# Mental Health Disparities for Latino Oregonians: Exploratory Analysis Using Administrative Data

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## Key Points

- At 12% of the state's population, Hispanics are the largest minority population in Oregon and is rapidly growing
- Although the physical health needs of this population has been evaluated in previous surveys, there is currently little information regarding this population's mental health needs. Additionally, there is almost no information regarding how Hispanics use mental health services in the state of Oregon. This information is important to knowing the particular needs of this patient population and what services will be most needed.
- This project examines the use of mental health services in the state of Oregon and was prepared in Spring 2017 for the Oregon Advocacy Commission Office- Commission on Hispanic Affairs, in partnership with Oregon Enterprise Data Analytics. Data was reviewed for Oregonians for had initiated mental health care via the state of Oregon between 1983 and 2013 and who had terminated their service between 2010 and 2014.
- The Hispanic patient population is much younger than the total patient population; the median age for Hispanic patients is 17 years, compared to 29 years for the total population. Likewise, 53.5% of the Hispanic patient population is less than 18 years old, compared to 29.9% of the total population.
- Counties with the greatest percentage of Hispanic patients were Yamhill, Polk, and Marion Counties, whereas the total patient population mostly resided in Multnomah County. However, when county of residence was examined for minor patients, this trend differed slightly. The percentage of Hispanic minors residing in Yamhill, Polk, and Marion Counties were still considerably larger than the total minor population, yet a similar percentage of Hispanic minors and all minors resided in Multnomah County. Additionally, the percentage of Hispanic minors residing in Washington County more than doubled the percentage of all minors in Washington County. Most patients were able to receive treatment in the same county as where they resided.
- Most Hispanic patients are either priority 2 patients (56.1% of minors, 41.1% of adults) or Non-SPMI/SED priority 1 patients (27.5% of minors, 27.0% of adults).
- Hispanic patients were mostly likely to have Medicaid, Title XIX Fee for Service, AMH Office, state or federal grants, or other public assistance programs responsible for payment of service. In contrast, the majority of the total population had the indigent fund billed for coverage of service.

## Glossary

*Minor: *An individual less than 18 years of age*
*Non-SPMI/SED Priority 1: *An individual without severe and persistent mental illness or serious emotional disorder, but is still at risk of hospitalization if untreated*
*Priority 2: *Individuals who are least capable of obtaining assistance from the private sector due to the nature of their illness, their geographic location, or their family income*

**Introduction**

The Latino population is the largest minority population in the state of Oregon, with some groups estimating this population's size at 476,000 individuals, or 12% of Oregon's population [5,6]. The Latino population in Oregon has been growing at a faster rate than that for the entire United States, with the Oregon Latino population almost doubling from 275,000 in 2000 to 400,000 in 2010 [5]. Oregon's growth is fueled primarily by a rise in the number of U.S. born Latinos rather than immigration; the native Latino population has grown by 21% compared to a 1% growth in the immigrant population [6]. In fact, nearly 2/3 of Oregon Latinos were born in the United States [6]. It is also important to realize that the Latino population is much younger than Oregon's white population, with the median age for Latinos being 24 years, compared to 41 years for the white population [6]. The largest number of Latinos reside in Washington County, where the population has grown from about 50,000 in 2000 to 99,000 in 2014 [6].

The Latino population is at-risk for multiple health complications. Compared to the white population, a greater number of Latino Oregonians experience adult obesity and diabetes (31% vs. 25% and 9.6% vs. 6.2%, respectively) [5]. Additionally, Latino Oregonians have a higher rate of new HIV/AIDS diagnoses than non-Latino whites, with a case rate of 9.8/100,000 compared to 5.4/100,000 [5]. Although multiple reports can be found documenting Latinos' health disparities for physical health complications, so far little research has been completed regarding Latinos' mental health, especially for Latino Oregonians. The reports have occasionally been contradictory, with some researchers reporting similar mental health between Hispanics and white populations, some showing improved mental health for Hispanics, and still others showing worse mental health for Hispanics. The Oregon Healthy Teen Survey (2015) showed few mental health differences between Latino and white youth, although Latino youth were slightly more likely to have reported suicide attempts than their white peers [6]. This result is consistent with other reports showing Latina high school girls having higher rates of suicide attempts [2]. Another study showed that Latina Americans were more likely to experience worse depression than white American females, with 53% of Latinas of Latinas experiencing moderate to severe depressive symptoms, compared to 37% of white American females [different 9 citation]. However, similar results were not seen in the National Survey on Drug Use and Health (2015) [3]. The National Survey on Drug Use and Health measured multiple mental health outcomes with respect to ethnicity, age, and other demographic variables, and found that approximately 14.5% of Hispanics had *any mental illness* (AMI- a mental, behavioral, or emotional disorder, excluding developmental and substance use disorders, that was diagnosable at the time of the survey or diagnosed within the past year, and of sufficient duration to meet diagnostic criteria specified within the 4$^{th}$ edition of the *Diagnostic and Statistical Manual of Mental Disorders*) compared to 17.9% of all U.S. adults. Similarly, only 2.9% of Hispanics, compared to 4% of all adults, reported having a *serious mental illness* (SMI- a mental, behavioral, or emotional disorder that, in addition to meeting the criteria for AMI, also

results in serious functional impairment that substantially interferes with or limits one or more major life activity) [4].

These contradictory results may be explained in part by the fact that Latinos are less likely to seek mental health treatment. In 2001, the Surgeon General's report found that only 20% of Latinos with symptoms of psychological disorders spoke to their doctors about their mental health, and the National Alliance on Mental Illness reports that only 10% of Latinos contact mental health specialists [2]. Researchers have found that issues of stigma, cultural miscommunication, and misunderstanding of counseling services contribute to Latinos' underutilization of mental health services. Furthermore, lack of bilingual or Spanish-speaking services may also limit Hispanics' access to mental health services [1]. A study by Sorkin et al. reported that for Hispanic adults older than 55 years, reasons for not receiving treatment included wanting to handle their mental health problem on their own, issues related to expense, difficulty receiving an appointment, and not feeling comfortable talking to a professional [7].

To better understand how Hispanics utilize mental health services, I reviewed data pertaining to Oregonians who had initiated mental health care via the state of Oregon between 1983 and 2013, and who had terminated their mental health treatment between 2010 and 2014. This data set contained 271,158 entries which represented 105,109 individuals with one service element and 50,715 individuals with multiple service elements. There were also 1,381 entries that did not have a case-number associated with them, and so it could not be determined if these entries belonged to individuals who had already contributed to the data set, or if they were new entries.

There were 15 variables that I analyzed for this data set: gender, age, ethnicity, education, training (whether a subject was currently involved in schooling or training), referral source (the individual, group, or institution that was responsible for getting the patient into care), income, service element (the type of treatment the patient received), county (where the patient resided during treatment), provider county (the county where the patient went to receive treatment), eligibility code (the eligibility/prioritization group to which the patient belongs), marital status, living arrangement, employability, and the termination type.

**Analysis**

This project was prepared in Spring 2017 for the Oregon Advocacy Commission Office-Commission on Hispanic Affairs, in partnership with Oregon Enterprise Data Analytics. The data was accessed via a spreadsheet from Microsoft Excel 2013. To assess gender and ethnicity, I removed duplicate identification codes to ensure that each subject was only counted once, which prevents the report of gender and ethnicity from being biased by the number of service

elements the subject received. For example, if Subject A were to have 8 service elements and Subject B were to have 1 service element, Subject's A ethnicity and gender would have been counted 8 times while Subject B's ethnicity and gender would have only been counted once; this would have resulted in a bias towards Subject A.

However, for other variables, it is important to capture information by how often a subject receives treatment. For example, it is meaningful and relevant to count age at the beginning of therapy multiple times, since a subject's age would change with time (which would be reflected in multiple service entries) and since this information would better reflect the health care community's patient load. Therefore, for single-entry analysis, we obtain information about the population of patients receiving mental health services, while multiple-entry analysis allows us to examine who is most likely to receive mental health services. Single entry analysis was performed for gender and ethnicity, and multiple-entry analysis was performed for age at the beginning of therapy, ethnicity, education, training, referral source, county, provider county, eligibility code, marital status, living arrangement, employability, and termination type.

*General Distribution*

Initial analysis focused primarily on identifying general distributions of the population, which revealed that our total population was slightly more female (54% female vs. 46% male), mostly Caucasian (77.55%), and around 30 years old (mean = 31 years, median = 29 years).

**Figure 1**

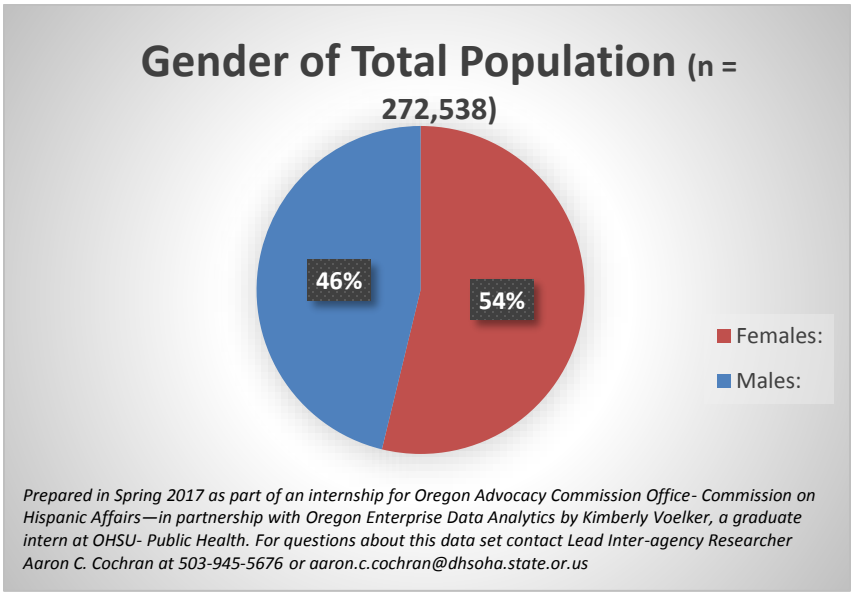
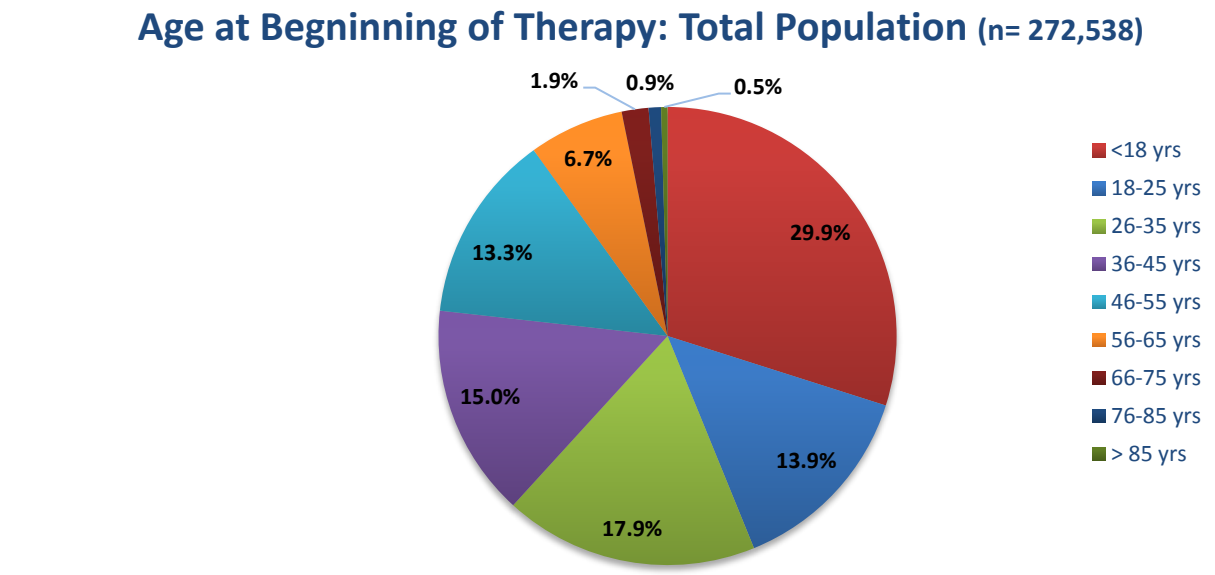


**Figure 2**




*Prepared in Spring 2017 as part of an internship for Oregon Advocacy Commission Office- Commission on Hispanic Affairs—in partnership with Oregon Enterprise Data Analytics by Kimberly Voelker, a graduate intern at OHSU- Public Health. For questions about this data set contact Lead Inter-agency Researcher Aaron C. Cochran at 503-945-5676 or aaron.c.cochran@dhsoha.state.or.us*

**Table 1**

| Age | % Population |
|---|---|
| <18 yrs | 29.9% |
| 18-25 yrs | 13.9% |
| 26-35 yrs | 17.9% |
| 36-45 yrs | 15.0% |
| 46-55 yrs | 13.3% |
| 56-65 yrs | 6.7% |
| 66-75 yrs | 1.9% |
| 76-85 yrs | 0.9% |
| > 85 yrs | 0.5% |
| Mean: 31 years | |
| Median: 29 years | |
| N = 272,538 | |

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**Figure 3**

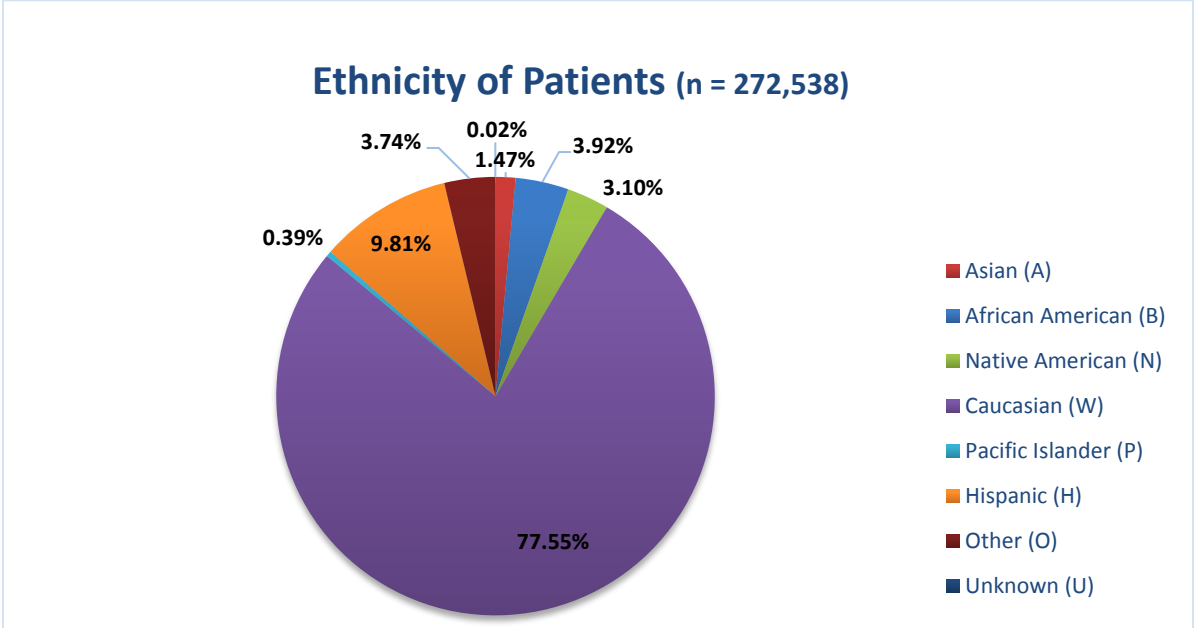


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**Table 2**

| Ethnicity | % Population |
|---|---|
| Asian American (A) | 1.47% |
| African American (B) | 3.92% |
| Native American (N) | 3.10% |
| Caucasian (W) | 77.55% |
| Pacific Islander (P) | 0.39% |
| Hispanic (H) | 9.81% |
| Other (O) | 3.74% |
| Unknown (U) | 0.02% |
| N= 272,538 | |

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The Hispanic population that received mental healthcare during this time was similar to the total population in terms of gender, with 53% of the population identifying as female. However, the Hispanic population was much younger than the total population: over half of Hispanics receiving healthcare were under the age of 18 years, and the median age of those receiving treatment was 17 years (compared to 29 years for the total population).

**Figure 4**

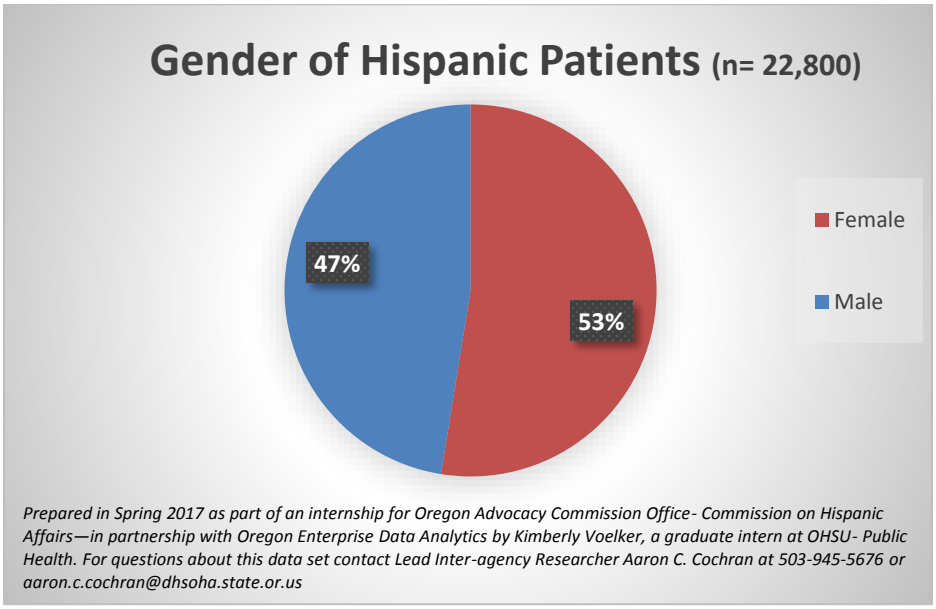


**Figure 5**

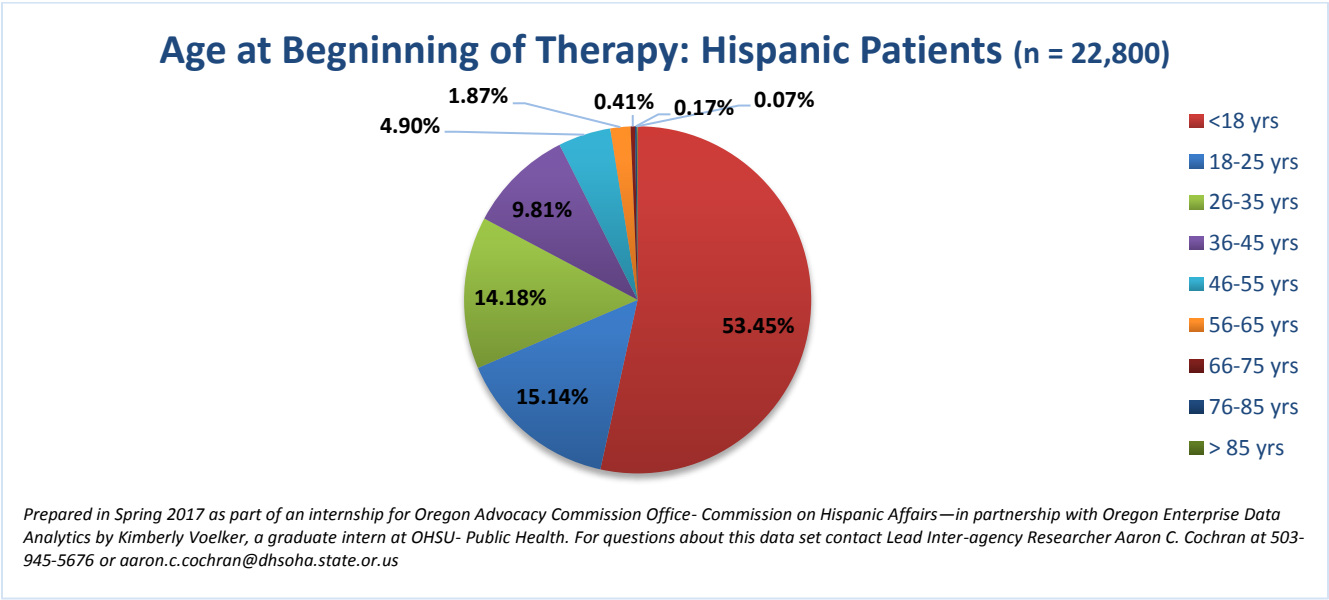

**Table 3**

| Age | % Population |
|---|---|
| <18 yrs | 53.45% |
| 18-25 yrs | 15.14% |
| 26-35 yrs | 14.18% |
| 36-45 yrs | 9.81% |
| 46-55 yrs | 4.90% |
| 56-65 yrs | 1.87% |
| 66-75 yrs | 0.41% |
| 76-85 yrs | 0.17% |
| > 85 yrs | 0.07% |
| Mean: 21 years | |
| Median: 17 years | |
| N= 22,800 | |

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Since the age distribution differed drastically between the Hispanic population and the population of the entire dataset, I decided to perform multiple analyses based on age. For example, for "referral type," there were three analyses completed: the first was an analysis of the referral type for the Hispanic Population vs. the Total Population, the second was an analysis of the referral type for Hispanic Minors vs. All Minors, and the third was an analysis of the referral type for Hispanic Adults vs. All Adults. The variables that had a Minors vs. Adults sub-analysis (in which 3 types of analyses were performed, as like in the example provided above) were: referral type, county of residence, provider county, eligibility code, and termination type. Additionally, more detailed analyses were performed for income (for which differences by gender and ethnicity were examined) and service elements (for which differences by ethnicity were examined in addition to age analyses). Sub-analyses were not performed for education, training, marriage status, living arrangement, or employability. Although education may have provided valuable information from sub-analysis, reporting of the population's education became impractical for reasons which will be discussed in more detail below.

