TAKE CHARGE *for better health® series*

REPORT 7:

Status Report on Efforts to Understand and Create Awareness of Non-Urgent Emergency Department Visits

in Memphis and Shelby County, Tennessee

March 2013

Healthy Memphis®
COMMON TABLE

This **Take Charge for Better Health®** report uses 2009 hospital data for Memphis and Shelby County. The cost is expressed in 2012 dollar equivalents. The intent of this report is to provide transparency of information related to non-urgent and primary-care-sensitive hospital emergency department visits.

Excessive use of the emergency department for non-urgent care is a serious problem within our health system. This report uses data and information from The University of Memphis and various ED reporting agencies that outline what can occur from inappropriate use of emergency departments.

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Aligning Forces for Quality | Improving Health & Health Care in Communities Across Greater Memphis

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This report is meant to reach a broad spectrum of individuals, including those with decision making capabilities. Its purpose is to act as a catalyst to bridge the conversation from research to practice.

Copies of this report are available at:
www.healthymemphis.org

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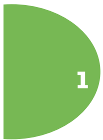
FOREWORD



As a professor of health care economics, I conduct research to determine how our behaviors and choices impact the cost and quality of health care. Some of our results can be used to develop applicable solutions to the health care dilemmas facing our community. Excessive use of the emergency department (ED) for non-urgent care is one such dilemma. EDs across the country experience this problem, and finding a solution has become a major priority within local and national health care reforms.

The Robert Wood Johnson Foundation has been leading the collection and usage of data to create positive change within our health and health care delivery systems for many years through their *Aligning Forces for Quality* (AF4Q) initiative. As one of the 16 communities selected to participate in AF4Q, we are able to gather local data and use it to improve our community. I am grateful that a foundation of this magnitude recognizes the value of this type of research and how it can be used to improve the quality of our health care.

Each year, we waste millions of dollars and prohibit our EDs from obtaining maximum efficiency by packing them with people who could easily have their health issues addressed in a primary care environment. This report reveals some startling facts about ED misuse, but also suggests solutions to the problem. It is my hope that the report will increase public awareness about the importance of primary care physicians not only so patients can receive the best possible care but also to help lower the cost of health care in our community. It will take the concerted efforts of everyone within Memphis and Shelby County to do it, but it can be done—and it will help us achieve better health for all!

ABOUT HEALTHY MEMPHIS COMMON TABLE

Healthy Memphis Common Table is a non-profit, 501(c)(3) Regional Health Improvement Collaborative that addresses both the health of everyone in the community and the health care delivery system. HMCT's vision is to support Memphis in becoming one of America's healthiest cities by mobilizing people to achieve excellent health for all. Our commitment to the community includes:

Thomas Feeney, MBA, CPA
Chair, Board of Directors
Healthy Memphis Common Table

IMPROVE the quality of primary care

EMPOWER patients and caregivers

FIGHT childhood and family obesity

REDUCE diabetes, heart disease, and pediatric asthma

ELIMINATE food deserts in low income neighborhoods.

Healthy Memphis Common Table (HMCT) is the Mid-South's only Regional Health Improvement Collaborative (RHIC). There are approximately 50 RHICs in the country that have been developed to address multiple stakeholders committed to improving the health and the health care of an entire community. The first RHIC was founded in 1995. HMCT was organized in 2003 as a combined effort of various organizations to align and create a common table. HMCT has been certified by the Department of Health and Human Services as Tennessee's only Chartered Value Exchange, and it is seen as a national model of innovation and collaboration.

Currently HMCT operates seven projects which focus on the five areas noted above, and it has expanded its management capacity to lead specific community-wide efforts. These efforts involve more than 50 partner organizations, 200 collaborating organizations, and 25-30 steering committees and work groups. Over 500 individuals serve on these various committees and work groups, representing a cross section of the community to include patients and families, hospital executives, business leaders, consumers, nurse practitioners, physicians, health plan executives, educators, faith-based leaders, and health department officials. The key is the collective impact these individuals are making in framing the work of HMCT and the actions associated with improving the health and health care provided in our community.

The role of HMCT is threefold: serve as a multi-stakeholder neutral convener, produce community-level performance reports, and execute on small-scale projects which can expand community-wide. The work of HMCT is done through partnership and collaboration, and the model of the RHIC has created a new era of change and innovation. The key to the work of HMCT is the alignment of resources and agendas. This is so important to the Memphis region, and HMCT is honored to serve in this significant role.

