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Community's Safety Net: A Comparative Analysis of the Role of Nonprofit Hospitals in Barrow and Clayton Counties in Providing Services to its Medicaid Population

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**Community's Safety Net:
A Comparative Analysis of the Role of Nonprofit Hospitals in Barrow and
Clayton Counties in Providing Services to its Medicaid Population**

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Certificate of Approval

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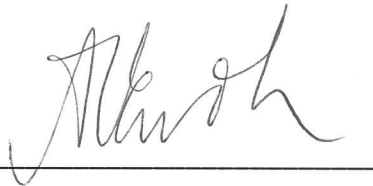
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Community's Safety Net: A Comparative Analysis of the Role of Nonprofit Hospitals in Barrow and Clayton Counties in Providing Services to its Medicaid Population

Executive Summary

Nonprofit hospitals serve as part of the healthcare safety net to deliver a significant level of care to low-income, uninsured, underinsured, Medicaid and other vulnerable groups in society. Safety net hospitals are defined as those hospitals where at least 10 percent of the costs of care provided is uncompensated. Nonprofit hospitals are granted tax exemptions from the government and in exchange they are required to meet community benefit standards which include offering care to a relatively large proportion of uninsured or socially disadvantaged individuals.

Increasing poverty levels due to rising unemployment, foreclosures and economic distress have placed the safety net structure under tremendous stress. Policy makers are concerned whether the nonprofit hospitals are able to provide the level of community benefits to justify the forgone tax revenue estimated at \$20 billion annually. The purpose of this study is to determine whether, in spite of the changing environment, nonprofit hospitals provide community benefits to low-income groups, and specifically to the Medicaid patients who visit their emergency departments.

The emergency department plays a critical role in the safety net of every community and extremely report high usage rates by Medicaid patients. Many of these patients often choose the emergency department as their primary source of care because of barriers they encounter in accessing healthcare.

A case study method was used to determine the visit rate levels of Medicaid patients to the emergency departments of both the Barrow Regional Medical Center and the Southern

Regional Medical Center from 2004 to 2008. Both facilities are nonprofit hospitals in Barrow and Clayton counties, two counties whose poverty levels ranged from 11.3 to 14.7 percent. High poverty level rates are indicative of low-income households that are, in turn, confronted with many challenges, including access to healthcare. A similar analysis was conducted at the state level and the results reflected the findings at the county level, for instance visit rates were high for certain diseases.

It was established that emergency departments benefit the community by providing residents with crucial, on-demand healthcare services. The study concludes by recommending that in order to ensure the continued efficient and effective use of emergency departments, efforts should be made to reduce their use for non-emergent purposes through education, collaboration and other strategic interventions. Whether it serves as a first choice or last chance source of care, it is proven that the emergency departments provide a valuable and irreplaceable service for all community residents. It is not a tangible benefit but one that is highly valued.

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Community's Safety Net: A Comparative Analysis of the Role of Nonprofit Hospitals in Barrow and Clayton Counties in Providing Services to its Medicaid Population

Introduction

The scope of health services has not kept pace with the expanding population in metropolitan Atlanta. The fact that there is a large number of low-income earners among the population of metropolitan Atlanta, is indicative of an inability on their part to afford healthcare. To assist with this dilemma, nonprofit hospitals were established to serve as safety nets. The key question is what role, if any, do the nonprofit hospitals have to play in addressing the problems posed by the increasing number of uninsured and underinsured?

From the mid 1950s to 1969, the Internal Revenue Service (IRS) required a hospital seeking exemption under 501(c)(3) to be “operated to the extent of its financial ability for those not able to pay for the services rendered” (Internal Revenue Service 1956). The "financial ability standard" was a reflection of a policy decision that tax-exempt hospitals should provide a significant amount of care to those who could not afford to pay for it. But, in 1969, the Internal Revenue Service issued Revenue Ruling 69-545, which discarded free care or charity care as the key requirement for exemption. Instead, "promotion of health" for the benefit of the community itself was considered a charitable purpose, thus giving rise to the community benefit standard. This standard has been in existence for more than 40 years, with very little regulatory changes (Internal Revenue Service 1969).

The introduction of Medicaid and Medicare programs in 1965 offered a new coverage for many medically needy. According to Fox and Schaffer (1991), "the IRS issued the 1969 Revenue Ruling creating the community benefit standard partly in response to requests from

nonprofit hospitals that the IRS eliminate the free care requirement" (Fox and Schaffer 1991, 251).

The number of the uninsured has grown to more than 46 million. Similarly, the scale of financial benefits that nonprofit hospitals collect from federal and state tax exemptions have grown. The tax revenue amount annually forgone by the government is estimated to be twenty billion dollars (Crossley 2008, 2).

The purpose of this study is to explore the level of emergency care provided by nonprofit hospitals to the low-income, underserved and uninsured population, and to determine whether these hospitals, in spite of the changing financial, economic, and social environment, still benefit the communities they serve. Specifically, the level of care rendered to those receiving Medicaid coverage is also examined.

The researchers compiled demographic information on metropolitan Atlanta, Barrow and Clayton counties. Information was also collected on the nonprofit hospitals in Barrow and Clayton counties in relation to their role as safety net providers, the tax exemptions they receive in return for delivering healthcare to vulnerable groups, and the community benefits expected from their services. The objectives and scope of coverage of Medicaid are also addressed in the study. A detailed examination was then undertaken on the key factors that affect the different players involved in the delivery of healthcare, for example, hospitals and health professionals. Some of the factors affecting the beneficiaries of healthcare were also examined.

An analysis was conducted on patient visits to the emergency departments of Barrow Regional Medical Center and Southern Regional Medical Center. The analysis was done using the OASIS Web Query Tool and included the demographics of Medicaid patients who use the emergency departments. A cross-sectional analysis was also performed using similar

demographics available at the state level. The final part of the study contained the key findings and recommendations for safety net providers and policymakers to address issues uncovered by this research.

Literature Review

The Atlanta-Sandy Springs-Marietta Metropolitan Statistical Area (MSA) or metro Atlanta as it is more popularly called was designated by the U.S. Census Bureau as the metropolitan area of the state's capital, Atlanta. In addition to Atlanta, the metropolitan area spans up to 28 counties in north Georgia. Between 2000 and 2007, the metro Atlanta population grew by 24 percent to about 5.3 million in 2007. The addition of approximately one million new residents accounted for 76 percent of the state's total population growth (Georgia Power and Metro Atlanta Chamber 2009, 2). During that same period, metro Atlanta moved from an eleventh place ranking in population to ninth and became the nation's fastest growing MSA (Georgia Power and Metro Atlanta Chamber 2009, 2). Two of the counties that are located in metropolitan Atlanta are Barrow County and Clayton County.

Barrow County

Barrow County was created in 1914 as a way of settling a dispute among the citizens of the City of Winder, which at the time was located at the juncture of three counties, Gwinnett, Jackson, and Walton. The new county was named for David Crenshaw "Uncle Dave" Barrow, long-time chancellor of the University of Georgia (Barrow County 2010). Winder was designated as the county seat. The other main towns in Barrow County are Auburn, Bethlehem, Braselton, Carl, and Statham. As of July 1, 2009, Barrow's resident total population was

estimated at 72,158, reflecting a 56.4 percent increase from April 1, 2000. The median income for a household in the county was \$51,318, and approximately 11.3 percent of the population lived below the poverty line (U.S. Census Bureau 2010). The information below was extracted from Barrow County's approved budget for fiscal year 2010 and reflects the serious economic situation which the county and so many others are experiencing:

- A decrease in the General Fund Budget and use of reserves in the amount of \$414,325.
- Several departments have merged to form fewer departments.
- A net loss of 56 positions was realized in the FY 2010 budget due to layoffs, position changes, retirements and voluntary staff reductions.
- No market adjustments or merit increases will be provided for full-time, part-time, temporary, or seasonal employee salaries (Barrow County 2010).

Clayton County

Clayton County is Georgia's 125th county and falls within the five-county core of the Atlanta metropolitan area. The county was formed in 1858 from parts of Fayette and Henry counties, and was named to honor Judge Augustin S. Clayton, who held the county's first sessions of the superior court and later served in both the Georgia House of Representatives and Senate (Clayton County 2010). The City of Jonesboro holds the county seat. The 2000 census showed that the population of Clayton County was 236,517, while in 2009 it was estimated at 275,772, representing a 16.6 percent increase. However, from 2000 to 2008, the median household income for the county had dropped from \$57,466 to \$46,293. In 2007, the county ranked second of 26 counties in relation to a decline in household income for counties in

Georgia. The percentage of the population living below the poverty line was listed at 14.7 percent (U.S. Census Bureau 2010).

Safety Net Areas

The high percentage of persons living below the poverty level in Barrow and Clayton counties is a situation reflected in many areas throughout the United States. In fact, the official poverty rate jumped from 13.2 percent in 2008 to 14.3 percent in 2009, and was the second statistically significant annual increase in the poverty rate since 2004, when poverty increased to 12.7 percent from 12.5 percent in 2003 (U.S. Census Bureau 2010). Demographic information related to Barrow and Clayton counties, as well as aggregated county information, are presented in summary form in Appendix A. In the majority of situations where poverty exists, it is the low-income households that are primarily affected. Many low-income working families are struggling to get by, and are often forced to make impossible choices among food, housing, and healthcare and other priorities. Government safety net programs were established to protect families during tough times—before they fall into poverty. But rising unemployment, foreclosures, and economic distress are putting pressure on a system already in need of updates and repairs (Ullman 1999).

The healthcare safety net consists of a wide variety of providers delivering care to low-income and other vulnerable populations, including the uninsured and those covered by Medicaid. Many of these providers have either a legal mandate or an explicit policy to provide services regardless of a patient's ability to pay. Major safety net providers include public hospitals and community health centers as well as teaching and community hospitals, private physicians, and other providers who deliver a substantial amount of care to these populations

(U.S. Department of Health and Human Services 2000). There are many other ways to describe safety net hospitals. For example, the Institute of Medicine defines safety net hospitals as "those providers that deliver a significant level of health care to uninsured, Medicaid, and other vulnerable patients" (Institute of Medicine 2000, 1). Other researchers have defined safety net hospitals as those hospitals where at least 10 percent of the costs of care provided is uncompensated. One feature that consistently defines safety net hospitals is that they provide care to a relatively large proportion of uninsured or socially disadvantaged individuals.

