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Reducing Emergency Room Usage in Solano County

Ian Kaiser

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EMPA 396

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Abstract

A 10-year old boy had a severe asthma attack and couldn't breathe. All the hospitals were full including two children's hospitals. After waiting on a gurney for several minutes, he died in the hallway before a nurse could see him (ACEP, 2007). The overcrowded Emergency Departments (EDs) are at a critical point. Between 2006 and 2008 Solano County had a 13.1% increase in the total number of Emergency Room (ER) visits. According to the *California Health Care Foundation* report, over 90% of ER visits in Solano County needed, instead, to see primary care physicians (*CHF,* 2006). This study focused on public awareness and education of alternatives as being essential to reducing inappropriate ER visits in Solano County.

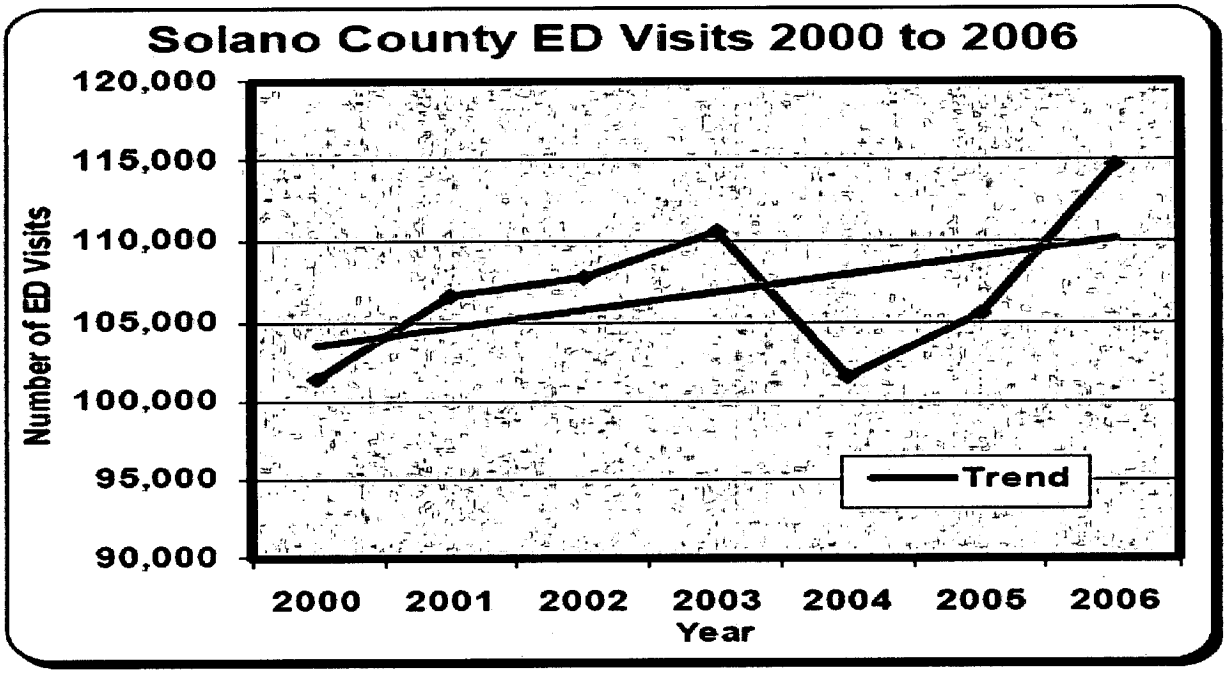
Introduction

A study done by the California Medical Association, "A System in Crisis" states "Emergency Departments across the state of California are closing or reducing services. They are strained beyond their capacity to treat many of the uninsured for ambulatory services. They cannot maintain sufficient on-call specialist capabilities and survive in an era of serious financial crisis" (*CMA,* 2001 p. 1). In 1998-99, ED's reported financial losses of over $315 million while serving 9.3 million patients. The average cost for an ER visit without surgery, tests or other special services was $302.00 (Burgess, 2006, p. 15). Throughout California, ambulances are being diverted, hospitals are shutting down or scaling back emergency services and patients are waiting hours for treatment. Our state faces a very real choice: "Act now and save a system on the brink of disaster, or ignore the warning signs and watch the system flat line and die" (*CMA,* 2001 p. 2). A recent study by The California Health Foundation shows that 77% of ER visits needed treatment by a PCP (*CHF,* 2006 p. 21). The same study indicated that insured patients who go to the ED for something that could have been treated by a PCP are a major problem (*CHF*, 2006, p. 25). Furthermore, emergency physicians believe that PCPs are at the center of this problem.

ED visits across the United States increased from 90.3 million to 113.9 million, a 21% increase from 1993 to 2003. By 2001, 425 EDs closed and 60% of hospitals were operating at or over capacity (Kiplinger, 2006 p. 6). In health care dollars that means that 40.5 million people paid up to three times as much for routine care at the ER as they

would have paid at a physician's office (Kiplinger, 2006 p. 6). This trend is congruent with the Solano County Safety net study that showed that Solano county exceeded the state average and saw a 13.1% increase in the total number of visits between 2000 and 2006 (*Safety Net*, 2007 p. 14). This is more than twice the statewide increase of 5.6%; with only 14% of the patients actually admitted for emergency care. The financial loss associated with this increase to the Sutter Solano Medical Center in Vallejo is projected to be $5.8 million in 2008 and over $16 million since 2006 (*Sutter Report*, 2008). The following charts show the increases for each of the Solano medical facilities. Sutter Solano Medical Center carries most of the county burden for ER visits and also reported that 92% of all ER visits were non urgent to moderate and could have been seen by a PCP (*Safety Net*, 2007 p. 14).