EXECUTIVE SUMMARY

Reneé S. Frazier, MHSA, FACHE
CEO

Healthy Memphis Common Table

Healthy Memphis Common Table is pleased to share its seventh *Take Charge for Better Health®* Report. It may seem easy and harmless to go to your local hospital's emergency room for a non-emergency medical matter—but it isn't. Excessive use of the emergency department (ED) for non-urgent care is a serious health system problem in our community that wastes resources and dollars that could be used elsewhere.

Here are some of the key findings in this report. In 2009:

- More than 2.3 million ED visits were made by Tennessee residents and close to 340,000 of them (14.4%) were made by residents of Shelby County.
- More than half of the total ED visits (52.1%) were non-urgent in 2009; 57.3 percent of the total ED visits were primary-care-sensitive and therefore potentially avoidable.
- Hospitals that provided ED services in Shelby County billed patients and their third-party payers more than $434 million for non-urgent ED visits. The total cost for non-urgent ED visits increases to $498 million when such visits to the ER are a result of emergent, primary care appointments.
- Racial and ethnic differences exist. The highest rate of non-urgent and primary-care-sensitive ED visits in Tennessee exists among African Americans and the lowest among the Asian community.

The most important goal of the *Take Charge for Better Health®* reports produced by the Healthy Memphis Common Table is to increase the transparency of cost, equity, and quality data. This data provides cause for a community-wide call to action, as noted on page 12 of this report. We recommend that Memphis and its surrounding communities:

- Maximize the provision under the Affordable Care Act to address needed access issues for primary care in underserved communities.
- Focus on providing increased coordinated efforts which improve health literacy community-wide. These efforts should provide education on better management of chronic diseases, obtaining treatment by a primary care physician, and the appropriate use of emergency room services.
- Encourage local innovations in payment in primary care, which supports better management of patients outside of the ED.
- Create more transparency of cost and quality data at the provider, insurance, and hospital level.
- Create a more coordinated approach to tracking cost, performance measures, and quality indicators.
- Embrace large-scale community awareness approaches that note system and personal responsibility.
- Reduce wasteful health care spending.

The intent of this status report is to stimulate all stakeholders in various community-wide actions that lead to better health, better quality of care, and more affordable health care services for every man, woman, and child. As the area's regional health improvement collaborative, Healthy Memphis Common Table will continue to lead efforts to address cost, quality, and issues of health equity as a major driver of our strategic agenda.

INTRODUCTION

In the United States, the main function of hospital emergency departments (EDs) is to provide trauma and emergency services for "people in imminent danger of losing their lives or suffering permanent danger to their health."[1] Hospital EDs are also a critical element within a disaster response system to prepare for pandemics and bioterrorism and respond to the needs of victims when a public health emergency occurs. However, many people use hospital EDs for non-urgent medical problems that can be treated at a clinic or a doctor's office. Today, many local hospital EDs have become a provider of primary care for people who cannot afford health care. Many other people who have insurance use EDs for non-urgent problems because of their belief that they can get high-quality care without waiting for an appointment.

Excessive use of the emergency department for non-urgent care is a serious health system problem for several reasons. First, it contributes to overcrowding and longer ED wait times and places financial and logistical burdens on the hospital that provides the service.[2,3] Researchers have reported that ED overcrowding compromises patient safety and adversely affects the ability of ED staff to provide a timely response.[4,5] Reducing the excessive use of hospital emergency departments, including for non-urgent medical problems, has been a major priority of recent national health care reforms.

"NON-URGENT ED VISITS DESERVE PUBLIC ATTENTION FOR ANOTHER REASON: THEY RAISE SERIOUS QUESTIONS ABOUT WHETHER RESIDENTS IN A COMMUNITY HAVE ADEQUATE ACCESS TO QUALITY PRIMARY CARE.

Some of the most commonly known inappropriate reasons individuals use the emergency room in Memphis and Shelby County:

- **Toothache**
- **Rash**
- **Insect Bite**
- **Eye Pain/Injury**
- **Sore Throat**
- **Earache**
- **Boil**
- **Back Pain**
- **Cold Symptoms**

Non-urgent ED visits deserve public attention for another reason: they raise serious questions about whether residents in a community have adequate access to quality primary care. Research has shown that low-income individuals, as well as minority racial and ethnic groups, are less likely than persons of more substantial means to have a regular source of care and, as a result, are more likely to use hospital emergency rooms for routine primary care. Others, though insured, may not be aware of the primary care available to them and end up in the hospital emergency room for serious medical problems brought on by their delay in seeking needed care.

