

*CHAS Issue Brief*  
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# An Examination of Emergency Department Use in Colorado

*Prepared for The Colorado Trust by the Colorado Health Institute*

## Abstract

Hospital emergency departments (EDs) are unique sources of medical care. They operate 24 hours a day, offer a wide variety of services and examine all who seek medical attention. Because non-emergency services provided in EDs could in many cases be provided more cost-effectively in other medical settings,<sup>1</sup> reducing inappropriate ED use is an important component of efforts to improve the nation's health care system.

The 2011 Colorado Health Access Survey (CHAS) asked a random sample of 10,000 Coloradans a detailed set of questions about their ED use. The CHAS data provide a unique glimpse of not only the frequency with which Coloradans visit the ED, but also a greater understanding of why they use the ED. In addition, the 2011 CHAS can be compared with the 2008-2009 Colorado Household Survey (COHS) to understand how ED use has changed in Colorado.

These are the key findings:

- The number of Coloradans reporting an ED visit in the 12-month period before each survey rose from 1 million (20.2 percent of the population) in 2008-2009 to nearly 1.2 million (22.3 percent) in 2011.
- Coloradans who reported relatively high ED rates included:
  - ✓ Young children ages 0 to 5 years (28.4 percent) and adults ages 65 years and older (26.9 percent)
  - ✓ Individuals reporting their race/ethnicity as non-Hispanic black (34.0 percent)
  - ✓ Individuals living at or below the poverty line (29.1 percent)
  - ✓ Individuals reporting poor health status (50.7 percent); and individuals reporting a health problem that limited their activities (40.0 percent)
- With the exception of young children, each of these populations also experienced higher rates of frequent ED use, defined as visiting the ED three or more times in a 12-month period, compared to other groups.
- Uninsured Coloradans reported one of the lowest rates (20.5 percent) of ED use. People covered by Medicaid

(the joint state and federal insurance program that covers many low-income children and their parents, adults 65 and older and individuals with disabilities) had the highest rate (39.7 percent). Among underinsured Coloradans, 30.4 percent reported an ED visit. In comparison, 19.3 percent of Coloradans covered by employer-sponsored or individual insurance – a category encompassing most Coloradans – visited the ED.

- Almost half (44.1 percent) of Coloradans reporting at least one ED visit noted that their last trip to the emergency department was for a condition that could have been treated by a regular doctor, had a doctor been available.
- The top reason given for visiting an ED (among those who said their condition could have been treated by a regular doctor) was the need for care after normal office hours for a doctor or clinic (79.2 percent). The second most common reason was an inability to secure a doctor's appointment as soon as it was needed (63.3 percent), followed by the convenience of the ED (45.0 percent).
- No statistical difference in ED visits was found between individuals reporting they had a usual place where they get health care (22.6 percent) and those reporting they did not have a usual source of care (20.5 percent).

The question of how and when EDs are used has numerous implications for efforts surrounding expansion of health insurance coverage, improving the quality of health care and reducing its cost.

The CHAS findings underscore the barriers faced by vulnerable Coloradans trying to access primary care, including whether there are enough primary care providers willing to take certain types of insurance. A number of policy efforts are underway to reduce ED use and shore up access to primary care, including state efforts to lower ED use within Colorado's Medicaid program and federal efforts to expand the health care safety net and workforce through the Affordable Care Act (ACA). The CHAS results also point to the need to improve the coordination of care among individuals with multiple health conditions and to increase the ability of patients to secure care after normal business hours.

# Introduction

Hospital emergency departments (ED) are under the microscope. While EDs are often a more expensive venue to receive care,<sup>1</sup> the use of ED services for non-urgent conditions is common and growing.<sup>2</sup> This practice raises a number of concerns, particularly at a time when health reform efforts are focused on delivering the right care at the right time in the right place for an affordable price.

Understanding who uses Colorado's EDs, and under what circumstances, can provide important information about the state's health care delivery system. There are many reasons why an individual or family may be treated in an ED. Many patients are in the ED because they require immediate medical attention – such as for the trauma sustained in a car accident. Others visit the ED because of an urgent condition for which the patient cannot wait for an appointment in another venue; for example, a child's high fever in the middle of the night.

But when do individuals or families use ED services inappropriately? Understanding inappropriate (or “avoidable”) ED use requires a far more nuanced discussion of access and choices – or the lack of access and choices.

Some patients with an unmanaged chronic condition – such as those with unchecked diabetes – may end up in the ED when their condition worsens to the point of requiring emergency treatment.<sup>3</sup> Still others may seek primary care services in the ED because of health clinic wait times, misinformation, community and family expectations of care, transportation issues, jobs that don't allow time off for office visits or a lack (real or perceived) of choices in the community.<sup>4</sup>

Because health care is interconnected, with no one part of the system operating in isolation, a high rate of inappropriate ED use may be one indicator of whether primary care in our state is affordable, accessible and used appropriately. Findings from the CHAS paint a portrait of ED usage in Colorado, while challenging some common assumptions. This analysis of the CHAS data tackles two primary questions:

