*Patch Kugel LG 19x24*", which, according to Stuart Altman, is, "like, an brain enhance, or stuff like that."

EXCERPT FROM CALIFORNIA'S SAMPLE CHARGEMASTER

2982446	SWS-CPSP-GROUP	39.00
3038402	SCISSOR TIP ENDOCUT	351.00
3038407	PUMP PAIN MEDTRONIC SYNII	56,710.00
3038409	CATH MEDTRONICS SYNMED	3,570.00
3038419	PATCH KUGEL LG 19X24	34,058.00
3038420	PATCH KUGEL 13X17	11,533.00
3038421	STENT SET BILARY FARELLI	13,091.00
3038422	SET EXPLORE COMMON BILE	13,642.00
3039395	SURGERY LEVEL 1 GEN	3,089.00
3039396	SURGERY LEVEL 2 GEN	3,718.00
3039397	SURGERY LEVEL 3 GEN	4,463.00
3039398	SURGERY LEVEL 4 GEN	5,368.00
3039399	SURGERY LEVEL 5 GEN	6,435.00
3039400	SURGERY LEVEL 6 GEN	7,736.00



Stuart Altman, enhanced by a *Patch Kugel LG 19x24*

The chargemaster is updated annually by each hospitals in a process that is a great mystery to the outside world. As one hospital recently explained it to *The Wall Street Journal*:

“There is no method to this madness. As we went through the years, we had these cockamamie formulas. We multiplied our costs to set our charges.”

William McGowan, CFO of UC Davis Health System, 30-year veteran of hospital financing, quoted in *The Wall Street Journal*, December 27, 2004.



The list prices in the chargemasters of hospitals can vary enormously across hospitals – reportedly by a factor of up to 17 – even within a single state.

LIST PRICES FOR SELECTED ITEMS FOR SELECTED CALIFORNIA HOSPITALS

How Much Is That Chest X-Ray?

A new California law allows patients to look up the retail prices of many goods and services at hospitals. A survey of several hospital price lists shows dramatic differences in price.

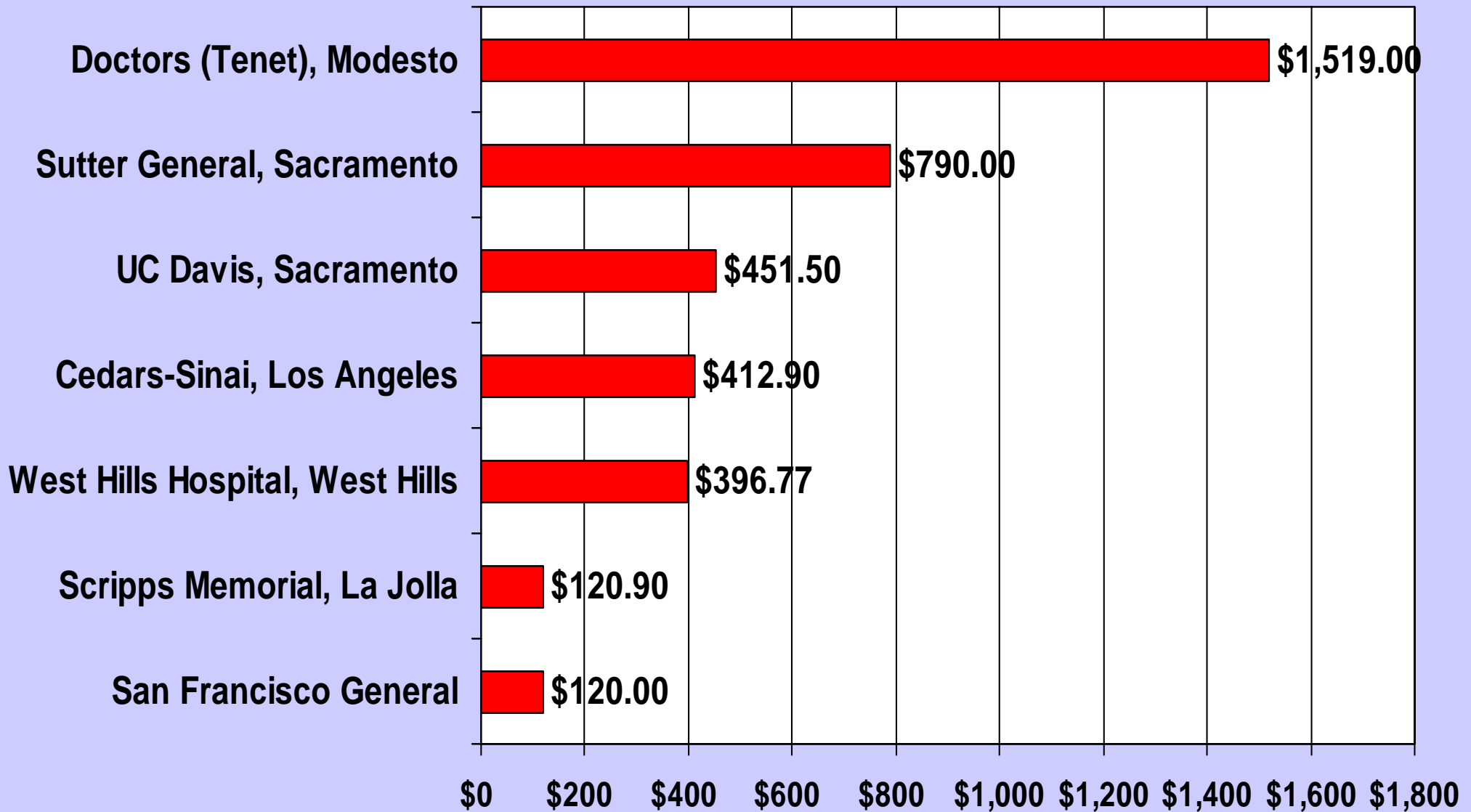
	SCRIPPS MEMORIAL LA JOLLA, San Diego	SUTTER GENERAL, Sacramento	UC DAVIS, Sacramento	SAN FRANCISCO GENERAL, San Francisco	DOCTORS, Modesto	CEDARS-SINAI, Los Angeles	WEST HILLS HOSPITAL, West Hills
Chest X-ray (two views, basic)	\$120.90	\$790	\$451.50	\$120	\$1,519	\$412.90	\$396.77
Complete blood count	\$47	\$234	\$166	\$50	\$547.30	\$165.80	\$172.42
Comprehensive metabolic panel	\$196.60	\$743	\$451**	\$97	\$1,732.95	\$576	\$387.18
CT-scan, head/brain (without contrast)	\$881.90	\$2,807	\$2,868	\$950	\$6,599	\$4,037.61	\$2,474.95
Percocet* (or Oxycodone hydrochloride and acetaminophen) one tablet, 5-325 mg	\$11.44	\$26.79	\$15	\$6.68	\$35.50	\$6.50	\$27.86
Tylenol* (or acetaminophen) one tablet, 325 mg	\$7.06	No charge	\$1	\$5.50	No charge	12 cents	\$3.28

*Hospitals carry either generic version, name brand, or both **Represents the added total of 14 tests that make up the comprehensive metabolic panel

