Uncompensated Emergency Care in Hospital Markets in Los Angeles County

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Abstract: A survey of hospital emergency rooms in Los Angeles County was conducted in March 1987. Analysis of the distribution of uninsured emergency care patients revealed that private hospitals play a significant frontline role in terms of entry into the hospital system for patients who are unable to pay—almost one-half of such patients were treated in the emergency rooms of private hospitals. Hospitals serving markets in which a higher proportion of residents had incomes below the poverty level provided a greater share of uncompensated emergency room services. (*Am J Public Health* 1989; 79:514–516.)

Introduction

As public and private third party payors impose market-oriented reforms in hospital payment methods, concerns have heightened over the effects of these policies on the uninsured population. Attention has been directed to the access problems of the medically indigent under these new payment approaches and to the problems of disproportionate share hospitals serving the medically indigent. The imposition of competitive pricing methods limits the ability of hospitals to subsidize the costs of uninsured patients. Growth of competitive-based insurance programs has been particularly strong in California, where they now cover over 60 per cent of the population.[1] Nationally, this number is approaching 25 per cent.[2] We discuss the distribution of unsponsored hospital emergency room care in a large metropolitan area in California and explore whether hospital market and financial characteristics influence provision of care to uninsured patients.

Methods

A survey of hospital emergency rooms in Los Angeles County was conducted by the Los Angeles County Medical Association and the Hospital Council of Southern California for a one-month period, beginning in March 1987. The survey collected data on the volume and costs of emergency room care provided to patients who were both uninsured and unable to pay (hereinafter referred to as uninsured). The costs of treatment included hospital and physician costs associated with emergency room services as well as hospital inpatient costs for uninsured patients who were admitted from the emergency room.

Both public and private hospitals were surveyed. Hospitals owned by Kaiser-Permanente, a closed system health maintenance organization (HMO), were excluded from the analyses since they serve members enrolled in Kaiser health plans and treat few, if any, uninsured patients. All four County-owned acute care hospitals and 51 of the 81 private hospitals with emergency rooms responded.

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Hospital cost reports for fiscal year 1984 and discharge data for calendar year 1983 were provided by the California Office of Statewide Health Planning and Development. Emergency room charges for services rendered to uninsured patients as reported in the survey were reduced to costs using cost-to-charge ratios obtained from the hospital cost reports. We used patients' zip code of residence obtained from the discharge data to define each hospital's primary market area. The defined market area contained all zip codes that contributed at least 1 per cent of the hospital's discharges. If this rule did not result in a market area that contained at least 40 per cent of the hospital's discharges, additional zip codes were added (in descending order of patient volume) until a hospital's market area encompassed a minimum of 40 per cent of its discharges. We calculated the proportion of the population with income below the poverty level for each hospital's primary market area using 1980 census data.

Using multiple regression, we explored the role of several factors in explaining the wide variation among private hospitals in the volume and costs of care provided to uninsured patients. The independent variables included: ownership status, profit margin in a past year, hospital share of paying emergency room patients in the County, and the proportion of the population below the poverty level in a hospital's market area.

Results

Of all patients treated in the emergency room of responding hospitals, 19.8 per cent were classified as uninsured and unable to pay (see Table 1). A total of 36,304 such patients were treated in survey hospitals during the one month reporting period, incurring costs of $39.6 million. Although the four County hospitals provided treatment to the majority of uninsured patients, almost one-half of such patients were treated by the 51 private hospitals; the 15 private hospitals with trauma centers treated almost as many of these patients as the other 36 private hospitals.

Our estimates of the total number of uninsured emergency room patients and the total treatment costs incurred do not represent the total costs of treating such patients in the County since 35 per cent of hospitals with emergency rooms did not respond to the survey. Non-responding hospitals tended to be smaller than responding hospitals, having an average bed size of 198 compared to 312. All non-respondents consisted of private hospitals so the estimates of the relative burden of care borne by County-owned versus private facilities underestimate the contribution by private hospitals. However, we believe that this is not a significant problem since only one of the 16 trauma centers in the County were among the non-respondents. A telephone follow-up to a sample (eight hospitals) of the 30 non-respondents revealed that on average a low proportion of patients treated in the emergency rooms were uninsured and unable to pay.

On average two-thirds of the patients in County hospital emergency rooms are uninsured and unable to pay compared to 16 per cent in private hospital emergency rooms (see Table 2). Within individual County hospitals, the proportion of uninsured patients ranged from 48 per cent to 78 per cent, whereas within private hospitals, it ranged from less than 1 per cent to 42 per cent. Table 3 shows the distribution of uninsured patients among the hospitals.