Chart 1



Source: OSHPD, Sutter-Solano data for 2001, 2004, 2005 & 2006

Chart 2

Hospital	2000	2006	% Change
Kaiser Vallejo	31,827	31,091	-2.3%
North Bay	28,126	32,860	16.8%
Sutter-Solano	23,067	30,081	30.4%
Vaca Valley	18,391	20,650	12.3%
Total	101,411	114,682	13.1%

Source: OSHPD, Sutter-Sutter-Solano data for 2001,2004,2005 & 2006

One of the major policy issues that contributed to the increase in ER visits, is a 1985 federal law, which mandated that ER doctors and nurses treat everyone who enters an ED regardless of their ability to pay. The Emergency Medical Treatment and Active Labor Act (EMTALA) is the federal "anti-dumping law." This law was enacted by Congress as part of the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985. COBRA ensures that patients, who come to hospitals for treatment for potential emergency conditions, are not turned away or transferred to another facility, regardless of

their insurance coverage or ability to pay. In addition, such treatment must meet minimum health care quality standards (*CMA* 2001, p. A-7). Hospitals that do not comply or which violate the EMTALA are subject to civil penalties from $25,000 to $50,000 per violation, as well as potential exclusion from federal health programs such as Medicare and Medicaid. Sutter-Solano must assume the responsibility for the under insured and uninsured population because there is no county hospital. Their losses in recent years are as follows:

In 2006: $4.2 million

In 2007: $7.0 million

In 2008: $5.8 million is the projected loss

The major policy issue is redefining what sort of care is actually required to be given in the ER and what truly are the responsibilities of the ED versus the obligations of the primary care physicians and other community health care providers. The State's Emergency Medical Services Authority (EMSA), which was created in 1981 to provide a centralized resource responsible for emergency medical services, must begin to rethink at a foundational level what is truly feasible in the way of assuming responsibility for providing for various categories of "emergency" service. Hospitals define categories of emergency service as:

1. Non-urgent: A patient with a non-emergent injury, illness or condition, sometimes chronic, that can be treated in a non-emergency setting, and not necessarily on the same day.

2. Urgent: A patient with an acute injury or illness where loss of life or limb is not an immediate threat to their well-being, or a patient who needs a timely evaluation (low or low-to-moderate complexity).

3. Critical: A patient presents with an acute injury or illness that could result in permanent damage, injury or death (*CMA*, 2006).

Because federal law mandates that hospitals provide care regardless of the ability to pay or type of care needed, the EMSA must rethink the above categories and redefine emergency care. The basis for this all-encompassing law is rooted in the ethics of the healing profession. Yet the traditional view that emergency care is an essential public service, abiding by the current terms of this law is resulting in patients enduring long wait times, ambulances being diverted, on-call physicians withdrawing from hospital back-up rosters, and facilities downgrading, closing or being in danger of closing (*CMA*, 2006).

Policymakers, the medical community and the public must demand a new direction and take ownership to educate, inform and commit resources for alternatives to ED services. Most importantly, the primary care physicians must begin to take responsibility for the misuse of the ED by educating; informing and redirecting non-urgent care issues to alternatives besides the ED. In my interviews of health care professionals in Vallejo, it became obvious that there was strong opposition to the further regulation of health care; on the other hand, however, there exists a desperate need to understand that it is critical to establish an "Essential Public Service" designation for the system and its participants.

Creating innovative alternatives along with policy changes could help to redefine how hospitals utilize EDs. Barry Trask, Senior Report Analyst for Physician Practice Solutions, comments that "the fundamental issue is associated with access coverage, availability and utilization of primary care. Eighty-five percent of patients do not have a genuine need of emergency services" (Trask, 2005 p. 1). Access to primary care means timely and efficient treatment. If primary care physicians direct patients to EDs that do not belong there, it could take longer for beds to be assigned for patients that do need them and ancillary testing could take longer. Addressing the issues of access, cutting wait times, redirecting non-urgent cases, and building awareness of alternatives to emergency room use for non-urgent health issues are the focus of this study.

Around the country, hospitals are making strides to increase access. For instance, New York City's Montefiore Medical Center cut wait times from six to two hours. Other hospitals are developing "fast track" programs and "getting less-sick patients out the door quicker" (*Fiercemarket,* 2006). Solano County is experiencing overcrowding of EDs, yet there is currently only a small amount of change. The desired result of this study is to identify and offer methods which could help to rectify the disconnect between the primary care physicians and the health care community and begin to build public awareness to use alternatives to reduce ED usage.

Literature Review

"You have to understand who your population is. You have to use evidence-based practice guidelines. You have to use collaborative practice models that would include physicians, support services, community outreach, patient self-management and education opportunities" (Kiplinger, 2006).

There is a tremendous amount of literature that documents the overuse of EDs during the last few years. From the federal down to the local level, mention has been made of finding alternatives and collaborating with the community and the health care professionals to provide new models. Yet, as seen in this review of the literature, very little in the way of documented results have been forthcoming. In addition, with the desperate cry for change arising throughout the country, new legislation has not addressed the fallibility of the existing law. Furthermore the law and reports does not address the lack of responsibility of the primary care physicians to treat this as a public service issue. On a whole, the health care system, overall, is very complex and requires many different changes that are not within the scope of this paper. The literature within the scope of this research has been used to evaluate the need for greater awareness and collaborative efforts from all sectors of the healthcare establishment.

The article "Overuse of Emergency Departments Among Insured Californians" (California Health Foundation {CHF}, 2006) studied California's ERs and the challenges of increasing usage affecting ED's throughout the state. The survey focused on two groups: 1) insured customers and 2) primary care physicians and emergency medicine

physicians. This was not a comprehensive study and further analysis is required to verify specific findings. In addition to the primary subjects, two sub-groups who are prone to ED usage were interviewed: chronically ill adults and MediCal consumers.

Findings revealed a direct relationship between the over-usage of emergency rooms and the significant impact on hospital costs and quality of care. Four major areas were identified that contribute to overcrowding:

1. Lack of access to preventative and immediate health care

2. Lack of advice from physicians on how to handle sudden medical conditions

3. Lack of alternatives to the ED

4. Positive perceptions of the ED

(*CHF,* 2006, p. 1)

Lack of access to non-ED medical care was reported by 46% of ED users. Primary care physicians and emergency medicine physicians alike indicated that the lack of access to the primary care physician was the major cause of ED over-use. The top two reasons cited for lack of access to primary care physicians were: 1) the unavailability of same-day appointments and 2) the limited business hours the primary care physicians' offices are open. Improving access and providing evening service could significantly reduce the number of unnecessary ED visits (*CHF,* 2006, p. 6).