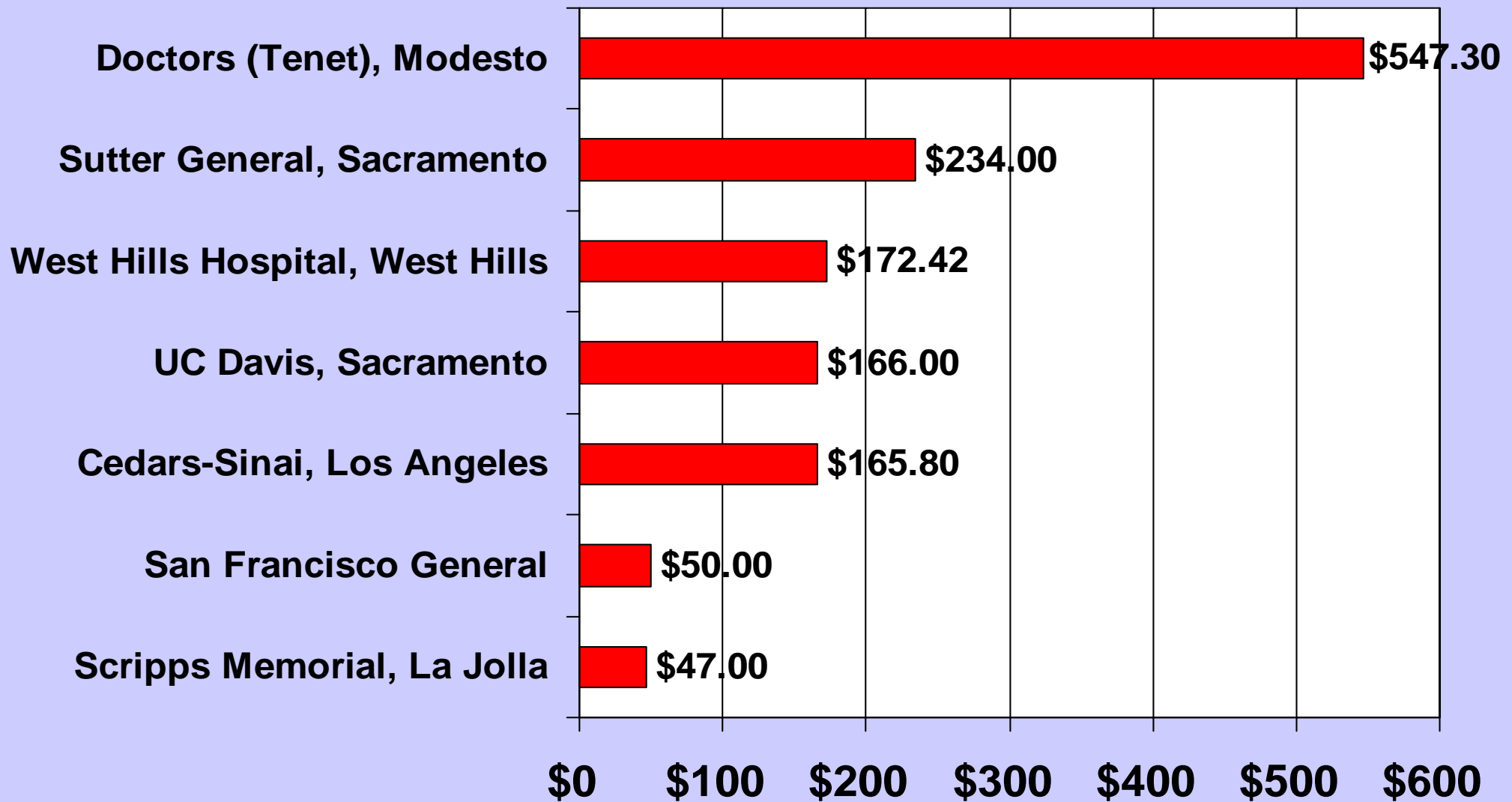
Sources: Scripps Memorial La Jolla; Sutter General; UC Davis Health System; San Francisco General; Doctors Medical Center; Cedars-Sinai Health System; West Hills Hospital and Medical Center

SOURCE: Lucette Lagnado, "California Hospitals Open Books, Showing Huge Price Differences, *The Wall Street Journal*, December 27, 2004: A1.

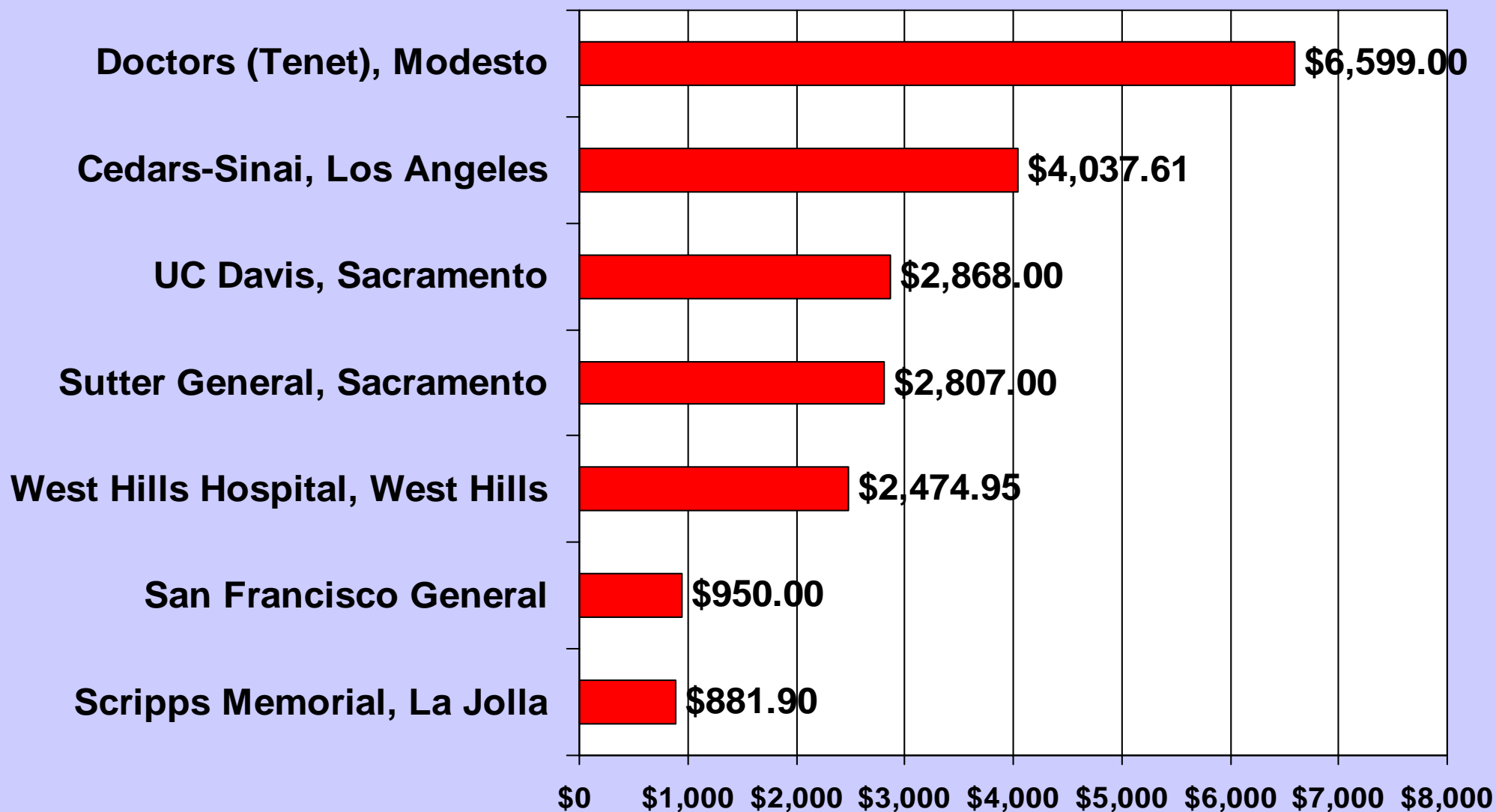
2004 "CHARGES" (LIST PRICES) FOR CHEST X-RAYS IN SELECTED CALIFORNIA HOSPITALS



2004 "CHARGES" (LIST PRICES) FOR COMPLETE BLOOD COUNT IN SELECTED CALIFORNIA HOSPITALS



2004 "CHARGES" (LIST PRICES) FOR CT SCAN HEAD/BRAIN (W/O CONTRAST) IN SELECTED CALIFORNIA HOSPITALS



Actually, though, very few patients are billed the list prices in the charge-masters, and even fewer pay them. Instead, all manner of systems are used actually to pay hospitals:

