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## ASSESSING HOSPITALIZATIONS DUE TO ASSAULTS AT DELL SETON MEDICAL CENTER (2015-2018)

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ASSESSING HOSPITALIZATIONS DUE TO ASSAULTS AT

DELL SETON MEDICAL CENTER (2015-2018)

by

STEPHANI L CURRY, BS

APPROVED

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2019

ASSESSING HOSPITALIZATIONS DUE TO ASSAULTS AT  
DELL SETON MEDICAL CENTER (2015-2018)

by

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BS, Virginia Polytechnic Institute and State University, 2017

Presented to the Faculty of The University of Texas

School of Public Health

in Partial Fulfillment

of the Requirements

for the Degree of

MASTER OF PUBLIC HEALTH

THE UNIVERSITY OF TEXAS  
SCHOOL OF PUBLIC HEALTH  
Houston, Texas  
May 2019

TITLE ASSESSING HOSPITALIZATIONS DUE TO ASSAULTS AT  
DELL SETON MEDICAL CENTER (2015-2018)

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School of Public Health, 2018

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Physical assaults are a major public health concern in the United States, with rates being on the rise during the last couple of years (WISQARS Nonfatal Injury Reports, n.d.). In Austin at the Dell Seton Medical Center [DSMC], physical assaults are a main reason for hospitalization, making up nearly 10% of their hospitalizations, with around 250 patients per year. No subgroup of the population is risk free from physical assaults; however, national data suggest some sociodemographic groups are at higher risk than others (“Injury and Violence Prevention”, n.d.). Given the diversity of Austin, TX, it was unclear whether local sociodemographic trends reflect national disparities or whether these risk groups have changed over time. It was also unclear if there was a geographic pattern in terms of geospatial patterns of assaults in Austin. These types of analyses can be incredibly valuable when developing and implementing pointed primary, secondary, and tertiary interventions aimed at decreasing physical assaults. The objective of this study was to assess trends in the prevalence of physical assault hospitalizations at DSMC from 2015 to 2018 by seasonal or

event period, sociodemographic risk factors (e.g., sex, race/ethnicity, age group), geographic location, and mechanism of injury. Data was extracted from DSMC's injury patient registry, which currently utilizes ICD-10 diagnosis codes within electronic health records (EHR). Data was analyzed using Stata with one or two sample tests of proportions to compare physical assaults over time, between and across sociodemographic groups, and by mechanism of injury. In addition, hot spot maps, by zip code, were used to describe the geospatial distribution of physical assaults in that end up at Dell Seton Medical Center. Results showed males, Blacks, and 25-34-year-old's to be at greater risk of being hospitalized for assault. The warmer months of the year, April-June and July-September, showed to have greater number of assault hospitalizations, most likely due to the heat hypothesis. Two music festivals analyzed, ACL and SXSW, showed no significant increase or decrease between 2015 to 2018. A disproportionate amount of assaults from the sample occurred in 78701.

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## **Background**

Physical assaults are a major public health problem in the United States. Assaults can include a wide range of actions such as hitting, pushing, slapping, and shoving with a body part or a blunt or sharp object, as well as kicking, choking, or suffocating (Nonfatal Physical Assault, n.d.). In 2017, over 1.7 million nonfatal assault injuries were reported in the U.S and the crude rate has been on the rise over the last couple years (WISQARS Nonfatal Injury Reports, n.d.). Not only can people sustain major, acute injuries, but they can also suffer from long-term mental and emotional problems as a result of these assaults (Violence Prevention Home Page, n.d.).

Past research has found some sociodemographic groups sustain physical assaults at a disproportionately higher rate compared to others. For example, national data shows that people aged 20-29 experience the majority of physical assaults and African Americans have nearly triple the amount of assaults cases and hospitalizations compared to Whites and Hispanics, after adjusting for population size (WISQARS Nonfatal Injury Reports, n.d.). Males also have a disproportionately higher crude rate of assault cases compared to females (620.97 v. 405.12 per 100,000, respectively) and a crude rate for assault-related hospitalizations more than 4 times higher than females (WISQARS Nonfatal Injury Reports, n.d.).