Thus from the perspective of community health, hospital emergency departments can serve as a window into the quality and adequacy of a community's primary care network. Local communities such as Shelby County, Tennessee that have a large minority population and concentration of citizens in poverty can benefit from consistently tracking the trends of ED use for non-urgent purposes by local residents. The data gathered can provide health officials and decision-makers with valuable information to gauge the effectiveness and accessibility of the local primary care system that plays a vital role in keeping residents healthy and preventing unnecessary downstream ED visits and hospitalizations.[2,6]

WHAT IS A NON-URGENT ED VISIT?

Researchers have long recognized the difficulty in determining the "urgency" of hospital ED visits. In the clinical setting, the level of urgency of ED visits is usually determined by the level of immediacy in minutes or hours assigned by the triage staff upon a patient's arrival at the hospital ED. For example, the National Center for Health Statistics (NCHS) of the U.S. Department of Health and Human Services recommends the following five levels of urgency for classifying ED visits: (1) immediate (treat in 0 minute), (2) emergent (needs to be seen within 15 minutes of arrival), (3) urgent (between 15 - 60 minutes), (4) semi-urgent (1-2 hours), and (5) non-urgent (2-24 hours). NCHS has for many years used this classification system for collecting and reporting ED visits data in its annual National Hospital Ambulatory Medical Care Survey (NHAMC).[7]

The NHAMC approach, though useful for triaging patients in a busy hospital ED, has limited usefulness for public health; it sheds little light on the linkage between ED use and the external health care environment in the broader community where people live. This is because the NHAMC ED classification system and other similar systems are for clinical purposes. They are mostly based on an assessment by the frontline triage staff without taking into account the lessons that can be learned about the patient's medical condition and the broader underlying predisposing and enabling factors closely associated with the patient's health.

For research and public policy discussion, the diagnostically based and empirically verified NYU ED Algorithm designed by J. D. Billings and his colleagues is by far the most commonly used program.[8] In addition to the information analyzed on the severity of ED visits, the NYU ED Algorithm has the added advantage of empirically linking the admitting diagnoses to the role of the primary care physician and the capacity of the community health system in which the patient lives.[2] We applied this NYU software program to Tennessee outpatient discharge data for 2009 to identify and analyze ED visits for this report.

THE NYU ED ALGORITHM AND HOW IT WORKS

The NYU ED Algorithm was developed by an expert panel of ED and primary care physicians and was based on the detailed medical records of 6,000 ED patients. Based on the information abstracted from the full patient records, the NYU researchers used their algorithm to place ED visits that did not result in an admission into the following nine categories:

1. Non-emergent – The patient's initial complaint, presenting symptoms, vital signs, medical history, and age indicated that immediate medical care was not required within 12 hours.

2. Emergent/Primary Care Treatable – Based on information in the record, treatment was required within 12 hours, but care could have been provided effectively and safely in a primary care setting. The complaint did not require continuous observation, and no procedures were performed or resources used that cannot be provided in a primary care setting (e.g., CAT scan or certain lab tests).

3. Emergent, ED Care Needed, Preventable/Avoidable – Emergency department care was required based on the complaint or procedures performed/resources used, but the emergent nature of the condition was potentially preventable/avoidable if timely and effective ambulatory care had been received during the episode of illness (e.g., flare-ups of asthma, diabetes, congestive heart failure, etc.).

4. Emergent, ED Care Needed, Not Preventable/Avoidable – Emergency department care was required and ambulatory care treatment could not have prevented the condition (e.g., trauma, appendicitis, myocardial infarction, etc.).

5. Injury – Injury was the principal diagnosis.

6. Mental Health – Mental health condition was the principal diagnosis.

7. Alcohol Related – Alcohol-related condition was the principal diagnosis.

8. Drug Related – Drug-related condition was the principal diagnosis.

9. Unclassified – Conditions that could not be classified due to insufficient sample sizes available to the expert panel.