$\{ P_1, P_2, P_3, \dots, P_{587}, P_{588}, P_{589}, \dots, P_{5088}, P_{5089}, \dots, P_{18389}, P_{18390}, P_{18391} \}$



1. **MEDICARE:** fees per diagnosis-related (DRG) case, set, Soviet-style, by the central government for the whole country, and “OUTLIER PAYMENTS” based on “Charges” that are calculated with “charge-to-cost” ratios;
2. **MEDICAID:** per diems or DRGs, set, Soviet-style, by the state governments;
3. **COMMERCIAL INSURERS:** discounted charges or per diems negotiated separately with each of several dozens of third-party payers;
4. **THE SELF- PAYING (UNINSURED):** full charges, or means-tested discounts

FOR UNINSURED, MIDDLE-CLASS AMERICANS, HOSPITAL BILLS AT FULL CHARGES CAN BE FINANCIALLY DEVASTATING

Hospital bills spin out of control

Consumers are caught in crossfire between insurers, hospitals

By Julie Appleby
USA TODAY

Hospital sticker shock is hitting the USA. It isn't just \$5-a-pill aspirin. Daily room charges exceed \$5,000 in some New Jersey hospitals. An appendectomy in California, including about two days in the hospital, has

Increased hospital charges for common ailments

Across all diagnoses

Charges for hospital care have risen sharply, helping fuel overall health care inflation. Price increases reflect higher costs, along with hospital efforts to recoup declining revenue from some insurers. Median charges, adjusted to current dollars, for common hospital stays (dollar amounts in thousands):

Ailment	1993	2001
Across all diagnoses	\$12,646	\$15,726
Pneumonia	\$9,642	\$13,444
Birth	\$1,076	\$1,344
Congestive heart failure	\$9,282	\$10,522

USA TODAY April 13, 2004.

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I. THE CURRENT HOSPITAL PRICING SYSTEM

A. American fiction: the “chargemaster”

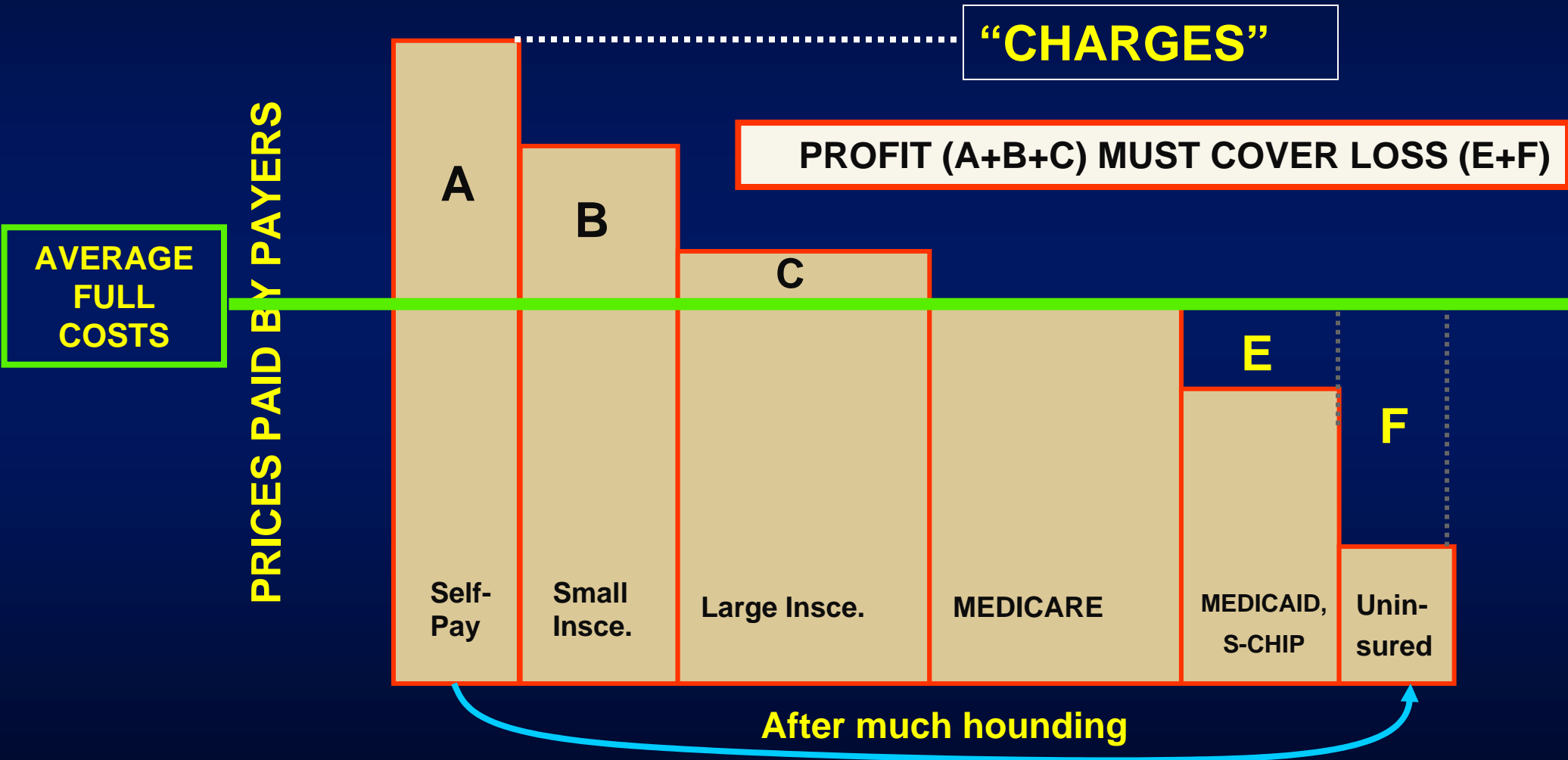
B. Price discrimination

Price discrimination is the practice of charging different customers (payers) different prices for identical goods or services whose cost of procurement or production is identical as well.

It is common in the U.S. health care business, notably among hospitals.

THE U.S. HOSPITAL AS A HYDRAULIC FISCAL SYSTEM:

a.k.a. “Pin-the-tail-on-the-donkey financing”



SOURCE: Adapted from a design by Larry Lewin.

AN ASIDE ON UNCOMPENSATED CARE (AS DISTINCT FROM OUTRIGHT “CHARITY” CARE:

In many instances, what hospitals report as “uncompensated care” (or “bad debt expense”) may have been merely a book loss rather than an actual cash-drain. In the future, however, the problem of the so-called “self-pay” patients may become a real cash-drain problem.

