

Alabama Head and Spinal Cord Injury Report

January 1, 2014 – December 31, 2014

Alabama Department of Public Health

Thomas M. Miller, M.D., Acting State Health Officer

Office of Emergency Medical Services

Mark A. Jackson, Interim Director

State Trauma Program Administrator

Choon Lang, R.N., B.S.N, M.H.A.

Alabama Trauma Registry Program Coordinator

Verla Thomas, R.N., B.S.N.

Alabama Trauma Registry Epidemiologist

Augustine M. Amenyah, Ed.D., M.P.H.

Background

According to the National Center for Health Statistics (NCHS), traumatic injuries are the leading cause of death among children and young adults. The Alabama Center for Health Statistics (ACHS) reports that, during the year 2014, accidental injury alone ranks fourth overall among causes of death in the state. Moreover, when the components of traumatic injury, i.e. accidental, suicide, and homicide, are added together, they represent the third leading cause of mortality in the state. In fact, traumatic injuries result in the loss of more potential years of life than any other cause.

The Alabama Department of Rehabilitation Services (ADRS) is charged with offering rehabilitation services to patients with moderate to severe brain, spinal cord, or other debilitating injury. At times, patients are unaware of, or have difficulty understanding, state supported rehabilitation services – the result of which leads to inadequate rehabilitation, disability management, and work force re-entry assistance. Patients who have sustained debilitating injuries are identified and linked with ADRS via the Alabama Head and Spinal Cord Injury Registry (AHSCIR), a registry mandated by Alabama Act 98-611. This law, which requires all hospitals in Alabama to submit data related to head and/or spinal cord injury cases to the Alabama Department of Public Health (ADPH), was passed in May of 1998. The Alabama Trauma Registry (ATR), established shortly after AHSCIR data collection began in 1999, strives to broaden collection efforts to include data related to all types of trauma. Since the trauma registry program began providing data to the ADRS in the year 2000, patients with moderate to severe traumatic brain injury and/or spinal cord injury have been identified and contacted. Detailed analysis of 2014 data submitted to the ATR is ongoing since new cases from 2014 are still being submitted. However, enough data is contained in the ATR to perform a preliminary analysis of 2014 cases. Those requesting services have been provided appropriate, need-based, referral information.

More specifically, development of the ATR component pertains to an expansion of the head and spinal cord injury registry into a larger, more comprehensive program. Trauma registry personnel in the Office of Emergency Medical Services (EMS) of the ADPH collect statewide data by working with hospitals at all levels of trauma care (acute and ancillary). The ATR is beginning to capture data that will allow for more accurate evaluations regarding traumatic injury incidence and patterns. Data are received from hospitals that devote significant resources to trauma care as well as those hospitals that function to treat less severe traumatic injuries but stabilize and transfer more severe traumatic injuries. Ultimately, registry data analysis and injury pattern evaluations will permit researchers and policy makers to identify better ways of reducing injury mortality and morbidity in Alabama.

It is important to provide the public with mortality and morbidity statistics associated with motor vehicle crashes in order to accurately illustrate the impact injuries have on individuals, families, and society. Additionally, the information assists with efforts related to increasing protective equipment usage rates. Trauma registry data are used by a variety of organizations. Emergency management agencies and emergency medical services providers use the registry information for community trauma

prevention education. As previously described, the ADRS uses the AHSCIR data to locate patients suffering from head and/or spinal cord injuries in an effort to make them aware of state supported services and perform follow-up treatment.

Historically, the Alabama Traffic Injury Registry (ATIR), which collected data from 1991 through 1998 from 18 hospital emergency departments, was able to generate and convey similar information; however, due to the small sample size and other limitations, it was not possible to draw broad conclusions with respect to statewide mortality and morbidity. ATIR data collection was labor intensive, required frequent travel to hospital emergency departments and was unable to capture all trauma cases treated at all the 18 participating hospitals. The demographic characteristics of patients treated at hospitals from which the ATIR collected data were, simply put, not representative of the state as a whole. Therefore, it was not possible to accurately assess the extent of disparity in Glasgow Coma Scale (GCS) scores, the Abbreviated Injury Scale (AIS) scores, Injury Severity Scores (ISS), and functional ability at discharge of persons whose injuries were severe enough for admittance to the hospital and among different segments of Alabama's population. For obvious reasons, if hospital participation for the general trauma registry (ATR) is broad enough, more representative samples will be available which, in turn, will allow for more accurate information regarding statewide injury – especially motor vehicle crash related injury.

The Alabama Statewide Cancer Registry (ASCR), located in the Bureau of Family Health Services, has provided the ATR/AHSCIR staff with a successful example regarding registry operation and management. Collaboration between the ATR/AHSCIR and cancer registry staff has contributed greatly to the development and operation of the trauma registry program. Also, the ATR/AHSCIR staff has consulted with the staffs and web resources of other successful state registries. The ATR/AHSCIR has been modeled after these successful programs and proposes, in cooperation with a statewide emergency response program, to establish one of the most comprehensive trauma surveillance systems in the country.

Methods

The case definition for inclusion in the ATR program denotes any patient with at least one injury ICD-9-CM diagnosis code between 800.00 and 959.9, excluding 905–909 (late effects of injury), 910-924 (blisters, contusions, abrasions, and insect bites), and 930-939 (foreign bodies). The patient must also have been admitted to the hospital for at least 24 hours, transferred into and/or out of the hospital, or died after receiving any evaluation or treatment at the hospital or was dead upon arrival. Reportable diagnoses for the AHSCIR include all confirmed cases of head and spinal cord injury with at least one of the following ICD-9-CM diagnoses:

800.0 - 801.9	Fracture of the vault or base of the skull
803.0 - 804.9	Other and unqualified and multiple fractures of the skull
850.0 - 854.1	Intracranial injury, including concussion, contusion, laceration
806.0 - 806.9	Fracture of vertebral column with spinal cord lesion
950.1 - 950.3	Injuries to the optic chiasm, optic pathways, and visual cortex
952.0 - 952.9	Spinal cord lesion without evidence of spinal bone injury
959.01	Head Injury, unspecified
995.55	Shaken infant syndrome

Data Use and Comparability

All data contained in this report must be interpreted with careful judgment. It is important to note that the information presented in this report is based on data from the ATR which were submitted as of September 30, 2015. The data in this report is not comparable to state or federal data from other sources due to variations in collection and analytical techniques.

Less severe head and spinal cord injuries are under-represented in this analysis by design. Consequently, some less severe injuries are not included in the AHSCIR case definition thereby permitting registrars to omit reporting them. Additionally, mortality may be under-estimated because of cases in which persons expired at the scene and bypassed hospitals. The statistical significance of the summary data for the Spinal Cord Injuries (SCI) and combined Traumatic Brain Injuries (TBI)/SCI cases is also limited by the small population size regarding some respective data subgroups. Cases admitted to a given hospital and then transferred to another hospital during the course of their treatment are counted twice in this report.

RESULTS

The ATR received reports of 4,509 head and spinal cord injury cases that were admitted to Alabama hospitals during calendar year 2014. Head injuries (TBI) exclusively constituted 94 percent (n=4,256) of the reported cases and spinal cord injuries (SCI), exclusively constituted 4 percent (n=196). There were 57 cases (1 percent) in the registry that had both head and spinal cord injuries together. This document will use the term traumatic brain injury (TBI) when referring to head injuries. Separate analyses are presented for each of the three categories.

Figure 1(a)
Type of Injury
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=4,509)

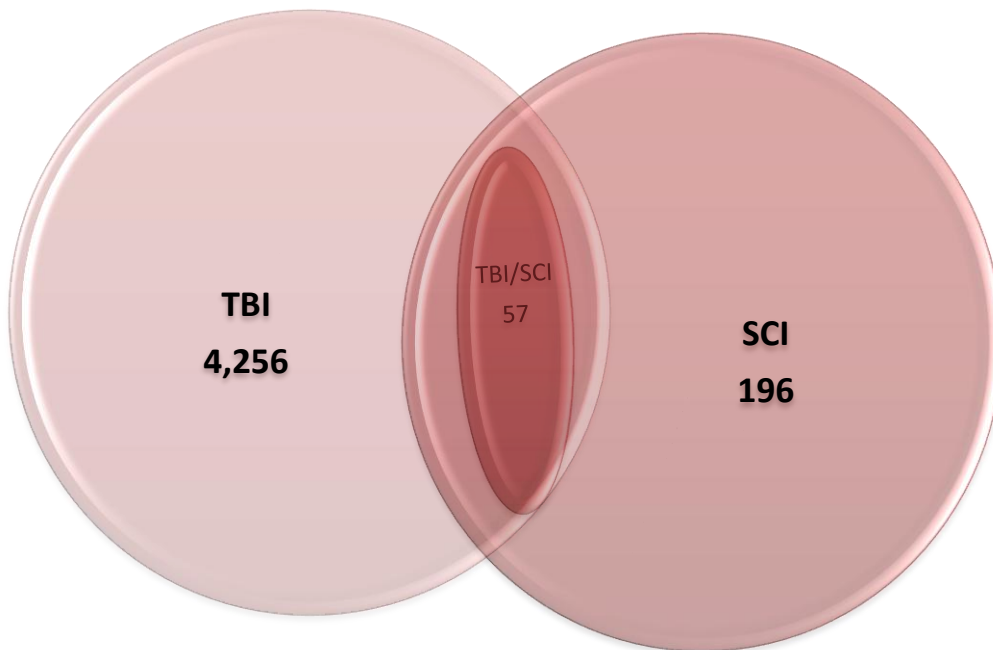
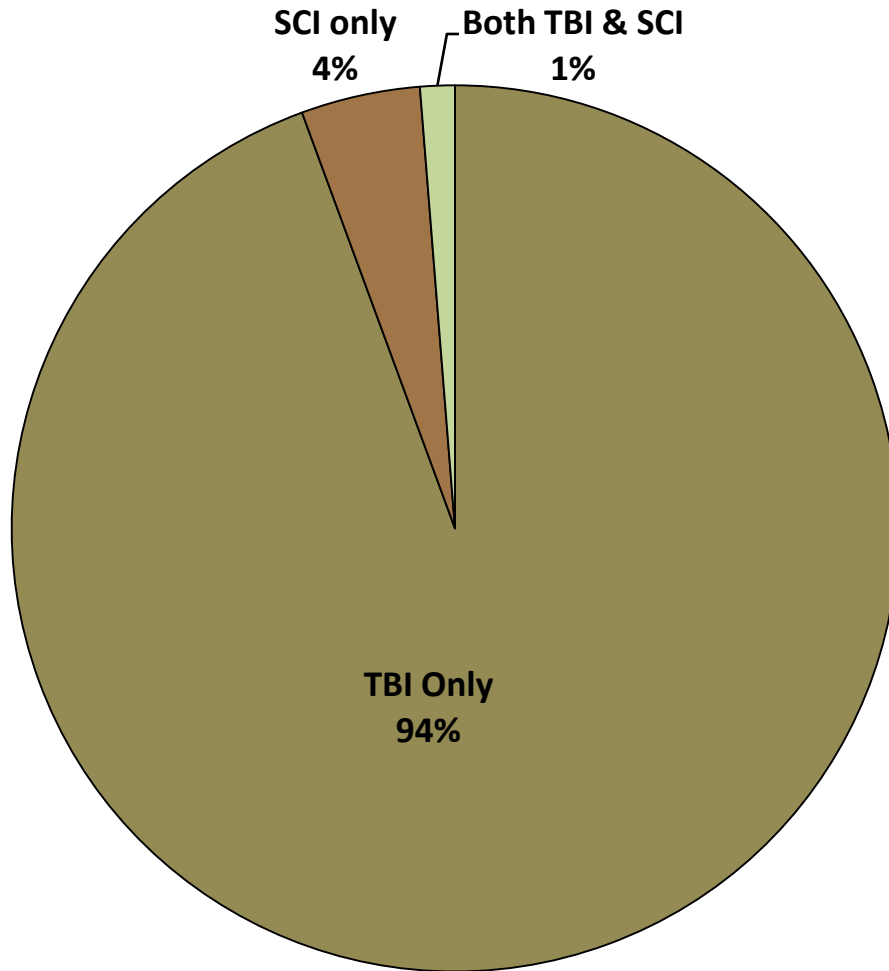