Role of Nonprofit Hospitals as Safety Nets

According to the National Association of Public Hospitals, safety net members account for two percent of all hospitals but provide 25 percent of the nation's uncompensated care. Barrow Regional Medical Center and Southern Regional Medical Center, as nonprofit hospitals and safety net members, form part of that figure. Information was obtained from the American Hospital Directory that Barrow Regional Medical Center, located in Winder, is the only hospital in Barrow County. There were no listings for hospitals in the other major cities of Barrow County. Similarly, apart from Southern Regional Medical Center, no other acute hospital was listed for Clayton County (American Hospital Directory 2010).

Nonprofit Hospitals

Nonprofit hospitals receive various tax exemptions from the government and are required to meet community-benefit standards. This is one of the factors that differentiate for-profit hospitals from the nonprofit hospitals. For a hospital to qualify for exemption from federal income taxes, it must be organized and operated exclusively for a charitable, educational, or

scientific purpose and meet IRS requirements under section 501(c)(3) of the tax code. Table 1 below shows the estimated value of tax exemptions received by nonprofit hospitals in 2002.

Table 1. Estimated Value of Tax Exemptions Provided to Nonprofit Hospitals, 2002

Category	Value (In billions)
Corporate Income Tax (Federal)	2.5
Tax-Exempt-Bond Financing (Federal)	1.8
Charitable Contributions (Federal)	1.8
Corporate Income Tax (State)	0.5
Sales Tax (State and local)	2.8
Property Tax (Local)	3.1
Total	12.6

Source: Congressional Budget Office, 2006

The main concern to many policymakers is whether these hospitals provide community benefits to justify the forgone government tax revenues. The value of major tax exemptions that nonprofit hospitals receive from federal, state and local governments is substantial. According to The Joint Committee on Taxation, "the value of the various tax exemptions in 2002 was estimated to be \$12.6 billion, with exemptions from federal taxes accounting for about half of the total and exemptions from state and local taxes accounting for the remaining half" (Congressional Budget Office 2006, 3). The focus of this study is to compare the role of nonprofit hospitals in two counties of Georgia, Barrow and Clayton, in relation to their performance as safety net providers.

Community Benefits

"The community benefit standard is the legal standard for determining whether a nonprofit hospital is exempt from federal income tax under section 501(c)(3) of the Internal Revenue Code" (Internal Revenue Service 2009, 1). This standard is used by the IRS to assess whether a hospital is exempt or taxable. Since these nonprofit hospitals receive federal income tax exemption on the basis of the healthcare services they provide, they are periodically scrutinized to determine whether the community benefits from their services. This benefit standard was last modified in 1969 by the Internal Revenue Service (IRS). The most recent development is the Senate Finance Committee hearing, "Taking the Pulse of Charitable Care and Community Benefits at Nonprofit Hospitals," held on September 13, 2006, which highlighted the many dimensions of the community benefit standard (Ernst and Young 2006).

According to United States Government Accountability Office's statement prepared by David M. Walker before the Committee on Ways and Means, House of Representatives community benefits include "such services as the provision of health education and screening services to specific vulnerable populations within a community, as well as activities that benefit the greater public good, such as education for medical professionals and medical research" (Walker 2005, 1). In order to identify the community benefits, the economic concept of a public good—something that benefits all, whether they pay or not—has been used in many studies (Nicholson et al. 2000). Nicholson and others (2000) state that most medical services provided by hospitals are considered private goods. But, some medical services that treat or prevent contagious diseases have an important public good element. Though a less obvious one, the use of medical services by low-income and high-risk persons can be an important type of public

good (Nicholson et al. 2000). For this study, the measurement of community benefits is based on the emergency care received by the Medicaid population of the Barrow and Clayton counties.

The charitable services or the community benefit services of these nonprofit hospitals have been a cornerstone of the society's safety net. Many studies have been conducted by various agencies to examine the safety net aspect of hospitals. The 2000 Institute of Medicine report on the healthcare safety net is worth mentioning. In the aftermath of Hurricane Katrina, high immigration levels, and new fiscal and policy pressures on care for vulnerable population, the committee that wrote the 2000 Institute of Medicine report on the healthcare safety net reconvened in 2006 to reflect on the safety net from the perspective of the rising number of uninsured and underinsured people. The committee noted that although the public hospitals are surviving in aggregate, they remain in uncertain financial trouble (Lewin and Baxter 2007). Another study that needs to be mentioned here is done by Stephen M. Davidson and Ronald C. Wacker in 1974 to determine to what extent community hospitals are serving patients covered by the Medicaid program. The study found that a substantial number of low-income people bypassed nearby hospitals to obtain service in a relatively few teaching hospitals located miles further away, thereby increasing the cost, as well as the potential medical risks (Davidson and Wacker 1974).

Furthermore a study conducted by the Congressional Budgeting Office in 2006, found that, when compared to for-profit hospitals, nonprofit hospitals provided higher levels of uncompensated care. The study also found that, "nonprofit hospitals were more likely than otherwise similar for-profit hospitals to provide certain specialized services but were found to provide care to fewer Medicaid-covered patients as a share of their total patient population" (Congressional Budget Office 2006, 9).

Insurance

Medicaid is a critical component of our society's safety net in the absence of universal health coverage. Medicaid takes on the highest-risk, sickest, and often most expensive population from private insurance and Medicare (Rowland and Tallon 2003). Medicaid is a joint federal and state program created in 1965, through Title XIX of the Social Security Act, to help low-income individuals and families who fit in an eligibility group recognized by federal and state law. The specific objectives of the Medicaid program are to: (a) Provide broad health care coverage to certain lower income populations, (b) offer special community-based coverage for certain disabled and elder populations, (c) extend supplemental coverage to lower income Medicare beneficiaries, and (d) Offset the high costs of institutional care for lower and moderate income Georgians (Centers for Medicare and Medicaid Services 2005).

Medicaid covers forty-seven million low-income people, including twenty-four million children, eleven million adults, and more than thirteen million elderly and disabled people, at an estimated annual cost to the federal and state governments of \$250 billion (Centers for Medicare and Medicaid Services 2005). It is jointly funded by state and federal governments, and is managed by the states. Regardless of the interstate differences, the non-federal cost turned out to be considerably higher than expected, thus contributing to fiscal crises in many states. Whether or not a person is eligible for Medicaid will depend on the state where he or she lives. The eligible group served by Medicaid includes certain categories of low-income adults and their children, pregnant women, parents of eligible children, people with certain disabilities and elderly needing nursing home care.

One of the primary requirements for Medicaid is having limited assets, but poverty alone does not necessarily qualify an individual for Medicaid. According to the Centers for Medicare

and Medicaid Services, "Medicaid does not provide medical assistance for all poor persons. Even under the broadest provisions of the Federal statute (except for emergency services for certain persons), the Medicaid program does not provide health care services, even for very poor persons, unless they are in one of the designated eligibility groups" (Centers for Medicare and Medicaid Services 2005). Since each state manages the program, there are variations in the plan across the country. For our study we will discuss Medicaid coverage in Georgia, focusing specifically on Barrow and Clayton counties.

The Medicaid program began serving Georgians in 1968. According to the Georgia Department of Community Health, Georgia Medicaid served 1.5 million members with \$5.9 billion in state and federal funding in fiscal year 2006. Currently, for every dollar of state funds spent, Georgia Medicaid receives \$1.63 in federal funds (Georgia Department of Community Health 2010). Table 2 below provides information relating to Medicaid enrollment for 2005-2008.

Table 2. Average Monthly Enrollment for Medicaid for Fiscal Years 2005 to 2008

FISCAL YEAR	AVERAGE MONTHLY ENROLLMENT	
	GA	U.S.
FY 2005	1,369,592	42,525,000
FY 2006	1,383,254	42,407,700
FY 2007	1,275,259	42,506,650
FY 2008	1,253,454	44,154,750

Note: The average monthly enrollment figures does not include March and June 2007, given they are not final pending retro eligibility

Sources: Georgia Department of Community Health 2010 and State Health Facts 2010

Like Medicaid there are other programs introduced in Georgia, one of which is PeachCare for Kids. With the 1997 Title XXI of the Social Security Act created by the Congress,

the states were given an opportunity to create programs to increase access to affordable health insurance. Georgia introduced PeachCare for Kids in 1999, providing comprehensive healthcare to children through the age of 18 who do not qualify for Medicaid and live in households with incomes at or below 235 percent of the federal poverty level (PeachCare for Kids 2010).

Georgia Families is another such program. This program delivers healthcare services to members of Medicaid and PeachCare for Kids. The program is a partnership between the Department of Community Health and private care management organizations. Georgia Families allows members to select a health care plan that fits their needs by providing a choice of health plan (Georgia Department of Community Health 2010).

The focus of this study is on Medicaid, and the Barrow Regional Medical Center and the Southern Regional Medical Center offer services to this population. A brief description of some of the services they provide are addressed below.

Barrow Regional Medical Center

The passage of the Hill Burton Act facilitated the opening of Barrow Regional Medical Center in 1951. The hospital's mission is "to provide quality healthcare services to our patients and their families with compassion and care without compromise; to contribute to the wellbeing of our employees; and to establish the hospital as an integral part of the community" (Barrow Regional Medical Center 2010). Barrow Regional Medical Center is a 56-bed facility with gross patient revenue of \$108,650. The hospital provides acute care, diagnostic services, emergency services and outpatient services to the local community. Emergency care is provided 24 hours a day, seven days a week, through the hospital's exclusive ER Extra Initiative.

Southern Regional Medical Center

Southern Regional Medical Center began its operations as Clayton General Hospital in 1971 and was established to provide high quality medical care to the residents of Clayton County and surrounding communities. Southern Regional is a not-for-profit, community based healthcare provider that began growing into a health system in the early 1990s (Southern Regional Health System 2010). The Center has 274 beds with patient revenue of \$745,476, forms one segment of the Southern Regional Health System. Other components include a Long Term Acute Care Hospital, a Women's Life Center and an Orthopedic Institute. The Center offers a wide range of healthcare services with its signature services covering weight management, orthopedic joint replacement, comprehensive cardiac services, diagnostic imaging, surgeries, and women's healthcare services.

