THE HOSPITAL SELF PAY STUDY FINDINGS REPORT

prepared for

the Hospital Association of Southern California

by

the National Health Foundation
515 S. Figueroa, Suite 1300
Los Angeles, CA 90071

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The Hospital Self Pay Study

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Funder

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Research Team

J. Eugene Grigsby III, Ph.D.
Julia Pennbridge, Ph.D.
Andrew Barnes, M.P.H
Quinnie Le, B.Sc
O'Keeya Singleton, B.A.

The Hospital Self Pay Study

EXECUTIVE SUMMARY

Over the last decade, the Los Angeles County's Department of Health Services (LAC-DHS) has faced several fiscal crises prompting major restructuring efforts. These efforts in turn have spawned law suits against the proposed changes. In the last few years, LAC-DHS has reduced its inpatient capacity and ambulatory care services and modified its transfer policies to address its fiscal woes. Some private sector hospitals have reported feeling the brunt of these changes by seeing more self pay patients[*] being admitted from their Emergency Departments (EDs). In late 2004, the Hospital Association of Southern California (HASC) asked the National Health Foundation to conduct the Hospital Self Pay Study to validate these reports.

Using Office of State Health Planning and Development (OSHPD) Patient Discharge data and an online survey, ED and inpatient data were analyzed using descriptive, comparison and correlation statistics. Major findings for the sample of hospitals (56 of 76 hospitals) from this 2000-2004 study include:

- Countywide while the proportion and number of self pay patients receiving care in EDs hardly changed, the number of them then admitted as inpatients increased by 13.4%.
- Most important, the distribution of self pay patients, for both ED visits and hospital admissions, dramatically changed:
  - The proportions of self pay patients obtaining emergency care at LAC-DHS and private sector hospitals shifted from 49% and 51% respectively at the beginning of 2000 to 35% and 65% at the end of 2004.
  - Similarly, the proportions of self pay patients admitted from hospitals own EDs shifted from 50% for both LAC-DHS and private sector hospitals at the beginning of 2000 to 30% and 70% respectively at the end of 2004.
- Within the private sector, both DSH and non-DSH hospitals reported increases in self pay ED visits and in self pay admissions from their own EDs, with the non-DSH hospitals reporting the largest increases.
- The redistribution of self pay patients--with more going to private sector hospitals for their emergency care--appears to have begun in 2000, before LAC-DHS closed its health centers/clinics in October 2002. This trend continued through the end of 2004. The similar redistribution of self pay patient admissions appears to have started a little later—about the beginning of 2002—and also continues through the end of 2004.
- Between 2000 and 2004, the total population of Los Angeles County increased 6.8% to over ten million and unemployment rates also increased. Both of these changes could have resulted in increasing the size of the County's self pay population and the numbers of self pay patients. Also during this time, two private sector hospitals closed their EDs and seven hospitals with EDs closed entirely further contributing to self pay patient redistribution.

Findings from this study suggest that private sector hospitals with EDs have, over the last few years, been shouldering more and more of the demand for emergency and inpatient services for self pay patients in LA County.

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[*] This study uses the Office of State Health Planning and Development's definition of "self pay," which includes those without insurance who are expected to pay the majority of the costs of their care, has been used throughout this study.

I. INTRODUCTION

Los Angeles is a large county—bigger both in square miles and in population than many states—and has more uninsured residents than any other county in California. Compared to the State, it has a higher proportion of uninsured (23.6% vs. 18.2%); more small businesses, the employees of which are most likely to be uninsured; and more low income families, young adults and Latinos all of which are more likely to be uninsured.[1]

As if these were not challenges enough, Los Angeles County also has a unique health care delivery system and ongoing fiscal problems. Its public health system includes four large hospitals and the countywide trauma and emergency medical systems depend on the operational integration of the public and private sector hospitals. Its fiscal woes are nationally known. In the last decade, it has faced two budget crises, each of which have resulted in the Los Angeles County Department of Health Services undertaking major restructuring of its health services. Another such crisis is anticipated in 2006.

Also, in Los Angeles County issues easily become politicized and the question of who has responsibility for uninsured patients is one such issue. State law requires County governments to be "providers of last resort," that is of providing a "safety net" of health care for those who are uninsured and cannot afford to pay for care.[2] Thus the private sector hospitals view Los Angeles County-Department of Health Services (LAC-DHS) as being ultimately responsible for these patients. However, many private sector hospitals have serving low-income populations as part of their missions and non-profit hospitals are required to provide charity care to maintain their status. One issue of contention between the public and private sectors is that some of the Los Angeles County Board of Supervisors have, on more than one occasion, voiced the opinion that the private sector does not provide its fair share of care for the uninsured. It was in this context, along with several more recent events, that this study of changes in the numbers of self pay patients going to emergency departments and then being admitted for care was conducted.

II. BACKGROUND

In late 2004, the Hospital Association of Southern California (HASC) heard from several private sector hospitals that they were seeing more self pay patients being admitted from their Emergency Departments (EDs). Some hospitals felt this was primarily the result of LAC-DHS's implementation of a limited transfer policy in January 2004 and others felt it had started earlier after some LAC-DHS health center and clinic closures. A review of recent history shows there have been several events in Los Angeles County since 2000 that may be relevant to this reported change. They include the proposal for and the partial

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[1] Data from: *Snapshot: California's Uninsured* published 2004 by the California HealthCare Foundation, *County Snapshot, Los Angeles 2001*, California Employment Development Department, retrieved May 11, 2005 from http://www.chis.ucla.edu/ber/tables.asp?regionID=60, http://quickfacts.census.gov, and from http://factfinder.census.gov/servlet/ACSSAFFFacts.

[2] California Welfare and Institutions Code Division 9. Public Social Services Part 5. County Aid and Relief to Indigents Chapter 1. General Provisions Section 17000.

implementation of LAC-DHS's Scenario III and its definition and enactment of Transfer Policies, closure of private sector hospitals and/or EDs, LA County population growth and increasing unemployment rates. These events are briefly discussed below and provide a context for this study.

LAC-DHS Scenario III

On June 26th 2002, LAC-DHS presented to the Los Angeles County Board of Supervisors its "System Redesign" plan to reduce or eliminate the $35 million dollar budget deficit of the previous fiscal year. This deficit was attributed to several factors: the large number of uninsured, the reduction in Medi-Cal revenues, the loss of sustainable funding sources, the rise in the cost of care and LAC-DHS's need to modernize. Of the plans presented, Scenario III was expected to have the least negative effect on county residents using LAC-DHS services. Even so, Scenario III proposed the reduction of inpatient capacity and ambulatory care services by 29% and 16% respectively as well as reducing public health visits by 13% and full time employees by 18%. These reductions in capacity were to be realized by closing Rancho Los Amigos Rehabilitation Center, eliminating 207 inpatient beds for rehabilitation and acute care for patients with chronic disease; stepping High Desert Hospital down from an acute care facility to a multi-service ambulatory care center, eliminating 60 inpatient beds; closing all psychiatric beds at the four DHS hospitals with EDs (Harbor/ULCA, King/Drew, LAC+USC, and Olive View/UCLA), eliminating 100 inpatient beds from LAC+USC Medical Center, and closing 16 LAC-DHS clinics thereby reducing clinic visits by 300,000 per year (based on 2001 utilization).[3]

In response to this Restructuring/Redesign Plan, the Board of Supervisors instructed LAC-DHS to work with the National Health Foundation (NHF) and HASC to study the impact of Scenario III on the health delivery system.[4] Funded by HASC, The California Endowment and the California Health Care Foundation and with the help of a Technical Advisory Committee, NHF developed an Impact Model to assess the effect of the proposed changes. The extensive study findings included the fact that the uninsured, or self pay, patients would be hardest hit.[5]

Several law suits have prevented LAC-DHS's full implementation of Scenario III. However, 16 LAC-DHS clinics were closed by the third quarter of 2002 and High Desert Hospital was converted from an acute care facility to a multi-service ambulatory care center. Closure of Rancho Los Amigos Rehabilitation Center and the elimination of 100 inpatient beds from LAC+USC Medical Center remain under injunction by the 9th District Appellate Court (Harris v. Board of Supervisors, see footnote 3 above).

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[3] LAC-DHS System Redesign http://www.ladhs.org/planning/pdf/board/BdPres62602.pdf, Harris v. Board of Supervisors filed April 27, 2004, and 2001 LAC-DHS clinic data given to NHF by LAC-DHS Office of Planning

[4] Memorandum from Thomas Garthwaite, MD to the County Board of Supervisors dated September 19th, 2002 http://www.ladhs.org/wwwfiles/dhs/media/media/LA_Model_Board_Memo_2.pdf

[5] Impact on Inpatient and Emergency Services in Los Angeles County by NHF, January 2003 http://www.nhfca.org/reports/impact_assessment.pdf

Implementation of LAC-DHS Transfer Policies

By January 2004, LAC-DHS had defined and enacted three levels of transfer policies. The first and second were policies formalizing transfers to LAC-DHS EDs from private sector EDs for unstabilized and stabilized patients as defined by the Emergency Medical Treatment and Active Labor Act (EMTALA).[6] The third policy laid out the governance of inpatient transfers to DHS hospitals from private sector hospitals. The ED transfer policies were designed to define the "capacity and capability", as they relate to EMTALA, of DHS hospitals to receive transfers. In essence, a receiving LAC-DHS hospital could only accept a transfer if it had the requisite staff and capacity at the time of the transfer as determined by the hospital's Patient Flow Manager.[7] With regards to inpatient transfers, the LAC-DHS Transfer Policy defined transfer limits based upon the capacity available for the required service at the time of the transfer request.[8] Historically, private sector hospitals had transferred patients who were uninsured. Effectively, since LAC-DHS hospitals operate at close to maximum ED and inpatient capacity most of the time, after the implementation of LAC-DHS transfer policies, private sector hospitals were no longer able to transfer self pay patients from their EDs or inpatient beds.

Private Sector Hospital and ED Closures, LA County Population Growth and Increasing Unemployment Rates

Private sector capacity had also been reduced between 2000-2004. During this time, two private sector hospitals had closed their EDs and seven more hospitals with EDs had closed entirely. Of these nine: St. Luke Medical Center, Santa Teresita Hospital, Robert F. Kennedy Medical Center, Northridge Hospital Medical Center – Sherman Way Campus, Granada Hills Community Hospital, Elastar Community Hospital and Century City Hospital had basic EMS level EDs and closed entirely, while Community Hospital of Gardena and Suburban Medical Center closed just their EDs. The nine closures account for an accumulated loss of over 1,200 staffed inpatient beds and over 130,000 annual ED visits to the Los Angeles County health care system.[9]

These private sector closures took place while LA County's population and unemployment rates were increasing. The California Department of Finance estimates that from 2000 to

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[6] The EMTALA Statute found at 42USC 1395dd et seq regulations enacted in June 1994, was first passed in 1986. This statute applies to all hospitals that accept payment from the Department of Health & Human Services, Centers for Medicare & Medicaid Services (CMS) under the Medicare program. It essentially imposes 1) an affirmative obligation on the part of the hospital to provide a medical screening examination to determine whether an "emergency medical condition" exists; 2) restrictions on transfers of person who exhibit an "emergency medical condition" or are in active labor, which restrictions may or may not be limited to transfers made for economic reasons; and 3) an affirmative duty to institute treatment if an "emergency medical condition" does exist. Found at www.emtala.com/faq.htm on May 17, 2005.

[7] DHS/MAC Transfer Policy 304, Guidelines for Acceptance of Emergency Department Transfers of Patients *With* an Emergency Medical Condition and DHS/MAC Transfer Policies 305, Guidelines for Acceptance of Emergency Department Transfers of Patients *Without* an Emergency Medical Condition

[8] DHS/MAC Transfer Policy 306, Guidelines for Acceptance of Stable Inpatient Transfers

[9] OSHPD Utilization Data 2002, OSPHD Annual Financial Data 2002 and HASC Data

2004 the LA County population increased 6.5% to over ten million residents. Furthermore, according to US Department of Labor's Bureau of Labor Statistics, the County unemployment rate increased from 5.7% in the first quarter of 2000 to 6.2% in the last quarter of 2004. As is usual in LA County and in health care, change was ongoing.