*Education*

Information regarding a patient's education-level depends on self-reporting, which may not always be reliable. This proved to be an especially relevant concern for individuals with multiple entries: individuals with multiple entries may have reported "0 years" of education for one entry, and "25 years" for another, during a time frame that would not have been possible. Initially, I attempted to reconcile the multiple-entries individuals by entering the midpoint of all reported years of education for these individuals; however, there were tens of thousands of individuals for whom data needed to be reconciled, and since multiple-entry individuals varied in how many entries they had, there was no practical systematic way to enter the midpoints of the reported years of education. Therefore, I focused my analysis on individuals with only one entry to determine the distribution of the level of education obtained by the subjects. However, since approximately half the entries were excluded from this analysis, it is important to realize that this data has the potential to be skewed and may not accurately reflect the true level of education obtained by the subjects.

**Figure 6**

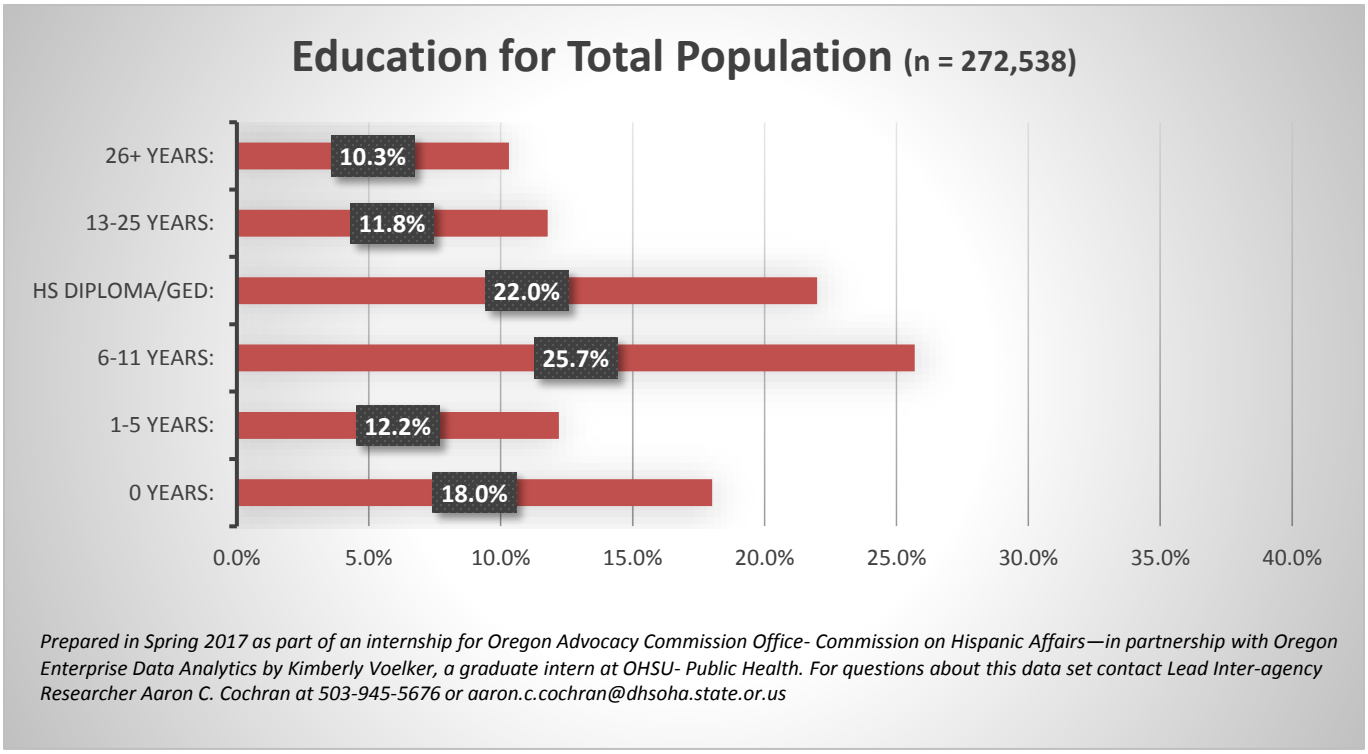


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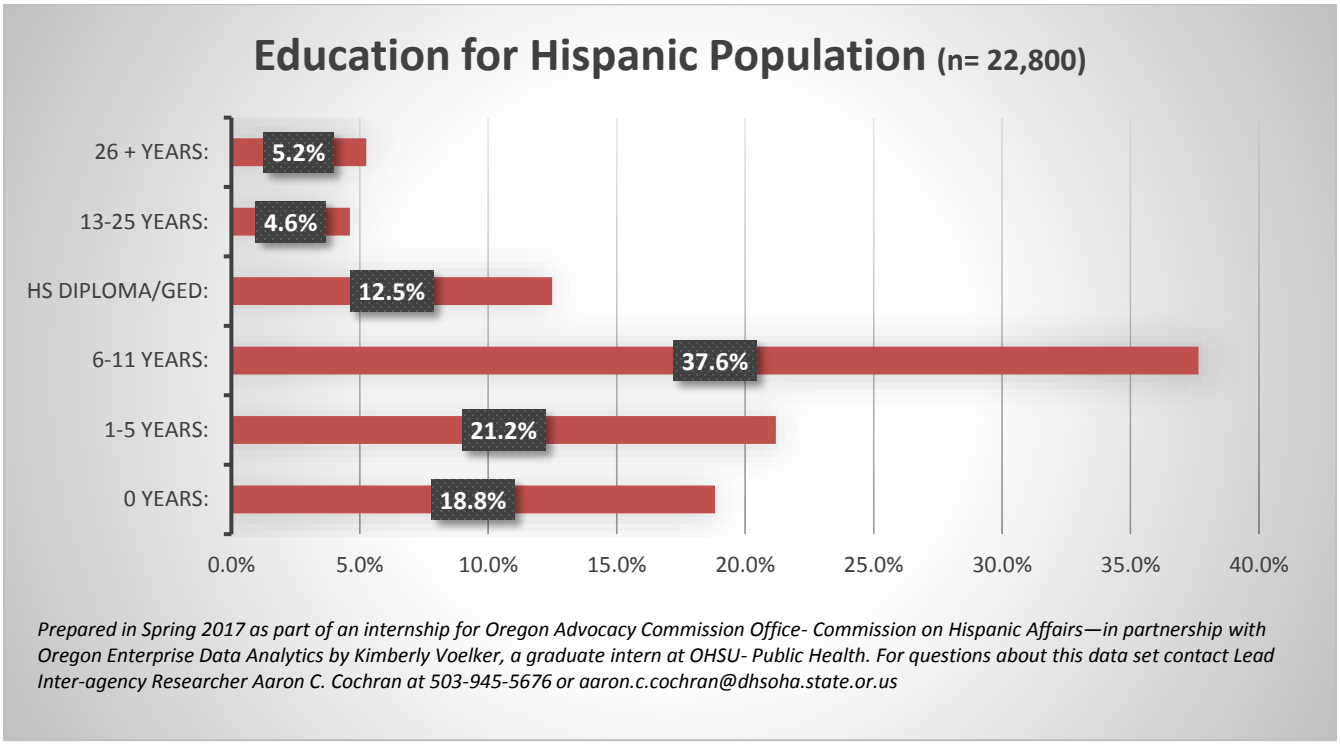
**Figure 7**

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*Training*

Training refers to whether the subject was enrolled in a school or formal training program during the time of their treatment. This includes GED classes, English as a Second Language (ESL) classes, barber school, clerical support classes, a carpenter apprentice program, vocational rehabilitation training, computer training, and any primary, secondary, or post-secondary academic program. If students attended school in the spring and will attend school in the fall, they are considered enrolled in school.

Approximately one-quarter of the total population was enrolled in school or training at the time of their treatment, as opposed to about one-half of the Hispanic population. Given that over half of the Hispanic population is under the age of 18, or the age of most students attending primary and secondary school, it is possible that the data for the Hispanic population may not be comparable to the total population. Further sub-analysis for minors and adults should be made for training.

**Figure 8**

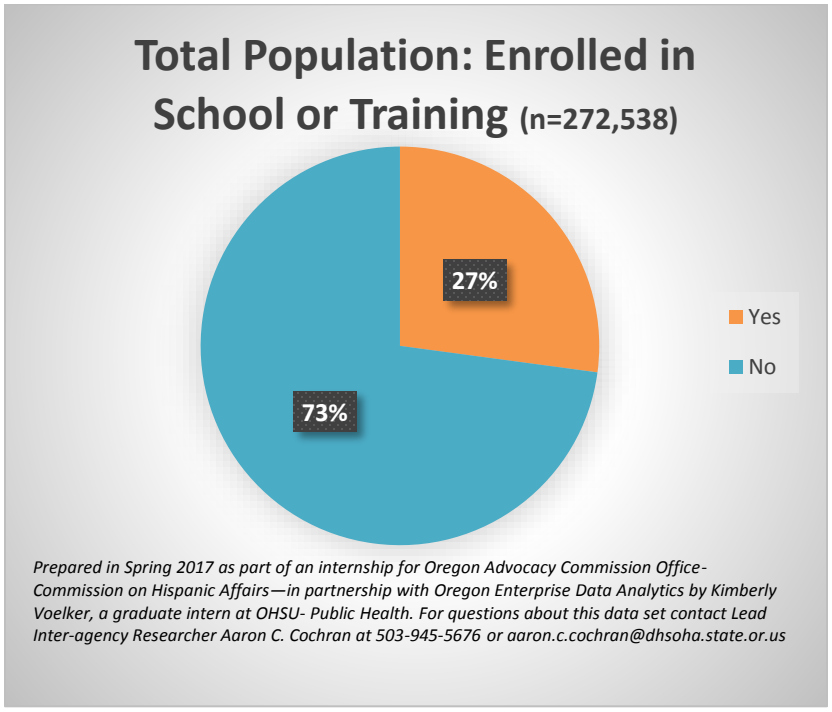
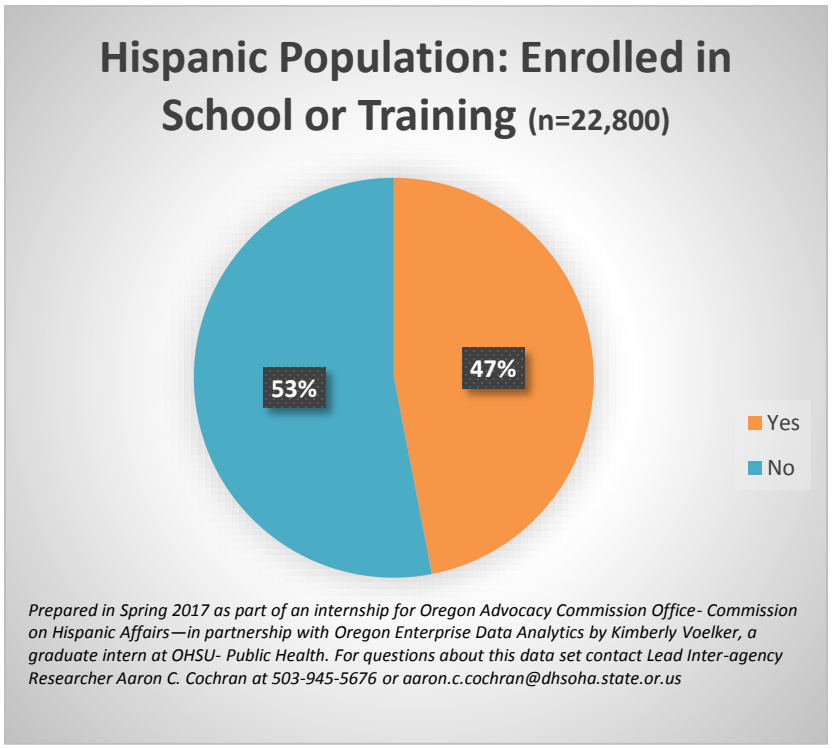



**Figure 9**



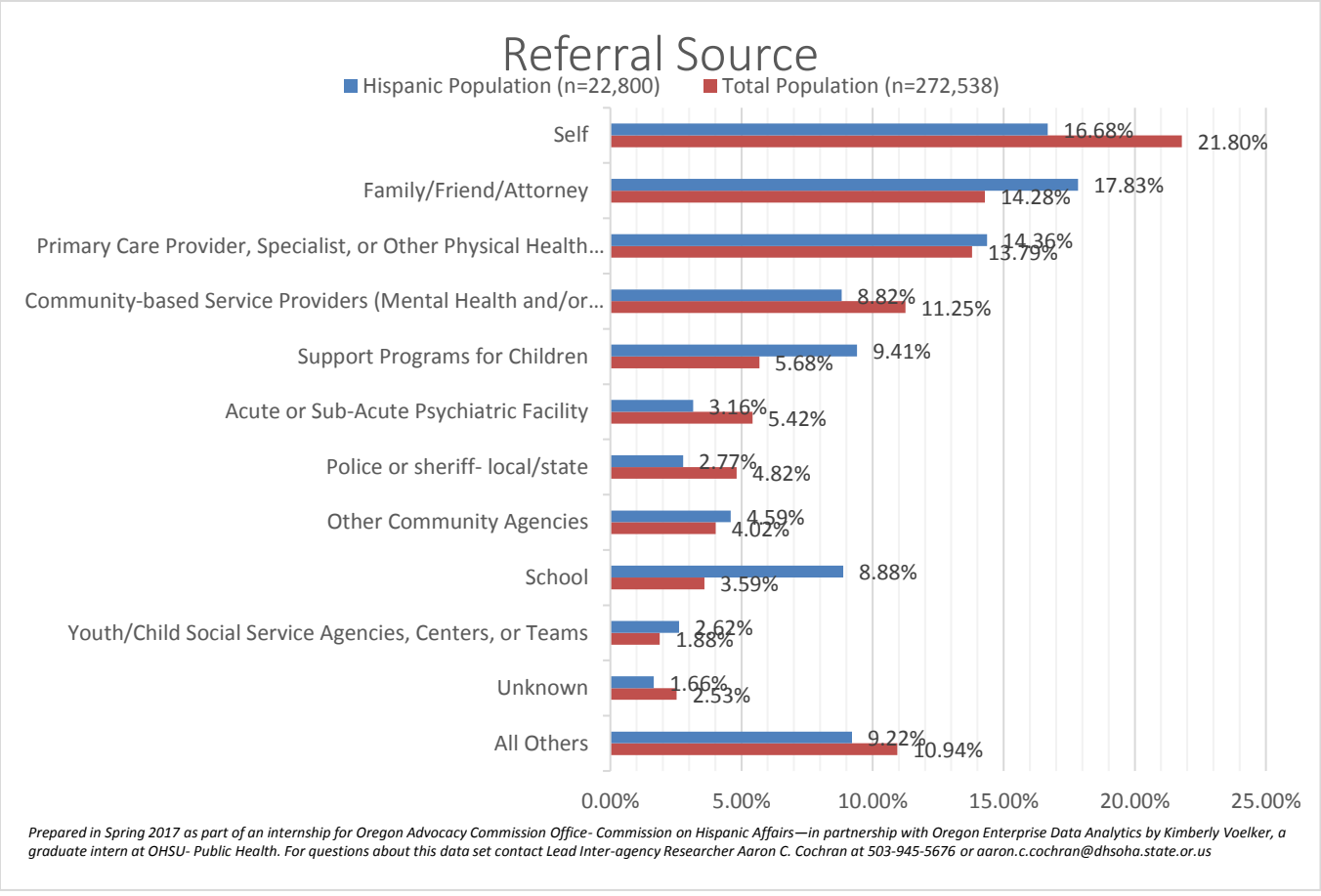
*Referral Source*

The referral source is the institution, agency, or person that takes deliberate action to ensure that the client is seen by the health provider. Examples of a deliberate action are bringing the client to the appointment, writing letters, and making phone calls to set up appointments. A deliberate action is *not* a suggestion from someone to receive mental healthcare. In the event that a person was referred to the provider by both an institution and a provider, the institution was recorded as the referring source.

There was a total of 61 referring sources in the dataset, including "Other" and "Unknown." The entire distribution of referring sources for the total population, minors, and adults can be seen in Table 1A, Table 2A, and Table 3A in the appendix.

In general, the most common referral sources were self, family/friends/attorneys, and primary care providers/specialists/or other physical health provider. The Hispanic population less often reported "self" as the referral source (16.68% vs. 21.80%), but more often reported a family member, friend, or attorney as the referring source (17.83% vs. 14.28%).

**Figure 10**

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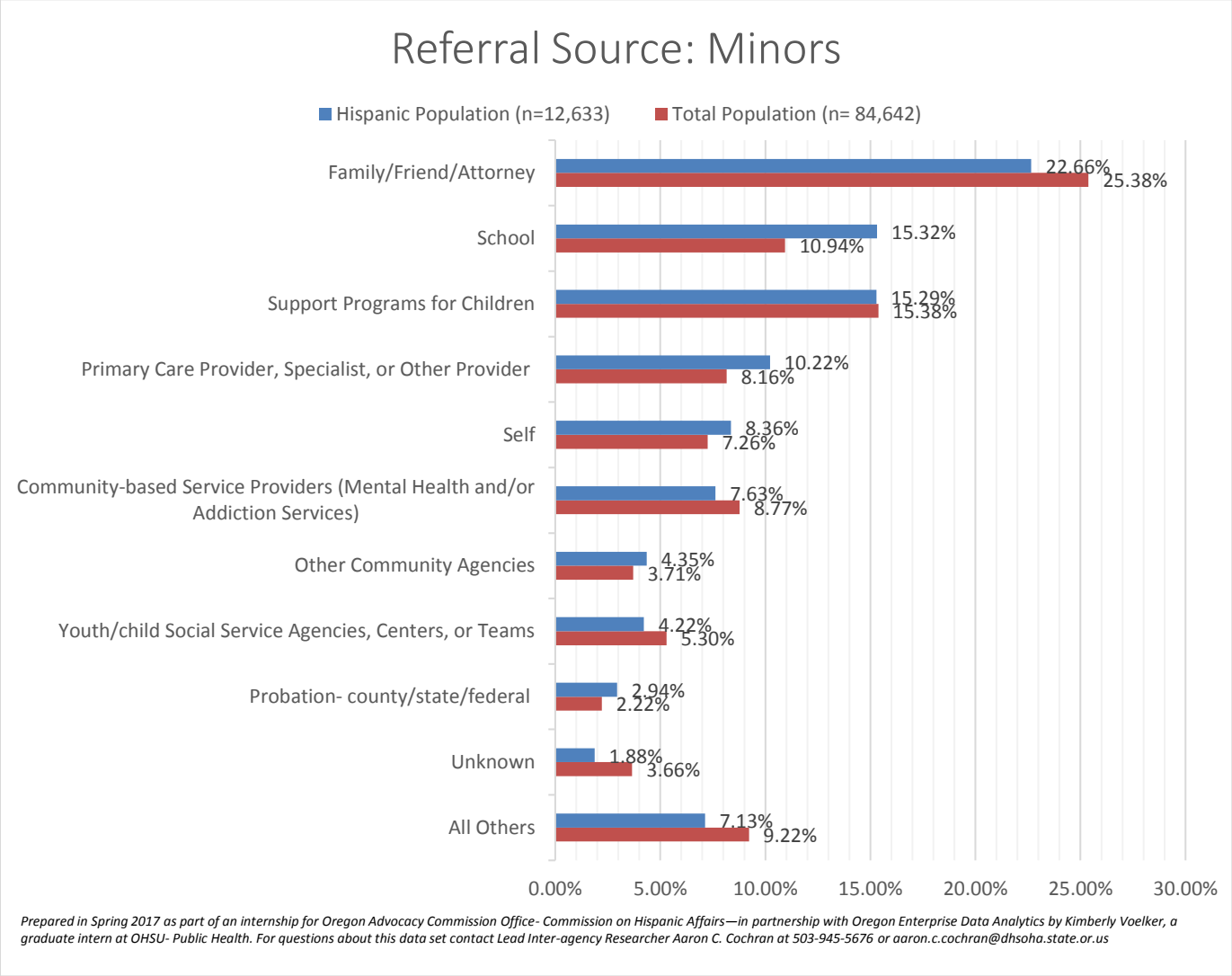
When referral source is broken down into “Minors” and “Adults” subcategories, some stronger differences become clear. For example, with minors there is not a large difference between the percentage of children who had been referred by “Support Programs for Children,” yet there is a smaller percent of Hispanic children being referred by family, friends, or attorneys (22.66% vs. 25.38%) , and a larger percent being referred by school (15.32% vs. 10.94%) compared to children in the total population. There is also a larger percentage of Hispanic minors (compared to the total population) who report a “Primary Care Provider, Specialist, or Other Provider,” “Self,” “Other Community Agencies,” or “Probation” as the referral source, and a smaller percentage (compared to the total population) that report “Community-based Service Providers,” “Youth and Child Social Service Agencies, Center, or Teams,” or “Other” as their referral source. Also, the percentage of Hispanic minors whose referral source is unknown is smaller than the percentage of unknown referral source for the total population.