Factors affecting Access to Care

The ongoing issue of access to health care for all citizens has been of concern to decision-makers at all levels as well as individuals who face seemingly formidable obstacles when attempting to access care. The Metropolitan Atlanta Hospital Accountability Project, a program of the nonprofit consumer advocacy organization, Georgia Watch, sponsored a study that examined the financial practices of metropolitan area nonprofit and for-profit hospitals in relation to healthcare access and affordability. According to the study, certain barriers can be high hurdles in accessing care for all individuals, but low-income, uninsured and underinsured populations may be disproportionately affected due to socioeconomic factors that affect them (Lang 2010). This structure can be described as fragmented and two-tiered and presents

implications for low-income families. For a large fraction of Americans, their jobs do not provide health insurance or other benefits, and although government programs are available for children, adults without private healthcare coverage have few options. Extensive poverty, the increasing proportion of minority households, and the growing dependence on insecure service sector work all influence access to healthcare for families at the economic margin (Angel, Lein and Henrici 2006). An examination will be undertaken to explore some the issues that affect different players involved in the delivery of healthcare as well as some of the factors that affect the beneficiaries of healthcare.

Hospitals

In 2008, metropolitan Atlanta hospitals marked-up their costs to 235 percent increase, on average, though price hikes at some facilities reached as high as 714 percent (Lang 2010, 3). When there are such high mark-ups on services, numerous patients, but more so the uninsured and other vulnerable groups, are faced with the choice of whether to seek medical attention. Many hospitals that are granted tax exemptions in exchange for treating the low-income populations have no signage, or signage that is not easily seen, about the availability of financial assistance for potential patients to the facilities. In fact, the Georgia Watch sponsored study found that “only one-half of the 34 hospitals examined had clear signage placed at some part of the hospital advertising the availability of free or reduced-cost care for uninsured and/or low-income persons” (Lang 2010, 3). Provisions in the recently-passed national healthcare reform law (the Patient Protection and Affordable Care Act) impose new requirements on tax-exempt hospitals. Under the new law, hospitals must establish written financial assistance policies that clearly specify eligibility criteria and widely publicize these policies.

Nonetheless, safety net hospitals that provide subsidized care for the vulnerable populations are prone to incur a huge amount of debt due to the level of subsidies, and the fact that they are sometimes never reimbursed for such services. Some hospitals have had to close their doors because of the financial strain they experience. After only two years of operation, DeKalb Medical Center at Hillandale began to experience shortfalls as a result of a large number of unpaid bills. Southern Regional Medical Center almost closed its doors in December of 2008 due to the cost of care for its uninsured patients, who comprised a significant percent of its total patient load. The hospital provided about \$80 million in indigent care that year (Lang 2010, 6). In recognition of the fact that the small number of safety net hospitals provide a disproportionate share of indigent care, the Institute of Medicine (IOM) released a report in 2000 describing the healthcare safety net—the nation’s “system” of providing health care to low-income and other vulnerable populations—as “intact but endangered” (Lewin and Baxter 2007). IOM recommended improved monitoring of the structure, capacity, and financial stability of the safety net. In terms of patient revenue margin, public safety-net hospitals fared much worse than other hospitals with –6.7 percent compared to –0.8 percent for nonprofit safety-net hospitals and 2.2 percent for investor-owned safety-net hospitals (U.S. Department of Health and Human Services 2007).

Insurance Coverage

Insurance status is a key determinant in a consumer’s ability to afford needed healthcare, and those that have no form of insurance, whether private or public, are especially affected, though each group has its own particular challenges (Lang 2010). It was reported by the Associated Press that healthcare insecurity is becoming a major issue as the downturn in the

economy continues (Kerr 2009). It has also been documented that nearly one in four people expressed fear of losing coverage in the next year. About the same number reported that they or a family member delayed seeing a doctor in the past year because of what it might cost.

Despite the important role that health insurance plays in obtaining necessary care, 1.6 million Georgians, or 18 percent of Georgia population, are uninsured (Georgians for a Healthy Future 2009). This figure forms part of the 42.6 million Americans that lack health insurance (Billings, Parikh, and Mijanovich 2000). In Georgia, the uninsured are nearly four times more likely than the insured to have gone without a routine check-up in the past two years, and are more likely than the insured to experience avoidable hospitalizations for conditions such as diabetes, hypertension, and asthma (Georgians for a Healthy Future 2009). Seventy-two percent of consumers who were surveyed in the Georgia Watch sponsored study identified themselves as underinsured and stated they often delay preventive and other care due to the fear of the cost, as they are uncertain whether they can pay their part of a hospital bill (Lang 2010).

Also the Georgia Watch sponsored study found that poorer individuals are much more likely than higher-income individuals to lack insurance, and account for nearly two-thirds of all uninsured consumers. The Commonwealth Fund study confirms this fact that a disproportionate number of those who lack health insurance are low-income workers (Billings, Parikh and Mijanovich 2000). Moreover, low-income workers are less likely than those with high incomes to have employee-sponsored health insurance. The foregoing discussion is supported by the findings in an article published by Georgians for a Healthy Future which stated that the majority of nonelderly uninsured Georgians are in working families, four-fifths of the uninsured are in families with at least one worker, and nearly 70 percent are in families with at least one full-time

worker (Georgians for a Healthy Future 2009). From 2000 to 2007, health insurance premiums for Georgia working families increased by 72.5 percent (Lang 2010, 8).

Furthermore, Census figures showed that the economic cycle during 200 to 2007 period was one of the weakest on record for working families, leaving many unable to afford their medical bills. A study of nonprofit hospitals in Barrow and Clayton counties is justified since these counties were determined to have among the highest level of uninsured persons. Of the counties involved in the Georgia Watch sponsored study, Pickens County and Clayton County had the highest level of uninsured patients, about 23 percent of their total residents, followed closely by Barrow and Bartow counties with 20 percent (Lang 2010, 5). Uninsurance rates vary between different regions of the state, from a low of 12 percent uninsured in the East Metro Public Health District to a high of 24 percent uninsured in the Clayton Public Health District (Georgians for a Healthy Future 2009).

Poverty and access

Historically, it has been demonstrated that unemployment and poverty rates keep rising after a recession ends. In 2008, 39.8 million people were in poverty; in 2009, the figure increased to 43.6 million therefore, poverty rates are likely to continue to rise in 2010 (Urban Institute 2010). Unemployment benefits do not ensure that unemployed workers will avoid poverty, partly because many low-income workers are not eligible for benefits (Nichols, 2010). There are many factors that are responsible for low income households experiencing poor health, but the more important are limited access to low-cost care, lack of transportation options to access timely care, increased likelihood of having a dangerous job and unhealthy lifestyle habits. The findings of the Georgia Watch sponsored study showed that low-income persons spend their

limited income first on basic necessities such as food, clothing, and housing, which leaves no additional funds for healthcare, especially private insurance and preventive care (Lang 2010, 7). The foregoing information underscores some of the reasons why the uninsured or underinsured tend to utilize the emergency departments as their primary point of care.

Emergency Care

An Emergency Department is defined as a hospital facility that provides unscheduled outpatient services to patients whose conditions require immediate care, which is staffed 24 hours a day. All metropolitan Atlanta acute care facilities operate an emergency department that operates 24 hours a day, seven days a week. Under the Emergency Medical Treatment and Labor Act, hospitals participating in the Medicare program are required to stabilize and treat anyone who enters the emergency room, regardless of their insurance status or ability to pay. However, the law does not require emergency departments to provide care for those who do not have an emergency diagnosis. Emergency conditions are defined as currently threatening a person's life or long-term health.

When illness or injury strikes, Americans count on the emergency care system to respond with timely and high-quality care. At the same time, the increasing use of the emergency system represents failures of the larger healthcare system (Institute of Medicine of the National Academies 2007). Many low-income, uninsured and underinsured individuals use the emergency room as their access point to a hospital and as their primary care provider for two main reasons. First, many uninsured consumers avoid care until a condition escalates to an emergency situation. Second, these consumers believe the emergency room is their only health care option, because it is the only place in a hospital where care is guaranteed regardless of the patient's

ability to pay (Lang 2010). A cross-sectional survey administered to self-referred non-urgent patients of a university emergency department concluded, among other things, that many of the patients were unaware of other places to go for their current health problem. Even those patients with a primary care provider sought care in the emergency department because it was believed to provide better care despite its perceived increase in both waiting time and cost (Northington, Brice and Zou 2005).

A Commonwealth Fund study classified emergency department visits according to four basic categories:

- Non-emergent. Cases where immediate care is not required within 12 hours (e.g., sore throat).
- Emergent-primary care treatable. Care is needed within 12 hours, but care could be provided in a typical primary care setting (infant with a 102° fever).
- Emergent-emergency department care needed: preventable/avoidable. Immediate care in an emergency department setting is needed, but the condition could potentially have been prevented or avoided with timely and effective ambulatory care (asthma, diabetic ketoacidosis, etc.).
- Emergent-emergency department care needed: not preventable/avoidable. Immediate care in an emergency department setting is needed, and the condition could not have been prevented/avoided with ambulatory care—heart attacks, multiple trauma, and so on—(Billings, Parikh and Mijanovich 2000).

Visits involving preventive care are more appropriately addressed in a clinical or primary care setting than in an emergency room which is the most expensive point of entry at a hospital. For example, it typically costs \$715 to treat a urinary tract infection in an emergency room

whereas it can be treated more affordably in a clinic or primary care setting. In Georgia, the average clinic visit is \$29 and an average primary care doctor visit can range from \$75 to \$120. About 37 percent of all emergency room visits in 2007 were during regular business hours, making clinics and urgent care centers viable alternatives to the emergency room when non-emergent care is needed (Lang 2010, 16).