It is against this backdrop that NHF was asked to conduct a study to validate private sector hospitals' reports that they had seen an increase in self pay patients, particularly in the number of self pay patients being admitted from their own EDs. The study was also expected to identify salient features accounting for any increases. This required collecting some new data and analyzing it along with existing data. The analyses had to be conducted to confirm reported self pay patient increases, to determine whether all hospitals in the county were experiencing this increase and if they were not, which groups of hospitals were. Finally there had to be an assessment of what factors might have accounted for any confirmed change.

III. METHODS

The 76 general acute care hospitals with EDs in Los Angeles County comprise the study population. Study data came from two sources: the Office of State Health Planning and Development (OSHPD) Patient Discharge Data and an NHF online survey. OSHPD uses "self pay" to include those without insurance who are expected to pay the majority of the costs of their care, and NHF used OSHPD definitions in its survey. OSHPD data from 2000-2003 were used to provide inpatient data for each hospital. Survey data provided 2004 inpatient data and 2000-2004 ED data.[10] While assuring hospitals that only aggregate data would be made public, the survey was distributed both electronically and by mail. Extensive telephone follow-up was conducted by both HASC and NHF. Inpatient and ED survey data were compared against OSHPD data to assess validity.[11] Both the ED and inpatient data were analyzed using descriptive, comparison and correlation statistics.[12]

This study was conducted to clarify a narrowly defined issue in Los Angeles County and it has several limitations. Its findings are unique to this County and look at only four contributing factors—population, unemployment, capacity reductions and changes in County policies. Also, they do not include financial data nor do they answer questions about cause and effect. Nevertheless, they do provide a new perspective on the relationship between the public and private sector hospital systems in Los Angeles County.

The overall response rate for the survey was 79% (60/76), although some of the hospitals were unable to provide all the requested data. The ED visit expected source of payment data were the most difficult to obtain. For example, for the study time frame—January 1, 2000 to December 31, 2004—58% (44/76) of the hospitals were able to meet the "data for 4 out of

[10] Appendix A: NHF Self Pay Survey
[11] Appendix B: NHF survey data validation
[12] Appendix C: Description of Statistics

the 5 years" criterion for ED visits by payer type, while 74% (56/76) were able to meet the "data for 19 of the 20 quarters" criterion for inpatient admissions from their own EDs. [13]

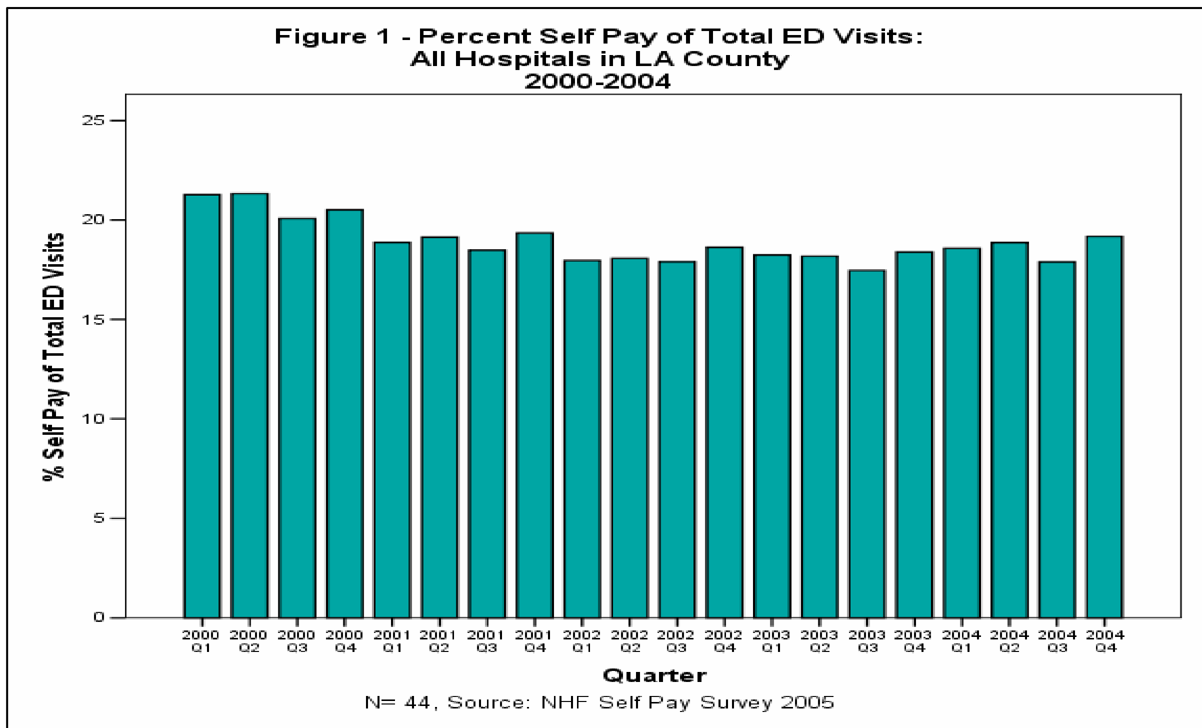
IV. FINDINGS

Study findings are organized to address four questions: 1) Are all acute care hospitals in LA County seeing an increase in self pay patients? 2) Are public and private sector hospitals showing the same or different patterns? 3) Are different groups of private sector hospitals showing different patterns? and 4) What other factors are associated with the change in self pay patients? Answers to these questions are similarly structured: proportions are compared to numbers first for self pay ED visits and then for self pay admissions from own ED. (Throughout, calendar year quarters are identified as Q1, Q2, etc.)

1. Are all acute care hospitals in LA County seeing an increase in self pay patients?

Countywide between 2000 and 2004 there was only a slight increase in the total number of self pay ED visits but a much larger increase in the total number of self pay admissions from own ED (See Figures 1, 2, 3, and 4).[14]

Self pay ED visits: As seen in Figure 1, self pay ED visits, the proportion of total ED visits, decreased from 21.3% in the beginning of 2000 to 19.2 % in the end of 2004.



[13] Appendix D: Hospitals included and excluded in analyses
[14] See Appendices E: Self Pay ED Visits and F: Self Pay Admissions from Own ED

However, during this time as seen in Figure 2, the total number of self pay ED visits rose slightly (N = 2,219). This Figure also shows that from Q3, 2000 to Q2, 2002, total self pay visits to EDs declined hitting the 2000-2004 low of 67,248. From Q2, 2002, self pay visits to EDs began to rise and reached their 2000-2004 peak of 76,350 in Q3, 2004. Overall, from Q1, 2000 to Q4, 2004, the number of self pay ED visits increased by 3%.

The rise beginning in Q2, 2002, was occurring about the same time that LAC-DHS was completing its closure of health centers/clinics; all 16 were closed by October 2002. It should be noted that 26 of the 44 reporting hospitals (59%) were within a five mile radius of at least one closed DHS clinic.

Figure 2 also suggests a seasonal effect. July through September (Q3) show the highest numbers of self pay ED visits in all years except 2003 when Q4 was slightly higher. According to EMS Commission minutes, the 2003 Q4 rise in ED visits may be attributable to an unusual increase in influenza cases county-wide.[15]

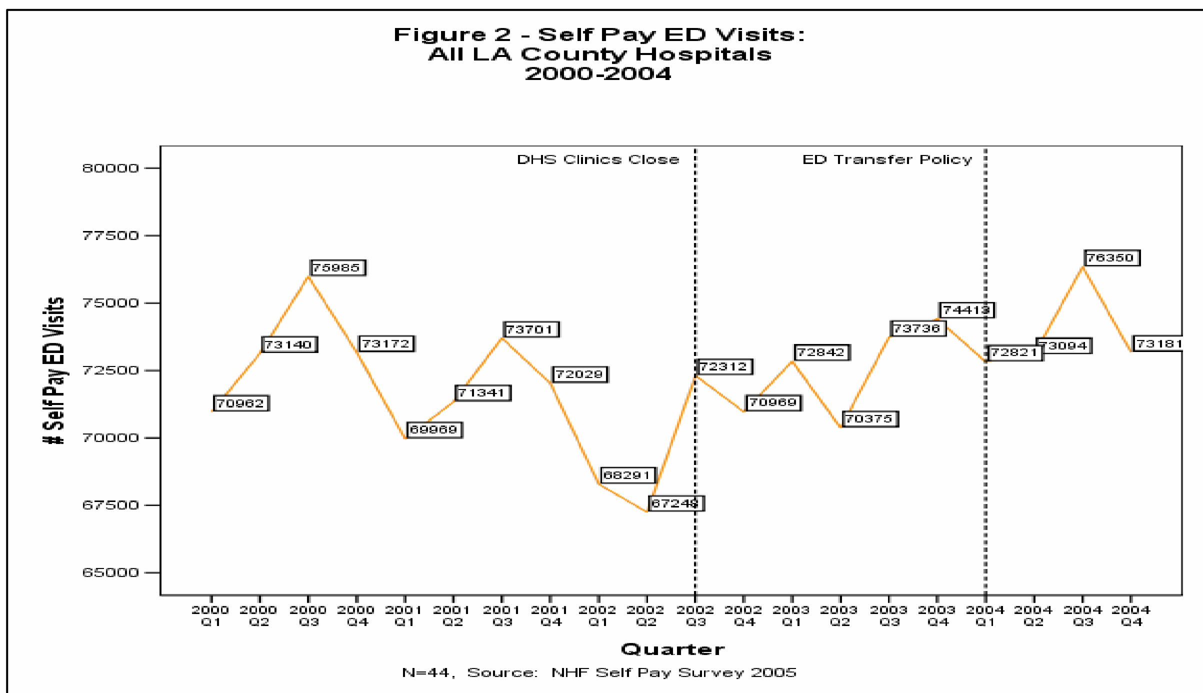
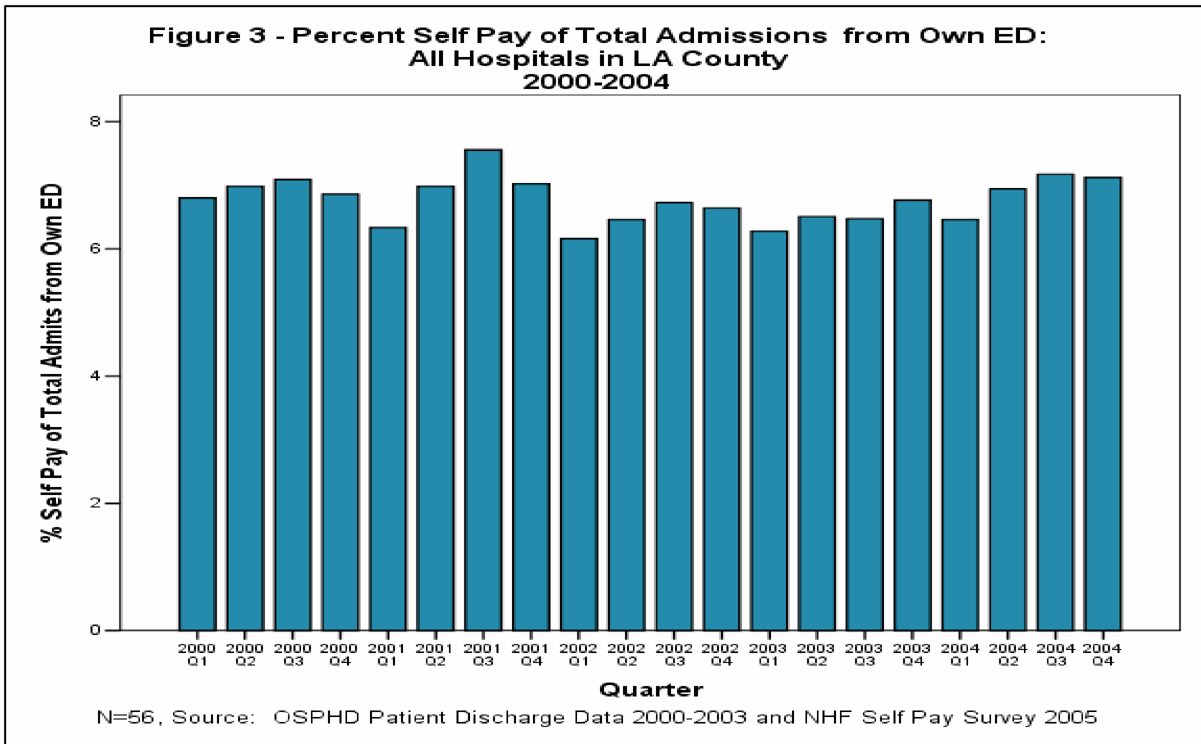