1. Which Coloradans are most likely to use the emergency department?
2. Why do Coloradans use the emergency department?

**NOTE:** *Unless otherwise noted, the data and analysis presented in all tables and graphs in this brief come from the 2011 Colorado Health Access Survey and/or the 2008-2009 Colorado Household Survey. Also, the data presented are based on respondents' self-reported perceptions and are not comparable to administrative data.*

## THE RULES

Congress passed the law governing hospital emergency use – the Emergency Medical Treatment and Active Labor Act (EMTALA) – in 1986. The law says:

- Hospitals must examine any patient seeking care and must stabilize those requiring emergency services regardless of legal status or ability to pay.
- Any hospital seeking reimbursement through Medicare is subject to EMTALA. This covers all Colorado hospitals.
- If the hospital does not have the necessary resources to provide care, it must transfer the patient.<sup>5</sup>
- The hospital's obligation ends once the patient is stabilized.
- Hospitals are not required to treat patients who don't have an emergency medical condition.<sup>6</sup>
- EDs aren't free. Hospitals may charge patients for the exam and for any care. If patients do not pay, hospitals may engage a collection agency, garnish wages or obtain a lien against future wages or the sale of a home.<sup>7</sup>

## ABOUT THE SURVEY

*The Colorado Health Access Survey (CHAS) is an extensive survey of health care coverage, access and utilization in Colorado. It is a follow-up to the 2008-2009 Colorado Household Survey (COHS) and is administered every other year via a random-sample telephone survey of more than 10,000 households across the state. The CHAS provides detailed information that is representative of the five million-plus Coloradans.*

*A program of The Colorado Trust, the CHAS provides information to help policymakers, as well as health care, business and community leaders, more fully understand health care challenges and advance shared solutions to improve health coverage and care for Coloradans.*

*The Colorado Health Institute (CHI) managed the data collection and analysis of the survey.*

# Coloradans Most Likely to Use the ED

Certain groups of Coloradans reported higher rates of ED use than others. This section describes how ED use compares across eight categories: age, insurance status, race/ethnicity, income, gender, self-reported health status, self-reported disability status and geographic location.

Nearly 1.2 million Coloradans, or 22.3 percent of all residents, indicated that they visited an ED at least once in the 12 months before the CHAS, a statistically significant increase from the 20.2 percent with an ED visit in the 12 months prior to the 2008-2009 baseline survey. This increase is generally consistent with national trends.<sup>8</sup>

## *Age*

In Colorado, age groups with the highest ED usage rates are young children ages 0 to 5 years (28.4 percent) and adults 65 years or older (26.9 percent). Approximately 21 percent of older children and working-age adults visited an ED in the 12 months prior to the survey (see Table 1).

The CHAS findings are consistent with national research that has found young children and seniors with higher ED use rates than other age groups.<sup>9</sup> Young children are vulnerable to injuries, poisonings and other conditions that often need to be treated at the ED.<sup>10</sup> Additionally, their parents may depend on the ED when their primary doctor's office is closed, or they may be unable to differentiate between emergency and non-emergency conditions.<sup>11</sup> Seniors are more likely to have greater health needs, likely contributing to a greater ED utilization rate.<sup>12</sup>

## *Insurance Status*

The CHAS reveals that 20.5 percent of uninsured Coloradans reported an ED visit. This compares to 39.7 percent for individuals covered by Medicaid and 30.4 percent for those covered by Medicare. Both of these are statistically significant differences from the uninsured. Coloradans covered by Medicaid were more likely than individuals in all other insured categories to report that a doctor wouldn't accept their insurance, at 27.9 percent, a possible factor in their higher ED use rate.

About one in five (19.3 percent) Coloradans covered by employer-sponsored or individual insurance – a category encompassing most Coloradans<sup>13</sup> – visited the ED. The difference in ED use between the privately insured and the uninsured was not statistically significant.

Out-of-pocket costs may deter some uninsured individuals from visiting the ED, although there is little research on the role that cost makes in the decision-making process that leads to the differences in ED use (see Table 1). By contrast, individuals covered by Medicaid face relatively small (or no) out-of-pocket costs. Still, both the uninsured and those covered by Medicaid may face challenges with gaining access to needed care elsewhere.<sup>14</sup> Individuals who have difficulty finding care may forego needed treatment to the point where they develop a condition that requires immediate medical attention.

## *Gender*

Consistent with national data,<sup>15</sup> a slightly higher percentage of females reported visiting the ED (23.4 percent) compared to males (21.1 percent) in Colorado, though this difference was not found to be statistically significant.

## *Race and Ethnicity*

Among three racial and ethnic groups, the CHAS found that individuals identifying as non-Hispanic black reported higher rates of ED use (34.0 percent) compared to Hispanics (26.5 percent) and non-Hispanic whites (20.9 percent).