On top of differential crude rates by age, gender, and race/ethnicity, there are seasonal fluctuations in assaults as well. The National Crime Victimization Survey found that from 1993 to 2010, aggravated assault rates were higher during the summer than any of the other three seasons (“Seasonal Patterns in Criminal Victimization Trends”, n.d.). This may be

attributed to the “heat hypothesis,” which states that heat directly increases hostile and negative thoughts leading to more aggressive actions (Anderson, 2001).

While not peer reviewed, there is also literature stating that assault increases at music events/festivals. A survey conducted in Chicago found that out of the female respondents, 92% of them said they had been harassed (including spoken violence, assault, being drugged, etc.) at a concert or a festival (Roti, 2018). After 2018’s SXSW festival that occurs each year in Austin, an article reported that the number of forensic nursing exams performed for sexual assaults has continually increased during this festival (Sexual assault exam numbers spike during 2018 SXSW festival, 2018).

### *Gaps in Literature*

Given the growing diversity of Austin, TX, it’s unclear whether local sociodemographic trends reflect national disparities or whether these risk groups have changed over time. Also, it is unclear if there is a geographic pattern in terms of where patients are assaulted in Austin. There is also a lack of information on solely physical assaults, for most of the literature focuses mostly on sexual assaults (Fuller, 2017). While both are important public health matters, they have different medical implications. This study will be valuable in developing and implementing interventions aimed at decreasing physical assaults in targeted areas and time frames.

### *Purpose of Study*

To fill these gaps, I utilized EHR data from Dell Seton Medical Center [DSMC] – a hospital serving 11 counties and the only level 1 trauma facility in Austin. The hospital

system has about 7-10% of their patients admitted for physical assault violence every year (Seton Healthcare Family, n.d.).

**The purpose of this thesis** was to analyze all physical assault hospitalizations at DSMC from 2015 to 2018 to assess if any particular demographic sub-group, time frame, or geographic location is at a higher risk. Specifically, my research questions, aims, and hypotheses are:

- Have physical assault hospitalizations in Austin changed from 2015-2018?
  - Aim 1: To determine trends in the prevalence of hospitalizations due to physical assaults at DSMC each year.
  - Hypothesis: There will be statistically significant increase in assault hospitalizations at DSMC from 2015 to 2018.
- Was there a predominant season/time of year/etc. when physical assaults leading to hospitalizations are the highest?
  - Aim 2: To determine any seasonal or monthly trends of physical assaults leading to hospitalization in Austin.
  - Hypothesis: The prevalence of assault hospitalizations will be higher during the warmest periods of the year.
- Did physical assault hospitalizations in Austin, Texas increase during weeks in which large festivals and big events (e.g., Austin City Limits Festival, South by Southwest Festival, etc.) occurred?
  - Aim 3: To determine if the presence of major music festivals affect the prevalence of hospitalized physical assaults in Austin.

- Hypothesis: There will be an increase in the prevalence of assault hospitalizations during ACL and SXSW from 2015-2018.
- Did physical assault hospitalizations across these years differ by sex (males vs. females), race (White, African American, Asian, Native American, other), ethnicity (Hispanics vs. non-Hispanics), age (older vs. younger age), socioeconomic status (low vs. high socioeconomic status OR insured vs. uninsured), geographic location (e.g., by zip code), and mechanism of injury?
  - Aim 4: to assess sociodemographic and geographic differences among the hospitalized physical assault patients in Austin.
  - Hypothesis: Assault hospitalizations at DSMC will be higher among males, African Americans, and 18-24-year old's and will differ geospatially.