Communication between providers and consumers appears to be lacking as the study indicates. For instance, half of the Californians surveyed reported they could not get a same-day appointment even though 76% of doctors questioned said they accommodate most requests for same-day appointments. Because one-quarter of primary care physicians interviewed did not have office hours after 5:00 p.m. and more than half did not have weekend office hours, patients chose the ED without knowing any other choices were available.

There are two implications within this article that pertain to this analysis:

1. Primary care physicians hold the key to reducing ED usage by either expanding office hours or by educating their patients on alternatives to ED usage in their local area.

2. Even though the perception exists that PCPs accommodate most patients' requests for same-day appointments, the results of the patient survey do not support this.

The perception among patients that EDs provide a safe and secure environment where a user can count on diagnostic testing, higher quality of care, easier access to specialists, and convenience also increases the burden on EDs. Users tend to trust EDs to give them what they need. Yet, the study indicated that despite this belief, overcrowding and lack of specialists on call have a dramatic effect on waiting periods and quality of care. One example from Flynn's 2006 article is the tragic death of a 13-month-old girl whose skull shunt stopped functioning. She needed a new shunt, normally a simple one-hour procedure. However, in the ER where she was taken for care, during a five-hour period of

time, no doctors checked on her and no surgeon could be located. Six days later her father carried his daughter to the morgue (Flynn, 2007 p.4).

Other articles researched for pertinent statistics included a national "Hospital Ambulatory Medical Care Survey: 2004 Emergency Department Summary" (*Division of Health Care Statistics*, 2005). This report presents the most current data on EDs. The report describes ambulatory care visits to hospital EDs. Statistics are presented on selected hospital patients and visit characteristics from 1994-2004 (McCaig & Nawar, 2004, p. 2). Data categories included ED utilization that shows an increase in usage of 18% since 1994, also patient characteristics that include ethnicity and age trends, acuity levels, conditions seen, and outcomes, which included accessibility statistics (McCaig & Nawar, 2004).

In January 2001, the California Medical Association published California's *Emergency Services: A System in Crisis.* This was a pointed report that drew a vivid picture of California's crisis in the emergency room. Not only did this article outline the existing legal regulations on hospitals, but it also enumerated the financial consequences of the current policies and the impact on each county in California. It reported that Solano County showed losses for 1998-99 as follows: $3,826,574 for only two hospitals: The Kaiser Foundation Hospital in Vallejo and Sutter Solano Medical Center in Vallejo. This represents a $130.00 loss per patient in the county in one year (*CMA,* 2006, p. 14).

The article shows that, "Despite hard-won insurance reforms requiring access and coverage for most emergency services, a combination of very low reimbursement rates, slow payment, and inappropriate downgrading of service changes has caused severe economic damage to the emergency care infrastructure" (*CMA* 2006, p. A-13). The following aggravating factors serve to exacerbate the situation:

1. Delayed or non-payment by health plans for emergency services is decreasing physicians' ability or desire to serve on call.

2. Uninsured patients are contributing to the increase and use of the emergency rooms for their primary source of medical care.

3. In some cases, EMTALA interferes with the development of regional trauma systems because hospitals are concerned about potential EMTALA violations (CMA 2006, pg. A-13).

This report's recommendation was to specify that emergency services, including backup (alternatives), are essential public services and must require adequate funding to meet the entire community's needs. It also recommended placing the ER system under a single agency in order to "garner the public trust and support and to designate the Emergency Medical Service (EMS) an essential public service" (*CMA*, 2006, p. A-14). In the context of this paper and analysis, the report neither addresses the need to create greater collaboration among PCPs, nor, does it address their role in order to provide information as well as educating their patients as to alternatives to the ED.

The Health Intelligence Network (HIN) published a special report in October 2006 for HIN as an audio conference hosted by Melanie Matthew, HIN executive vice president and chief operating officer. The report entitled "For Emergency Use Only: Curbing Unnecessary Emergency Room Use Through Education, Accountability and Physician Engagement" was conducted by Roberta Burgess, clinical case manager, Heritage Hospital, Community Care Plan of Eastern Carolina and Gerald Kiplinger, vice president and executive director, Georgia Enhanced Care program for APS Healthcare. This was the most comprehensive and far-reaching report I found, which addressed the central issues of awareness, accountability and education. Kiplinger states, "There are opportunities to redirect care to appropriate settings. But to be able to redirect care or reduce unnecessary utilization of ED services, it's imperative to understand your local environment." He continues by saying, "Greater primary care access and scope of services may also reduce ED use" (Kiplinger, 2006, p. 10). The report refers to a study done by the Agency for Healthcare Research and Quality (AHRQ) called, "How Primary Care Practice Affects Medicaid Patients' Use of Emergency Services." It looks at 57,850 patients assigned to 353 primary care practices affiliated with the Medicaid HMO to determine if practice characteristics were associated with ED use. In this study, patients from practices with more than 12 evening hours per week used the ED 20% less often than patients from practices without evening hours. Patients from practices that had weekend hours also had fewer ED visits, but the difference was not as significant (Kiplinger, 2006, p. 10).

Another substantial outcome was due to state-sponsored education. Literature was used to support understanding as to when to use the ED, appropriate use of the ED, public service announcements and public information on alternatives to the ED. For example, Idaho issued a *Health Wise Handbook* to every household in the state. The effort was partially funded through a grant from the Robert Wood Johnson Foundation. In the year following the issuance of the manual, ED usage was reduced by 13% in the entire state (Kiplinger, 2006, p. 10). Another case study was done with the Wyoming Department of Health Office of Healthcare Finance Equality Care program. One portion of the program was called "Healthy Together," which provided educational materials to encourage self-management and one-on-one support from a nurse, health coach, or a social worker. It is estimated that this program saved $12.7 million that would have resulted from unnecessary ED usage (Kiplinger, 2006, p.10).