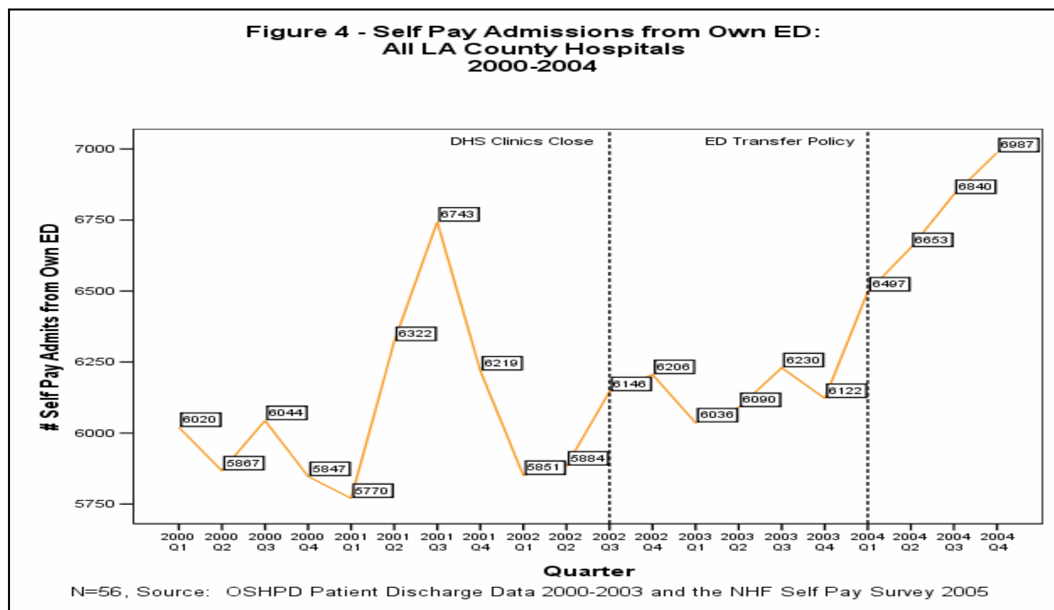
Figure 2 - Self Pay ED Visits: All LA County Hospitals 2000-2004

Self pay admissions from own ED: The proportion of self pay admissions from own ED rose slightly from 6.8% in the beginning of 2000 to 7.1% in the end of 2004 (see Figure 3).

[15] County of Los Angles Emergency Medical Services Commission Meeting Minutes for January 21st 2004.



As shown in Figure 4, despite a large spike in self pay inpatient admissions from own ED in Q3, 2001, for which no-one has an explanation [16] there appears to be an overall increase in self pay admissions from own ED from Q1, 2000 to Q4, 2004. This upward trend became sharper after the Scenario III clinic closures and much more dramatic after LAC-DHS instituted its ED transfer policies.

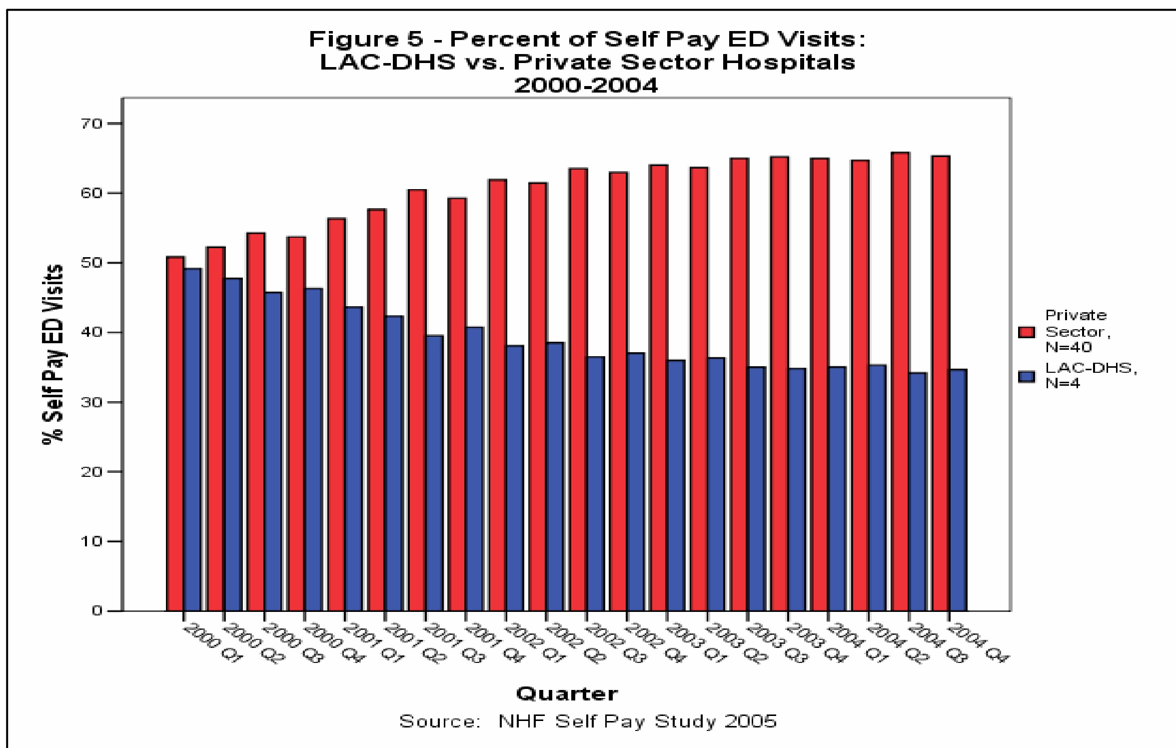


[16] To date, those NHF has spoken to at LAC-DHS, in private sector hospitals or at OSHPD cannot explain this spike.

2. *Are public and private sector hospitals showing the same or different patterns?*

While there was a small increase in the number of ED visits county-wide and a larger increase in the number of self pay admissions from own ED, the distribution of patients, or where they were going to receive these services, changed considerably.[17]

Self pay ED visits: Since the beginning of 2000, private sector hospitals have increasingly seen more self pay visits at their EDs. In Q1, 2000, LAC-DHS and private sector hospitals saw similar proportions of the total self pay visits in the County, (49% and 51% respectively, see Figure 5). Since then, the proportion of self pay visits to private sector hospital EDs has increased to 65% while the proportion of LAC-DHS has declined to 35%. This shift predates both LAC-DHS's initial implementation of Scenario III and its definitive transfer policies (Figure 5).



At LAC-DHS hospitals, self pay ED visits declined 15 out of 20 quarters between 2000 and 2004, and from Q1, 2000 to Q1, 2002 they decreased 25% (8,879 visits, see Figure 6). It appears that self pay patients have been redirected from public hospitals to the private sector. Among private hospitals, self pay visits to EDs increased 17% from Q1, 2000 to Q1, 2002 (6,208 visits).

From 2002 through 2004, during and after the implementation of Scenario III, self pay visits to LAC-DHS EDs remained fairly constant. However, from Q1, 2002 to Q4, 2004, private

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[17] See Appendices E: Self Pay ED Visits and F: Self Pay Admissions from Own ED

sector hospital's self pay ED visits continued to rise by another 13% (5,540 visits) bringing the total increase from Q1, 2000 to Q4, 2004 to 33% (11,748 visits).

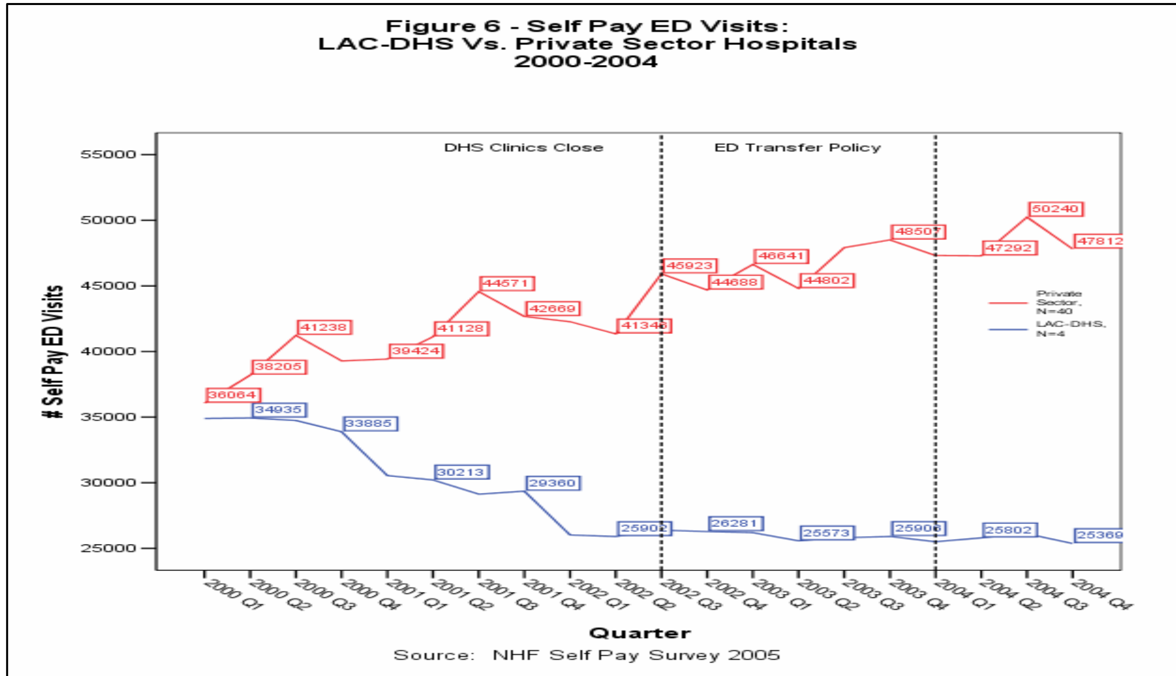

Table 1 illustrates the average increase per private sector hospital for each quarter compared. The total increase in self pay visits to private hospitals from 2000-2004 is significant for each quarter compared ($p<0.05$).

Table 1 - Private Sector Self Pay ED Visits 2000 vs. 2004

Quarter	Average Difference	95% CI
Q1 2000 vs. Q1 2004	242	(102, 382)
Q2 2000 vs. Q2 2004	184	(53, 315)
Q3 2000 vs. Q3 2004	199	(62, 337)
Q4 2000 vs. Q4 2004	187	(52, 322)

N=44, Source: NHF Self Pay Survey 2005

Self pay admissions from own ED: LAC-DHS and private sector hospitals equally shared the inpatient demand of self pays throughout 2000 and 2001 (see Figure 7). Beginning Q1, 2002, however, the private sector began carrying more of the self pay admissions load and by the end of 2004 private sector hospitals accounted for nearly 70% of countywide self pay admissions through own ED. The shift in self pay admissions from an even split too predominantly private sector appears to have begun at about the same time as LAC-DHS's capacity reductions outlined in Scenario III.