All hypotheses were based on previous national findings utilizing WISQARS data; the fact that Austin typically has very hot summers, with multiple days being over 100 degrees; and crime rates that are 23% higher than the rest of Texas (“Compare Crime Rates, Reports & Statistics”, n.d.). On top of all that information, Austin’s aggravated assaults increased by 5% from 2014 to 2015 (“Violent Crime Per 1,000 Population”, n.d.). However, it was unclear what has occurred since 2015 in Austin.

### *Public Health Implications*

This study will inform the City of Austin public health officials, as they create targeted interventions to reduce physical assaults. For example, interventions could target specific locations or population subgroups within Austin or just making the public aware of the information as well in attempts at primary prevention. It could also be of value when

determining how much police presence to have at events such as ACL or SXSW, based on the results of the temporal differences in assaults.

## **Methods**

### *Study design*

This study was a cross-sectional, with assessment of time trends. It examined the relationship between assaults and other variables of interest as they exist in a defined population at a single point in time or over a short period of time (e.g. calendar year).

### *Study setting*

Data was extracted from the Austin, Texas metroplex, specifically patients in DSMC's catchment area of 11 counties. DSMC is a level 1 adult trauma center, as it provides comprehensive care and is capable of providing all aspects of care from prevention to rehabilitation for those aged 14 years or older. The hospital receives approximately 2,500 injured patients each year that result in hospitalization with about 10% from physical assault (Seton Healthcare Family, n.d.).

### *Study participants*

The participants of this study were patients admitted to DSMC for physical assault, according to DSMC's patient registry. The hospital classifies this as "physical harm done to another person with determinable intent". For this study, a total of 730 patients that were hospitalized from January 1<sup>st</sup>, 2015 to December 31<sup>st</sup>, 2018 were eligible to "participate".

### *Data collection*

All information was gathered from DSMC's patient registry for the years 2015-2018. This registry records every patient requiring admission to the hospital and is managed by DSMC. Information collected by the registry includes pre-hospital information, such as location of injury, and physician notes taken during their stay until discharge. Records coded as physical assault were pulled from the registry, whether they used ICD-9 or ICD-10 diagnoses (Seton Healthcare Family, n.d.). A private report writing software was used to abstract information on physical assault patients and included the following variables: age, sex, race, ethnicity, insurance status, date, assault zip code, home zip code, and mechanism of injury.

### *Data analysis*

All analyses for this study were stratified by year and pooled over the cumulative four-year span. Possible exposures were sex, age, race, ethnicity, insurance type, and mechanism of injury. Univariate analyses were used to describe the data results through frequency distributions, population averages, and dispersion factors. One- and two-sample tests of proportions were used to evaluate significant differences over the years and between seasons. All analyses were conducted using Stata 14.0 (StataCorp. 2017).

### *Human Subjects*

All participants were deidentified prior to being given access to their information and necessary IRB approval (*UTH: #HSC-SPH-18-1048, DSMC: #2019-01-0034*) was obtained. All data was also provided on a password protected document and secured at all times.

## Results

### *Tables 1-4*

Table 1 displays the prevalence of physical assault (PA) hospitalizations for each year over the total sample size. It also displays the prevalence of these assaults over the total amount hospitalized, for any reason, at DSMC for that year. While the population of Austin steadily increases throughout the years, the number of PA hospitalizations and all other hospitalizations steadily decrease. The proportion of assaults in 2015 v. 2016 (0.3383 vs. .2699) and 2016 v. 2017 (.2699 vs. .2041) were different, indicating that this decline over time was statistically significant.

Table 2 reports the prevalence of physical assault hospitalization during ACL and SXSW, stratified by year. The number of PA hospitalizations occurring during ACL slightly increased over the years and the number occurring during SXSW slightly decreased over time. However, no proportions were statistically different from each other.

Table 3 displays the prevalence of PA hospitalizations across different month for each corresponding year. The majority of assaults for each year occurred during the April-June and July-September. The proportion of PA hospitalizations during April-June and July-September were found to be statistically insignificant with p-values less than 0.05.