The emergency department of Barrow Regional Medical Center has two distinct areas of treatment, a FastTrack area with 3 beds for minor emergencies and another area with nine beds for major healthcare emergencies. Fast Track handles all minor care, ranging from sore throats to minor orthopedic injuries. Initial assessments are generally done within 15 minutes of arrival and patients with non-life threatening conditions are usually evaluated, treated and discharged to their homes in typically less than two hours. In order to deliver the fastest quality care possible, the emergency room has a computerized tracking system that records every second the patient spends in the emergency department (Barrow Regional Medical Center 2010). Southern Regional Medical Center's Emergency Department treats nearly 80,000 patients a year, making it one of the busiest in the State of Georgia. The Department is designed to handle almost every type of emergent and critical care situation, and is equipped with 39 acute beds, all with state-of-the-art bedside monitoring equipment. The Emergency Department treats patients dealing with serious injuries, life-threatening illnesses, and multiple system organ failures (Southern Regional Health System 2010).

Methodology

The design of the study was of a descriptive nature where the researchers combined a case study approach with a cross-sectional method. Use of the case study approach allowed for the

inclusion of an in-depth, detailed information on Barrow and Clayton counties. Socio-demographic, economic and health information related to the two counties were extracted from federal records including the U.S. Census Bureau, Census of Governments, USA Counties, and Current Population Survey. The County and City Data Book and the University of Georgia website provided comprehensive information on the two counties in relation to population, education, income and poverty levels. Articles published by Georgia Watch and the Urban Institute were helpful in providing current positions on the issue. This approach not only allowed greater insight to be gained into the issue but also revealed any weaknesses in the system and which could serve as an impetus for proposing a new program or strategy to improve the quality of life for the communities. Since the researchers limited their case study to an analysis of a few factors that influence the effectiveness of safety nets, the strength of the case study approach, combining diverse pieces of information to obtain a better picture, was not fully utilized.

Identifying the sample population

The demographic information obtained from the two counties provided justification for focusing on the two nonprofit hospitals in Barrow and Clayton counties, but more specifically, the patient population that visits their emergency departments. The patients who visit the hospitals' emergency departments comprise the insured, the uninsured, the underinsured and other vulnerable groups. We chose as our unit of analysis the percentage of that population who received Medicaid assistance.

Selecting variables and their measurements

The variables considered were cause for visit, age, and sexual orientation. Age refers to the proportion of persons in the corresponding age groups of the target population; cause refers to the underlying cause of illness; and sexual orientation refers to gender that is either male and female. Detailed definitions of the terms used in the analysis are presented in Appendix B.

Data Analysis

In order to make the assumption that county level information was an accurate reflection of the information available at the nonprofit hospital level, the researchers manipulated information provided in the Online Analytical Statistical Information System (OASIS). The OASIS Web Query Tool was the principal mechanism through which available qualitative information relating to the counties was manipulated. This proved to be a very reliable source of information since it is the repository of relevant health information which all hospitals are required to submit to the Georgia Department of Human Resources, Division of Public Health. It provides standardized health data by county on emergency visits, hospital discharge, and population. Therefore, reporting on the usage pattern of the emergency departments by Medicaid patients of the two counties was facilitated. The data generated for the years, 2004, 2005, 2006, 2007 and 2008 allowed for a comparative analysis to be undertaken. The inclusion of a cross-sectional design to compare data at the state level proved a valuable strategy since it reinforced what was reflected at the county level and could serve to stimulate further research on the issue. Future research could be undertaken not only by administrators but also by professionals in other fields of work who have different interests. It is well documented that the greatest value of cross-sectional studies is in describing the relationships among several variables, but they are not very

appropriate for providing investigators with causes. From the analysis, an assessment was done to determine whether nonprofit hospitals in Barrow and Clayton counties were meeting their role of safety net providers and providing community benefits.

Study limitations

It is well known that hospitals offer many other services in addition to emergency care. Therefore, concentration on a specific service can only serve as an indicator of the level of performance by safety nets. Also exclusion of such important variables as race created a bias in the results since it is well documented that strong health disparities exist among the various races. The limited coverage of factors which are involved in offering Medicaid coverage was also a constraint. Lastly, evaluating the performance of safety net hospitals in two of twenty-eight counties in metropolitan Atlanta may not be sufficient to arrive at a conclusive decision on their effectiveness. It must also be stressed that administrative data on its own can seldom establish a clear causal link between outcomes and the factors that led to the outcomes. Safety net performance is undoubtedly affected by many variables, including resource supply, composition, support levels, demand levels, etc.

Findings

This section of the study examines the results of visits made by the Medicaid population of Barrow and Clayton counties to the emergency departments of Barrow Regional Medical Center and Southern Regional Medical Center. The examination highlights and compares trends from 2004 to 2008 according to county, emergency department visit rate, principal reason for visit, age categories and sexual orientation. A review of the tables in Appendix C indicate that

some cells indicate an asterisk. This occurred where the size of the selected population was unknown and census population estimates were used as the denominator in the calculation of the data. The major findings for years 2004 to 2008 follow.

Year 2004:

- Endocrine, Nutritional and Metabolic Diseases: A relatively high visit rate (1,692.7 visits per 100,000 persons) was recorded for the 0-12 age category in Barrow County.
- Mental and Behavioral Disorders: The 13-19 and 20-29 age categories for both counties showed higher visit rate levels than the other age categories.
- Nervous System Diseases, Bone and Muscle Diseases, and External Causes: Barrow County recorded higher visit rate levels than Clayton County in all age categories.

Year 2005:

- Infectious and Parasitic Diseases: The visit rate levels for the 0-12 age category in both counties are high in comparison to the other age categories (1,803.9 visits per 100,000 persons in Barrow County, and 973.7 per 100,000 in Clayton County).
- Mental and Behavioral Disorders: The 13-19, 20-29 and 30-44 age categories for both counties showed higher visit rate levels than the other age categories. This trend continued in the 45-49 age category for Barrow County.
- Digestive System Diseases: Comparatively high visit rate levels are recorded for the 0-12 age category in both counties (1,274.3 visits per 100,000 persons in Barrow County and 1,458.8 visits per 100,000 persons in Clayton County).

- Reproductive and Urinary System Diseases: The visit rate level in the 20-29 age category for Clayton County was approximately three times that of Barrow County (1,416.4 visits per 100,000 persons in Clayton County and 486.9 visits per 100,000 persons in Barrow County).
- Respiratory Diseases: Visits made by the 0-12 age category for these diseases recorded the highest visit rate level for both counties.
- Males and females recorded visit rate levels which were almost similar for respiratory related diseases.

Year 2006:

- Infectious and Parasitic Diseases: In Barrow County, the 0-12 age category showed an extremely high visit rate compared to all the other age categories for both counties.
- Respiratory Diseases: Relatively high visit rate levels were recorded for all categories in both counties, with the 0-12 age category in both counties showing the highest levels.
- Digestive System Diseases: The 0-12 age category for both counties recorded the highest visit rate level among the age categories (1,033.3 visits per 100,000 persons in Barrow County and 1,300.1 per 100,000 in Clayton County). This trend was similar to that for 2005.
- External Causes: Visit rate levels were comparatively high for the 0-12 and 13-19 age categories in both counties.
- Male and female visit rates for External Causes are higher in Barrow County than in Clayton County.

Year 2007:

- Infectious and Parasitic Diseases: Barrow County had higher visit rate levels than Clayton County in all age groups, except 20-29 and 30-44 age categories.
- Mental and Behavioral Disorders: The visit rate levels were very similar in both counties with highest levels shown in the 13-19 and 20-29 age categories.
- Nervous System Diseases and Respiratory Diseases: The visit rate levels were higher in all age categories for Barrow County. However, the 20-29 age category visit rate level for Respiratory Diseases was lower than that of Clayton County.
- Digestive System Diseases: Among the 0-12 age category, the visit rate level was higher than the other categories for both counties.
- External Causes: Barrow County showed much higher visit rate levels in all age categories than Clayton County.

Year 2008:

- Infectious and Parasitic Diseases: Barrow County had a higher visit rate than Clayton County for all age categories. The pattern approximates that of 2007.
- A similar pattern is evident in the visit rates for Nervous System Diseases and Respiratory Diseases. However, in the 0-12 and 13-19 age groups, the levels for Barrow County were almost double and triple times that of Clayton County for Infectious and Parasitic Diseases.

- Mental and Behavioral Disorders: The 13-19 and 20-29 age categories for both counties showed higher visit rate levels than the other age categories.
- Major Cardiovascular Diseases: Generally low visit rate levels were recorded for all age categories.
- Digestive System Diseases: The visit rate levels were very similar for both counties.
- Reproductive and Urinary System Diseases: The visit rate levels were much higher for females, as was expected. In addition, the 13-19 and 20-29 age categories reflect very high visit rate levels when compared to the other age categories.
- Females had much higher visit rate levels than males for nervous system diseases and for bone and muscle diseases.
- Respiratory Diseases and External Causes: these two groups of visits recorded the highest visit rate levels among the reasons listed for visits to emergency departments for both counties. This factor was most evident in the 0-12 age category for all the years under examination.

The information provided above served as the basis to make the following evaluation:

Reasons for Visits

From 2004 to 2008, the emergency department visit rate levels by the 0-12 and 13-19 age categories in Barrow County remained consistently high for Infectious and Parasitic Diseases, Respiratory Diseases, and Digestive System Diseases. A similar trend was recorded in Clayton County for Respiratory Diseases, and Digestive System Diseases (see Figures A and B below).