**Figure 11**

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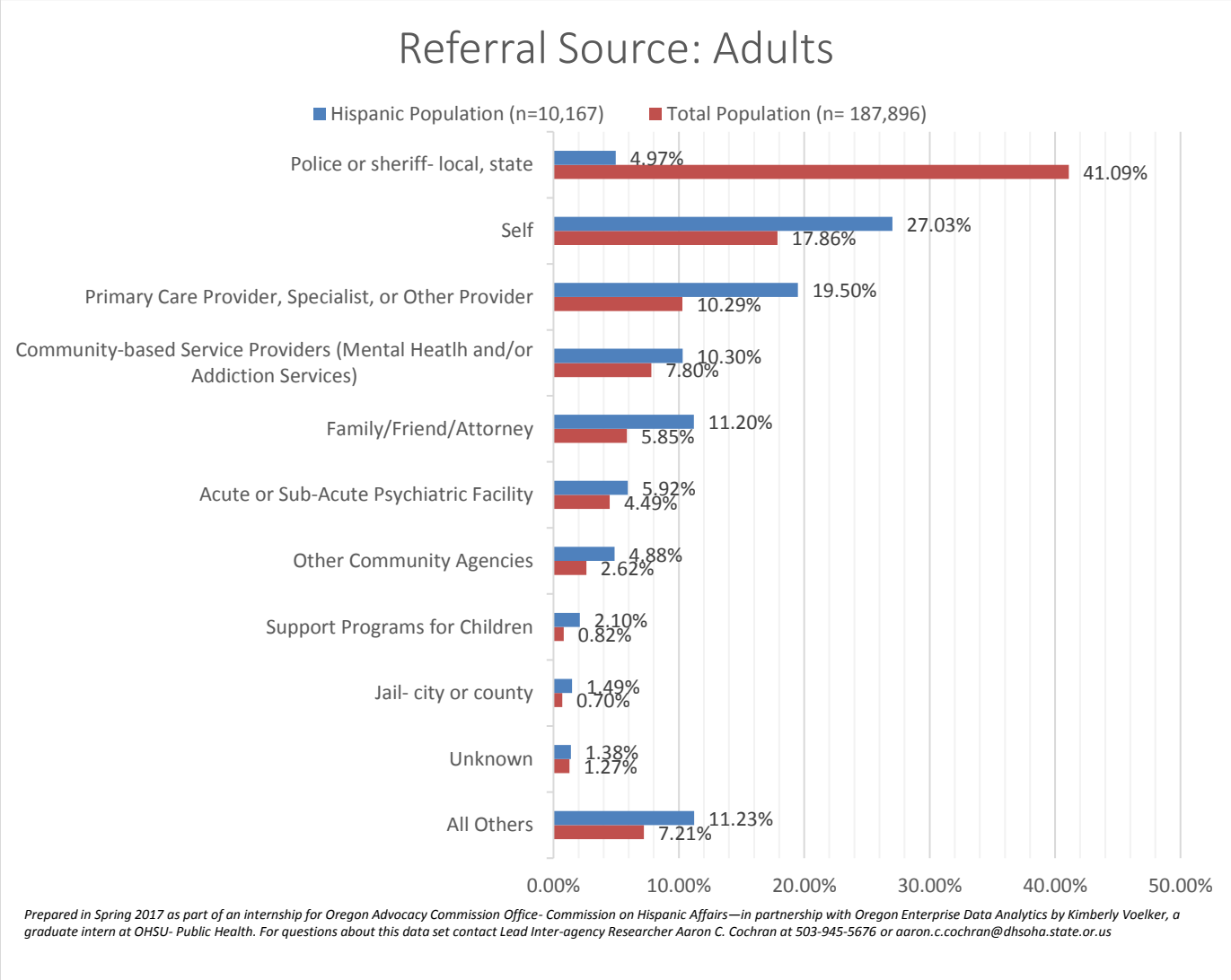
A more dramatic difference in referral source can be seen for the adult population. In the total population of adults, the main referral source is “Police or Sheriff”; over 40% of the total adult population has “Police or Sheriff” as their referral source, whereas less than 5% of the Hispanic adult population was referred by the police or sheriff. Instead, the main referral source for Hispanic adults is “Self” (27.03%). The percentage of Hispanic adults is greater than the percentage of adults in the total population for referral reports of “Self,” “Primary Care Provider, Specialist, or Other Provider,” “Community-based Service Providers,” “Family/Friend/Attorney,” “Acute or Sub-Acute Psychiatric Facility,” “Other Community Agencies,” Support Programs for Children,” “Jail,” and “Others.” There is also a slightly greater percentage of Hispanic adults than adults from the total population whose referral source is unknown (1.38% vs. 1.27%).

**Figure 12**

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*Income*

Information regarding subjects' income was complete for less than half of the entries. Of all patients who had received healthcare, 40% had complete income information, 3% refused to provide information, and 57% were unknown. In general, females were slightly more likely to have complete income information, about as likely to refuse to provide information, and slightly less likely to have unknown income information.

**Figure 13**

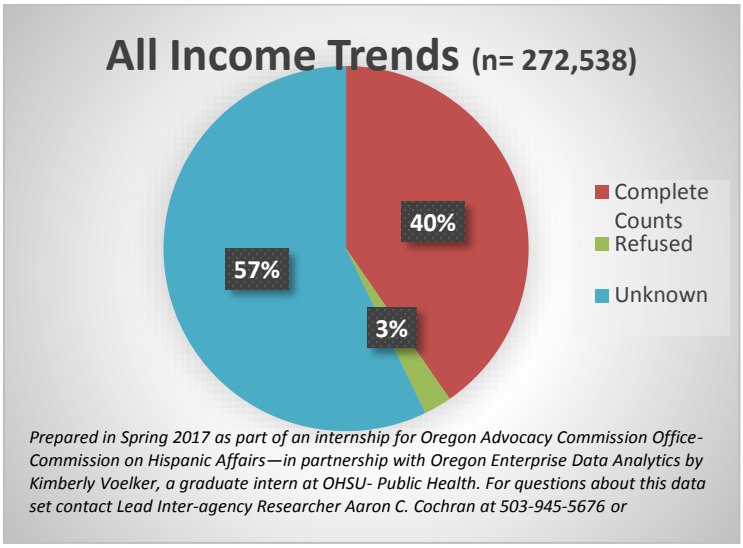
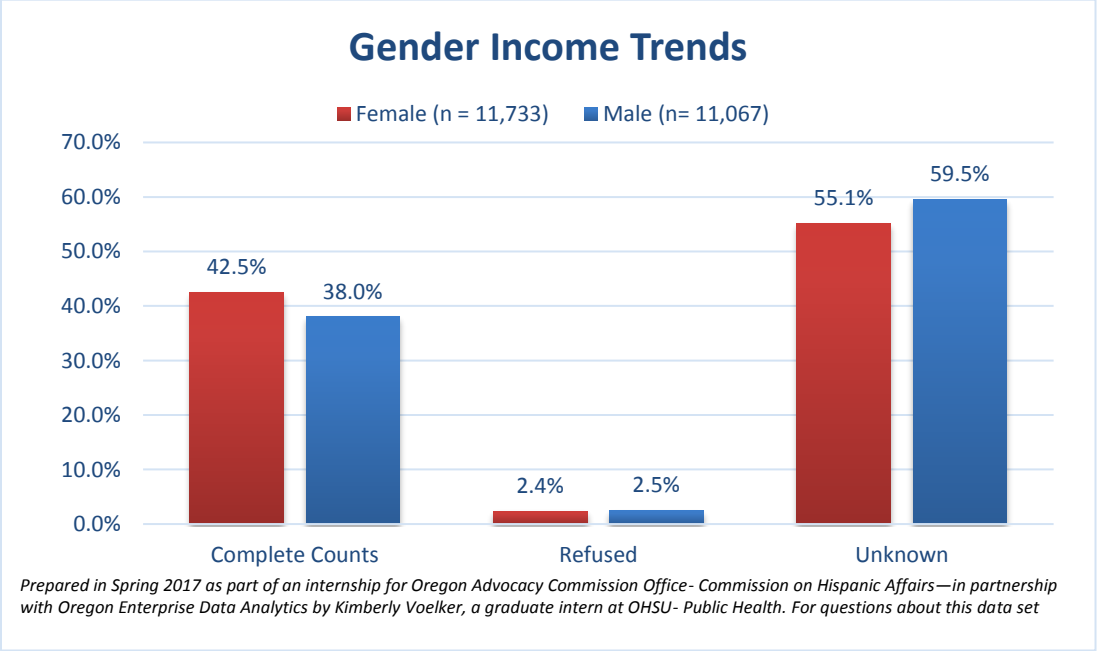



**Figure 14**



The percentage of subjects who had complete income information, refused to provide income information, and whose income information was unknown was calculated for individuals based on ethnicity. Complete income information was more likely to exist for Hispanics, Native Americans, and individuals whose ethnicity was unknown or "Other"; Hispanics and individuals whose ethnicity was unknown or "Other" were more likely to refuse to provide income information; and Caucasians, Asians, African-Americans, Pacific Islanders, and individuals whose ethnicity was unknown or "Other" were more likely to have incomplete (or "unknown") income information.

**Table 4**

| Ethnicity | Type | # Subjects | %Subjects | % Difference |
|---|---|---|---|---|
| Caucasian | Complete | 85603 | 40.0% | -0.4% |
| | Refused | 4874 | 2.3% | -0.2% |
| | Unknown | 123596 | 57.7% | 0.6% |
| Asian American | Complete | 1436 | 37.1% | -3.3% |
| | Refused | 65 | 1.7% | -0.8% |
| | Unknown | 2372 | 61.2% | 4.1% |
| African-American | Complete | 4563 | 37.0% | -3.4% |
| | Refused | 297 | 2.4% | 0.0% |
| | Unknown | 7468 | 60.6% | 3.4% |
| Hispanic | Complete | 10862 | 47.6% | 7.2% |
| | Refused | 869 | 3.8% | 1.4% |
| | Unknown | 11069 | 48.5% | -8.6% |
| Native American | Complete | 3910 | 45.3% | 4.9% |
| | Refused | 188 | 2.2% | -0.3% |
| | Unknown | 4531 | 52.5% | -4.6% |
| Pacific Islander | Complete | 448 | 40.8% | 0.4% |
| | Refused | 16 | 1.5% | -1.0% |
| | Unknown | 634 | 57.7% | 0.6% |
| Other/Unknown | Complete | 3276 | 33.6% | -6.8% |
| | Refused | 381 | 3.9% | 1.5% |
| | Unknown | 6081 | 62.4% | 5.3% |

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Given that income information is refused or unknown for most of the population, any interpretation of income information should be done with a certain degree of skepticism. Of the information that was provided, the average monthly income for patients is $731.80 (median = $500).

**Table 5**

| Ethnicity | Mean | SD | Median |
|---|---|---|---|
| Total Population N = 110,098 | $731.80 | $1,116.78 | $500.00 |
| Asian American N= 1,463 | $642.42 | $1,163.68 | $250.00 |
| African American N = 4,563 | $640.70 | $986.59 | $430.00 |
| Hispanic N = 10,862 | $896.45 | $1,082.92 | $676.00 |
| Native American N = 3,910 | $635.32 | $1,130.67 | $300.00 |
| Pacific Islander N= 448 | $766.35 | $1,108.71 | $430.00 |
| Caucasian N = 85,603 | $804.53 | $1,243.81 | $550.00 |
| Other/Unknown N = 3,276 | $820.47 | $1,316.11 | $450.00 |

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*Service Elements*

To see the percentage of total Asian Americans, African Americans, Hispanics, Native Americans, Pacific Islanders, Caucasians, and individuals with unknown or other ethnicity who utilized different service types, please refer to the appendix.

Service element refers to the type of service provided. The type of service received by Hispanic minors and all minors is very similar: Almost the same percentage of Hispanic minors as all minors receive Pre-admission Screening & Resident Review (< 0.01% vs. 0.0.1%), Older & Disabled Mental Health (0.01% vs. < 0.01%), Pre-Commitment Services (0.10% vs. 0.28%), Residential Treatment Service ( < 0.01% vs. 0.02%), and Adult Basic Outpatient (0.25% vs. 0.28%). There is a small percentage of minors who received Psychiatric Residential Treatment (1.70% vs. 3.18%) and Special Projects (2.87% vs. 1.40%), yet the number of minors who receive these service elements are approximately half and double all minors, respectively. A smaller percentage of Hispanic minors receive Crisis Services (9.54% vs. 11.48%) than all minors, and a larger percentage receive Child or Adolescent Basic Outpatient services (85.02% vs. 82.34%).

About the same percentage of Hispanic adults as adults from the total population received services labeled as “Community Support Homeless Mentally Ill,” “Special Projects,” “Older & Disabled Mental Health,” “Adult Foster Care Services,” “Enhanced Care Services,” “Residential

Treatment Services," "Pre-admission Screening & Resident Review," "Psychiatric Security Review Board (PSRB)," and "Child/Adolescent Basic Outpatient." A larger percentage of Hispanic adults received "Adult Basic Outpatient Services," and a smaller percentage received "Pre-Commitment Services" or "Crisis Services."

**Figure 15**

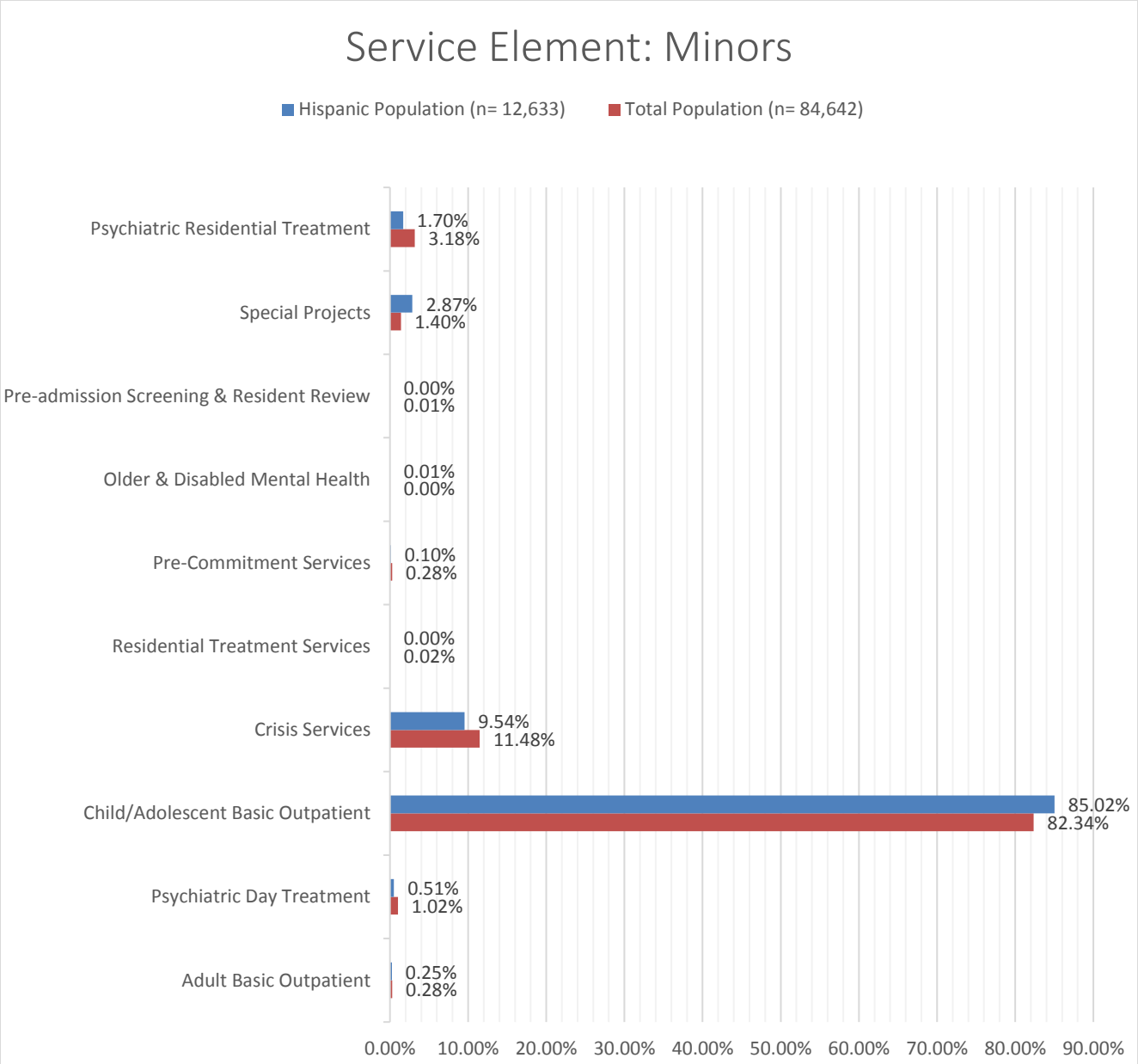


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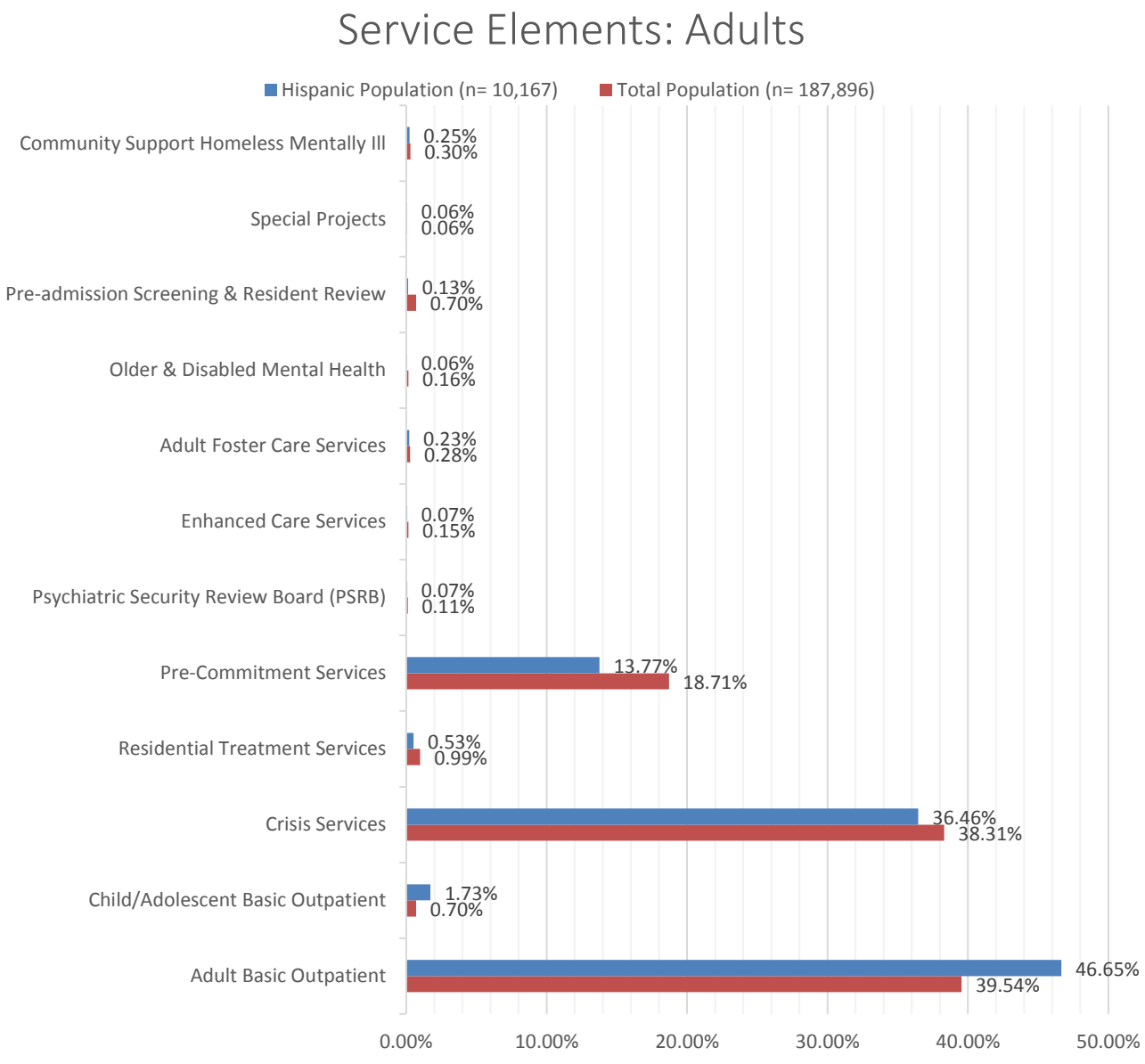
**Figure 16**

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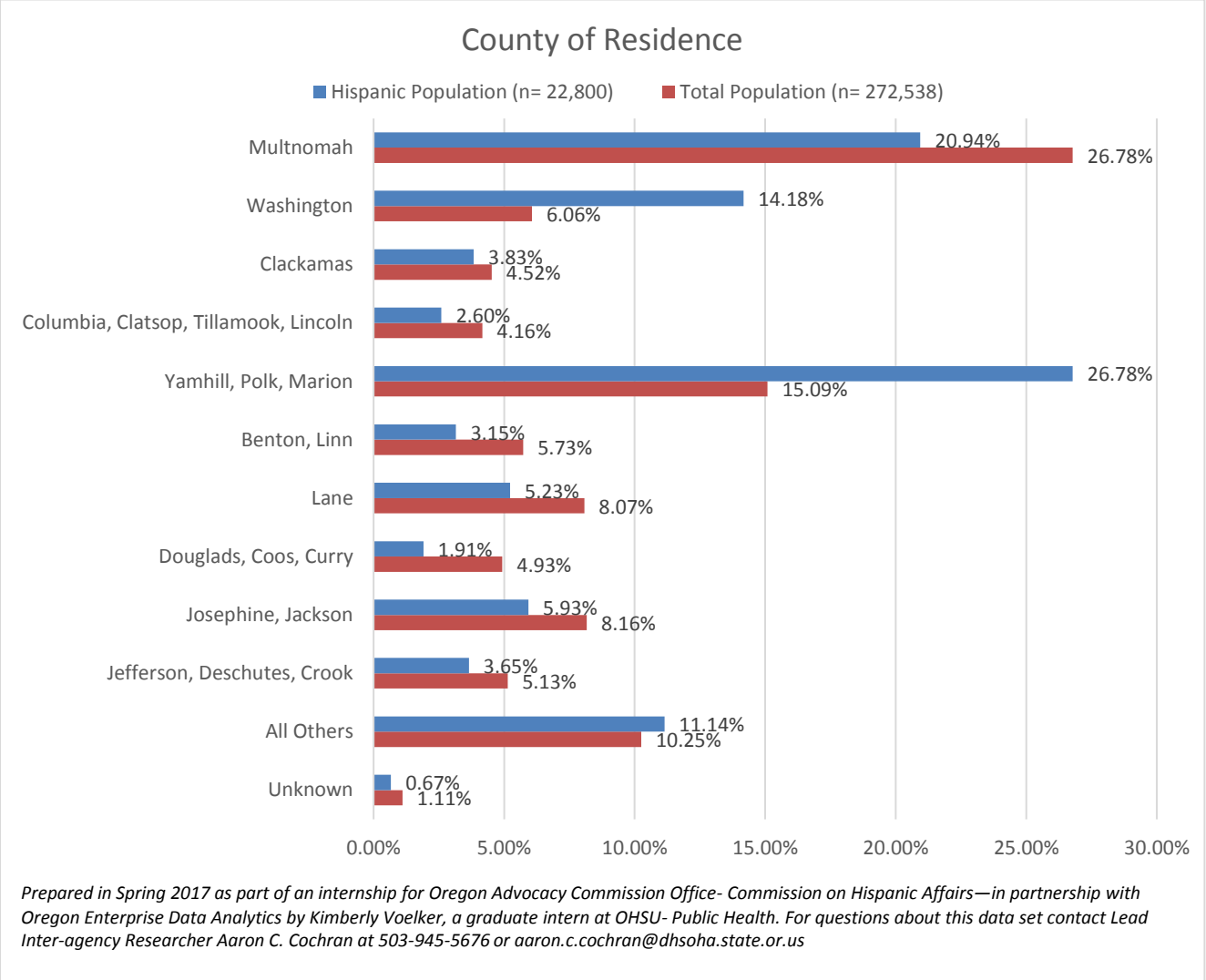
*County of Residence*

The county of residence was analyzed for each patient. In general, residence reporting was complete: only 1.11% of the total patient population and 0.67% of the Hispanic patient population had incomplete residence information. The counties with the greatest percentage of Hispanics were Yamhill, Polk, and Marion, whereas the total population mostly resided in Multnomah County.