Table 4 displays the sociodemographic breakdown of PA hospitalizations across years and the total four-year span. Overall, the majority PA hospitalization's occurred among males, 25-34-year old's, Whites, non-Hispanics, self-paying patients, patients under the



*assault* group from mechanism of injury, and those who were not over (or equal to) the legal drinking limit.

#### *Graphs 1-7*

Graphs 1-7 show graphically display socioeconomic differences in PA hospitalizations. The *Other Race* subcategory, Hispanics, and non-Hispanics were shown to be statistically different from 2017-2018. The proportion of Medicaid users was statistically different across all year comparisons, increasing around 20% from 2015 to 2018. Lastly, the proportion of knife involvement was statistically different from 2015 v. 2016 (increase) and 2016 v. 2017 (decrease).

#### *Figures 1-5*

Figures 1-5 show geospatial patterns of PA hospitalizations across zip codes, for each year. Figure 2 has been separated into two images for a better visual. Darker shading indicates more assaults within that region. Zip code 78701 contained the most assaults for this data, for all years analyzed, followed by 78723, 78702, 78753, and 78741.

<b>Table 1. Prevalence of physical assaults hospitalizations across year and among total hospitalized at DSMC and total Austin population from 2015-2018.</b>								
	PA hospitalizations	<i>Among PA hospitalizations</i>			<i>Among total hospitalizations</i>		<i>Austin Population</i>	
		% (N = 730)	Test-Statistic	p-value	Total hospitalized (N)	%	Austin population (N)	%
<b>2015</b>	247	33.83%			3447	7.16	919,974	0.03
<b>2016</b>	197	26.99%	4.16	0.000	2717	7.25	938,200	0.02
<b>2017</b>	149	20.41%	4.41	0.000	2404	6.2	950,715	0.01
<b>2018</b>	137	18.77%	1.13	0.256	2386	5.74	Not available	
<b>2015-2018</b>	730				10,954	6.66		

PA = physical assaults. % = prevalence of physical assault hospitalizations. Test-statistics and p-values come from one sample tests of proportions comparing PA hospitalizations for one year compared to the next year.

<b>Table 2. Prevalence of physical assault hospitalizations at DSMC from 2015-2018 during two major music festivals.</b>											
	N	ACL					SXSW				
		Dates	n	%	test-statistic	p-value	Dates	n	%	test-statistic	p-value
<b>2015</b>	<b>247</b>	10/02-10/11	4	1.62			03/13-03/22	13	5.26		
<b>2016</b>	<b>197</b>	09/30-10/09	4	2.03	-0.32	0.747	03/11-03/20	4	2.03	1.76	0.078
<b>2017</b>	<b>149</b>	10/06-10/15	6	4.03	-1.09	0.272	03/10-03/19	7	4.70	-1.40	0.161
<b>2018</b>	<b>137</b>	10/05-10/15	8	5.84	-0.71	0.478	03/08-03/17	2	1.46	1.57	0.117

ACL = Austin City Limits Music Festival. SXSW = South by Southwest Music Festival. N = total number of physical assault hospitalizations for that year. n = total number of physical assault hospitalizations during the specified dates. % = prevalence. P-values and test-statistics come from two sample tests of proportions for one year compared to the next.

<b>Table 3. Monthly distribution of physical assaults hospitalized at DSMC from 2015-2018.</b>								
	<b>2015 (N = 247)</b>				<b>2016 (N = 197)</b>			
	n	%	test-statistic	p-value	n	%	test-statistic	p-value
<b>January-March</b>	51	20.65			50	25.38		
<b>April-June</b>	75	30.36	-3.32	0.001	55	27.92	-0.79	0.427
<b>July-September</b>	65	26.32	1.45	0.148	58	29.44	-0.47	0.639
<b>October-December</b>	56	22.67	1.37	0.171	34	17.26	4.52	0.000

N = total number of physical assault hospitalizations for that year. n = total number of physical assault hospitalizations during the specified time period. % = the prevalence of physical assault hospitalizations during that time period. P-values and test-statistics come from one sample test of proportions comparing one quarter to the next within the same year.