The article offers strategies for patient education as the key. Burgess reduced ED visits by 56,000 in 2003 by partnering with educational efforts using ED case managers. This included phone calls and letters of referral redirecting clients to primary care physicians and providing resource lists for after-hours care. Outreaches to the community were held wherein Burgess trained patients to ask themselves three questions before choosing to go to the ED:

1. Is this a true emergency and do I need assistance right now?
2. Did this happen suddenly or unexpectedly?
3. Is this a matter of life or death to body, mind or organ (Burgess, 2007, p. 15)?

I would add: Are there any cheaper and quicker alternatives outside of the ED?

Burgess (2006) articulates, with great clarity, that:

> People use the emergency room for different reasons. Many times they feel they have a need. Buses in most urban places always have a route to the emergency room. So if you don't have transportation, you can get the bus straight to the emergency room if you can't get to your doctor. Culturally, people choose the emergency room, particularly between our immigrant and African-American populations, because often they don't have a sense of a medical home. It's not a part of the culture. It's what mama did. It's what everybody else did. And the best way to reduce that is to find out why they're using it and to make sure that they know what their resources are as far as picking a medical home or choosing somewhere else that's less expensive. (Burgess, 2006, p.16)

The care plan improves communication among providers from case managers to pharmacists and primary care physicians. The plan also provides tools for the physician to make sure the community is on the same page and heading in the same direction according to state guidelines and best models. The main goal is to empower the community to be able to self-manage. They make it clear to people that going to the emergency room is not free. Burgess says, "We make sure our clients know it's not free. Put a number on it, and put accountability on it" (Burgess, 2006, p. 19). Readily available information is essential to the success of this type of program: receptionists,

nurses and others in the physician's practice must know how to direct people. They empower the community with the necessary tools. The backbone of the Carolina Care program is accountability. The case managers follow up with every ED visit and once people know that there is follow-up they are less likely to use the ED the next time. Eve

Kiplinger (2006) answering questions pertaining to the EMTALA regulations, explains that:

> Under current restrictions, you cannot redirect patients once they are in the ED, but the hospital can give out information and resources that are out there. You can educate people while they're there so that they'll know the next time what they can do instead. They need to know what's available, how much it costs, how to get to these places and what these places offer. When people have information, often they'll choose differently. (Kiplinger, 2006, p. 25)

Kiplinger's comment indicates that the EMTALA, although having good intentions, has created a large disparity between appropriate and inappropriate ER usage. Thus, without awareness building people will continue to misuse the ER.

Fierce Healthcare Newsletter is a leading source of health care management news for health care executives. In 2006, there have been numerous articles on ED usage that further illustrates trends and possible solutions. One writer, Timothy J. Ward, Partner, TEFEN USA, Ltd., agrees that most EDs treat patients who really do not belong there at all. Furthermore, he continues by saying that, "ED's are notoriously poor at aligning

staff with the patient demand and that no one has done statistical work to identify the time of day and week admission patterns from the EDs to the hospitals" (*Fierce Healthcare*, October 2006).

The Hanover Research Council produced a report in 2008 on best practices around the county to curb inappropriate ED utilization. The results concluded were:

Patient education programs (60%)

Increased availability of alternative facilities such as urgent care or walk-in centers (56%)

Nurse advice lines (56%)

Assignment of patients to medical homes (26%)

Placement of caseworkers in the ED (13%) (Hanover, 2008, p. 2)

One case study by the New York Presbyterian Hospital (NYPH) showed that by hiring a Health Priority Specialist and a Community Health Worker, the ED usage declined sharply at a 6-month evaluation. Furthermore, it was found that the decrease at three months significantly correlated with referral to primary care providers, while the decrease at six months significantly correlated with other forms of intervention, education and counseling. Another study done at San Francisco General, showed that intervention with an ED Case Manager to reduce ER visits, saved the hospital $1.44 for each dollar invested (Hanover, 2008, p.4).

The *Emergency Medicine Journal* has provided much secondary data in an article titled Independent Evaluation of Four Quantitative Emergency Department Crowding Scales. The study establishes quantitative scales to overcrowding of emergency departments. The goal of the study is to correct the lack of quantifiable data necessary to evaluate ED overcrowding and to create measurability in order to be able to determine the causes and consequences of ED overcrowding across institutions. This study did not give evidence to quantifiable solutions.

Since ED overuse has reached "critical mass," the literature cited exemplifies the urgency felt within the medical establishment to understand and re-educate the public in order to head off a catastrophe.

Methodology

The research design will be a qualitative study based upon primary data collected through a means of surveys and interviews. I completed forty surveys and five interviews. The questions will be based upon a cross-sectional study that gathers data, which includes the insured and uninsured status of the subjects. Questions were also designed to identify the current practices of PCP's to redirect patients to other care sources besides the ED.

I developed the methodology over the past year working with the Solano Coalition for Better Health. The plan was to work with its research department to tackle the problem of ED over-usage in Solano County. Barriers existed of two sorts: one was the bureaucracy of the health care system and the other the political nature of this

problem. As I was endeavoring to set up a system for gathering data from the facilities, hospital liability issues restricted me from securing interviews and doing surveys. There was also a strong sense that even though this was an issue desperately needing to be addressed, there was a fear that current practices would disparage county leadership. In talking with a state legislator, I found that there was no study that had been done to specifically quantify the awareness of alternatives to ED usage.

Subsequently, I needed to change directions and find ways to complete the information/gathering process. To get a cross-section of the community, I went to Laundromats, the Vallejo Farmers' Market, and two Vallejo community centers. I also initiated interviews with a private clinic, the County clinic, and a hospital CEO. In addition, I did a short interview with the healthcare consultant of the State Senate Committee and the Legislative Liaison of the American Emergency Physicians Association. All parties were compliant and willing to share their opinions. It was interesting to learn that most of the focus in California concerning reducing of the ED crisis was on curtailing costs rather than building an educational awareness program.

The methodology of data collection and the review of secondary and relevant literature may lead to conclusions consistent with the central hypothesis which is, "If residents of Solano County were aware of alternatives to using the ED in Vallejo, then there would be a decrease in unnecessary ED visits." I designed the sub-questions to substantiate that awareness was lacking and had a direct impact on ER visits. The independent variable assumes that awareness through education, collaboration and

information will empower people to make appropriate choices when patients have non-urgent medical problems. The dependent variable assumes that education and awareness building is essential in reducing the use of the local ED.

