

Emergency Department Visits for Behavioral Health Conditions in Harris County, Texas,
2007-2008

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Executive Summary

Introduction

In September 2008 a report was published on behavioral health related emergency department (BHED) visits by Harris County residents. That report examined visits to 16 hospitals over the period 2004-2006, along with visits to the Neuropsychiatric Center (NPC). The present report examines BHED visits to 25 hospitals in each of the years 2007 and 2008.

Methods

Selection of hospitals

The earlier study used data from the same 16 hospitals over a three year period. This was to examine any trends that may have taken place. However, not every hospital in the study was able to supply all relevant discharge diagnoses. In addition, not every hospital supplied data on discharge status. The present report used data from 25 hospitals for the years 2007 and 2008. This is because a) every participating hospital supplied all discharge diagnoses that were available, b) every participating hospital supplied all visits, both admitted and discharged, and c) the 2008 data set also included data on transport status (e.g. ambulance vs. self). Data for both 2007 and 2008 years came from the same 25 hospitals. Because of the detailed nature of some of the analyses presented here, visits from the NPC were not included, nor was population rate setting done.

Classification of types of BHED visits

While the first two tables examine BHED visits from a general perspective, most of the report examines BHED visits according to the following mutually exclusive categories:

- A. Simple BHED: Visits with a behavioral health diagnosis as the primary diagnosis (ICD1), but no other behavioral health diagnosis (ICD 2 through 10). Such visits may or may not have a medical diagnosis on ICD 2 through 10.
- B. Complex BHED: Visits with a behavioral health diagnosis as the primary diagnosis (ICD1), and also at least one other behavioral health diagnosis (ICD2 through 10).

Such visits may or may not also have a medical diagnosis somewhere else on ICD2 through 10.

- C. Medical BHED: Visits with a medical diagnosis as the primary diagnosis (ICD1), and at least one behavioral health diagnosis (ICD 2 through 10). Such visits may or may not also have another medical diagnosis somewhere else on ICD 2 through 10.
- D. No BHED: Visits with no behavioral health diagnosis on ICD 1 through 10.

Many of the tables in the 2004 – 2006 BHED report correspond roughly to a combination of the first three categories. However, the demographics (e.g. payer source, gender) of that report only correspond to the first two categories. The third category was not covered in the 2004 – 2006 BHED report. The fourth category is only covered in Table 3 for this report and not thereafter. To an extent, the concepts of “co morbidity” or “co occurring disorders” are akin to the second and third categories. However, visits in the first category, as noted, may or may not have a medical diagnosis as well (although not examined as such here). Certain detailed analyses of secondary BHED visits (e.g. ICD2 vs. ICD5) are beyond the scope of this report.

A summary of the first three definitions is repeated throughout the report for ease of understanding.

Points of comparison

In order to make it easier to compare/contrast the findings of this report, the following documents will be referenced as needed throughout the report:

2004 – 2006 BHED: The earlier BHED report.¹

2008 Harris: An analysis of primary care related ED (PCRED) visits to Harris County hospitals.²

2007 national: A report from the Agency for Healthcare Research and Quality on BHED visits among adults in 2007.³

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Results

Behavioral health related ED visits in general

When all age groups were examined, nearly the same percentage of ED visits in Harris County had a behavioral diagnosis as the primary diagnosis in 2007 as in 2008 (2.4% in 2007 and 2.0% in 2008, Table 1). However, the percentage of visits that had a BHED diagnosis on one of the remaining diagnoses dropped from 9.8% in 2007 to 7.3% in 2008.

When examined in terms of whether the visit had any BHED diagnosis, 11.2% of visits in 2007 had a BHED diagnosis, compared with 8.3% in 2008 (Table 1). When BHED visits were examined with regards to the percentage of visits that had a behavioral diagnosis as the first diagnosis, 21.5% of BHED visits in Harris County in 2007 had a BHED component on the first diagnosis, and 24.6% in 2008 had it on the first diagnosis. In other words, the majority of BHED visits in Harris County in 2007 and 2008 did not have a behavioral diagnosis as the first diagnosis.

Table 2 repeats Table 1, but is restricted only to adults. This was to replicate one statistic from the 2007 national report. Other than Table 2, this entire report uses all ages.

Specific types of BHED visits

The percentage of ED visits in Harris County with no behavioral diagnosis at all increased from 88.8% in 2007 to 91.7% in 2008 (Table 3). The percentage of simple BHED visits was 1.4% of total ED visits in 2007 and 1.0% in 2008. The percentage of complex BHED visits was 1.0% of total ED visits in 2007 and 1.0% in 2008. The percentage of medical BHED visits was 8.8% of total ED visits in 2007 and 6.3% in 2008. The majority of BHED visits in Harris County were for visits whose primary purpose is medical, but who also have a behavioral component.

Demographics

Payer source – More than four in ten simple BHED visits (44.3%) and complex BHED visits (42.3%) in 2007 were by persons who were uninsured. However, in 2008 the uninsured represented 32.3% of simple BHED visits and 39.0% of complex BHED visits (Table 4, Figures

1-4). The most predominant category for persons enrolled in Medicaid was complex BHED visits (19.5% of complex BHED in 2007 and 19.3% of complex BHED in 2008).

By contrast, persons enrolled in Medicare made up 29.1% of medical BHED visits in 2007 and more than one third (36.2%) of medical BHED visits in 2008 (Table 1, Figures 5-6). The predominant payer source (or lack thereof) varied according to specific type of BHED visit.

Race/ethnicity – More than one third (36.3%) of simple BHED visits in 2007 were by persons who were White, yet they made up nearly half of all complex BHED visits (48.5%) and nearly half of all medical BHED visits (49.6%). In 2008 just over four in ten (40.2%) of simple BHED visits, 43.2% of complex BHED visits, and nearly half (48.1%) of medical BHED visits were by persons who were White. Hispanics made up 27.4% of simple BHED visits in 2007 but only 17.4% of medical BHED visits. In 2008 Hispanics made up 25.6% of simple BHED visits and 19.4% of medical BHED visits. Blacks made up 27.9% of medical BHED visits in both 2007 and 2008 (Table 5, Figures 7-12).

Age – More than four in ten complex BHED visits were by adults age 26 to 44 (41.7% in 2007 and 40.8% in 2008). In contrast, fewer than three in ten medical BHED visits were by adults age 26 to 44 (29.9% in 2007, 26.2% in 2008). Children made up just over one in ten simple BHED visits (11.1% in 2007 and 11.6% in 2008), but a smaller percentage of complex BHED visits (6.6% in 2007, 6.3% in 2008). More than half of medical BHED visits were by persons age 45 and over (53.8% in 2007 and 56.2% in 2008). (Table 6, Figures 13-18).

Gender – The majority of simple BHED visits (54.0% in 2007, 54.8% in 2008) and medical BHED visits (54.5% in 2007, 57.7% in 2008) were by persons who were female. However, the majority of complex BHED visits (53.3% in 2007, 53.4% in 2008) were by persons who were male (Table 7, Figures 19-24).

Discharge status – Fewer than one in five simple BHED visits (18.1% in 2007, 15.0% in 2008) resulted in an admission or a hospitalization. Just over one in five (22.6%) complex BHED visits in 2007 resulted in an admission, but that dropped slightly to 19.4% in 2008. The group most likely in both years to result in an admission were those with a medical BHED visit (27.8%

in 2007 and 25.9% in 2008) (Table 8, Figures 25-30).

Interaction of payer source and discharge status – Tables 9 and 10 present the three types of BHED visits from the perspective of the interaction of payer source and discharge status. In both years, Medicare enrollees with a medical BHED visit were the ones most likely to have an admission (50.0% of medical BHED visits by Medicare enrollees in 2007, 43.9% in 2008). In both years, Medicaid enrollees were more likely than the uninsured for all three classes of BHED visits to have had an admission. For example, 19.9% of Medicaid enrollees with a complex BHED visit were admitted in 2008, but only 16.3% of the uninsured with a complex BHED visit were admitted. Also in 2008, 23.0% of Medicaid enrollees with a medical BHED visit were admitted, but only 15.5% of the uninsured with a medical BHED visit were admitted. For CHIP, Medicaid, and Medicare enrollees, and for those with commercial insurance, in both years complex BHED visits were more likely than simple BHED visits to result in an admission.

BHED visits by month, day, hour, length of stay, and transport status

Simple BHED visits were more frequent than complex BHED visits for every month of the year in 2007, but they were closer in frequency in 2008 (Figures 31 & 33). Medical BHED visits peaked in September in 2007 but September in 2008 saw a slight drop (Figures 32 & 34). Hurricane Ike made landfall in September 2008 and led to the temporary closure of some of the EDs in this study.

Simple BHED visits were more frequent than complex BHED visits for every day of the week in 2007, but they were closer in frequency in 2008 (Figures 35 & 37). Medical BHED visits peaked on Monday in both 2007 and 2008 (Figures 36 & 38).

BHED visits of every kind were at their lowest levels at the hours of 4 – 6 AM, and they peaked from late morning to early evening (Figures 39 - 42).

Mean length of stay was measured for non hospitalized visits of less than 24 hours each (Table 11). Complex BHED visits consistently had the longest length of stay (6.74 hours in 2007, 6.81 hours in 2008).

The 2008 ED dataset included a variable on whether the visit included an ambulance transport or a self transport. Type of BHED visit in 2008 by transport is presented in Table 12. More than three in ten (31.9%) simple BHED visits involved an ambulance transport, 36.1% of complex BHED visits involved an ambulance transport, and more than four in ten (42.2%) of medical BHED visits involved an ambulance transport.

Top diagnoses for BHED visits

Table 13 presents simple and complex BHED visits according to whether their first or primary diagnosis was for mental health, alcohol, or drug related reasons. In both 2007 and 2008, the majority of simple BHED visits had a mental health condition as the primary diagnosis (72.0% in 2007 and 79.0% in 2008). However, those percentages dropped for complex BHED visits (59.5% in 2007, 69.6% in 2008). Alcohol and drug related conditions combined made up 28.0% of simple BHED visits in 2007, but 40.6% of complex BHED visits. In 2008, alcohol and drug related conditions made up 21.0% of simple BHED visits but 30.3% of complex BHED visits.

Tables 14, 15, and 17 present the top diagnoses for BHED visits, and Table 16 presents the top primary/medical diagnoses for medical BHED visits. Various forms of anxiety, depression, and alcohol use/abuse were among the top BHED diagnoses (Tables 14, 15, and 17). Cocaine abuse was one of the top primary diagnoses for complex BHED visits (Table 15), as well as one of the top secondary (ICD2) BHED diagnoses for medical BHED visits (Table 17). Chest pain and pneumonia were the top medical diagnoses for medical BHED visits in both 2007 and 2008 (Table 16). While schizophrenia is often considered to be a serious and persistent mental illness, Table 14 indicates that many persons in both 2007 and 2008 were diagnosed with it in an ED setting but with no other BHED problems. Bipolar disorder, unspecified, was one of the top secondary BHED diagnoses for persons who present primarily with a medical disorder (Table 18).

Geographic distribution of BHED visits in 2008 by ZIP code

The following maps show the three categories of BHED visits by ZIP code of residence. For the sake of simplicity, only visits in 2008 are shown. In contrast to maps in the 2008 Harris report, distributions were broken up according to “natural breaks” rather than “quintiles.” Natural breaks more clearly shows the highest concentrations of visits.

While some of the largest frequencies of simple and medical BHED visits were on the far western and far eastern edges of Harris County (Maps 1 and 3), some of the highest concentrations of complex BHED visits were in the Third Ward and South Park areas (Map 3).

Table 18 gives the frequency counts for the top ZIP codes behind each map. The Baytown area ZIP code of 77520 was one of the top ZIP codes for all three types of BHED visits in 2008

Discussion

Earlier BHED report vs. current report

This report was not intended to be a replication of the earlier report. Nevertheless, some comparisons can be made. Despite some differences (16 hospitals vs. 25 hospitals, primary discharge diagnoses for demographics vs. all discharge diagnoses for demographics), the uninsured continue to represent the plurality of BHED visits (in the present study, simple and complex BHED visits). Persons who are male represent a slight majority of BHED visits (in the present study, complex BHED visits). Adults age 26 to 44 continue to represent a plurality of BHED visits (in the present study, simple and complex BHED visits).

However, the present study found a higher percentage of ED visits with a behavioral component than in the earlier study. This is especially noteworthy since the earlier study included visits to the NPC and this study does not. The difference is likely due to three factors: a) an increase in BHED visits over the passage of time, b) the earlier study estimated the number of BHED visits, whereas the present study used actual diagnoses for all ten possible codes, c) the additional hospitals in this study possibly captured a higher percentage of behavioral problems

than in the 16 hospitals from the earlier study.

Types of BHED visits

Simple and complex BHED visits – In some respects, simple and complex BHED visits are very similar. Both involved emergency room visits whose primary purpose is for a mental health, alcohol, or drug problem. Also, in this study both are predominantly uninsured. People in both groups are likely best served by the public and/or private mental health and substance abuse outpatient systems. The high percentage of people who go to the emergency department with a BHED visit may reflect their inability to access care on an outpatient basis.

However, in many other respects, persons with simple and complex BHED visits represent different groups. The two differ in terms of gender, age, length of stay, discharge status, use of an ambulance, and having an alcohol or drug concern as the primary diagnosis. In much the same way that some medical problems are simple and some are complex, persons with complex BHED visits likely need a more intensive array of services than those with a simple BHED visit.

Medical BHED visits – In both 2007 and 2008, the majority of ED visits that had a behavioral component came in primarily for a medical reason, and secondarily for a behavioral reason. The public and private mental health systems do not address medical problems. However, untreated behavioral problems can often exacerbate medical problems. For example, a person with untreated depression may not feel motivated to take medication for hypertension or asthma, and a depressed diabetic may not be eating properly. The findings here indicate the need to emphasize behavioral health care as a factor or co partner in medical care. It is not clear from this report if persons with a medical BHED visit were receiving behavioral health services or not.

Aged and disabled persons deserve special focus. As mentioned earlier, in 2008 more than one third of all medical BHED visits were by Medicare enrollees. In both 2007 and 2008 more than half of all medical BHED visits were by persons age 45 and over. Medical BHED visits by persons age 65 and over were three times as likely as 2008 PCRED visits by persons age 65 and over. A further exploration of this population is warranted – both of this research data

but also of the medical and behavioral needs of the elderly and disabled.

Limitation

Payer source is only being used as a demographic variable in this report. No statements are being made about public and private insurance coverage for mental health, alcohol, or drug related concerns.

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When examined in terms of whether the visit had any BHED diagnosis, 11.2% of visits in 2007 had a BHED diagnosis, compared with 8.3% in 2008 (Table 1). When BHED visits were examined with regards to the percentage of visits that had a behavioral diagnosis as the first diagnosis, 21.5% of BHED visits in Harris County in 2007 had a BHED component on the first diagnosis, and 24.6% in 2008 had it on the first diagnosis. In other words, the majority of BHED visits in Harris County in 2007 and 2008 did not have a behavioral diagnosis as the first diagnosis.

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Demographics

Payer source – More than four in ten simple BHED visits (44.3%) and complex BHED visits (42.3%) in 2007 were by persons who were uninsured. However, in 2008 the uninsured represented 32.3% of simple BHED visits and 39.0% of complex BHED visits (Table 4, Figures

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Race/ethnicity – More than one third (36.3%) of simple BHED visits in 2007 were by persons who were White, yet they made up nearly half of all complex BHED visits (48.5%) and nearly half of all medical BHED visits (49.6%). In 2008 just over four in ten (40.2%) of simple BHED visits, 43.2% of complex BHED visits, and nearly half (48.1%) of medical BHED visits were by persons who were White. Hispanics made up 27.4% of simple BHED visits in 2007 but only 17.4% of medical BHED visits. In 2008 Hispanics made up 25.6% of simple BHED visits and 19.4% of medical BHED visits. Blacks made up 27.9% of medical BHED visits in both 2007 and 2008 (Table 5, Figures 7-12).

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Gender – The majority of simple BHED visits (54.0% in 2007, 54.8% in 2008) and medical BHED visits (54.5% in 2007, 57.7% in 2008) were by persons who were female. However, the majority of complex BHED visits (53.3% in 2007, 53.4% in 2008) were by persons who were male (Table 7, Figures 19-24).

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in 2007 and 25.9% in 2008) (Table 8, Figures 25-30).

Interaction of payer source and discharge status – Tables 9 and 10 present the three types of BHED visits from the perspective of the interaction of payer source and discharge status. In both years, Medicare enrollees with a medical BHED visit were the ones most likely to have an admission (50.0% of medical BHED visits by Medicare enrollees in 2007, 43.9% in 2008). In both years, Medicaid enrollees were more likely than the uninsured for all three classes of BHED visits to have had an admission. For example, 19.9% of Medicaid enrollees with a complex BHED visit were admitted in 2008, but only 16.3% of the uninsured with a complex BHED visit were admitted. Also in 2008, 23.0% of Medicaid enrollees with a medical BHED visit were admitted, but only 15.5% of the uninsured with a medical BHED visit were admitted. For CHIP, Medicaid, and Medicare enrollees, and for those with commercial insurance, in both years complex BHED visits were more likely than simple BHED visits to result in an admission.

Table 1. Behavioral health related ED visits in general – all ages

| | All ages | Frequency | | Percentage | |
|---|--|-----------|-----------|------------|--------|
| | | 2007 | 2008 | 2007 | 2008 |
| A | Total ED visits, all areas | 1,060,825 | 1,060,952 | 100.0% | 100.0% |
| | Total BHED, all areas, ICD1 | 25,799 | 21,917 | 2.4% | 2.1% |
| | Total BHED, all areas, ICD2 - 10 | 104,041 | 78,098 | 9.8% | 7.4% |
| | Total ED visits, eight county area | 1,013,905 | 1,013,343 | 100.0% | 100.0% |
| | Total BHED, eight county area, ICD1 | 23,864 | 20,415 | 2.4% | 2.0% |
| | Total BHED, eight county area, ICD2 - 10 | 98,250 | 73,748 | 9.7% | 7.3% |
| | Total ED visits, Harris County | 901,684 | 899,673 | 100.0% | 100.0% |
| | Total BHED, Harris County, ICD1 | 21,587 | 18,385 | 2.4% | 2.0% |
| | Total BHED, Harris County, ICD2 - 10 | 88,252 | 65,651 | 9.8% | 7.3% |
| B | Total ED visits, all areas | 1,060,825 | 1,060,952 | 100.0% | 100.0% |
| | Total BHED, all areas, any diagnosis | 118,840 | 89,019 | 11.2% | 8.4% |
| | Total ED visits, eight county area | 1,013,905 | 1,013,343 | 100.0% | 100.0% |
| | Total BHED, eight county area, any diagnosis | 111,951 | 83,966 | 11.0% | 8.3% |
| | Total ED visits, Harris County | 901,684 | 899,673 | 100.0% | 100.0% |
| | Total BHED, Harris County, any diagnosis | 100,626 | 74,672 | 11.2% | 8.3% |
| C | Percentage of BHED that were ICD1, all areas | | | 21.7% | 24.6% |
| | Percentage of BHED that were ICD1, eight county area | | | 21.3% | 24.3% |
| | Percentage of BHED that were ICD1, Harris County | | | 21.5% | 24.6% |

B 2004 – 2006 BHED: An average of 6.8% of all ED visits in Harris County were for BHED visits. That report also included visits to the Neuropsychiatric Center, the present report does not.

2008 Harris: 41.1% of total ED visits in Harris County in 2007 were PCRED, compared with 39.1% in 2008.

C 2007 national: see next page for precise comparison.