**Figure 17**

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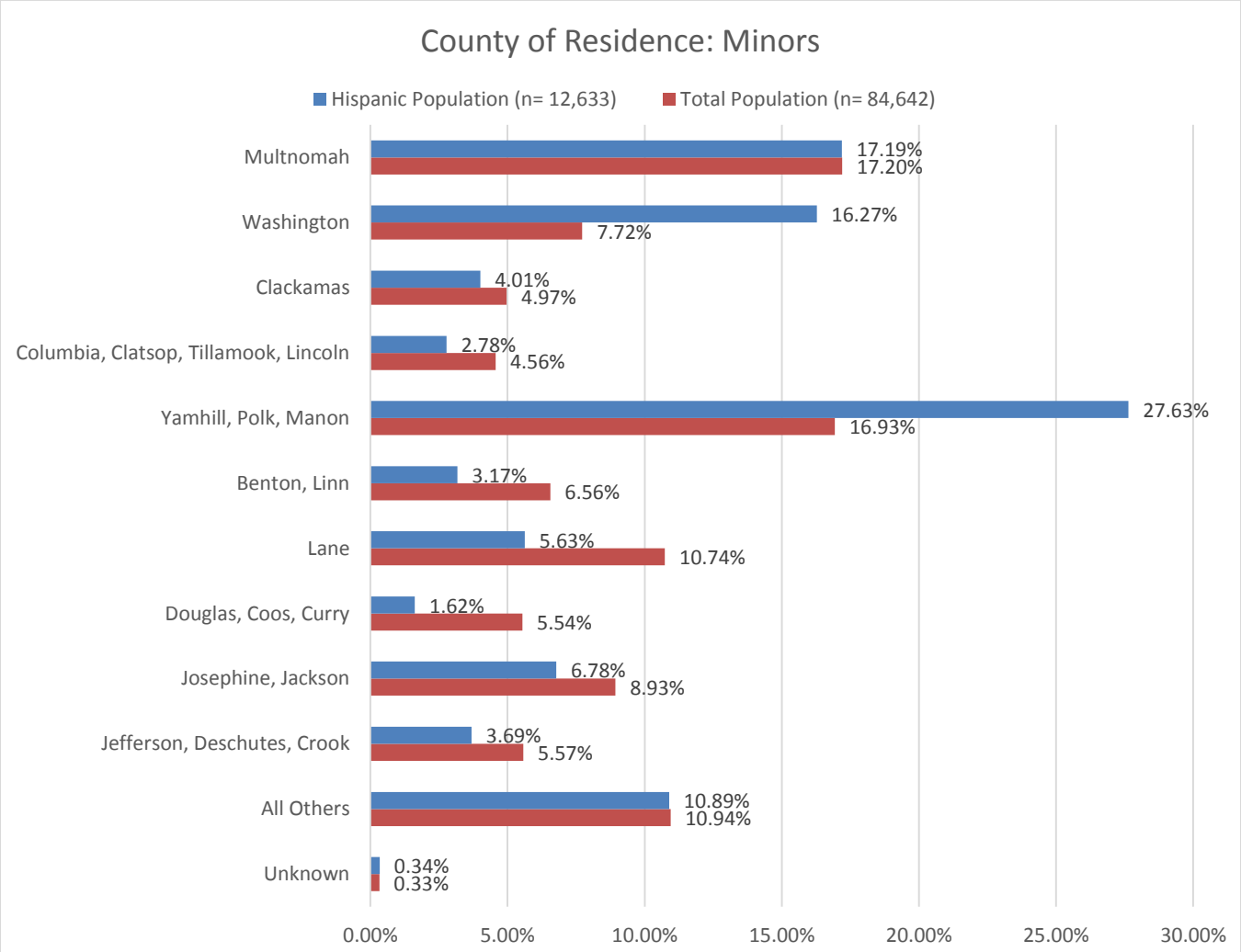
When county of residence is examined for Hispanic minor patients, the percentage of minors residing in Yamhill, Polk, or Marion County is still considerably larger than the percentage for the total patient population, yet the percentage between Hispanic minors and all minors

residing in Multnomah County is now almost the same (17.19% vs. 17.20%). Also, the percentage of Hispanic minors residing in Washington County more than doubles the percentage of all minors residing in Washington County.

**Figure 18**

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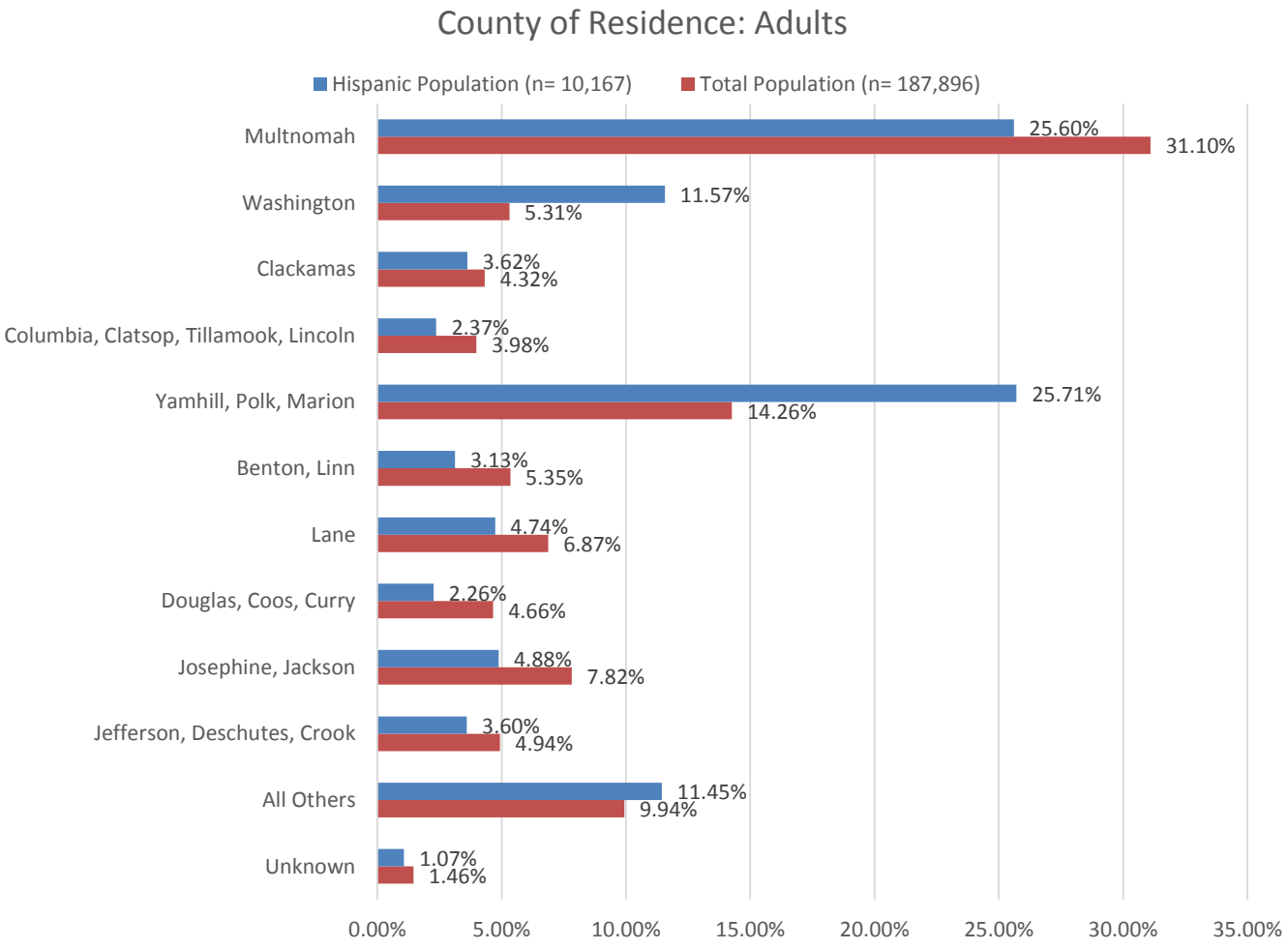
The trends for the county of residence for Hispanic adult patients is similar to the trends seen in all Hispanics: there is a greater percentage of Hispanic adults in Washington, Yamhill, Polk, and Marion County, and a smaller percentage of Hispanic adult patients in other large counties.

Unlike Hispanic minors, the percentage of Hispanic adults residing in Multnomah County is smaller than the percentage of all adults (25.60% vs. 31.10%).

**Figure 19**

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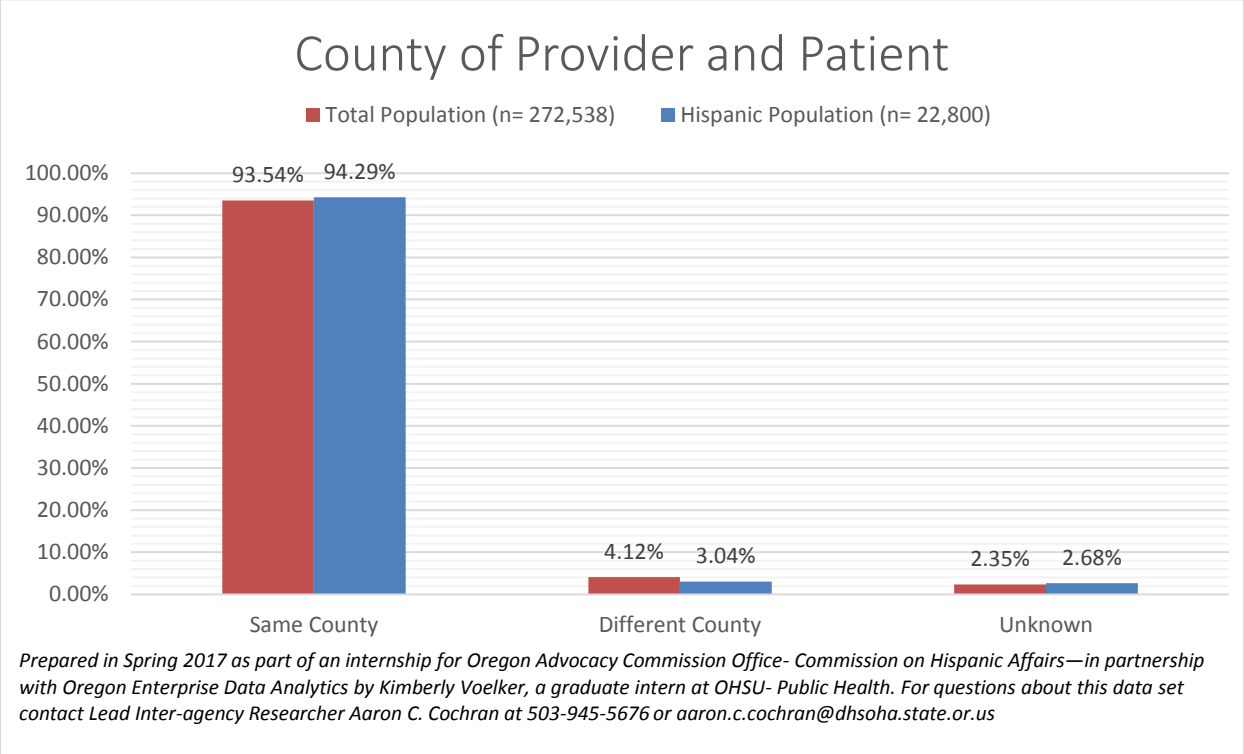
*County Where Service Was Received*

For each patient, the county where the provider resided was also recorded. Beyond allowing us to know where individuals were most likely to receive treatment, it also gives us information about accessibility to service. In general, patients were able to receive treatment from

providers in the same county that they resided (94.29% of the Hispanic population vs. 93.54% of the total population). Only 3.04% of the Hispanic population (or 4.12% of the total population) received care in a county that was different from the one where they resided. Less than 3% of the population had unknown data for either the county of the provider or the county of patience residence. These results did not differ appreciably for minors or adults; graphs show disparities in healthcare access for these populations can be seen in Figure 9A and 10A of the appendix.

**Figure 20**

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*Eligibility Code*

There are four primary eligibility codes used in this dataset:

1. Priority One: Severe and Persistent Mental Illness (SPMI) and/or Serious Emotional Disorder (SED); if untreated are at risk of hospitalization
2. Non-SPMI/SED Priority One: an individual without severe and persistent mental illness or serious emotional disorder, but is still at risk of hospitalization if untreated
3. Priority Two: Individuals who are least capable of obtaining assistance from the private section due to the nature of their illness, their geographic location, or their family income
4. Priority Three: individuals who are experiencing mental or emotional disturbances but will not require hospitalization in the foreseeable future.

Priority one patients are also marked by an immediate risk of hospitalization for the treatment of mental or emotional disorders, are in need of continuing services to avoid hospitalization, or pose a hazard to the health and safety of themselves or others. Furthermore, for patients under the age of 18 years, priority one status may also be given for those at immediate risk of removal from their homes for treatment of mental or emotional disturbances or exhibit behavior indicating high risk of developing disturbances of a severe or persistent nature.

Most patients are priority two, although we see a greater percentage of Hispanic patients compared to the total patient population are priority two clients (49.40% vs. 36.25%). The percentage of Hispanics who are SPMI/SED priority one or Non-SPMI/SED priority one are less than that for the total population (12.59% vs. 21.19% and 27.25% vs. 30.85%, respectively).

**Figure 21**

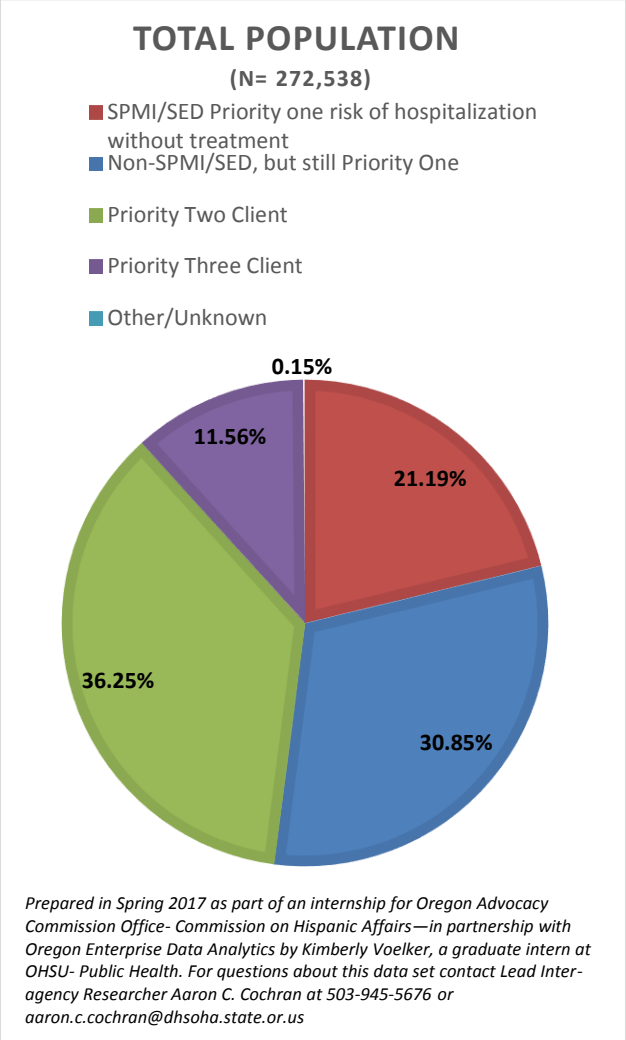


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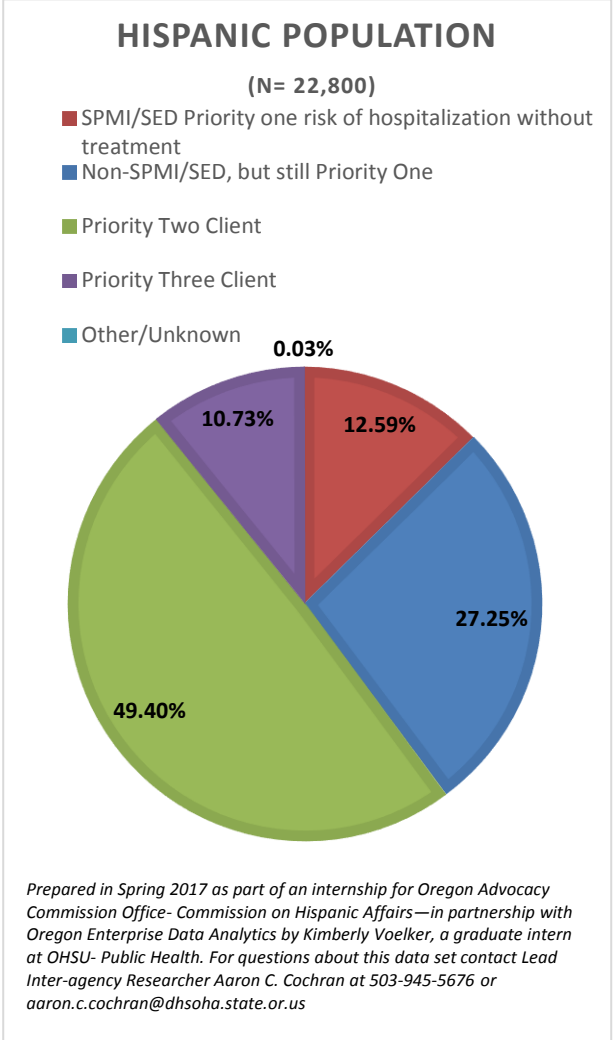
**Figure 22**

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Over half of Hispanic minors were priority two clients (56.12%), as opposed to just under half of all minors (47.37%). A smaller percentage of Hispanic minors compared to all minors were SPMI/SED priority one or Non-SPMI/SED priority one clients (5.31% vs. 8.14%, and 27.48% vs. 30.37%, respectively). There was also a smaller percentage of Hispanic minors who were priority three clients (11.07% vs. 14.09%).

**Figure 23**

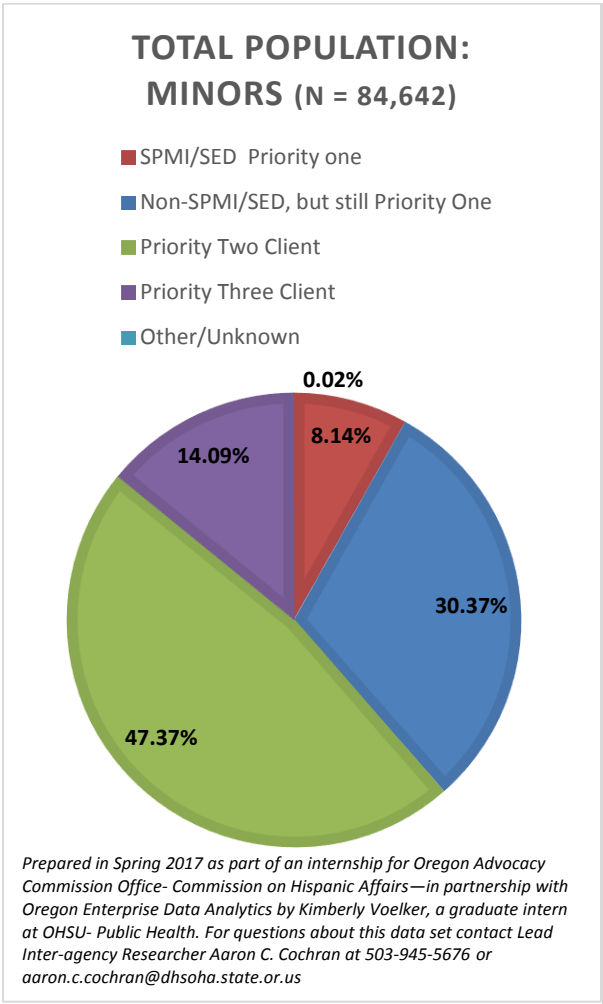


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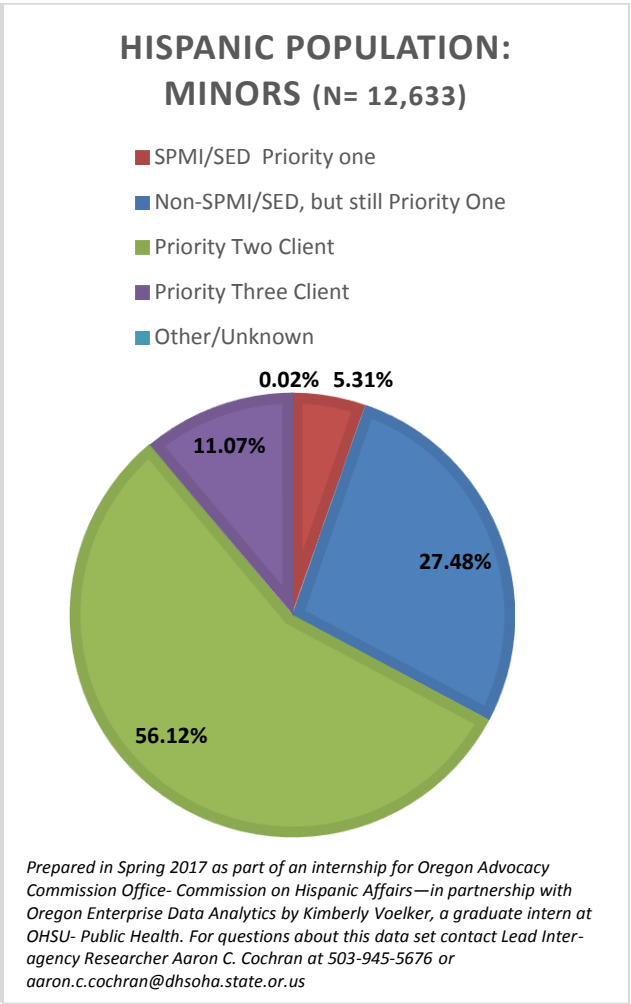
**Figure 24**

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A larger percentage of Hispanic adults than all adults were likely to be priority two clients, and about the same percentage of Hispanic adults and all adults were priority three clients. There was a smaller percentage of Hispanic adults than all adults who were SPMI/SED priority one or Non-SPMI/SED priority one clients (21.64% vs. 27.06% and 26.95% vs. 31.06%, respectively).