“BAD-DEBT EXPENSE” ON THE INCOME STATEMENT:

**Bad debt
expense**

=

**“Charges”
billed self-
pay patients**

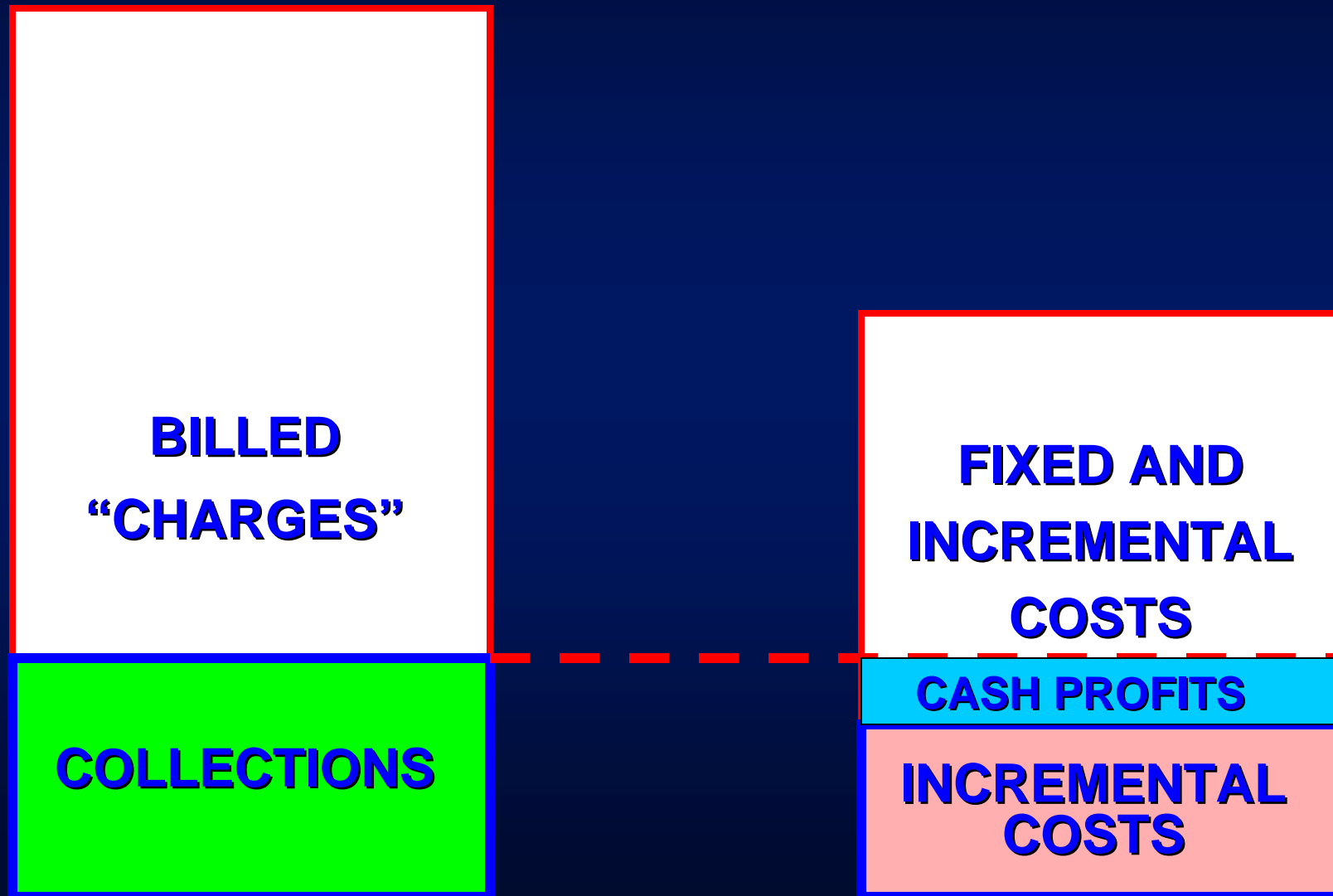
-

**What the
uninsured
actually pay
(about 20% of
charges)**

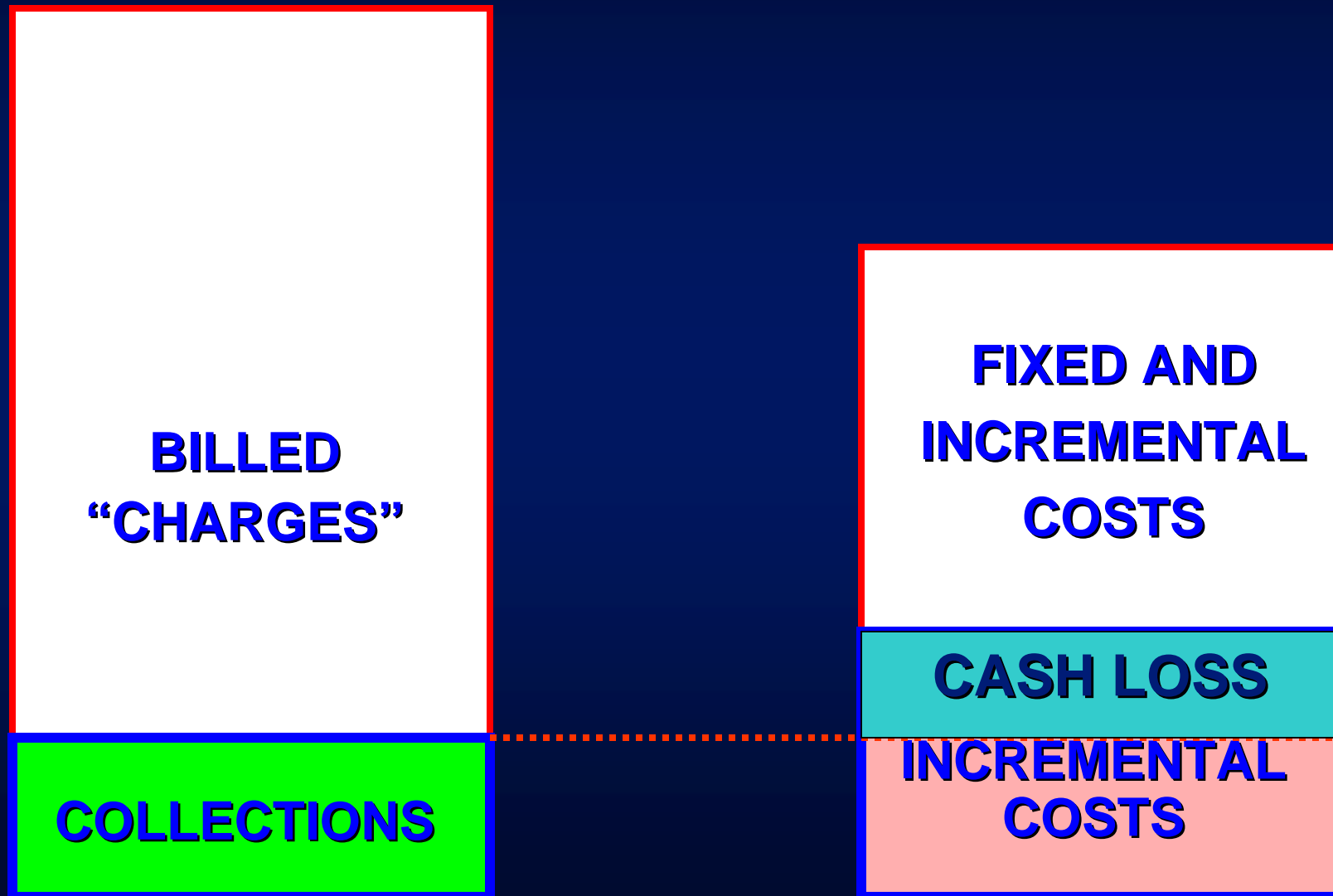
**Technically, what a
drunk, male billionaire
would actually pay if
his wife were not
around to control the
nitwit**

**May well cover the
incremental cash
cost of the care**

**FOR MANY HOSPITALS, UNCOMPENSATED CARE MAY
HAVE WORKED OUT LIKE THIS:**



But in the future, as the number of uninsured grows and health care becomes ever more expensive, it could eventually turn out like this:



PRICING THE SERVICES OF HOSPITALS IN THE AGE OF “CONSUMER-DIRECTED” HEALTH CARE

I. THE CURRENT HOSPITAL PRICING SYSTEM

**II. THE ECONOMIC AND ETHICAL FOUNDATION OF PRICE
DISCRIMINATION**

CONDITIONS FOR PRICE DISCRIMINATION:

