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March 28, 2008

To: Hospital Executives, Los Angeles County Region

FROM: Jim Lott, Executive Vice President
Policy Development and Communications

SUBJECT: King-Harbor Closure Hospital Inpatient Impact Analysis

We were asked to measure the impact of the closure of King-Harbor Hospital on the distribution of uninsured patients admitted to other public and private hospitals. Accordingly, to help answer this question we engaged the National Health Foundation (NHF) to analyze hospital discharge data reported by hospitals to the Office of Statewide Health Planning and Development (OSHPD) and available to the public.

## Conclusions

We concluded from NHF's analysis that much of the change to hospital inpatient utilization experienced by the hospitals directly impacted by the closure of King-Harbor Hospital took place over a year before King-Harbor closed. Moreover, when King-Harbor closed in the second quarter of 2007, the hospital was operating with a downsized emergency room and approximately 42 staffed beds. Accordingly, we doubt that the eventual closure directly affected utilization at other hospitals significantly. Rather, a confluence of factors account for the changes in hospital utilization throughout the region. They include the following:

1. Changes in service delivery and capacity at King-Harbor Hospital over time,

2. The closure of five private hospitals in or around the King-Harbor service area during the analysis period,

3. Sizable reductions in admissions at LAC+USC Medical Center and low-to-moderate reductions at Harbor-UCLA Medical Center,

4. Changes in the County's patient transfer policy, and

5. An overall increase in demand for hospital inpatient services by the residents of Los Angeles County.

## Limitations

All nine impacted hospitals report capacity-challenging increases in emergency room outpatient only (treat and release) utilization by uninsured patients residing in the King-Harbor service area. Some report increased ED treat and release activity from the Harbor-UCLA service area. This analysis considers neither ED treat and release changes occurring from 2000-2006 nor changes in either ED treat and release or inpatient admissions occurring in 2007 and 2008.

We were encouraged by the findings of this analysis to study the changes in inpatient admission trends for all 73 public and private hospitals with emergency departments serving all the communities of the County of Los Angeles. That analysis and report will be released in mid-April, 2008.

## Findings

The graphs that follow present changes in hospital inpatient utilization over time for patients who presented to the emergency departments (EDs) of the hospitals directly impacted by the downsizing and eventual closure of King-Harbor Medical Center. Also included are changes by insurance status (payer mix).

- The inpatient discharge data analyzed in this report for the years 2000 through 2006 were provided by the OSHPD.

- The public hospitals included in this analysis are King-Harbor Medical Center, Harbor-UCLA Medical Center, and LAC+USC Medical Center. The impacted private hospitals included in this report are California Hospital Medical Center, Centinela-Freeman's Centinela Hospital, Downey Regional Medical Center, Kaiser Hospital-Bellflower, Lakewood Regional Medical Center, Long Beach Memorial Medical Center, Memorial of Gardena, St. Francis Medical Center, and White Memorial Medical Center.

- Other private-sector hospitals serving the region also closed altogether or closed EDs during this period. Accordingly, their impact was included in this analysis. Those hospitals include Elastar Community Hospital (hospital closed 2004), Robert F. Kennedy Medical Center (hospital closed 2004), Suburban Medical Center (ED closed 2005), and Centinela-Freeman Memorial Hospital (ED closed 2006).[1]

[1] Note: NHF did not include Community Hospital of Gardena (ED closed 2004) among the closed private hospitals since most quarters of data for the years of interest were missing from OSHPD files. Additionally, the county's Olive View hospital was excluded as it was geographically distant from SPA 6 impacted hospitals and because there was almost no change in self-pay/county indigent admissions from 2000 to 2006 according to OSHPD data.

## 1. Total Admissions Via Own Emergency Department (ED) (See Figure 1 and Table 1)

- Between 2000 and 2006, total admissions via own ED declined for the three public hospitals (21.2%) while increasing steadily for the nine impacted private hospitals (26.2%) prior to King-Harbor closing.

- LAC+USC, the County's largest public hospital, experienced the largest decreases in overall inpatient admissions via own ED (-7,443 or 21.7% decrease) between 2000 and 2006.