**Figure 25**

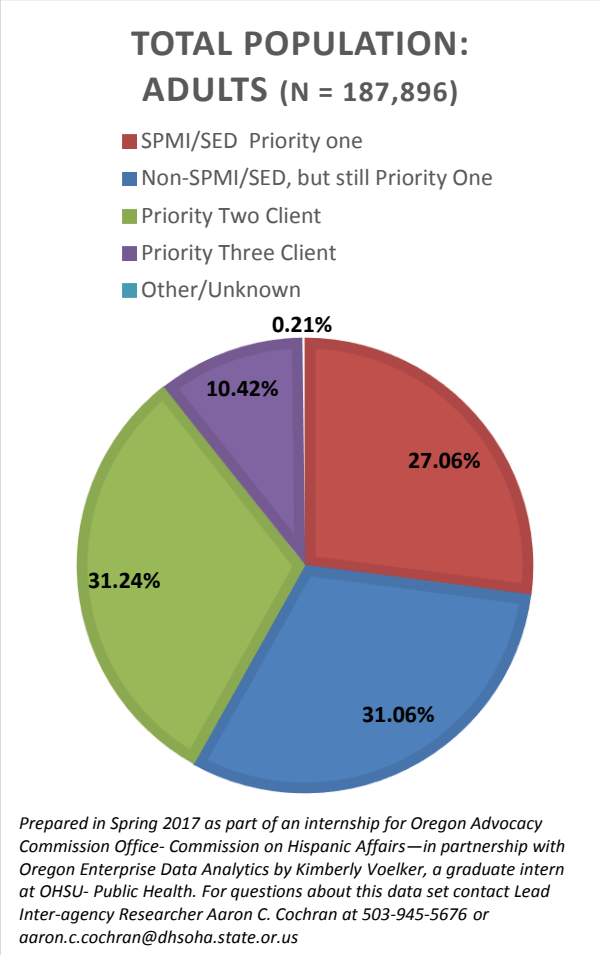


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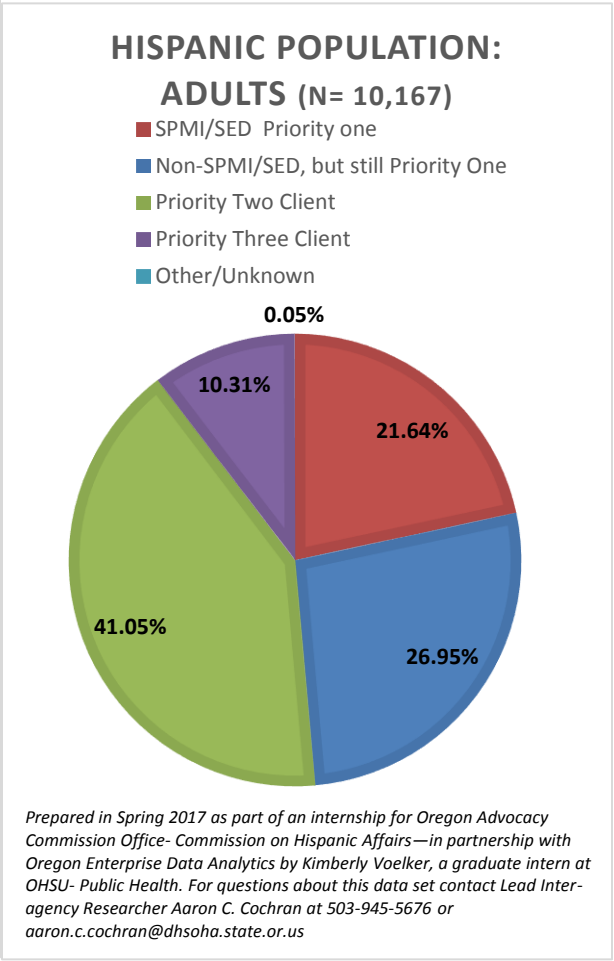
**Figure 26**

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*Marital Status*

A larger percentage of the Hispanic patient population than the total patient population was never married. Given that over half the Hispanic population is under the age of 18 years, this result is not surprising. The total population has a larger percentage of individuals who are married, widowed, divorced, separated, living as married, and whose marital status is unknown.

**Figure 27**

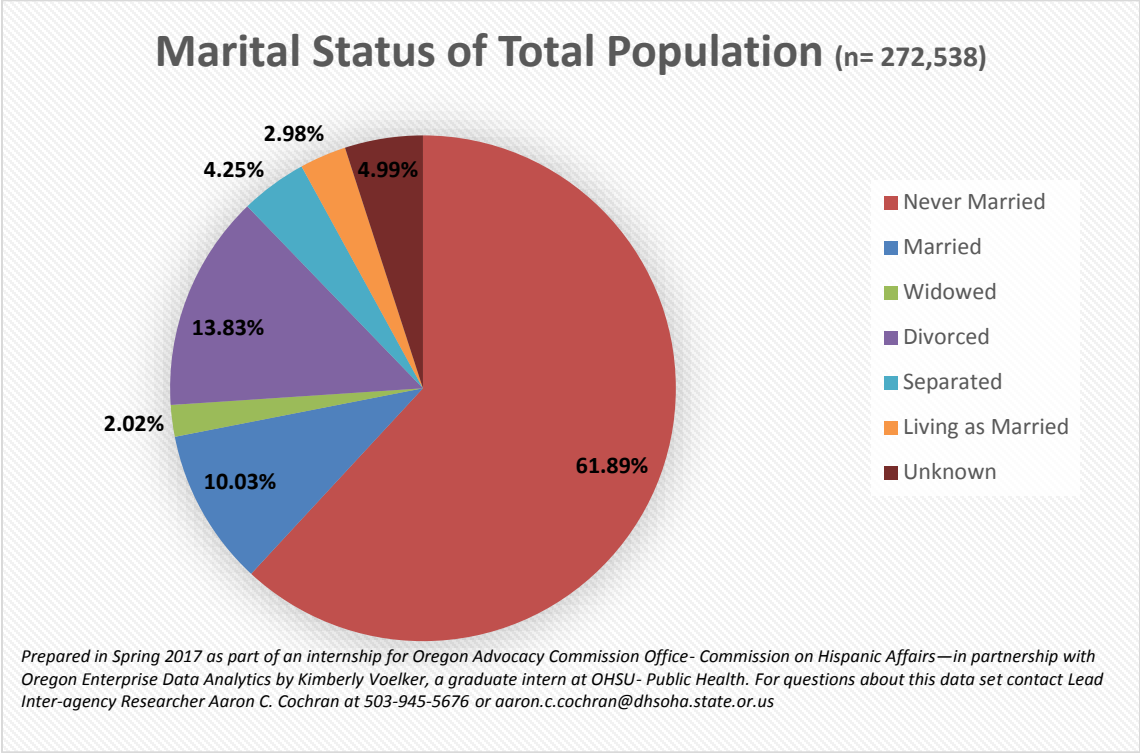


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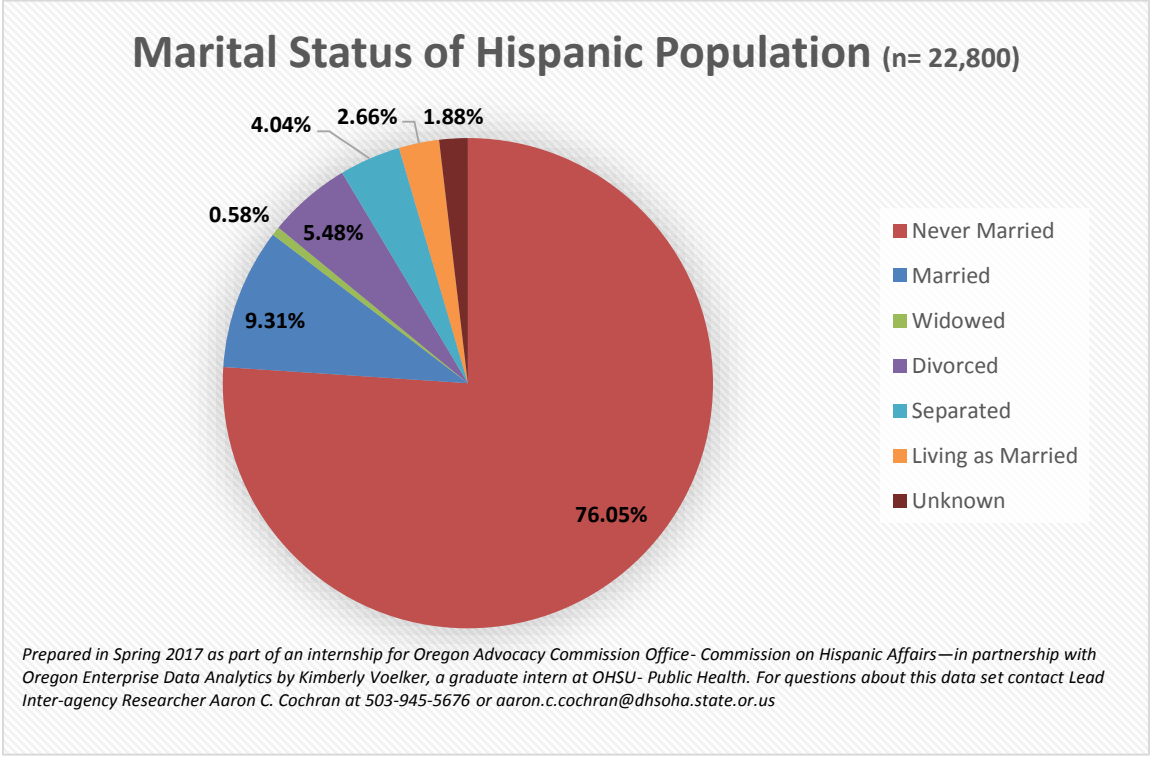
**Figure 28**

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*Living Arrangement*

A patient's living arrangement refers to the living arrangement of the patient at the time they were enrolled in the service. If there were multiple types of living arrangements that the patient could fit into, the first appropriate living arrangement in the code listing was the one recorded.

The living arrangement for Hispanic patients and all patients is shown below. Most patients lived in a private residence with parents, relatives, or adult children, followed by patients who lived alone in a private residence or with a spouse/significant other in a private residence.

**Figure 29**

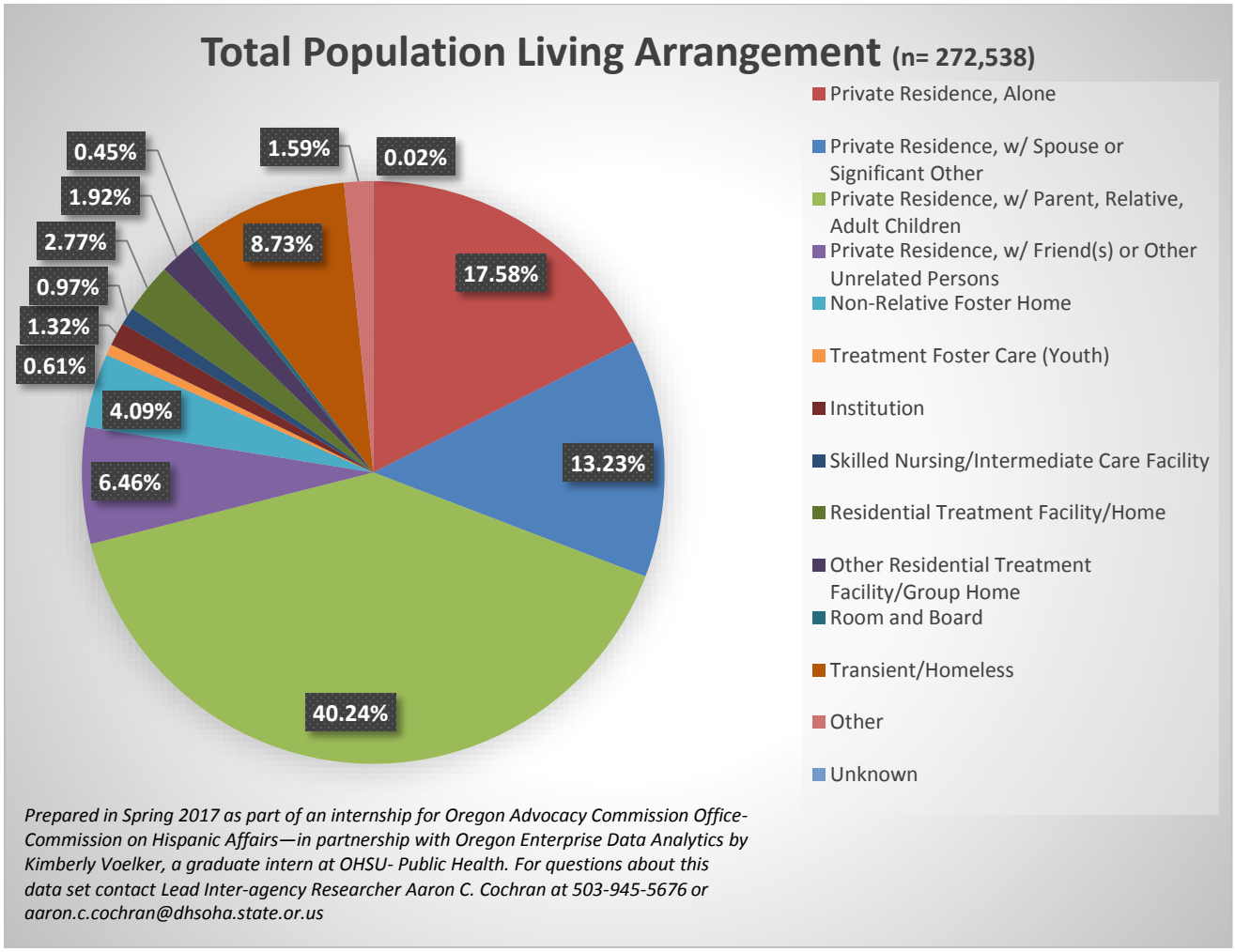
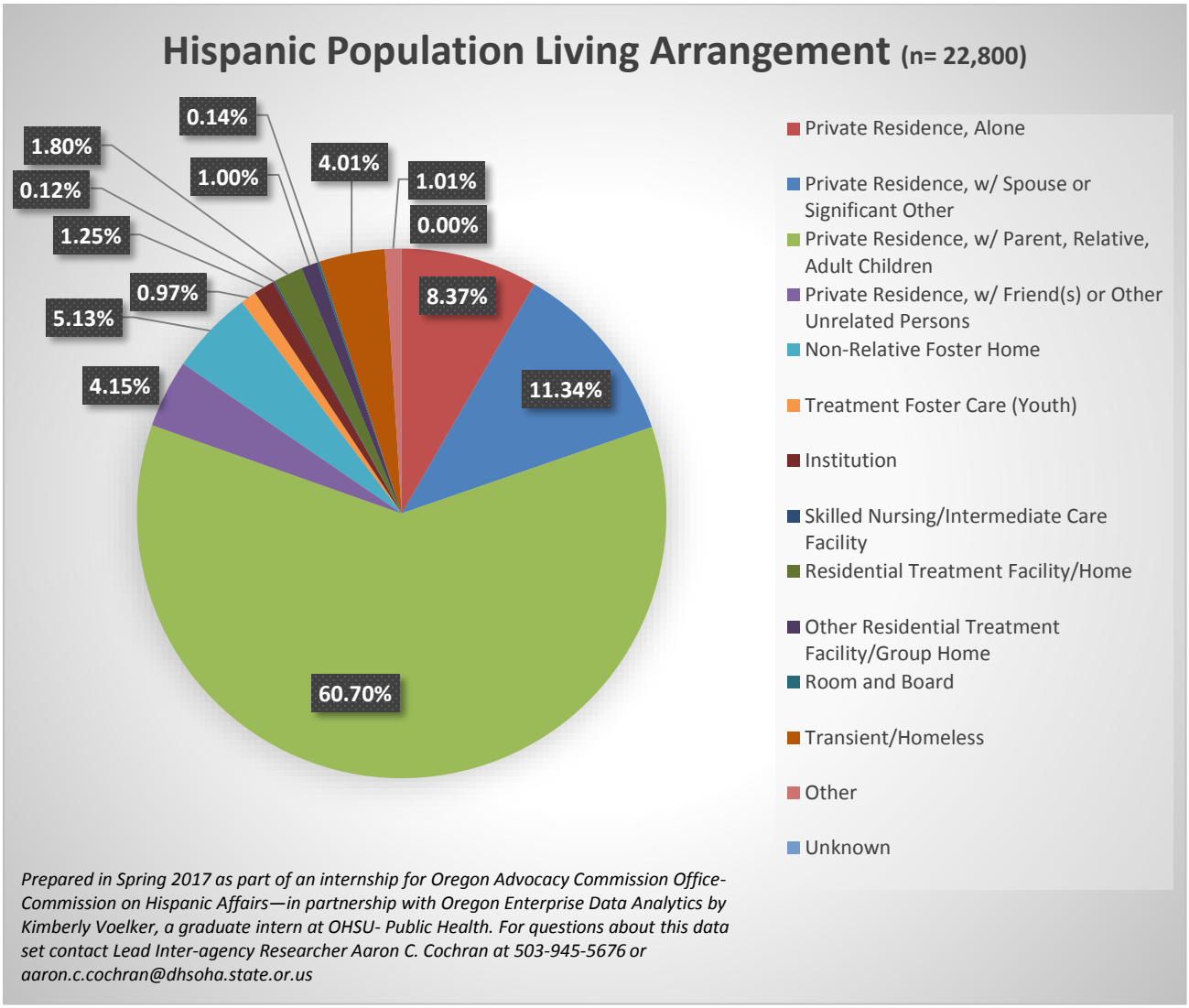


**Figure 30**




*Employment*

Employment refers to the patient's employment status at the time of service enrollment. There are five categories for employment:

1. Full-time: Individuals who were working for pay at the time of their enrollment and who normally work at least 35 hours per week or who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute (such as strikes), or similar reasons.

2. Part-time: Individuals who were working for pay at the time of their enrollment and who normally work at least 17 hours but no more than 34 hours, including individuals who were on strike.
3. Irregular: Individuals who were working for pay at the time of their employment and who normally worked fewer than 17 hours per week.
4. Not Employed (but sought employment): Individuals who were not working at the time of enrollment but who had sought work and were available within the preceding 30 days, or individuals who were available for work but were unemployed at the time of enrollment because they were on layoff, temporarily ill, or waiting to start a new job within 30 days.
5. Not Employed (and has not sought employment): This includes individuals who did not seek employment because they were retired, were not working while attending school, were unable to work because of a long-term illness, were discouraged from seeking work due to personal factors, and individuals who were voluntarily idle.

The majority of patients were not employed (and not seeking) at the time of service enrollment.