Lastly, by showing other models throughout the country, which focus on public awareness of appropriate versus inappropriate ED use and alternatives, it is hypothesized that similar or comparable policies could be developed in Solano County. This would also confirm the external validity of other studies and can be implemented into Solano County. The following sub-questions qualify the main hypothesis.

Sub Questions:

1. Does your primary care physician have adequate service after 6:00 p.m. or on weekends?

One of the main obstacles to providing alternatives to the ED is the after-hours network of PCP availability and urgent care clinics within the area. Identifying the after-hours care providers, the community can then build a communication network to redirect patient care. The standard procedure is to direct patients to the ED after hours via the phone message system. The common statement on the PCP after-hours message is "If you think you have an emergency, call 911 or go to the emergency room." This message contributes to the culture of misusing the ED.

2. Does your primary care physician provide patients with information on alternatives to emergency room usage within your city?

Information and education are the keys to awareness: handbooks, flyers, and health fairs would support the PCP's efforts to create greater awareness and contribute to reducing ER visits.

3. Would you use the alternatives if you were educated as to what constitutes an emergency and you knew the low-cost alternatives close to your home available after 6:00 p.m. and on weekends? The answer to this question is the defining data that supports the main hypothesis. Information and education bring awareness, awareness changes cultural mindsets, and thus, the outcome is change.

Validation of this research will not only depend upon the data accumulated locally but also on the documentation of successful innovations applied in other communities. This validation is contingent upon the secondary research from the literature in this study. Comparing the local data with the best practices and proven models will not only enlighten the community as to the necessity of creating informational material but could also spur the health community to create a network of ED-alternative awareness.

Based on the above methods, data will be compiled showing the relationship of trends with bar graphs, Excel worksheets and a PowerPoint presentation accompanied by a written document to be distributed to the health care community.

Results and Findings

> Medical delivery in the United States is a miracle of disorganization, held together through the sheer collective will of overworked professionals tasked with managing tens of millions of patients by memory, pen scrawl, post-it note, and telephone call. It is a system that, to quote Berwick is perfectly designed to achieve exactly the results it gets. (Berwick, 1996, p. i3)

The data collected from this study supports the need for greater public awareness and education on alternatives to using the ED. The three main sub-question findings are consistent with the main hypothesis, which are as follows.

SUB QUESTION 1

Does your Primary Care Physician have adequate service after 6 p.m. or on weekends? Twelve participants knew of after-hours clinics that had limited access. Twenty-eight stated that their doctors did not have after hour's access and had no knowledge of other alternatives.

SUB QUESTION 2

Does your Primary Care Physician provide patients with information on alternatives to Emergency Room usage within your city?

Out of 40 participants, 14 or 35% were somewhat aware of after-hours access through their PCP and 28 or 70% were not. Of those surveyed, 100% said that they had not

received any information as to alternative choices within the community outside of the ED from their PCP.

SUB QUESTION 3

If you were educated as to what constitutes an emergency and you knew the low cost alternatives close to your home were available after 6 pm and weekends, would you use the alternatives? This question substantiates the assumption that all 40 or 100% of the participants would first consider going to an urgent care center before going to the ED.

In the category of insured participants, 14 or 46% knew of after hour clinics and 21 or 70% had no knowledge. Also, 21 of the insured knew of a nurse advice line and 14 did not. All 35 or 100% of those that were insured did not have any literature on alternative care outside of the ED. It is interesting to point out that, whether insured or uninsured, reducing ED usage is dependent upon increased awareness and education. In a recent article from *Modern Healthcare*, the scope of inappropriate ED usage encompassed the insured population as well as the uninsured, which is congruent with the methodology and findings of this study. The article stated that researchers found that uninsured patients accounted for 15.5% of visits in 1996-97 but only 14.5% of visits in 2003-04. Meanwhile, the number of higher-earning people with incomes of more than 400% of the poverty level grew from 21.9% to 29% during the comparable period. This was a stunning reversal from the conventional wisdom yet also supported by this study (fiercehealthcare, April, 2008 para.1).

Once again between the insured, uninsured and PCP's there was no information or education on alternatives to using the ED. Secondly, if there was greater awareness, 100% of participants stated that they would first consider using the alternatives rather than going to the ED. Thirdly, the amount of awareness of the alternatives such as after hour clinics, urgent care clinics or nurse advise lines was limited except for the Kaiser HMO model. Even then most of the people using Kaiser were not sure of the after hours clinics times and days. The following charts indicated the breakdown and failure of the community and health care professionals to approach this problem through educational means.