Figure A: Barrow County

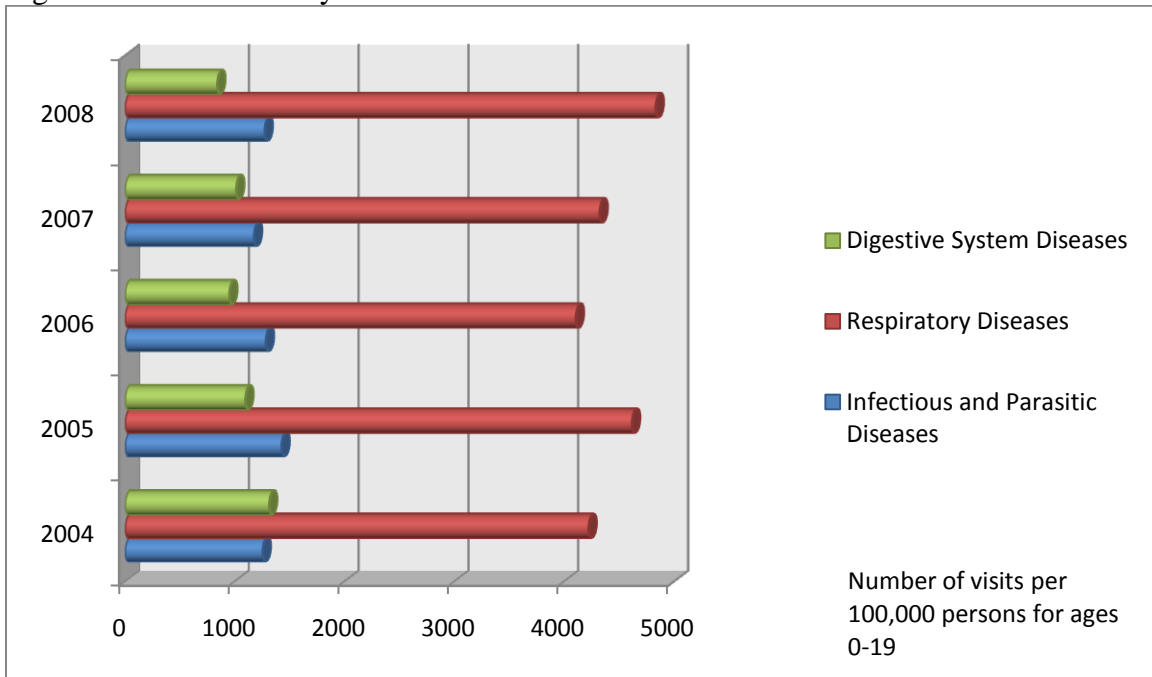
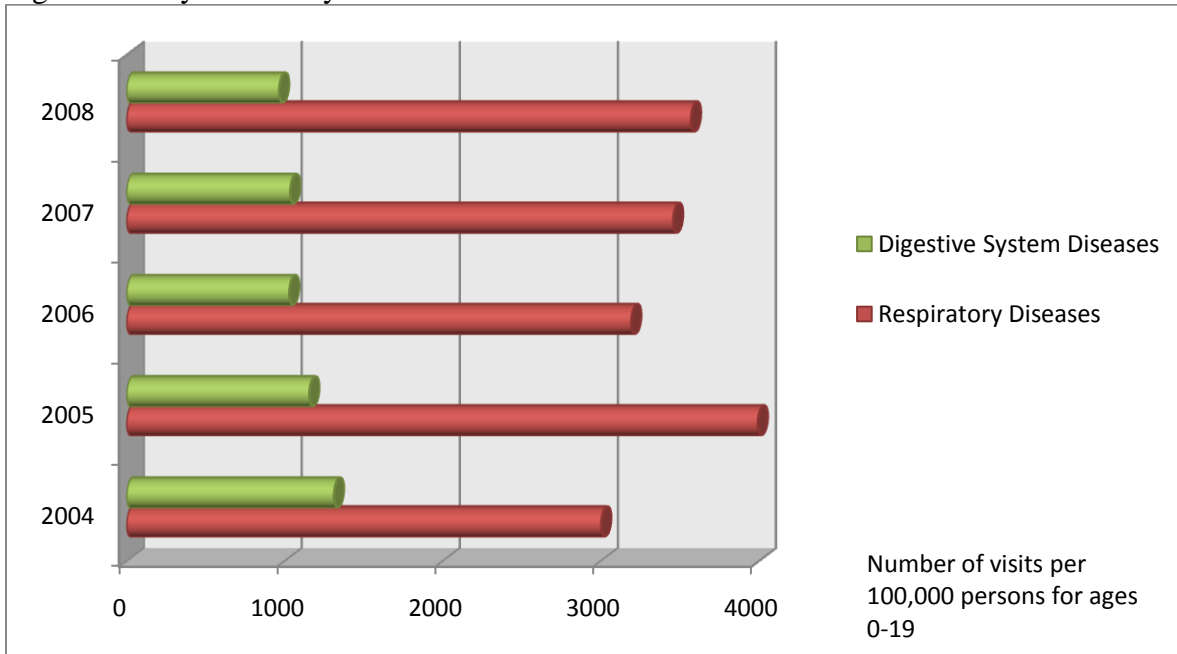


Figure B: Clayton County



Infectious diseases include meningitis which is an infection of the coverings around the brain and spinal cord, and occurs most often in children, teens, and young adults. There are two types of meningitis: viral meningitis and bacterial meningitis. Since the two kinds of meningitis

share the same symptoms, it is highly recommended that persons displaying symptoms related to this disease should see a doctor immediately for a diagnosis to be done. If not treated promptly, bacterial meningitis could lead to death. Respiratory diseases range from mild and self-limiting such as the common cold to life-threatening such as bacterial pneumonia or pulmonary embolism. Included among digestive system diseases are ruptured appendix, and gastrointestinal bleeding. If a person has appendicitis and does not have surgery in time, the appendix can rupture and cause serious problems, sometimes even leading to death. Similarly, gastrointestinal bleeding could lead to death if left untreated.

Many of the illnesses mentioned above affect young children who accounted for the highest visit rate levels. When children have fevers, particularly those that are prolonged or carry high temperatures, there is cause for much concern that they may have a serious illness. Therefore, they are often taken for emergency treatment as a form of precaution. The descriptions and effects of the diseases cited above convey the immediacy and urgency with which affected patients should seek medical attention. The case has been made repeatedly that the emergency department may not be the most appropriate for the treatment of the diseases affecting Medicaid patients, a large percentage of whom comprise children. However, they are impacted by the treatment administered during emergency visits.

It was previously noted in this study that even when persons have insurance coverage, they sometimes delay preventive and other care due to the fear of cost. Another major contributory factor to the high rates of visits to the emergency department is the lack of knowledge or education about the importance of having a primary healthcare provider. For some of the diseases, visit rate levels to the emergency departments of the two nonprofit hospitals are very high and recommendations will include educating Medicaid patients about seeking care

early and elsewhere. While no information was available in this study about how many lives are actually saved through visits to the emergency departments, the 1992 National Hospital Statistics Survey reported that of 119.2 million visits made to emergency departments, 12.8 percent (15.3 million visits and 5.2 visits per 100 population) resulted in admission to the hospital (Pitts et al. 2008).

Utilization rates between the two counties fluctuated according to reason for visit but generally, Barrow County which has a smaller population recorded higher visit rates than Clayton County. The size of Barrow County in relation to the high visit rate levels for some diseases could cause concern. However, Barrow Regional Medical Center should be commended for its ability to treat such large numbers of patients and highlights the fact that size does not matter in relation to the impact of community benefit. In fact, the Center was cited in a study as one of two hospitals in metropolitan Atlanta that provided the highest level of free care for poor people (Lang 2010).

Visits by Age Categories

Visits for respiratory diseases reflected an extremely high visit rate among the 0-12 and 13-19 age categories in both counties. However, while the visit rate decreased for the 20-29 age group, the reduction was not as steep in Clayton County as it was in Barrow County (see Figures A and B above). These trends may be explained by the fact that shortness of breath, labored or difficult breathing, asthma, and wheezing have been judged to be among the leading causes of visits to the emergency department. In addition, the expectation is that as a person gets older, the

symptoms associated with asthma and wheezing usually decrease or disappear leading to less reasons to seek emergency care.

Several circumstances may explain the high visit rate levels among these age categories. On many occasions, seeking treatment is delayed until a person's medical condition has seriously worsened. If treatment is received earlier in an ambulatory care setting, the trip to the emergency department might have been avoided. For children aged 0-2 years, adults are unable to purchase over-the-counter medications to relieve symptoms. Therefore, adults use the emergency department to obtain the required medications as well as to receive supportive care. Some adults administer home treatments or remedies for some of the illnesses and only when the children's conditions do not improve, are the children rushed for emergency care. Another reason for emergency visits could be that many working parents are unable to keep appointments with primary care providers and therefore seek medical attention for their children in the emergency department. A major reason is related to an adult's decision to take persons in these age groups (particularly the 0-12 age group) for emergency care since in most cases they are unable to describe their symptoms very well.

When external causes are excluded from the list of reasons for visits, overall persons 0-12 and 13-19 years of age had a higher emergency department visit rate than persons in the other four age categories. The 2006 emergency department Summary state that the most common reasons for emergency department visits among children (aged 15 years and under) included fever, cough, vomiting, and earache, and the most common specific principal reasons given by adult patients (aged 15 years and older) for seeking emergency care were, in descending frequency: chest pain, abdominal pain, back pain, headache, and shortness of breath (Pitts et al. 2008).

Among visits made for reproductive and urinary system diseases, the highest visit rate levels were recorded among the 13-19 and 20-29 age categories. This is expected since these age categories (particularly the 20-29 age category) are included in the period when most females decide to have children. Pregnancy-related illnesses may include complications during pregnancies, miscarriages or abortions, all of which could lead patients to seek emergency care. Even though it was reported that it is costlier to treat a urinary tract infection in the emergency room than in a clinic or primary care setting, a visit to the emergency department sometimes saves the lives of persons.

An analysis of emergency visits by Medicaid patients at the state level was conducted using the same variables as for the county analyses and for the same period 2004 to 2008 (see Appendix C). The data obtained reveal a similar trend in relation to the high visit rate levels for specific diseases.

Analysis of emergency department records usually cannot provide a causal explanation for high visit rates for non-emergent, primary care treatable, or preventable/avoidable conditions. However, an analysis of patterns of use among subgroups in the population could assist in identifying areas of particular concern to focus further inquiry or to develop intervention strategies. Therefore, the researchers make the following recommendations for rationalizing the flow of Medicaid patients to emergency departments of the two nonprofit hospitals.

Recommendations and Conclusion

High usage rates of emergency departments are typically the result of a failure of the primary care delivery system. However, if other parties such as health educators, community

leaders and the patients themselves, share responsibility for ensuring the correct use of emergency departments, this could lead to effectiveness, equity and efficiency in the system.