- The total decreases in admissions via own emergency department experienced in the three public hospitals (-13,241) and the four closed private hospitals (-6,827) --for a total of 20,068-- outpaced increases in total inpatient utilization via the ED at the nine impacted private hospitals (14,605).

- The private hospital closures did not occur prior to 2004. Figure 1 shows that the rate of increase of total admissions through the ED at the impacted private hospitals started to manifest prior to 2004.

**Figure 1. Impacted Hospitals' Total Admissions via own ED -2000-2006**

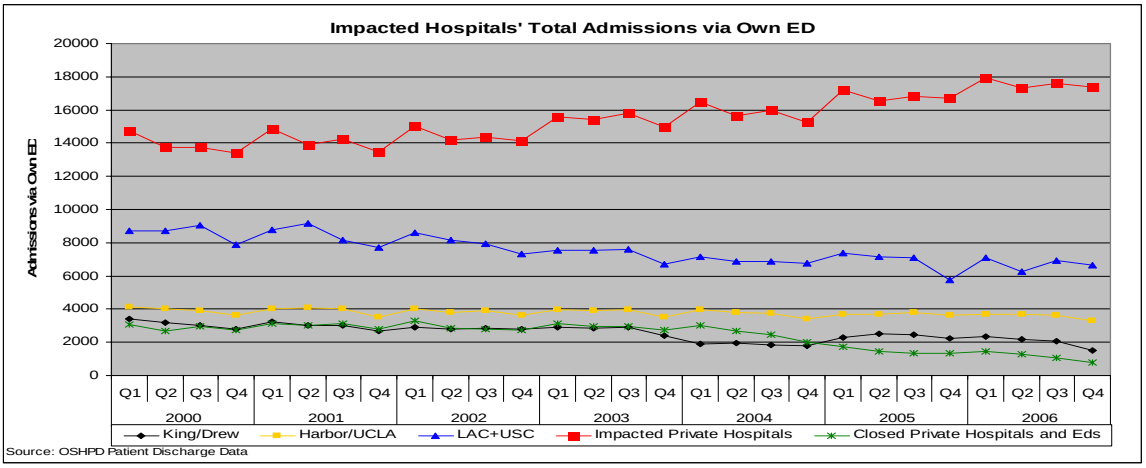


**Table 1. Total Admissions via own ED 2000-2006**

| | 2000 | 2006 | Change (#) | Percent Change |
|---|---|---|---|---|
| **Harbor-UCLA** | 15,745 | 14,271 | (1,474) | 9.4% |
| **King-Harbor** | 12,417 | 8,093 | (4,324) | 34.8% |
| **LAC+USC** | 34,361 | 26,918 | (7,443) | 21.7% |
| **Total Public** | 62,523 | 49,282 | (13,241) | 21.2% |
| **Impacted Private** | 55,671 | 70,276 | 14,605 | 26.2% |
| **Closed Private** | 11,436 | 4,609 | (6,827) | 59.7% |

*( ) represents a decrease from 2000 to 2006

## 2. King-Harbor Impact **(See Figure 2 and Table 2)**

- King-Harbor's total inpatient admissions via own ED declined by 34.8% (12,417 to 8,093) from 2000 to 2006.
- This decrease at King-Harbor represents less than a third of the overall increase at the impacted private hospitals (-4,324 vs. 14,605).
- The combined decrease at King-Harbor (-4,324) and closed private hospitals (-6,827) represents more than three-quarters of the overall increase at the impacted private hospitals (14,605).
- Of the total decline in the number of inpatient admissions via own ED both public (13,241) and private hospitals closed (6,827), public hospitals accounted for 66% of this decline and private hospitals accounted for 34%. Among the public hospitals, LAC+USC accounted for 56% of the 13,241 decline and King/Harbor accounted for 33%.