Chart 3

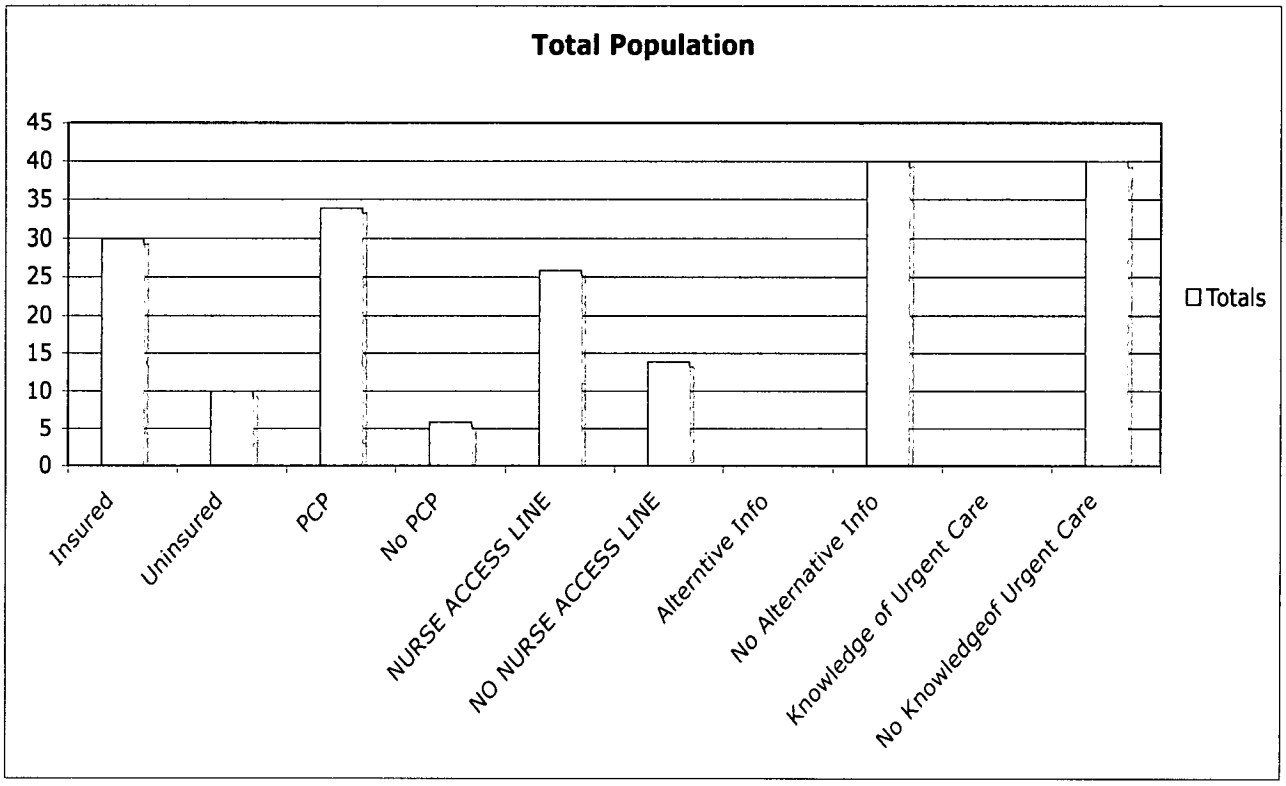


Chart 4

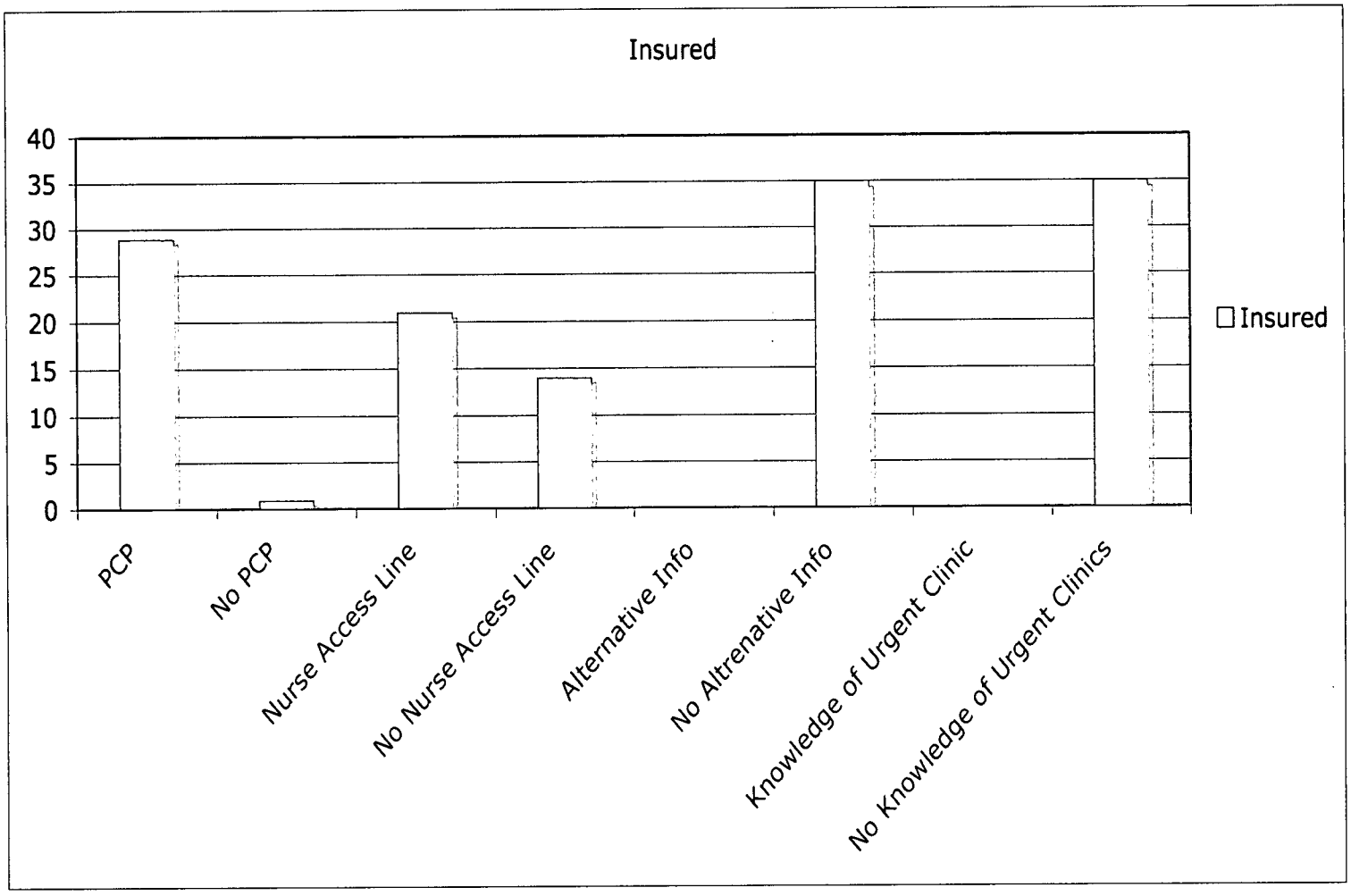
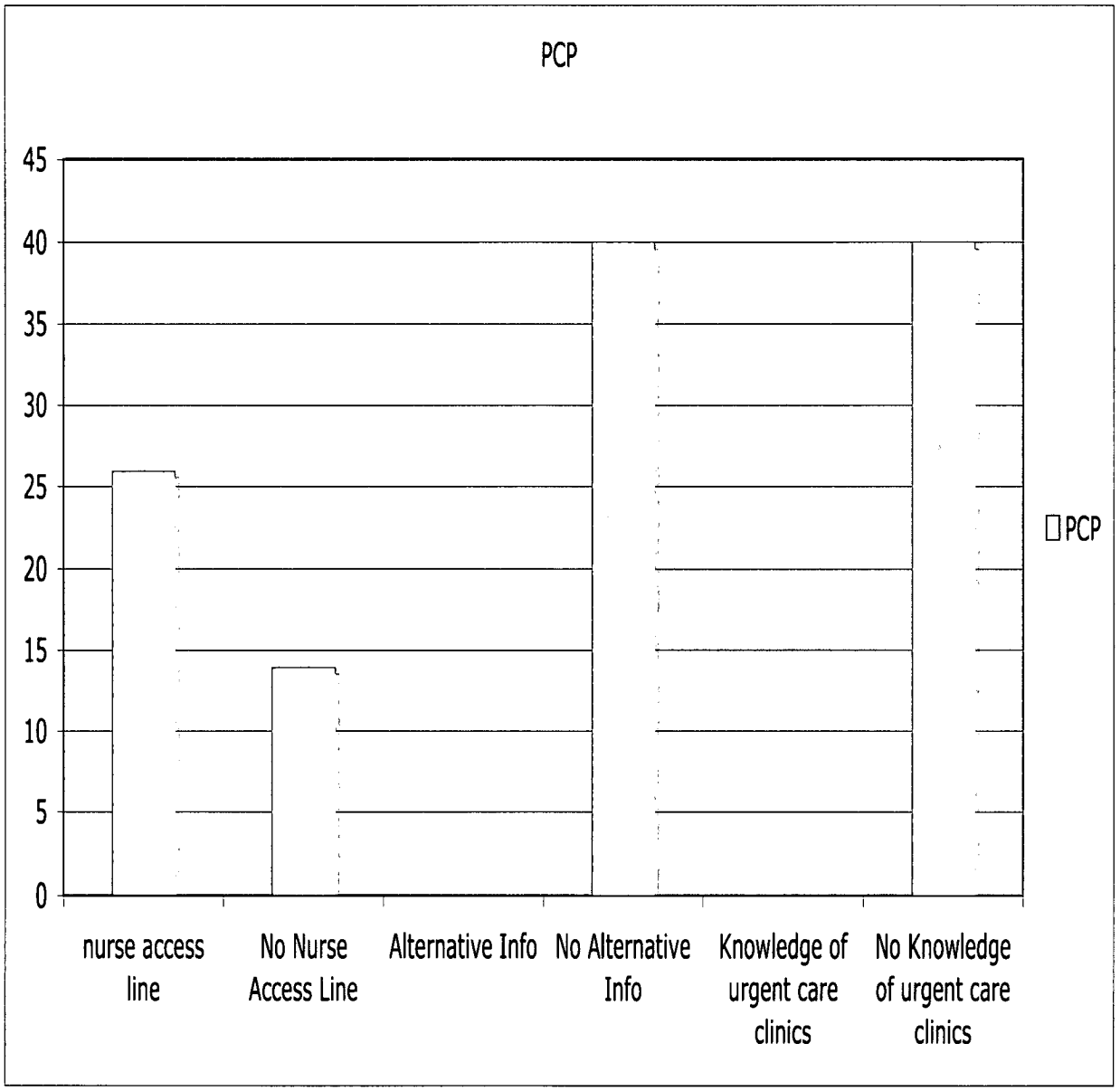