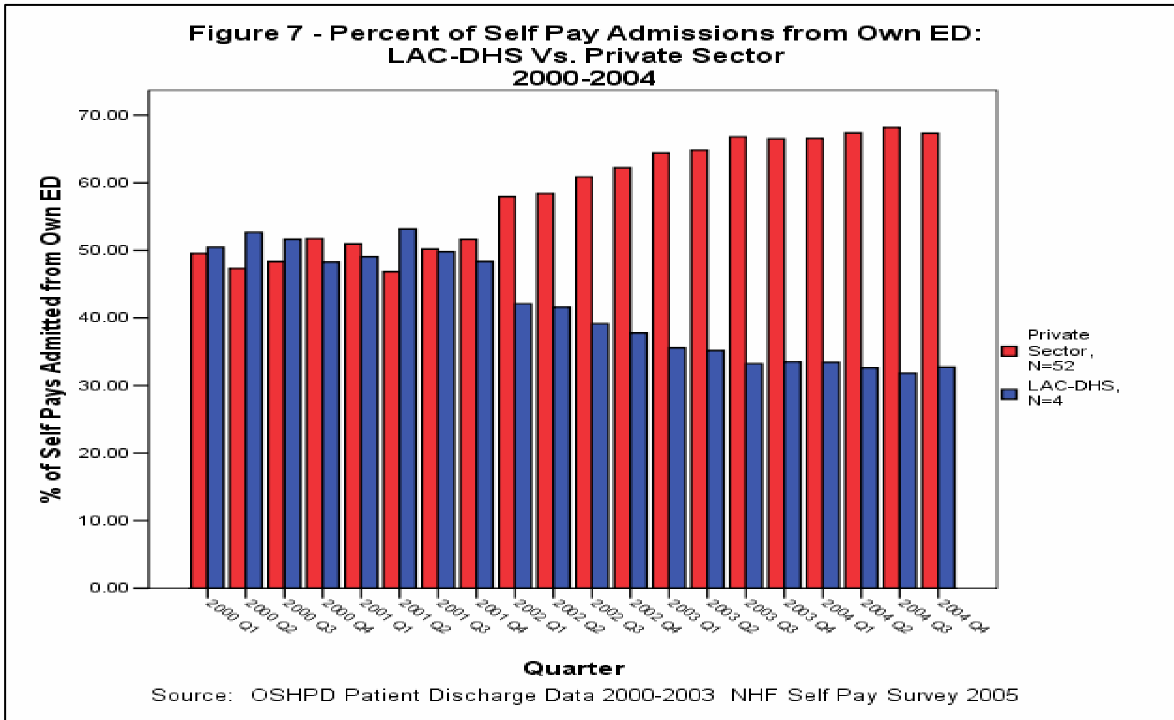

Figure 8 shows that since Q3, 2001, LAC-DHS hospitals have seen an overall decrease in self pay admissions from own ED. The comparison of Q1, 2000 to Q4, 2004 shows LAC-DHS self pay admissions from its four hospitals own EDs decreased by 25% (754 fewer admissions in Q4, 2004), while private sector hospitals increased by 58% (1,721 more admissions in Q4, 2004).

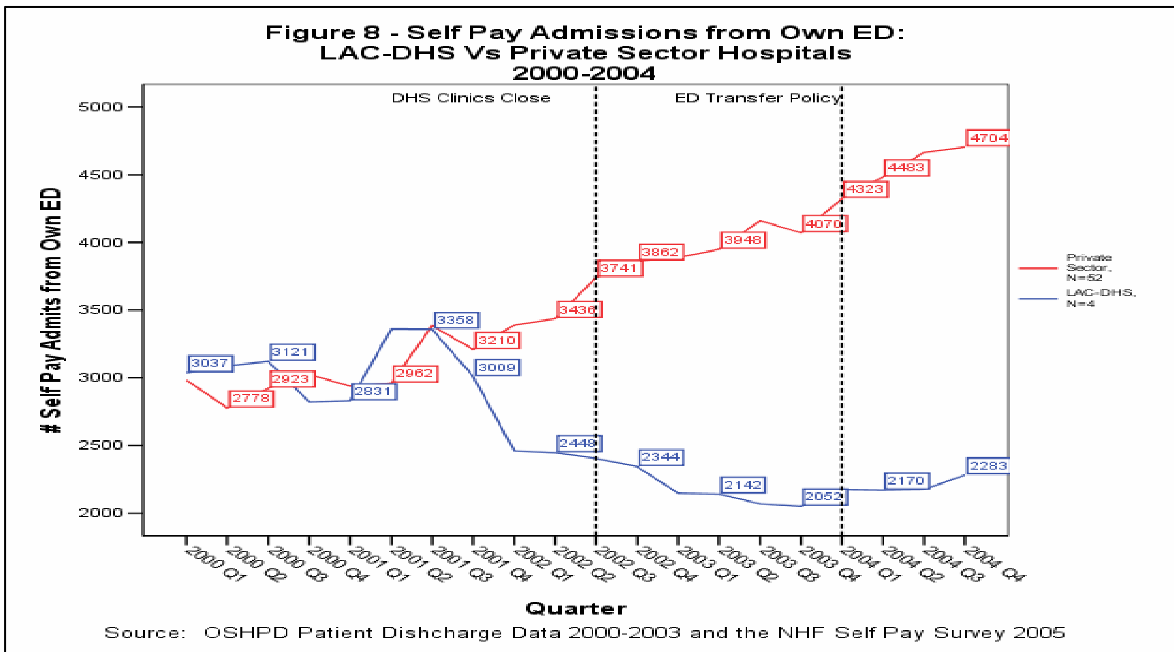

Table 2 shows the average increase per private sector hospital for each quarter compared. From 2000 to 2004, the total increase of private sector self pay admissions from own EDs was statistically significant for each quarter compared ($p<0.05$). Also, after the 2004 implementation of the LAC-DHS Transfer Policy, private sector hospitals saw significantly more admissions from their own EDs (Table 3).

Table 2 - Private Sector Self Pay Admissions from Own ED 2000 vs. 2004

Quarter	Average Difference	95% CI
Q1 2000 vs. Q1 2004	25	(6, 43)
Q2 2000 vs. Q2 2004	33	(15, 50)
Q3 2000 vs. Q3 2004	33	(18, 49)
Q4 2000 vs. Q4 2004	32	(16, 49)

N=52, Source: OSHPD Patient Discharge Data 2000-2003 and NHF Self Pay Survey 2005

Table 3 - Private Sector Self Pay Admissions from Own ED Q1, 2004 vs. Q4, 2004

Quarter	Average Difference	95% CI
Q1 2004 vs. Q4 2004	7	(2, 13)

N=52, Source: NHF Self Pay Survey 2005

Finally, significant inverse correlations exist between subsequent admissions and self pay visits to LAC-DHS EDs compared to private sector EDs. While it cannot be said that decreases in LAC-DHS self pay ED visits and admissions caused increases in private self pay ED visits and admissions, the strong associations (shown in Tables 4 and 5) suggests that increases in the private sector have something to do with decreases in the public sector.

Table 4 - Self Pay ED Visits Correlations

		LAC-DHS Hospitals	Private Sector Hospitals
LAC-DHS Hospitals	Pearson Correlation	1	-.820(**)
	Sig. (1-tailed)		.000
	N of Quarters	20	20
Private Sector Hospitals	Pearson Correlation	-.820(**)	1
	Sig. (1-tailed)	.000	
	N of Quarters	20	20

** Correlation is significant at the 0.01 level (1-tailed).
LAC-DHS N=4, Private Sector N=40, Source: NHF Self Pay Survey 2005

Table 5 - Self Pay Admissions from the ED Correlations

		LAC-DHS Hospitals	Private Sector Hospitals
LAC-DHS Hospitals	Pearson Correlation	1	-.831(**)
	Sig. (1-tailed)		.000
	N of Quarters	20	20
Private Sector Hospitals	Pearson Correlation	-.831(**)	1
	Sig. (1-tailed)	.000	
	N of Quarters	20	20

** Correlation is significant at the 0.01 level (1-tailed).
LAC-DHS N=4, Private Sector N=52, Source: OSHPD Patient Discharge Data 2000-2003 and NHF Self Pay Survey

3. Are different groups of private sector hospitals showing different patterns?

Hospitals can be grouped using various criteria (e.g., being part of a system or stand alone, being for profit or not for profit), the following findings are based on an analysis comparing disproportionate share hospital status (DSH and non-DSH). [18,19]

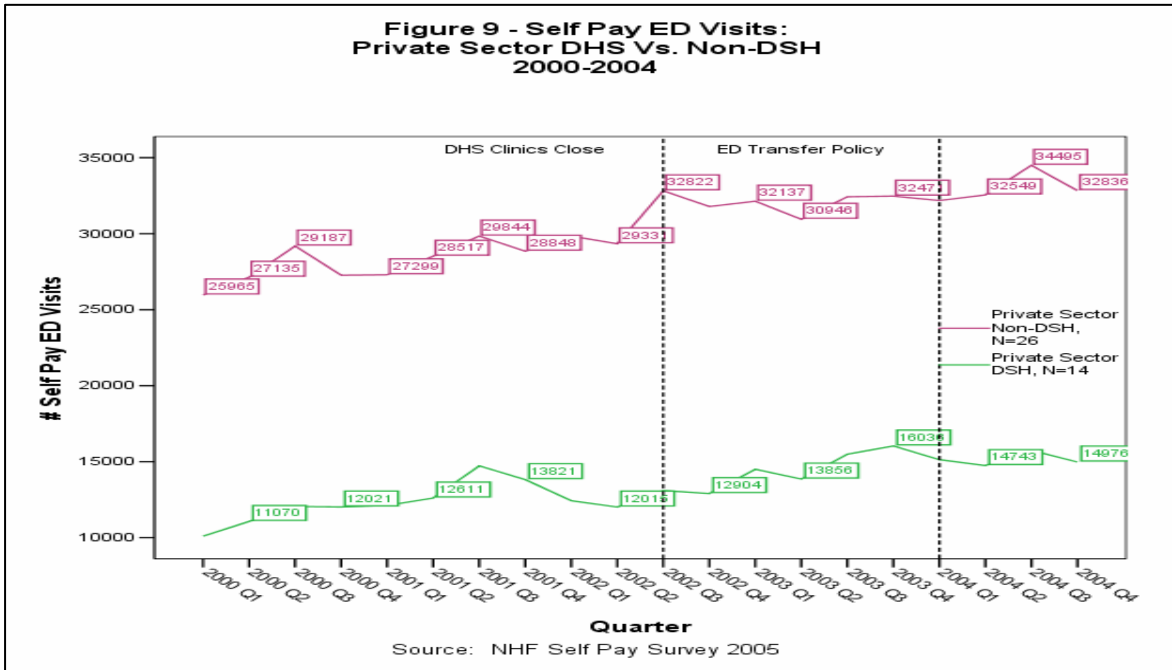

Figure 9 - Self Pay ED Visits: Private Sector DHS Vs. Non-DSH 2000-2004

Source: NHF Self Pay Survey 2005

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[18] Disproportionate share hospitals (DSH) are those with a "disproportionate share" of low-income or uninsured patients. DSH payments "are in addition to the regular payments such hospitals receive for providing care to Medicare and Medicaid beneficiaries." Retrieved May 17, 2005 from http://www.naph.org/Content/ContentGroups/Advocacy_Issues/Glossary1/DSH_Payments.htm. For more information: http://www.naph.org/Template.cfm?Section=Medicaid_DSH&Template=/ContentManagement/ContentDisplay.cfm&ContentID=4174.

[19] See Appendices E: Self Pay ED Visits, and F: Self Pay Admissions from Hospitals' Own EDs

Self pay ED visits: Overall, both the private sector DSH (14) and the non-DSH (26) hospitals reported increases in self pay ED visits between Q1, 2000 and Q4, 2004 (Figure 9). These increases were 48% for DSH and 26% for non-DSH hospitals. The largest increase occurred in non-DSH hospitals between Q2 and Q3 2002 (all 16 LAC-DHS clinic closures occurred by October 2002) when total self pay ED visits at these 26 hospitals increased from 29,331 to 32,822 (12%).

The average number of self pay ED visits to private sector DSH and non-DSH hospitals for all quarters of 2000 compared to the same quarter of 2004 quarter showed significant increases ($p<0.10$). Tables 6 and 7 illustrate the average increase per private sector hospital for each quarter compared.