**Figure 2. King-Harbor& Impacted Private Hospitals' Total Admissions via Own ED 2000-2006**

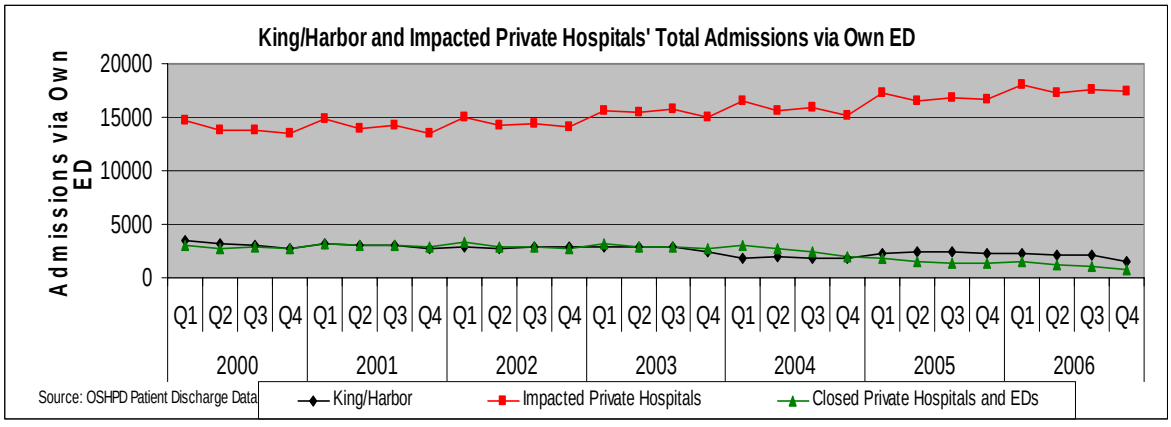


**Table 2. Total Admissions via own ED 2000-2006 (Closures and Impacted)**

| | 2000 | 2006 | Change(#) | % Change |
|---|---|---|---|---|
| **King-Harbor** | 12,417 | 8,093 | (4,324) | 34.8% |
| **Impacted Private** | 55,671 | 70,276 | 14,605 | 26.2% |
| **Closed Private** | 11,436 | 4,609 | (6,827) | 59.7% |

*( ) represents a decrease from 2000 to 2006

### 3. Self-Pay/County Indigent Program Admissions Via Own ED (See Figure 3, Table 3, Figure 4, Table 4)

- Self-pay/county indigent admissions via own ED declined for all three public hospitals from 2000 to 2006 (33.5% or 7,715) while increasing for private hospitals (58% or 1,895) in the King-Harbor closure impact area.

- LAC+USC, the County's biggest public hospital, experienced the largest decreases in self-pay/county indigent inpatient admissions via own ED (-5,300 or 37% decrease) between 2000 and 2006 and this facility accounts for 69% of the total decrease for public hospitals.

- Increases in self-pay/county indigent inpatient utilization via the ED at the nine impacted private hospitals (1,895) were well below the combined decreases experienced in the three public hospitals (-7,715). However when increases in admissions are examined on an individual hospital basis, a direct affect may be evident (as is the case with King/Harbor closure as presented in section 4.)

- Total private hospital closures (-135) represented less than 10% of the increase at impacted private hospitals (+1,895). It is unlikely that the closures of private hospitals significantly increased self-pay admissions at the impacted private hospitals.

- Figure 4 shows that the impacted private hospitals were being affected prior to the closure of private hospitals in 2004. The decreases in self-pay admissions at King/Harbor and LAC+USC are more likely to have caused the increase in self-pay admissions at the impacted private hospitals.