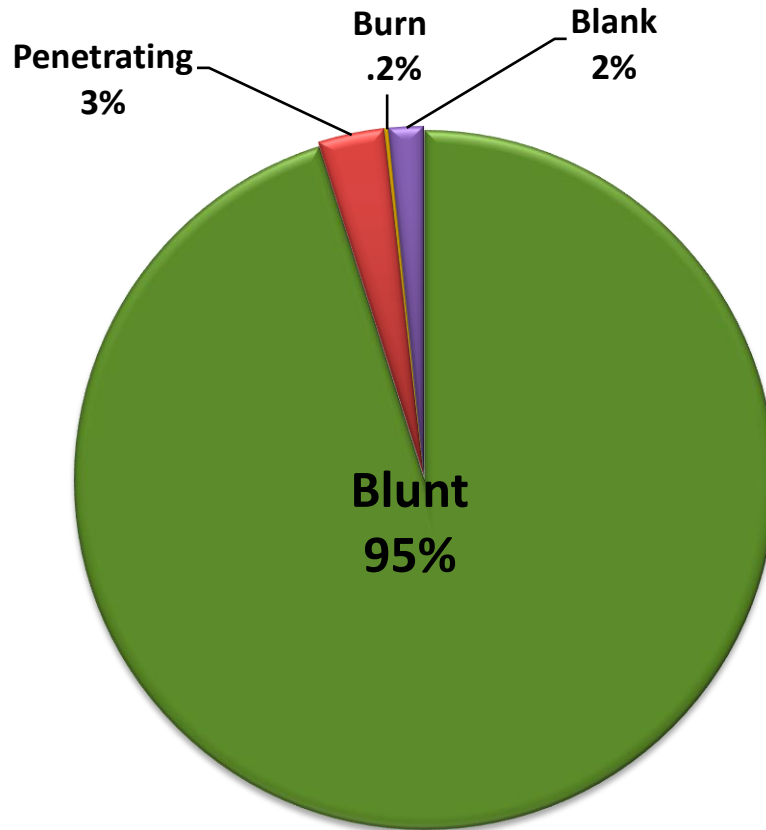
Figure 1(b)
Type of Injury
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=4,509)



Population size of each category will be noted in the caption for each graphic illustration.

Traumatic Brain Injury

Figure 2
Proportion of TBI Cases by Mechanism of Injury
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=4,313)

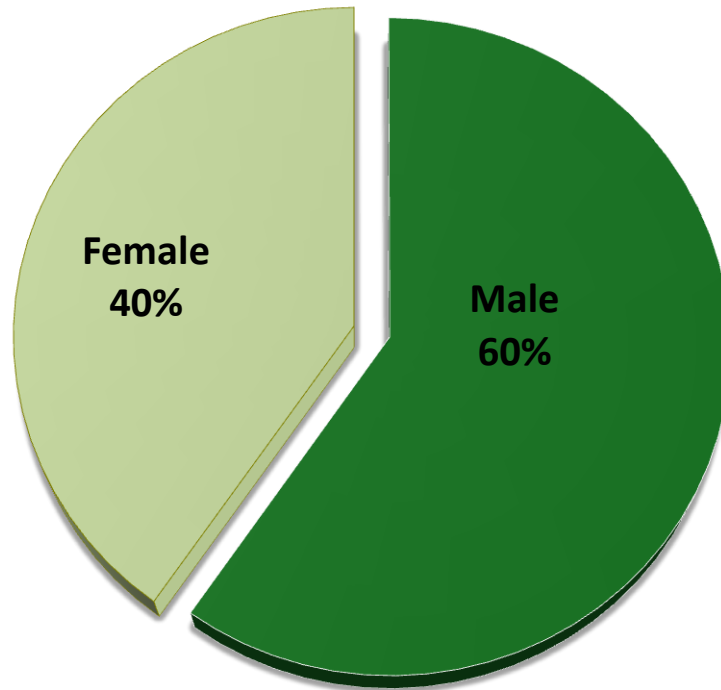


Ninety-five percent (n=4,104) of the TBI cases for 2014 were due to blunt trauma. Penetrating injuries accounted for 3 percent (n=132), burns .2% (n=9), and 2 percent (n=68) were blank.

Figure 3

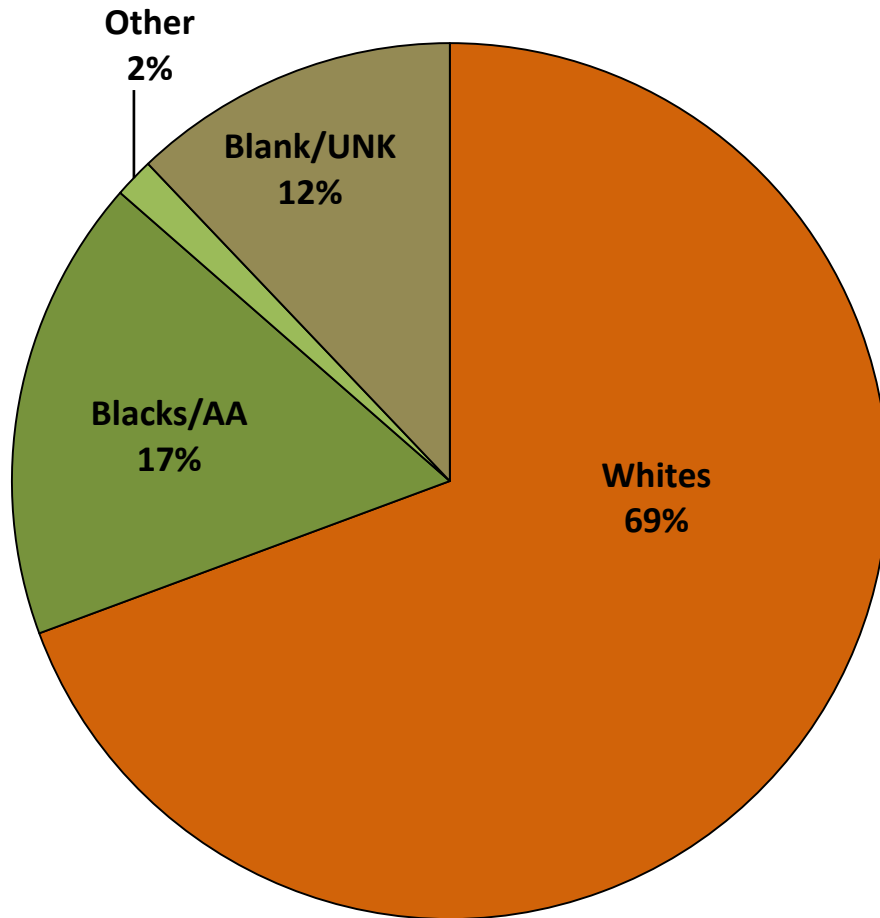
Proportion of TBI Cases by Gender
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=4,313)

Proportion of TBI Cases by Gender



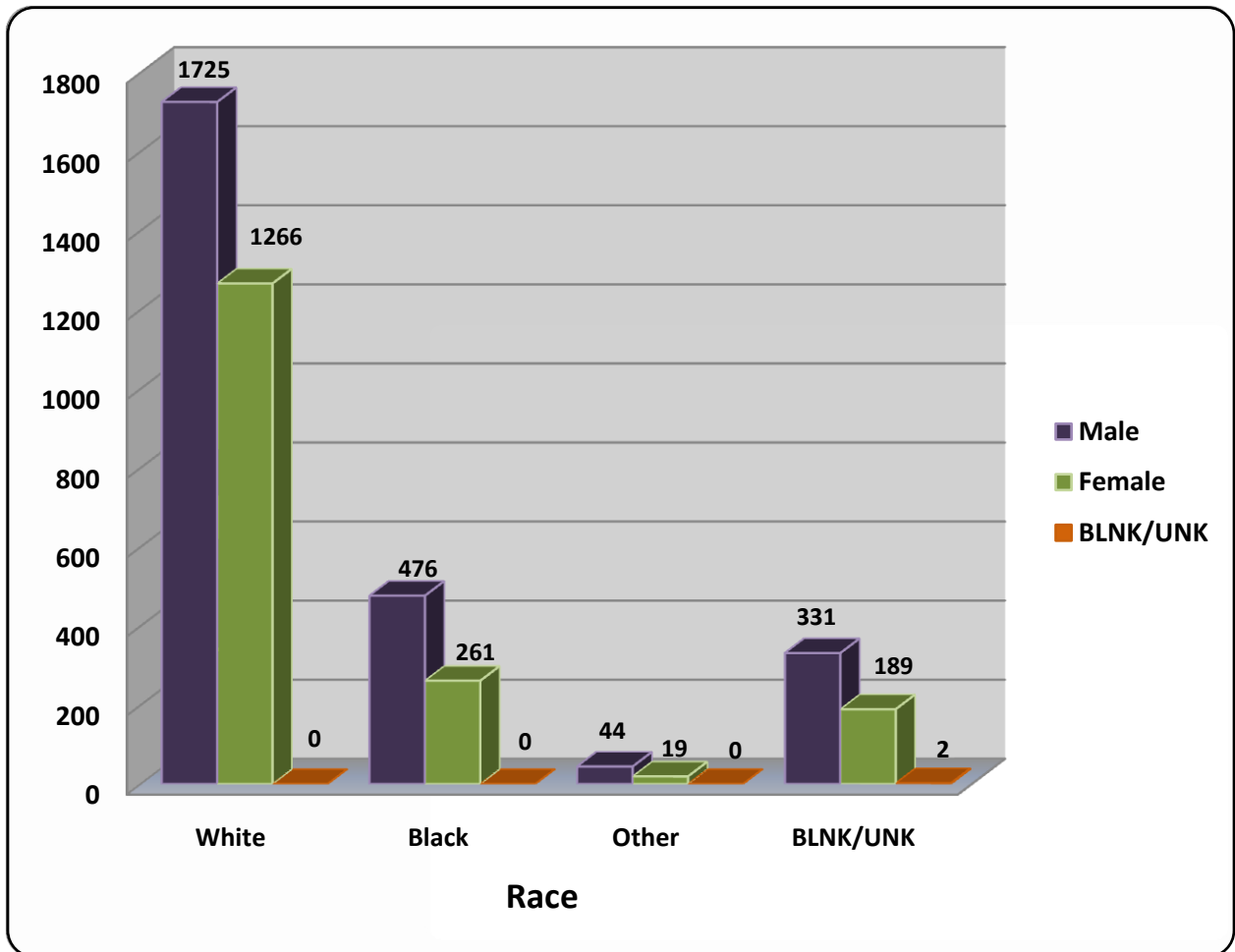
Sixty percent (n=2,576) of the TBI cases for the year 2014 were male. Forty percent (n=1,737) of the cases were female.

Figure 4
Proportion of TBI Cases by Race
Alabama Head and Spinal Cord Registry (AHSCIR)
January 1, 2014– December 31, 2014
(n=4,313)



Whites constitute 69 percent (n=2,991) of the cases, Blacks/African-Americans 17 percent (n=737), other race 2 percent (n=63), and in 12 percent of the reported cases (n=522), race information was unknown or unavailable at the time of this report.

Figure 5
Number of TBI Cases by Gender and Race
 Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n=4,313)



Forty percent (n=1,725) of TBI cases in whites were male, 11 percent (n=476) of Black/African-American cases were male, and 1 percent (n=44) of “Others” were male. This category includes those of Asian, American Indian, and Hispanic descent. There were 29 percent white female (n=1,266), 6 percent Black female (n=261), and 19 cases of “Other” female. There were 522 cases where both race and gender were unknown or unavailable. The overall percentages in this injury type were 60 percent male, 36 percent female, and 4 percent unknown or the data was not available.