Disparities in health care access among racial and ethnic minorities have been well documented.<sup>16</sup> The higher ED use rate among non-Hispanic black Coloradans is consistent with national findings. Data from the National Health Interview Survey (NHIS), however, suggest a slightly lower rate of ED use among Hispanics relative to non-Hispanic whites nationally, which differs from the Colorado findings.<sup>17</sup>

## *Poverty*

Findings from the 2011 CHAS suggest that as income increases, ED use decreases. Nearly three in 10 (29.1 percent) Coloradans with the lowest incomes – between 0 and 100 percent of the Federal Poverty Level (FPL) – reported visiting the ED, compared to 17.3 percent of those with family incomes greater than 400 percent of the FPL. These disparities in ED use may reflect a number of factors that affect individuals living in poverty, including the possibility of poorer overall health, more dangerous and unhealthy environments or difficulties in securing needed health care.<sup>18</sup>

Another way to measure this phenomenon is to analyze the ED use of Coloradans reporting problems paying their medical bills. Nearly twice as many individuals who visited the ED in the 12 months before the survey reported problems paying medical bills (36.2 percent) as those without such problems (18.4 percent).

Underinsured Coloradans – those who have health insurance but still spend at least 10 percent of their annual family income on out-of-pocket medical expenses – are more likely than individuals with adequate insurance to face barriers when obtaining care.<sup>19</sup> The CHAS findings show that 30.4 percent of underinsured Coloradans used the ED, compared to 19.4 percent of those deemed adequately insured and 20.5 percent of the uninsured.

Of the Coloradans who said their doctor's office was not accepting new patients, nearly four in 10 (38.4 percent) visited the ED. Of those Coloradans who said their doctor would not accept their insurance, 39.9 percent visited an ED.

### *Health Status and Limitations*

Given that individuals with poorer health have greater medical needs, it follows that they use ED services at higher rates. The CHAS data confirm that as health status declines, rates of ED use increase.

- More than half (50.7 percent) of Coloradans reporting poor health status made at least one visit to the ED, compared to 14.3 percent of those who reported that their health status was excellent (see Graph 1).
- Among adults ages 18 years and older reporting a health condition that prevented them from working, 40 percent received care in the ED compared to 17.1 percent of those reporting no such limitations (see Table 1).

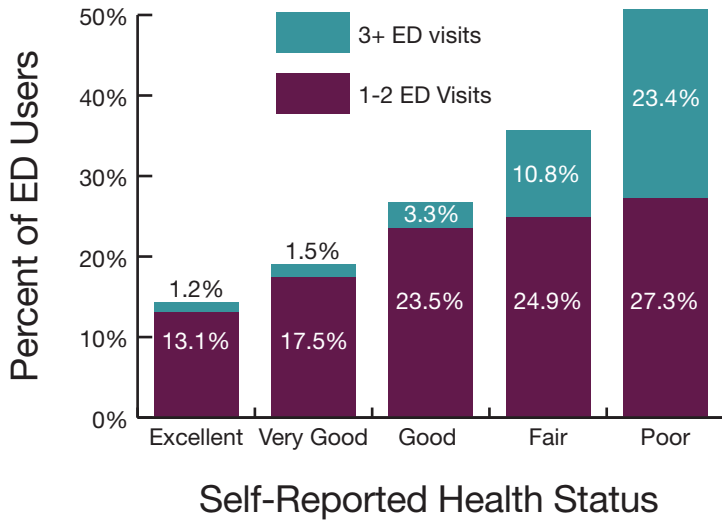
Which diagnoses are most common for ED patients across the United States? Asthma, ear infections and upper respiratory infections are the leading diagnoses for children, according to national research. Women most often visit an ED for abdominal pain or pregnancy complications. Men most often use the ED for open wounds and contusions.<sup>20</sup>

### *Location*

As illustrated in Map 1, the percentage of Coloradans who reported visiting an ED in the 12 months prior to the survey varied by region. Looking at Colorado's 21 Health Statistics Regions (HSRs) as defined by the Colorado Department of Public Health and Environment, ED use ranged from a low of 12.3 percent in the mountain resort counties of Eagle, Garfield, Grand, Pitkin and Summit (HSR 12) to 31.5 percent in Mesa County (HSR 19). In general, the rural eastern plains, mountain communities and San Luis Valley fell below the state rate of 22.3 percent, while urban areas along the Front Range were mixed. The relatively affluent Denver suburbs of Boulder, Broomfield, Douglas and Jefferson counties posted lower rates than the state rate, while residents in Adams, Denver, El Paso and Pueblo counties reported visiting a hospital ED at rates higher than the state average.

Given the linkage between poverty and health insurance, the regional differences are likely influenced by patterns of income, insurance coverage and demographic characteristics. The regional pattern is less discernible among patients who received care for a condition that could have been treated by a regular doctor. ED use in this category ranged from 30.3 percent in the counties of Cheyenne, Elbert, Kit Carson and Lincoln (HSR 5) to 60.4 percent in the counties of Logan, Morgan, Phillips, Sedgwick, Washington and Yuma (HSR 1).