**Figure 3. Impacted Hospitals' Self-Pay County Indigent Admissions via Own ED, 2000-20006**

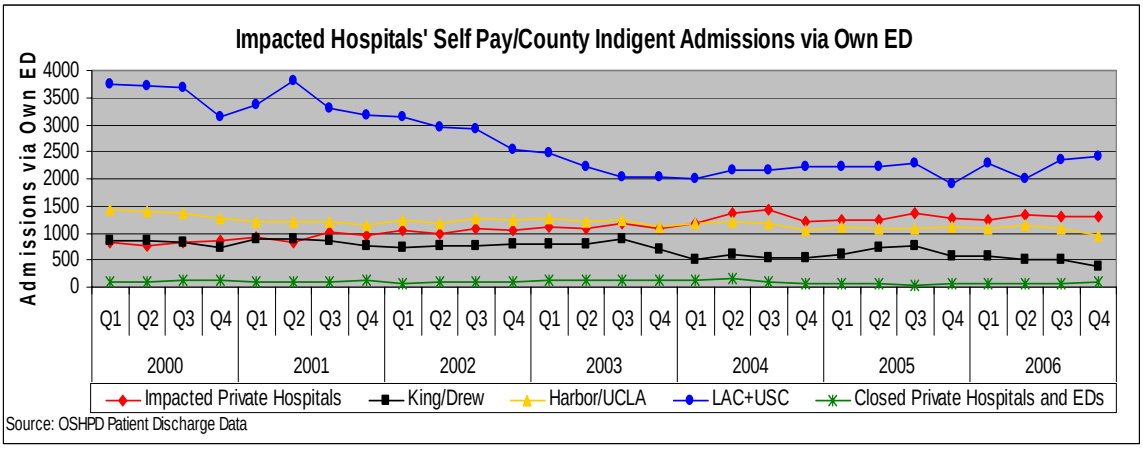



**Table 3. Impacted Hospitals' Self-Pay County Indigent Admissions via Own ED, 2000-20006**

| | 2000 | 2006 | Change* | % Change |
|---|---|---|---|---|
| **Harbor-UCLA** | 5,423 | 4,289 | (1,134) | 20.9% |
| **King-Harbor** | 3,254 | 1,973 | (1,281) | 39.4% |
| **LAC+USC** | 14,322 | 9,022 | (5,300) | 37.0% |
| **Total Public** | 22,999 | 15,284 | (7,715) | 33.5% |
| **Impacted Private** | 3,267 | 5,162 | 1,895 | 58.0% |
| **Closed Private** | 445 | 310 | (135) | 30.3% |

*( ) represents a decrease from 2000 to 2006

- King-Harbor's self-pay/county indigent inpatient admissions via own ED declined by more than 39% (3,254 to 1,973) from 2000 to 2006.

- This decrease in self-pay/county indigent inpatient use at King-Harbor appears to mirror increases at the impacted private hospitals (1,973 versus 1,895).

**Figure 4. King-Harbor & Private Impacted Hospitals' Self-Pay/County Indigent Admissions via Own ED 2000-2006**

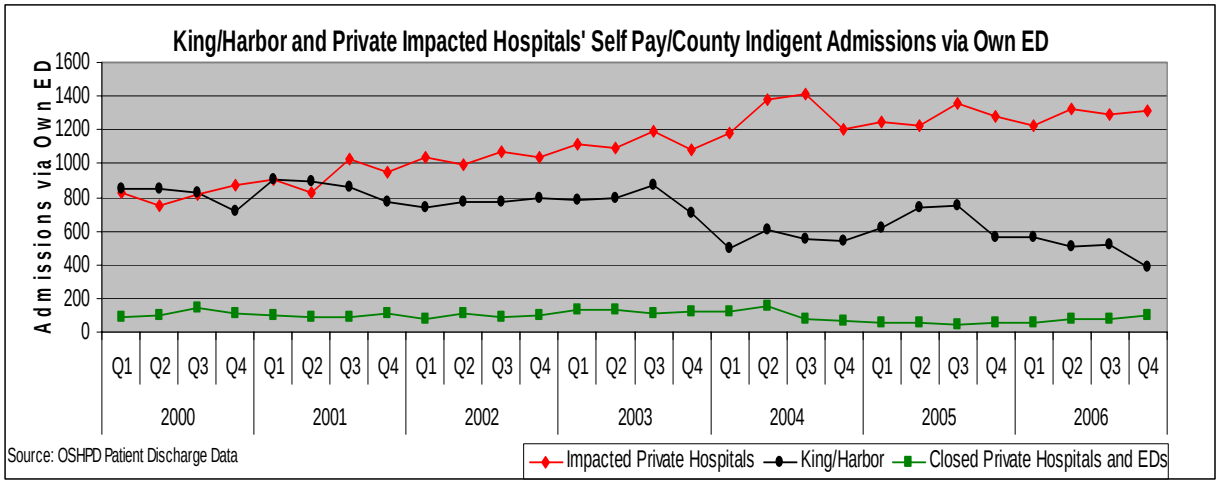



**Table 4 King-Harbor & Private Impacted Hospitals' Self-Pay/County Indigent Admissions via Own ED 2000-2006**

| | 2000 | 2006 | Change* | % Change |
|---|---|---|---|---|
| **King-Harbor** | 3,254 | 1,973 | (1,281) | 39.4% |
| **Impacted Private** | 3,267 | 5,162 | 1,895 | 58.0% |
| **Closed Private** | 445 | 310 | (135) | 30.3% |