Table 6 – Private Sector-DSH ED Visits 2000 vs. 2004

Quarter	Mean Difference	90% CI
Q1 2000 vs. Q1 2004	360	(140, 579)
Q2 2000 vs. Q2 2004	262	(61, 464)
Q3 2000 vs. Q3 2004	264	(25, 449)
Q4 2000 vs. Q4 2004	211	(38, 384)

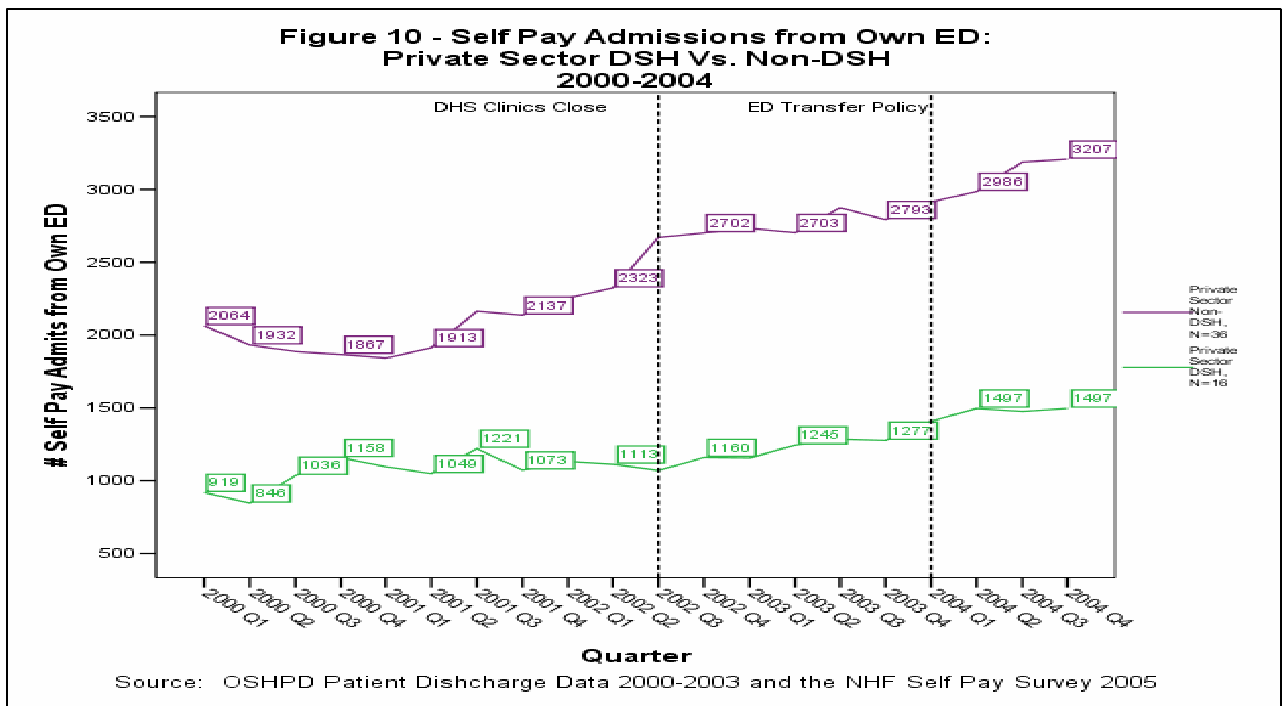
N=14, Source: NHF Self Pay Survey 2005

Table 7 – Private sector non-DSH ED Visits 2000 vs. 2004

Quarter	Mean Difference	90% CI
Q1 2000 vs. Q1 2004	171	(52, 289)
Q2 2000 vs. Q2 2004	136	(21, 251)
Q3 2000 vs. Q3 2004	162	(38, 285)
Q4 2000 vs. Q4 2004	173	(34, 311)

N=26, Source: NHF Self Pay Survey 2005

Self pay admissions from own ED: Between Q1, 2000 and Q4, 2004, both private sector DSH (16) and non-DSH (36) hospitals experienced large increases in the numbers of self pay admissions from their own EDs (63% and 55% respectively from Figure 10).



Only non-DSH private sector hospitals experienced significant increases in self pay admissions from their own EDs in each quarter of 2004 compared to 2000 ($p<0.05$). Table 8 shows the average increase per non-DSH hospital for the quarters compared.

Table 8 – non-DSH Admissions from Own ED

Quarter	Mean Difference 2000 to 2004	95% CI
Q1 2000 vs. Q1 2004	22	(7, 37)
Q2 2000 vs. Q2 2004	29	(17, 42)
Q3 2000 vs. Q3 2004	36	(23, 49)
Q4 2000 vs. Q4 2004	37	(24, 51)

N=36, Source: OSHPD Patient Discharge Data 2000-2003 and NHF Self Pay Survey 2005

The correlation tables below (Tables 9 and 10) suggest the interconnectedness of Los Angeles County's public and private hospital systems. Decreases in LAC-DHS self pay ED visits and admissions are strongly associated with increases in both private sector DSH and non-DSH hospitals ($p<0.01$). In fact, the private sector DSH and non-DSH hospital increases are also significantly correlated ($p<0.01$) indicating that both similarly experienced increases in the total number of self pay ED visits and admissions.

Table 9 - Self Pay ED Visit Correlations

		LAC-DHS Hospitals	Private Sector DSH Hospitals	Private Sector non-DSH Hospitals
LAC-DHS Hospitals	Pearson Correlation	1	-.733(**)	-.829(**)
	Sig. (1-tailed)		.000	.000
	N	20	20	20
Private Sector DSH Hospitals	Pearson Correlation	-.733(**)	1	.845(**)
	Sig. (1-tailed)	.000		.000
	N	20	20	20
Private Sector non-DSH Hospitals	Pearson Correlation	-.829(**)	.845(**)	1
	Sig. (1-tailed)	.000	.000	
	N	20	20	20

** Correlation is significant at the 0.01 level (1-tailed)
LAC-DHS N=4, Private Sector DSH N=14, Private Sector Non-DSH N=26, Source: NHF Self Pay Survey 2005

Table 10 - Self Pay Admissions from ED Correlations

		LAC-DHS Hospitals	Private Sector DSH Hospitals	Private Sector non-DSH Hospitals
LAC-DHS Hospitals	Pearson Correlation	1	-.661(**)	-.855(**)
	Sig. (1-tailed)		.001	.000
	N	20	20	20
Private Sector DSH Hospitals	Pearson Correlation	-.661(**)	1	.822(**)
	Sig. (1-tailed)	.001		.000
	N	20	20	20
Private Sector non-DSH Hospitals	Pearson Correlation	-.855(**)	.822(**)	1
	Sig. (1-tailed)	.000	.000	
	N	20	20	20

** Correlation is significant at the 0.01 level (1-tailed)
LAC-DHS N=4, Private Sector DSH N=16, Private Sector Non-DSH N=36, Source: OSHPD Patient Discharge Data 2000-2003 and the NHF Self Pay Survey 2005

4. What other factors are associated with the change in self pay patients?

In addition to LAC-DHS's Scenario III service reductions and modified transfer policies, population and unemployment rates were on the rise and private sector hospitals were closing.

Between 2000 and 2004, seven private sector hospitals with EDs closed entirely and two others closed their EDs.[20] Overall, these closures accounted for a loss of 1,207 staffed inpatient beds and 132,803 ED visits.[21] Table 11 describes the annual number of self pay admissions for the seven hospitals and the percent of LA County's self pay admissions they represented.

Table 11 - Self Pay Admissions from Own ED at 7 Hospitals Prior to Closure

Year	Total Annual Self Pay Admissions from Own ED for 7 Closed Hospitals	Total Annual Self Pay Admissions from own ED for All Hospitals (N=56)	Closed Hospitals' % of All Hospitals Self Pay Admissions from Own ED	Total Annual Admissions from Own ED for All Private Sector Hospitals (N=52)	Closed Hospitals' % of All Private Sector's Self Pay Admissions from Own ED
2000	523	24,301	2.1	12,232	4.3
2001	599	25,653	2.3	13,095	4.6
2002	645	24,732	2.6	15,073	4.3
2003	679	25,157	2.7	16,745	4.1
2004	not available	26,977	not available	18,174	not available

Source OSHPD Patient Discharge Data 2000-2003 and the NHF Self Pay Survey 2005

[20] Two additional private sector hospitals without EDs also closed during this period; they are not included in this study.
[21] 2002 OSHPD Hospital Annual Utilization data (not available to public after 2002) and HASC data. See Appendix G for a list of hospitals closed between 2000 and 2004

During 2000 and 2001, when all seven hospitals were still open, they accounted for slightly more than two percent of the county's self pay admissions from own ED and just over four percent of private sector admissions from own ED. Five of these hospitals were within five miles of closed DHS clinic and all seven were within five miles of two or more hospitals. The biggest impact of these hospitals' closures occurred in 2004 when five hospitals with EDs closed entirely and one hospital closed its ED. These closures accounted for the loss of 887 inpatient beds and 96,469 ED visits.

Within the design of this study it is impossible to tell how much these closures contributed to the increases in the remaining private sector hospitals. However, with the decreases in LAC-DHS visits and admissions during this period it appears that these closures may have exacerbated the self pay demand at remaining private sector hospitals.

As unemployment rates and population rose, private and public sector hospitals showed different patterns of self pay ED visits and admissions. From the beginning of 2000 to the end of 2004, the county's population increased 6.8% to over ten million and unemployment rates fluctuated between 4.8 and 7.5%. At the same time, self pay ED visits and admissions to LAC-DHS hospitals decreased by 27.3% and 24.8% respectively while private sector hospitals showed an increase in self pay ED visits of 32.6% and in self pay admissions from their own EDs of 57.7% (see Figures 11 and 12 and Tables 12 and 13).

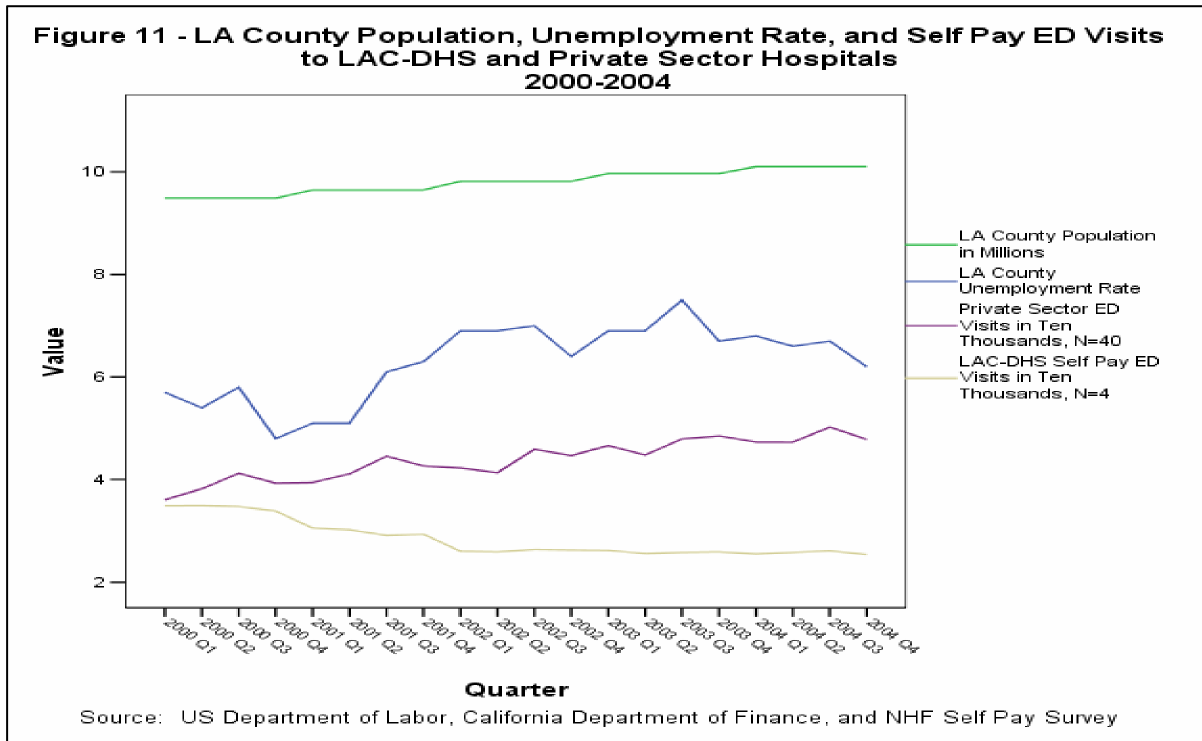


Figure 11 - LA County Population, Unemployment Rate, and Self Pay ED Visits to LAC-DHS and Private Sector Hospitals 2000-2004