**Graph 1. ED Use by Self-Reported Health Status, Colorado, 2011**



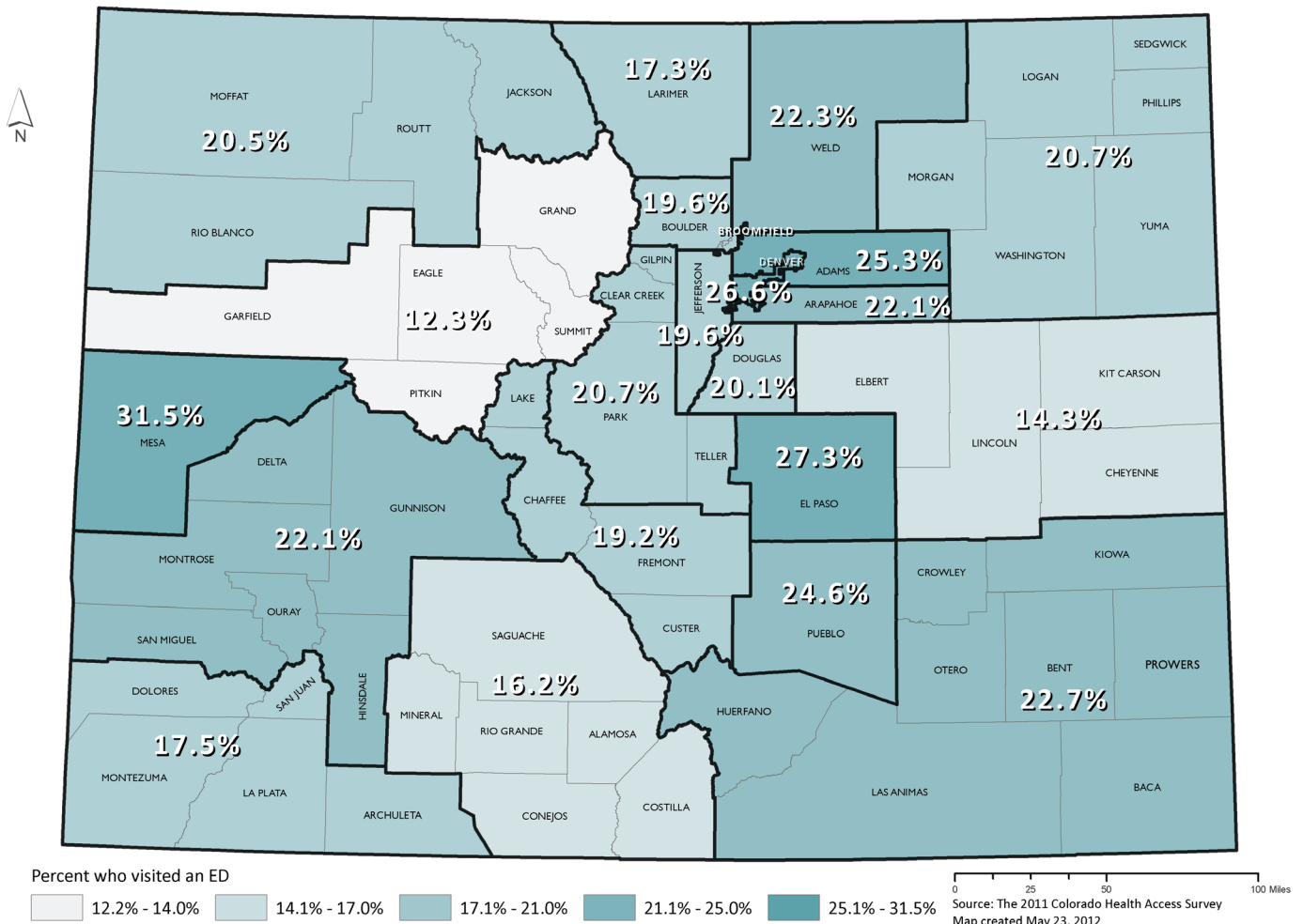
## Why Coloradans Use the ED

Of the nearly 1.2 million Coloradans who visited the ED in the 12 months prior to the survey, nearly half (44.1 percent) reported that their last ED visit was for a condition that could have been treated by a general doctor if one had been available (see Graph 2).

The CHAS asked this group why they went to the ED, giving respondents the option to choose more than one answer. The majority (79.2 percent) of respondents said they needed care after normal office hours. The second most commonly cited reason was the inability to get an appointment with a provider as soon as one was needed (63.3 percent).

ED users reported these reasons more frequently in 2011 than in 2008-2009, when 74.7 percent reported needing after-hours care, and 56.5 percent reported an inability to get an appointment. The percentage citing the convenience of the ED fell from 48.4 percent in 2008-2009 to 45 percent in 2011, though this decrease was not statistically significant.

**Map 1. Percentage of Coloradans Who Visited an ED at Least Once in the 12 Months Prior to the Survey, by Health Statistics Region, Colorado, 2011**