An important first step would be to make the primary care delivery system more responsive to the residents it serves by understanding the factors that influence the decisions of patients when they become ill and how they want healthcare services delivered. Their unawareness of alternative places to seek care and their belief that better care is provided in the emergency department need to be addressed. The primary care delivery system should seek to reduce waiting times at clinics and doctors' offices, expand office hours, and facilitate telephone consultations so that patients could obtain care that is more timely and appropriate. Educational strategies informed by patients' preferences should also be developed by the primary care system to assist patients identify warning signs of disease and better manage chronic conditions. The provision of community benefits such as clinic support, health screenings and appropriate follow-up care could assist in patients' health conditions being more affordably treated in settings outside the emergency room.

The introduction of mandatory managed care for most Medicaid beneficiaries has meant lower payment rates and loss of Medicaid market share for many safety net primary care providers, including public hospitals and community health centers. This occurrence led to competition for Medicaid patients. On the other hand, collaboration would lead to a more cohesive network of safety net providers which would in turn allow for scarce resources to be better leveraged in the community, and function more effectively on behalf of the low-income and uninsured residents of Barrow and Clayton counties. Eventual cost-effectiveness could be achieved if the primary care delivery system could be better rewarded for providing a lower-cost alternative to emergency department use and for preventing emergency conditions from

developing (Billings, Parikh and Mijanovich 2000). The Patient Protection and Affordable Care Act proposes the expansion of Medicaid to all non-Medicare eligible individuals under age 65. It is expected that an expansion of the Medicaid population would lead to more resources to be shared among primary care providers. Without stronger incentives and higher payment rates, there will be fewer sources of primary care in the future and a greater dependence on emergency departments.

When patients visit the emergency departments, health educators should serve as gatekeepers and seize the opportunity to share information about total wellness programs. Where these programs exist, health educators should seek to intensify them and launch new programs wherever the target groups are most likely to converge, such as in schools. Action of this nature could lead to lifestyle changes. In addition, some level of equity could be gained in the healthcare system by enacting programs that help reduce barriers to health care access, such as screenings with appropriate follow-up care and health education. The overall fiscal and physical health of a community will also be enhanced.

Hospitals are required to submit uniform, computerized emergency department records, similar to that from which the findings for this study were extracted. The ability to track developments and calculate data from population-based rates would allow for more detailed analysis and the targeting of specific geographic areas or population subgroups within Barrow and Clayton counties where the most serious problems exist. There is a strong likelihood that some health educators reside within the community where they are employed. This places them in an advantageous position to share health improvement data with key stakeholders, and become involved in local change efforts to increase overall access and avoid the misuse of emergency departments.

Community leaders should be used as change agents, and to introduce programs to support community coalitions in the design, implementation, and evaluation of unique community-driven strategies. These programs could be instrumental in diverting patients away from, and reduce the use of, emergency departments as the first point of access. Programs similar to the Eat Smart Program organized by the Vegetarian Society of the District of Columbia could be developed for Medicaid patients and their families (Carter 2008). This program addresses the health disparities in Washington D.C. and aims to educate the population on how they can avoid life-threatening illnesses through adopting a plant-based diet and reduce expenditure on processed foods. Eat Smart offers nutrition, cooking and shopping classes to its students wherein they will understand the connection between health and diet. The inability of the primary care system to deliver care to those who most need it is one of the social determinants of health. Poor and unequal living conditions are the consequence of poor social policies and program, unfair economic arrangements, and bad politics. Therefore action on the social determinants of health must involve the whole of government, civil society and local communities.

The percentage of persons living below the poverty level in Barrow and Clayton counties range from 11.3 to 14.7 percent. Where poverty exists, as it does in Barrow and Clayton counties, low-income households are usually adversely affected in several ways including lack of access to appropriate healthcare. Government safety net programs were established to protect families who fall into this category but they are under increasing pressure to deliver the services for which they were established.

The healthcare safety net comprises a wide variety of primary care systems to deliver care to low-income and other vulnerable populations, including the uninsured and those covered by Medicaid. Healthcare safety net providers have a legal mandate to provide services regardless

of a patient's ability to pay and much of this care takes place in the emergency departments. The Barrow Regional Medical Center and the Southern Regional Medical Center, both nonprofit hospitals, comprise part of the healthcare safety net. Concern has been expressed about the level of community benefits that nonprofit hospitals offer in return for tax exemptions they receive. When nonprofit hospitals do not provide the appropriate level of community benefits, inequity in the level of care results since other hospitals are forced to carry the burden of care for those who need assistance. This study successfully determined that nonprofit hospitals still provide a community benefit through the services received by Medicaid patients in the emergency departments.

Medicaid is a critical component of any safety net program and offers insurance coverage to low-income individuals and families who fit into an eligibility group recognized by federal and state law. Some of the patients covered by Medicaid delay preventive and other care due to fear of cost or because of uncertainty whether they can pay their part of the hospital bill. Others avoid care until their condition escalates into an emergency, are unaware of alternatives for treatment or believe that better care is received through emergency care. If departments other than the emergency departments of Barrow Regional Medical Center and Southern Regional Medical Center could assist low-income, uninsured and underinsured patients to access affordable healthcare and provide clinic support, health screenings and appropriate follow-up care, health conditions of patients could be more affordably treated in settings outside the emergency room. A component of the Patient Protection and Affordable Care Act includes the creation of a new Medicaid state plan option which would permit certain Medicaid enrollees to designate a provider as a health home. The creation of a such structure should serve to divert some of patients who visit the emergency departments to other departments of a safety net

hospital and allow for care management, care coordination, and health promotion (Focus on Health Reform 2010).

While it has been established that visits to emergency departments play a major role in saving lives, and that a visit to the emergency department could be indicative of an urgency, it is not always the most appropriate facility to visit. The conditions of many patients who visit are non-emergent, and others whose conditions are emergent, could be treated in a primary care setting. If their use for non-emergent cases is substantially reduced, nonprofit hospitals could better fulfill the community benefits they are expected to offer through services offered in the emergency departments. Waiting times would be shortened, hallway boarding would be reduced and generally there would be greater efficiency in the operations of emergency departments.

Accessible and high quality emergency services provide a benefit that is not tangible but yet highly valued. This is a community benefit that too often goes unnoticed. Whether it serves as a first choice or last chance source of care, the emergency department provides a valuable and irreplaceable service for all community residents, including low-income underserved populations.

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Appendices

Appendix A

Comparative Demographic Profile of Barrow and Clayton counties together with average county levels.

	BARROW	CLAYTON	AVERAGE COUNTY IN GEORGIA
Year of County Creation	1914	1858	
Total Population, 2008 estimate	70,073	273,718	60,917
Economics			
Median Household income (2008)	\$51,318	\$46,293	\$41,186
% of All Persons below poverty level	11.3	14.7	19.1
Per capita income, 2007	\$26,222	\$24,221	\$26,299
Education			
Total FTE enrollment: 2007-2008	11,899	52,029	9,362
% students economically disadvantaged	47.2	73.8	60
High school dropout rate per 100 enrolled	4.5	0.8	4.2
% of grads with college prep diploma	64.7	88.0	61.8
Class of 2008 percent completion	72.5	76.5	72.7
Percent not completing high school	26.7	19.9	29.3
% of some college and/or associate degree	26.4	31.5	21.8
Government			
Total direct Federal Government Expenditures, FY 2008	\$264,020,095	\$1,051,129,120	\$425,664,325
Health			
Disability, % age 21-64, 2000	18.7	20.1	23.8
General Hospitals, 2007	1	1	
Labor			
Average annual unemployment rate, 2008	6.4	7.6	6.9
Average weekly wage, all industries, 2008	\$617	\$804	\$589
Public Assistance			
Food stamp recipients, % of population	7.4	13.5	13.8
Medicaid recipients, % of population	20.4	30.6	27.2

Source: Georgia County Guide 2010, Center for Agribusiness and Economic Development, University of Georgia.

Appendix B

Definitions

Reason for ER Visit

Reported causes of illness are based solely on the underlying cause of illness. The underlying cause of illness is defined by the World Health Organization as the disease or injury that initiated the sequence of events leading directly to illness or as the circumstances of the accident or violence that produced the injury.

Infectious and Parasitic Diseases A00-B99 (001-139.8): Certain Infectious and Parasitic Diseases Includes the most common of the infectious and parasitic diseases such as Blood Poisoning, HIV/AIDS, TB, Meningitis.

Endocrine, Nutritional and Metabolic Diseases E00-E90: A series of diseases or conditions related to various endocrine, nutritional and metabolic disorders such as Diabetes.

Mental and Behavioral Disorders F00.0 - F99(290-319): Any of a series of mental and behavioral disorders, which may be developmental or brought on by external factors. Drug overdoses are the misuse or overuse of any medication or drug, including alcohol and tobacco.

Nervous System Diseases G00.0 - G99.8 (320-359): Includes diseases of the central and peripheral nervous systems, including degenerative conditions of the nervous systems like Alzheimer's and Parkinson's.

Respiratory Diseases J00 - J99.8 (460-519): Diseases related to the process or organs involved in breathing such as Flu, Pneumonia, Bronchitis, Emphysema and Asthma.

Major Cardiovascular Diseases 100-178 (390-434, 436-448): Diseases related to the major parts of the circulatory system includes Hypertension, Rheumatic Fever and Heart Diseases, Hypertensive Heart Disease, Obstructive Heart Disease, Stroke, Hardening of the Arteries, Aortic Aneurysm and Dissection.

Digestive System Disease K00.0 - K93.8: Includes diseases associated with the organs necessary for the digestion of food like Alcoholic Liver Disease which involves an acute or chronic inflammation of the liver induced by alcohol abuse.

Reproductive and Urinary System Diseases N00-N99: Diseases relating to the organs of reproduction and urination including Kidney Diseases and Kidney Infections.

Bone and Muscle Diseases M00-M99: Diseases of the musculoskeletal system and connective tissue.

External Causes V01-Y97 (E800-E999): All causes that affect the human body that originate from an external source like motor vehicle accidents, falls, accidental shooting, drowning, fire and smoke exposure, poisoning, suicide, homicide and legal intervention.