Source: US Department of Labor, California Department of Finance, and NHF Self Pay Survey

Table 12 - LA County Unemployment Rate, Population, and Self Pay ED Visits to LAC-DHS and Private Sector Hospitals

	Population	Unemployment Rate	LAC-DHS (N=4)	Private Sector		
				Total (N=40)	DSH (N=14)	Non-DSH (N=26)
Q1, 2000	9,487,400	5.7%	34,898	36,064	10,099	25,965
Q4, 2004	10,103,000	6.2%	25,369	48,812	14,976	32,836
% change	6.5%	8.8%	-27.3%	32.6%	48.3%	26.5%

Source: California Department of Finance, US Department of Labor, and NHF Self Pay Survey

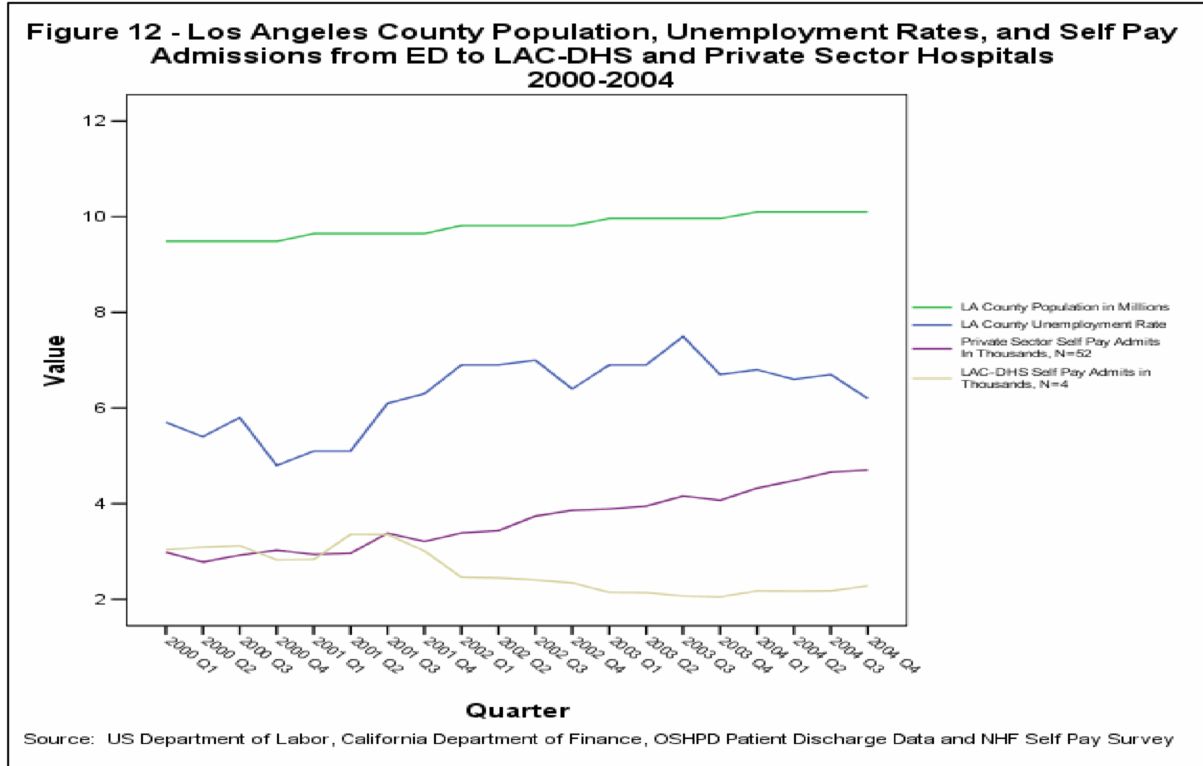


Figure 12 - Los Angeles County Population, Unemployment Rates, and Self Pay Admissions from ED to LAC-DHS and Private Sector Hospitals 2000-2004

Source: US Department of Labor, California Department of Finance, OSHPD Patient Discharge Data and NHF Self Pay Survey

Table 13 - LA County Unemployment Rate, Population, and Self Pay Admissions from Own ED to LAC-DHS and Private Sector Hospitals

	Population	Unemployment Rate	LAC-DHS (N=4)	Private Sector		
				Total (N=52)	DSH (N=16)	Non-DSH (N=36)
Q1, 2000	9,487,400	5.7%	3,037	2,983	919	2,064
Q4, 2004	10,103,000	6.2%	2,283	4,704	1,497	3,207
% change	6.5%	8.8%	-24.8%	57.7%	62.9%	55.4%

Source: California Department of Finance, US Department of Labor, OSHPD Patient Discharge Data 2000-2003 and NHF Self Pay Survey

From this high level review, we conclude that between 2000 and 2004, the total population increase probably means that the size of the self pay population increased and the rise in unemployment may have also resulted in an increase in the number of self pay patients in the County. Such conclusions are at odds with the findings reported earlier. Given the

population and unemployment data, it is curious that the proportion of self pay ED visits declined and that the size of the increase in their total number was not larger. Possible explanations might include the fact that high proportions of the new and unemployed populations had some form of health coverage or that few of these individuals sought ED care.

V. CONCLUSION

This study has shown that among patients receiving care in the Emergency Departments of hospitals in Los Angeles County between 2000 and 2004 the proportion of self pay patients slightly decreased (-2.1%) while the number of them hardly changed. At the same time, the proportion of these self pay patients that hospitals then admitted as inpatients hardly changed (+0.3%) while their numbers increased (13.4%). However, while more self pay ED patients are being admitted to hospitals throughout the County, the major change over the last five years has been in the distribution of these patients—that is, which hospitals they are being admitted to.

During the first quarter of 2000, Los Angeles County Department of Health Services (LAC-DHS) hospitals and private sector hospitals were providing similar proportions and numbers of visits to self pay patients (49% = 34,898 visits and 51% = 36,064 visits respectively). By the last quarter of 2004, these proportions and numbers had changed considerably: LAC-DHS hospitals were seeing 35% of the self pay patients and providing 25,309 visits/quarter, while private sector hospitals were seeing 65% and providing 47,812 visits/quarter. Within the private sector, both DSH and non-DSH hospitals saw statistically significant increases in the numbers of self pay ED visits for almost every quarter.

A similar pattern is also seen in the distribution of self pay patients hospitals admit from their own EDs. During the first quarter 2000, LAC-DHS hospitals and private sector hospitals were admitting similar proportions and numbers of their ED self pay patients (50% each equaling 3,037 admits for LAC-DHS and 2,983 admits for the private sector). By the last quarter of 2004, these proportions and numbers had changed considerably: LAC-DHS hospitals were admitting 33% (2,283) of these patients, while private sector hospitals were admitting 67% (4,704). Within the private sector both DSH and non-DSH hospitals saw increases in the numbers of self pay patients they admitted from their EDs; this increase was statistically significant only for non-DSH hospitals.

The redistribution of self pay patients, so that more are going to private sector hospitals for their emergency care, appears to have begun in 2000, before LAC-DHS had closed its health centers/clinics in October 2002. This trend continued through the end of 2004. A similar redistribution of self pay patient admissions appears to have started a little later—about the end of 2001—and also continues through the end of 2004.

It is important to note that also between 2000 and 2004, the total population of Los Angeles County increased to over ten million and a fluctuating unemployment rate shows an overall increase as well. Both of these changes could have resulted in increasing the size of the

County's self pay population and the numbers of self pay patients. Given these increases, it is curious that the number of patients requiring emergency treatment did not grow more than it did. Perhaps high proportions of the new County residents and unemployed had health insurance or few of them visited an ED. Again, there was no great increase in demand, rather a redistribution of supply.

This study suggests that private sector hospitals were indeed correct in their concerns about having to care for increasing numbers of self pay patients. Given the shift documented by this analysis and review, the private sector and not the public sector now has primary responsibility for serving self pay patients in Los Angeles County.

Appendix A: NHF Self Pay Survey 2005

SELF PAY SURVEY

SELF PAY SURVEY INSTRUCTIONS

This survey contains three data entry sections and asks about the following types of data:

- Hospital Identification.
- Emergency Department Data: Quarterly data by various payer types for calendar years 2000 through 2004.
- Inpatient Admission Data: Quarterly data by various payer types for calendar year 2004 only (NHF has compiled 2000 through 2003 data from OSHPD).

The following information will help you move through the survey:

- Each time you navigate through the survey by selecting either the "Previous" or "Continue" button, the data you have entered are saved
- You can exit the survey and then return to your saved data by logging back in with your user id and password (see cover email of this survey).
- Upon survey completion, click the "submit" button.
- If, on submission, data fields are left empty, you will be asked to return to the survey to complete these fields which will be highlighted in red. If this happens, you can do the following:

a. Return and make the changes
b. Return at a more convenient time
c. Submit the survey as is

- A Glossary of terms is provided in the Table of Contents

The National Health Foundation (NHF) has been asked by the Hospital Association of Southern California (HASC) to administer the survey and analyze survey responses. Your responses will be aggregated with those from other hospitals. All individual-level hospital responses will be held confidential by NHF and no individual hospitals will be identified in any reports or publications issued from this study. Please:

- Submit the completed web-based survey no later than **Wednesday February 9th.**
- If you prefer to provide survey responses by hard copy, print out and complete the PDF version of the survey, and fax to NHF at the fax number below by **Wednesday February 9th.**
- This survey is intended for the Chief Financial Officer (or equivalent position) at your hospital. Please notify NHF if you received this survey in error.
- Responses should be made at the individual hospital level—not the system level. Please notify NHF if you received this survey but your position is at the system level.

Survey Contact: O'Keeya Singleton
National Health Foundation (NHF)
515 S. Figueroa Street, Suite 1300
Los Angeles, CA 90071
Phone: 213-538-0742
Fax: 213-629-4272
E-mail: Osingleton@nhfca.org

Hospital Identifying Information
Please verify or complete every line.

OSHPD Facility ID Number:	______________________
Hospital Name:	______________________
System Affiliation:	______________________
Hospital Type: (LAC-DHS, Non-profit, For Profit, Other)	______________________
Disproportionate Share Hospital Status (DSH, Non-DSH, Other)	______________________
Designated Contact Person:	______________________
Title:	______________________
Email:	______________________
Phone Number:	______________________

<u>EMERGENCY DEPARTMENT VISITS</u> (OSHPD Utilization Data)

Year 2000

Please indicate the number of visits to your ED by various payer types during each quarter in the tables below. If for any reason quarterly figures are unavailable, please provide a total for the year by payer type.

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual
Medi-Cal (Traditional)					
Medi-Cal (Managed Care)					
Medicare (Traditional)					
Medicare (Managed Care)					
Private Coverage					
Self-pay					
All Other					
Total ED Visits					

Year 2001

Please indicate the number of visits to your ED by various payer types during each quarter in the tables below. If for any reason quarterly figures are unavailable, please provide a total for the year by payer type.

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual
Medi-Cal (Traditional)					
Medi-Cal (Managed Care)					
Medicare (Traditional)					
Medicare (Managed Care)					
Private Coverage					
Self-pay					
All Other					
Total ED Visits					

Year 2002

Please indicate the number of visits to your ED by various payer types during each quarter in the tables below. If for any reason quarterly figures are unavailable, please provide a total for the year by payer type.

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual
Medi-Cal (Traditional)					
Medi-Cal (Managed Care)					
Medicare (Traditional)					
Medicare (Managed Care)					
Private Coverage					
Self-pay					
All Other					
Total ED Visits					

Year 2003

Please indicate the number of visits to your ED by various payer types during each quarter in the tables below. If for any reason quarterly figures are unavailable, please provide a total for the year by payer type.

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual
Medi-Cal (Traditional)					
Medi-Cal (Managed Care)					
Medicare (Traditional)					
Medicare (Managed Care)					
Private Coverage					
Self-pay					
All Other					
Total ED Visits					

Year 2004

Please indicate the number of visits to your ED by various payer types during each quarter in the tables below. If for any reason quarterly figures are unavailable, please provide a total for the year by payer type.