**Table 1. Coloradans by ED Use and Selected Demographic Characteristics, 2011**

	A. Percentage with No ED Visits	B. Percentage with 1-2 ED Visits	C. Percentage with 3+ ED Visits	D. Percentage with Any ED Visits (B + C)	Total Number of Coloradans <sup>†</sup>
<b>Colorado</b>	<b>77.7</b>	<b>18.5</b>	<b>3.7</b>	<b>22.3</b>	<b>5,212,221</b>
<b>AGE (YEARS)</b>					
0 to 5	71.6	25.9	2.5	28.4	387,547
6 to 18	78.7	18.2	3.0	21.3	977,649
19 to 64	78.9	17.1	4.1	21.1	3,247,478
65 and over	73.1	22.9	4.0	26.9	539,174
<b>INSURANCE STATUS</b>					
Employer/Individual*	80.7	17.1	2.2	19.3	3,456,291
Medicare	69.6	21.2	9.2	30.4	479,597
Medicaid <sup>††</sup>	60.3	30.6	9.1	39.7	403,626
Child Health Plan Plus (CHP+) <sup>††</sup>	65.9	28.7	5.4	34.1	49,084
Uninsured at time of survey	79.5	16.4	4.1	20.5	823,623
<b>INSURANCE ADEQUACY</b>					
Underinsured	69.6	25.1	5.3	30.4	668,632
Adequately insured	80.6	16.9	2.4	19.4	3,064,155
<b>GENDER</b>					
Female	76.6	19.4	4.0	23.4	2,609,261
Male	78.9	17.6	3.5	21.1	2,600,605
<b>RACE AND ETHNICITY</b>					
White, non-Hispanic	79.1	17.8	3.1	20.9	3,948,023
Black, non-Hispanic	66.0	25.5	8.5	34.0	161,831
Hispanic	73.5	21.3	5.2	26.5	606,384
<b>FAMILY INCOME RELATIVE TO THE FEDERAL POVERTY LEVEL (FPL)</b>					
0-100% FPL	70.9	21.7	7.4	29.1	1,229,770
101-200% FPL	75.9	19.9	4.2	24.1	1,113,089
201-300% FPL	79.8	17.7	2.5	20.2	954,938
301-400% FPL	81.2	17.8	1.0	18.8	613,046
More than 400% FPL	82.7	15.2	2.1	17.3	1,301,379
<b>SELF-REPORTED HEALTH STATUS</b>					
Excellent	85.7	13.1	1.2	14.3	1,760,113
Very Good	81.0	17.5	1.5	19.0	1,545,961
Good	73.2	23.5	3.3	26.8	1,107,731
Fair	64.3	24.9	10.8	35.7	574,656
Poor	49.3	27.3	23.4	50.7	219,963
<b>ACTIVITIES LIMITED BY HEALTH PROBLEM (SELF-REPORTED; AGE 18 AND OVER)</b>					
Yes	60.0	27.6	12.4	40.0	827,594
No	82.9	15.3	1.8	17.1	3,068,295

\* Employer Individual includes employer-sponsored insurance, privately purchased insurance and other insurance.

† Due to missing data values within the ED visits variable, the total number may not reflect the total number in the population or previously published estimates.

†† Because these figures are estimates derived from self-reported survey data, they differ from administrative counts published by the Colorado Department of Health Care Policy and Financing.

### Usual Source of Care and ED Use

The 2011 CHAS revealed that there was not a statistically significant difference in ED visit rates between those who said they have a usual source of care (22.6 percent) and those who indicated they did not have a usual place where they commonly seek care (20.5 percent).<sup>21</sup>

Although this finding is consistent with national studies,<sup>22</sup> it is somewhat counterintuitive. If someone has a place where they usually go for care, then why would they visit an ED? The key is differentiating between a usual source of care and the concept of a “medical home.” Medical homes – which integrate and coordinate a patient’s care, with a focus on primary care and prevention – are being tested to measure their ability to reduce ED visits and hospital admissions.<sup>23</sup> In other words, the medical home model is much more than just a usual place to seek care.

The key question – not yet answered by the CHAS – is what impact having a full and well-operating medical home will have on keeping Coloradans out of the ED. What the CHAS can answer is whether the reasons for ED visits differ by where Coloradans report usually seeking care. CHAS analysis suggests that the reasons for using an ED were similar, regardless of whether Coloradans received their care in a doctor’s office/private clinic or in a community health center/public clinic – the two most common care locations (see Graph 3). High proportions of both groups said they used the ED because they were unable to get an appointment soon enough or that they needed care after normal business hours.

But there was a more pronounced difference when it came to convenience. More than half (53.5 percent) of Colorado non-emergency ED users who listed a community health center/public clinic as their usual source of care said it was more convenient to go to the emergency department (see Graph 3). In comparison, 39.9 percent of those who listed a doctor’s office or private clinic as their usual source of care said an ED was more convenient.