Insured
40
35
30
25
20
15
10
5
0
PCP
No PCP
Nurse Access Line
No Nurse Access Line
Alternative Info
No Altrenative Info
Knowledge of Urgent Clinic
No Knowledge of Urgent Clinics
Insured

Chart 5


PCP
45
40
35
30
25
20
15
10
5
0
PCP
nurse access line
No Nurse Access Line
Alternative Info
No Alternative Info
Knowledge of urgent care clinics
No Knowledge of urgent care clinics

The participant's interviewed were also consistent with the assumption:

1. Those that were interviewed expressed that if they were aware of other alternatives; it would have saved them time and money. One interviewee did not know there was an urgent care clinic right down the street from where he lived. On the previous night the interviewee was driven to the ER for stomach problems. He waited in the ER for more than four hours and left with an antacid's prescription. He was informed that he "could have been treated in an urgent care clinic within 30 minutes and cost a lot less" (Interview, April, 2008).

2. Wayne Ashworth, Vice President of Excel Care, said "we spend thousands of dollars each month on advertising and still people don't know we are here and most of the patients come because of word of mouth" (Ashworth, Interview, 2008).

3. Michelle Baker, supervisor for the county health clinic, expressed that, "Vallejo has had only one Health Fair in the last four years and that people are not aware of clinic hours or other services provided by the county or within Vallejo. She continued to explain that there is little follow-up on those that go to the ED and returned because there is not enough alternatives or enough doctors servicing the county infrastructure" (Baker Interview, April, 2008).

Secondary research concluded in numerous studies that awareness and education models are impacting hospitals ER outcomes. In a study conducted by the Partnership Health Plan of California, on October 3, 2007, a focus group of four women and two men were asked about their ER usage. These participants indicated that they infrequently

used the ER and did not see their usage as inappropriate. There was a general sense that going to the ER was the only alternative at that time (*Partnership Health Plan, 2007*).

Study-after-study supports the findings that most people are not aware of using alternatives in order to reduce the ED usage. One case study, by the New York Presbyterian Hospital (NYPH), showed that by hiring a Health Priority Specialist and Community Health Workers, the ED usage declined sharply. Furthermore, it was found that the decrease at three months significantly correlated with referrals from the primary care providers while the decrease at six months significantly correlated with other forms of intervention, education and counseling. Another study done at San Francisco General showed that intervention with an ED case manager indicated that for each dollar invested in the case management program there was reduction in other hospital costs and as hypothesized, fewer visits to the ED in the year after case management implementation. The savings to provide case management services to 53 patients was $132,726, which translates into for every dollar spent in case management there was $1.44 reduction in hospital cost (*Hanover,* 2008, p. 5).