TABLE 1—Distribution of Emergency Room Volume and Costs of Uninsured Patients Who Were Unable to Pay (UUTP), Los Angeles County, California, March 15–April 15, 1987

Hospital Type	# Responding Hospitals	# UUTP Patients	% of Total UUTP Patients*	% of Total Sponsored Patients	Total Cost	% of Total Cost
County	4	20,139	55.5	14.5	$31,783,114	80.3
Private	51	16,165	44.5	85.5	7,823,356	19.8
Trauma Center	15	7,474	20.6	36.6	3,924,016	9.9
Non-Trauma Center	36	8,691	23.9	48.9	3,899,340	9.8
All Hospitals	55	36,304	100.0	100.0	39,606,470	100.0

*This column refers to the proportion of all UUTP emergency room patients in the County that are treated by the hospitals in each group.

TABLE 2—Relative Burden of Uninsured and Unable to Pay Emergency Room Patients by Hospital Type, Los Angeles County, California, March 15–April 15, 1987

Hospital Type	Average Proportion of Uninsured Emergency Room Patients
	%
County	66.9
Private	16.1
Trauma Center	16.8
Non-Trauma Center	15.8
All Hospitals	19.8

Table 4 shows the estimated regression coefficients for each private hospital's share of the uninsured patients treated and for each hospital's share of the total cost of treating such patients.

The regression analyses show that hospitals with trauma centers provide a greater share of unsponsored care, both in terms of the number of uninsured patients and the total cost. Controlling for a hospital's share of paying patients, hospitals with trauma centers treat 1.6 per cent more of the uninsured patients and incur 2.1 per cent more of the costs of such patients on average than hospitals without trauma centers. Hospitals serving markets with higher poverty rates provide a greater share of services to this population. The estimated coefficient for a hospital's past profit margin is insignificant, suggesting that hospitals with higher profits in earlier periods do not use the surplus funds to provide a larger share of care to uninsured patients.

Discussion

Any solution to the problem of access to care for the medically indigent population needs to be broadly based and should address the complex issues surrounding access. Even though Los Angeles County has a large, publicly funded health care delivery system, private hospitals treat a substantial share (at least 45 per cent) of uninsured patients seeking emergency hospital care. Although the private hospitals transfer many of the patients to County-owned facilities, they play an important frontline role in providing entry into the health care system.*

County-owned hospitals treated 55 per cent of the uninsured emergency room patients but incurred 80 per cent of the total costs of treating such patients. The large share of costs borne by County facilities is likely due to several factors: 1) after providing initial treatment to uninsured patients, private hospitals often transfer these patients to County-owned facilities for further treatment; 2) County facilities may treat a more complex case mix of uninsured emergency room patients than do private hospitals; and/or 3) the average costs of County facilities are higher than in private hospitals.

Higher profit margins in a previous year do not lead to higher spending for care to uninsured patients, nor does a lower profit margin lead to lower spending. Unlike other parts of the United States, private not-for-profit hospitals in Los Angeles County provide only slightly more unsponsored care than do investor-owned hospitals.

*This may be particularly true in areas of Los Angeles County that are not near any of the County-owned facilities.

TABLE 3—Percentile Distribution of UUTP Patients within Hospitals, Los Angeles County, California, March 15–April 15, 1987

Percentage of Uninsured Emergency Room Patients	Number of Hospitals	
	Private	County
%	N	N
0–5	7	—
6–10	6	—
11–15	12	—
16–20	12	—
21–30	10	—
31–40	3	—
41–50	1	1
>50	0	3
Average % Uninsured	16.1	66.9
Standard Deviation	0.09	0.14

TABLE 4—Determinants of Emergency Room Care to Uninsured and Unable to Pay Patients

Independent Variables	Dependent Variables: Share of Uninsured Patients	Dependent Variables: Share of Unsponsored Costs
Intercept	−0.014	−0.014
	(0.007)	(0.009)
Trauma Center	0.016	0.021
yes = 1, mean= .294)	(0.004)	(0.005)
Ownership	0.006	0.005
(nonprofit = 1, mean = .745)	(0.005)	(0.006)
Share of Emergency Room Paying Patients in County	0.272	0.263
(mean = .019)	(0.104)	(0.134)
Profit Margin	−0.013	−0.022
(mean = .064)	(0.031)	(0.040)
Poverty Percentage in Hospital's Market (mean = 13.0)	0.002	0.002
	(0.000)	(0.001)
R-Square	0.567	0.492

NOTES: The variable means are based only on the private hospitals in the sample since County-owned hospitals were excluded from the regression analysis.
Standard errors are in parentheses.