### UNDERSTANDING ED USE

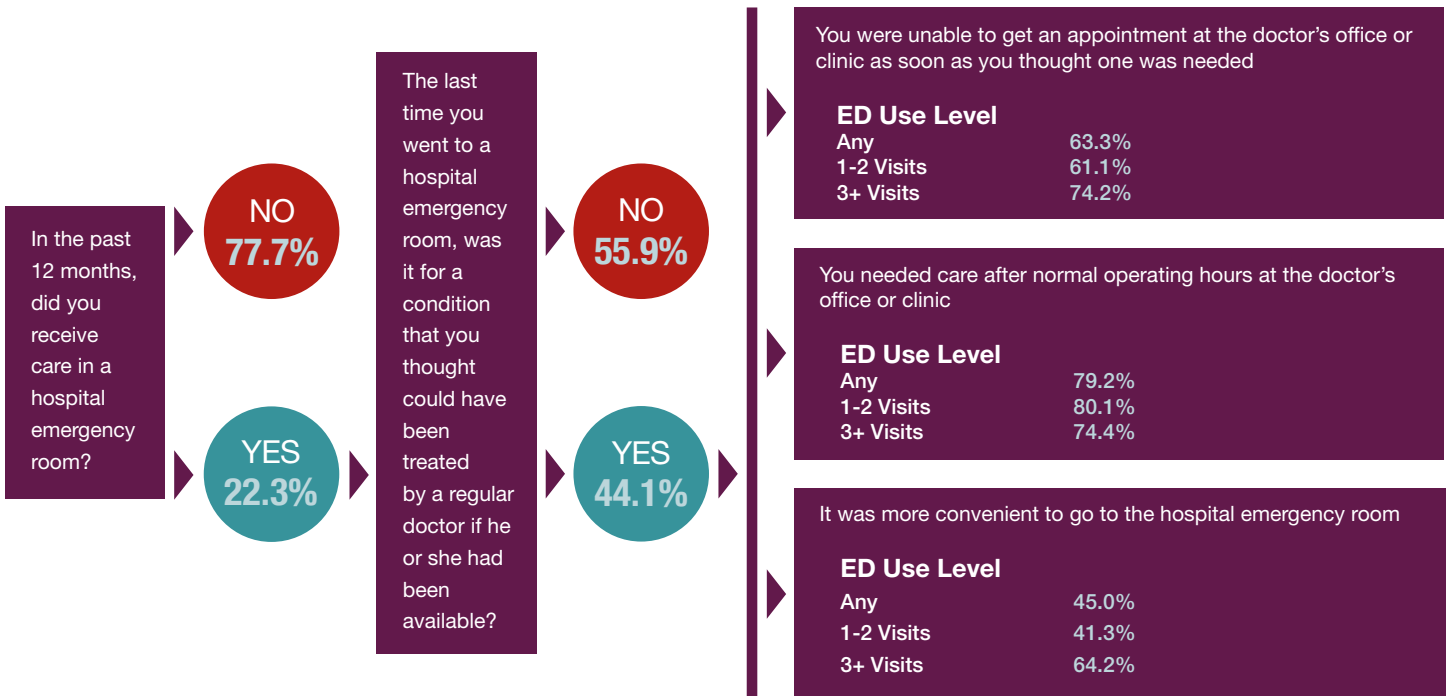
**None** – No visits to the ED in the 12 months before the survey was taken in summer 2011.

**Infrequent** – One or two visits to the ED in the 12 months before the survey.

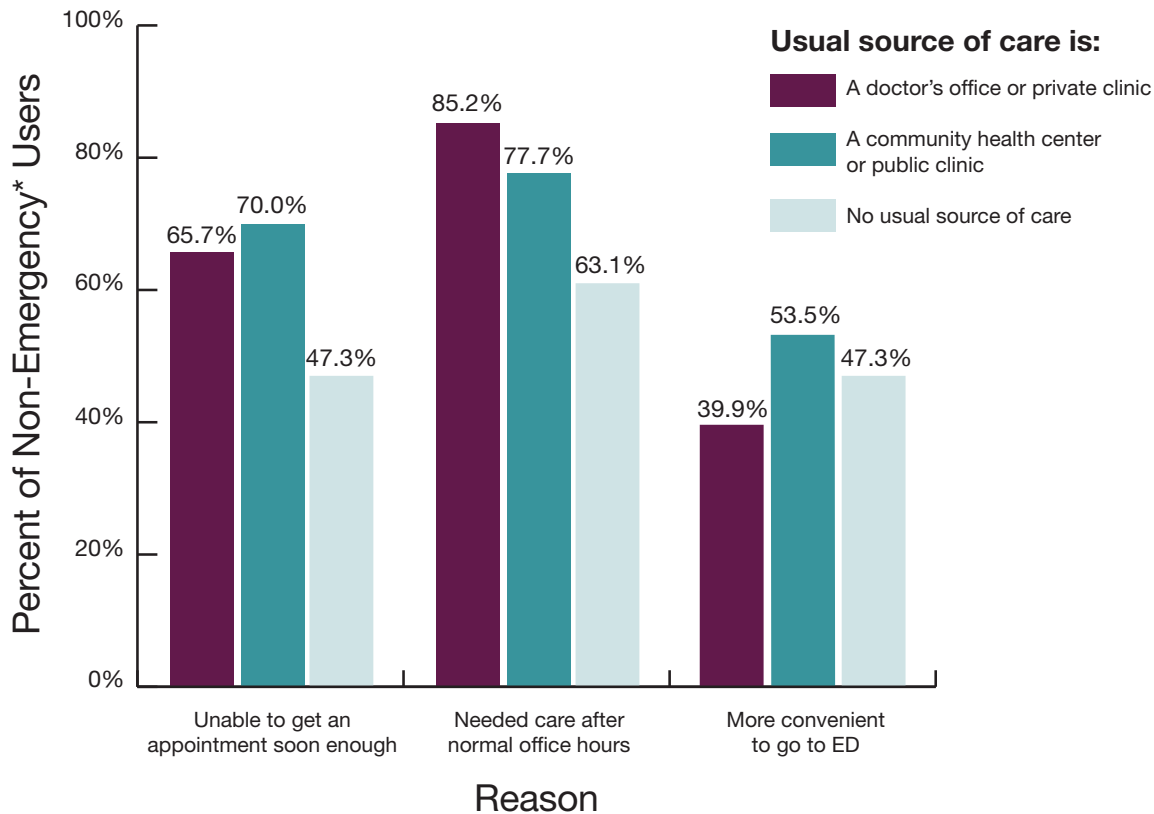
**Frequent** – Three or more visits to the ED in the 12 months before the survey.