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual
Medi-Cal (Traditional)					
Medi-Cal (Managed Care)					
Medicare (Traditional)					
Medicare (Managed Care)					
Private Coverage					
Self-pay					
All Other					
Total ED Visits					

<u>INPATIENT ADMISSIONS</u> (OSHPD Hospital Discharge Data)

Year 2004 (NHF has compiled 2000-2003 data from OSHPD)

Please indicate the number of inpatient admissions by various payer types during each quarter in the tables below. If for any reason quarterly figures are unavailable, please provide a total for the year by payer type.

	From Your ED					**Not From Your ED**				
	Jan-Mar	**Apr-Jun**	**Jul-Sep**	**Oct-Dec**	**Annual**	**Jan-Mar**	**Apr-Jun**	**Jul-Sep**	**Oct-Dec**	**Annual**
Medi-Cal (Traditional)										
Medi-Cal (Managed Care)										
Medicare (Traditional)										
Medicare (Managed Care)										
Private Coverage										
Self-pay										
All Other										
Total Admissions										

Year 2004

	Avg. Case Mix	*Avg. Length of Stay (Days)*
Medi-Cal (Traditional)		
Medi-Cal (Managed Care)		
Medicare (Traditional)		
Medicare (Managed Care)		
Private Coverage		
Self-pay		
All Other		
Total Admissions		

<u>2000 -2004 Inpatient (Traditional) Medi-Cal Claims</u>

	2000	**2001**	**2002**	**2003**	**2004**
For the listed years, how many of the traditional Medi-Cal claims' days (#) were denied?					
After appeals, how many of the traditional Medi-Cal claims' days (#) **<u>remained</u>** denied?					

SELF PAY SURVEY GLOSSARY

Data Field	Definition
OSHPD Facility ID Number	This is a nine-digit facility identification number assigned by OSHPD for reporting purposes. The first three digits represent the type of facility, the next two digits indicate the county in which the facility operates, and the last four digits are assigned to identify the facility.[1]
Hospital Name	The name under which the hospital is doing business. This name may be an abbreviation of and may differ from the hospital's legal name. It is listed on the license as the name of the facility being operated by the licensee.[1]
System Affiliation	If the hospital is a subsidiary or division of another corporation please indicate the name of that corporation.[1]
Hospital Type	LA County DHS, Nonprofit, For Profit, or Other
Disproportionate Share Hospital Status	DSH, Non-DSH, Other
Designated Contact Person	The person best to contact regarding this survey.
Title	The professional title of the Designated Contact Person.
Email	The direct email where the Designated Contact Person can be reached.
Phone Number	The direct phone number where the Designated Contact Person can be reached.
Emergency Department Visits	Visits to the hospital's Emergency Department. This includes outpatient ED visits and those ED visits resulting from inpatient admission. Do not include patients who registered at the ED but left without being seen, employee physicals, and scheduled clinic-type visits.[1]
Medi-Cal-Traditional	Includes patients who are qualified as needy under state laws and are enrolled in Medi-Cal.[1]
Medi-Cal-Managed Care	Includes patients who are covered by a managed care health plan funded by Medi-Cal.[1]
Medicare-Traditional	Includes patients who are covered under the Social Security Amendments of 1965. These patients are primarily the elderly and

	the needy.[1]
Medicare-Managed Care	Includes patients who are covered by a managed care health plan funded by Medicare.[1]
Private Coverage	Payment covered by private, nonprofit, or commercial health plans, whether insurance or other coverage, or organizations. Included are payments by local or organized charities.[2]
Self Pay	Payment directly by the patient, personal guarantor, relatives, or friends. The greatest share of the patient's bill is not expected to be paid by any form of insurance or other health plan.[2]
All Other	Any third party payment not included above. Include cases where no payment will be required by the hospital, such as special research or courtesy patients.[2]
Total ED visits	The sum of visits to the hospital's emergency department by all payer categories listed above during the reporting period.
2000, 2001, 2002, 2003, 2004	E.g., the calendar year 2000 (as opposed to fiscal year)
Jan-Mar	January 1st-March 31st
Apr-Jun	April 1st-June 30th
Jul-Sep	July 1st-September 30th
Oct-Dec	October 1st-December 31st
Annual	Total numbers for that category during the calendar year reported.
Inpatient Admissions	Patients who have been formally admitted by a physician and who are provided with room, board and continuous general nursing service in an area of the hospital where patients stay overnight.[1]
From Your ED	Any patient admitted as an inpatient after being treated or examined in this hospital's emergency department. Excludes patients seen in the emergency department of another hospital.[2]
Not From Your ED	Any patient admitted as an inpatient without being treated or examined in this hospital's emergency department. Includes patients seen in the emergency department of some other hospital and patients not seen in any emergency department.[2]

Total Inpatient Admissions	The total number of patients admitted for inpatient services as described above under Inpatient Admissions.
Average Case Mix	The estimated average case mix is calculated by dividing the average weighted Diagnosis Related Groups (DRGs) for a payer group during a reporting period by the number of patients in that payer group during the same reporting period.[2]
Average Length of Stay	The estimated average number of days of service rendered to each inpatient discharged during a given period of interest. To calculate, divide the total number of patient (census) days for the reporting period by the total number of patients discharged during the reporting period.[1]
For the listed years, how many of the traditional Medi-Cal claims' days were denied?	Number of Medi-Cal (traditional) inpatient days that have been initially denied by the State.
After appeals, how many of the traditional Medi-Cal claims' days **remained** denied?	Number of Medi-Cal (traditional) inpatient days that remained denied by the State after appeals.

1. Instructions for Completing Annual Utilization Report of Hospitals: Reporting Period January 1, 2004 through December 31st 2004. http://www.oshpd.ca.gov/HID/hospital/util/hosinstrct/hosinstrct04.pdf

2. California Patient Discharge Reporting Manual 3rd Edition http://www.oshpd.ca.gov/MIRCal/programs/IP/PDDManual.htm

Appendix B: NHF Self Pay Survey Data Validation

OSHPD inpatient admission data was sorted using year of admission, not year of discharge. As a result, the total number of admissions was slightly different (by less than 1%) from the total number of discharges reported by OSHPD.

OSHPD and NHF survey data were integrated into SPSS from SQL and Access respectively. To insure integrity of the final SPSS warehouse, a meticulous review of each data field transferred was performed by descriptive analysis of data pre and post transfer.

The cleaning of survey data was accomplished through continual data analysis of survey responses. ED data were analyzed and cleaned through both trending self-reported survey data for outliers as well as comparing self reported ED visit survey totals for each hospital with its respective OSHPD Utilization Data. The median difference of total ED visits for hospitals who reported to both the NHF Self Pay Survey and OSHPD Utilization Data for the years 2000, 2001 and 2002 was 2.4%, 2.9% and 0.0% respectively. For inpatient data, the heterogeneous sources, OSHPD Patient Discharge Data 2000-2003 and 2004 NHF Self Pay Survey inpatient data were trended to identify outliers. Three hospitals (2 private sector and 1 public sector) reported incorrect data to either the survey or to OSHPD or both. When anomalies were discovered, the facility was contacted and requested to verify the anomaly or resubmit the data. All three hospitals in which inconsistencies were found resubmitted more consistent data.

In order to maximize the number of hospitals included in both ED and inpatient analyses the following inclusion criteria were set after the survey was closed.

ED Visits:

To be included in the analysis of the self pay ED visits data, hospitals had to have provided data for four of the five years surveyed. Forty-four hospitals met this criterion. When asked why hospitals were not able to report ED visits by payer type for the year 2000, the hospitals indicated that the data systems to do so were not available then. Of those 44, four were LAC-DHS hospitals and 40 were private sector hospitals. All four LAC-DHS hospitals reported 20 out of the 20 quarters surveyed. Two private sector hospitals reported 16 of the 20 quarters surveyed; the four missing quarters fell in the year 2000. One private sector hospital reported 18 of the 20 quarters surveyed; the two missing quarters being quarters one and two of 2000. The remaining 37 private sector hospitals included in the analysis reported all 20 quarters from 2000 to 2004.

Inpatient admissions from own ED:

Survey data for 2004 included 56 hospitals reporting twenty out of twenty quarters of either direct data or a reasonable proxy as decided by the reporting hospitals and NHF. Four of the 56 hospitals included in the "admissions from own ED" analysis were LAC-DHS hospitals and 52 were private sector hospitals. One hospital was unable to report 2004 data by payer type and instructed NHF to use its 2003 numbers as a proxy based on its 2004 census data. Six hospitals were unable to report Q4 of 2004; in these cases and with their approval, an average of Q1-Q3 2004 was used as a proxy for Q4 of 2004.

Appendix C: Description of Statistics

From the SPSS warehouse, ED and inpatient data were analyzed using descriptive, comparison, and correlation statistics.

Descriptive

The sums of Self Pay ED visits for county-wide, LAC-DHS, private sector, private sector DSH and private sector non-DSH hospitals were calculated from survey respondents in SPSS for each quarter from 2000-2004. Each sum was transferred into a separate SPSS data base. Next, the sum for each quarter was graphed in SPSS. Annotations were inserted to indicate when LAC-DHS closed its clinics and implemented its transfer policies.

The sums of Self Pay Admissions from Own ED for county-wide, LAC-DHS, private sector, private sector DSH and private sector non-DSH hospitals were calculated from survey respondents in SPSS for each quarter from 2000-2004. Again, after transferring to a new data base, the sum for each quarter was graphed in SPSS and annotations were inserted to indicate when DHS closed its clinics and implemented its transfer policies.

Paired t-tests

In the SPSS warehouse, the hospitals were split by nominal grouping variable of interest; LAC-DHS vs. private sector and DHS vs. non-DSH. Using SPSS compare means function for paired differences, LAC-DHS, private sector, private sector DSH and non-DSH hospitals' ED visits and admissions from own ED for self pay patients were compared. The paired *t*-tests operates by comparing differences in study population means between identical quarters in 2000 and 2004 (e.g., Quarter 1, 2000 vs. Quarter 1, 2004). The paired t-test was selected for its design to compare repeat measures of populations for differences in their means. The paired t-test allows for the answer to the question "has there been a significant change (increase or decrease) in a particular population from point A to point B".

Correlations

After the sums for ED visits and inpatient admissions from own ED of each comparison group were transferred into separate SPSS databases, bivariate analyses were performed, using Pearson's Product Moment Correlation (r), to determine statistical associations between the sum of LAC-DHS vs. private sector, LAC-DHS vs. private sector DHS hospitals, and LAC-DHS vs. private sector non-DSH hospitals. The correlation analyses allow for the determination of relationships between two populations over time. Correlations do not infer causality, however, they are helpful in understanding how one population changed at the same time its comparison population changed and whether there is a relationship between the differences in each such that as one increases, the other tends to increase as well (positive correlation), or as one decreases, the other increases (negative or inverse correlation).