Table 2. Behavioral health related ED visits in general – adults age 18 and over

| | Adults age 18 and over | Frequency | | Percentage | |
|---|--|-----------|---------|------------|--------|
| | | 2007 | 2008 | 2007 | 2008 |
| A | Total ED visits, all areas | 745,846 | 755,143 | 100.0% | 100.0% |
| | Total BHED, all areas, ICD1 | 23,436 | 19,953 | 3.1% | 2.6% |
| | Total BHED, all areas, ICD2 - 10 | 98,640 | 72,017 | 13.2% | 9.5% |
| | Total ED visits, eight county area | 707,710 | 716,658 | 100.0% | 100.0% |
| | Total BHED, eight county area, ICD1 | 21,581 | 18,513 | 3.0% | 2.6% |
| | Total BHED, eight county area, ICD2 - 10 | 93,059 | 67,880 | 13.1% | 9.5% |
| | Total ED visits, Harris County | 629,509 | 635,001 | 100.0% | 100.0% |
| | Total BHED, Harris County, ICD1 | 19,601 | 16,703 | 3.1% | 2.6% |
| | Total BHED, Harris County, ICD2 - 10 | 83,710 | 60,463 | 13.3% | 9.5% |
| B | Total ED visits, all areas | 745,846 | 755,143 | 100.0% | 100.0% |
| | Total BHED, all areas, any diagnosis | 111,713 | 81,650 | 15.0% | 10.8% |
| | Total ED visits, eight county area | 707,710 | 716,658 | 100.0% | 100.0% |
| | Total BHED, eight county area, any diagnosis | 105,192 | 76,854 | 14.9% | 10.7% |
| | Total ED visits, Harris County | 629,509 | 635,001 | 100.0% | 100.0% |
| | Total BHED, Harris County, any diagnosis | 94,710 | 68,411 | 15.0% | 10.8% |
| C | Percentage of BHED that were ICD1, all areas | | | 21.0% | 24.4% |
| | Percentage of BHED that were ICD1, eight county area | | | 20.5% | 24.1% |
| | Percentage of BHED that were ICD1, Harris County | | | 20.7% | 24.4% |

B 2004 – 2006 BHED: See previous page for precise comparison.

2008 Harris: See previous page for precise comparison.

C 2007 national: 34.6% of all adult BHED visits had a BHED visit as the primary discharge diagnosis

Table 3. Specific types of behavioral health related ED visits – all ages

| All areas | | | | |
|-------------------|-----------|---------|-----------|---------|
| | 2007 | | 2008 | |
| | Frequency | Percent | Frequency | Percent |
| A Simple BHED | 14,799 | 1.4% | 10,921 | 1.0% |
| B Complex BHED | 11,000 | 1.0% | 10,996 | 1.0% |
| C Medical BHED | 93,041 | 8.8% | 67,102 | 6.3% |
| D No BHED | 941,985 | 88.8% | 971,573 | 91.6% |
| Total | 1,060,825 | 100.0% | 1,060,592 | 100.0% |
| Eight county area | | | | |
| | Frequency | Percent | Frequency | Percent |
| A Simple BHED | 13,701 | 1.4% | 10,218 | 1.0% |
| B Complex BHED | 10,163 | 1.0% | 10,197 | 1.0% |
| C Medical BHED | 88,087 | 8.7% | 63,551 | 6.3% |
| D No BHED | 901,954 | 89.0% | 929,377 | 91.7% |
| Total | 1,013,905 | 100.0% | 1,013,343 | 100.0% |
| Harris County | | | | |
| | Frequency | Percent | Frequency | Percent |
| A Simple BHED | 12,374 | 1.4% | 9,021 | 1.0% |
| B Complex BHED | 9,213 | 1.0% | 9,364 | 1.0% |
| C Medical BHED | 79,039 | 8.8% | 56,287 | 6.3% |
| D No BHED | 801,058 | 88.8% | 825,001 | 91.7% |
| Total | 901,684 | 100.0% | 899,673 | 100.0% |

2008 Harris: In the Harris County section above, simple BHED corresponds to “primary diagnosis” on page 55 of 2008 Harris, complex BHED corresponds to “primary and any other diagnosis”, and medical BHED corresponds to “any other diagnosis”.

Table 4. Specific BHED visits by payer source

| Frequencies | | | | | | | | | |
|--------------------|------------|------|----------|----------|-----------|------------|-----------|---------|--------|
| 2007 | | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 2,776 | 129 | 1,932 | 1,678 | 222 | 48 | 5,486 | 103 | 12,374 |
| B Complex BHED | 1,937 | 72 | 1,792 | 1,367 | 100 | 14 | 3,893 | 38 | 9,213 |
| C Medical BHED | 19,152 | 557 | 11,703 | 23,021 | 1,239 | 375 | 22,696 | 296 | 79,039 |
| 2008 | | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 2,531 | 147 | 1,451 | 1,616 | 246 | 93 | 2,918 | 19 | 9,021 |
| B Complex BHED | 1,812 | 75 | 1,806 | 1,764 | 78 | 44 | 3,650 | 135 | 9,364 |
| C Medical BHED | 11,841 | 536 | 9,127 | 20,397 | 721 | 284 | 12,908 | 473 | 56,287 |
| Percentages | | | | | | | | | |
| 2007 | | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 22.4% | 1.0% | 15.6% | 13.6% | 1.8% | 0.4% | 44.3% | 0.8% | 100.0% |
| B Complex BHED | 21.0% | 0.8% | 19.5% | 14.8% | 1.1% | 0.2% | 42.3% | 0.4% | 100.0% |
| C Medical BHED | 24.2% | 0.7% | 14.8% | 29.1% | 1.6% | 0.5% | 28.7% | 0.4% | 100.0% |
| 2008 | | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 28.1% | 1.6% | 16.1% | 17.9% | 2.7% | 1.0% | 32.3% | 0.2% | 100.0% |
| B Complex BHED | 19.4% | 0.8% | 19.3% | 18.8% | 0.8% | 0.5% | 39.0% | 1.4% | 100.0% |
| C Medical BHED | 21.0% | 1.0% | 16.2% | 36.2% | 1.3% | 0.5% | 22.9% | 0.8% | 100.0% |

Simple BHED: Visits with a behavioral health diagnosis as the primary diagnosis, but no other behavioral health diagnosis. Complex BHED: Visits with a behavioral health diagnosis as the primary diagnosis, and also at least one other behavioral health diagnosis. Medical BHED: Visits with a medical diagnosis as the primary diagnosis, and at least one behavioral health diagnosis.

2004 – 2006 BHED: 48.1% of hospital BHED visits were by the uninsured, 18.1% by commercially insured, 18.0% by Medicaid enrollees and 12.6% by Medicare enrollees.

2008 Harris: 31.8% of PCRED visits were by the uninsured, 24.2% were by Medicaid enrollees, 11.0% were by Medicare enrollees, and 26.0% were by the commercially insured.

2007 national: 20.1% of adult BHED visits nationwide were by the uninsured, 25.7% by the privately insured, 19.8% by Medicaid enrollees, and 30.1% by Medicare enrollees.

Figure 1. 2007 Simple BHED by payer source

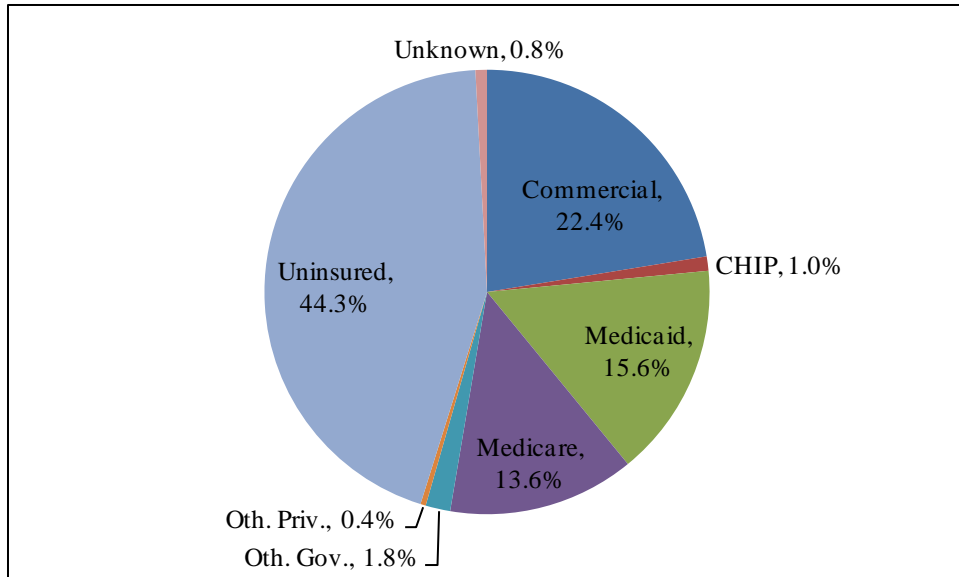


Figure 2. 2008 Simple BHED by payer source

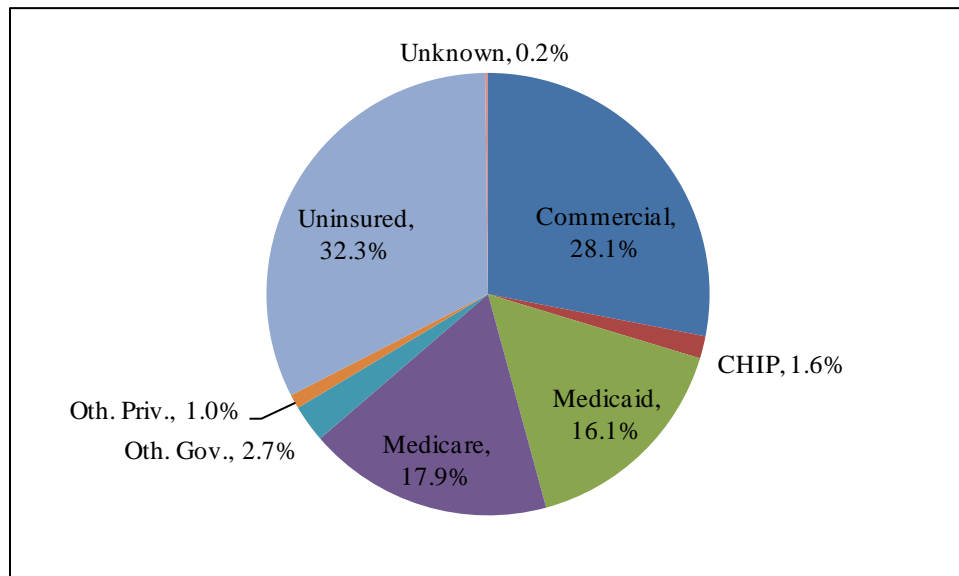


Figure 3. 2007 Complex BHED by payer source

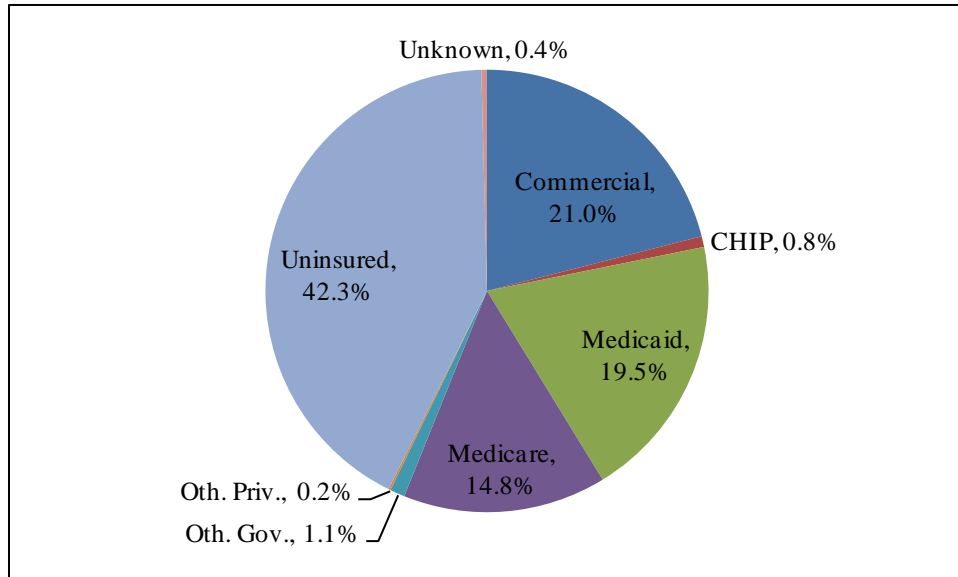


Figure 4. 2008 Complex BHED by payer source

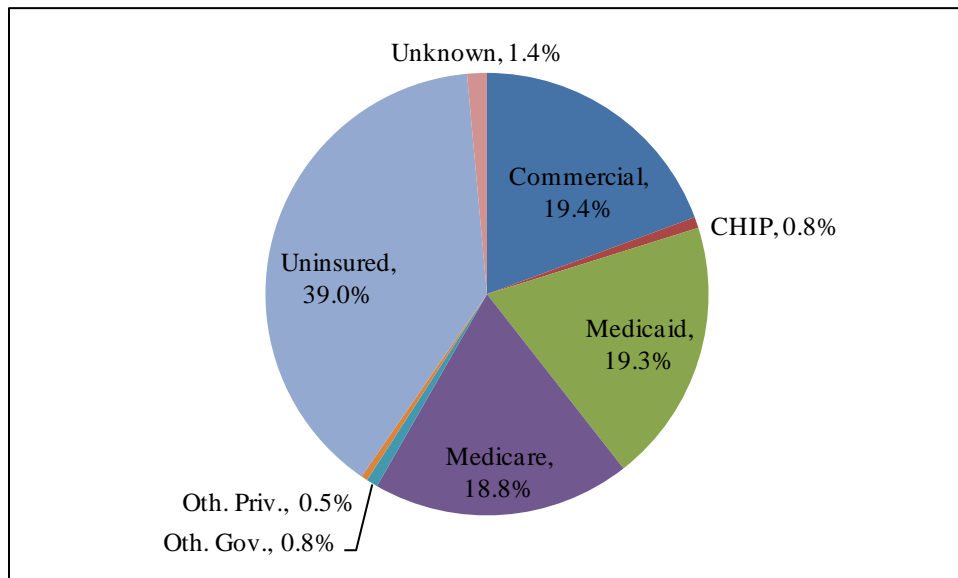


Figure 5. 2007 Medical BHED by payer source

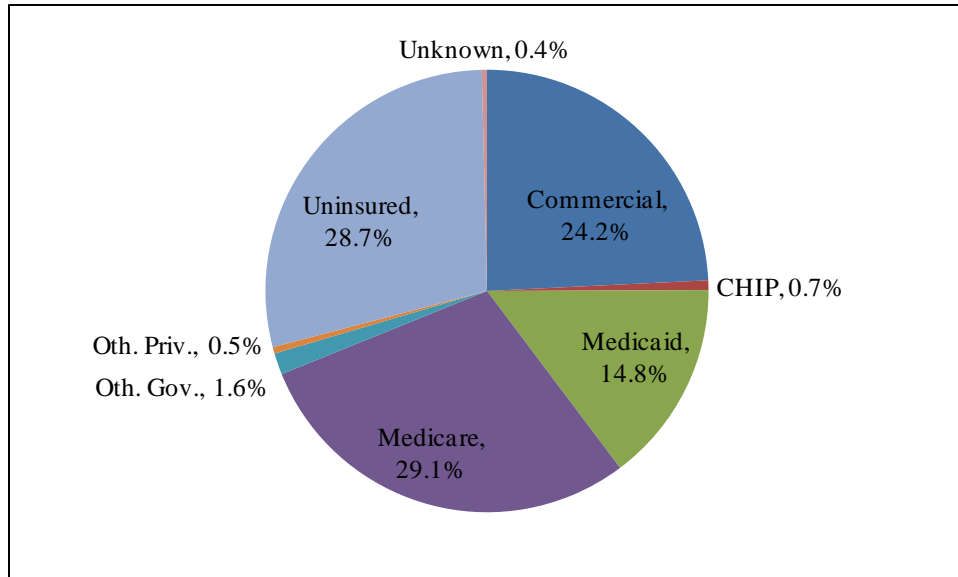


Figure 6. 2008 Medical BHED by payer source

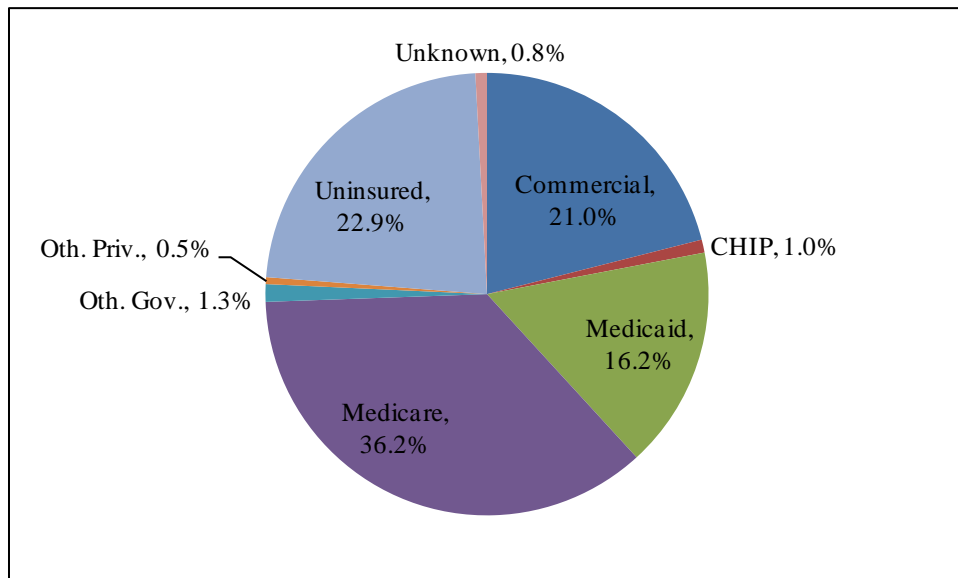


Table 5. Specific BHED visits by race

| | Frequencies | | | | | | | |
|----------------|--------------------|--------|----------|----------|-------|---------|--------|--------|
| | 2007 | | | | | | | |
| | Asian | Black | Hispanic | Am. Ind. | Other | Unknown | White | Total |
| A Simple BHED | 127 | 3,726 | 3,392 | 8 | 351 | 283 | 4,487 | 12,374 |
| B Complex BHED | 69 | 2,474 | 1,781 | 2 | 258 | 162 | 4,467 | 9,213 |
| C Medical BHED | 696 | 22,034 | 13,772 | 24 | 1,733 | 1,589 | 39,191 | 79,039 |
| | 2008 | | | | | | | |
| | Asian | Black | Hispanic | Am. Ind. | Other | Unknown | White | Total |
| A Simple BHED | 158 | 2,329 | 2,310 | 8 | 428 | 162 | 3,626 | 9,021 |
| B Complex BHED | 117 | 2,910 | 1,890 | 6 | 317 | 78 | 4,046 | 9,364 |
| C Medical BHED | 767 | 15,695 | 10,934 | 41 | 1,319 | 464 | 27,067 | 56,287 |
| | Percentages | | | | | | | |
| | 2007 | | | | | | | |
| | Asian | Black | Hispanic | Am. Ind. | Other | Unknown | White | Total |
| A Simple BHED | 1.0% | 30.1% | 27.4% | 0.1% | 2.8% | 2.3% | 36.3% | 100.0% |
| B Complex BHED | 0.7% | 26.9% | 19.3% | 0.0% | 2.8% | 1.8% | 48.5% | 100.0% |
| C Medical BHED | 0.9% | 27.9% | 17.4% | 0.0% | 2.2% | 2.0% | 49.6% | 100.0% |
| | 2008 | | | | | | | |
| | Asian | Black | Hispanic | Am. Ind. | Other | Unknown | White | Total |
| A Simple BHED | 1.8% | 25.8% | 25.6% | 0.1% | 4.7% | 1.8% | 40.2% | 100.0% |
| B Complex BHED | 1.2% | 31.1% | 20.2% | 0.1% | 3.4% | 0.8% | 43.2% | 100.0% |
| C Medical BHED | 1.4% | 27.9% | 19.4% | 0.1% | 2.3% | 0.8% | 48.1% | 100.0% |

Simple BHED: Visits with a behavioral health diagnosis as the primary diagnosis, but no other behavioral health diagnosis. Complex BHED: Visits with a behavioral health diagnosis as the primary diagnosis, and also at least one other behavioral health diagnosis. Medical BHED: Visits with a medical diagnosis as the primary diagnosis, and at least one behavioral health diagnosis.