Table 1
2014 TBI Cases by Age, Gender and Race

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=4,313)

Age	White Male	White Female	Black Male	Black Female	Other Male	Other Female	No Data/BLNK	Total	% Total
<5	48	45	27	19	5	4	29	177	4.1%
5 - 14	98	57	25	17	3	4	31	235	5.4%
15-24	305	145	113	50	12	2	105	732	17.0%
25-34	204	120	91	42	11	1	90	559	13.0%
35-44	198	118	72	28	4	1	63	484	11.2%
45-54	198	109	64	38	6	1	68	484	11.2%
55-64	233	121	43	26	2	2	47	474	11.0%
65-74	179	168	30	21	1	2	45	446	10.3%
75-84	177	202	7	14	0	0	25	425	9.9%
>84	83	181	2	6	0	2	18	292	6.8%
No Data/Blank	2	0	2	0	0	0	1	5	0.1%
Total	1725	1266	476	261	44	19	522	4313	100%
% Total	40.0%	29.3%	11.0%	6.1%	1.0%	0.5%	12.1%	100%	

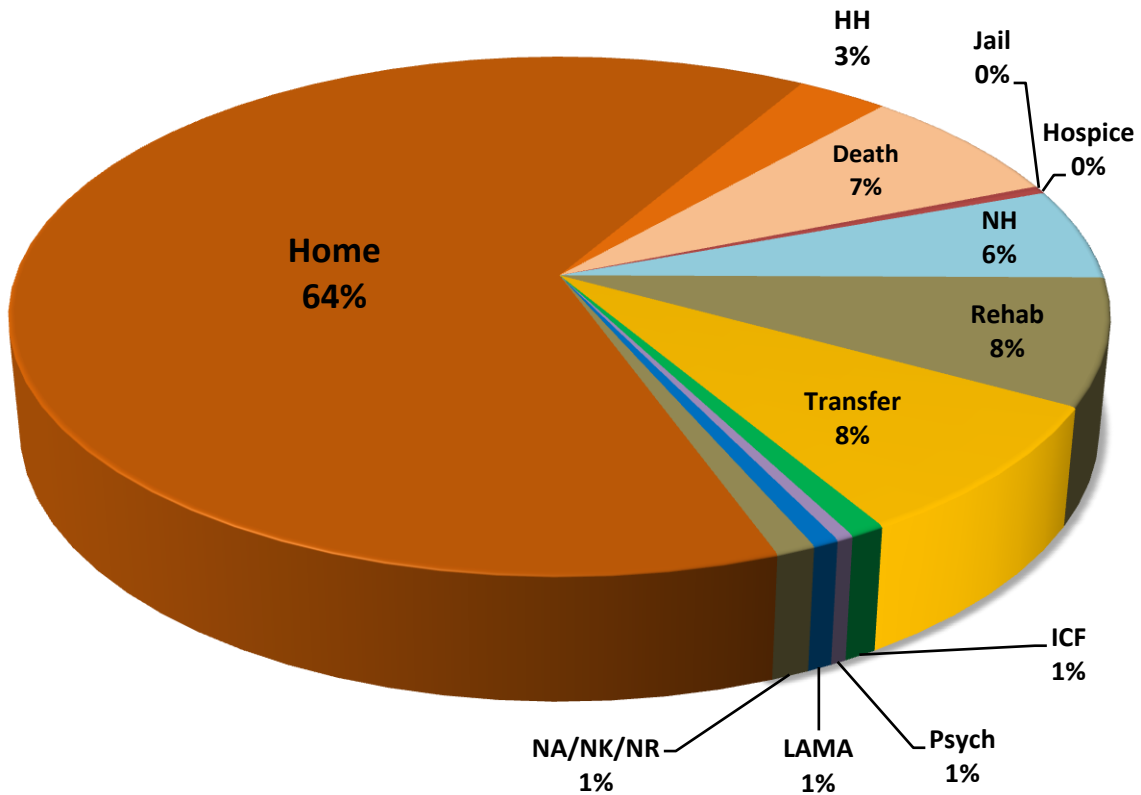
The 15-24 year old age group sustained the largest percentage of TBI cases both in 2014 with 17 percent (n=732) and 2013, with 18.6 percent (n=836). The “Other” category in the data includes Asians, Hispanics, and Others.

Table 2
2013 TBI Cases by Age, Gender and Race

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2013 – December 31, 2013
(n = 4,504)

Age	White Male	White Female	Black Male	Black Female	Other Male	Other Female	No Data	Total	% Total
<5	57	45	31	30	4	1	29	197	4.4%
5 - 14	120	76	52	22	0	2	59	331	7.3%
15-24	305	160	107	53	7	6	198	836	18.6%
25-34	237	103	96	36	3	1	131	607	13.5%
35-44	193	99	62	24	4	1	99	482	10.7%
45-54	197	105	73	15	7	0	88	485	10.8%
55-64	184	89	54	31	3	2	92	455	10.1%
65-74	190	143	22	9	3	2	44	413	9.2%
75-84	143	208	9	12	1	3	47	423	9.4%
>84	81	146	5	8	1	1	24	266	5.9%
No Data	3	3	0	0	0	0	3	9	0.2%
Total	1710	1177	511	240	33	19	814	4504	100.0%
% Total	37.97%	26.13%	11.35%	5.33%	0.73%	0.42%	18.07%	100.0%	

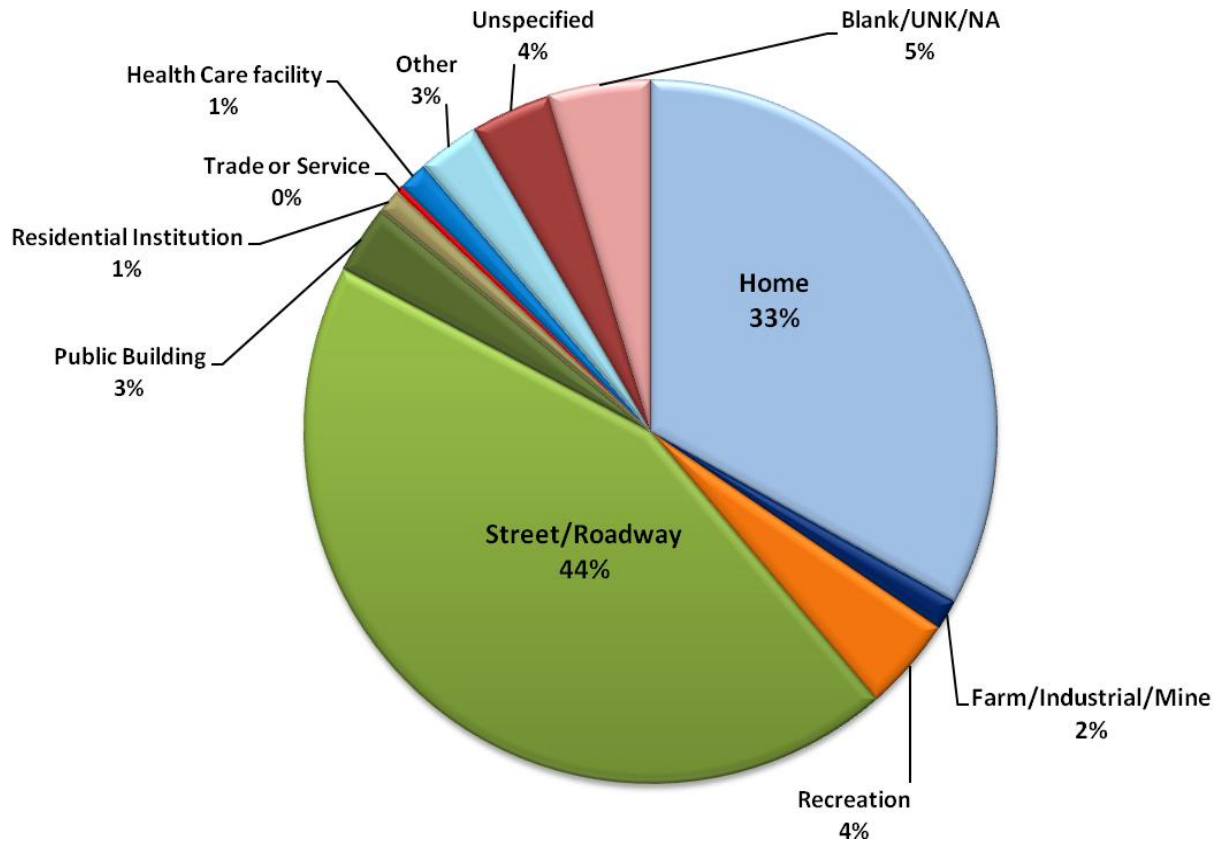
Figure 6
Discharge Disposition Following TBI Cases
 Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n = 4,313)



The greatest portion, 64 percent (n=2,761), were discharged home. From the data it cannot be determined how many of the 64 percent discharged home were referred to outpatient rehabilitation facilities.

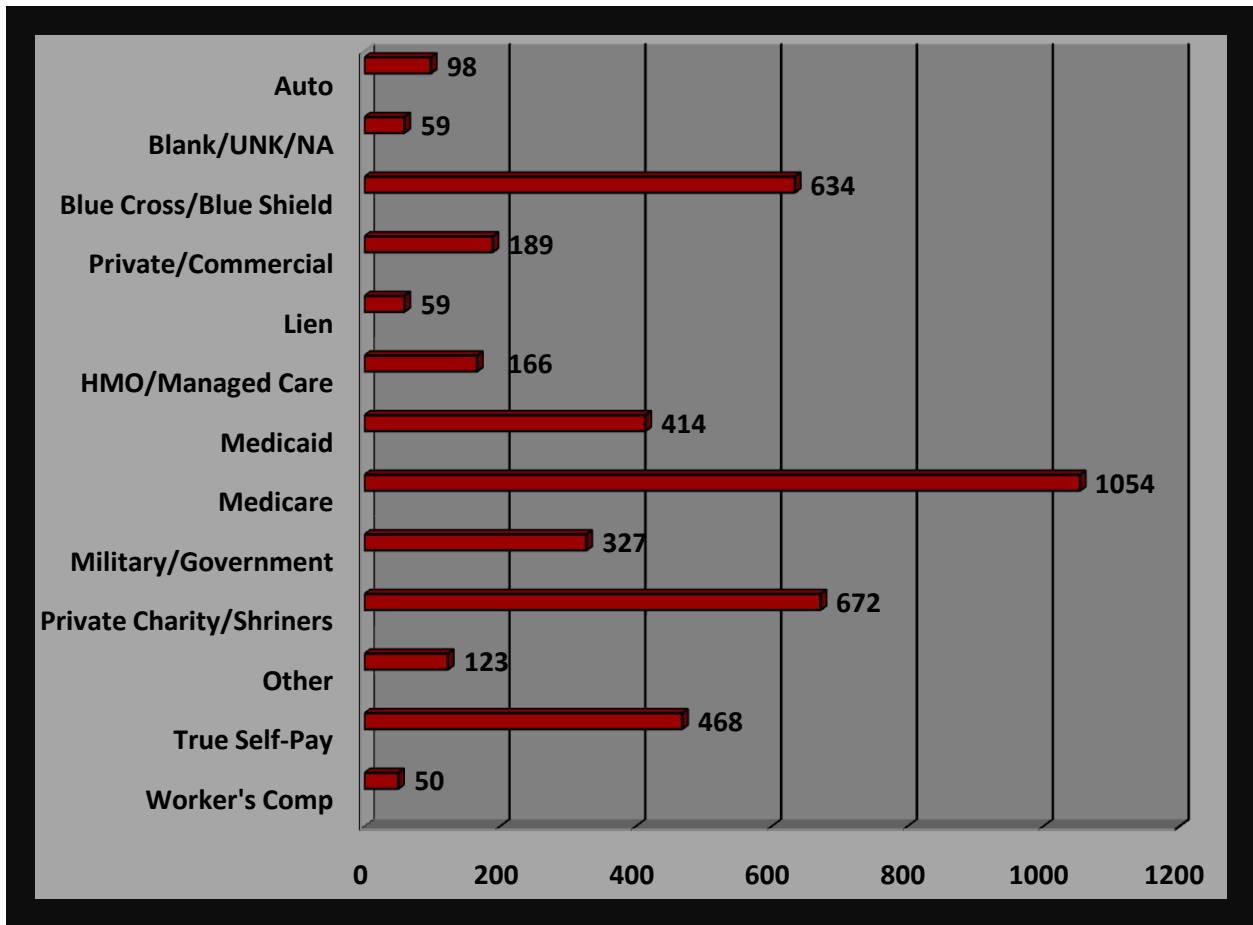
Key:
 LAMA=Left Against Medical Advice
 NH=Nursing Home
 ICF=Immediate Care Facility
 HH=Home Health
 NA/NK/NR=Not Applicable/Not Known/Not Recorded

Figure 7
Site of Injury Occurrence in TBI Cases
 Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n=4,313)



Most traumatic brain injuries, 44 percent (n=1,898), occurred on roads, streets, and highways, 33 percent (n=1,420) occurred in the home. Four percent (n=161) reported an unspecified site of injury occurrence, while in 5 percent of cases (n=205) data was unreported or unknown for TBI.