Following the instructions of the NYU ED Algorithm[7] and the example of a New Jersey non-urgent ED report,[9] the following ED definitions were used in this report:

- ED visits falling into categories 1 and 2 of the NYU Algorithm are defined as non-urgent, meaning they do not need to be provided in a hospital ED and therefore are unnecessary as ED care. Common examples of reasons for non-urgent and potentially unnecessary ED visits include sore throat and back problems.
- ED visits falling into the NYU ED categories 1 through 3 are defined as primary-care-sensitive because they are sensitive to (or modifiable by) the effective delivery of primary care outside the hospital. In other words, they are potentially avoidable by the delivery of effective primary care and can serve as an indicator of problems with access to primary care within a patient subgroup or in a local area.
- ED visits falling into category 4 are the least likely to be prevented with access to primary care or other medical interventions. They can be considered urgent, unpreventable, or necessary.
- ED visits falling into categories 5–9 are injury, mental health, or drug-related, and not the focus of this study.

NON-URGENT ED VISITS

These are potentially unnecessary ED visits that either require no immediate medical treatment within 12 hours upon arrival at a hospital ED or require treatment within 12 hours but care could have been provided safely and effectively in the primary care setting.

PRIMARY-CARE-SENSITIVE ED VISITS

These include all non-urgent ED visits defined in the box to the left plus all ED visits that require immediate ED care but the emergent nature of the condition would have been potentially avoidable had timely and effective primary care been received earlier by the patient before going to the hospital through the emergency department.

FINDINGS

Table 1 presents an overview of ED visits made in 2009 by residents of Tennessee and Shelby County. Notice that for simplicity, the original NYU categories 5–9 have been combined into one single category under the heading of "Unclassified and Other."

TABLE 1

Classification of ED Visits in Tennessee and Shelby County, Tennessee, 2009

ED Classification	Shelby County		Tennessee	
	ED Visits	**% of Total**	**ED Visits**	**% of Total**
a.Non-urgent (NYU Categories 1 and 2)	176,933	52.1%	1,323,683	56.0%
b.Emergent/ED Care Needed/ Preventable/Avoidable (NYU Category 3)	17,454	5.2%	108,580	4.6%
c.Primary Care Sensitive ED Visits (a+b)	194,387	57.3%	1,432,263	60.6%
d.Emergent/ED Care Needed/Not Preventable/Avoidable (NYU Category 4)	30,470	9.0%	231,943	9.8%
e.Unclassified and Other*	114,431	33.7%	698,817	29.6%
Total ED Visits (a+b+d+e)	339,288	100.0%	2,363,023	100.0%

**** The "Other" category includes ED visits for injury, mental health, alcohol, and drug-related diagnoses.***

TABLE 1

MAJOR POINTS

In 2009, a total of more than 2.3 million ED visits were made by Tennessee residents and close to 340,000 of them (or 14.4% of the state total) were made by residents of Shelby County. With 14.7% of the state total population, Shelby County had a proportionate share of total ED visits in Tennessee.

- In Shelby County, more than half of the total ED visits (52.1% of total) were non-urgent in 2009, and 57.3% of the total ED visits were primary-care-sensitive and therefore potentially avoidable. Clearly, a majority of Shelby County residents who had at least one ED visit used ED care for medical problems that could have been treated effectively and safely in the primary care setting.
- In 2009, 56% of Tennessee's total ED visits were non-urgent and 60.6% of the total ED visits were primary-care-sensitive. These percentages were slightly higher than those of Shelby County.
- Tennessee and Shelby County had 9.8% and 9%, respectively, of ED visits that were emergent, required ED services, and were not preventable by primary care.

57.3% OF ED VISITS IN SHELBY COUNTY WERE PRIMARY-CARE-SENSITIVE AND THEREFORE, POTENTIALLY AVOIDABLE. A MAJORITY OF THOSE COULD HAVE BEEN TREATED EFFECTIVELY AND SAFELY IN THE PRIMARY CARE SETTING.

Table 2 details the volume of non-urgent and primary-care-sensitive ED visits by gender and age for Shelby County and Tennessee as a whole.