Lifestages

An age year grouping methodology based upon predictable mortality. The tables show the following Lifestages: 0-12 Infancy to Later Childhood, 13-19 Adolescence, 20-29 Early Adulthood, 30-44 Young Adulthood, 45-59 Middle Adulthood, 60+ Late Adulthood to Older Adulthood. The highest value for age is 120 years.

Emergency Room Visit Rate (ER Visit Rate)

Formula = [Number of ER Visits / Population] * 100,000. Rates that use Census Population Estimates in the denominator are unable to be calculated when the selected population is Unknown

Source: OASIS 2010, Online Analytical Statistical Information System. Georgia Department of Human Resources, Division of Public Health, Office of Health Information and Policy.

Appendix C

**Table 3: ER Visit Rates by Patient’s Principal Reason for Visit, Age and Sex. Year: 2008,
County: Barrow**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1550.2	603.10	233.1	87.2	*	0.0	456.7	396.7	515.8
Endocrine, Nutritional and Metabolic Diseases	83.6	123.7	68.0	52.3	119.4	*	77.1	46.0	107.7
Mental and Behavioral Disorders	45.0	556.7	310.7	186.0	144.9	*	178.4	152.4	204.0
Nervous System Diseases	77.2	355.7	291.3	186.0	170.5	*	168.4	77.6	257.9
Respiratory Diseases	5,750.7	2,628.7	1,126.4	558.1	460.4	181.2	1,920.9	1,747.8	2,091.5
Major Cardiovascular Diseases	*	0.0	*	34.9	68.2	124.6	42.8	28.7	56.7
Digestive System Diseases	964.9	541.2	602.1	348.8	153.5	68.0	472.4	353.6	589.5
Reproductive and Urinary System Diseases	405.2	1,360.8	1,097.3	424.4	127.90	68.0	510.9	97.7	918.20
Bone and Muscle Diseases	225.1	572.1	485.5	447.60	613.8	147.2	405.3	230	578.1
External Causes	5,178.2	5,582.2	1,349.8	784.8	673.5	226.5	2,196.3	2,118.6	2,272.9

* Census Population Estimates used in the denominator and are unable to be calculated when the selected population is Unknown.

Source: OASIS 2010, Online Analytical Statistical Information System. Georgia Department of Human Resources, Division of Public Health, Office of Health Information and Policy.

**Table 4: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2008,
County: Clayton**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	893.1	185.30	181.80	57.9	49.2	17.0	261.6	252.90	269.7
Endocrine, Nutritional and Metabolic Diseases	90.3	84.2	82.9	47.3	79.4	61.0	73.1	52.2	92.5
Mental and Behavioral Disorders	52.8	434.7	251.3	167.7	157.0	50.9	168.8	143.1	192.8
Nervous System Diseases	68.2	114.6	200.5	123.5	183.5	*	120.9	57.5	180.1
Respiratory Diseases	4,714.5	1,314.2	1,053.2	539.6	374.5	98.3	1,509.2	1,402.8	1,608.5
Major Cardiovascular Diseases	15.3	30.3	42.8	100.6	121.1	54.2	65.8	40.1	89.7
Digestive System Diseases	1,198.2	505.5	569.4	233.2	158.9	81.4	484.8	380.8	581.8
Reproductive and Urinary System Diseases	342.6	835.7	1,152.1	394.8	140.0	40.7	447.5	110.5	761.9
Bone and Muscle Diseases	252.3	323.5	344.8	335.3	297.0	166.1	291.9	162.0	413.1
External Causes	3,132.8	2,203.8	836.7	468.0	306.4	108.5	1,207.8	1,261.2	1,158.0

**Table 5: ER Visit Rates by Patient’s Principal Reason for Visit, Age and Sex. Year: 2007,
County: Barrow**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,445.6	530.1	79.7	54	62.5	*	406.6	371.8	441
Endocrine, Nutritional and Metabolic Diseases	94.6	128.5	*	54	80.4	*	70.0	57	82.9
Mental and Behavioral Disorders	67.5	369.5	249	96	125.1	*	137	89.9	183.5
Nervous System Diseases	60.8	241.0	288.8	204.1	71.5	*	146	45	245.7
Respiratory Diseases	5,073.0	2,538.2	816.6	570.3	375.3	206.9	1,705.4	1,625	1,784.86
Major Cardiovascular Diseases	*	80.3	*	36	44.7	*	32.8	24	41.4
Digestive System Diseases	1,094.3	819.3	488	354.2	151.9	97.3	515.3	431.7	597.9
Reproductive and Urinary System Diseases	385.0	1,220.9	717	378.2	116.2	97.3	430.5	86.9	769.5
Bone and Muscle Diseases	249.9	465.9	637.3	474.2	393.1	109.5	390.2	227.9	550.5
External Causes	5,626.9	5,831.3	1,254.7	930.5	634.4	146	2,323.5	2,290.6	2,356

**Table 6: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2007,
County: Clayton**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	899.7	233.9	152.2	71	50.7	17.6	271.5	256.4	285.6
Endocrine, Nutritional and Metabolic Diseases	100.9	81.3	48.1	34.8	89.8	63.5	69.4	54.8	83.1
Mental and Behavioral Disorders	38.7	379.6	291.1	163.2	111.2	21.2	152.5	143.8	160.5
Nervous System Diseases	47.1	71.2	149.5	104.3	48.8	*	74.6	36.5	110.1
Respiratory Diseases	4,547.3	1,264.1	899.9	386.8	312.2	109.3	1,418.4	1,361	1,471.9
Major Cardiovascular Diseases	30.3	20.3	37.4	86.1	126.8	70.5	66.1	54.8	76.7
Digestive System Diseases	1,331.9	440.6	579.5	238.7	105.4	63.5	502.9	413.1	586.8
Reproductive and Urinary System Diseases	309.4	979.5	1,092.2	309.8	103.4	31.7	422.1	94.3	728.1
Bone and Muscle Diseases	247.2	406.7	373.8	299.2	241.9	162.2	284.7	175.7	386.5
External Causes	3,245.7	2,616.4	953.3	534.9	320	172.8	1,332	1,389.1	1,278.7

**Table 7: ER Visit Rates by Patient’s Principal Reason for Visit, Age and Sex. Year: 2006,
County: Barrow**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,651.8	478.1	137.3	84.4	55.7	66.6	436.4	363.3	508.6
Endocrine, Nutritional and Metabolic Diseases	70.5	*	49	54.2	55.7	106.6	62.8	47.4	78
Mental and Behavioral Disorders	54.8	614.8	196.1	174.7	185.7	*	180.5	135.8	224.7
Nervous System Diseases	39.1	85.4	137.3	204.9	92.8	*	108.3	34.7	181
Respiratory Diseases	5,174.6	1,776	607.8	463.9	427.1	146.6	1,508.6	1,399.5	1,616.4
Major Cardiovascular Diseases	*	*	0.0	72.3	111.4	*	45.5	44.2	46.8
Digestive System Diseases	1,033.3	768.4	382.4	222.9	250.7	106.6	452.1	388.6	514.9
Reproductive and Urinary System Diseases	383.6	973.4	588.2	325.4	92.8	*	364.2	75.8	649
Bone and Muscle Diseases	211.4	717.2	421.6	385.6	482.8	*	364.2	271.7	455.6
External Causes	5,683.4	5,054.6	931.4	783.3	705.6	146.6	2,094.1	2,157.6	2,031.4

**Table 8: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2006,
County: Clayton**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	702.9	196.1	151.8	74.1	34.2	*	223	205.9	239.1
Endocrine, Nutritional and Metabolic Diseases	83.9	75.7	52.3	63.8	68.3	*	63.8	48	78.5
Mental and Behavioral Disorders	30.2	361.3	311.4	170.5	146.7	33.2	161.8	138.8	183.4
Nervous System Diseases	23.5	48.2	125.6	74.1	72.3	*	60.8	20.6	98.5
Respiratory Diseases	4,168.6	1,194	1,054.4	434.4	317.4	77.4	1,366.7	1,211.7	1,511.7
Major Cardiovascular Diseases	13.4	*	54.9	71.2	102.5	88.5	56.8	38.1	74.2
Digestive System Diseases	1,300.1	474.9	457.9	220.9	144.7	51.6	487.8	404.9	565.3
Reproductive and Urinary System Diseases	295.2	880.9	1,062.3	412.2	140.6	66.4	443.9	113.6	753
Bone and Muscle Diseases	187.9	320	353.2	296.5	245.1	173.3	261.4	141.8	373.3
External Causes	2,338.4	1,916.7	897.5	515.9	331.5	169.6	1,051.8	1,012.7	1,088.5

**Table 9: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2005,
County: Barrow**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,803.9	597.7	93.2	37.6	81.5	*	463.7	459.2	468.1
Endocrine, Nutritional and Metabolic Diseases	107.6	*	*	31.3	61.1	*	56.7	39.9	73.6
Mental and Behavioral Disorders	57.9	470.9	227.9	275.6	193.6	*	200.2	133.1	267.5
Nervous System Diseases	66.2	108.7	145	169.1	51	0.0	100.1	20	180.6
Respiratory Diseases	5,626.8	2,409	632	482.3	428	216.8	1,681	1,484.2	1,879.3
Major Cardiovascular Diseases	*	*	*	*	81.5	332.5	70.1	99.8	40.1
Digestive System Diseases	1,274.3	706.4	414.4	313.2	142.7	*	498.7	409.3	588.5
Reproductive and Urinary System Diseases	264.8	960	486.9	244.3	81.5	*	303.6	63.2	545.1
Bone and Muscle Diseases	662	1,467.1	600.9	670.2	580.9	173.5	658.8	479.2	839.3
External Causes	5,395.1	5,488.1	1,274.3	783	448.4	245.7	2,108.3	2,299.6	1,916.1