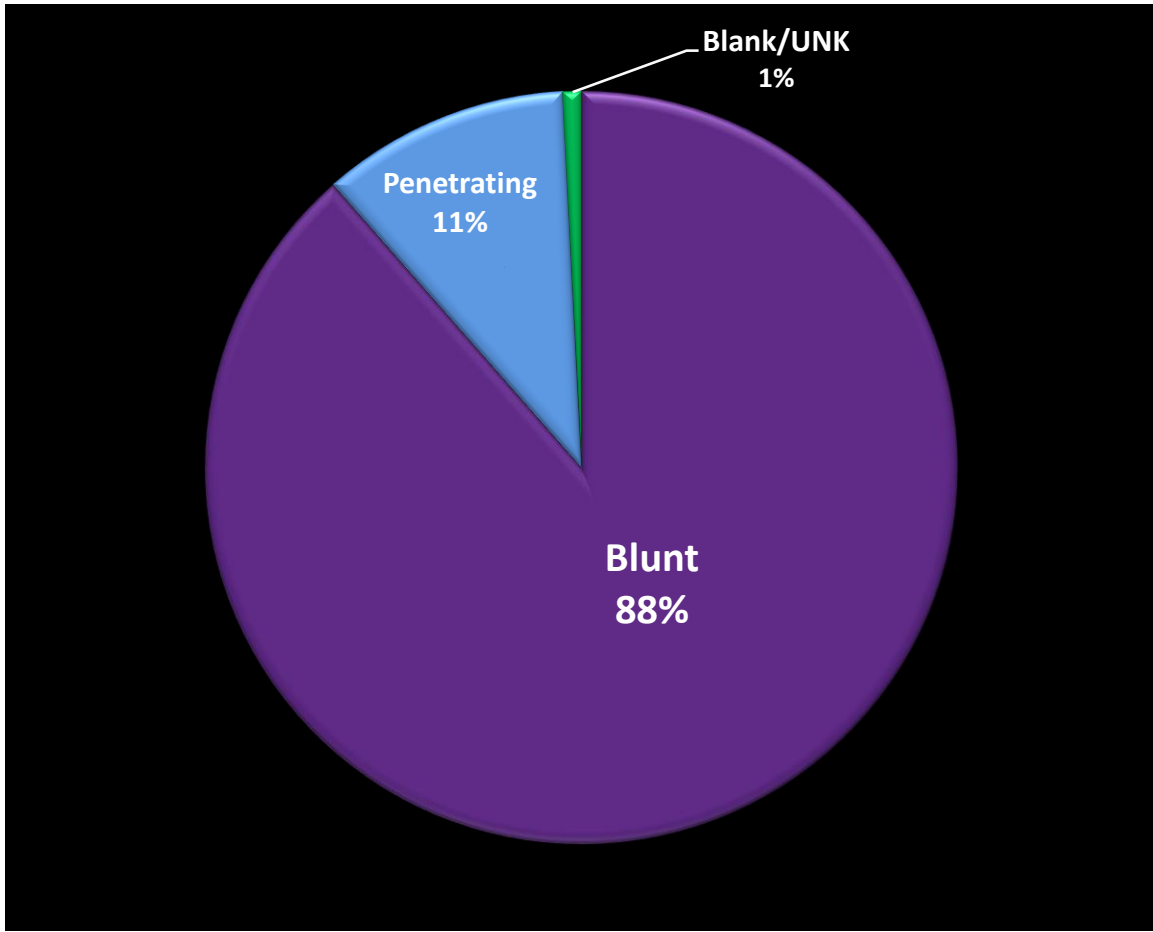
Figure 8
Payer Source for TBI Cases
 Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n=4,313)



Individuals paid for their own care in 11 percent (n=468) of cases according to information sent to the AHSCIR. Fifteen percent (n=634) were paid for by various Blue Cross/Blue Shield plans. Medicaid paid 10 percent (n=414) and Medicare paid 24 percent (n=1,054) respectively. Various commercial insurance companies (n=189) and health maintenance organizations (HMOs)/manage care (n=166) were primary payers in a total of 8 percent of TBI cases reported to the registry. Military and other government insurance plans paid in 8 percent (n=327), workman’s compensation was the primary payer in 1 percent (n=50), and hospital liens were held in 1 percent (n=59). Payment source was indicated as “Other” in 3 percent (n=123) of these cases. The source of payment data sent to the AHSCIR is subject to misclassification for various reasons, e.g. the Self Pay group might include Liens in some cases or the primary payment source may not be properly submitted when there are multiple sources of payment.

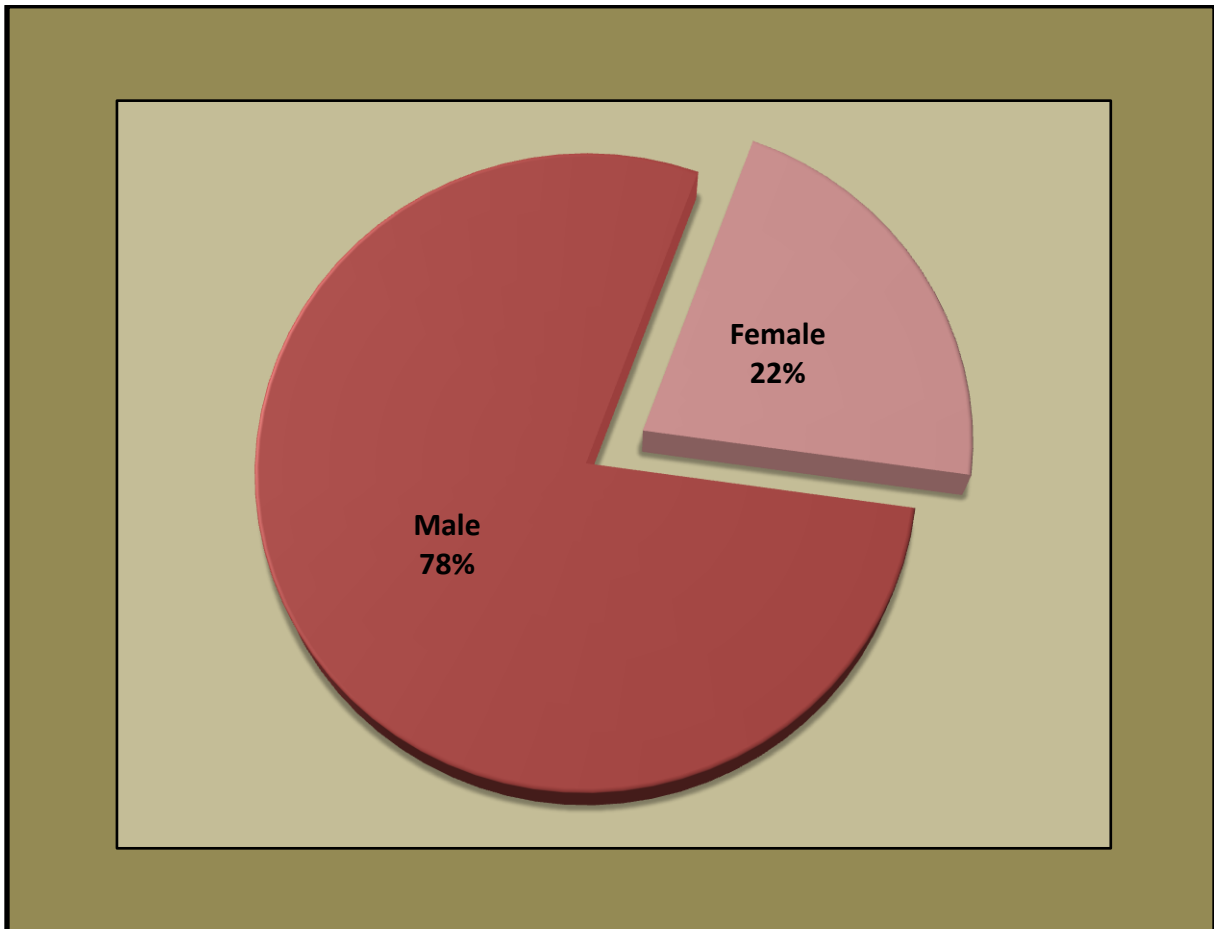
Spinal Cord Injury

Figure 9
Proportion of SCI Cases by Mechanism of Injury
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=253)



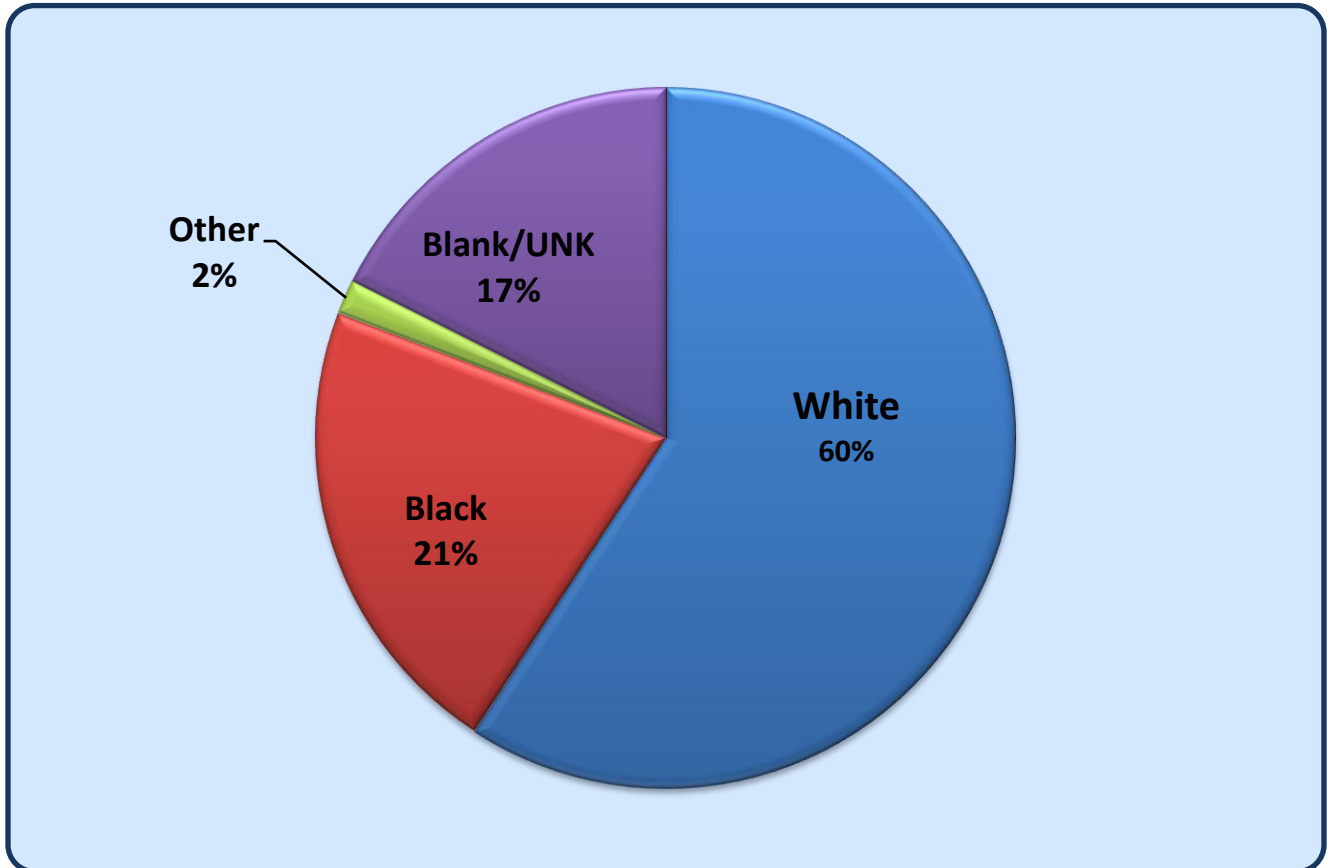
Eighty-eight percent (n=224) of the SCI cases were injuries due to blunt trauma. Penetrating injuries accounted for 11 percent (n=27) of the SCI cases for 2014. Blanks/UNK accounted for 1 percent (n=2) of reported cases.