Another study in Honolulu found that educational intervention for parents of pediatric asthmatics were useful in decreasing the number of persistent asthma ED visits but intermittent asthma visits increased. In 2006, Baylor College of Medicine found that only 73 of the 3,394 surveyed came to the ED by first contacting a primary care provider. Nearly one-third of the children brought to the ED were uninsured. The health professionals intervened by developing greater awareness and educational tools. Baylor

College of Medicine concluded that educators who spend 30 minutes with families of asthma sufferers reinforced an alternative action plan to using the ED (*Hanover*, 2008, p. 13).

8. At a 2007 Healthcare Intelligence Network symposium, Dr. James Glauber outlined the basic reason that his company, Neighborhood Heath Plan of Massachusetts, relies primarily on patient education materials to discourage non-urgent ED use. Dr. Glauber spoke from a study done in Michigan where 21,000 copies of "What to Do When Your Child is Sick" were sent to families. There was a reported 14.4% decrease in emergency room usage from this study. Furthermore, 80% indicated that they had consulted the book "at least once" (*Hanover,* 2008, p. 10).

*Hospital-Based Emergency Care: At the Breaking Poin*ts, supports this overwhelming gap in awareness to ED use by saying:

> A final step in implementing the changes recommended by the committee is to make the public understand what is going on, appreciate the seriousness of the situation, know what questions to ask, and realize that the problem affects each individual: rich or poor, old or young, black or white, urban or rural. In short, the public needs to know what good performances are and understand who does and does not experience it. Hospitals should be required to measure key indicators of ED crowding and make those measures available to policy makers and the public. This could be accomplished through a variety of mechanisms, including patient

> flow performance report cards, public notices regarding diversion, and educational efforts focused on the unique and critical role served by safety net hospitals. For example, a community could provide diversion alerts, similar to storm alerts, to inform the public about EDs unable to accept new patients. (*Committee on Future Emergency Care*, 2006, p. 159)

In a recent report form HIN, retail clinics such as those established in Wal Mart, over one-third of the health plans "saw a reduction in non-urgent emergency department visits since introducing retail clinics. A recent E-survey by Laura Green, HIN Communication Editor, stated that "the main strategies to reduce Ed usage is, number one: educational programs, and number two: increase availability of alternative care or walk-in centers. She continues explaining, the main hurdles are changing patient behavior, getting patients to listen to and remember new information, getting healthcare providers to be more available to patients, (i.e. longer hours), identifying which ED visits qualified as "non-emergent" and educating patients on ED alternatives." She continues, "This is a community-wide problem of expectations and need for education" (Green, 2008, p. 1). Green says, "Education can come in the form of media, health education with the school system and more. Perhaps one of the most important factors in reducing non-emergent ED use is improving patients' access to care when urgent care needs arise whether this means educating patients so that they are aware that these facilities exists" (Green, 2008, p. 2).

Conclusions and Recommendations

The data collected provides a workable analysis to determine that increased awareness to alternatives is essential in making changes to reduce Ed usage. Although ED usage needs more complex solutions, hospitals, government agencies and doctors must begin to address this as a Public Services obligation and responsibility. The cost to facilities such as Sutter Solano of over $16 million in the last three years or to the county's healthcare infrastructure is either absorbed by the private facility or transferred to the taxpayer. This contributes to increased cost in healthcare. Because of this factor, accountability is paramount. For instance, if there were a 15% or 4500 patient decrease in ED visits to Solano Medical Center, the savings to the hospital would be approximately $1,353,645.00. Leadership must not only provide a comprehensive approach but also make necessary adjustments to existing hospital policy. It would be difficult to change the EMTALA policy, yet hospitals have already made policy changes to redirect patients. Policy could change to mandate PCP's to provide information to alternative care. Another policy change could be to allow hospitals to redirect patients to the alternatives. For example, Memorial Hospital in Jacksonville is one of 15 Florida-based HCA hospitals that kicked off a program to redirect non-emergency patients to clinics instead of treating them in the ER. In the first week, out of 110 patients, who were initially thought to be non-emergency patients, 85 were redirected to local profit and nonprofit clinics for treatment (Fierce Healthcare, 2006 *Business Journal of Jacksonville).*

Other recommendations would include:

1. Primary Care Physicians network to adjust hours as a trial to an overall plan.

2. Primary Care Physicians should change and add additional information on their messages or add a 24 hour nurse advise line that could redirect patients to existing urgent care centers within the community.

3. Primary Care Physicians should partner with each other in order to create after hours care on a rotational schedule between groups.

4. Frequent Health Fairs held during events in parks, churches and schools should be once every quarter to assure saturation.

5. City and county should provide funding for printed information in welcome packages for newcomers to the community.

6. The city should partner with the health care establishment to build a web-based link to clinics to increase access.

7. The county could redirect non-urgent cases to a county-run nurse advice line.

8. Billboards should be scattered around the community advertising urgent care clinics. This should be funding by the health care establishments and the county government.

9. Increased awareness by using publications, pamphlets and media to direct patients to other modes of care.

10. Case Managers placed within the ER should make follow up calls with recent

ED users in order to educate and redirect patient use.

11. Mandate all Primary Care Physicians and clinics to post alternative information within their offices and hand out information packets to their patients.

Our ER system in California is in crisis. In Solano County the current debate is whether to build a County Hospital. Is this thinking transferring the responsibility to the government to solve ED usage? Transferring the cost to the government does not solve the problem of reducing ED usage or in curtailing health care costs. Building awareness and educating people is a proven model which changes the status quo and empowers people to make appropriate choices. In a changing culture, people must begin to think, believe and feel differently in order to make those new choices. This will take a comprehensive community commitment at the grass roots level. It may take some time, but the benefits are surely proven and attainable:

> The reliance of EDs on other hospital units to eliminate ED crowding and its consequences, demands a system-wide approach supported by hospitals leaders and staff, policy makers, and the American public.
>
> (Committee on the Future of Emergency Care, 2006 p.159)

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