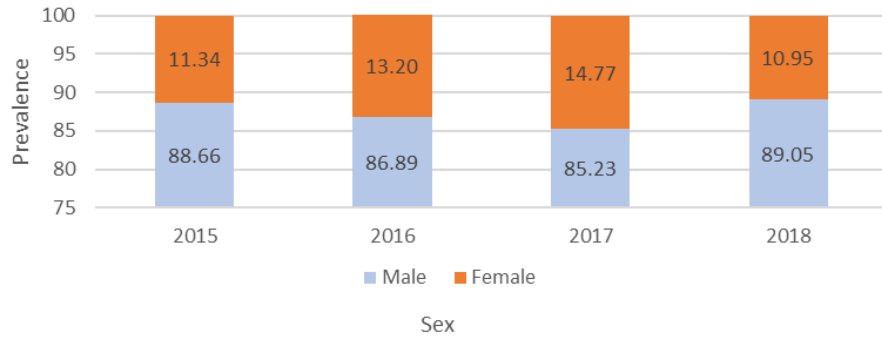
<b>Table 3 continued. Monthly distribution of physical assaults hospitalized at DSMC from 2015-2018.</b>												
	<b>2017 (N = 149)</b>				<b>2018 (N = 137)</b>				<b>2015-2018 (N = 730)</b>			
	n	%	test-statistic	p-value	n	%	test-statistic	p-value	n	%	test-statistic	p-value
<b>January-March</b>	33	22.15			32	23.36			166	22.74		
<b>April-June</b>	45	30.20	-2.14	0.032	34	24.82	-0.39	0.692	209	28.63	-3.52	0.000
<b>July-September</b>	39	26.17	1.12	0.263	42	30.65	-1.48	0.139	204	27.95	0.41	0.682
<b>October-December</b>	32	21.48	1.39	0.163	29	21.17	2.72	0.006	151	20.68	4.85	0.000

N = total number of physical assault hospitalizations for that year. n = total number of physical assault hospitalizations during the specified time period. % = the prevalence of physical assault hospitalizations during that time period. P-values and test-statistics come from one sample test of proportions comparing one quarter to the next within the same year.