**Figure 31**

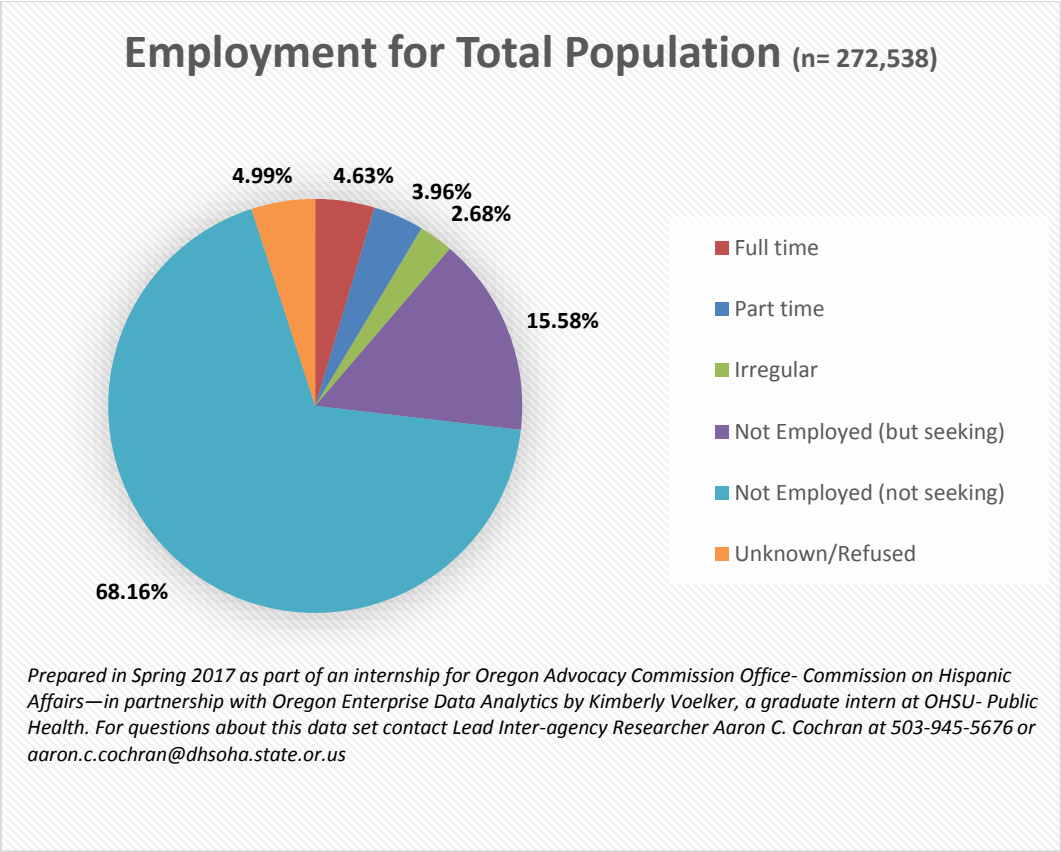
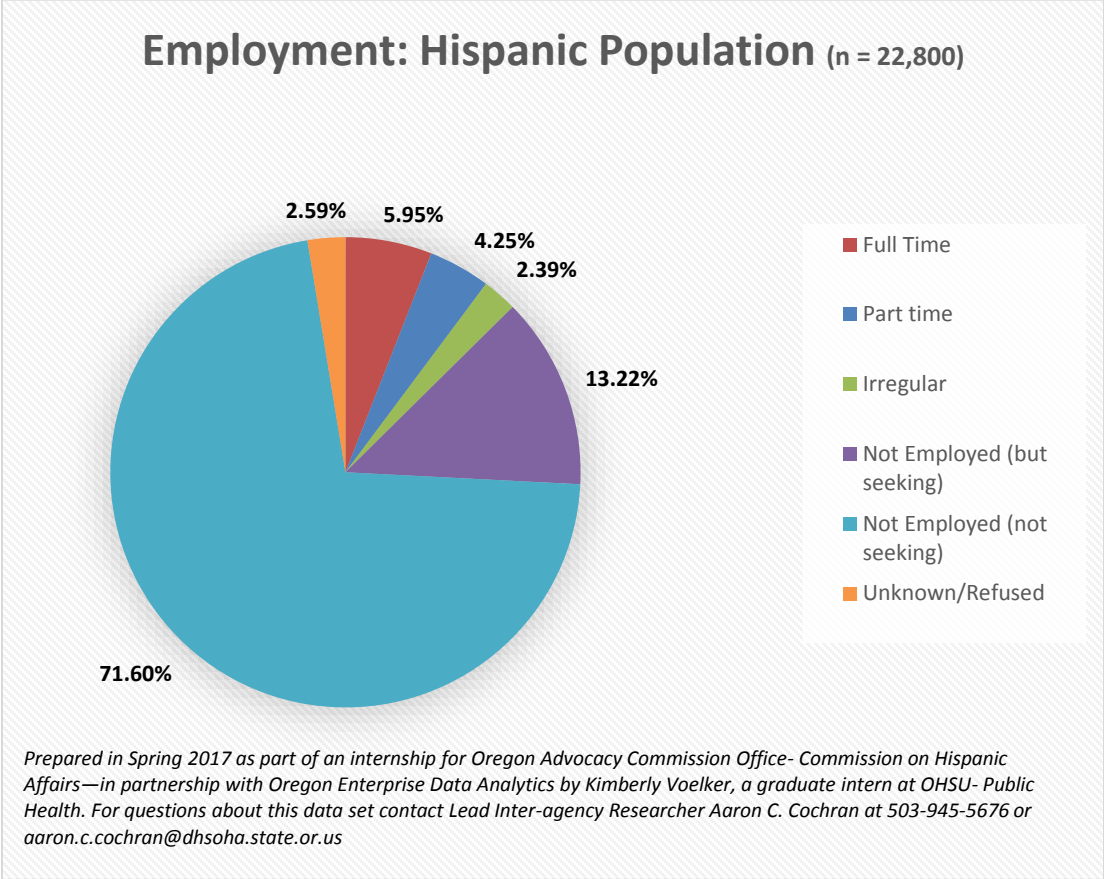


**Figure 32**

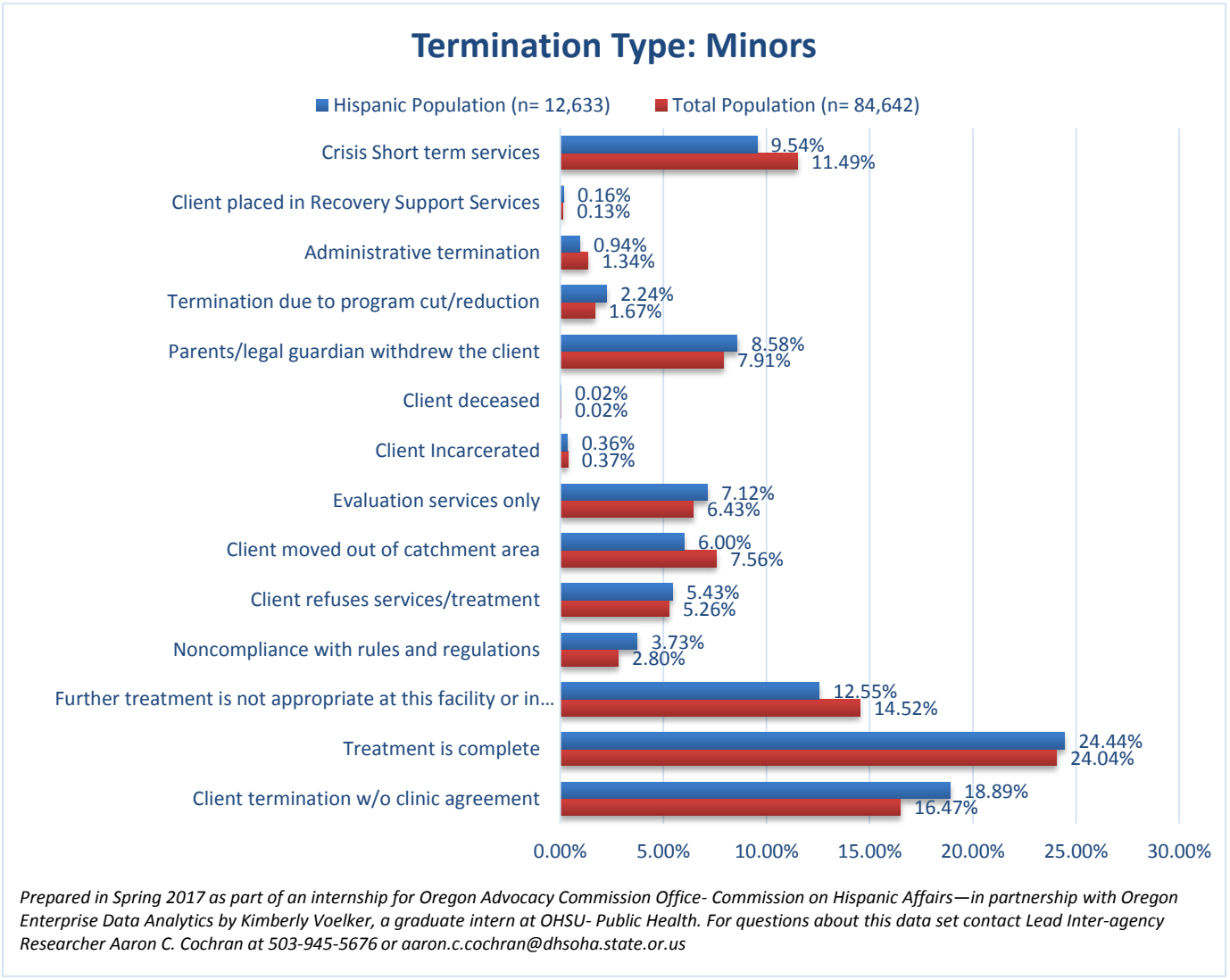



*Termination Type*

Hispanic minors were more likely than minors in the total population to terminate treatment without clinic agreement (18.89% vs. 16.74%), to have their parents or legal guardians withdraw them from treatment (8.58% vs. 7.91%), to have noncompliance with rules and regulations (3.73% vs. 2.80%), and to have their treatment terminated to due program cut or reduction (2.24% vs. 1.67%). Hispanic minors were less likely than minors in the total population to have treatment terminated due to crisis short term services (9.54% vs. 11.49%). About the same percentage of Hispanic minors and minors in the total population had terminated treatment due to the client being placed in recovery support services (0.16% vs. 0.13%), client dying (0.02% for both), client becoming incarcerated (0.36% vs. 0.37%), client

refusing services or treatment (5.43% vs. 5.26%), and because treatment was complete (24.44% vs. 24.04%).

**Figure 33**

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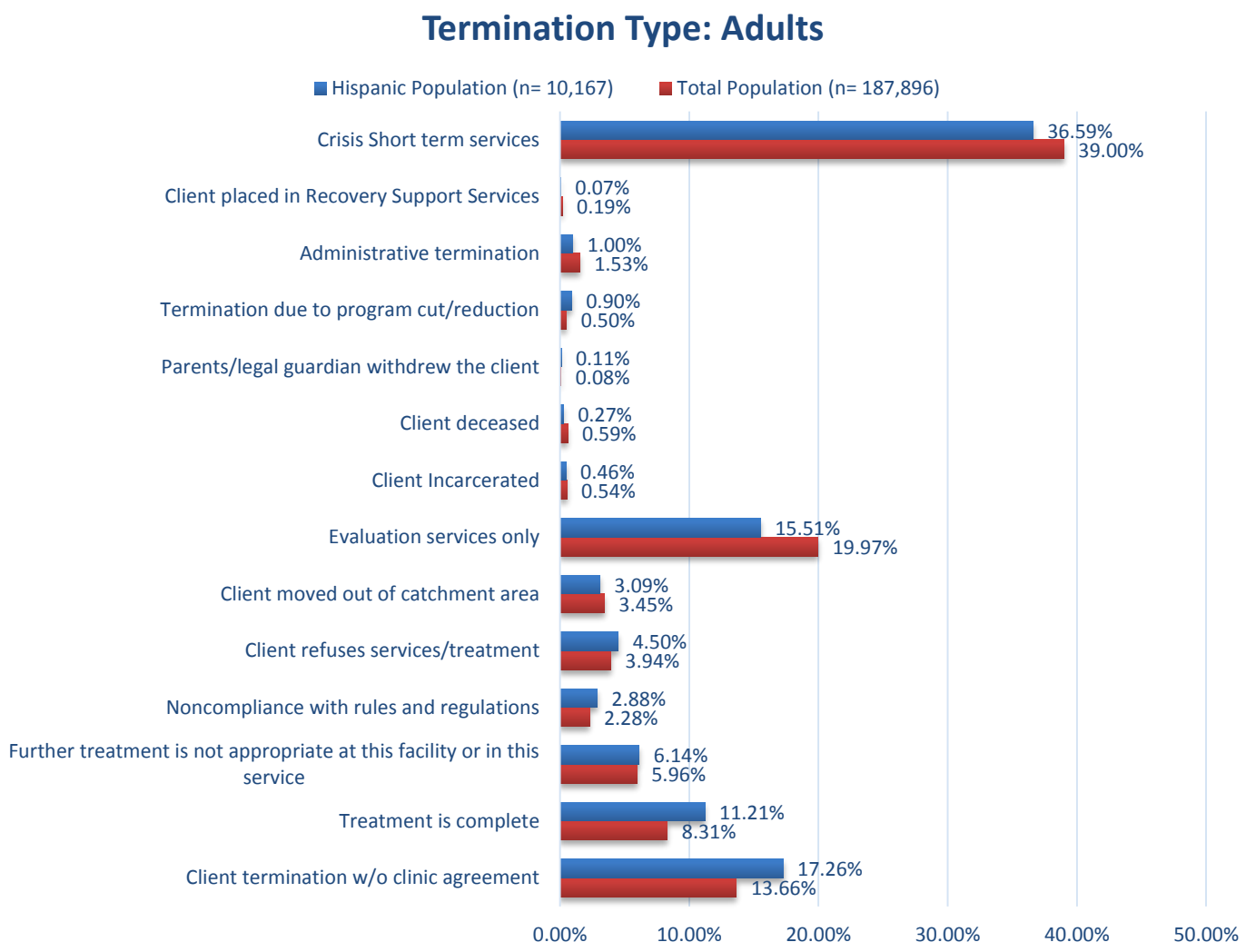
Hispanic adults were about as likely as all adults to terminate treatment for administrative termination (1.00% vs. 1.53%), for having parents or legal guardian withdrawing them (0.11% vs. 0.08%), for dying (0.27% vs. 0.59%), for becoming incarcerated (0.46% vs. 0.54%), for moving out of the catchment area (3.09% vs. 3.45%), for refusing services or treatment (4.50% vs. 3.94%), for noncompliance with rules and regulations (2.88% vs. 2.28%), and because further treatment was not appropriate for that facility or service (6.14% vs. 5.96%). Hispanic adults were less likely than all adults to have terminated treatment due to crisis short term services (35.59% vs. 39.00%), education services only (15.51% vs. 19.97%), and were more likely

to have treatment terminated due to treatment being complete (11.21% vs. 8.31%) and because of client termination without clinic agreement (17.26% vs. 13.66%).

**Figure 34**

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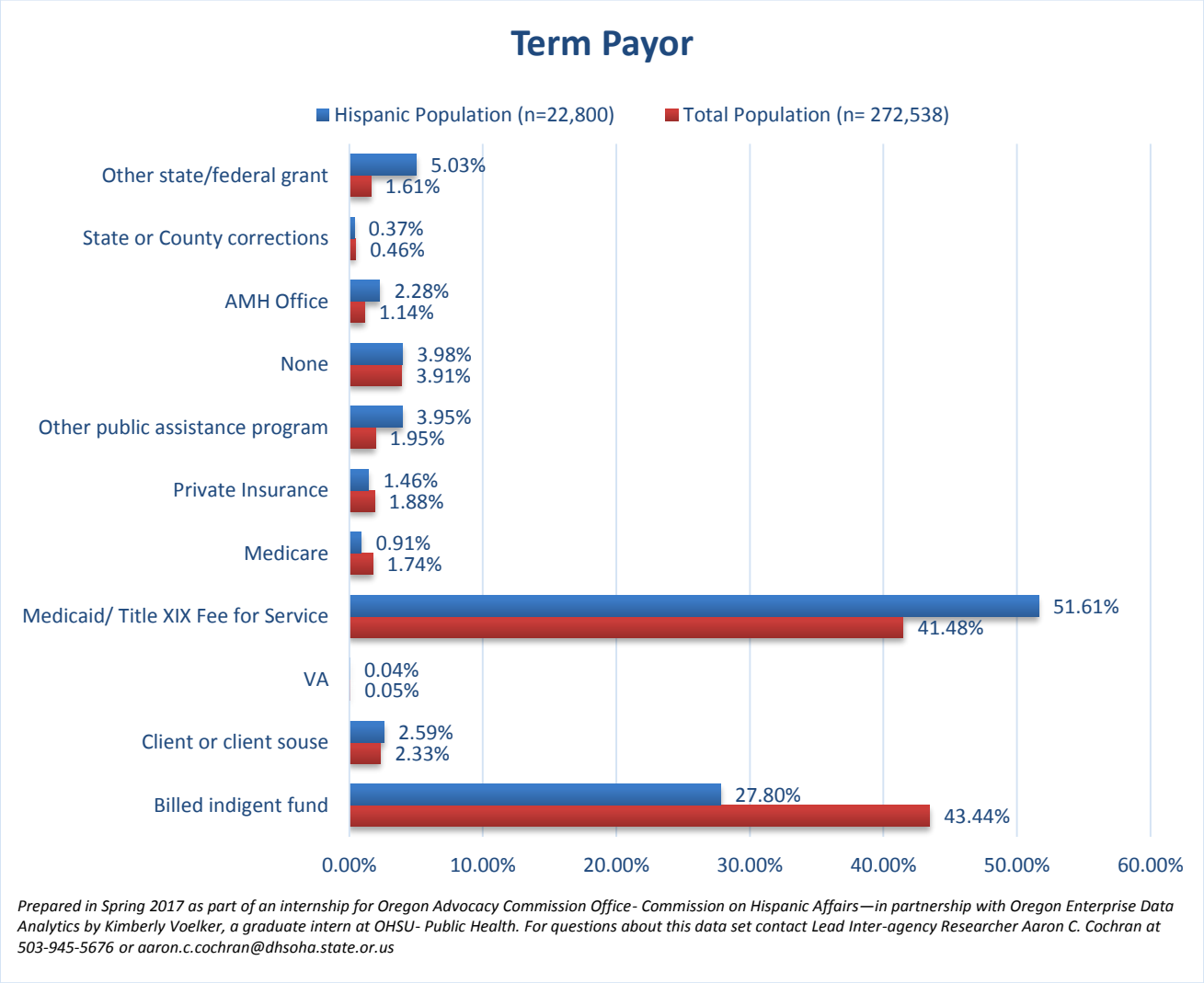
*Payor*

Payor refers to the primary source of payment for the services delivered to the patient. Patients in the total population were most likely to have the indigent fund billed, whereas Hispanic

patients were more likely to have Medicaid, Title XIX Fee for Service, AMH Office, state or federal grants, or other public assistance programs responsible for payment of services.

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**Conclusions**

The Hispanic population utilizing mental health services is distinctly different than the total population, with the Hispanic population being younger, more likely to be enrolled in school or training, and more concentrated in geography than the total population. Although Hispanic youth are likely to enter the mental health system similarly to the total population, with the majority of Hispanic minors reporting referral sources as family, friends, attorneys, schools, or support programs for children, adult Hispanics show different trends than the total population

for referral sources: almost half of the total adult population was referred to the mental health system by the police or sheriffs, whereas this only comprised about 5% of the Hispanic adult population's referral source. Hispanic adults were more likely than all adults to report themselves; a primary care provider, specialist, or other provider; community-based service providers; family, friends, and attorneys; acute or sub-acute psychiatric facilities; and other community agencies than all adults.

The Hispanic population is also more geographically concentrated than the total population. Close to two-thirds of Hispanic Oregonians receiving mental health care lives in Multnomah, Washington, Yamhill, Polk, or Marion County, with the percentage of Hispanics living in Yamhill, Polk, or Marion County about 11% greater than the percentage of the total population living in those three counties, and the percentage of Hispanics living Washington County more than doubling the percentage of the total population living in this county.

It is important to remember that although there may occasionally be small percentage changes between some of the variables analyzed, this difference may still be relevant due to the large sample size; therefore, one must not discount small differences between groups.

These results have important implications for identifying the needs of Hispanic patients receiving mental health care in Oregon. From this, we see that the average Hispanic patient is young and will be referred to mental health services from avenues that are distinctly different than patients in the total population. Therefore, what systems are in place to facilitate the needs of this young patient group, and how can we improve care for these children? Likewise, we see that a larger percentage of Hispanic patients (both minor and adult) terminate patient care without clinic approval: why is this, and what are mechanisms that we can use to improve retention? Although this project cannot answer the *why* behind the results, it illuminates trends that will allow future researchers and public officials to design projects to answer the questions brought up by this project. With this, we will be able to address the needs of the Oregonian Hispanic population.