TABLE 2

Non-urgent ED Visits by Gender and Age, 2009

Gender and Age	Shelby County		Tennessee	
	ED Visits	**% of Total**	**ED Visits**	**% of Total**
Male	64,379	36.4%	504,049	38.1%
Female	112,552	63.6%	819,598	61.9%
Gender Data Missing	2	0.0%	36	0.0%
Total	176,933	100.0%	1,323,683	100.0%
Children 0-17	51,292	29.0%	347,373	26.2%
Young Adults 18-39	73,464	41.5%	537,446	40.6%
Adults 40-64	41,806	23.6%	329,048	24.9%
Seniors 65 and Older	10,371	5.9%	109,816	8.3%
Total	176,933	100.0%	1,323,683	100.0%

TABLE 2

MAJOR POINTS

- In Shelby County and the state as a whole, a majority of non-urgent ED visits were made by females, accounting for more than 60% of total ED visits in 2009.
- The pattern of age distribution of non-urgent ED visits in Shelby County was similar to that shown for the state as a whole, with young adults 18 to 39 years of age accounting for more than 40% of total non-urgent ED visits.
- Senior residents, ages 65 or older, were less likely to visit hospital emergency departments for non-urgent problems than were the younger residents, and this was true for both Shelby County and Tennessee as a whole.

Table 3 presents similar age and gender data for primary-care-sensitive ED visits. For 2009, the gender and age variations of primary-care-sensitive ED visits shown in Table 3 appeared similar to those for non-urgent ED visits presented in Table 2.

TABLE 3

Table 3 - Primary-Care-Sensitive ED Visits by Gender and Age, 2009

Gender and Age	Shelby County		Tennessee	
	ED Visits	**% of Total**	**ED Visits**	**% of Total**
Male	72,290	37.2%	551,794	38.5%
Female	122,094	62.8%	880,430	61.5%
Gender Data Missing	3	0.0%	39	0.0%
Total	194,387	100.0%	1,432,263	100.0%
Children 0-17	58,518	30.1%	377,322	26.3%
Young Adults 18-39	78,258	40.3%	565,404	39.5%
Adults 40-64	45,880	23.6%	360,823	25.2%
Seniors 65 and Older	11,731	6.0%	128,714	9.0%
Total	194,387	100.0%	1,432,263	100.0%

Does Shelby County have excessive levels of non-urgent and primary-care-sensitive ED visits? To answer this question, we compare the percentages of these two types of potentially avoidable ED visits in Shelby County with those of a limited number of cities and states that have estimated the same statistics using the NYT ED Algorithm. The comparison results are presented in Table 4.

TABLE 4

Table 4 - Comparison of Shelby County and the State of Tennessee with Other Cities and States

ED Category	Shelby County (2009)	Tennessee (2009)	Charlotte, NC (2007)[1]	Houston, TX (2003)[2]	Upstate NY (2008)[3]	Utah (2010)[4]
	Percent of All ED Visits					
Non-urgent ED Visits	52.1%	56.0%	53.1%	46.7%	44.0%	38.7%
Primary-Care-Sensitive ED Visits	57.3%	60.6%	59.4%	55.9%	-	43.7%

[1] See Reference No. 10 for source. [2] See Reference No. 11 for source. [3] See Reference No. 12 for source.

[4] Utah Department of Health (http://ibis.health.utah.gov/query/result/edpcsc/EDPCSCCnty/PercentED.html)

Shelby County residents did not seem to have an excessively higher level of ED visits than residents in Tennessee as a whole based on a comparison of the proportions of ED visits that are non-urgent or primary-care-sensitive. However, it is important to note that Shelby County, as well as the state of Tennessee as a whole, have much higher non-urgent and primary-care-sensitive ED visits than the state of Utah and Upstate New York, which includes 39 counties located in the western, central, and northern parts of New York State. Shelby County's percentages are also slightly higher than those of Houston and comparable to those of Charlotte. The statistics reported in Table 4 taken as a whole suggest that the proportion of ED visits that are non-urgent and primary-care-sensitive in Tennessee and Shelby County are relatively high when compared to other cities outside of Tennessee and other states for which comparable statistics are available.

Were there significant differences in non-urgent and primary-care-sensitive ED visits among the major racial and ethnic population subgroups in Shelby County?

The relevant data for this question are presented in Table 5 for Shelby County and Tennessee as a whole.