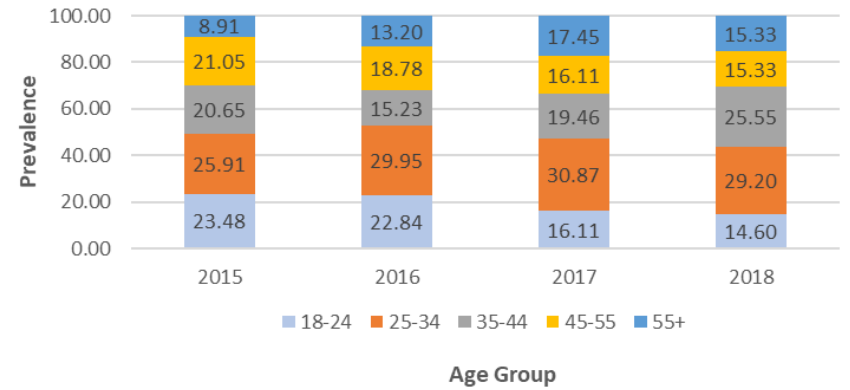
<b>Table 4. Demographic differences of physical assaults hospitalized at DSMC from 2015 to 2018.</b>											
		<b>2015 (N=247)</b>		<b>2016 (N=197)</b>		<b>2017 (N=149)</b>		<b>2018 (N=137)</b>		<b>2015-2018</b>	
		n	%	n	%	n	%	n	%	n	%
<b>Sex</b>	Male	219	88.66	171	86.80	127	85.23	122	89.05	639	87.53
	Female	28	11.34	26	13.20	22	14.77	15	10.95	91	12.47
<b>Age group</b>	18-24	58	23.48	45	22.84	24	16.11	20	14.60	147	20.14
	25-34	64	25.91	59	29.95	46	30.87	40	29.20	209	28.63
	35-44	51	20.65	30	15.23	29	19.46	35	25.55	145	19.86
	45-54	52	21.05	37	18.78	24	16.11	21	15.33	134	18.36
	55+	22	8.91	26	13.2	26	17.45	21	15.33	95	13.01
<b>Race</b>	White	184	74.49	141	71.57	114	76.51	101	73.72	540	73.97
	Black	38	15.38	39	19.80	26	17.45	35	25.55	138	18.90
	Other	25	10.12	15	7.61	9	6.04	1	0.73	50	6.85
<b>Ethnicity</b>	Hispanic	78	31.58	74	37.56	59	39.60	29	21.17	240	32.88
	Not Hispanic	166	67.21	120	60.91	90	60.40	107	78.10	483	66.16
<b>Insurance</b>	Private pay	54	21.86	42	21.32	28	18.79	23	16.79	147	20.14
	Medicare	12	4.86	19	9.64	9	6.04	9	6.57	49	6.71
	Medicaid	38	15.38	17	8.63	31	20.81	14	10.22	100	13.70
	Self pay	58	23.48	75	38.07	49	32.89	58	42.34	240	32.88
	Other	85	34.41	44	22.33	32	21.48	33	24.09	194	26.57
<b>Mechanism of Injury</b>	Assault	208	84.21	176	89.34	126	84.56	110	80.29	620	84.93
	Knife	32	12.96	12	6.09	20	13.42	22	16.06	86	11.78
	Gun	7	2.82	9	4.57	3	2.01	5	3.65	24	3.28
<b>Alcohol involved</b>	Yes	74	29.96	74	37.56	60	40.27	47	34.31	255	34.93
	No	173	70.04	123	62.44	89	59.73	90	65.69	475	65.07

N = total number of physical assault hospitalizations during that year. n = total number of physical assault hospitalizations within the specified category. % = prevalence of physical assault hospitalizations. Categories not totalling 100% are due to missing information within the patient data. *Other* under Race includes Asian, Native American, and all other categories. *Assault under Mechanism of Injury* includes any blunt attack with a weapon or without, that did not result in penetration. *Knife* and *Gun* resulted in penetration of the patient's body. *Gun* includes handguns, shotguns, and all other types of gun assaults. *Private Pay* under Insurance includes Blue Cross Blue Shield, HMO/PPO/POS, and Champus. *Yes* under Alcohol Involved includes patients where alcohol was noted to be above or equal to the legal drinking limit of 0.08%.

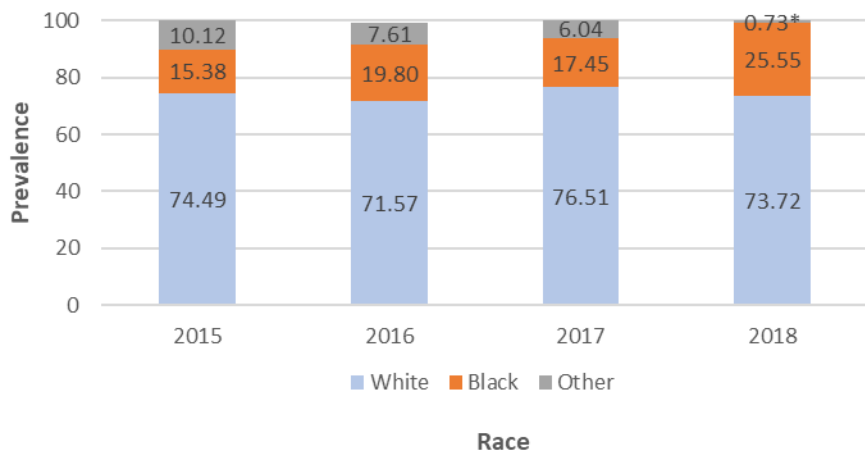
Graph 1. Prevalence between sexes among PA hospitalizations