# Appendix

**Table 1A: Referral Source for Total Population**

| *Program* | Total | Total % | Hispanic | Hispanic % |
|---|---|---|---|---|
| Alcohol Treatment Agency | 1 | 0.00% | 0 | 0.00% |
| Drug Treatment Agency | 2 | 0.00% | 0 | 0.00% |
| Mental Health Treatment Agency | 108 | 0.04% | 2 | 0.01% |
| Development and Disability Services | 911 | 0.33% | 39 | 0.17% |
| School | 9795 | 3.59% | 2024 | 8.88% |
| Other Community Agencies | 10958 | 4.02% | 1046 | 4.59% |
| Support Programs for Adults (TANF/Food Stamps) | 1962 | 0.72% | 149 | 0.65% |
| Support Programs for Children | 15472 | 5.68% | 2145 | 9.41% |
| Employee Department | 2 | 0.00% | 0 | 0.00% |
| Health Division | 44 | 0.02% | 2 | 0.01% |
| Vocational Rehabilitation | 332 | 0.12% | 19 | 0.08% |
| Mental Health Division | 212 | 0.08% | 9 | 0.04% |
| Dammash State Hospital | 64 | 0.02% | 1 | 0.00% |
| Eastern OR Psychiatric Center | 27 | 0.01% | 1 | 0.00% |
| Eastern OR Training Center | 2 | 0.00% | 0 | 0.00% |
| Oregon State Hospital | 53 | 0.02% | 3 | 0.01% |
| Other Hospital | 168 | 0.06% | 3 | 0.01% |
| Corrections Division | 31 | 0.01% | 0 | 0.00% |
| Court | 2121 | 0.78% | 167 | 0.73% |
| Jail- city or county | 2464 | 0.90% | 207 | 0.91% |
| Parole- county/state/federal (includes juveniles) | 2074 | 0.76% | 166 | 0.73% |
| Police or sheriff- local, state | 13140 | 4.82% | 632 | 2.77% |
| Psychiatric Security Review Board (PSRB) | 450 | 0.17% | 29 | 0.13% |
| Probation- county/state/federal (includes juveniles) | 3978 | 1.46% | 487 | 2.14% |
| Oregon State Correctional Institution (OSCI) | 1 | 0.00% | 1 | 0.00% |

| | | | | |
|---|---|---|---|---|
| Oregon State Penitentiary | 1 | 0.00% | 0 | 0.00% |
| Primary Care Provider, Specialist, or Other Physical Health Provider | 37592 | 13.79% | 3274 | 14.36% |
| Self | 59403 | 21.80% | 3804 | 16.68% |
| Family/Friend/Attorney | 38930 | 14.28% | 4065 | 17.83% |
| | | | | |
| Employer/Employee Assistance Programs (EAP) | 216 | 0.08% | 17 | 0.07% |
| Seniors and People with Disabilities | 1677 | 0.62% | 35 | 0.15% |
| Youth/Child Social Service Agencies, Centers, or Teams | 5117 | 1.88% | 598 | 2.62% |
| Self Help Groups (non-Alcohol or Drug) | 83 | 0.03% | 5 | 0.02% |
| Outpatient Hospital | 11 | 0.00% | 0 | 0.00% |
| Residential Care | 2 | 0.00% | 0 | 0.00% |
| Fully Capitated Health Plan (FCHP) | 939 | 0.34% | 85 | 0.37% |
| Mental Health Organization (MHO) | 2908 | 1.07% | 206 | 0.90% |
| Drug Outpatient | 1 | 0.00% | 0 | 0.00% |
| Drug Residential | 1 | 0.00% | 0 | 0.00% |
| Semi-Independent Living/Supported Housing Services | 1 | 0.00% | 0 | 0.00% |
| | | | | |
| M- ED Adult Foster Care/MHS Adult Foster Care | 6 | 0.00% | 0 | 0.00% |
| Residential Care Facility- Transferred | 11 | 0.00% | 1 | 0.00% |
| Residential Care Facility- M-ED/ Residential Care Facility- MHS | 29 | 0.01% | 0 | 0.00% |
| Children & Adolescent Mental Health Services/ Juvenile Department (Non-court) | 9 | 0.00% | 0 | 0.00% |
| Community Treatment Services- Adult | 1 | 0.00% | 0 | 0.00% |
| Community Support Services | 3 | 0.00% | 0 | 0.00% |
| Pre-Commitment Services | 2 | 0.00% | 0 | 0.00% |
| Juvenille Department (Non-Court) | 2 | 0.00% | 0 | 0.00% |
| Jobs Program- Adult Family Services | 108 | 0.04% | 2 | 0.01% |
| State Correctional Institution | 144 | 0.05% | 9 | 0.04% |
| Federal Correctional Institution | 7 | 0.00% | 1 | 0.00% |
| Integrated Treatment Court (Drug Court or Mental Health Court) | 282 | 0.10% | 19 | 0.08% |
| OHP | 7 | 0.00% | 0 | 0.00% |
| Oregon Partnership Helpline | 8 | 0.00% | 0 | 0.00% |
| Multnomah County Special Care Facility | 1 | 0.00% | 0 | 0.00% |
| Community-based Service Providers (Mental Health and/or Addiction Services | 30664 | 11.25% | 2011 | 8.82% |

| | | | | |
|---|---|---|---|---|
| Other Mental Health/Addiction Services Providers (Independent or Private Practice, e.g. Psychologist/Psychiatrist) | 2662 | 0.98% | 125 | 0.55% |
| Acute or Sub-Acute Psychiatric Facility | 14777 | 5.42% | 721 | 3.16% |
| State Psychiatric Facility | 1049 | 0.38% | 40 | 0.18% |
| Other | 4625 | 1.70% | 272 | 1.19% |
| Unknown | 6887 | 2.53% | 378 | 1.66% |

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**Table 2A: Referral Source for Minors**

| Program | Total Population | Total Population % | Hispanic Population | Hispanic Population % |
|---|---|---|---|---|
| Alcohol Treatment Agency | 0 | 0.00% | 0 | 0.00% |
| Drug Treatment Agency | 0 | 0.00% | 0 | 0.00% |
| Mental Health Treatment Agency | 0 | 0.00% | 0 | 0.00% |
| Development and Disability Services | 145 | 0.17% | 11 | 0.09% |
| School | 9256 | 10.94% | 1936 | 15.32% |
| Other Community Agencies | 3138 | 3.71% | 550 | 4.35% |
| Support Programs for Adults (TANF/ Food Stamps) | 235 | 0.28% | 33 | 0.26% |
| Support Programs for Children | 13019 | 15.38% | 1932 | 15.29% |
| Employee Department | 0 | 0.00% | 0 | 0.00% |
| Health Division | 0 | 0.00% | 0 | 0.00% |
| Vocational Rehabilitation | 56 | 0.07% | 10 | 0.08% |
| Mental Health Division | 5 | 0.01% | 0 | 0.00% |
| Dammash State Hospital | 0 | 0.00% | 0 | 0.00% |
| Eastern OR Psychiatric Center | 0 | 0.00% | 0 | 0.00% |
| Eastern OR Training Center | 1 | 0.00% | 0 | 0.00% |
| Oregon State Hospital | 1 | 0.00% | 0 | 0.00% |

| | | | | |
|---|---|---|---|---|
| Other Hospital | 8 | 0.01% | 1 | 0.01% |
| Corrections Division | 7 | 0.01% | 0 | 0.00% |
| Court | 459 | 0.54% | 77 | 0.61% |
| Jaily- city or county | 374 | 0.44% | 56 | 0.44% |
| Parole- county/ state/federal | 674 | 0.80% | 101 | 0.80% |
| Police or sheriff- local, state | 890 | 1.05% | 127 | 1.01% |
| Psyschiatric Security Review Board (PSRB) | 6 | 0.01% | 1 | 0.01% |
| Probation- county/state/federal | 1880 | 2.22% | 372 | 2.94% |
| Oregon State Correctional Institution (OSCI) | 0 | 0.00% | 0 | 0.00% |
| Oregon State Penitentiary | 0 | 0.00% | 0 | 0.00% |
| Primary Care Provider, Specialist, or Other Provider | 6904 | 8.16% | 1291 | 10.22% |
| Self | 6145 | 7.26% | 1056 | 8.36% |
| Family/Friend/Attorney | 21479 | 25.38% | 2863 | 22.66% |
| Employer/Employee Assistance Programs (EAP) | 13 | 0.02% | 2 | 0.02% |
| Seniors and People with Disabilities | 46 | 0.05% | 6 | 0.05% |
| Youth/Child Social Service Agencies, Centers, or Teams | 4485 | 5.30% | 533 | 4.22% |
| Self Help Groups (non-Alcohol or Drug) | 8 | 0.01% | 1 | 0.01% |
| Outpatient Hospital | 1 | 0.00% | 0 | 0.00% |
| Residential Care | 1 | 0.00% | 0 | 0.00% |
| Fully Capitated Health Plan (FCHP) | 338 | 0.40% | 54 | 0.43% |
| Mental Health Organization (MHO) | 1665 | 1.97% | 141 | 1.12% |
| Drug Outpatient | 1 | 0.00% | 0 | 0.00% |
| Drug Residential | 1 | 0.00% | 0 | 0.00% |
| Semi-Independent Living/Supported Housing Services | 0 | 0.00% | 0 | 0.00% |
| M-ED Adult Foster Care/MHS Adult Foster Care | 0 | 0.00% | 0 | 0.00% |
| Residential Care Facility-Transferred | 0 | 0.00% | 0 | 0.00% |

| | | | | |
|---|---|---|---|---|
| Residential Care Facility-M ED/Residential Care Facility MHS | 5 | 0.01% | 0 | 0.00% |
| Children & Adolescent Mental Health Services/Juvenile Department (Non-Court) | 3 | 0.00% | 0 | 0.00% |
| Community Treatment Services- Adult | 0 | 0.00% | 0 | 0.00% |
| Community Support Services | 0 | 0.00% | 0 | 0.00% |
| Pre-Commitment Services | 0 | 0.00% | 0 | 0.00% |
| Juvenile Department (Non-Court) | 2 | 0.00% | 0 | 0.00% |
| Jobs Program- Adult Family Services | 0 | 0.00% | 0 | 0.00% |
| State Correctional Institution | 34 | 0.04% | 3 | 0.02% |
| Federal Correctional Institution | 0 | 0.00% | 0 | 0.00% |
| Integrated Treatment Court (Drug Court or Mental Health Court) | 13 | 0.02% | 3 | 0.02% |
| OHP | 0 | 0.00% | 0 | 0.00% |
| Oregon Partnership Helpline | 0 | 0.00% | 0 | 0.00% |
| Multnomah County Special Care Facility | 0 | 0.00% | 0 | 0.00% |
| Community-based Service Providers (Mental Health and/or Addiction Services) | 7423 | 8.77% | 964 | 7.63% |
| Other Mental Health/Addiction Services Providers (Independent Private Practice, e.g. Psychologist/ Psychiatrist) | 546 | 0.65% | 35 | 0.28% |
| Acute or Sub-Acute Psychiatric Facility | 1405 | 1.66% | 119 | 0.94% |
| State Psychiatric Facility | 33 | 0.04% | 2 | 0.02% |
| Other | 836 | 0.99% | 116 | 0.92% |
| Unknown | 3101 | 3.66% | 238 | 1.88% |

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**Table 3a: Referral Source for Adults**

| Program | Total Population | Total Population % | Hispanic Population | Hispanic Population% |
|---|---|---|---|---|
| Alcohol Treatment Agency | 1 | 0.00% | 0 | 0.00% |
| Drug Treatment Agency | 2 | 0.00% | 0 | 0.00% |
| Mental Health Treatment Agency | 108 | 0.04% | 2 | 0.02% |
| Development and Disability Services | 766 | 0.26% | 28 | 0.28% |
| School | 539 | 0.18% | 88 | 0.87% |
| Other Community Agencies | 7820 | 2.62% | 496 | 4.88% |
| Support Programs for Adults (TANF/ Food Stamps) | 1727 | 0.58% | 116 | 1.14% |
| Support Programs for Children | 2453 | 0.82% | 213 | 2.10% |
| Employee Department | 2 | 0.00% | 0 | 0.00% |
| Health Division | 44 | 0.01% | 2 | 0.02% |
| Vocational Rehabilitation | 276 | 0.09% | 9 | 0.09% |
| Mental Health Division | 207 | 0.07% | 9 | 0.09% |
| Dammash State Hospital | 64 | 0.02% | 1 | 0.01% |
| Eastern OR Psychiatric Center | 27 | 0.01% | 1 | 0.01% |
| Eastern OR Training Center | 1 | 0.00% | 0 | 0.00% |
| Oregon State Hospital | 52 | 0.02% | 3 | 0.03% |
| Other Hospital | 160 | 0.05% | 2 | 0.02% |
| Corrections Division | 24 | 0.01% | 0 | 0.00% |
| Court | 1662 | 0.56% | 90 | 0.89% |
| Jaily- city or county | 2090 | 0.70% | 151 | 1.49% |
| Parole- county/ state/federal | 1400 | 0.47% | 66 | 0.65% |
| Police or sheriff- local, state | 122500 | 41.09% | 505 | 4.97% |
| Psyschiatric Security Review Board (PSRB) | 444 | 0.15% | 28 | 0.28% |
| Probation- county/state/federal | 2098 | 0.70% | 115 | 1.13% |
| Oregon State Correctional Institution (OSCI) | 1 | 0.00% | 1 | 0.01% |

| | | | | |
|---|---|---|---|---|
| Oregon State Penitentiary | 1 | 0.00% | 0 | 0.00% |
| Primary Care Provider, Specialist, or Other Provider | 30688 | 10.29% | 1983 | 19.50% |
| Self | 53258 | 17.86% | 2748 | 27.03% |
| Family/Friend/Attorney | 17451 | 5.85% | 1202 | 11.82% |
| Employer/Employee Assistance Programs (EAP) | 203 | 0.07% | 15 | 0.15% |
| Seniors and People with Disabilities | 1631 | 0.55% | 29 | 0.29% |
| Youth/Child Social Service Agencies, Centers, or Teams | 632 | 0.21% | 65 | 0.64% |
| Self Help Groups (non-Alcohol or Drug) | 75 | 0.03% | 4 | 0.04% |
| Outpatient Hospital | 10 | 0.00% | 0 | 0.00% |
| Residential Care | 1 | 0.00% | 0 | 0.00% |
| Fully Capitated Health Plan (FCHP) | 601 | 0.20% | 31 | 0.30% |
| Mental Health Organization (MHO) | 1243 | 0.42% | 65 | 0.64% |
| Drug Outpatient | 0 | 0.00% | 0 | 0.00% |
| Drug Residential | 0 | 0.00% | 0 | 0.00% |
| Semi-Independent Living/Supported Housing Services | 1 | 0.00% | 0 | 0.00% |
| M-ED Adult Foster Care/MHS Adult Foster Care | 6 | 0.00% | 0 | 0.00% |
| Residential Care Facility- Transferred | 11 | 0.00% | 1 | 0.01% |
| Residential Care Facility- M ED/Residential Care Facility MHS | 24 | 0.01% | 0 | 0.00% |
| Children & Adolescent Mental Health Services/Juvenile Department (Non-Court) | 6 | 0.00% | 0 | 0.00% |
| Community Treatment Services- Adult | 1 | 0.00% | 0 | 0.00% |
| Community Support Services | 3 | 0.00% | 0 | 0.00% |

| | | | | |
|---|---|---|---|---|
| Pre-Commitment Services | 2 | 0.00% | 0 | 0.00% |
| Juvenile Department (Non-Court) | 0 | 0.00% | 0 | 0.00% |
| Jobs Program- Adult Family Services | 108 | 0.04% | 2 | 0.02% |
| State Correctional Institution | 110 | 0.04% | 6 | 0.06% |
| Federal Correctional Institution | 7 | 0.00% | 1 | 0.01% |
| Integrated Treatment Court (Drug Court or Mental Health Court) | 269 | 0.09% | 16 | 0.16% |
| OHP | 7 | 0.00% | 0 | 0.00% |
| Oregon Partnership Helpline | 8 | 0.00% | 0 | 0.00% |
| Multnomah County Special Care Facility | 1 | 0.00% | 0 | 0.00% |
| Community-based Service Providers (Mental Health and/or Addiction Services) | 23241 | 7.80% | 1047 | 10.30% |
| Other Mental Health/Addiction Services Providers (Independent Private Practice, e.g. Psychologist/ Psychiatrist) | 2116 | 0.71% | 90 | 0.89% |
| Acute or Sub-Acute Psychiatric Facility | 13372 | 4.49% | 602 | 5.92% |
| State Psychiatric Facility | 1016 | 0.34% | 38 | 0.37% |
| Other | 3789 | 1.27% | 156 | 1.53% |
| Unknown | 3786 | 1.27% | 140 | 1.38% |

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**Figure 1A: Service Elements for all Patients**

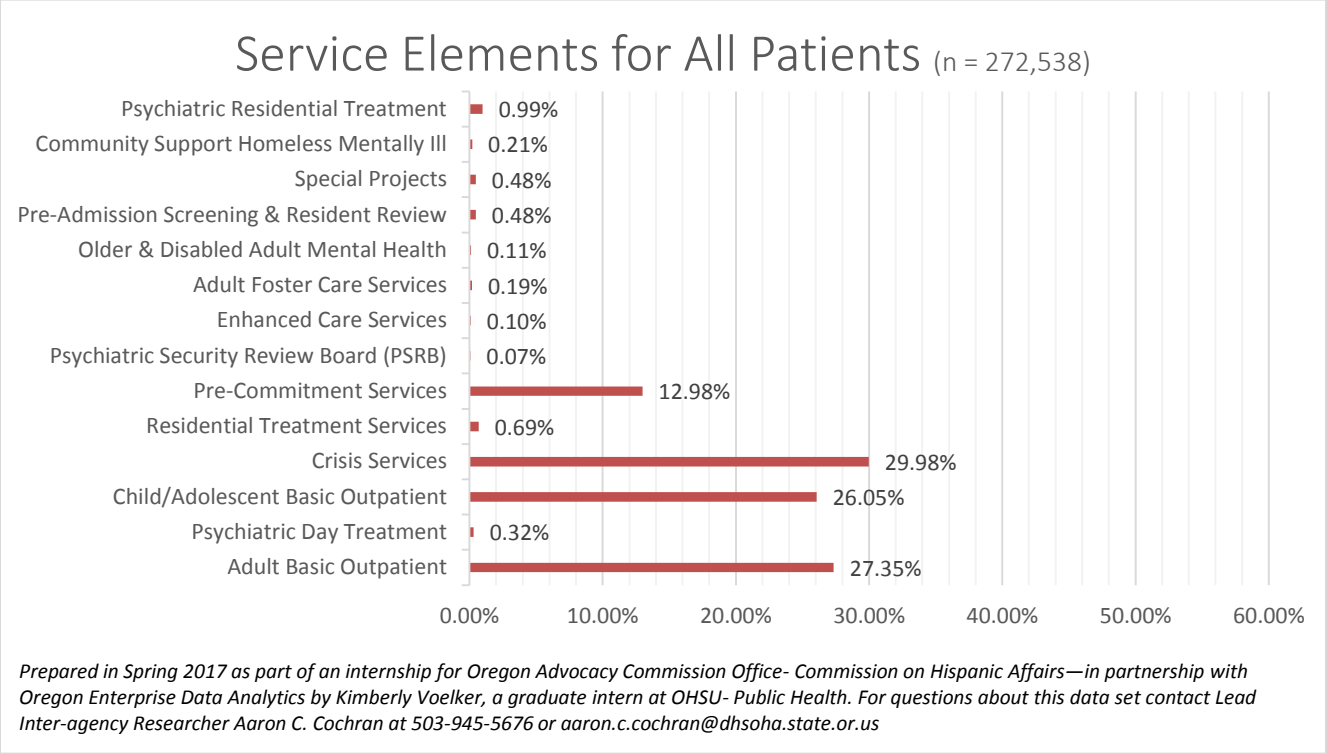


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**Figure 2A: Service Elements for White Patients**

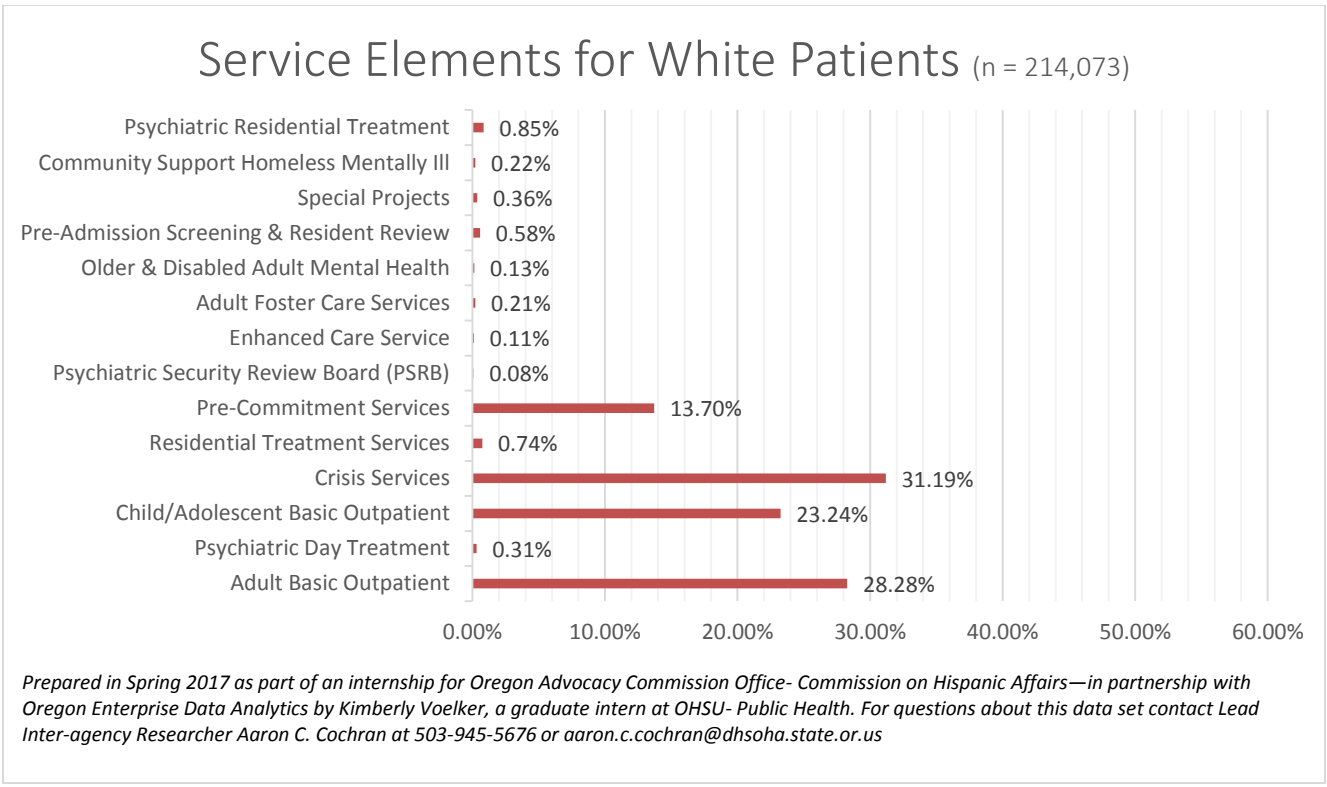


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**Figure 3A: Service Elements for Asian American Patients**

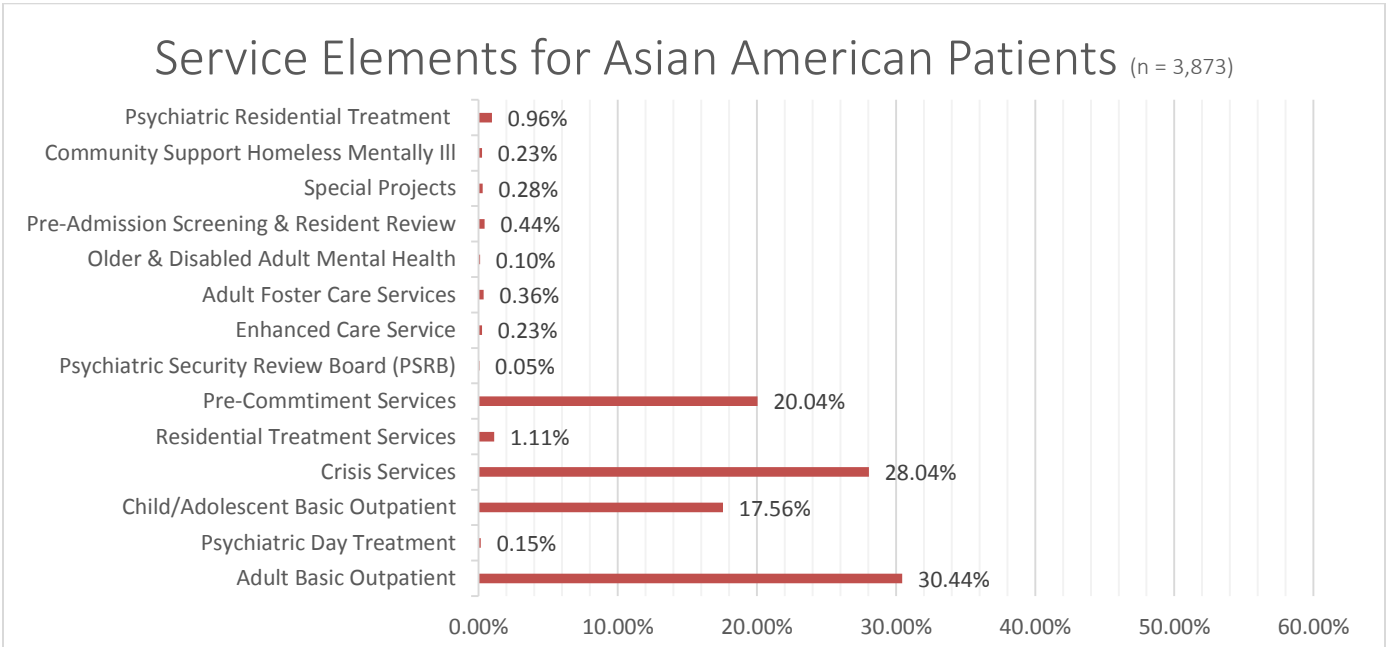


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**Figure 4A: Service Elements for African-American Patients**