Figure 10
Proportion of SCI Cases by Gender
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=253)



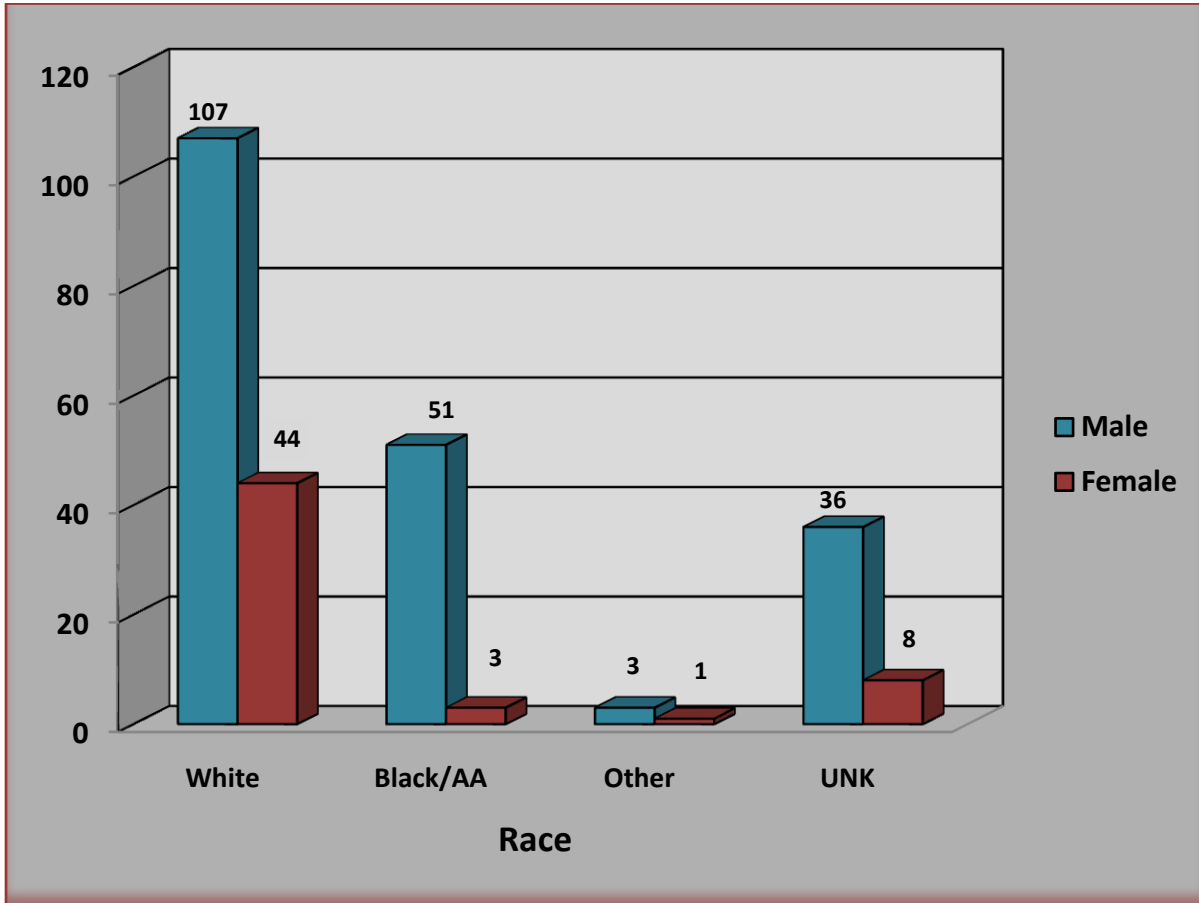
Males made up 78 percent (n=197) of the SCI cases reported in the year 2014, while females constituted 22 percent (n=56) of the cases.

Figure 11
Proportion of SCI Cases by Race
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=253)



Whites constituted 60 percent (n=151) of the SCI cases, Blacks/African-Americans 21 percent (n=54), and Other represented 2 percent (n=4) in calendar year 2014. In 17 percent (n=44) of the 2014 cases, race was unknown or unavailable.

Figure 12
Number of SCI Cases by Race and Gender
 Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n=253)



Forty-two (n=107) of SCI cases in Whites were male and 20 percent (n=51) in Blacks/African-Americans were male. In 17 percent (n=44) of SCI cases, the race was unknown. The overall percentages in this injury type were 64 percent male and 19 percent female and 17 percent UNK (see Figure 10).

Table 3
2014 SCI Cases by Age, Gender and Race

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=253)

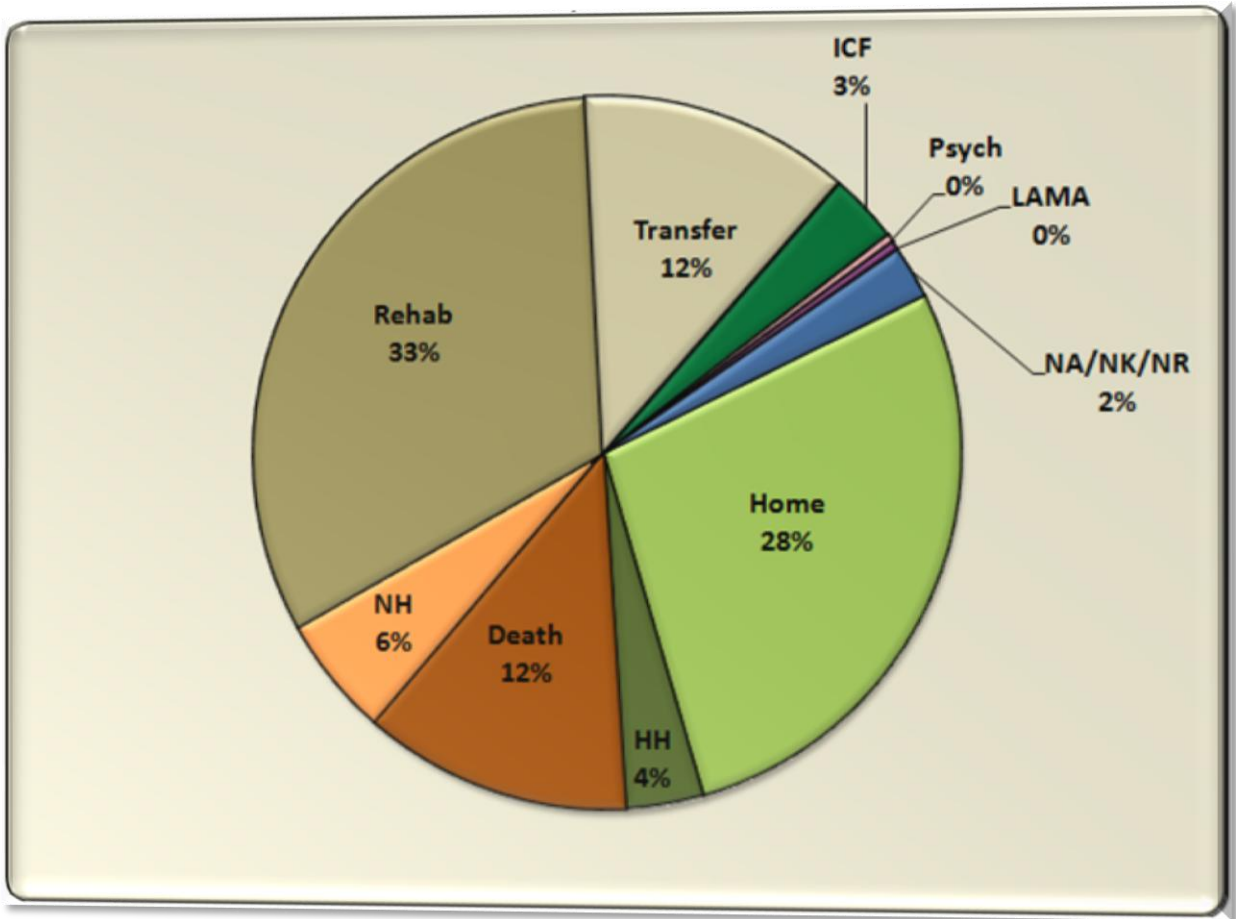
Age	White Male	White Female	Black Male	Black Female	Other Male	Other Female	No Data	Total	% Total
<5	0	1	0	0	0	0	1	2	0.8%
5 - 14	0	0	0	0	0	0	1	1	0%
15-24	14	7	13	1	0	0	12	47	18.6%
25-34	21	9	13	0	1	0	6	50	19.8%
35-44	11	5	7	0	0	0	4	27	10.7%
45-54	17	6	11	2	1	1	7	45	17.8%
55-64	21	3	5	0	1	0	5	35	13.8%
65-74	12	8	1	0	0	0	4	25	9.9%
75-84	0	0	0	0	0	0	0	0	0%
>84	7	5	1	0	0	0	3	16	6.3%
No Data	4	0	0	0	0	0	1	5	2.0%
Total	107	44	51	3	3	1	44	253	100.0%
% Total	42.2%	17.4%	20.2%	1.2%	1.2%	0.4%	17.4%	100.0%	

Table 4
2013 SCI Cases by Age, Gender and Race

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2013 – December 31, 2013
(n=249)

Age	White Male	White Female	Black Male	Black Female	Other Male	Other Female	No Data	Total	% Total
<5	1	0	0	1	0	0	0	2	0.8%
5 - 14	1	3	1	0	0	0	0	5	2.0%
15-24	17	5	9	4	0	1	6	42	16.9%
25-34	11	6	11	2	1	1	3	35	14.1%
35-44	22	7	5	0	0	0	11	45	18.1%
45-54	19	5	2	0	1	1	8	36	14.5%
55-64	14	9	9	4	0	0	10	46	18.5%
65-74	10	4	0	1	0	0	4	19	7.6%
75-84	4	8	1	1	0	0	1	15	6.0%
>84	2	1	0	0	0	0	0	3	1.2%
No Data	0	0	0	0	1	0	0	1	0.4%
Total	101	48	38	13	3	3	43	249	100.0%
% Total	40.6%	19.3%	15.3%	5.2%	1.2%	1.2%	17.3%	100.0%	

Figure 13
Discharge Disposition Following SCI Cases
 Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n=253)