Changes in reimbursement policies in California (i.e., selective contracting by Medi-Cal and private insurers) are creating an increasingly competitive operating environment for hospitals. Hospitals located in areas with higher proportions of the indigent population will increasingly be at a competitive disadvantage. Recent attempts by hospitals in downtown Los Angeles to close their emergency rooms suggest that these pressures are already being felt.[3] Although the Medicare prospective payment system program provides extra payments to hospitals serving a disproportionate share of low income patients, this provision is scheduled to be discontinued in 1989. Emerging payment reforms need to recognize and incorporate provisions to ensure that access to medical care is not sacrificed in the effort to contain hospital costs.

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ADDENDUM

Background Information on Closure of Emergency Departments in Los Angeles as of September 1988

In May 1988, a private, not-for-profit hospital in downtown Los Angeles filed an application to "down-license" its emergency room from a full-service department to a standby facility that would no longer accept ambulances (it received approximately 800 ambulance visits per month). Soon afterward, three nearby hospitals filed similar applications, citing the potential increase in indigent patients if ambulances were re-routed to their facilities. Other hospitals have since threatened to follow suit.

As a short run solution, the County Department of Health Services provided $1.81 million in supplemental funding directly to eleven private hospitals that it believes are vital to the emergency services network. In return, the hospitals agreed to keep their emergency rooms open for the period of the contract. The County has agreed to provide an additional $1.25 million for a two-month period, but only on the condition that a statewide Tobacco Tax Initiative passes in the November election.

Of the eleven contracting hospitals, at least three had once been designated trauma centers but had withdrawn from the trauma network in 1987. Nine of the eleven are not-for-profit facilities, and the remaining two are investor-owned. Most are located in inner city areas. Absent a long run solution to the funding problem, the County could face a substantial reduction in the availability of hospital emergency department services.

REFERENCES

1. Arstein-Kerslake C: PPOs Continue to Grow. Insights, Newsletter of the California Association of Hospitals and Health Systems November 30, 1987; 11(12):1.
2. Matherlee T: HNLA Symposium on Managed Care, Change and Diversification. As reported in Health Lawyers News Report 1988; 16(1).
3. Spiegal C, Steinbrook R: Emergency Room Cutbacks Set Off Debate on Causes. Los Angeles Times May 8, 1988; Part II:1,4.

Television Viewing and Obesity in Adult Males

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Abstract: We estimated the extent to which time spent watching television is associated with obesity and super-obesity among 6,138 employed adult males. After adjustment for age, smoking status, length of work week, measured physical fitness, and reported weekly hours of exercise, people who viewed TV more than three hours/day were twice as likely to be obese as those who viewed less than 1 hour/day. Those who viewed for 1 to 2 hours daily had a relative risk of 1.60 (1.21, 2.11). Physical fitness consistently confounded the associations between TV viewing and obesity/super-obesity, but the other control variables did not do so. (*Am J Public Health* 1989; 79:516–518.)

Introduction

Television viewing is the most pervasive pastime in the United States today. Following sleep and work, it is the nation's third most time-consuming activity.[1] The typical adult watches TV nearly four hours daily[1,2]; hence, it is not surprising that contemporary research indicates that human beliefs and practices are affected by television to a degree far exceeding earlier judgments.[1,3]

The role television plays in the development of health-related attitudes and behaviors is of growing interest to many.[3-6] Studies of the content of this powerful medium suggest that many health messages are conveyed regularly to viewers. Unfortunately, the information is sometimes unrealistic, distorted, and misleading,[7] particularly regarding food, nutrition, and obesity.[8-14]

Although many of the "micro-lessons" to which Americans are regularly exposed may promote misconceptions and produce unhealthy eating habits, television's primary offense may be one of omission rather than commission.[15] Research has shown repeatedly that the medium has profoundly altered American leisure.[1,16] When the TV is on, activity ceases and time for exercise is reduced significantly. The heart and other muscles of the body are not strengthened and calories are not expended in excess of resting metabolism during television viewing.

Recently, Tucker[17] examined the relation between television viewing and physical fitness. Results showed that as TV watching increased among 379 high school males, multiple measures of physical fitness decreased markedly and systematically. Similarly, Dietz and Gortmaker[18] showed that as TV viewing increased among several thousand children, obesity increased substantially.

The present study measured the extent of the association between TV viewing and obesity among adult males; an ancillary objective was to determine the extent to which age, cigarette smoking, physical fitness, time reported exercising, and hours worked per week mediate the relation between the television viewing and obesity.

Methods

Study subjects were 6,138 adult male employees of over 50 different companies that participated in the Health Examination Program offered by Health Advancement Services (HAS), Inc. Approximately 77 per cent of the subjects were married, 85 per cent were white, 51 per cent had some college education, and 32 per cent of the subjects were current smokers. The mean age

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