**Table 10: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2005,
County: Clayton**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	973.7	308.2	229.7	104.6	47.6	*	316.5	280.6	350.4
Endocrine, Nutritional and Metabolic Diseases	89.9	67.3	66.4	65.4	77.9	56.5	72.4	62.1	82.2
Mental and Behavioral Disorders	56	375.6	298.6	174.4	93	37.7	160.1	138	181
Nervous System Diseases	20.4	28.3	168.4	136.6	47.6	*	76.1	13	136
Respiratory Diseases	5,280.6	1,310.9	1,184.2	555	361.1	184.6	1,696.1	1,528.9	1,854.6
Major Cardiovascular Diseases	15.3	17.7	33.2	107.5	93	82.9	61.9	29.1	93.1
Digestive System Diseases	1,458.8	527.9	678.9	296.4	142.7	56.5	582.2	460.8	697.2
Reproductive and Urinary System Diseases	376.6	1,084.1	1,416.4	486.7	162.2	52.8	562.4	119.6	982.2
Bone and Muscle Diseases	210.3	428.7	423.7	342.9	287.6	233.6	314.2	136.5	482.7
External Causes	2,725.9	2,356.1	1,043.8	611.7	335.2	173.3	1,232.6	1,094.9	1,363.2

**Table 11: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2004,
County: Barrow**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,692.7	314.5	102.3	66.6	*	*	421.9	304.5	539.6
Endocrine, Nutritional and Metabolic Diseases	302.3	203.5	147.7	119.9	87.3	*	156.0	127.4	184.6
Mental and Behavioral Disorders	98.0	555.0	318.1	173.0	87.3	93.0	193.2	120.4	266.2
Nervous System Diseases	69.1	222.0	329.5	213.1	152.7	*	170.2	42.5	298.2
Respiratory Diseases	5,380.4	1,739.1	920.3	459.5	283.7	170.5	1,602.3	1,465.6	1,739.4
Major Cardiovascular Diseases	*	*	*	59.9	109.1	0.0	44.3	24.8	63.9
Digestive System Diseases	1,520.0	869.6	715.8	372.9	109.1	*	631.0	534.6	727.7
Reproductive and Urinary System Diseases	207.3	943.6	613.6	339.6	130.9	*	345.6	88.5	603.5
Bone and Muscle Diseases	371.4	536.5	568.1	619.3	447.3	201.6	476.8	308.0	646.1
External Causes	6,365.0	6,235.0	1,363.5	985.5	567.3	263.6	2,501.0	2,442.7	2,559.4

**Table 12: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2004,
County: Clayton**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	808.2	201.3	217.3	114.9	20.4	*	268.0	252.3	539.6
Endocrine, Nutritional and Metabolic Diseases	83.0	61.1	57.5	44.2	86.0	69.1	66.0	53.4	184.6
Mental and Behavioral Disorders	54.2	323.5	227.3	166.5	129.1	34.5	148.0	110.7	266.2
Nervous System Diseases	16.9	68.3	174.9	109.0	43.0	*	72.8	21.7	298.2
Respiratory Diseases	3,920.8	1,060.3	896.9	374.3	249.1	134.4	1,270.8	1,101.4	1,739.4
Major Cardiovascular Diseases	23.7	39.5	79.9	91.4	113.2	88.3	72.5	50.3	63.9
Digestive System Diseases	1,443.6	528.3	542.1	296.2	154.0	80.6	568.4	445.8	727.7
Reproductive and Urinary System Diseases	291.4	1,085.4	1,366.5	456.8	131.3	161.2	540.1	106.8	603.5
Bone and Muscle Diseases	220.3	363.0	447.2	377.2	330.6	103.6	316.7	174.9	646.1
External Causes	2,582.2	2,084.6	1,019.3	638.0	292.1	138.2	1,173.8	1,064.2	2,559.4

Table 13: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2008, State: Georgia

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,338.3	359.7	182.6	84.8	50.5	11.4	349.7	323.0	375.6
Endocrine, Nutritional and Metabolic Diseases	104.2	82.5	66.9	68.2	102.3	44.9	79.7	62.4	96.5
Mental and Behavioral Disorders	64.8	384.8	221.9	180.1	172.9	41.2	161.8	136.9	185.9
Nervous System Diseases	73.5	176.7	260.1	233.1	157.5	32.9	155.8	74.6	234.6
Respiratory Diseases	5,209.1	1,534.6	843.9	485.5	391.5	130.3	1,478.9	1,360.5	1,593.6
Major Cardiovascular Diseases	17.8	22.0	35.1	71.6	116.4	58.1	52.2	45.6	70.3
Digestive System Diseases	1,179.4	535.0	605.3	338.5	209.3	65.4	491.4	376.1	603.2
Reproductive and Urinary System Diseases	318.3	851.0	860.2	332.2	148.1	52.6	376.6	96.1	648.2
Bone and Muscle Diseases	250.7	500.5	465.7	487.2	473.3	136.1	385.1	248.6	517.3
External Causes	3,760.1	3,099.5	950.5	643.7	437.9	140.0	1,412.8	1,428.8	1,397.2

**Table 14: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2007,
State: Georgia**

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,154.1	323.4	157.4	73.2	43.6	10.0	304.4	275.3	332.5
Endocrine, Nutritional and Metabolic Diseases	100.0	76.8	56.7	62.1	96.4	49.7	75.2	59.8	90.0
Mental and Behavioral Disorders	57.0	323.9	189.9	157.6	143.7	35.5	138.8	116.6	160.2
Nervous System Diseases	54.4	128.3	177.5	176.9	117.6	28.2	115.3	50.8	177.8
Respiratory Diseases	4,598.5	1,357.7	700.3	403.5	321.3	111.3	1,294.5	1,208.0	1,378.2
Major Cardiovascular Diseases	14.0	19.8	29.4	62.1	110.3	54.6	52.4	39.8	64.7
Digestive System Diseases	1,259.8	535.7	533.3	293.2	183.4	63.6	483.8	386.8	577.7
Reproductive and Urinary System Diseases	290.6	770.9	728.0	279.2	126.1	45.2	329.6	83.8	567.4
Bone and Muscle Diseases	239.0	476.5	399.9	413.6	405.5	125.8	341.1	220.7	457.5
External Causes	3,382.9	2,984.0	843.5	567.1	386.5	127.9	1,290.9	1,328.3	1,254.8

Table 15: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2006, State: Georgia

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,531.4	380.1	190.5	90.5	52.2	11.8	389.1	352.4	424.8
Endocrine, Nutritional and Metabolic Diseases	115.9	67.2	55.9	70.0	102.6	52.5	80.5	65.7	94.8
Mental and Behavioral Disorders	66.8	350.6	214.4	185.9	163.7	37.4	158.7	129.1	187.5
Nervous System Diseases	33.0	108.0	173.7	177.0	89.1	22.7	103.4	33.5	171.1
Respiratory Diseases	5,180.8	1,511.6	852.3	499.0	373.8	123.1	1,463.7	1,317.3	1,605.7
Major Cardiovascular Diseases	15.9	21.4	29.9	66.2	120.8	66.8	57.9	45.9	69.5
Digestive System Diseases	1,489.2	577.6	574.9	323.2	208.6	65.5	548.0	433.2	659.3
Reproductive and Urinary System Diseases	290.1	852.0	831.1	316.4	138.1	52.2	367.0	88.8	639.9
Bone and Muscle Diseases	230.0	483.6	478.3	513.1	493.5	135.0	394.9	245.5	539.8
External Causes	3,729.8	3,139.1	941.5	646.6	422.4	134.4	1,407.9	1,409.4	1,406.4

Table 16: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2005, State: Georgia

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,759.4	444.0	231.5	104.1	56.7	16.3	449.7	402.0	496.4
Endocrine, Nutritional and Metabolic Diseases	133.0	82.8	66.9	80.1	107.3	56.8	90.5	70.0	110.6
Mental and Behavioral Disorders	82.1	416.4	238.1	205.8	164.5	45.9	178.4	139.7	216.2
Nervous System Diseases	36.6	110.6	191.8	193.7	85.4	18.7	111.0	33.1	187.3
Respiratory Diseases	6,525.7	1,973.1	1,083.6	586.5	409.7	161.8	1,832.9	1,628.0	2,033.4
Major Cardiovascular Diseases	17.8	20.2	33.4	66.1	127.7	74.6	60.5	45.4	75.2
Digestive System Diseases	1,606.0	655.7	658.5	369.5	212.4	68.9	604.7	459.0	747.2
Reproductive and Urinary System Diseases	350.5	1,000.4	997.1	360.6	139.0	51.7	432.4	95.3	762.3
Bone and Muscle Diseases	278.3	569.9	535.3	564.3	508.2	157.4	440.5	264.0	613.2
External Causes	4,448.9	3,683.8	1,136.0	741.1	448.6	154.7	1,658.3	1,629.0	1,687.1

Table 17: ER Visit Rates by Patient's Principal Reason for Visit, Age and Sex. Year: 2004, State: Georgia

Reason for ER Visit	Age 0-12	Age 13-19	Age 20-29	Age 30-44	Age 45-59	Age 60+	All Ages	Male	Female
Infectious and Parasitic Diseases	1,542.9	354.9	198.0	91.5	46.9	13.7	394.7	353.6	434.8
Endocrine, Nutritional and Metabolic Diseases	132.3	69.7	59.9	73.0	105.0	53.4	85.5	66.9	103.7
Mental and Behavioral Disorders	86.0	410.3	225.8	215.4	161.9	46.0	178.6	141.5	214.7
Nervous System Diseases	37.9	118.0	209.8	189.5	87.9	19.4	114.3	37.4	189.5
Respiratory Diseases	5,507.1	1,566.5	919.5	511.7	371.7	149.0	1,565.9	1,394.4	1,733.6
Major Cardiovascular Diseases	15.8	17.8	30.6	60.9	117.8	66.3	54.8	40.2	69.1
Digestive System Diseases	1,603.9	627.1	660.0	364.4	212.7	72.9	605.9	468.1	740.7
Reproductive and Urinary System Diseases	327.6	996.1	999.3	353.7	136.7	57.1	427.5	94.1	753.7
Bone and Muscle Diseases	259.4	532.2	510.4	577.6	518.3	151.9	433.4	265.2	598.0
External Causes	4,409.9	3,525.3	1,171.2	765.8	451.4	157.2	1,662.4	1,621.8	1,702.1