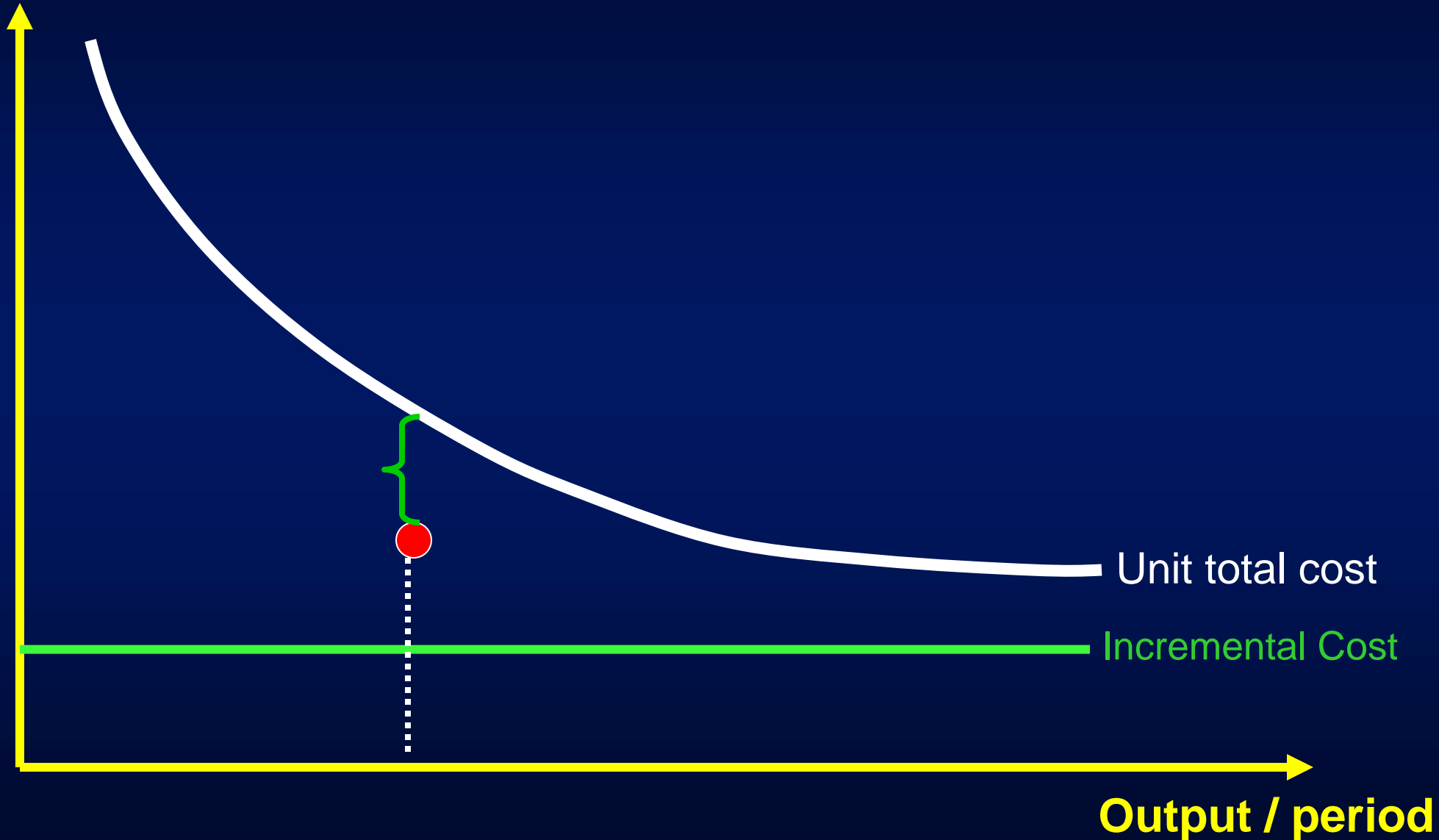
Price discrimination is a natural economic phenomenon for any industry whose member firms have the following characteristics:

- 1. firms have at least some monopolistic power**
- 2. firms have a high ratio of unit-fixed to unit-variable costs**
- 3. firms can segment their customers by “reservation price” that is, by the maximum bid prices buyers are willing to pay, which requires that customers cannot resell the good or service being sold among themselves.**

Hospitals have all of these characteristics. Therefore, price discrimination is natural to them.

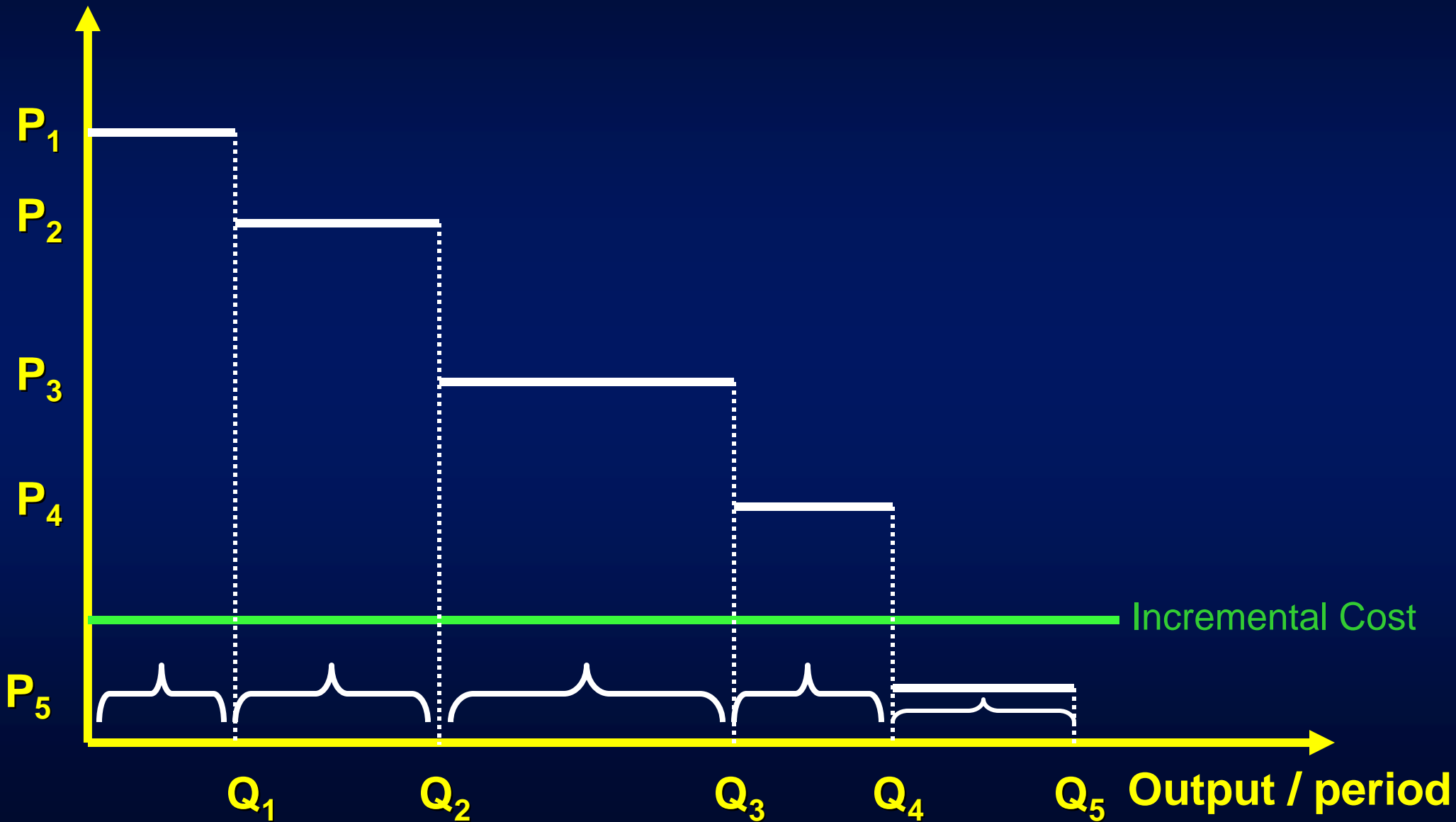
THE SHORT-RUN COST STRUCTURE OF A HOSPITAL