2004 – 2006 BHED: 31.9% of hospital BHED visits were by persons who were Black, 29.3% were by persons who were Hispanic, and 35.0% were by persons who were White.

2008 Harris: 31.5% of PCRED visits were by persons who were Black, 33.5% were by persons who were Hispanic, and 35.9% were by persons who were White.

2007 national: Race/ethnicity was not presented in this report.

Figure 7. 2007 Simple BHED by race

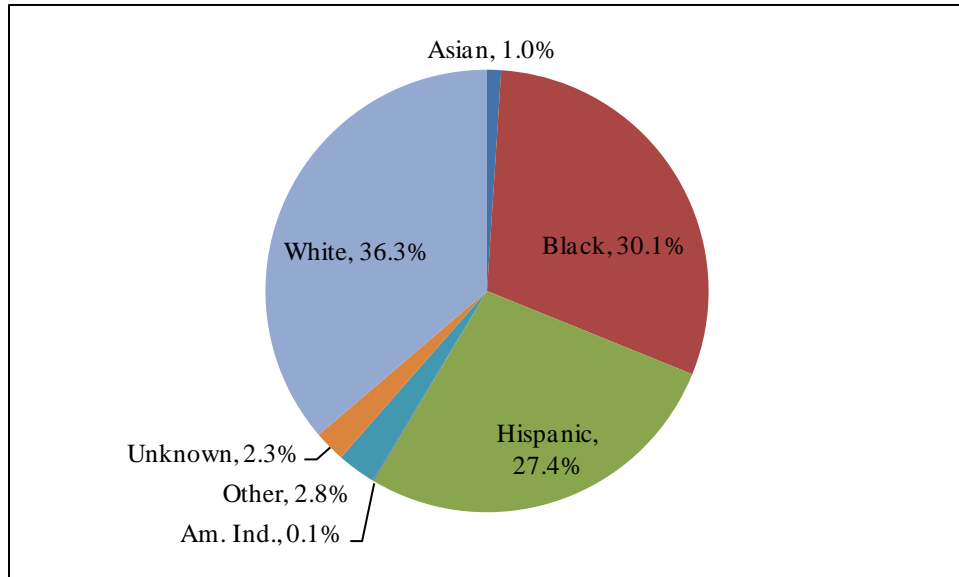


Figure 8. 2008 Simple BHED by race

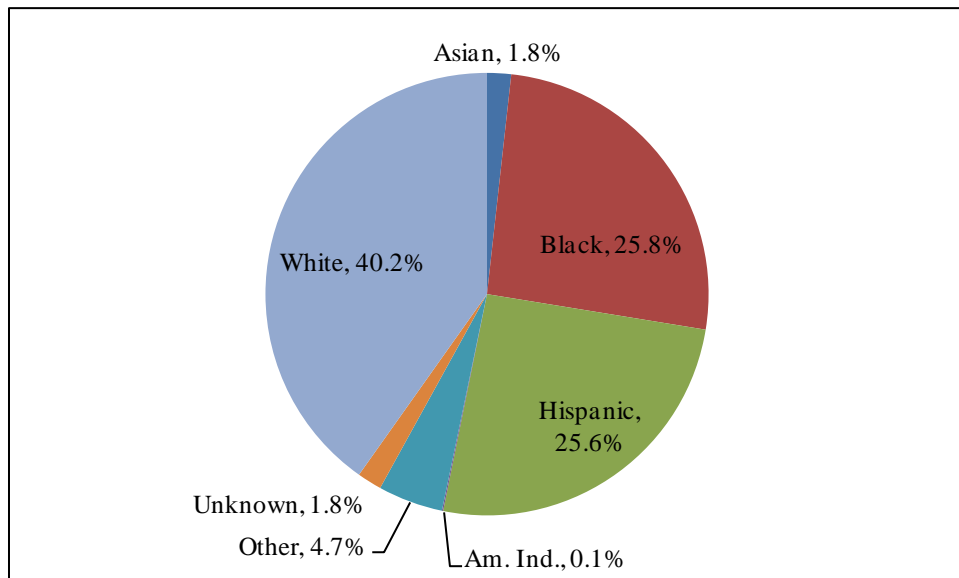


Figure 9. 2007 Complex BHED by race

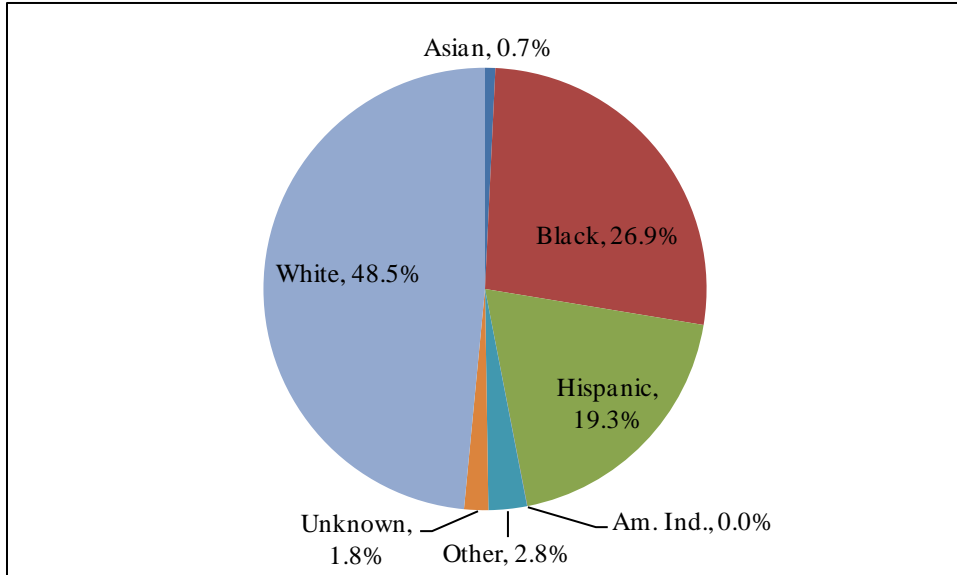


Figure 10. 2008 Complex BHED by race

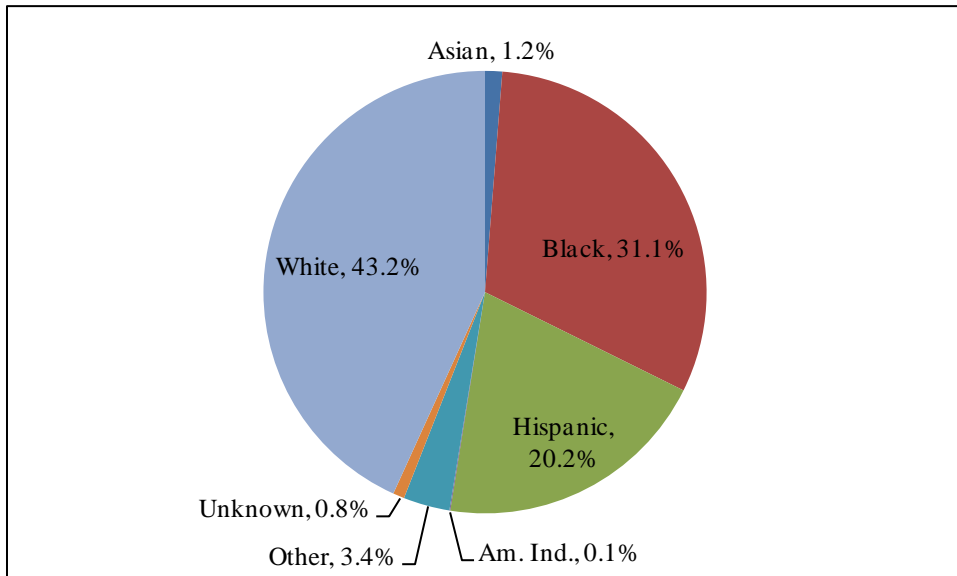


Figure 11. 2007 Medical BHED by race

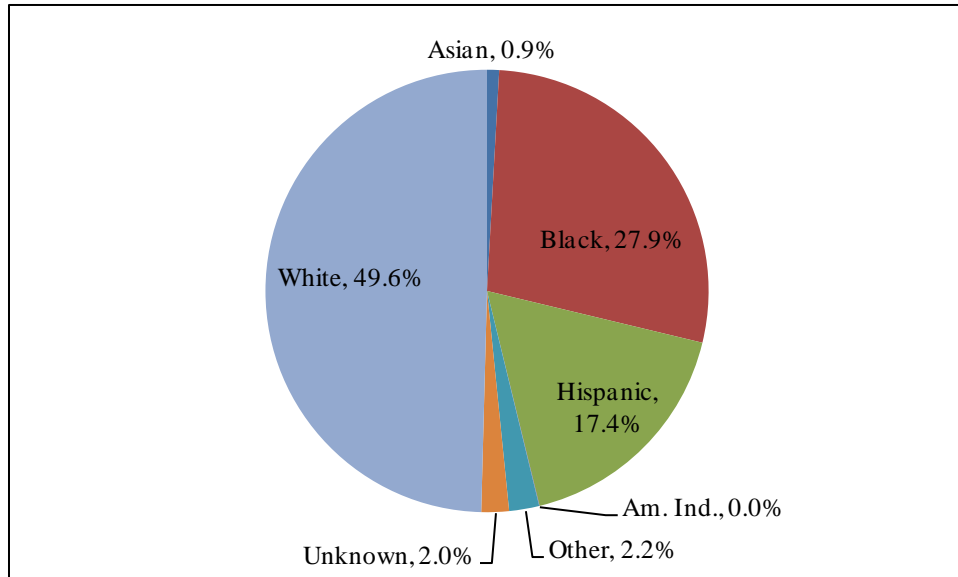


Figure 12. 2008 Medical BHED by race

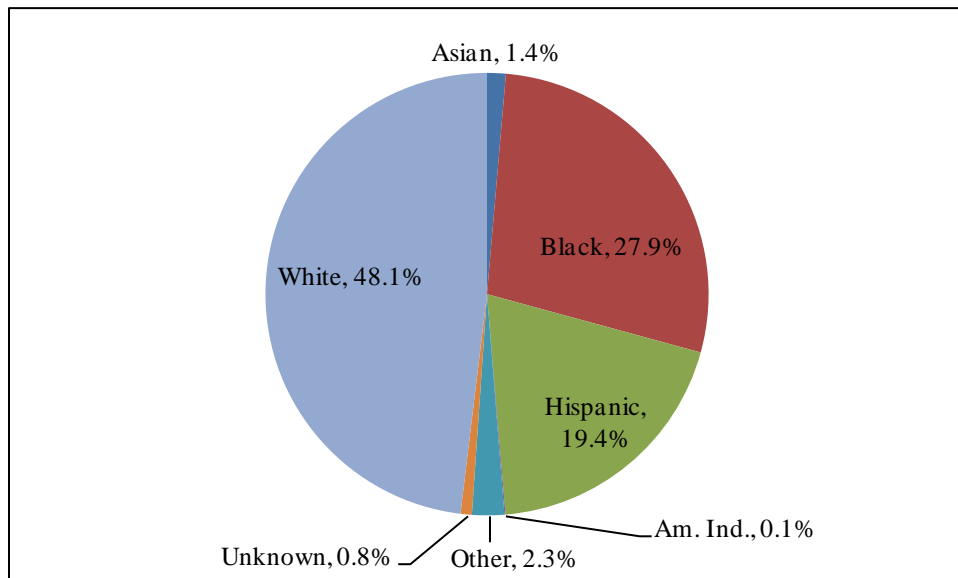


Table 6. Specific BHED by age

| | Frequencies | | | | | | |
|----------------|-------------|----------|----------|----------|--------|-----------|--------|
| | 2007 | | | | | | |
| | 0 to 17 | 18 to 25 | 26 to 44 | 45 to 64 | 65 + | Other/Unk | Total |
| A Simple BHED | 1,373 | 2,184 | 4,691 | 3,237 | 888 | 1 | 12,374 |
| B Complex BHED | 612 | 1,560 | 3,843 | 2,665 | 533 | 0 | 9,213 |
| C Medical BHED | 3,928 | 8,929 | 23,596 | 24,934 | 17,650 | 2 | 79,039 |
| | 2008 | | | | | | |
| | 0 to 17 | 18 to 25 | 26 to 44 | 45 to 64 | 65 + | Other/Unk | Total |
| A Simple BHED | 1,042 | 1,518 | 3,195 | 2,385 | 850 | 31 | 9,021 |
| B Complex BHED | 593 | 1,484 | 3,824 | 2,854 | 593 | 16 | 9,364 |
| C Medical BHED | 4,257 | 5,342 | 14,743 | 16,484 | 15,139 | 322 | 56,287 |
| | Percentages | | | | | | |
| | 2007 | | | | | | |
| | 0 to 17 | 18 to 25 | 26 to 44 | 45 to 64 | 65 + | Other/Unk | Total |
| A Simple BHED | 11.1% | 17.6% | 37.9% | 26.2% | 7.2% | 0.0% | 100.0% |
| B Complex BHED | 6.6% | 16.9% | 41.7% | 28.9% | 5.8% | 0.0% | 100.0% |
| C Medical BHED | 5.0% | 11.3% | 29.9% | 31.5% | 22.3% | 0.0% | 100.0% |
| | 2008 | | | | | | |
| | 0 to 17 | 18 to 25 | 26 to 44 | 45 to 64 | 65 + | Other/Unk | Total |
| A Simple BHED | 11.6% | 16.8% | 35.4% | 26.4% | 9.4% | 0.3% | 100.0% |
| B Complex BHED | 6.3% | 15.8% | 40.8% | 30.5% | 6.3% | 0.2% | 100.0% |
| C Medical BHED | 7.6% | 9.5% | 26.2% | 29.3% | 26.9% | 0.6% | 100.0% |

Simple BHED: Visits with a behavioral health diagnosis as the primary diagnosis, but no other behavioral health diagnosis. Complex BHED: Visits with a behavioral health diagnosis as the primary diagnosis, and also at least one other behavioral health diagnosis. Medical BHED: Visits with a medical diagnosis as the primary diagnosis, and at least one behavioral health diagnosis.

2004 – 2006 BHED: 40.8% of hospital BHED visits were by adults age 26-44, 10.5% were by children age 17 and under, 16.7% by adults age 18-25, 25.8% by adults age 45-64, and 6.3% by adults age 65 and over.

2008 Harris: 25.8% of PCRED visits were by adults age 26-44, 32.8% were by children age 17 and under, 13.4% were by adults age 18-25, 19.4% by adults age 45-64, and 8.7% by adults age 65 and over.

2007 national: Only adults age 18 and over were reported. 46.4% of BHED visits nationwide were by adults age 18-44, 34.5% by adults age 45-64, and 18.9% by adults age 65 and over.