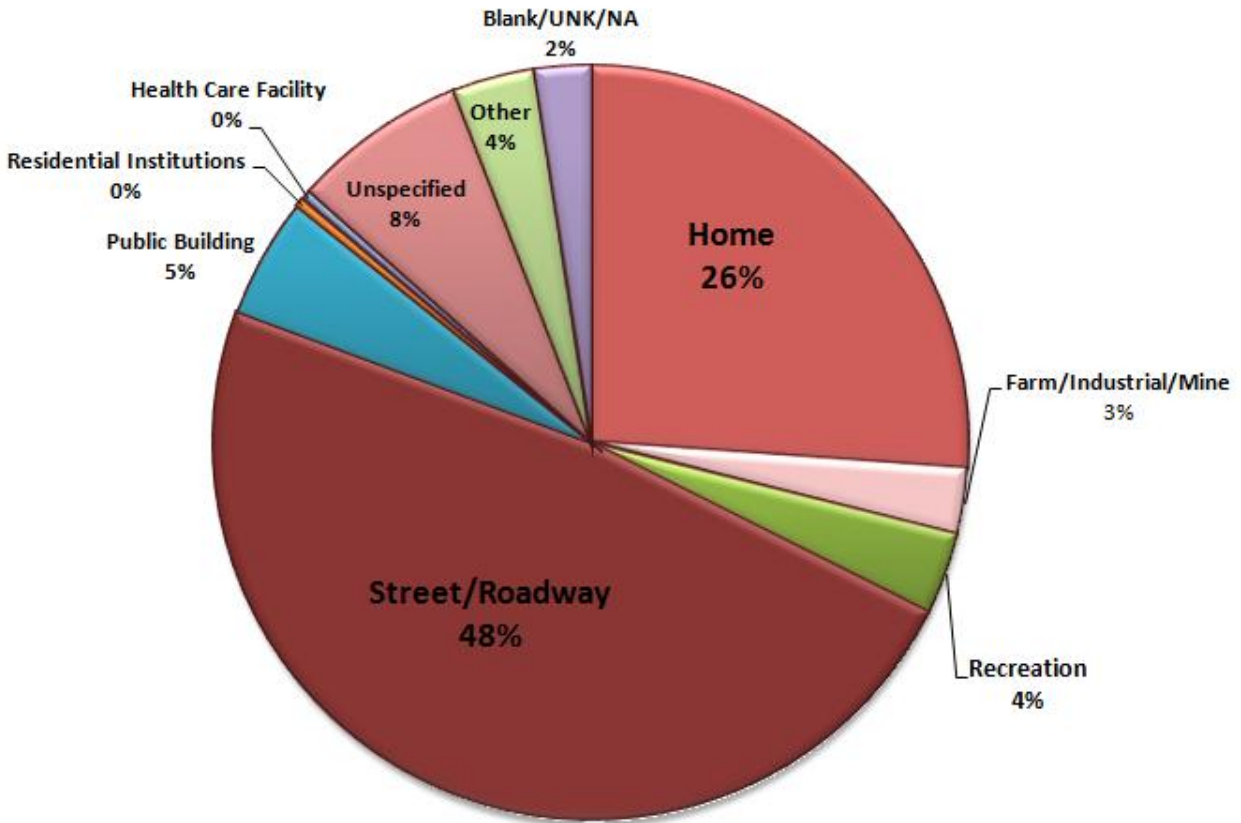


Twenty-eight percent (n=70) of SCI cases were sent home without any home services, 33 percent (n=82) were discharged to residential rehabilitation, 12 percent (n=31) were transferred to another facility, 6 percent (n=14) were discharged to nursing homes, and in 12 percent of the cases of SCI (n=31) the patient expired.

Key:

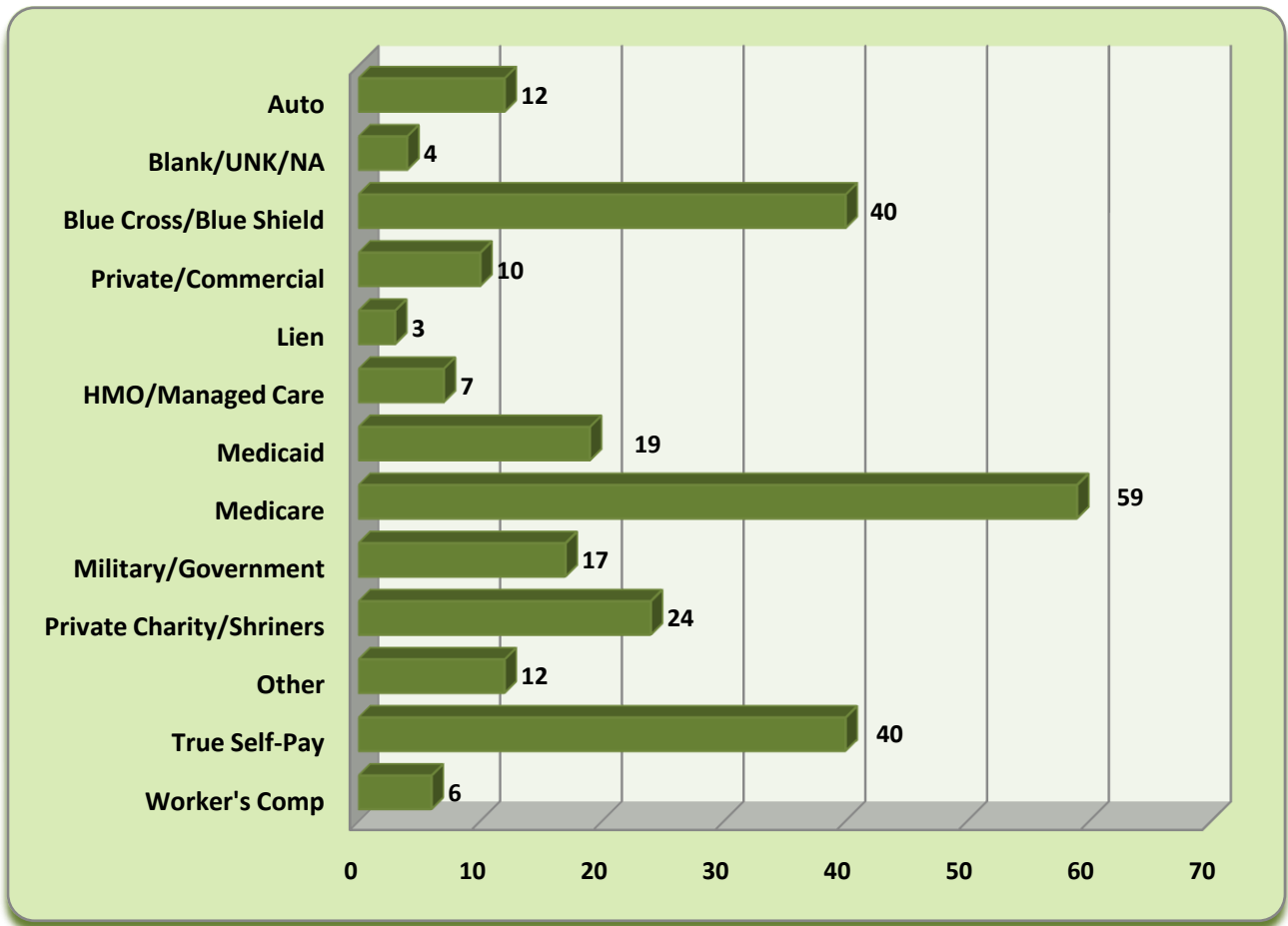
- NH=Nursing Home
- ICF=Immediate Care Facility
- HH=Home Health
- LAMA=Left Against Medical Advice
- NA/NK/NR=Not Applicable/Not Known/Not Recorded

Figure 14
Site of Injury Occurrence in SCI Cases
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=253)



Most spinal cord injuries reported occurred on street/roadways, 48 percent (n=122), and homes/private residences reported 26 percent (n=66). In 8 percent of the cases, (n=19) data on site of injury occurrence was unspecified.

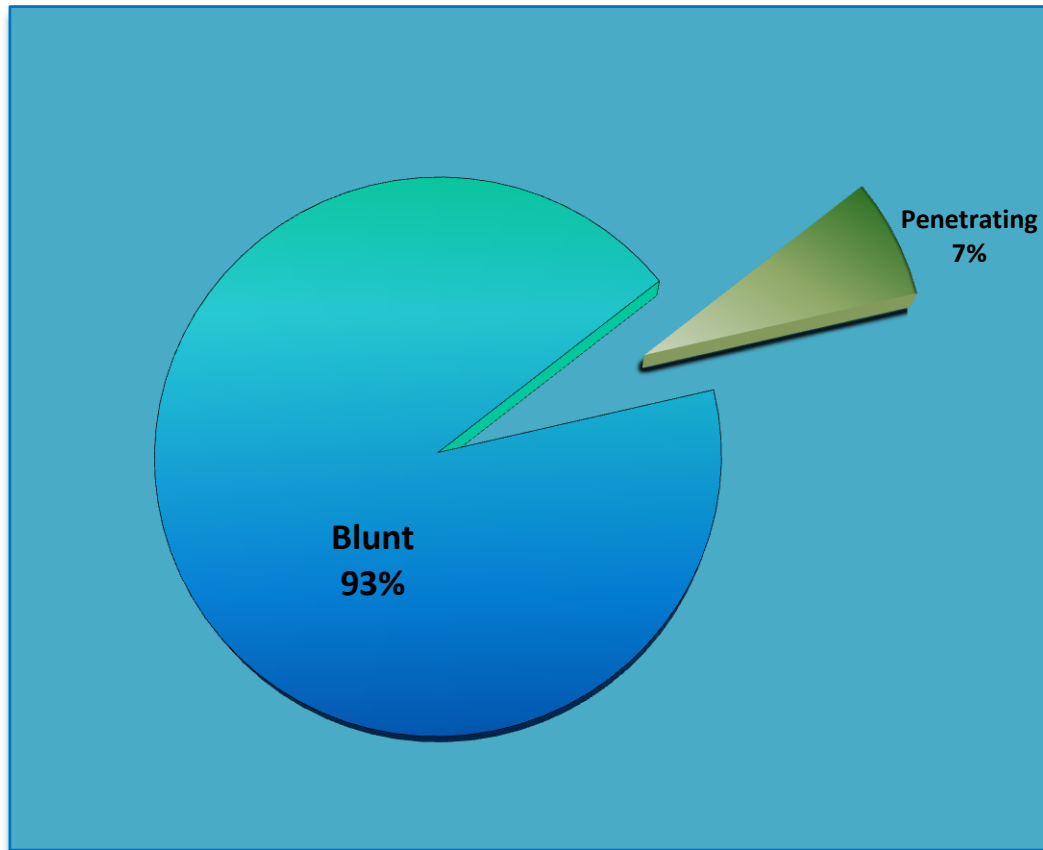
Figure 15
Payer Source for SCI Cases
 Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n=253)



Individuals paid for their own care in 16 percent (n=40) of cases according to information sent to the AHSCIR. Sixteen percent (n=40) were paid for by various Blue Cross/Blue Shield plans. Medicare and Medicaid paid 23 percent (n=59) and 8 percent (n=19), respectively. Various commercial insurance companies paid 4 percent (n=10) and health maintenance organizations (HMOs)/Managed Care 3 percent (n=7). Military and other government insurance plans paid in 7 percent (n=17), and workman’s compensation was the primary payer in 2 percent (n=6). Payment source was indicated as “Other” in 5 percent (n=12) of these cases. The source of payment data sent to the AHSCIR is subject to misclassification for various reasons, e.g., the Self Pay group might include Liens in some cases or the primary payment source may not be properly submitted when there are multiple sources of payment.