TABLE 5 *Non-urgent and Primary-Care-Sensitive ED Visits by Race and Ethnicity, 2009*

Race and Ethnicity	Shelby County		Tennessee		Shelby Co. as a % of Tennessee
	ED Visits	Per 1,000	ED Visits	Per 1,000	
	Non-urgent ED Visits				
White	28,583	80	703,274	148	54%
Black	130,779	272	286,068	269	101%
Hispanic	4,134	77	13,684	46	167%
Asian	568	26	2,311	24	105%
Native American/Alaskan Native	68	74	401	64	116%
Unknown or Missing Data	12,801		317,945		
Total	176,933	192	1,323,683	210	91%
	Primary-Care-Sensitive ED Visits				
White	31,102	88	762,089	161	55%
Black	144,125	299	313,026	294	102%
Hispanic	4,515	85	14,959	51	167%
Asian	622	28	2,500	26	106%
Native American/Alaskan Native	81	88	449	71	123%
Unknown or Missing Data	13,942		339,240		
Total	194,387	211	1,432,263	227	93%

TABLE 5

MAJOR POINTS

- Significant racial and ethnic variations in non-urgent and primary-care-sensitive ED visits exist in Tennessee, with black Tennessee residents having the most non-urgent and primary-care-sensitive ED visits per 1,000 people and Asian residents the least.
- Even greater racial and ethnic variations exist in Shelby County with black Shelby County residents having rates of non-urgent and primary-care-sensitive ED visits per 1,000 people more than three times those of white Shelby County residents.
- When Shelby County is compared with the state as a whole, white Shelby County residents have significantly lower non-urgent and primary-care-sensitive ED visits per 1,000 people in 2009 than did whites in the state as a whole.
- In contrast, black Shelby County residents had slightly higher rates of both non-urgent and primary-care-sensitive ED visits per 1,000 people than did blacks in the state as a whole.
- Hispanic, Asian, and Native American Shelby County residents also had higher non-urgent and primary-care-sensitive ED visit rates than those groups in the state as a whole. But, the population size of these smaller racial and ethnic groups is too small to produce reliable population rates of non-urgent and primary-care-sensitive ED visits.

“BLACK SHELBY COUNTY RESIDENTS HAVE RATES OF NON-URGENT AND PRIMARY-CARE-SENSITIVE ED VISITS PER 1,000 PEOPLE MORE THAN THREE TIMES THOSE OF WHITE SHELBY COUNTY RESIDENTS.

How much did ED visits made by Shelby County residents cost in 2009?

The financial data for ED services, expressed in 2012 dollars, are presented in Table 6.

TABLE 6

Hospital Charges and Reimbursements by Third-Party Payers in Shelby County, Tennessee, 2009[1]

Third-Party Payer	No. of ED Visits	Avg. Hospital Charges	Estimated Avg. Amount Reimbursed	Total Hospital Charges	Estimated Total Reimbursement
Non-urgent ED Visits					
Private/Commercial	37,563	$2,695	$1,078	$101,236,767	$40,494,707
Medicare	18,162	$3,256	$593	$59,136,922	$10,762,920
TennCare	83,863	$1,670	$489	$140,072,156	$41,041,142
Self Pay/Charity/Uninsured	37,345	$2,286	$169	$85,376,846	$6,317,887
Other[2]	22,412	$2,181	$654	$48,871,935	$14,661,581
Total	199,345	$2,181	$568	$434,694,626	$113,278,237
Primary Care Sensitive ED Visits					
Private/Commercial	40,688	$2,731	$1,092	$111,120,476	$44,448,191
Medicare	20,461	$3,383	$616	$69,211,759	$12,596,540
TennCare	92,890	$1,785	$523	$165,844,226	$48,592,358
Self Pay/Charity/Uninsured	40,348	$2,375	$176	$95,825,195	$7,091,064
Other[2]	24,623	$2,274	$682	$55,988,092	$16,796,428
Total	219,010	$2,274	$591	$497,989,748	$129,524,581

[1]Hospital charges and reimbursements (amounts paid) are expressed in 2012 dollars.

[2]The "Other" category includes jail inmates, federal workers' insurance, workers' compensation, and TriCare, etc.

TABLE6

MAJOR POINTS

- Hospitals that provided ED services in Shelby County billed patients and their third-party payers more than $434 million for non-urgent ED visits in 2009. When emergent, primary-care-needed, preventable/avoidable ED visits were added, the total bill for primary-care-sensitive ED visits was close to $498 million in 2009.
- Hospitals do not get their charges fully reimbursed. In 2009, they received from patients and third-party payers close to $130 million for providing hospital ED care that was primary-care-sensitive and potentially avoidable.
- Among the major third-party payers, TennCare was billed the largest amount of total charges for reimbursement and paid more in total reimbursements than any other third-party payer.
- However, Medicare had the highest per-visit charges, while in terms of the amount of charges paid per visit, private/commercial insurers paid more generously than any other third-party insurers.
- It is a myth that only uninsured patients use hospital EDs for non-urgent and primary-care-sensitive medical problems. In Shelby County, insured patients were responsible for close to 80% of all of the non-urgent and primary-care-sensitive ED visits in 2009. Uninsured patients, while representing about 15% of the total county population, were responsible for about 20% of the total non-urgent and primary-care-sensitive ED visits.