**Any Use** – At least one visit to the ED in the 12 months before the survey. This is the sum of the infrequent and frequent categories.

**Graph 2. Reasons for ED Use, Colorado, 2011**



**Graph 3. Reasons Provided for Visiting the ED, by Usual Source of Care, Colorado, 2011\***



\*Those who responded that they went to the ED for a condition that could have been treated by a regular doctor.

### *Implications of Emergency Department Use*

The CHAS findings concerning ED use have implications for a wide spectrum of complex questions related to access to needed health care.

As health care costs continue to rise, health policy is focused on increasing the quality and availability of care while controlling costs. Given the expense of obtaining care in an ED, efforts are underway to reduce inappropriate ED admissions by providing incentives for health care providers to coordinate care.<sup>25</sup> Colorado's Accountable Care Collaborative, an initiative to improve quality and reduce costs within the state's Medicaid program, is applying this concept. By moving patients into medical homes and coordinating their care, providers and regional coordinating organizations will receive incentive payments based on a handful of performance indicators, including a reduction in unnecessary ED visits.<sup>26</sup>

Coloradans who report poor health status and those reporting a health condition that prevents them from working may have multiple health care needs. This analysis confirms that these groups are frequent ED users and may benefit from improved coordination of care.

Findings from the CHAS do not support the contention that uninsured Coloradans use the ED more than insured individuals. What the findings do suggest is that both insured and uninsured ED users may face challenges in obtaining care in the community. While insurance is one of the most important ways to gain access to the health care system,<sup>27</sup> not everybody with an insurance card has access to the care he or she needs. Barriers may include long wait lists at safety net clinics, a lack of after-hours care facilities, an insufficient number of providers willing to serve Medicaid enrollees and having insurance that does not fully cover an individual's health care needs.

It is likely that many uninsured stay away from ED services because of concern about the cost. In an attempt to begin addressing this problem, Colorado passed legislation during the 2012 session (SB12-134) requiring hospitals to provide information about charity care programs, to establish a reasonable payment plan and to offer discounts to certain low-income uninsured patients.

In addition, as state and national discussions surrounding ways to expand coverage proceed, policymakers should examine not only how many Coloradans have sufficient coverage, but also how many will have a provider available to see them. One approach to increasing health care access is to assess whether Colorado has a sufficient primary care workforce. The health insurance expansions under the federal ACA are predicted to increase ED use because shortages of primary care providers are expected.<sup>28</sup>



Beyond expanding health insurance, the ACA also contains provisions aimed at expanding the capacity to provide primary and preventive care. A variety of approaches have been initiated, namely shoring up the health care safety net and expanding health care workforce capacity. The law authorized funding to expand community health centers, school-based health centers, the National Health Service Corps, and the number of Graduate Medical Education (GME) training positions, among others. Many of the provisions have not been (or may not be) implemented to their full extent due to limited or eliminated appropriations.

In addition, a Colorado law, also passed in the 2012 legislature (HB12-1052), requires the state to collect additional data from health professionals at the time of licensure. The data will shed light on the distribution of primary care providers across the state and will help to show whether areas with high ED use rates are also those that lack a sufficient number of clinicians to handle current (and future) primary care needs.

More than half of Coloradans who visited the ED indicated they went there for what it was intended to provide: emergency medical needs. The substantial remainder – 44.1 percent – indicated that their last ED visit was for a non-emergency condition. This response raises the question of whether vulnerable Coloradans would use the ED less if they had access to primary and preventive care through a medical home, especially one with expanded hours.<sup>29</sup> While the CHAS findings suggest that difficulties in getting an appointment and finding convenient office hours persist regardless of where one usually seeks care, other studies have found evidence that Medicaid patients at community health centers were significantly less likely to use the ED (among other services) than patients at private doctor's clinics.<sup>30</sup>

## FREQUENT USERS OF EMERGENCY DEPARTMENTS

Nearly 200,000 Coloradans, or 3.7 percent, are frequent visitors to EDs, meaning they went to an ED three or more times during the 12 months before the survey. Significant attention is being paid to health care “hot-spotters,” individuals who use a high number of health care services and could potentially benefit from improved coordination of care.<sup>24</sup> Who are these ED frequent users in Colorado? CHAS data provide the following information about high levels of use in the various demographic groups.

**NOTE:** *The percentage in parentheses indicates the rate at which Coloradans in each demographic group were frequent ED visitors. Most percentages are displayed in Table 1.*

**Age:** Adults between ages 19 and 64 (4.1 percent) had the highest frequent usage rate followed by seniors ages 65 years and over (4.0 percent).