Cases with Both Head and Spinal Cord Injuries

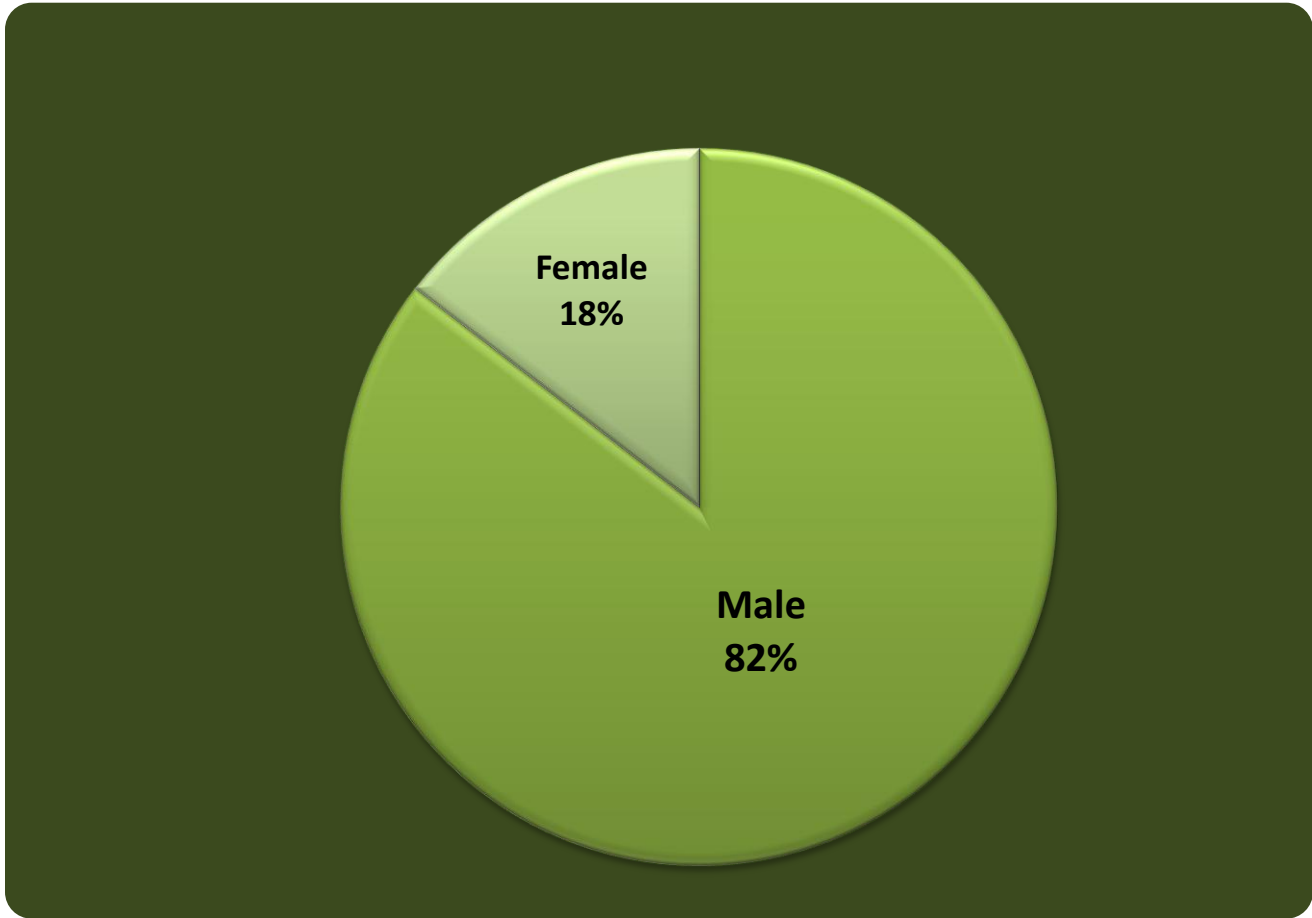
Figure 16
**Proportion of Cases with Both Head and
Spinal Cord Injuries by Mechanism of Injury**
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=57)



Ninety-three percent (n=53) of both TBI and SCI cases were injuries due to blunt trauma. Penetrating injuries accounted for 7 percent (n=4) of both TBI and SCI cases for 2014.

Figure 17
**Proportion of Cases with Both TBI
and SCI by Gender**

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=57)

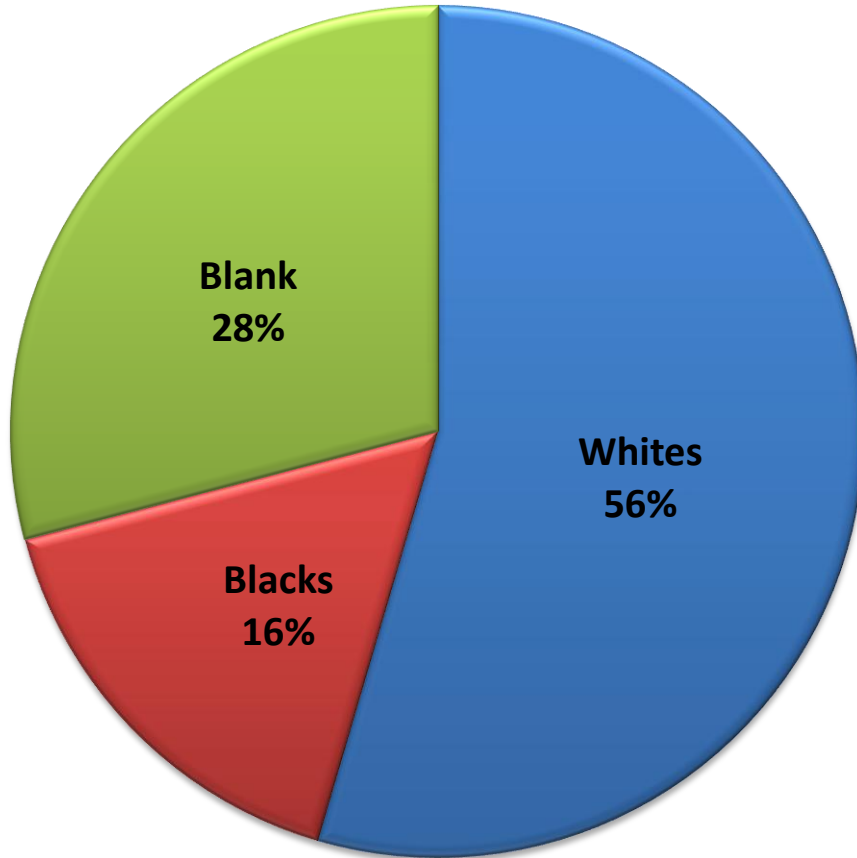


For the TBI and SCI cases reported to the AHSCIR, 82 percent (n=47) were males and 18 (n=10) were females.

Figure 18

**Proportion of Cases with Both TBI
and SCI by Race**

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=57)



Whites constituted 56 percent (n=32) of the SCI cases, Blacks/African-Americans 16 percent (n=9), and in 28 percent (n=16) of the cases, the race of the patient was left blank in calendar year 2014.

Figure 19
**Number of Cases with Both TBI
and SCI by Gender and Race**

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=57)

Forty-four percent (n=25) of both TBI and SCI cases in Whites were male and 16 percent (n=9) in Blacks/African-Americans were male. The overall percentages in this injury type were 82 percent male and 18 percent female (see Figure 17).

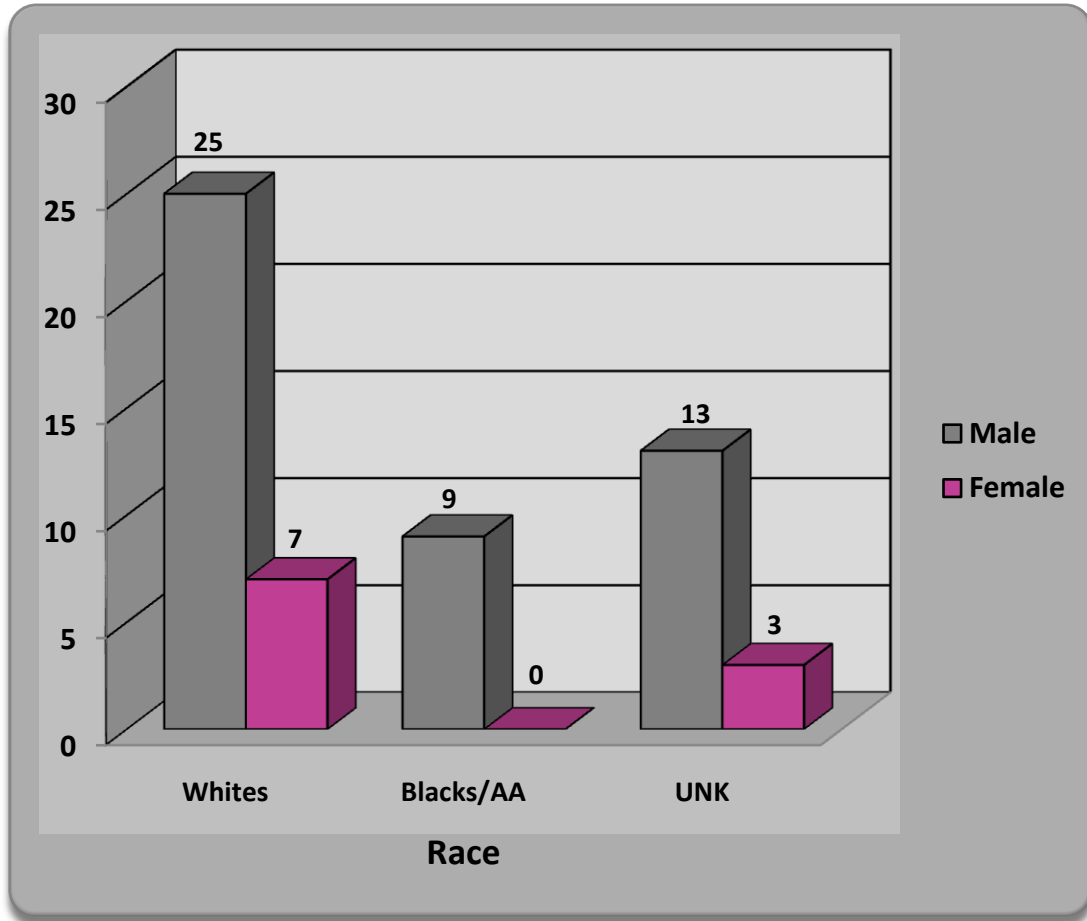


Table 5
2014 Both TBI and SCI Cases by Age, Gender and Race

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2014 – December 31, 2014
 (n=57)

Age	White Male	White Female	Black Male	Black Female	Other Male	Other Female	No Data	Total	% Total
<5	0	0	0	0	0	0	1	9	15.7%
5 - 14	0	0	0	0	0	0	1	19	33.3%
15-24	5	0	2	0	0	0	2	4	7.0%
25-34	7	5	3	0	0	0	4	10	17.5%
35-44	1	1	0	0	0	0	2	5	8.8%
45-54	4	0	4	0	0	0	2	6	10.5%
55-64	4	0	0	0	0	0	1	1	1.8%
65-74	3	0	0	0	0	0	3	1	1.8%
75-84	0	1	0	0	0	0	0	1	1.8%
>84	1	0	0	0	0	0	0	1	1.8%
No Data	0	0	0	0	0	0	0	0	0.0%
Total	25	7	9	0	0	0	16	57	100.0%
% Total	44.0%	12.0%	16.0%	0.0%	0.0%	0.0%	28.0%	100.0%	