Figure 13. 2007 Simple BHED by age

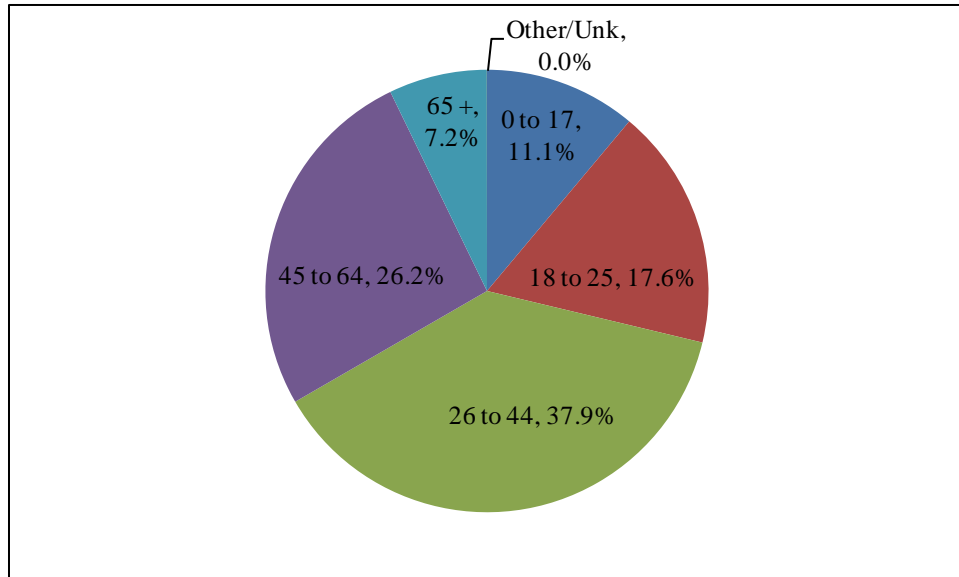


Figure 14. 2008 Simple BHED by age

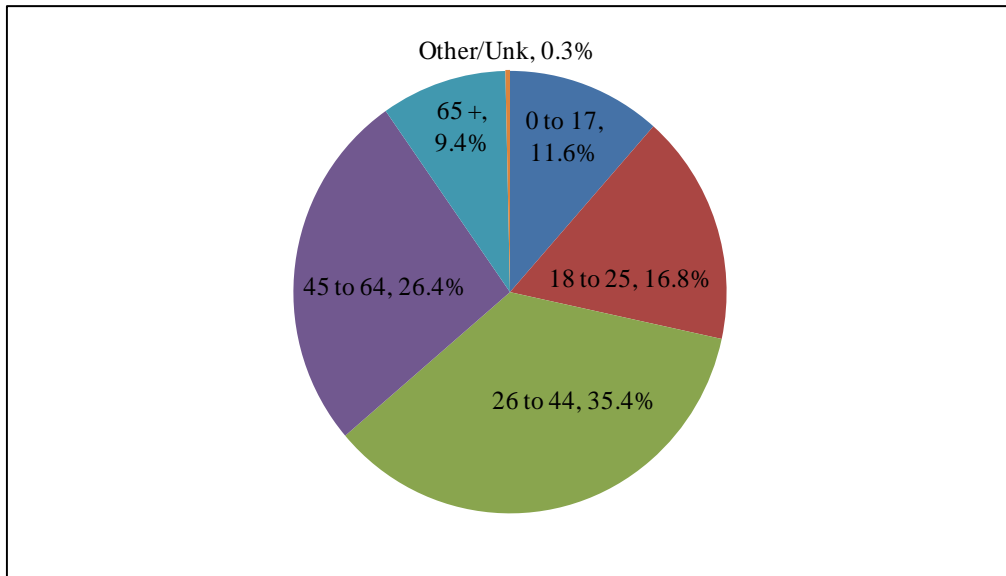


Figure 15. 2007 Complex BHED by age

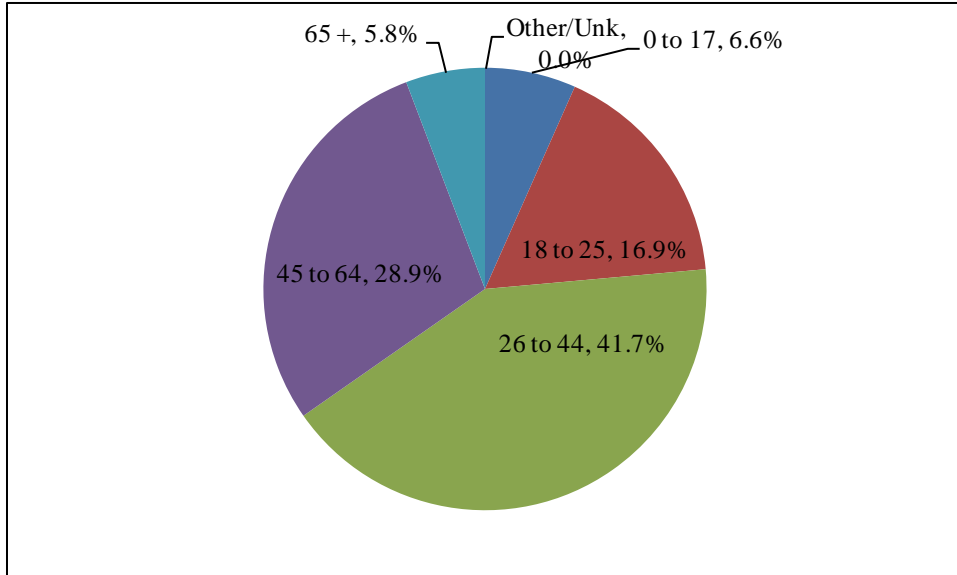


Figure 16. 2008 Complex BHED by age

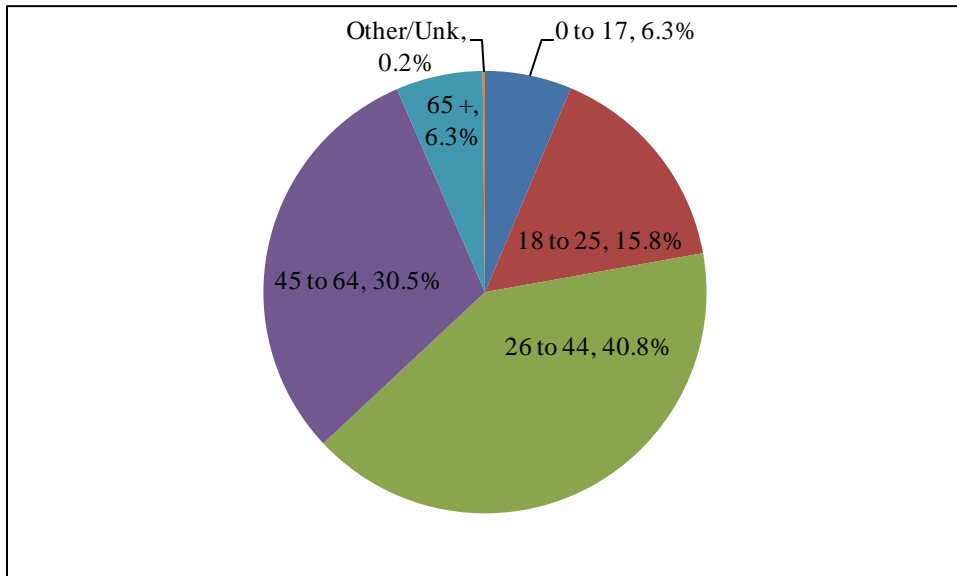


Figure 17. 2007 Medical BHED by age

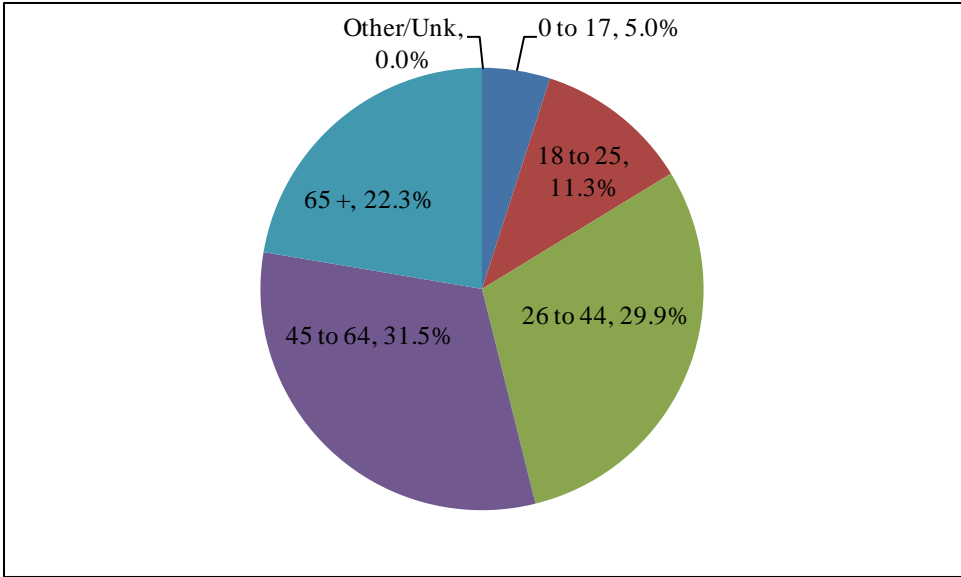


Figure 18. 2008 Medical BHED by age

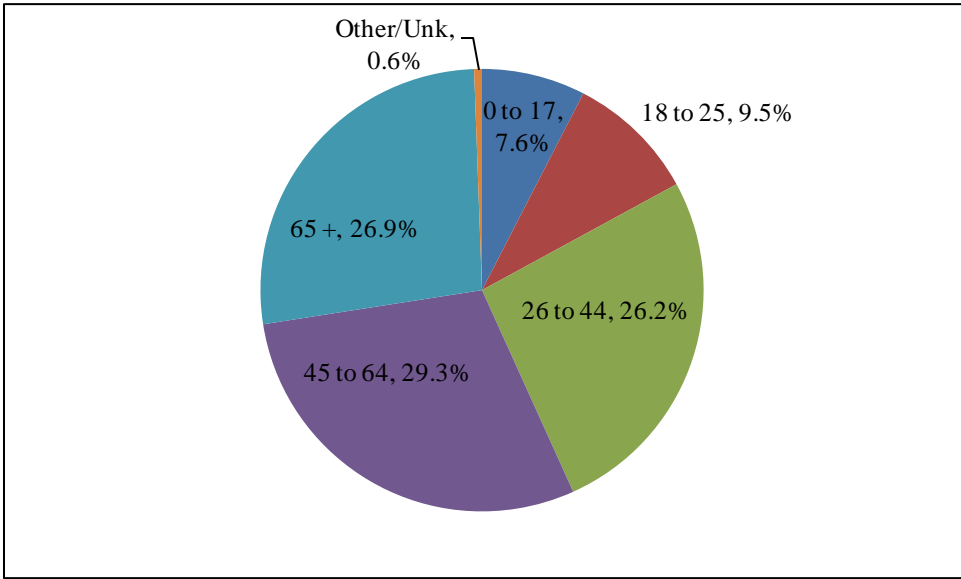


Table 7. Specific BHED visits by gender

| | Frequencies | | | |
|----------------|-------------|--------|------|--------|
| | 2007 | | | |
| | Female | Male | Unk | Total |
| A Simple BHED | 6,686 | 5,687 | 1 | 12,374 |
| B Complex BHED | 4,307 | 4,906 | 0 | 9,213 |
| C Medical BHED | 43,103 | 35,934 | 2 | 79,039 |
| | 2008 | | | |
| | Female | Male | Unk | Total |
| A Simple BHED | 4,945 | 4,075 | 1 | 9,021 |
| B Complex BHED | 4,360 | 5,003 | 1 | 9,364 |
| C Medical BHED | 32,464 | 23,822 | 1 | 56,287 |
| | Percentages | | | |
| | 2007 | | | |
| | Female | Male | Unk | Total |
| A Simple BHED | 54.0% | 46.0% | 0.0% | 100.0% |
| B Complex BHED | 46.7% | 53.3% | 0.0% | 100.0% |
| C Medical BHED | 54.5% | 45.5% | 0.0% | 100.0% |
| | 2008 | | | |
| | Female | Male | Unk | Total |
| A Simple BHED | 54.8% | 45.2% | 0.0% | 100.0% |
| B Complex BHED | 46.6% | 53.4% | 0.0% | 100.0% |
| C Medical BHED | 57.7% | 42.3% | 0.0% | 100.0% |

Simple BHED: Visits with a behavioral health diagnosis as the primary diagnosis, but no other behavioral health diagnosis. Complex BHED: Visits with a behavioral health diagnosis as the primary diagnosis, and also at least one other behavioral health diagnosis. Medical BHED: Visits with a medical diagnosis as the primary diagnosis, and at least one behavioral health diagnosis.

2004 – 2006 BHED: 50.3% of hospital BHED visits were by male patients, and 49.7% were by female patients.

2008 Harris: 57.8% of PCRED visits were by female patients, and 42.1% were by male patients.

2007 national: 53.9% of adult BHED visits nationwide were by female patients.

Figure 19. 2007 Simple BHED by gender

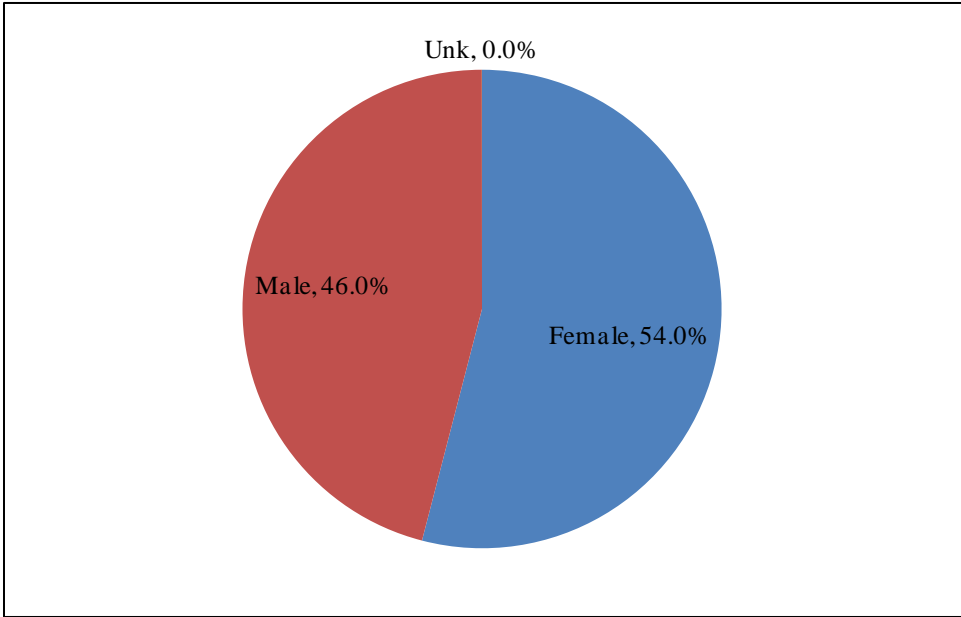


Figure 20. 2008 Simple BHED by gender

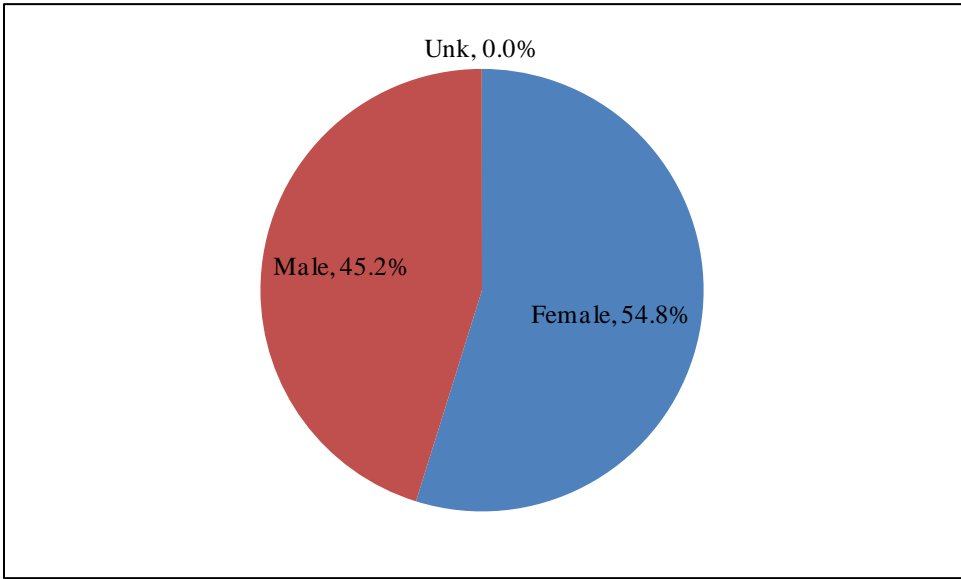


Figure 21. 2007 Complex BHED by gender

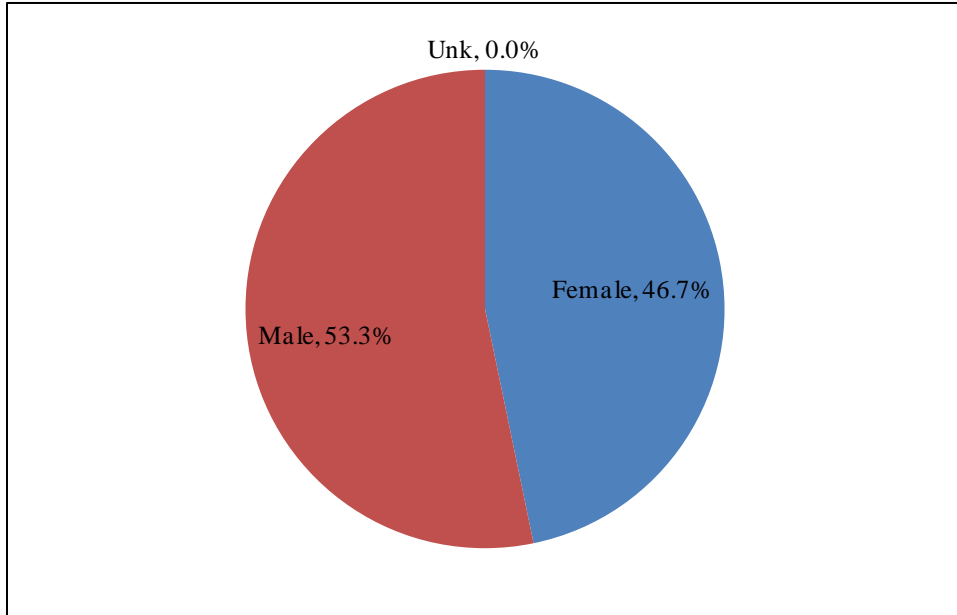


Figure 22. 2008 Complex BHED by gender

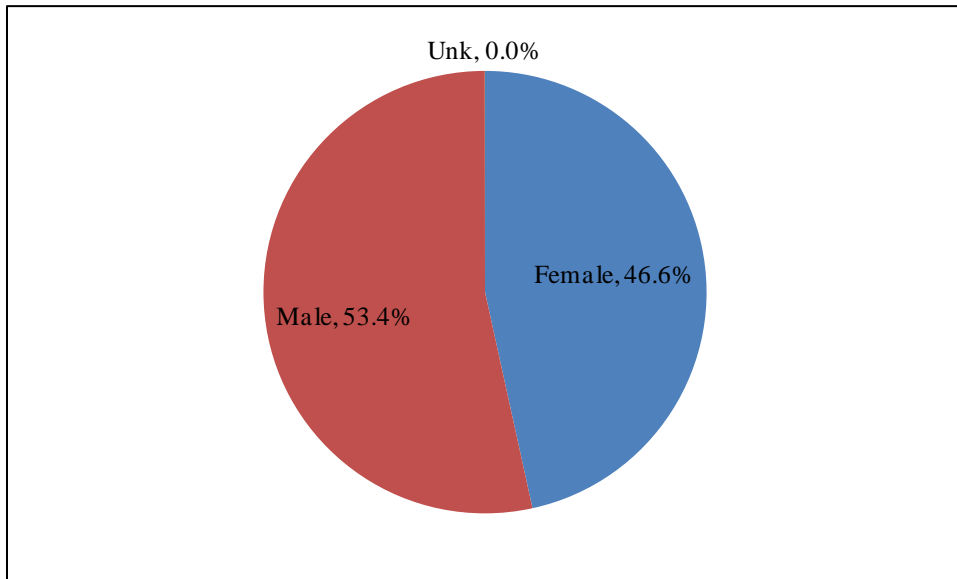


Figure 23. 2007 Medical BHED by gender

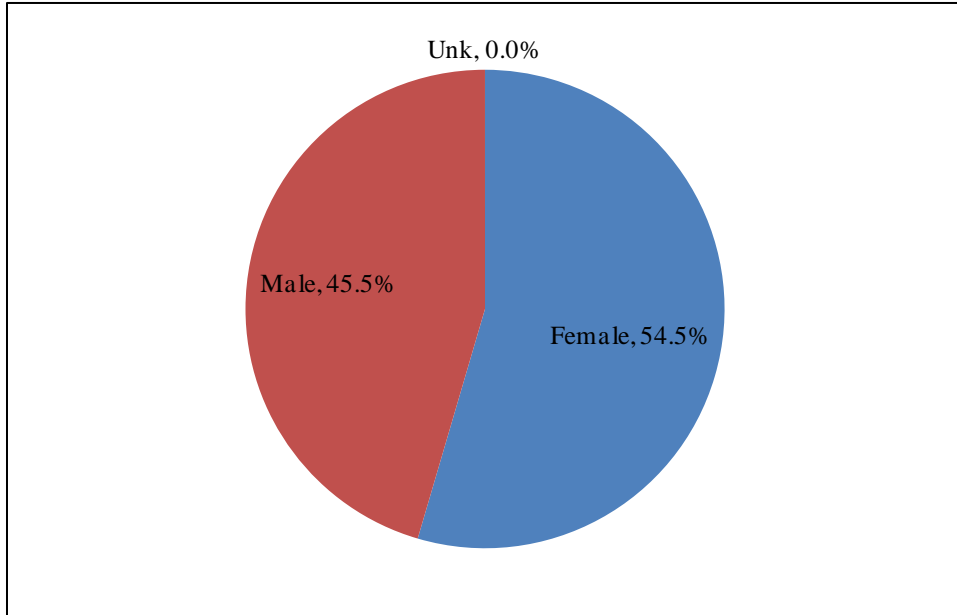


Figure 24. 2008 Medical BHED by gender

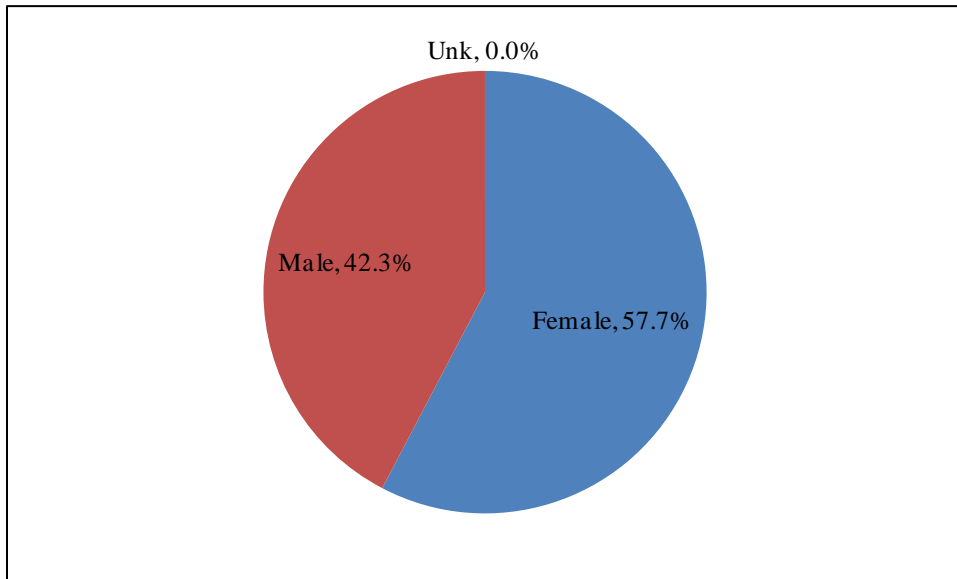


Table 8. Specific BHED visits by discharge status

| | Frequencies | | |
|----------------|------------------|-----------------|--------|
| | 2007 | | |
| | Adm ¹ | DC ² | Total |
| A Simple BHED | 2,243 | 10,131 | 12,374 |
| B Complex BHED | 2,085 | 7,128 | 9,213 |
| C Medical BHED | 21,999 | 57,040 | 79,039 |
| | 2008 | | |
| | Adm | DC | Total |
| A Simple BHED | 1,350 | 7,671 | 9,021 |
| B Complex BHED | 1,819 | 7,545 | 9,364 |
| C Medical BHED | 14,581 | 41,706 | 56,287 |
| | Percentages | | |
| | 2007 | | |
| | Adm | DC | Total |
| A Simple BHED | 18.1% | 81.9% | 100.0% |
| B Complex BHED | 22.6% | 77.4% | 100.0% |
| C Medical BHED | 27.8% | 72.2% | 100.0% |
| | 2008 | | |
| | Adm | DC | Total |
| A Simple BHED | 15.0% | 85.0% | 100.0% |
| B Complex BHED | 19.4% | 80.6% | 100.0% |
| C Medical BHED | 25.9% | 74.1% | 100.0% |

Simple BHED: Visits with a behavioral health diagnosis as the primary diagnosis, but no other behavioral health diagnosis. Complex BHED: Visits with a behavioral health diagnosis as the primary diagnosis, and also at least one other behavioral health diagnosis. Medical BHED: Visits with a medical diagnosis as the primary diagnosis, and at least one behavioral health diagnosis.