**Insurance:** Coloradans covered by Medicare (9.2 percent) and Medicaid (9.1 percent) had the highest frequent use rates.

**Underinsurance:** Underinsured Coloradans had a frequent use rate of 5.3 percent, more than double adequately insured Coloradans (2.4 percent).

**Gender:** There was little difference between men and women, with about 4 percent of each using the ED frequently.

**Race/Ethnicity:** The highest frequent use rates were posted by non-Hispanic blacks (8.5 percent), followed by Hispanics (5.2 percent) and non-Hispanic whites (3.1 percent).

**Disability:** Coloradans reporting a health condition that limited their ability to work had a far greater frequent use rate (12.4 percent) than those without a disability (1.8 percent).

**Health Status:** Nearly one in four Coloradans who reported they were in poor health (23.4) were frequent ED users. In comparison, those who said they were in excellent health had an ED frequent use rate of 1.2 percent.

**Family Income:** Coloradans with the lowest annual incomes, from nothing up to the federal poverty line, had a frequent use rate of 7.4 percent compared to 2.1 percent for Coloradans with family incomes of four times the poverty rate. Frequent ED rates were higher among those with medical bill issues (9.1 percent) compared to those without (2.3 percent).

**Usual Source of Care:** The proportion was similar for Coloradans with a usual source of care (3.8 percent) and those without (3.4 percent).

**Reasons:** Nearly three of four frequent ED users (74.2 percent) reported that they were unable to get an appointment soon enough. This compares with 61.1 percent of infrequent users. Nearly three of four frequent users (74.4 percent) said they needed care after normal office hours. In comparison, infrequent users cited this reason more often (80.1 percent). Nearly two of three frequent users (64.2 percent) indicated that it was more convenient than going to the regular doctor, compared to 41.3 percent of infrequent users, the widest gap between frequent and infrequent ED users.

The CHAS results imply that the ED represents a viable alternative for many individuals and families who are unable to make an appointment with their doctor or visit a public clinic during normal office hours. These individuals may be restricted by work or school schedules, transportation challenges, no available appointments at their physician's office or waiting lines at their safety net clinic. In addition to examining the distribution of primary care providers around the state, safety net clinics, other community providers and private doctors' offices could consider offering after-hours care or assist patients in knowing what their options are for after-hours, non-emergency care.

ED use was higher among Coloradans who say the health care system does not meet their needs (25.5 percent) compared to those who say the system generally meets their needs (19.9 percent).

## Conclusion

Almost half of Coloradans who were frequent ED visitors are dissatisfied with the health care system. Many vulnerable Coloradans indicate they use the ED because of difficulty obtaining care elsewhere. Combined with findings that insured Coloradans actually use the ED as often as uninsured individuals, the CHAS results underscore the importance of ongoing discussions about access to primary care as well as levels of insurance coverage.

As Colorado continues to be challenged by fallout from the economic recession, with more Coloradans losing their employer-sponsored insurance and increasing numbers enrolling in Medicaid and Child Health Plan Plus, access to care is a problem calling for a solution. Understanding how and why patients arrive at the ED seeking care can help point the way to better and more efficient ways to deliver health care in a fully integrated and well-functioning system.

## METHODOLOGY

The 2011 Colorado Health Access Survey (CHAS) is a program of The Colorado Trust. The Colorado Health Institute (CHI) manages the data collection and analysis of the CHAS.

The survey was conducted via a random-digit-dialing, computer-assisted telephone interview by Social Science Research Solutions, an independent research company between May 10 and August 14. A representative sample of 10,352 households participated in the survey.

Of the 10,352 interviews, 1,214 were conducted with respondents who owned only a cell phone. This compares to a representative sample of 10,090 households surveyed from November 12, 2008, through March 13, 2009, for the 2008-2009 baseline survey. In the 2008-2009 survey, 400 interviews were conducted with respondents who owned only a cell phone.

Interviews were stratified by Colorado's 21 Health Statistics Regions (HSRs) to ensure adequate representation within each of them. These HSRs were developed by the Colorado Department of Public Health and Environment for public health planning purposes. Regions with sufficient numbers of African American households were oversampled to ensure an adequate sample of African Americans comparable to their proportion in the Colorado population.

Survey data were weighted to 1) adjust for the fact that not all survey respondents were selected with the same probability, and to 2) account for gaps in coverage in the survey frame. Because of this weighting process, individuals who answered the questions are referred to as "respondents." When discussing results, which have been weighted to the Colorado population, the reference is to "Coloradans."

All statistical significance tests were run using an alpha of 0.05. Therefore, tests that resulted in a p-value of less than 0.05 were considered to be statistically significant findings. If a difference was found to be statistically significant, it was unlikely that the change occurred due to chance or sample selection.

The estimates of ED use (see Table 1) reflect an updated analysis from earlier CHAS reports. Reclassifying respondents who answered "no" to the threshold question about whether they visited any type of health professional or health care facility in the past 12 months resulted in more precise estimates of ED visits in Colorado.

While ED is the generally-accepted term in medical and academic venues, the CHAS questions used the term "emergency room" for ease of understanding. When this brief talks about the emergency department, it is referring to the questions about emergency rooms.

# Endnotes

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