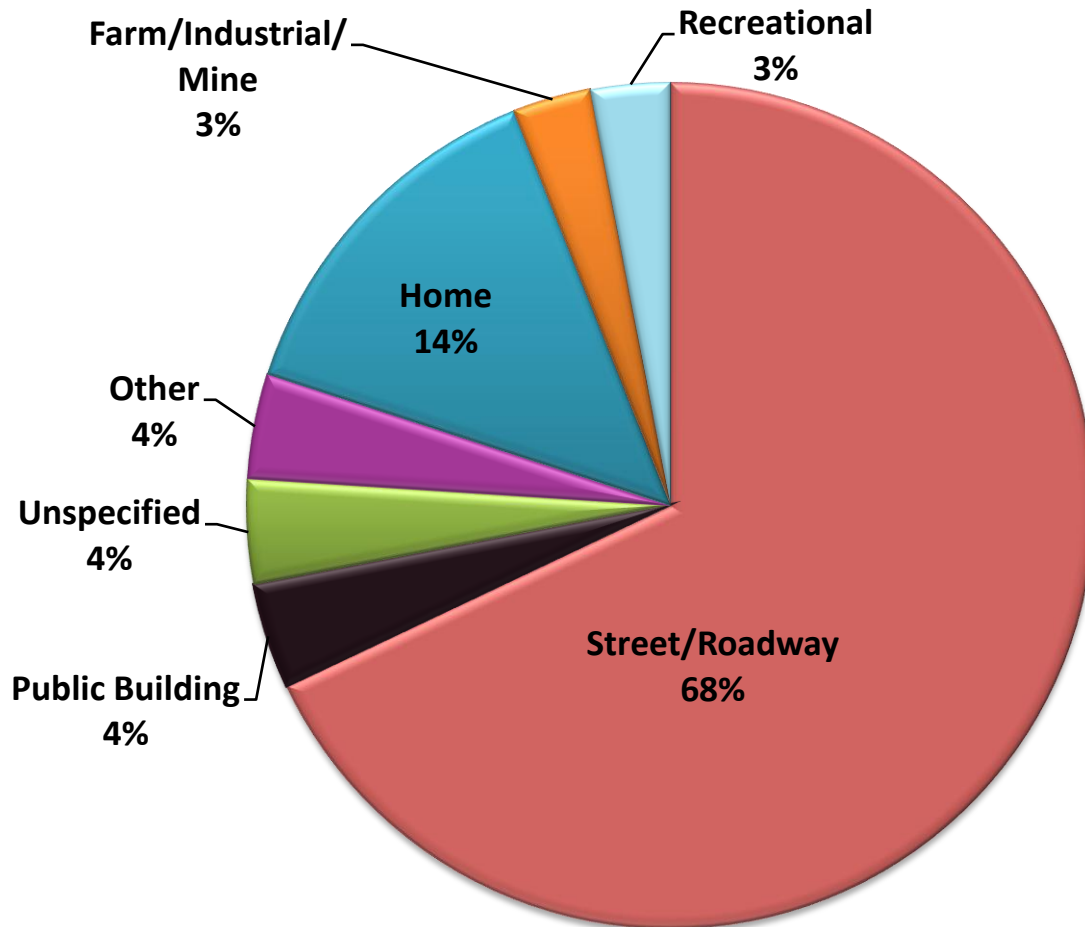
Table 6
2013 Both TBI and SCI Cases by Age, Gender and Race

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
 January 1, 2013 – December 31, 2013
 (n=70)

Age	White Male	White Female	Black Male	Black Female	Other Male	Other Female	No Data	Total	% Total
<5	0	1	0	1	0	0	0	2	2.9%
5 - 14	0	2	1	0	0	0	0	3	4.3%
15-24	4	1	2	2	0	1	1	11	15.7%
25-34	2	1	1	0	1	0	1	6	8.6%
35-44	6	2	3	0	0	0	2	13	18.6%
45-54	6	1	2	1	0	0	1	11	15.7%
55-64	2	3	6	0	0	0	3	14	20.0%
65-74	1	1	0	0	0	0	2	4	5.7%
75-84	2	2	0	0	0	0	0	4	5.7%
>84	2	0	0	0	0	0	0	2	2.9%
No Data	0	0	0	0	0	0	0	0	0.0%
Total	25	14	15	4	1	1	10	70	100.0%
% Total	35.7%	20.0%	21.4%	5.7%	1.4%	1.4%	14.3%	100.0%	

Figure 20
**Site of Injury Occurrence in Cases
with Both TBI and SCI**

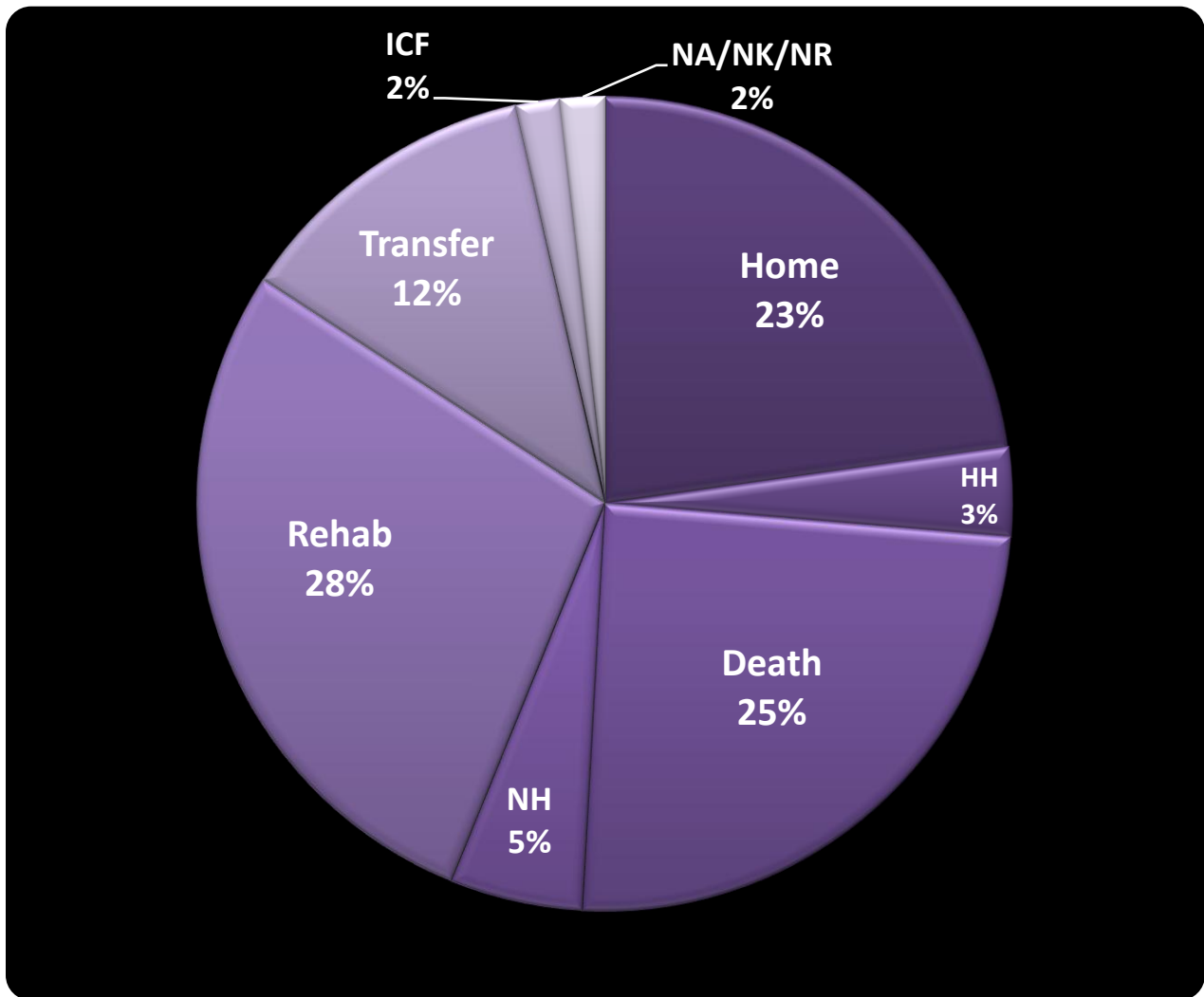
Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=57)



Sixty-eight percent (n=39) of AHSCIR cases that had both TBI and SCI occurred on streets and roadways. Fourteen percent (n=8) occurred in the home.

Figure 21
**Discharge Disposition Following Cases
with Both TBI and SCI**

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=57)



Twenty-three percent (n=13) of cases of both TBI and SCI were discharged home with no home services or were discharged home with home services. Twenty-eight percent (n=16) were discharged to rehabilitation services. Twenty-five percent (n=14) of the patients expired.

Key:

HH=Home Health

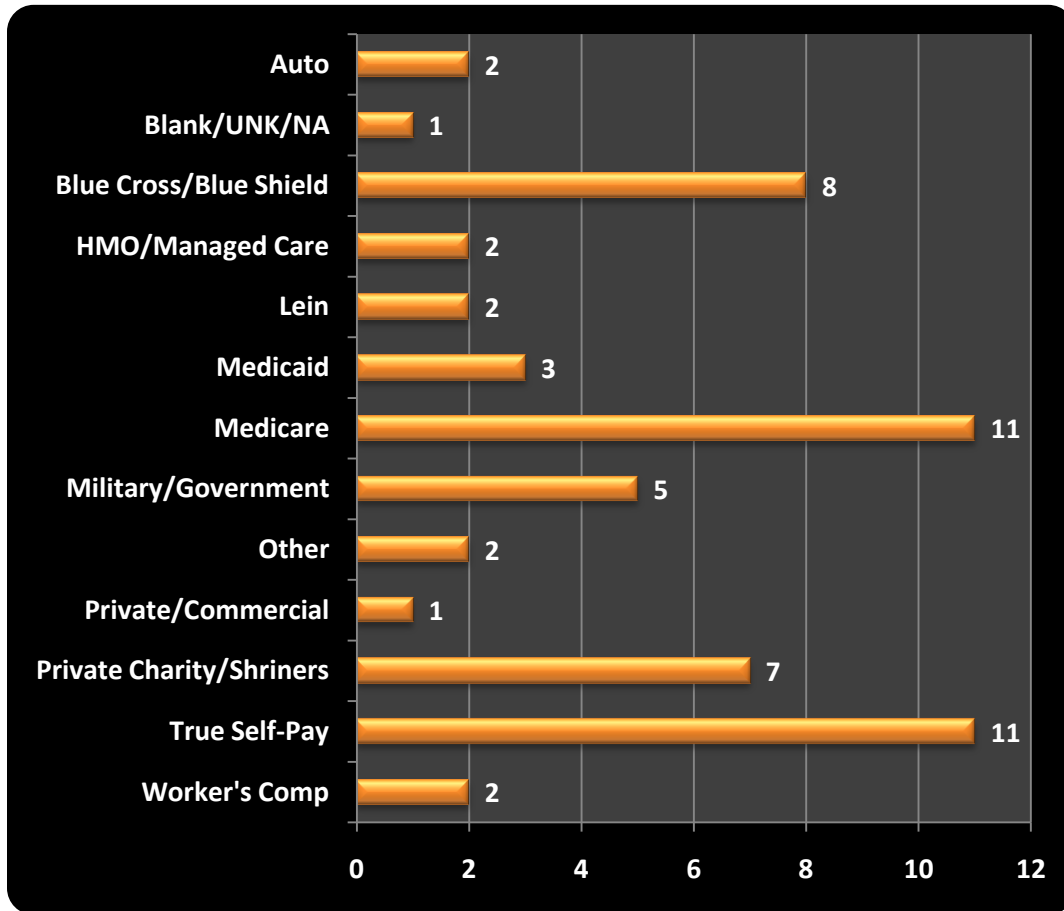
NH=Nursing Home

ICF=Immediate Care Facility

NA/NK/NR=Not Applicable/Not Known/Not Recorded

Figure 22
**Payer Sources for Cases
With Both TBI and SCI**

Alabama Head and Spinal Cord Injury Registry (AHSCIR)
January 1, 2014 – December 31, 2014
(n=57)



Of cases that had both TBI and SCI, Medicare paid 19 percent (n=11), true/self pay paid 19 percent (n=11), Blue Cross/Blue Shield paid 14 percent (n=8), and automobile insurance and Workers Compensation paid 4 percent (n=2).