2004 – 2006 BHED: Discharge status was not computed in this manner.

2008 Harris: Discharge status was not computed in this manner. PCRED visits (all of which were discharged/non hospitalized) were compared with all other ED visits (admitted/hospitalized were a part of this group).

1 Admitted: Admitted to/hospitalized at same facility or transferred to another facility.

2 DC: Discharged to home or self care/non hospitalized.

Figure 25. 2007 Simple BHED by discharge status

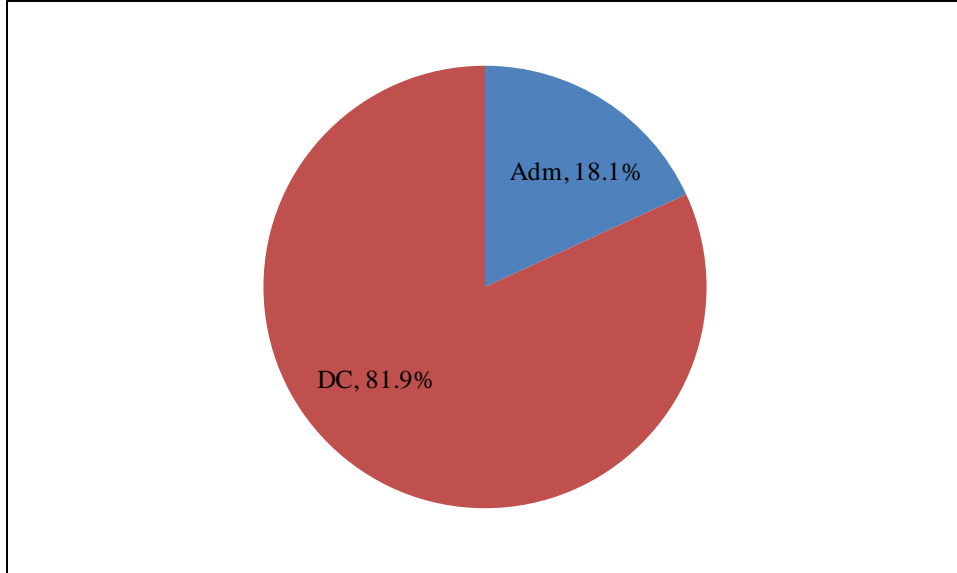


Figure 26. 2008 Simple BHED by discharge status

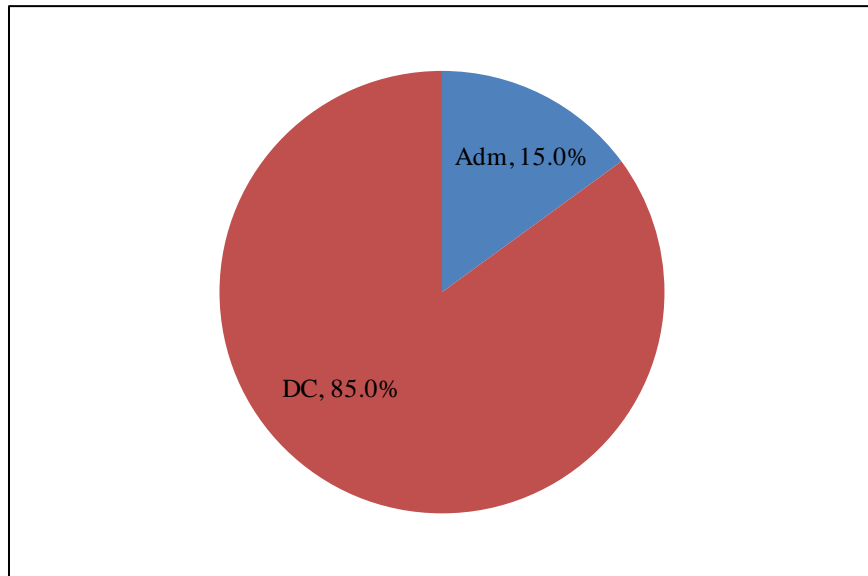


Figure 27. 2007 Complex BHED by discharge status

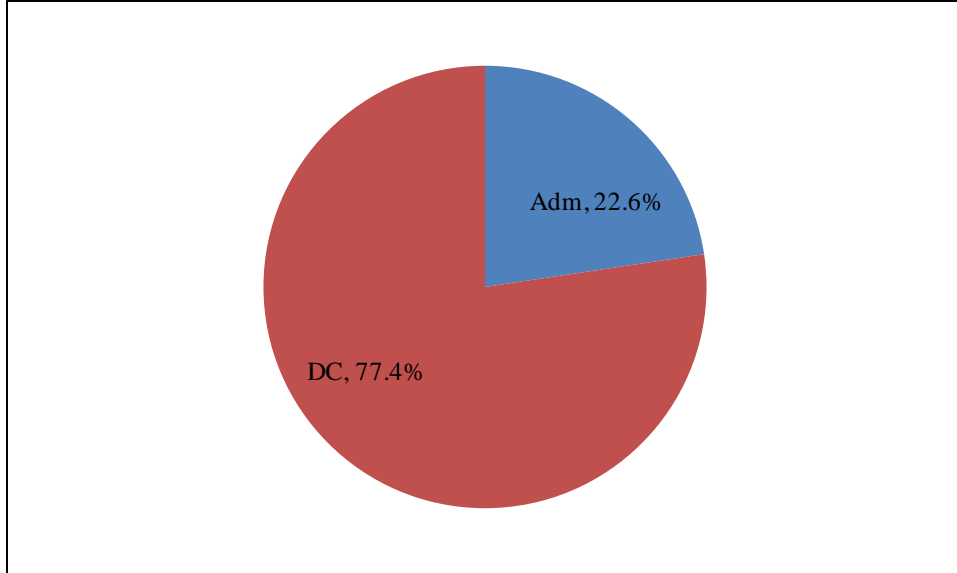


Figure 28. 2008 Complex BHED by discharge status

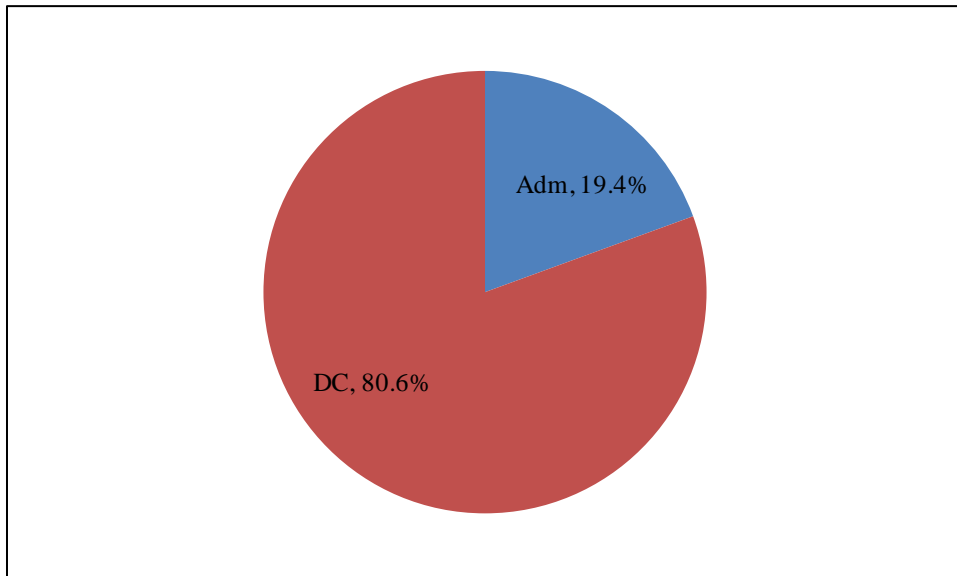


Figure 29. 2007 Medical BHED by discharge status

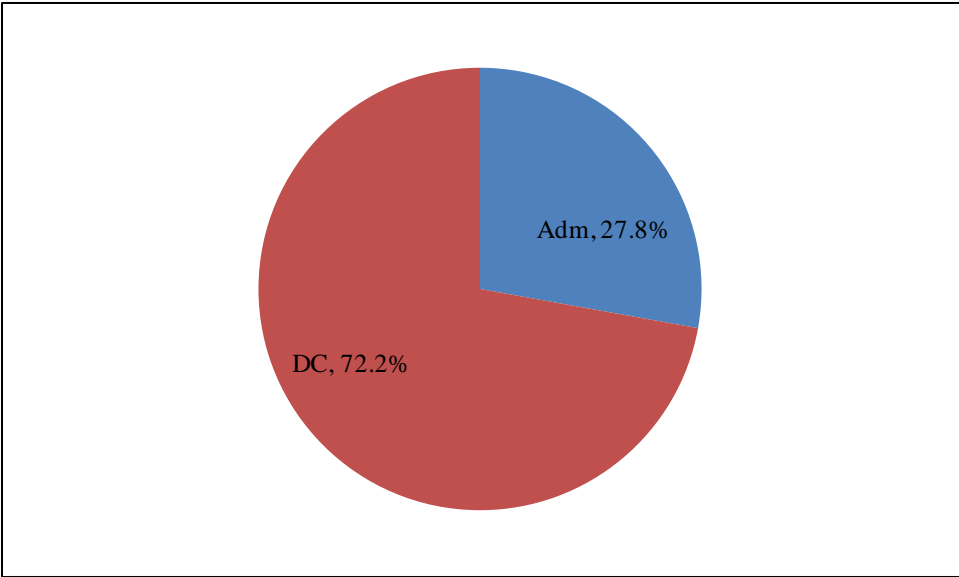


Figure 30. 2008 Medical BHED by discharge status

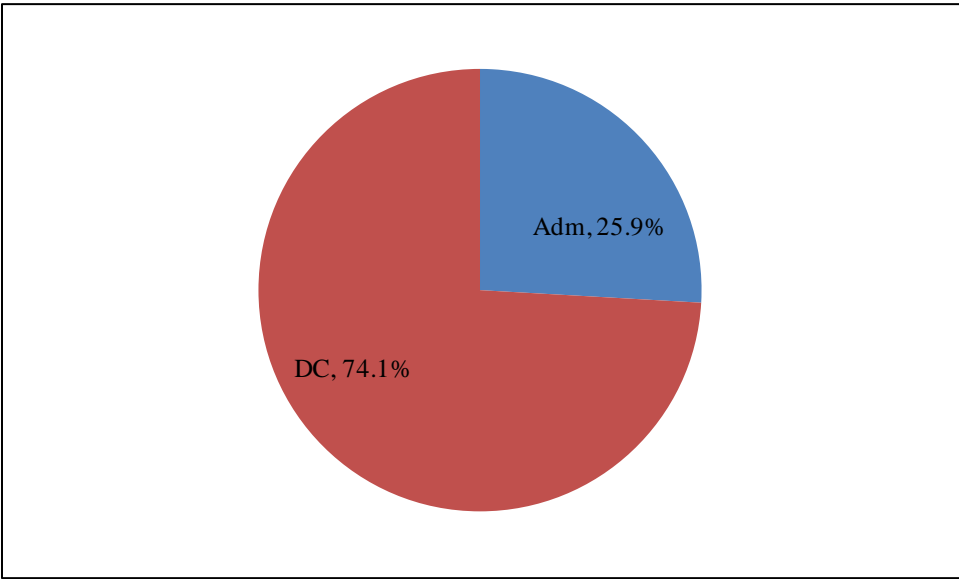


Table 9. Admission status by payer source for BHED visits in 2007

| | | 2007 frequencies | | | | | | | | |
|----------------|-------|------------------|--------|----------|----------|-----------|------------|-----------|---------|--------|
| | | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | Adm | 400 | 12 | 400 | 453 | 24 | 4 | 902 | 48 | 2,243 |
| | DC | 2,376 | 117 | 1,532 | 1,225 | 198 | 44 | 4,584 | 55 | 10,131 |
| | Total | 2,776 | 129 | 1,932 | 1,678 | 222 | 48 | 5,486 | 103 | 12,374 |
| B Complex BHED | Adm | 460 | 10 | 419 | 521 | 24 | 3 | 636 | 12 | 2,085 |
| | DC | 1,477 | 62 | 1,373 | 846 | 76 | 11 | 3,257 | 26 | 7,128 |
| | Total | 1,937 | 72 | 1,792 | 1,367 | 100 | 14 | 3,893 | 38 | 9,213 |
| C Medical BHED | Adm | 3,756 | 56 | 2,688 | 11,659 | 203 | 48 | 3,521 | 68 | 21,999 |
| | DC | 15,396 | 501 | 9,015 | 11,362 | 1,036 | 327 | 19,175 | 228 | 57,040 |
| | Total | 19,152 | 557 | 11,703 | 23,021 | 1,239 | 375 | 22,696 | 296 | 79,039 |
| | | 2007 percentages | | | | | | | | |
| | | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | Adm | 14.4% | 9.3% | 20.7% | 27.0% | 10.8% | 8.3% | 16.4% | 46.6% | 18.1% |
| | DC | 85.6% | 90.7% | 79.3% | 73.0% | 89.2% | 91.7% | 83.6% | 53.4% | 81.9% |
| | Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| B Complex BHED | Adm | 23.7% | 13.9% | 23.4% | 38.1% | 24.0% | 21.4% | 16.3% | 31.6% | 22.6% |
| | DC | 76.3% | 86.1% | 76.6% | 61.9% | 76.0% | 78.6% | 83.7% | 68.4% | 77.4% |
| | Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| C Medical BHED | Adm | 19.6% | 10.1% | 23.0% | 50.6% | 16.4% | 12.8% | 15.5% | 23.0% | 27.8% |
| | DC | 80.4% | 89.9% | 77.0% | 49.4% | 83.6% | 87.2% | 84.5% | 77.0% | 72.2% |
| | Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

2007 national: 15.1% of adult ED visits by the uninsured for mental health reasons resulted in an admission, and 23.8% of adult ED visits by the uninsured for substance abuse reasons resulted in an admission. By contrast, 58.9% of adult ED visits by Medicare enrollees for mental health reasons resulted in an admission, and 58.0% of adult ED visits by Medicare enrollees for substance abuse reasons resulted in an admission.

Table 10. Admission status by payer source for BHED visits in 2008

| | | 2008 frequencies | | | | | | | | |
|----------------|-------|------------------|--------|----------|----------|-----------|------------|-----------|---------|--------|
| | | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | Adm | 303 | 13 | 272 | 333 | 26 | 21 | 380 | 2 | 1,350 |
| | DC | 2,228 | 134 | 1,179 | 1,283 | 220 | 72 | 2,538 | 17 | 7,671 |
| | Total | 2,531 | 147 | 1,451 | 1,616 | 246 | 93 | 2,918 | 19 | 9,021 |
| B Complex BHED | Adm | 345 | 17 | 360 | 451 | 10 | 9 | 595 | 32 | 1,819 |
| | DC | 1,467 | 58 | 1,446 | 1,313 | 68 | 35 | 3,055 | 103 | 7,545 |
| | Total | 1,812 | 75 | 1,806 | 1,764 | 78 | 44 | 3,650 | 135 | 9,364 |
| C Medical BHED | Adm | 1,724 | 62 | 1,720 | 8,963 | 122 | 40 | 1,847 | 103 | 14,581 |
| | DC | 10,117 | 474 | 7,407 | 11,434 | 599 | 244 | 11,061 | 370 | 41,706 |
| | Total | 11,841 | 536 | 9,127 | 20,397 | 721 | 284 | 12,908 | 473 | 56,287 |
| | | 2008 percentages | | | | | | | | |
| | | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | Adm | 12.0% | 8.8% | 18.7% | 20.6% | 10.6% | 22.6% | 13.0% | 10.5% | 15.0% |
| | DC | 88.0% | 91.2% | 81.3% | 79.4% | 89.4% | 77.4% | 87.0% | 89.5% | 85.0% |
| | Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| B Complex BHED | Adm | 19.0% | 22.7% | 19.9% | 25.6% | 12.8% | 20.5% | 16.3% | 23.7% | 19.4% |
| | DC | 81.0% | 77.3% | 80.1% | 74.4% | 87.2% | 79.5% | 83.7% | 76.3% | 80.6% |
| | Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| C Medical BHED | Adm | 14.6% | 11.6% | 18.8% | 43.9% | 16.9% | 14.1% | 14.3% | 21.8% | 25.9% |
| | DC | 85.4% | 88.4% | 81.2% | 56.1% | 83.1% | 85.9% | 85.7% | 78.2% | 74.1% |
| | Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

2007 national: 15.1% of adult ED visits by the uninsured for mental health reasons resulted in an admission, and 23.8% of adult ED visits by the uninsured for substance abuse reasons resulted in an admission. By contrast, 58.9% of adult ED visits by Medicare enrollees for mental health reasons resulted in an admission, and 58.0% of adult ED visits by Medicare enrollees for substance abuse reasons resulted in an admission.

BHED visits by month, day, hour, length of stay, and transport status

Simple BHED visits were more frequent than complex BHED visits for every month of the year in 2007, but they were closer in frequency in 2008 (Figures 31 & 33). Medical BHED visits peaked in September in 2007 but September in 2008 saw a slight drop (Figures 32 & 34). Hurricane Ike made landfall in September 2008 and led to the temporary closure of some of the EDs in this study.