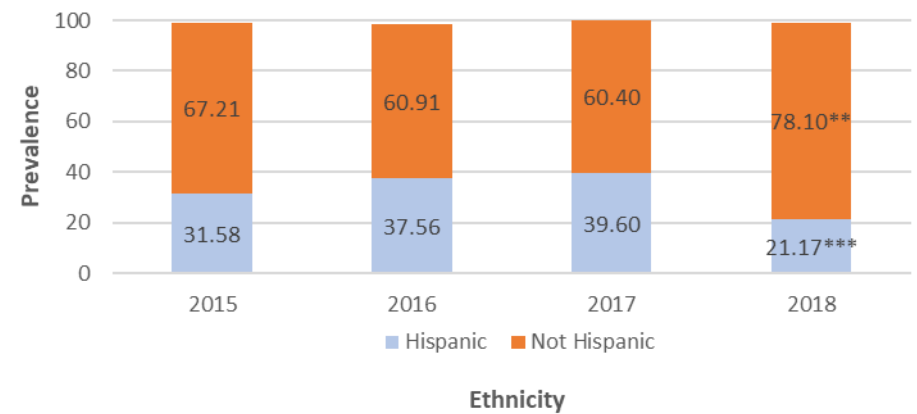
Graph 2. Prevalence between age groups among PA hospitalizations



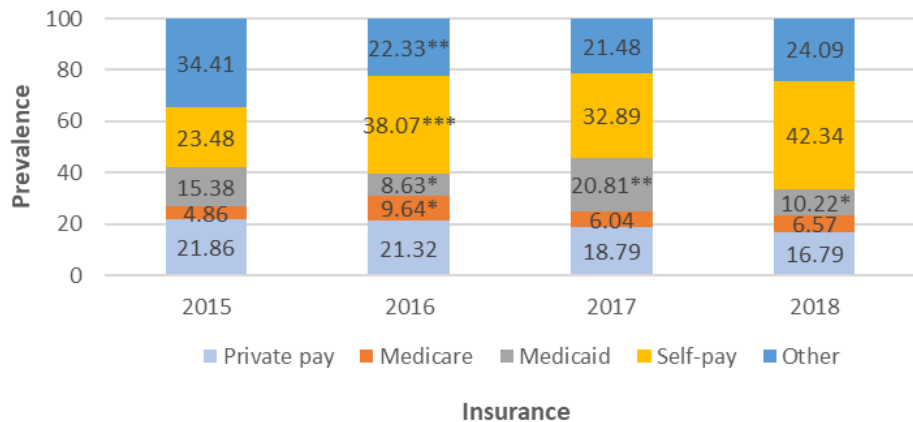
Graph 3. Prevalence between races among PA hospitalizations



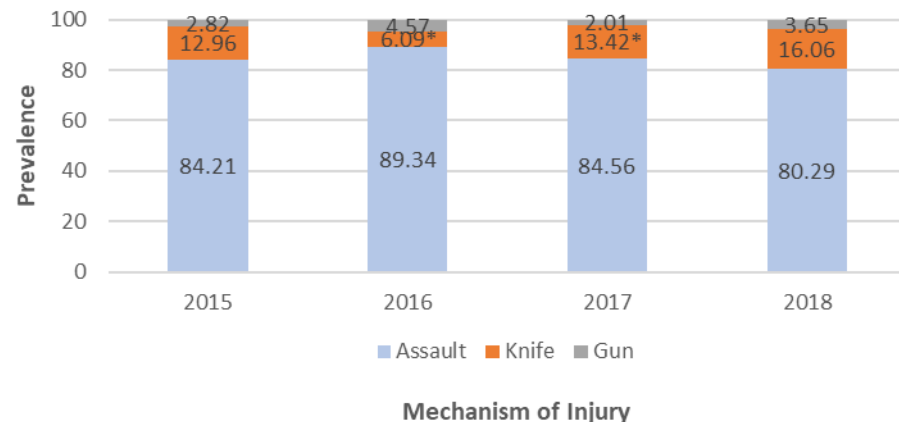
Graph 4. Prevalence between ethnicity among PA hospitalizations