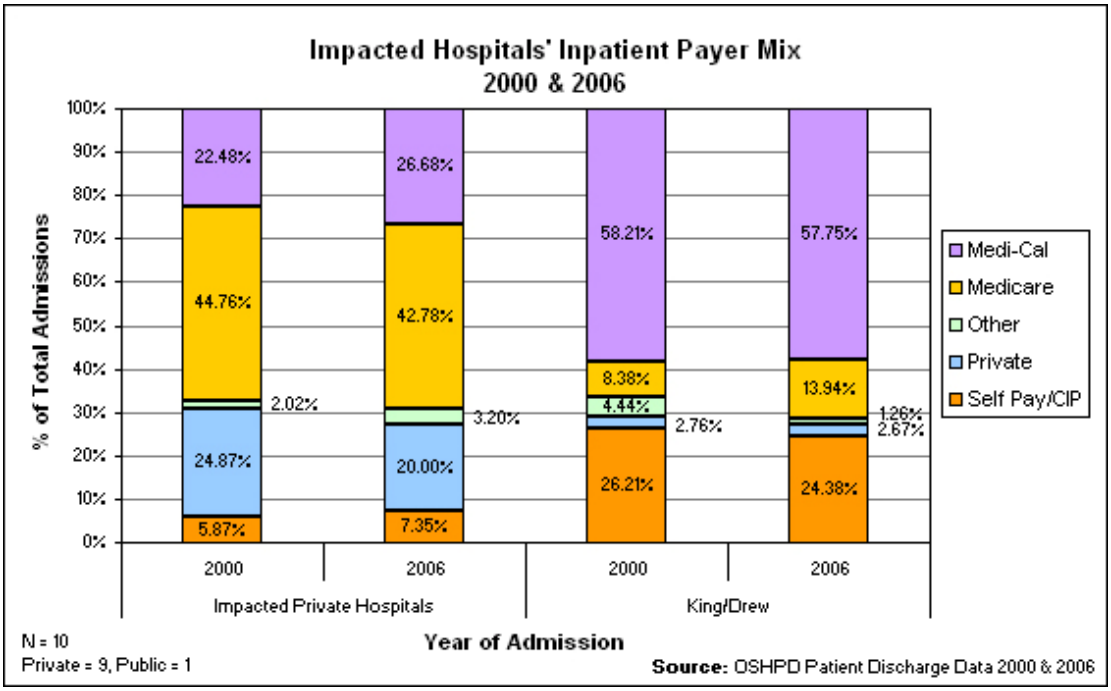
*( ) represents a decrease from 2000 to 2006

**4. Payer Mix Changes**
**(See Figure 5)**

- Between 2000 and 2006, the impacted private hospitals experienced increases in percentages of Medi-Cal and self-pay/county indigent patients and decreases in Medicare and private (commercial insurance) patients.

- During the same time, King-Harbor's payer mix shifted towards an increase in the percentage of Medicare patients and decrease in the percentages of Medi-Cal and self-pay/county indigent patients.

**Figure 5**


Impacted Hospitals' Inpatient Payer Mix
2000 & 2006
% of Total Admissions
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
22.48%
44.76%
2.02%
24.87%
5.87%
26.68%
42.78%
3.20%
20.00%
7.35%
58.21%
8.38%
4.44%
2.76%
26.21%
57.75%
13.94%
1.26%
2.67%
24.38%
Medi-Cal
Medicare
Other
Private
Self Pay/CIP
2000
2006
2000
2006
Impacted Private Hospitals
King/Drew
Year of Admission
N = 10
Private = 9, Public = 1
Source: OSHPD Patient Discharge Data 2000 & 2006