Simple BHED visits were more frequent than complex BHED visits for every day of the week in 2007, but they were closer in frequency in 2008 (Figures 35 & 37). Medical BHED visits peaked on Monday in both 2007 and 2008 (Figures 36 & 38).

BHED visits of every kind were at their lowest levels at the hours of 4 – 6 AM, and they peaked from late morning to early evening (Figures 39 - 42).

Mean length of stay was measured for non hospitalized visits of less than 24 hours each (Table 11). Complex BHED visits consistently had the longest length of stay (6.74 hours in 2007, 6.81 hours in 2008).

The 2008 ED dataset included a variable on whether the visit included an ambulance transport or a self transport. Type of BHED visit in 2008 by transport is presented in Table 12. More than three in ten (31.9%) simple BHED visits involved an ambulance transport, 36,1% of complex BHED visits involved an ambulance transport, and more than four in ten (42.2%) of medical BHED visits involved an ambulance transport.

Figure 31. 2007 BHED visits by month of the year – simplex and complex

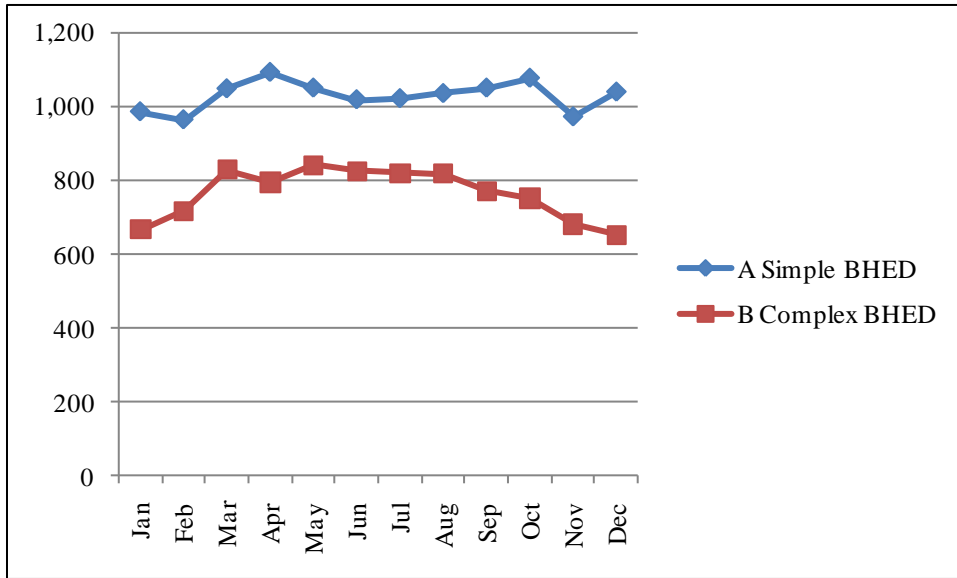
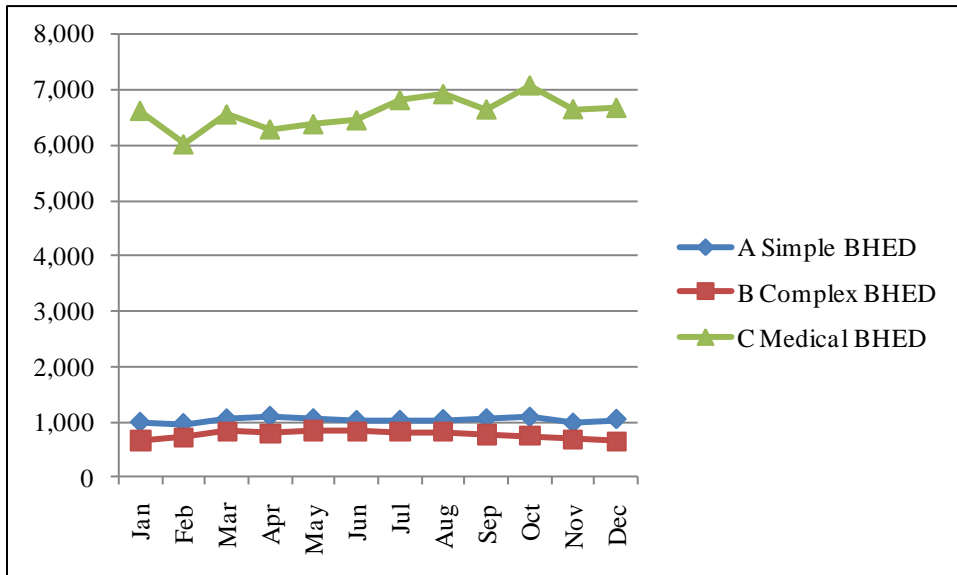


Figure 32. 2007 BHED visits by month of the year – simplex, complex, and medical



2008 Harris: ED visits overall peaked in January.

Figure 33. 2008 BHED visits by month of the year – simplex and complex

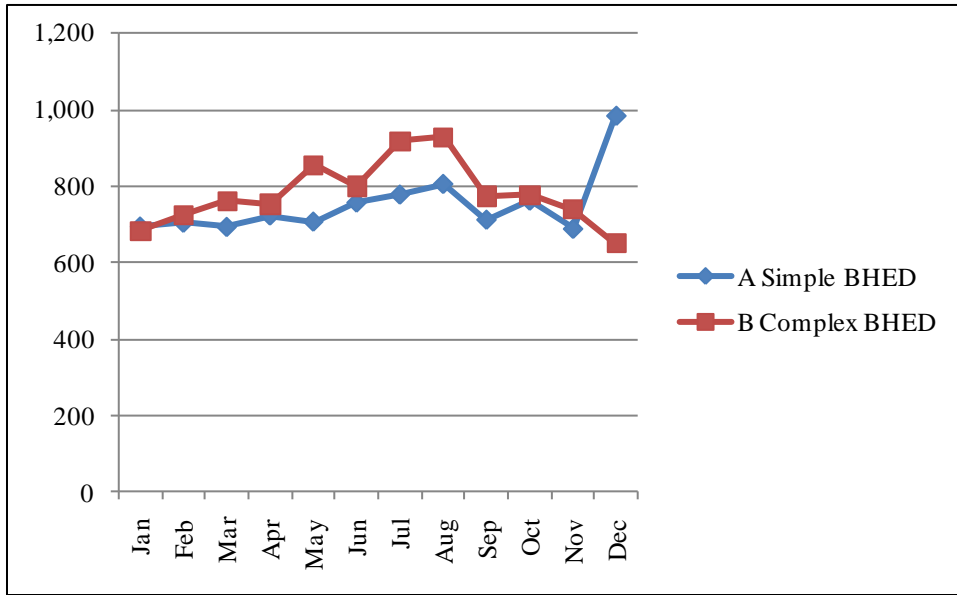
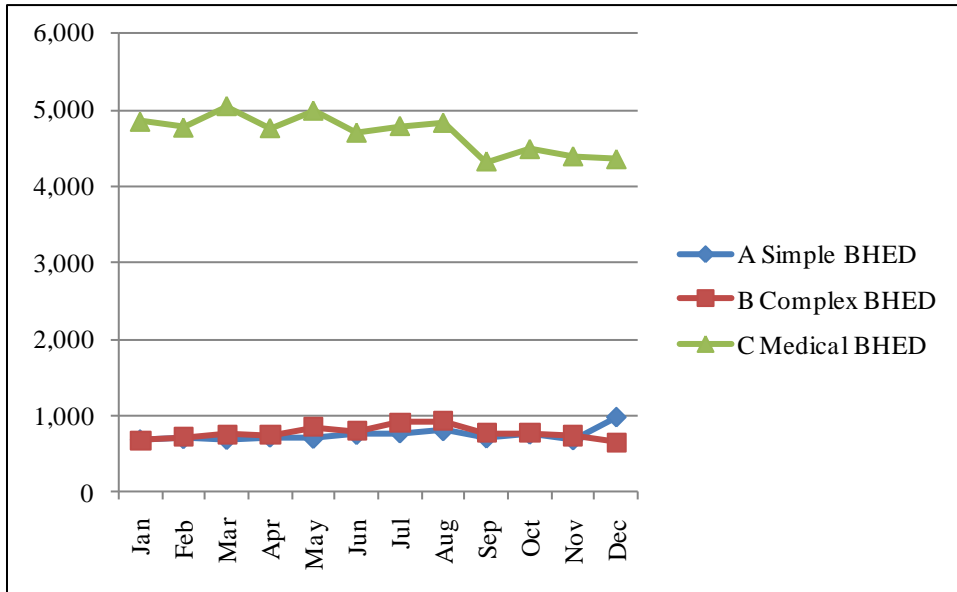


Figure 34. 2008 BHED visits by month of the year – simplex, complex, and medical



2008 Harris: ED visits overall peaked in January.

Figure 35. 2007 BHED visits by day of the week – simple and complex

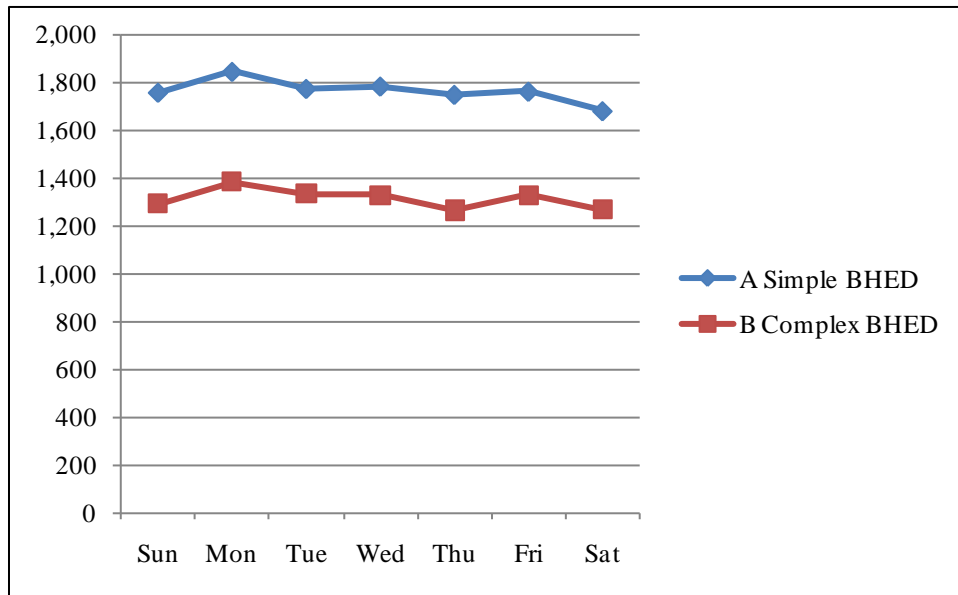
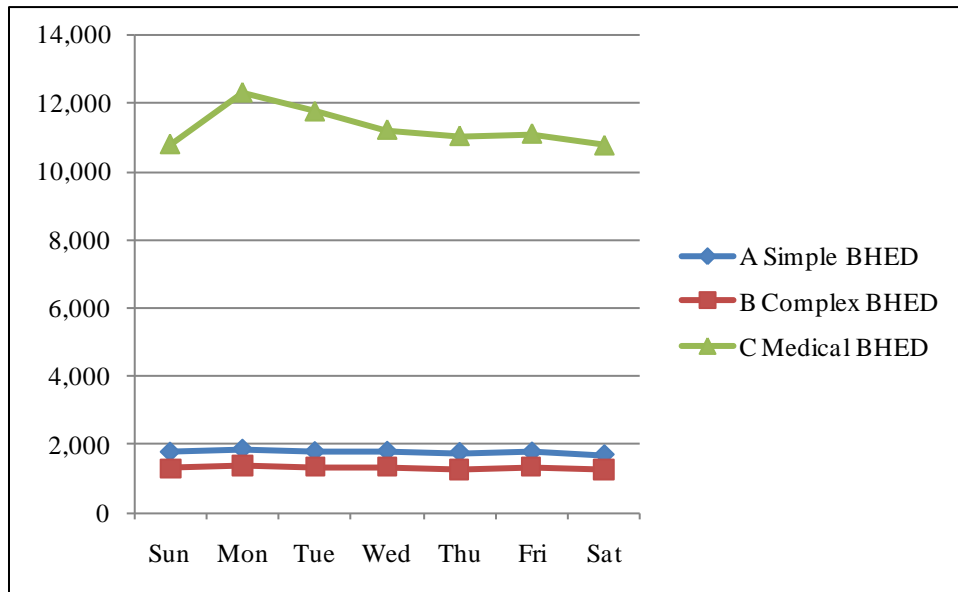


Figure 36. 2007 BHED visits by day of the week – simple, complex, and medical



2008 Harris: ED visits overall peaked on Sunday.

Figure 37. 2008 BHED visits by day of the week – simple and complex

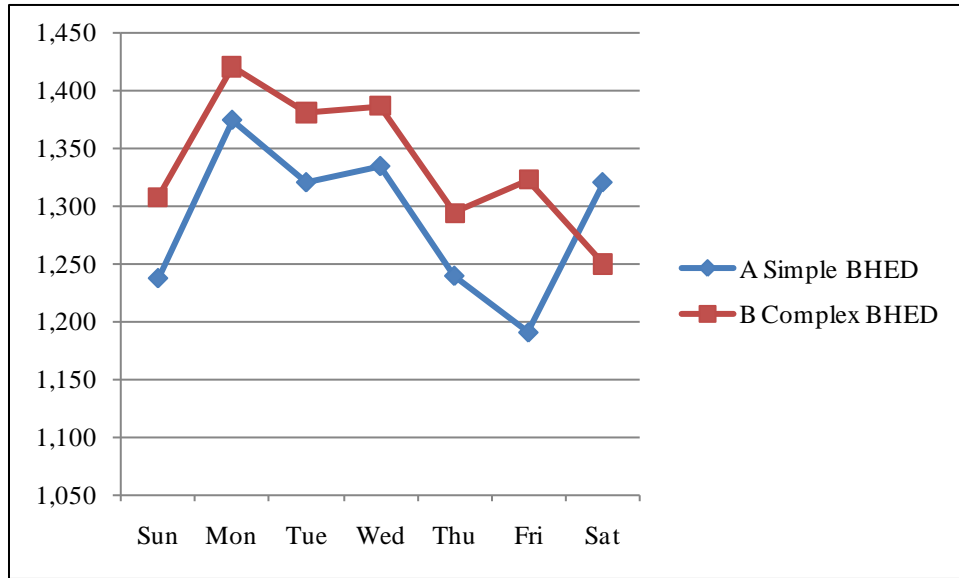
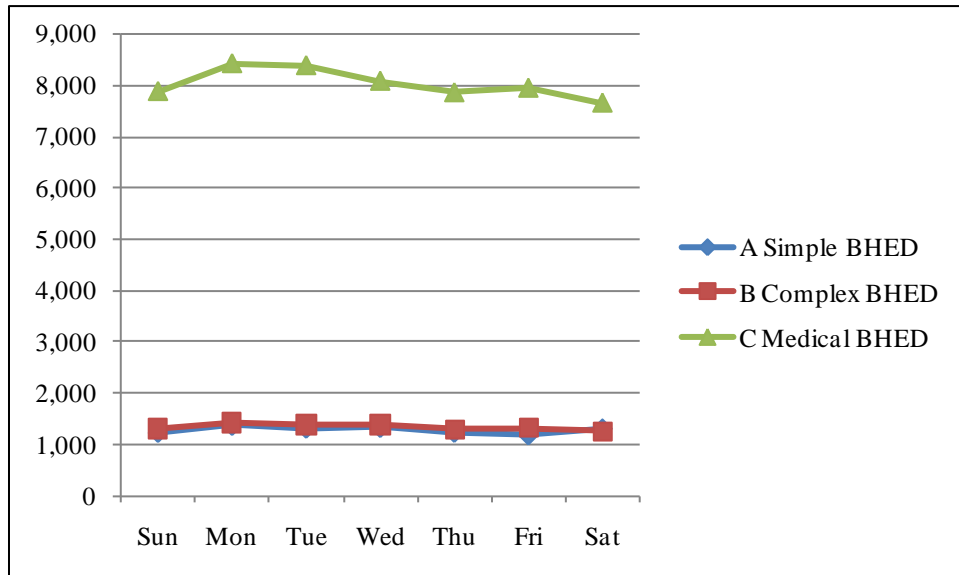


Figure 38. 2008 BHED visits by day of the week – simple, complex, and medical



2008 Harris: ED visits overall peaked on Sunday.

Figure 39. 2007 BHED visits by hour of the day – simple and complex

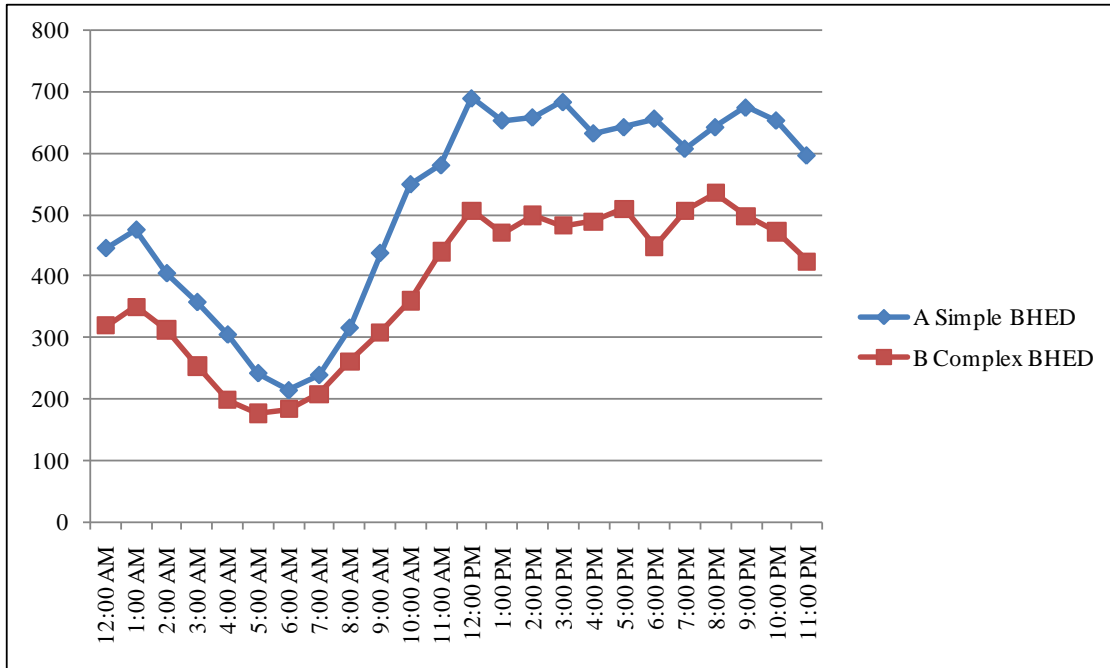
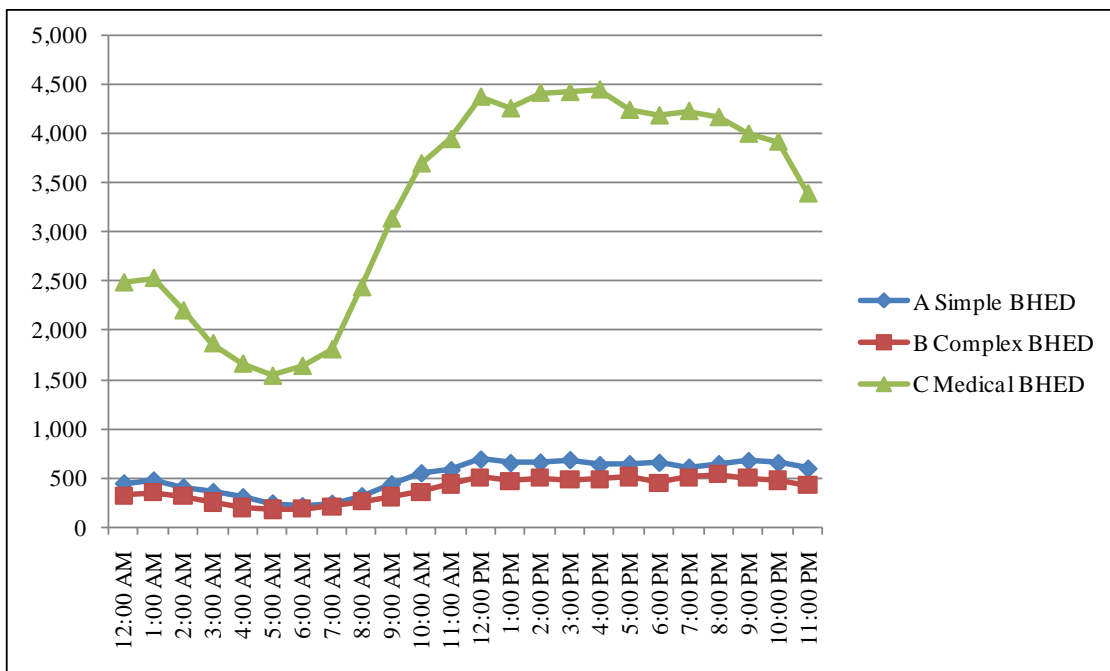