\$/unit

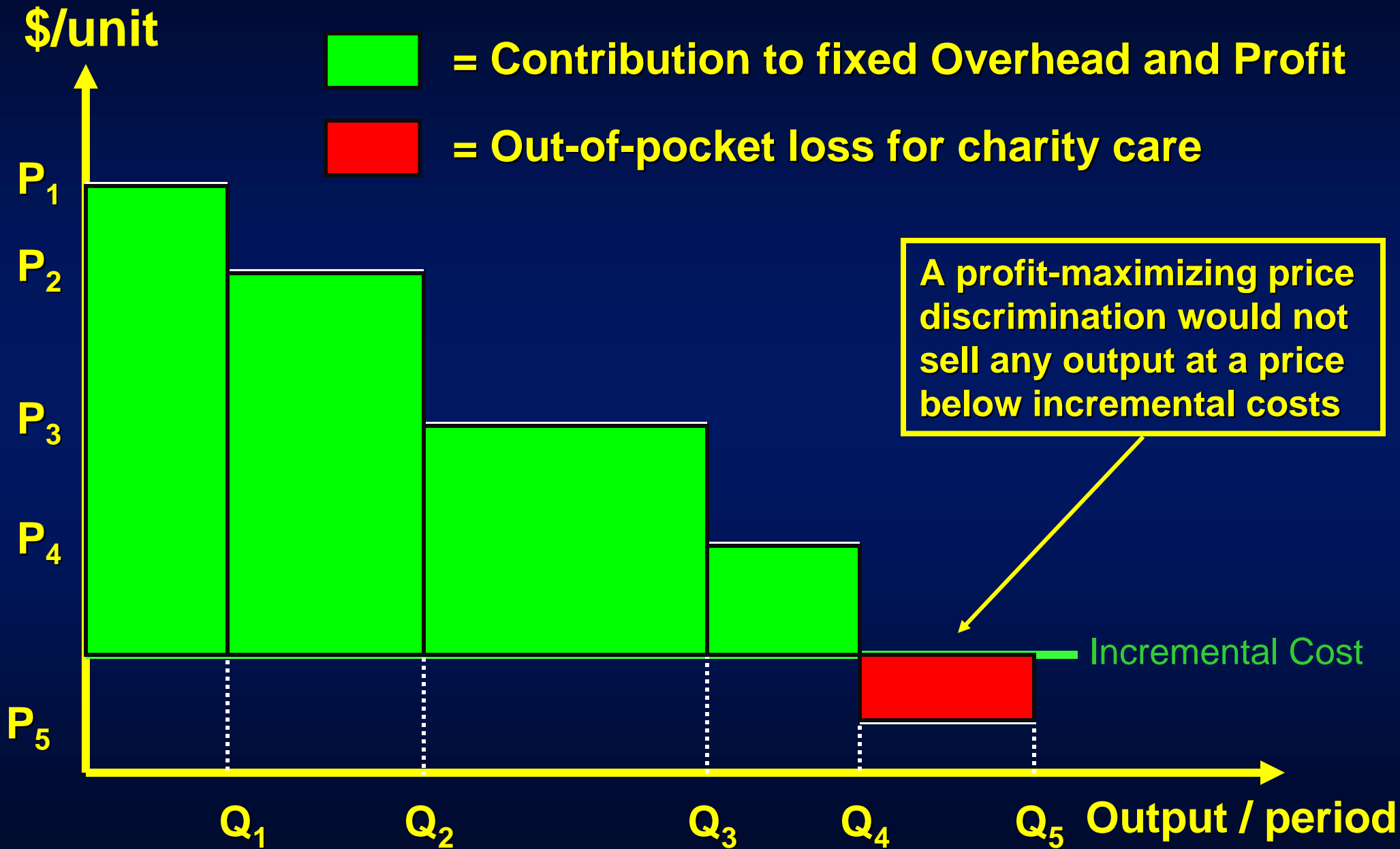


SEGMENTED CUSTOMER CLASSES OF A HOSPITAL

\$/unit



PRICE DISCRIMINATING HOSPITAL



SINGLE-PRICE PRICING BY HOSPITAL

\$/unit

- = Contribution to fixed Overhead and Profit
- = Out-of-pocket loss

P_1

P_2

P_3

P_4

P_5

At a single-price policy, these customers would not be willing to purchase output at the high price P_3 .