Appendix D: Hospitals included and excluded in NHF analyses

Hospital Name	Type of Control	DSH Status	Licensed Bed Size	SPA	Included in ED Analyses	Included in Inpatient Analyses
Alhambra Hospital	Private	DSH	100-149	3	Yes	Yes
Antelope Valley Hospital Medical Center	Private	Non-DSH	300-499	1	No	No
Bellflower Medical Center	Private	DSH	100-149	7	No	No
Beverly Hospital	Private	DSH	200-299	7	Yes	Yes
Brotman Medical Center	Private	Non-DSH	300-499	5	Yes	Yes
California Hospital Medical Center - Los Angeles	Private	DSH	300-499	4	Yes	Yes
Cedars Sinai Medical Center	Private	Non-DSH	500+	4	Yes	Yes
Centinela Hospital Medical Center	Private	Non-DSH	300-499	8	No	Yes
Children's Hospital of Los Angeles	Private	DSH	200-299	4	No	No
Citrus Valley Medical Center - IC Campus	Private	DSH	200-299	3	Yes	Yes
Citrus Valley Medical Center - QV Campus	Private	DSH	300-499	3	Yes	Yes
Coast Plaza Doctors Hospital	Private	Non-DSH	100-149	7	Yes	Yes
Community Hospital of Gardena	Private	Non-DSH	50-99	8	No	No
Community Hospital of Long Beach	Private	Non-DSH	200-299	8	Yes	No
Daniel Freeman Marina Hospital	Private	Non-DSH	150-199	5	No	Yes
Daniel Freeman Memorial Hospital	Private	DSH	300-499	8	No	Yes
Downey Regional Medical Center	Private	Non-DSH	150-199	7	Yes	Yes
East Los Angeles Doctors Hospital	Private	DSH	100-149	7	Yes	Yes
East Valley Hospital Medical Center	Private	DSH	100-149	3	No	No
Encino-Tarzana Regional Med Ctr-Encino	Private	Non-DSH	150-199	2	No	No
Encino-Tarzana Regional Med Ctr-Tarzana	Private	Non-DSH	200-299	2	No	No
Foothill Presbyterian Hospital-Johnston Memorial	Private	Non-DSH	100-149	3	Yes	Yes
Garfield Medical Center	Private	DSH	200-299	3	Yes	Yes
Glendale Adventist Medical Center - Wilson Terrace	Private	Non-DSH	300-499	2	Yes	Yes
Glendale Memorial Hospital & Health Center	Private	Non-DSH	300-499	2	Yes	Yes
Good Samaritan Hospital-Los Angeles	Private	Non-DSH	300-499	4	Yes	Yes
Greater El Monte Community Hospital	Private	DSH	100-149	3	No	No
Henry Mayo Newhall Memorial Hospital	Private	Non-DSH	200-299	2	Yes	Yes
Huntington Memorial Hospital	Private	Non-DSH	500+	3	Yes	Yes
Kaiser Fnd Hosp - Baldwin Park	Private	Non-DSH	200-299	3	No	Yes
Kaiser Fnd Hosp - Bellflower	Private	Non-DSH	300-499	7	No	Yes

Kaiser Fnd Hosp - Harbor City	Private	Non-DSH	200-299	8	No	No
Kaiser Fnd Hosp - Panorama City	Private	Non-DSH	200-299	2	No	Yes
Kaiser Fnd Hosp - Sunset	Private	Non-DSH	300-499	4	No	Yes
Kaiser Fnd Hosp - West La	Private	Non-DSH	200-299	4	No	Yes
Kaiser Fnd Hosp - Woodland Hills	Private	Non-DSH	200-299	2	No	Yes
Lakewood Regional Medical Center - South Street	Private	Non-DSH	150-199	8	Yes	Yes
Lancaster Community Hospital	Private	Non-DSH	100-149	1	No	Yes
Little Company of Mary - San Pedro Hospital	Private	Non-DSH	500+	8	Yes	Yes
Little Company of Mary Hospital	Private	Non-DSH	300-499	8	Yes	Yes
Long Beach Memorial Medical Center	Private	Non-DSH	500+	8	Yes	Yes
Los Angeles Co Harbor-UCLA Medical Center	Public	DSH	500+	8	Yes	Yes
Los Angeles Co Martin Luther King Jr/Drew Med Ctr	Public	DSH	500+	6	Yes	Yes
Los Angeles Co USC Medical Center	Public	DSH	500+	2	Yes	Yes
Los Angeles Community Hospital	Private	DSH	100-149	4	No	No
Los Angeles County Olive View-UCLA Medical Center	Public	DSH	300-499	7	Yes	Yes
Memorial Hospital of Gardena	Private	DSH	150-199	8	No	No
Methodist Hospital of Southern California	Private	Non-DSH	300-499	3	Yes	Yes
Midway Hospital Medical Center	Private	Non-DSH	200-299	4	No	No
Mission Community Hospital - Panorama Campus	Private	DSH	150-199	2	Yes	Yes
Monterey Park Hospital	Private	DSH	100-149	3	No	No
Northridge Hospital Medical Center	Private	Non-DSH	300-499	2	Yes	Yes
Norwalk Community Hospital	Private	Non-DSH	50-99	7	No	No
Pacific Hospital of Long Beach	Private	DSH	150-199	8	No	No
Pacifica Hospital of the Valley	Private	DSH	200-299	2	Yes	Yes
Pomona Valley Hospital Medical Center	Private	DSH	300-499	3	Yes	Yes
Presbyterian Intercommunity Hospital	Private	Non-DSH	300-499	7	No	Yes
Providence Holy Cross Medical Center	Private	Non-DSH	200-299	2	Yes	Yes
Providence Saint Joseph Medical Center	Private	Non-DSH	300-499	2	Yes	Yes
Queen of Angels/Hollywood Presbyterian Med Center	Private	DSH	300-499	4	No	Yes
San Dimas Community Hospital	Private	DSH	50-99	3	Yes	Yes
San Gabriel Valley Medical Center	Private	Non-DSH	200-299	3	Yes	Yes
Santa Monica - UCLA Medical Center	Private	Non-DSH	300-499	5	Yes	Yes
Sherman Oaks Hospital and Health Center	Private	Non-DSH	150-199	2	Yes	Yes
St. Francis Medical Center	Private	DSH	300-499	6	Yes	Yes
St. John's Hospital & Health Center	Private	Non-DSH	200-299	5	Yes	Yes
St. Mary Medical Center	Private	DSH	500+	8	Yes	Yes

Suburban Medical Center	Private	DSH	150-199	6	No	No
Torrance Memorial Medical Center	Private	Non-DSH	300-499	8	Yes	Yes
Tri-City Regional Medical Center	Private	Non-DSH	100-149	7	No	No
UCLA Medical Center	Private	Non-DSH	500+	5	Yes	Yes
Valley Presbyterian Hospital	Private	DSH	200-299	2	No	No
Verdugo Hills Hospital	Private	Non-DSH	150-199	2	Yes	Yes
West Hills Hospital & Medical Center	Private	Non-DSH	200-299	2	No	No
White Memorial Medical Center	Private	DSH	300-499	4	Yes	Yes
Whittier Hospital Medical Center	Private	Non-DSH	150-199	7	No	Yes

<u>ED Analyses Inclusion Criterion: Reported 16 of 20 Quarters</u>

2 Hospitals reported only 16 of 20

1 Hospitals reported only 18 of 20

<u>Inpatient Analyses Criterion for Inclusion: 19 of 20 quarters reported</u>

6 Hospitals required a proxy for one quarter calculated by averaging the three quarters for that year

1 Hospitals required a proxy for four quarters. Based on that hospital's census data, the previous year was used as a proxy with permission

Appendix E: Self Pay ED Visits

NHF Self Pay Survey 2005: ED Visits

	2000	2001	2002	2003	2004
Total	1411448	1514945	1537663	1613537	1587865
Self Pay	293259	287040	278820	291366	295446
%Self Pay	20.8	18.9	18.1	18.1	18.6

N=44, Source: NHF Self Pay Survey 2005

Self Pay ED Visits 2000-2004

Quarter	Countywide (N=44)	LAC-DHS (N=4)	Private Sector (N=40)	Private DSH (N=14)	Private Non-DSH (N=26)
2000 Q1	70962	34898	36064	10099	25965
2000 Q2	73140	34935	38205	11070	27135
2000 Q3	75985	34747	41238	12051	29187
2000 Q4	73172	33885	39287	12021	27266
2001 Q1	69969	30545	39424	12125	27299
2001 Q2	71341	30213	41128	12611	28517
2001 Q3	73701	29130	44571	14727	29844
2001 Q4	72029	29360	42669	13821	28848
2002 Q1	68291	26019	42272	12432	29840
2002 Q2	67248	25902	41346	12015	29331
2002 Q3	72312	26389	45923	13101	32822
2002 Q4	70969	26281	44688	12904	31784
2003 Q1	72842	26201	46641	14504	32137
2003 Q2	70375	25573	44802	13856	30946
2003 Q3	73736	25814	47922	15493	32429
2003 Q4	74413	25906	48507	16036	32471
2004 Q1	72821	25506	47315	15135	32180
2004 Q2	73094	25802	47292	14743	32549
2004 Q3	76350	26110	50240	15745	34495
2004 Q4	73181	25369	47812	14976	32836

Source: NHF Self Pay Survey 2005

Percent of Self Pay ED Visits

Quarter	LAC-DHS (N=4)	Private Sector (N=40)
2000 Q1	49	51
2000 Q2	48	52
2000 Q3	46	54
2000 Q4	46	54
2001 Q1	44	56
2001 Q2	42	58
2001 Q3	40	60
2001 Q4	41	59
2002 Q1	38	62
2002 Q2	39	61

2002 Q3	36	64
2002 Q4	37	63
2003 Q1	36	64
2003 Q2	36	64
2003 Q3	35	65
2003 Q4	35	65
2004 Q1	35	65
2004 Q2	35	65
2004 Q3	34	66
2004 Q4	35	65

Source: NHF Self Pay Survey 2002

Appendix F: Self Pay Admissions from Hospital With Own EDs

NHF Self Pay Survey 2005: Admissions from Own ED

	2000	2001	2002	2003	2004
Total	342966	359397	370736	376412	389795
Self Pay	23778	25054	24087	24478	26977
%Self Pay	6.9	7	6.5	6.5	6.8

N=56, Source: OSHPD 2000-2003 Patient Discharge Data and NHF Self Pay Survey 2002

Self Pay Admissions from Own ED

Quarter	Countywide (N=56)	LAC-DHS (N=4)	Private Sector (N=52)	Private DSH (N=16)	Private Non-DSH (N=36)
2000 Q1	6020	3037	2983	919	2064
2000 Q2	5867	3089	2778	846	1932
2000 Q3	6044	3121	2923	1036	1887
2000 Q4	5847	2822	3025	1158	1867
2001 Q1	5770	2831	2939	1096	1843
2001 Q2	6322	3360	2962	1049	1913
2001 Q3	6743	3358	3385	1221	2164
2001 Q4	6219	3009	3210	1073	2137
2002 Q1	5851	2462	3389	1133	2256
2002 Q2	5884	2448	3436	1113	2323
2002 Q3	6146	2405	3741	1070	2671
2002 Q4	6206	2344	3862	1160	2702
2003 Q1	6036	2148	3888	1155	2733
2003 Q2	6090	2142	3948	1245	2703
2003 Q3	6230	2070	4160	1286	2874
2003 Q4	6122	2052	4070	1277	2793
2004 Q1	6497	2174	4323	1408	2915
2004 Q2	6653	2170	4483	1497	2986
2004 Q3	6840	2176	4664	1476	3188
2004 Q4	6987	2283	4704	1497	3207

Source: OSHPD 2000-2003 Patient Discharge Data and NHF Self Pay Survey 2002

Percent of Self Pay Admissions

Quarter	LAC-DHS (N=4)	Private Sector (N=52)
2000 Q1	50%	50%
2000 Q2	53%	47%
2000 Q3	52%	48%
2000 Q4	48%	52%
2001 Q1	49%	51%
2001 Q2	53%	47%
2001 Q3	50%	50%
2001 Q4	48%	52%
2002 Q1	42%	58%
2002 Q2	42%	58%
2002 Q3	39%	61%

2002 Q4	38%	62%
2003 Q1	36%	64%
2003 Q2	35%	65%
2003 Q3	33%	67%
2003 Q4	34%	66%
2004 Q1	33%	67%
2004 Q2	33%	67%
2004 Q3	32%	68%
2004 Q4	33%	67%

Source: OSHPD 2000-2003 Patient Discharge Data and NHF Self Pay Survey 2002

Appendix G: Closed Facilities 2000-2004

Date Closed	Hospital Name	Staffed Beds	Total ED Visits	Closed Entirely
04/2004	CENTURY CITY HOSPITAL	120	10,285	Yes
08/2004	ELASTAR COMMUNITY HOSPITAL	94	11,579	Yes
07/2003	GRANADA HILLS COMMUNITY HOSPITAL	155	13,617	Yes
12/2004	SUBURBAN MEDICAL CENTER	182	18,089	No*
12/2004	NORTHRIDGE HOSPITAL MEDICAL CENTER - SHERMAN WAY	207	20,684	Yes
10/2004	ROBERT F. KENNEDY MEDICAL CENTER	250	240,97	Yes
01/2004	SANTA TERESITA HOSPITAL	216	11,735	Yes
02/2002	ST. LUKE MEDICAL CENTER	165	15,976	Yes
03/2003	COMMUNITY HOSPITAL OF GARDENA	49	6,741	No*

Source: HASC Data, OSHPD 2002 Annual Hospital Utilization Data, and OSHPD 2002 Annual Hospital Financial Data
*Closed ED only