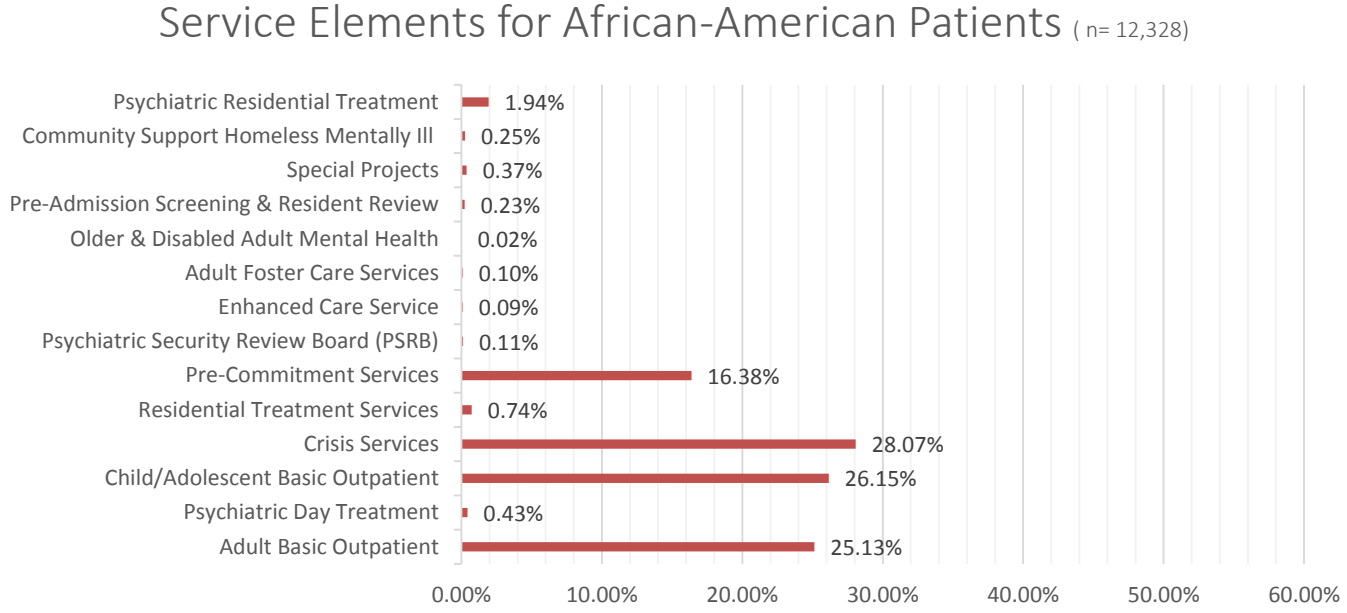


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**Figure 5A: Service Elements for Hispanic Patients**

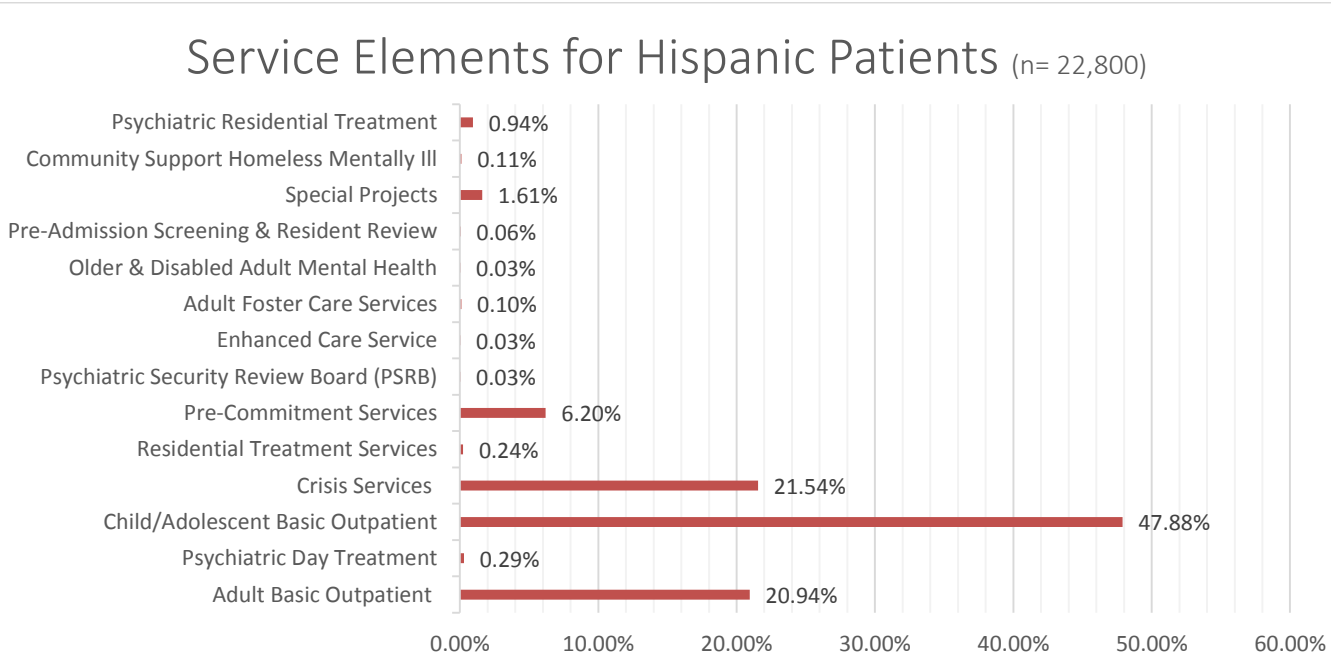


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**Figure 6A: Service Elements for Native American Patients**

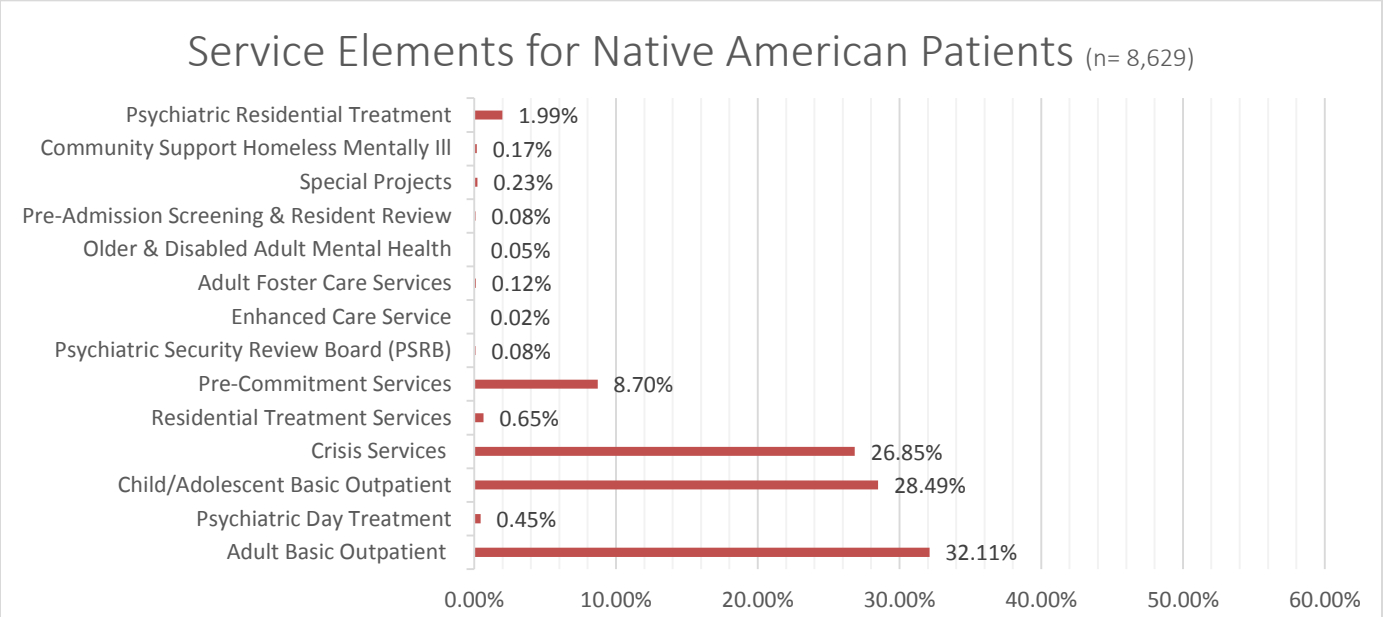


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**Figure 7A: Service Elements for Pacific Islander Patients**

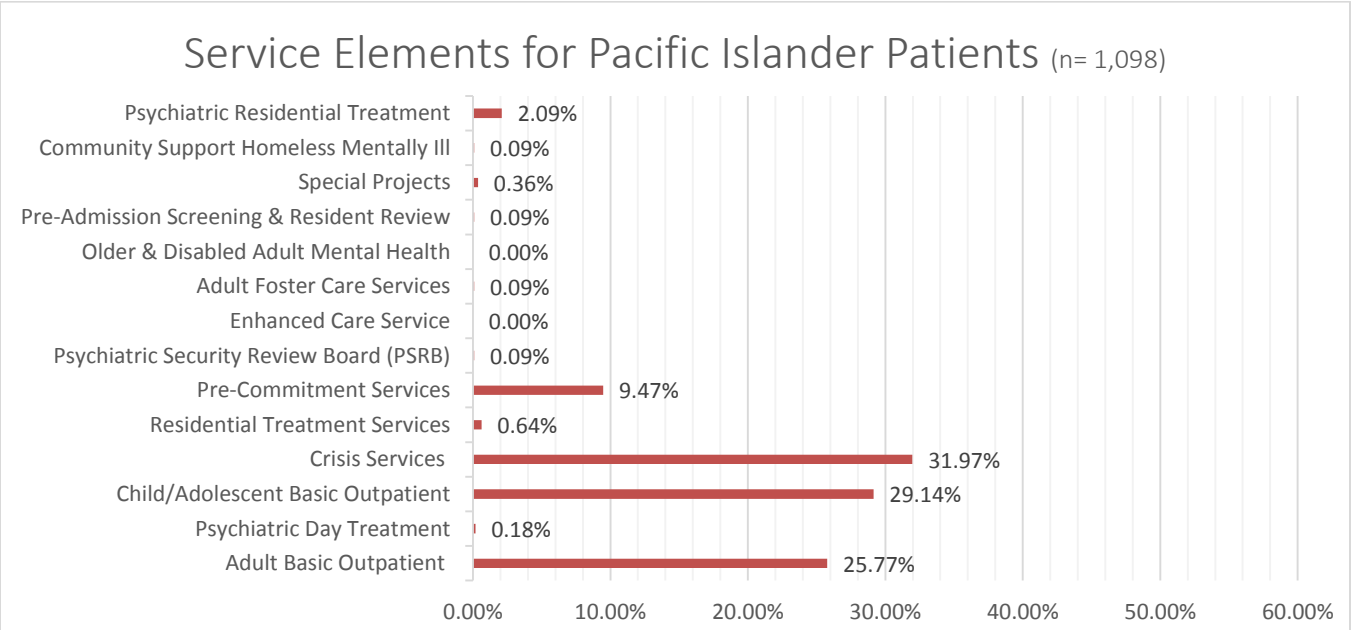


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**Figure 8A: Comparison of Service Elements between Hispanic Patients and Total Population**

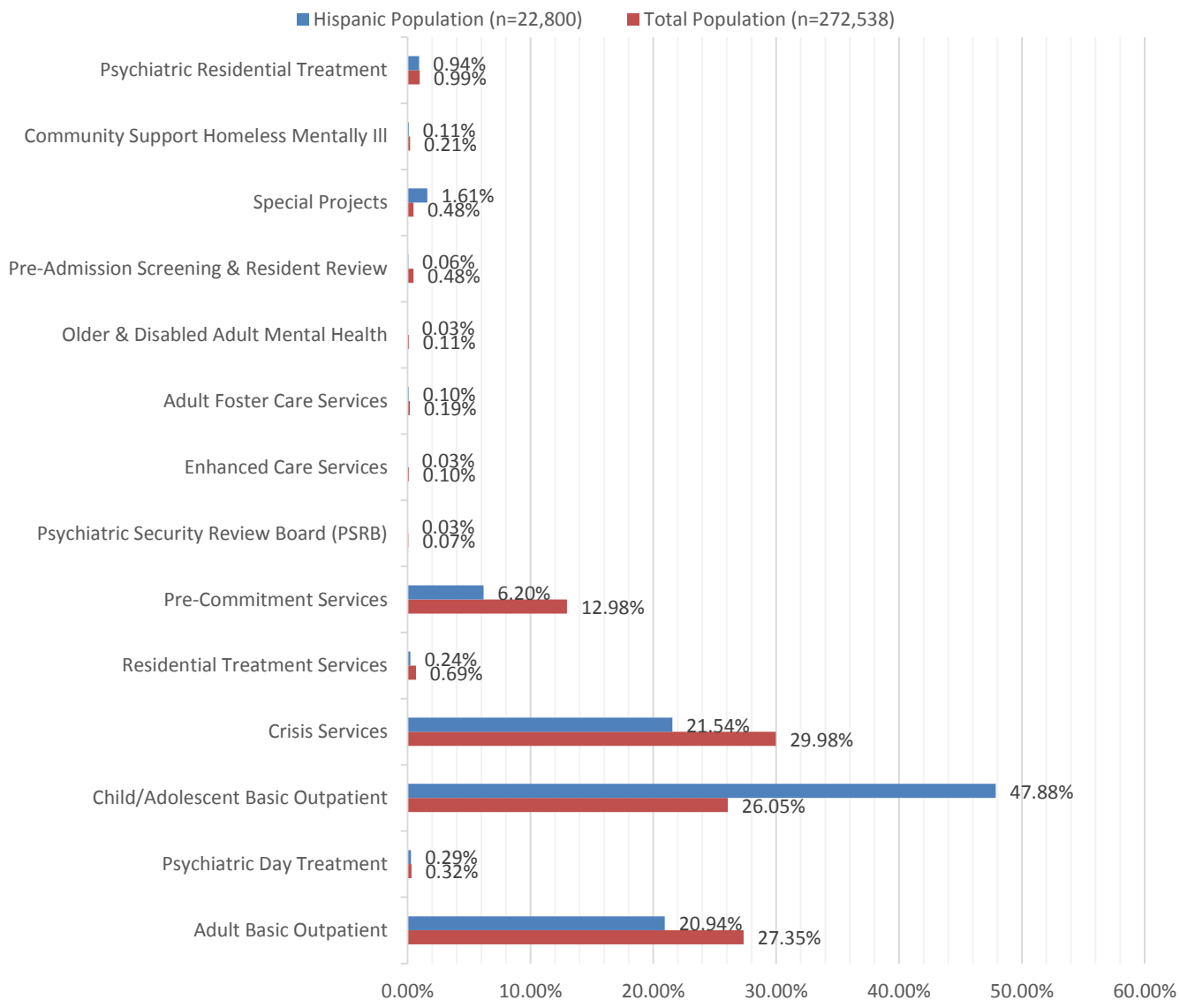


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**Figure 9A**

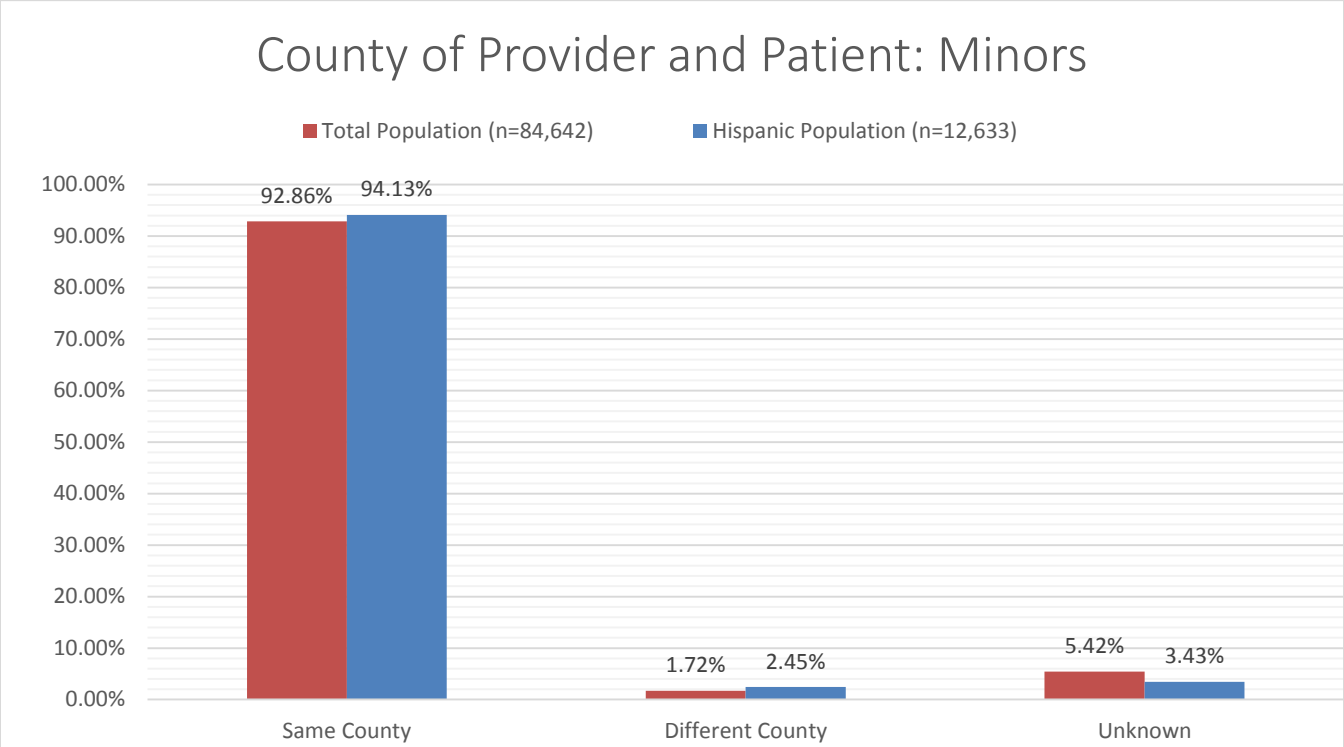


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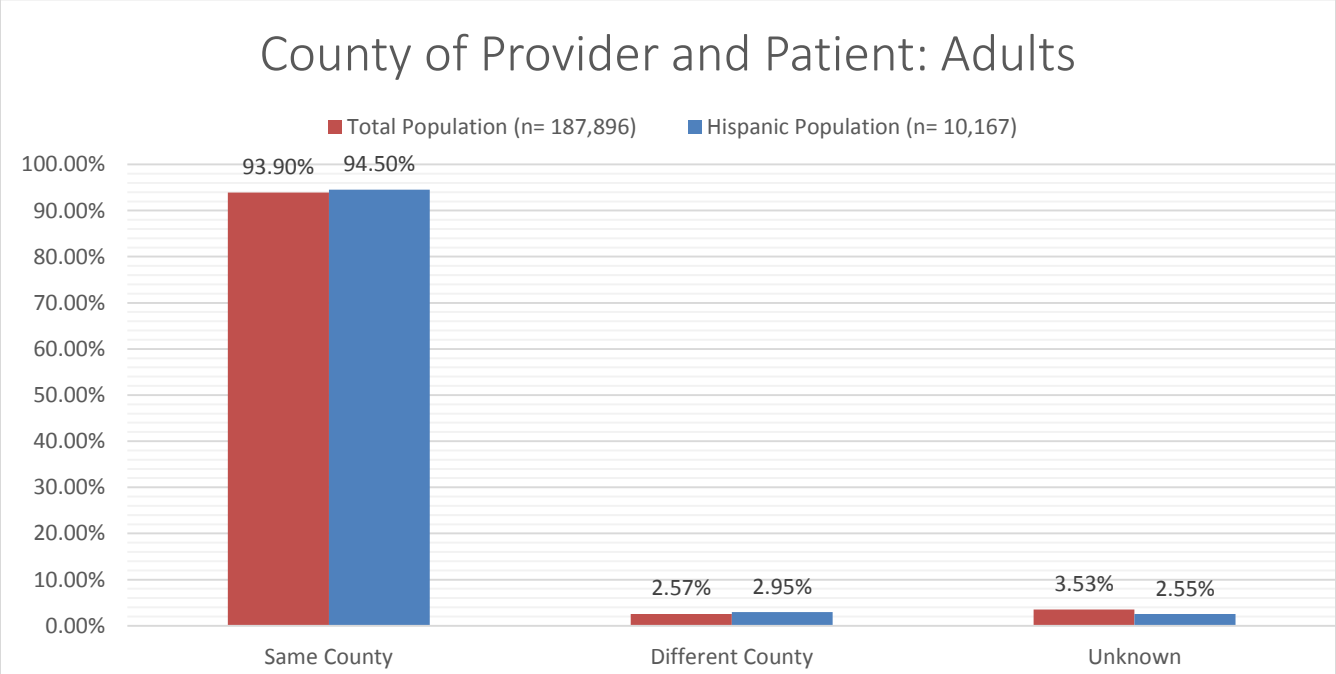
**Figure 10A**

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