Contribution to Fixed Overhead and Profit

Incremental Cost

Q_1

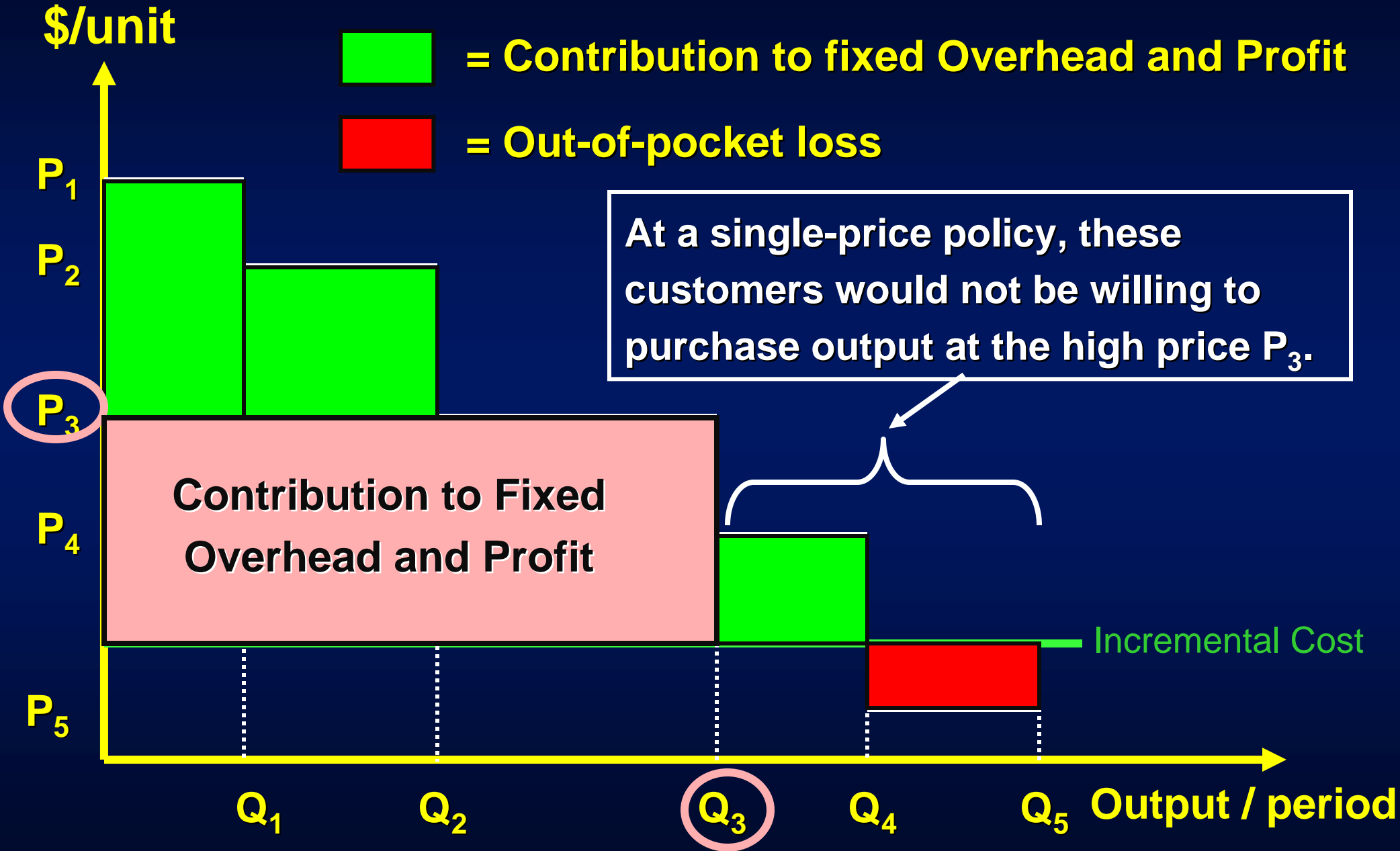
Q_2

Q_3

Q_4

Q_5

Output / period



TAKE-AWAY MESSAGE ON PRICE DISCRIMINATION

1. Price discrimination by hospitals does mean that hospitals firms earn more profits than they would with a single price policy.
2. But it also means that more customers will be served (at successively lower prices) who would otherwise not be served at all.
3. Sometimes, price discrimination at the upper-end of the willingness to pay curve allows hospitals to provide care at out-of-pocket losses for charity and uncompensated care, that is, price discrimination can be practiced for ethical reasons, on a Robin Hood pricing model.

TAKE-AWAY MESSAGE ON PRICE DISCRIMINATION

continued

4. It is difficult, however, to justify the price-discriminatory practices of American hospitals (for-profit and non-profit alike) with appeal to ethical considerations.

What theory of distributive justice, for example, dictates charging higher prices to small insurers than to large insurers, and what ethical theory dictates that truly exorbitant charges be levied on uninsured, middle-class Americans who sometimes are hounded mercilessly for payment?

TAKE-AWAY MESSAGE ON PRICE DISCRIMINATION

continued

5. However, when close to half of a hospital's revenue comes from government, which can and does set its administered, Soviet-style prices at will – often at levels that do not cover the full unit costs of hospitals -- when there are additional out-of-pocket losses for charity care and, possibly, for uncompensated care, hospitals may have no choice but to behave like pure, rapacious profit maximizers in the remaining segments of their (private) markets.

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I. THE CURRENT HOSPITAL PRICING SYSTEM

II. THE ECONOMIC AND ETHICAL FOUNDATION OF PRICE DISCRIMINATION

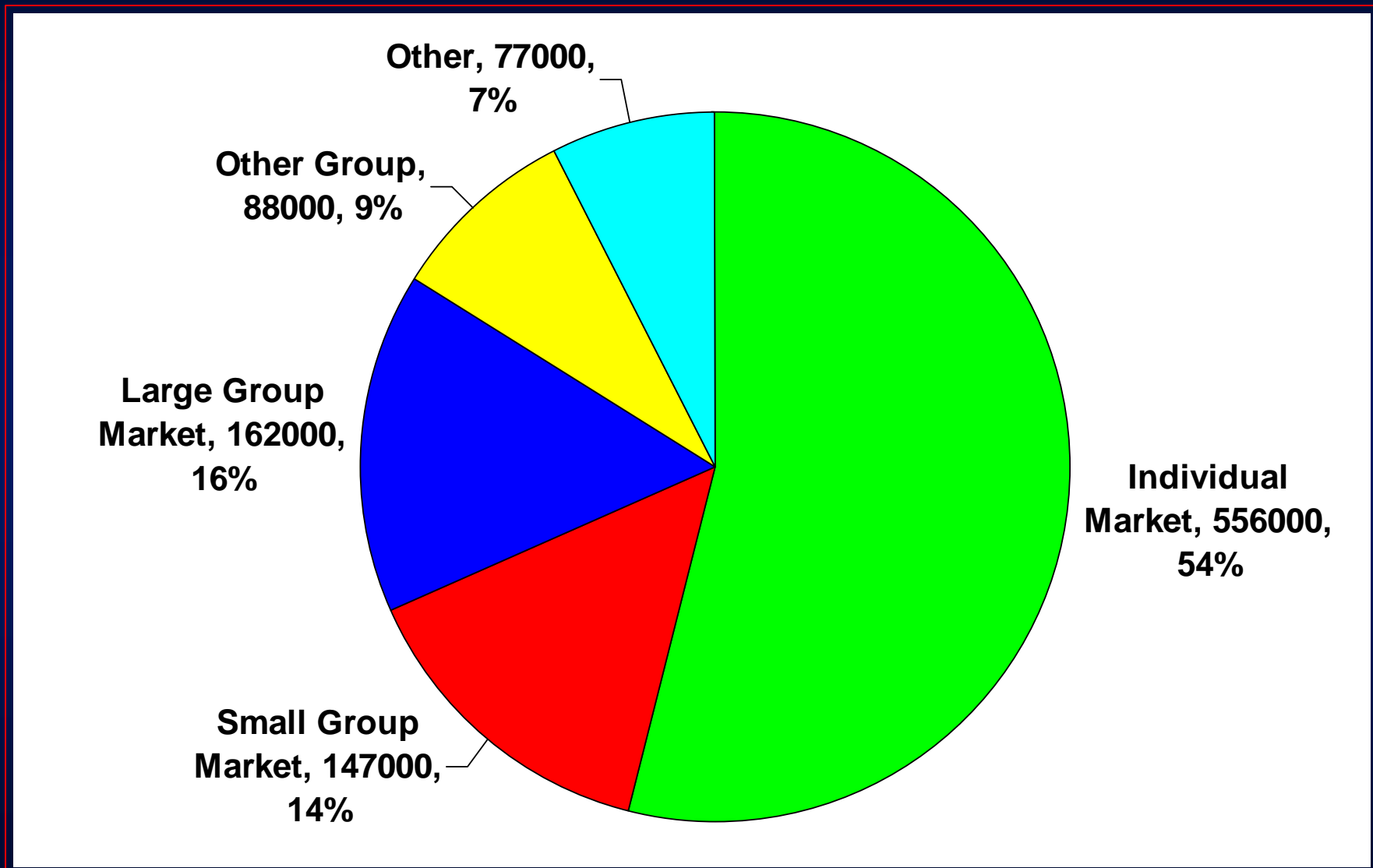
**III. HOSPITAL PRICING AND “CONSUMER DIRECTED” HEALTH
CARE (CDHC)**

“Consumer Directed” Health Care (CDHC) is a code term for **“High-Deductible Health Insurance” (HDHI)** coupled with tax-preferred **“Health Savings Accounts” (HSAs)** which, even more so than current employment-based, tax-favored health insurance, makes health care cheaper on an after-tax basis for high-income patients than it does for low-income patients.

The **“consumer directedness”** in this construct lies in the hope – and a mere hope it has been thus far – that consumers somehow can be empowered to chop around smartly for cost effective health care and will have an economic interest in doing so..