WHAT DOES IT ALL MEAN TO OUR COMMUNITY?

1 Many Shelby County residents seem to prefer EDs to a doctor's office for routine services. Hospital emergency departments are not designed to provide routine services. In his testimony before the U.S. Senate, health economist Peter Cunningham said that patients who seek treatment for non-urgent problems at a hospital ED instead of a physician's office can cause: (1) duplication of tests and procedures that can be performed at a lower cost outside a hospital, (2) fragmentation of services and a lack of follow-up care, and (3) an increase in the risk of medical errors.[1] Our study has shown that more than half of total ED visits made in Shelby County in 2009 were non-urgent or primary-care-treatable. Researchers have studied why patients prefer to seek care at hospital EDs for non-urgent problems. The reasons cited most frequently include: (1) physicians are often not immediately available, (2) patients feel they can receive prompt attention after regular office hours and on weekends, (3) patients feel they can get better care at the hospital ED, (4) patients feel they are less likely to be refused care due to inability to pay, and (5) patients can avoid obstacles associated with clinic visits (Institute of Medicine, 2006).

2 Both insured and uninsured patients make non-urgent and potentially avoidable hospital ED visits. It is a myth that only uninsured patients use EDs for non-urgent medical problems. Our results show that in Shelby County both insured and uninsured residents alike frequently visited hospital EDs for non-urgent and primary-care-treatable medical problems. These potentially avoidable ED visits add millions of extra dollars to the health care costs that must be paid by insurance companies, employers, and taxpayers.

3 Potentially avoidable ED use is a health care quality issue. A direct impact of non-urgent and primary-care-sensitive ED visits is that they contribute to ED overcrowding and reduce physician response time in a crowded hospital ED. This is also a symptom of many underlying trends in the health care system of a local community, including the capacity constraints of local hospitals, lack of access to primary care due to patients' inability to pay or lack of insurance coverage, and personal-care-seeking behaviors. When patients use hospital EDs for routine care that can be delivered more efficiently and economically in a community clinic or doctor's office, the quality of the health care system suffers. This is due in part to poor communication and coordination between hospital EDs and physicians' offices[13]. The sharing of information and the coordination of activities between these two critical segments of the local health care system are still the exception and not the rule in most local communities at the present time.

4 Millions of dollars can be saved without compromising the quality of care. Our finding of as much as $130 million worth of ED visits that were potentially avoidable suggests another weakness in our health care system—that scarce health care resources have not been put to their best use because of the fragmentation of our delivery system and an under-utilization of community-based primary care. It also suggests that opportunities exist to save millions of dollars without compromising the quality of care by strengthening the primary care system and by improving communication and care coordination between hospitals and community primary care providers.

5 Substantial racial and ethnic variations exist in non-urgent use of hospital EDs. Another major finding of this report is that the proportions of non-urgent and primary-care-sensitive ED visits in Shelby County were

slightly lower than those in Tennessee. However, Shelby County, as well as Tennessee as a whole, had higher rates of non-urgent ED visits than many other cities and states such as Houston, Texas and the state of Utah. Further, these statistics for the overall general population mask the substantial differences in the patterns of racial and ethnic variations between Shelby County and the state. For example, in 2009 black Shelby County residents had about the same rates (per 1,000 people) of non-urgent and primary-care-sensitive ED visits as those experienced by blacks in the state as a whole. The lower rates of potentially avoidable ED visits reported for all Shelby County residents were primarily the result of the much lower white rates when compared to the white rates for the state as a whole.

6 Shelby County's rates of non-urgent ED use suggests problems with access to primary care by some of its residents. Among the urban population centers in Tennessee, Shelby County has the highest concentration of poverty and socially and economically disadvantaged residents. However, based on 2009 data, our rates of ED visits were found to be slightly lower than those for the state as a whole. This lower ED use rate for a large urban county with a concentration of high-need population contradicts the conventional wisdom of public health that sicker patients use more health care. There are two competing interpretations of this anomaly, and they have very different policy implications. The first is that the rate of ED use in Shelby County is normal, while the other major urban counties over-use ED services. An alternative interpretation is that Shelby County residents, whether insured or uninsured, are relatively more reluctant to seek care than residents in other parts of the state due to a variety of real or perceived barriers to access. Some of these barriers are associated with supply-side factors such as a shrinking number of hospitals with an emergency department or inconveniently located hospitals and clinics. The increasingly smaller supply can cause ED overcrowding even with a slight upward fluctuation in demand. Other barriers are related to demand-side factors including a lack of transportation or patient aversion to seeking health care. Further research and better data are needed to explain this health care puzzle of under-use of health services by a high-need population.