Figure 40. 2007 BHED visits by hour of the day – simple, complex, and medical



2008 Harris: ED visits overall peaked from 11 AM to 7 PM.

Figure 41. 2008 BHED visits by hour of the day – simple and complex

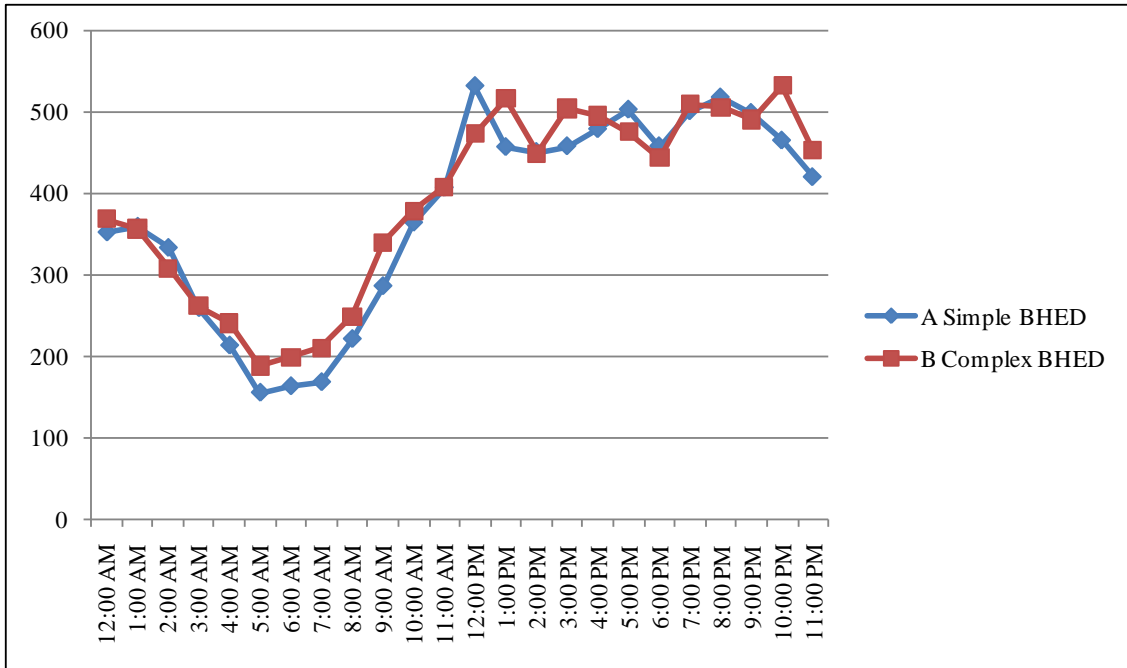
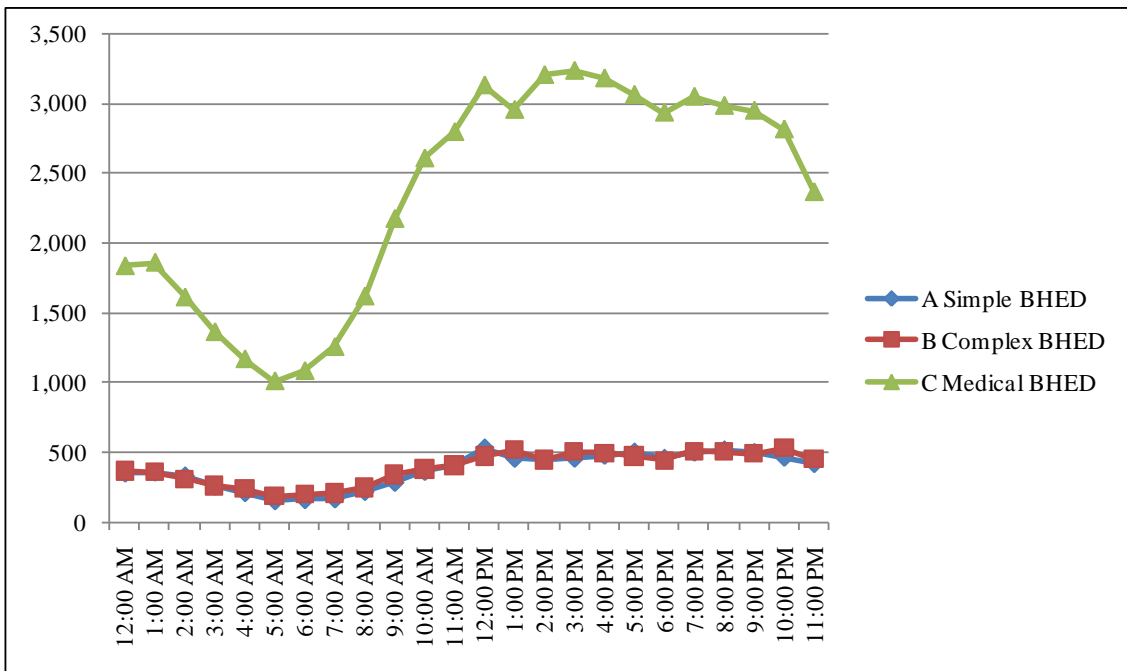


Figure 42. 2008 BHED visits by hour of the day – simple, complex, and medical



2008 Harris: ED visits overall peaked from 11 AM to 7 PM.

Table 11. Mean length of stay (in hours) in the emergency department for visits of less than 24 hours each.

| Type of visit | 2007 Mean (sd) | 2008 Mean (sd) |
|-----------------|----------------|----------------|
| A. Simple BHED | 5.69 (4.58) | 4.57 (4.01) |
| B. Complex BHED | 6.74 (5.12) | 6.81 (5.19) |
| C. Medical BHED | 5.34 (4.76) | 6.07 (5.18) |

Simple BHED: Visits with a behavioral health diagnosis as the primary diagnosis, but no other behavioral health diagnosis. Complex BHED: Visits with a behavioral health diagnosis as the primary diagnosis, and also at least one other behavioral health diagnosis. Medical BHED: Visits with a medical diagnosis as the primary diagnosis, and at least one behavioral health diagnosis.

2004 – 2006 BHED: Mean LOS for non hospitalized hospital based BHED visits was 6.1 hours in 2004, 5.9 hours in 2005 and 5.9 hours in 2006.

2008 Harris: Mean LOS for non hospitalized BHED visits in 2007 was 6.05 hours, compared with 5.52 hours in 2008. Mean LOS for non hospitalized medical visits in 2007 was 4.50 hours, compared with 4.48 hours in 2008.

Table 12. Types of BHED visits in 2008 by Transport

| | Frequencies | | | | |
|----------------|-------------|-------|--------|---------|--------|
| | Ambulance | Other | Self | Unknown | Total |
| A Simple BHED | 2,874 | 159 | 5,483 | 505 | 9,021 |
| B Complex BHED | 3,380 | 442 | 4,741 | 801 | 9,364 |
| C Medical BHED | 23,735 | 516 | 29,678 | 2,358 | 56,287 |
| | Percentages | | | | |
| | Ambulance | Other | Self | Unknown | Total |
| A Simple BHED | 31.9% | 1.8% | 60.8% | 5.6% | 100.0% |
| B Complex BHED | 36.1% | 4.7% | 50.6% | 8.6% | 100.0% |
| C Medical BHED | 42.2% | 0.9% | 52.7% | 4.2% | 100.0% |

In the 2010 ambulance report¹, 17.6% of all ED visits in Harris County had an ambulance transport, and 77.1% had a self transport. For BHED visits in that report with an ambulance transport, 41.3% were White, 39.9% were uninsured, 51.6% were female, 36.1% were age 26-44, and 19.3% were admitted.

2008 Harris: 10.8% of PCRED visits had an ambulance transport, and 20.9% of all other ED visits had an ambulance transport.

¹ Courtney P. *Emergency department visits to Harris County hospitals in 2008 that involved transportation by ambulance*. June 2010. Available at <http://www.sph.uth.tmc.edu/uploadedFiles/Centers/CHSR/HSRC/Final%20ambulance%20ED%20report.pdf>

Top diagnoses for BHED visits

Table 13 presents simple and complex BHED visits according to whether their first or primary diagnosis was for mental health, alcohol, or drug related reasons. In both 2007 and 2008, the majority of simple BHED visits had a mental health condition as the primary diagnosis (72.0% in 2007 and 79.0% in 2008). However, those percentages dropped for complex BHED visits (59.5% in 2007, 69.6% in 2008). Alcohol and drug related conditions combined made up 28.0% of simple BHED visits in 2007, but 40.6% of complex BHED visits. In 2008, alcohol and drug related conditions made up 21.0% of simple BHED visits but 30.3% of complex BHED visits.

Tables 14 (2007) and 15 (2008) go one step further and break down Table 13 by payer source. Six in ten (60.6%) of all simple BHED visits in 2007 whose primary diagnosis was alcohol related were by persons who were uninsured. In 2008 that same percentage dropped to 49.5%. Half (50.9%) of all simple BHED visits in 2007 whose primary diagnosis was drug related were by persons who were uninsured. In 2008 that same percentage dropped to 43.0%. The uninsured made up 38.1% of all simple BHED visits in 2007 whose primary diagnosis was mental health related, but that percentage dropped to 28.3% in 2008. However, the percentage of uninsured complex BHED visits, whose primary diagnosis was mental health related, changed very little from 2007 (35.3%) to 2008 (34.8%). While there were some differences between 2007 and 2008, the plurality (and in some cases majority) of visits whose primary focus was a drug or alcohol problem were by persons who were uninsured.

Tables 14, 15, and 17 present the top diagnoses for BHED visits, and Table 16 presents the top primary/medical diagnoses for medical BHED visits. Various forms of anxiety, depression, and alcohol use/abuse were among the top BHED diagnoses (Tables 14, 15, and 17). Cocaine abuse was one of the top primary diagnoses for complex BHED visits (Table 15), as well as one of the top secondary (ICD2) BHED diagnoses for medical BHED visits (Table 17).

Chest pain and pneumonia were the top medical diagnoses for medical BHED visits in both 2007 and 2008 (Table 16). While schizophrenia is often considered to be a serious and persistent mental illness, Table 14 indicates that many persons in both 2007 and 2008 were diagnosed with it in an ED setting but with no other BHED problems. Bipolar disorder, unspecified, was one of the top secondary BHED diagnoses for persons who present primarily with a medical disorder (Table 18).

Table 13. Primary discharge diagnoses¹ (mental, drug, or alcohol) for simple and complex BHED visits

| | 2007 frequencies | | | | 2008 frequencies | | | |
|----------------|------------------|---------|-------|--------|------------------|---------|-------|--------|
| | Mental health | Alcohol | Drug | Total | Mental health | Alcohol | Drug | Total |
| A Simple BHED | 8,504 | 2,820 | 481 | 11,805 | 7,128 | 1,290 | 603 | 9,021 |
| B Complex BHED | 5,413 | 2,590 | 1,097 | 9,100 | 6,520 | 1,875 | 969 | 9,364 |
| | 2007 percentages | | | | 2008 percentages | | | |
| | Mental health | Alcohol | Drug | Total | Mental health | Alcohol | Drug | Total |
| A Simple BHED | 72.0% | 23.9% | 4.1% | 100.0% | 79.0% | 14.3% | 6.7% | 100.0% |
| B Complex BHED | 59.5% | 28.5% | 12.1% | 100.0% | 69.6% | 20.0% | 10.3% | 100.0% |

2007 national: 63.7% of all BHED visits nationwide were for mental health conditions, 24.4% were for substance abuse conditions, and 11.9% were for co-morbid mental health and substance abuse conditions.

¹ ICD1.

Table 14. 2007 Primary discharge diagnoses¹ (mental, drug, or alcohol) for simple and complex BHED visits – broken down by payer source

| | 2007 Frequencies | | | | | | | | |
|----------------|------------------|------|----------|----------|-----------|------------|-----------|---------|--------|
| | Mental Health | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 2,054 | 93 | 1,538 | 1,444 | 93 | 23 | 3,236 | 23 | 8,504 |
| B Complex BHED | 1,124 | 49 | 1,262 | 990 | 52 | 9 | 1,912 | 15 | 5,413 |
| | Alcohol | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 447 | 19 | 284 | 172 | 112 | 18 | 1,708 | 60 | 2,820 |
| B Complex BHED | 508 | 13 | 364 | 247 | 40 | 3 | 1,400 | 15 | 2,590 |
| | Drug | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 99 | 6 | 69 | 34 | 8 | 2 | 245 | 18 | 481 |
| B Complex BHED | 258 | 9 | 158 | 124 | 8 | 2 | 530 | 8 | 1,097 |
| | 2007 Percentages | | | | | | | | |
| | Mental Health | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 24.2% | 1.1% | 18.1% | 17.0% | 1.1% | 0.3% | 38.1% | 0.3% | 100.0% |
| B Complex BHED | 20.8% | 0.9% | 23.3% | 18.3% | 1.0% | 0.2% | 35.3% | 0.3% | 100.0% |
| | Alcohol | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 15.9% | 0.7% | 10.1% | 6.1% | 4.0% | 0.6% | 60.6% | 2.1% | 100.0% |
| B Complex BHED | 19.6% | 0.5% | 14.1% | 9.5% | 1.5% | 0.1% | 54.1% | 0.6% | 100.0% |
| | Drug | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 20.6% | 1.2% | 14.3% | 7.1% | 1.7% | 0.4% | 50.9% | 3.7% | 100.0% |
| B Complex BHED | 23.5% | 0.8% | 14.4% | 11.3% | 0.7% | 0.2% | 48.3% | 0.7% | 100.0% |

Table 15. 2008 Primary discharge diagnoses¹ (mental, drug, or alcohol) for simple and complex BHED visits – broken down by payer source

| | 2008 Frequencies | | | | | | | | |
|----------------|------------------|------|----------|----------|-----------|------------|-----------|---------|--------|
| | Mental Health | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 2,185 | 121 | 1,205 | 1,417 | 123 | 45 | 2,020 | 12 | 7,128 |
| B Complex BHED | 1,239 | 57 | 1,355 | 1,434 | 46 | 28 | 2,268 | 93 | 6,520 |
| | Alcohol | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 214 | 14 | 129 | 131 | 113 | 43 | 639 | 7 | 1,290 |
| B Complex BHED | 355 | 10 | 298 | 184 | 22 | 12 | 963 | 31 | 1,875 |
| | Drug | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 132 | 12 | 117 | 68 | 10 | 5 | 259 | 0 | 603 |
| B Complex BHED | 218 | 8 | 153 | 146 | 10 | 4 | 419 | 11 | 969 |
| | 2008 Percentages | | | | | | | | |
| | Mental Health | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | Total |
| A Simple BHED | 30.7% | 1.7% | 16.9% | 19.9% | 1.7% | 0.6% | 28.3% | 0.2% | 100.0% |
| B Complex BHED | 19.0% | 0.9% | 20.8% | 22.0% | 0.7% | 0.4% | 34.8% | 1.4% | 100.0% |
| | Alcohol | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 16.6% | 1.1% | 10.0% | 10.2% | 8.8% | 3.3% | 49.5% | 0.5% | 100.0% |
| B Complex BHED | 18.9% | 0.5% | 15.9% | 9.8% | 1.2% | 0.6% | 51.4% | 1.7% | 100.0% |
| | Drug | | | | | | | | |
| | Commercial | CHIP | Medicaid | Medicare | Oth. Gov. | Oth. Priv. | Uninsured | Unknown | |
| A Simple BHED | 21.9% | 2.0% | 19.4% | 11.3% | 1.7% | 0.8% | 43.0% | 0.0% | 100.0% |
| B Complex BHED | 22.5% | 0.8% | 15.8% | 15.1% | 1.0% | 0.4% | 43.2% | 1.1% | 100.0% |

Table 14. Top primary diagnoses¹ for simple BHED visits

| 2007 | | | 2008 | | |
|-------|---|-------|------------------|--|-------|
| ICD | Description | Count | ICD | Description | Count |
| 30000 | Anxiety state, unspec | 1,936 | 300 ² | Anxiety | 1,274 |
| 30500 | Alcohol abuse, unspec | 1,338 | 311 | Depressive d/o, nec | 862 |
| 311 | Depressive disorder, nec | 1,181 | 30000 | Anxiety state, unspecified | 651 |
| 2989 | Unspecified psychosis | 693 | 30001 | Panic disorder without agoraphobia | 460 |
| 30590 | Other, mixed, or unspecified drug abuse | 560 | 30500 | Alcohol abuse, unspecified | 435 |
| 30781 | Tension headache | 441 | 2989 | Unspecified psychosis | 390 |
| 29590 | Unspecified schizophrenia, unspec | 419 | 78601 | Hyperventilation | 229 |
| 30001 | Panic disorder without agoraphobia | 405 | 2962 | Major depressive disorder, single episode | 221 |
| 29680 | Bipolar disorder, unspec | 364 | 3102 | Postconcussion syndrome | 215 |
| 29620 | Major depr disorder, single episode, unspec | 359 | 3059 | Other, mixed, or unspecified drug abuse | 180 |
| 30560 | Cocaine abuse, unspecified | 315 | V704 | Examination for medicolegal reasons | 163 |
| 78601 | Hyperventilation | 238 | 3080 | Predominant disturbance of emotions | 139 |
| 3102 | Postconcussion syndrome | 228 | 5712 | Alcoholic cirrhosis of liver | 139 |
| 3080 | Predominant disturbance of emotions | 179 | 30590 | Other, mixed, or unspecified drug abuse | 126 |
| 2948 | Oth persistent mental d/o due to conditions class | 155 | 2948 | Persistent mental d/os due to conditions classified else | 122 |
| V704 | Examination for medicolegal reasons | 150 | 2968 | Other and unspecified bipolar disorders | 113 |
| 29570 | Schizoaffective disorder, unspecified | 146 | 29620 | Major depr d/o, single episode, unspec | 104 |
| 3009 | Unspecified nonpsychotic mental disorder | 143 | 3061 | Respiratory malfunc. arising from mental factors | 93 |
| 300 | Anxiety, dissociative and somatoform disorders | 141 | 3056 | Cocaine abuse | 89 |
| 5712 | Alcoholic cirrhosis of liver | 120 | 29590 | Unspecified schizophrenia, unspecifed | 87 |
| 29690 | Unspecified episodic mood disorder | 112 | 29570 | Schizoaffective disorder, unspecified | 85 |
| 30390 | Other and unspecified alcohol dependence | 98 | 3004 | Dysthymic disorder | 84 |
| 3004 | Dysthymic disorder | 94 | 2959 | Unspecified schizophrenia | 78 |
| 305 | Nondependent abuse of drugs | 91 | 29680 | Bipolar disorder, unspecified | 77 |
| 29530 | Schizophrenic d/o, paranoid type, unspec | 87 | 29530 | Schizophrenia, paranoid type, unspecifed | 72 |