AHIP CENSUS OF HSA MEMBERSHIP AS OF MARCH ,2005

Total enrollment: 1,030,000 members



SOURCE: AHIP HSA SURVEY, Quoted in PULSE, Sherlock & Co. June 2005: Figure 1.b

Over 550,000 health insurance customers

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> Insurance Plan Benefit Details and Comparison

[<< Back to previous page](#)

Insurance Plan Summary

	UNICARE Life & Health Insurance Company	UNICARE Life & Health Insurance Company
<u>Company</u>		
<u>Plan Name</u>	HSA Compatible Plan 3 (Family)	HSA Compatible Plan 2 (Family)
<u>Policy Form Number</u>	TXIHDHPWP0304/TXIAPL1203	TXIHDHPWP0304/TXIAPL1203
<u>Plan Type</u>	PPO	PPO
<u>Estimated Monthly Cost</u>	\$129.00	\$163.00
<u>Deductible</u>	\$10,000	\$5,200
<u>Coinsurance</u>	0%	20%
<u>Out-of-Pocket Limit</u>	\$10,000	\$10,000
<u>Lifetime Maximum</u>	\$5 Million	\$5 Million
<u>HSA Eligible</u>	YES	YES

enlarge

Company



Plan Name

HSA Compatible Plan 3 (Family)

HSA Compatible Plan 2 (Family)

Policy Form Number

TXIHDHPWP0304/TXIAPL1203

TXIHDHPWP0304/TXIAPL1203

Plan Type

PPO

PPO

Estimated Monthly Cost

\$129.00

\$163.00

Deductible

\$10,000

\$5,200

Coinsurance

0%

20%

Out-of-Pocket Limit

\$10,000

\$10,000

Lifetime Maximum

\$5 Million

\$5 Million

HSA Eligible

YES

YES



Plan Name	HumanaOne HSA	HSA Compatible Variable-Deductible Plan (Family)	One Deductible
Policy Form Number	TX_46073_HH	TXIHDHPWP0304/TXIAPL1203	236.001.TX,B060-TX,2843-TX,2846,GAN 2348
Plan Type	PPO	PPO	PPO
Estimated Monthly Cost	\$319.26	\$328.00	\$359.26
Deductible	\$2600 Single/\$5150 Family	\$2,000	\$2,600 individual / \$5,200 family. The deductible for family coverage is integrated. If applying for more than individual coverage, the family deductible will apply.
Coinsurance	20% after deductible	20%	20%
Out-of-Pocket Limit	\$2000 Single / \$4000 family (deductible separate)	\$10,000	\$2,000 individual / \$4,000 family. (annual deductible is not included)

PRICING THE SERVICES OF HOSPITALS IN THE AGE OF “CONSUMER-DIRECTED” HEALTH CARE

I. THE CURRENT HOSPITAL PRICING SYSTEM

II. THE ECONOMIC AND ETHICAL FOUNDATION OF PRICE DISCRIMINATION

**III. HOSPITAL PRICING AND “CONSUMER DIRECTED HEALTH
CARE”**

A. The Challenge: Conveying information on prices

In the hospital sector, prospective patients (“consumers”) face sellers who, as already noted, have:

- 1. have chargemasters that contain close to 20,000 individual list prices for as many distinct procedures and supply items;**
- 2. can update these charge masters in an ad-hoc fashion that is not uniform across the hospital field;**
- 3. can grant different payers different discounts off the charge master, or cut other deals based on per-diems or DRGs.**

It taxes the mind to imagine an individual, prospective patient (“consumer”) might shop around smartly within this largely opaque and chaotic pricing system.

As a general rule, for example, the chargemasters of hospitals are not publicly available -- with the exception of California, where since July 2004 they are supposed to be available to the public (but rarely found on the website of hospitals). Typically, a hospital's "charges" remain a trade secret unless one is billed selected items at those charges.

Furthermore, the discount off list prices or per diems negotiated with private payers are tightly held trade secrets as well.

But even if the chargemasters of hospitals eventually were made public, how would an individual “consumer” cope with the information it contains – perhaps through lexicographic ranking of 20,000-dimensional price vectors?

What, for example, would prevent a hospital to price popularly known items as loss leaders and then heaping huge markups on items that patients “consume” when they are under anesthesia?

And even if “consumers” actually could cope intellectually with price vectors containing close to 20,000 elements, that information is only the P in the total cost expression $P \times Q$, where Q denotes the actual services packaged into a medical treatment.

To illustrate, behold again the following excerpts from California's sample chargemaster, available California's Office of Statewide Health Planning and Development (OSHPD) website, which contains some 19,000 separate list prices extending over 275 pages:

www.oshpd.cahwnet.gov/HOAD/SampleChrgmstr.pdf

EXCERPT FROM CALIFORNIA'S SAMPLE CHARGEMASTER

	OP6-CENTRAL LINE INSERTION	385.00
1052504	OP6-CARDIOVERSION	1,150.00
1052509	OP6-CENTRAL LINE REPOSIT	193.00
1052510	REFILL/MNT PORT PUMP 7155	385.00
1053404	ICU-OBSERV 601010 PCT	-
1053405	ICU OBSERV 601010/HR	80.00
1055395	ICU-QUINTON CATH CT ONLY	-
1055396	ICU-PACER INSERT CT ONLY	-
1055397	ICU-ICU RECOVERY CT ONLY	-
1088396	PRIVATE (SICU)	6,174.00
1093404	ICU-OBSERV 601020 PCT	-
1093405	ICU OBSERV 601020/HR	80.00
1108396	TRAUMA ICU	11,148.00
1108397	TRAUMA M/S TELE	3,145.00
1108398	MICU/SICU LEVEL	6,174.00
1108399	CCU LEVEL	6,174.00
1108400	TELE LEVEL	2,459.00
1119397	TI-TRANSPORT AMBULANCE	845.00
1123404	ICU-OBSERV 601030 PCT	-
1123405	ICU OBSERV 601030/HR	-

3043448	CATH PERITONEAL TENCHOFF	396.00
3043449	CATH PORTA CATH ARTERIAL	2,842.00
3043450	CATH PORTA CATH INTRO 9FR	198.00
3043451	CATH PORTA CATH PERIT	1,878.00
3043452	CATH PORTA CATH TITANIUM	2,875.00
3043453	CATH PORTA CATH VENOUS A	2,842.00
3043454	CATH PORTA CATH VENOUS B	1,416.00
3043455	CATH ROUND 6FR	76.00
3043456	CATH TPN	99.00



* High income “consumers” might opt for the more expensive “*Cath Porta Cath Venous A*,” instead of the “*Cath Porta Cath Venous B*,” for two reasons: (a) they have more money, and (b) the HSA mechanism effectively makes the after-tax cost of health care cheaper for them than it is for low-income people.

American health care “consumer,” newly empowered by a high deductible insurance policy, performing lexicographic rankings among 20,000-dimensional hospital-price vectors.



How can the bewildering chaos that is hospital pricing today be reformed to make it more compatible with the concept of genuine “Consumer Directed” Health Care?

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III. HOSPITAL PRICING AND “CONSUMER DIRECTED HEALTH CARE”

A. The Challenge: Conveying information on prices

B. A modest proposal to streamline hospital pricing

SIMPLIFYING HOSPITAL PRICING IN THE U.S.

- 1. Expand the DRG system to include all health care given by hospitals to all patients, young and old.**
- 2. Convert the estimated DRGs into equivalent relative value scales (really, relative cost scales) and mandate that every hospital must use this common scale to price its services.**
- 3. Allow each hospital competitively to set and publicly announce its own monetary conversion factor, which converts the common, industry-wide relative value scale into hospital-specific price schedules.**

SOME OPEN QUESTIONS:

- 1. Should hospitals be forced to charge every payer the same monetary conversion factor (the Porter-Treisberg approach), or should these conversion factors be negotiated separately with each third-party payer?**
- 2. If price-discrimination were no longer allowed (Porter-Treisberg), should the Soviet-style top-down pricing approaches of Medicare and Medicaid continue to exist?**
- 3. Should every hospital be mandated to post its own means-tested conversion factors for the uninsured?**

These are challenging questions, as would be the transition from the present, opaque, chaotic and largely unfair hospital pricing system to one along the lines proposed here.

On the other hand, to inject patients with high-deductible, individually purchased health insurance into the current, opaque, and chaotic hospital pricing system and to tell them to behave like the rational, well-informed consumers of textbook fame strikes me as making a mockery of the very concept of “Consumer Directed” Health Care.

THE END