WHAT CAN WE DO AS A COMMUNITY?

Non-urgent ED visits are a complex issue with many varied contributing factors. Some factors can be traced back to the primary care system's capacity constraints that have caused a shift in some of the demand from physician offices to hospital EDs. Another supply-side factor is a lack of provider incentives under the current fee-for-service payment system to reduce hospital ED use. On the demand side, many patients do not have the means to pay for routine, preventive services, and many others may prefer EDs to a doctor's office when they need immediate medical attention. What can we do as a community to address this health system issue that affects us all?

Medical researchers and practitioners across the country have found the following intervention strategies and community initiatives effective in reducing non-urgent, potentially avoidable ED visits:

1 Improve clinical communication and care coordination between hospital EDs and primary care offices and community health care offices using an electronic medical record (EMR) system and care coordinators or transition navigators to facilitate real-time communication.[13] The experimental pilot program, Project Better Care, initiated recently by Healthy Memphis Common Table, is a good example of programs that use care coordinators and health coaches to improve communication, care coordination, and patient education.

2 Establish medical homes where primary care physicians coordinate patient care and follow up with patients after they have been discharged from a hospital ED.[14]

3 Provide funding support to primary care clinics to operate extended business hours. Studies have shown that many patients, especially those with Medicaid insurance or no insurance, use hospital EDs because the doctor's office is not open or because patients have no other place to go.[15] Providing funding support to primary care clinics that serve Medicaid and other needy populations so they can extend their business hours is a cost-effective way to reduce non-urgent ED use.

4 Develop ED diversion programs to educate patients about alternative non-emergency care options and offer real-time referrals to alternative non-emergency care. Such advice and information can be delivered through the use of outreach case managers or a designated telephone line.[16] Recently, Skyline Medical Center of Nashville, Tennessee, initiated an ED-based diversion program funded by TennCare and with assistance from Vanderbilt University Medical Center. When patients arrive at Skyline ED during the peak hours of 7 p.m. to 11 p.m. and are not suffering from an emergency, they are greeted by an employee of United Health Services, a non-profit community health center that serves TennCare and other populations in the Nashville area. The United employee talks to the patients and lets them know which clinics are open and explains how the clinics work.

5 Strengthen and grow the capacity of community health centers (CHCs) to reduce the workload of community primary care physicians, making it easier for patients to get an appointment at their regular places of care. Research has shown that areas with a strong CHC presence tend to have lower rates of ED visits, especially among the uninsured.[17,18]

6 Initiate a payment reform program that shifts away from the fee-for-service style of payment model that rewards providers by the volume of services delivered and move toward bundled payments and shared savings plans that reward quality of care and clinical outcomes.[19]

7 Expand insurance coverage that emphasizes preventive services and care coordination through the establishment of Accountable Care Organizations. The health reform law, or the Patient Protection and Affordable Care Act, passed by Congress and signed into law by President Barack Obama in March 2010 is such an example.[20]

8 Educate patients on appropriate ED visits. Private health plans and community-affiliated health plans have the incentives to educate their plan members on appropriate use of ED services. Many of them have initiated emergency department diversion programs that focus on educating members on proper usage of ED visits, urgent care visits, and primary care provider visits.[21,22]

9 Create case management programs to help people manage chronic diseases.[23] These programs can be set up and managed by health plans, physician practice groups, or community-affiliated care coordination organizations.

10 Start workplace wellness programs to bolster workers' health and reduce the need to use hospital emergency services.[23]

Hospital EDs are a major component of the health care delivery system. They are meant to provide life-saving services to patients in critical need for immediate medical attention. When patients seek care at EDs for non-urgent and potentially avoidable conditions, health care resources are not appropriately used. Communities like ours should pay attention to the question of why so many people continue to use EDs for non-urgent care. Policies that improve accessibility and availability of primary care and greater care coordination among providers in all care settings should lead to more efficient use of ED services.

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