1 ICD1

2 Appears to be missing a digit.

Table 15. Top primary diagnoses¹ for complex BHED visits

| 2007 | | | 2008 | | |
|-------|---|-------|------------------|--|-------|
| ICD | Description | Count | ICD | Description | Count |
| 311 | Depressive disorder, nec | 851 | 311 | Depressive disorder, not elsewhere classified | 1,224 |
| 30500 | Alcohol abuse, unspecified | 629 | 2989 | Unspecified psychosis | 491 |
| 30000 | Anxiety state, unspecified | 553 | 3009 | Unspecified nonpsychotic mental disorder | 433 |
| 2989 | Unspecified psychosis | 503 | 29181 | Alcohol withdrawal | 375 |
| 30560 | Cocaine abuse, unspecified | 389 | 30500 | Alcohol abuse, unspecified | 351 |
| 29620 | Major depressive d/o, single episode, unspec | 371 | 5712 | Alcoholic cirrhosis of liver | 337 |
| 5712 | Alcoholic cirrhosis of liver | 368 | 300 ² | Anxiety | 327 |
| 2920 | Drug withdrawal | 360 | 30000 | Anxiety state, unspecified | 285 |
| 29181 | Alcohol withdrawal | 355 | 2962 | Major depressive disorder, single episode | 251 |
| 29680 | Bipolar disorder, unspecified | 295 | 29570 | Schizoaffective disorder, unspecified | 237 |
| 30590 | Other, mixed, or unspecified drug abuse | 284 | 292 | Drug-induced mental disorders | 232 |
| 29590 | Unspecified schizophrenia | 228 | 29620 | Major depr d/o, single episode, unspecified | 209 |
| 30001 | Panic disorder without agoraphobia | 158 | 3129 | Unspecified disturbance of conduct | 203 |
| 29570 | Schizoaffective disorder, unspecified | 153 | 29680 | Bipolar disorder, unspecified | 190 |
| 29650 | Bipolar I d/o, most recent episode depr, unspec | 148 | 29590 | Unspecified schizophrenia, unspecified | 181 |
| 2910 | Alcohol withdrawal delirium | 114 | 30001 | Panic disorder without agoraphobia | 136 |
| 78601 | Hyperventilation | 107 | 30560 | Cocaine abuse, unspecified | 132 |
| 29690 | Unspecified episodic mood disorder | 106 | 30590 | Other, mixed, or unspecified drug abuse | 131 |
| 64843 | Mental d/os complicating pregnancy, unspec | 106 | 29530 | Schizophrenia, paranoid type, unspecified | 121 |
| 30540 | Sedative, hypnotic or anxiolytic abuse, unspec | 104 | 2920 | Pathological drug intoxication | 115 |
| 30390 | Other and unspecified alcohol dependence | 89 | 78601 | Hyperventilation | 103 |
| 29630 | Major depr d/o, recurrent episode, unspecified | 79 | 291 | Alcohol-induced mental disorders | 100 |
| 30520 | Cannabis abuse, unspecified | 77 | 2965 | Bipolar I d/o, most recent episode depr | 93 |
| 30300 | Acute alcoholic intoxication, unspecified | 75 | 29650 | Bipolar I d/o, most recent episode depr, unspec. | 93 |
| 53530 | Alcoholic gastritis, no mention of hemorrhage | 68 | 29633 | Major depr d/o, recurrent episode, severe | 77 |

1 ICD1

2 Appears to be missing a digit.

Table 16. Top primary (medical) diagnoses¹ for medical BHED visits

| 2007 | | | 2008 | | |
|-------|--|-------|-------|--|-------|
| ICD | Description | Count | ICD | Description | Count |
| 78659 | Chest pain, other | 2,667 | 78659 | Chest pain, other | 1,743 |
| 78650 | Chest pain, unspecified | 1,988 | 7865 | Chest pain | 1,028 |
| 486 | Pneumonia, organism unspecified | 1,712 | 486 | Pneumonia, organism unspecified | 1,021 |
| 5990 | Urinary tract infection, site not specified | 1,634 | 599 | Other disorders of urethra and urinary tract | 945 |
| 78039 | Convulsive disorder NOS | 1,395 | 7802 | Transient alteration of awareness | 928 |
| 49121 | Acute exacerbation of COPD | 1,223 | 78650 | Chest pain, unspecified | 924 |
| 7802 | Transient alteration of awareness | 1,180 | 78039 | Convulsive disorder NOS | 795 |
| 4280 | Congestive heart failure, unspecified | 1,140 | 49121 | Acute exacerbation of COPD | 751 |
| 7840 | Headache | 992 | 78097 | Altered mental status | 751 |
| 4019 | Essential hypertension, unspecified | 915 | V6284 | Suicidal ideation | 655 |
| 34590 | Epilepsy, unspecified, not intractable | 836 | 5990 | Urinary tract infection, site not specified | 538 |
| 6826 | Cellulitis of leg, except foot | 813 | 4019 | Essential hypertension, unspecified | 537 |
| 43491 | Cerebral artery occlusion, unspec, with cerebral | 800 | 27651 | Dehydration | 526 |
| 4660 | Acute bronchitis | 797 | 7851 | Palpitations | 520 |
| 78900 | Abdominal pain, unspecified site | 730 | 43491 | Cerebral artery occlusion, unspec, with cerebral | 513 |
| 78652 | Painful respiration | 729 | 9694 | Poisoning by benzodiazepene-based tranquilizers | 508 |
| 5770 | Acute pancreatitis | 721 | 7804 | Dizziness and giddiness | 493 |
| 920 | Contusion of face, scalp, and neck except eye | 716 | 3459 | Epilepsy, unspecified, not intractable | 481 |
| 27651 | Dehydration | 703 | 5849 | Acute renal failure, unspecified | 466 |
| 5589 | Oth and unspec noninfectious gastroenteritis and | 661 | 78900 | Abdominal pain, unspecified site | 456 |
| 389 | Hearing loss | 660 | 389 | Hearing loss | 447 |
| 41401 | Coronary atherosclerosis of native coronary arte | 639 | V681 | Issue of repeat prescriptions | 440 |
| 78909 | Abdominal pain, unspecified site | 633 | 920 | Contusion of face, scalp, and neck except eye | 430 |
| 9694 | Poisoning by benzodiazepene based tranquilizers | 611 | 784 | Symptoms involving head and neck | 415 |
| 7804 | Dizziness and giddiness | 591 | 7840 | Headache | 399 |

¹ ICD1

Table 17. Top secondary diagnoses¹ that are behavioral for medical BHED visits

| 2007 | | | 2008 | | |
|-------|---|-------|------------------|---|-------|
| ICD | Description | Count | ICD | Description | Count |
| 3051 | Tobacco use disorder | 6,836 | 300 ² | Anxiety | 1,486 |
| 30000 | Anxiety state, unspecified | 2,106 | 311 | Depressive disorder, not elsewhere classified | 1,275 |
| 30500 | Alcohol abuse, unspecified | 1,544 | 30000 | Anxiety state, unspecified | 994 |
| 311 | Depressive disorder, not elsewhere classified | 1,352 | 30500 | Alcohol abuse, unspecified | 684 |
| 30560 | Cocaine abuse, unspecified | 1,197 | 2968 | Other and unspecified bipolar disorders | 593 |
| 30590 | Other, mixed, or unspecified drug abuse | 985 | 2948 | Oth persistent mental d/os due to conditions clas | 549 |
| 29680 | Bipolar disorder, unspecified | 782 | 29680 | Bipolar disorder, unspecified | 449 |
| 29590 | Unspecified schizophrenia, unspeficied | 480 | 30560 | Cocaine abuse, unspecified | 441 |
| 5712 | Alcoholic cirrhosis of liver | 397 | 31401 | Attention deficit disorder with hyperactivity | 440 |
| 2948 | Oth persistent mental d/o due to conditions class | 391 | 3051 | Tobacco use disorder | 419 |
| 31401 | Attention deficit disorder with hyperactivity | 325 | 30590 | Other, mixed, or unspecified drug abuse | 402 |
| 30520 | Cannabis abuse, unspecified | 283 | 3056 | Cocaine abuse | 329 |
| 30390 | Other and unspecified alcohol dependence | 237 | 2989 | Unspecified psychosis | 318 |
| 319 | Unspecified mental retardation | 213 | 3059 | Other, mixed, or unspecified drug abuse | 317 |
| 2989 | Unspecified psychosis | 193 | 29590 | Unspecified schizophrenia, unspeficied | 284 |
| 2920 | Pathological drug intoxication | 185 | 30001 | Panic disorder without agoraphobia | 262 |
| 30001 | Panic disorder without agoraphobia | 176 | 29181 | Alcohol withdrawal | 192 |
| 78601 | Hyperventilation | 173 | 3004 | Dysthymic disorder | 190 |
| 300 | Anxiety, dissociative and somatoform disorders | 172 | 78601 | Hyperventilation | 187 |
| 29181 | Alcohol withdrawal | 163 | 2962 | Major depressive disorder, single episode | 170 |
| 30540 | Sedative, hypnotic or anxiolytic abuse, unspec | 159 | 3052 | Cannabis abuse | 167 |
| 29900 | Autistic disorder, persistent or active state | 153 | 29620 | Major depressive disorder, single episode | 160 |
| 3004 | Dysthymic disorder | 147 | 319 | Unspecified mental retardation | 155 |
| 29620 | Major depr d/o, single episode, unspecified | 146 | 5712 | Alcoholic cirrhosis of liver | 144 |
| 31400 | Attention deficit disorder without hyperactivity | 137 | 30390 | Other and unspecified alcohol dependence | 130 |

1 ICD2. Diagnoses 3 through 10 are not included here.

2 Appears to be missing a digit.

Geographic distribution of BHED visits in 2008 by ZIP code

The following maps show the three categories of BHED visits by ZIP code of residence. For the sake of simplicity, only visits in 2008 are shown. In contrast to maps in the 2008 Harris report, distributions were broken up according to “natural breaks” rather than “quintiles.” Natural breaks more clearly shows the highest concentrations of visits.

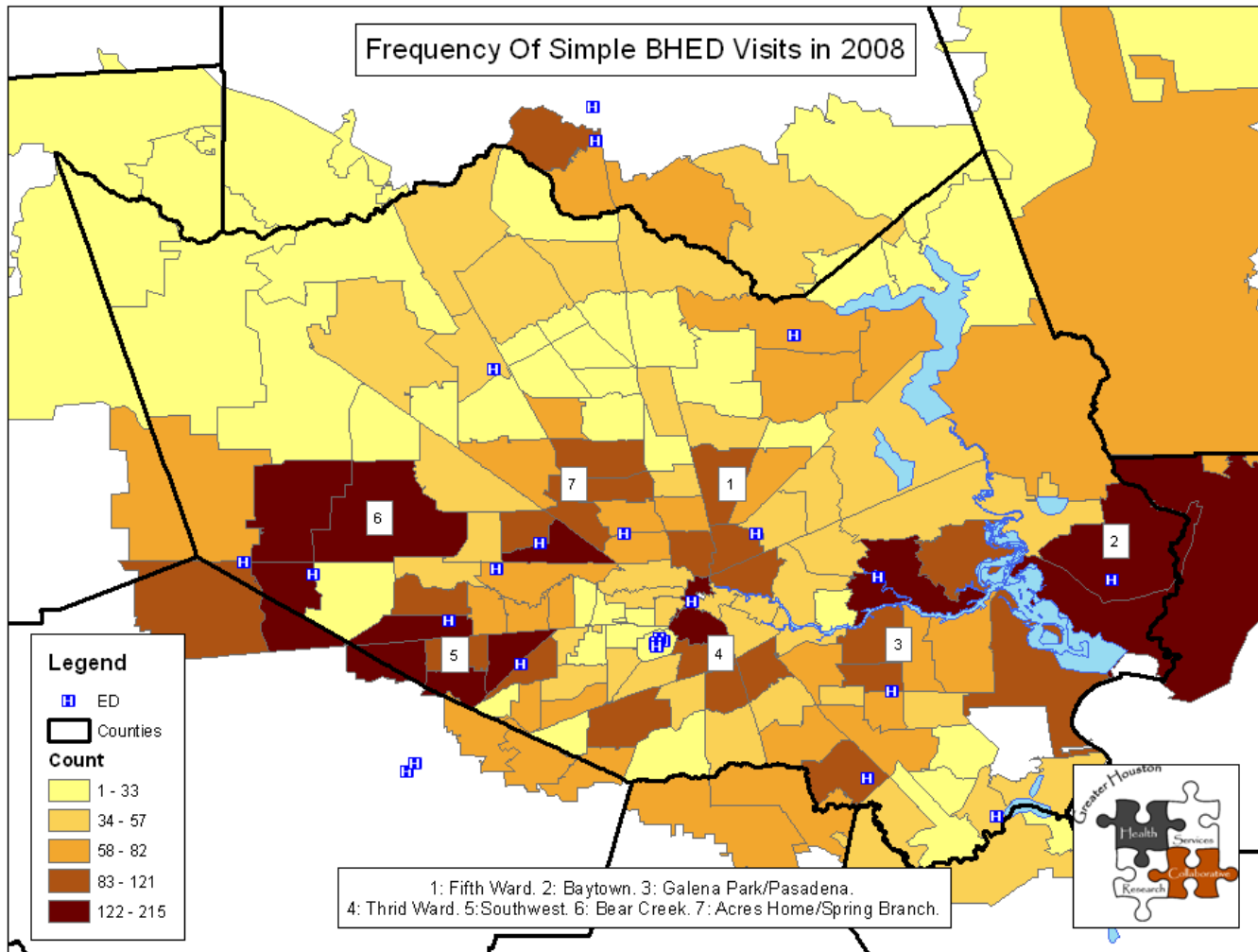
While some of the largest frequencies of simple and medical BHED visits were on the far western and far eastern edges of Harris County (Maps 1 and 3), some of the highest concentrations of complex BHED visits were in the Third Ward and South Park areas (Map 3).

Table 18 gives the frequency counts for the top ZIP codes behind each map. The Baytown area ZIP code of 77520 was one of the top ZIP codes for all three types of BHED visits in 2008

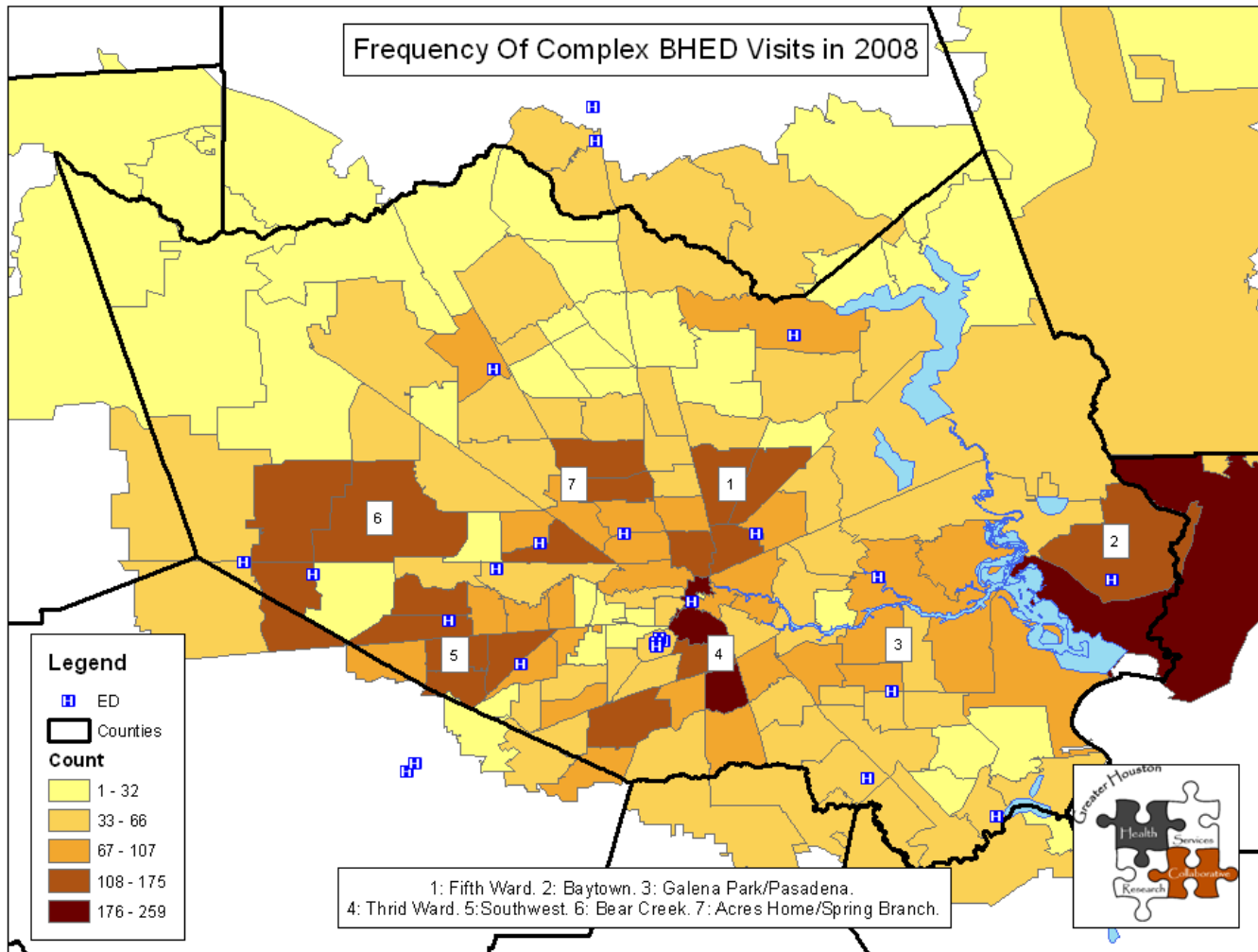
Table 18. Top ten ZIP code frequencies for simple, complex, and medical BHED visits

| Map 1 | | Map 2 | | Map 3 | |
|-------|-------|-------|-------|-------|-------|
| ZIP | Count | ZIP | Count | ZIP | Count |
| 77449 | 215 | 77002 | 259 | 77449 | 1,257 |
| 77520 | 214 | 77004 | 240 | 77520 | 1,179 |
| 77521 | 175 | 77520 | 237 | 77450 | 1,046 |
| 77084 | 169 | 77033 | 196 | 77055 | 1,027 |
| 77002 | 158 | 77521 | 175 | 77084 | 970 |
| 77082 | 145 | 77021 | 152 | 77521 | 948 |
| 77015 | 141 | 77026 | 150 | 77004 | 900 |
| 77004 | 138 | 77088 | 150 | 77033 | 899 |
| 77055 | 135 | 77036 | 141 | 77082 | 828 |
| 77036 | 134 | 77009 | 140 | 77077 | 787 |

Map 1



Map 2



Map 3