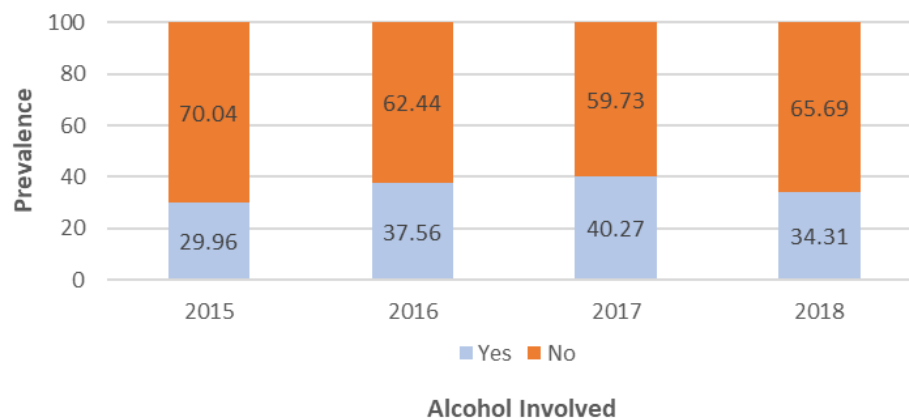
Graph 5. Prevalence between insurance types among PA hospitalizations



Graph 6. Prevalence between mechanisms of injury among PA hospitalizations



Graph 7. Prevalence of alcohol among PA hospitalizations



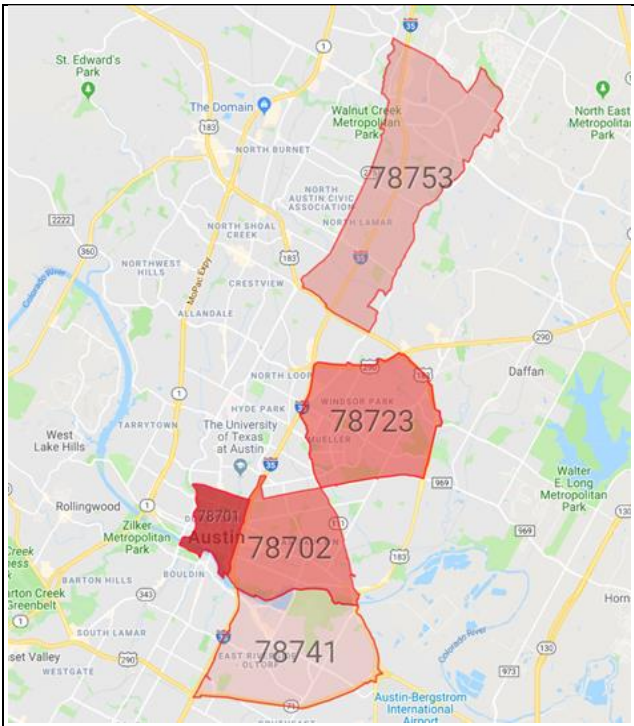


Figure 1. Top 5 zip codes from those hospitalized due to assaults from 2015-2018. There were 177 assaults in 78701, 36 in 78723, 35 in 78702, 31 in 78753, and 29 in 78741.

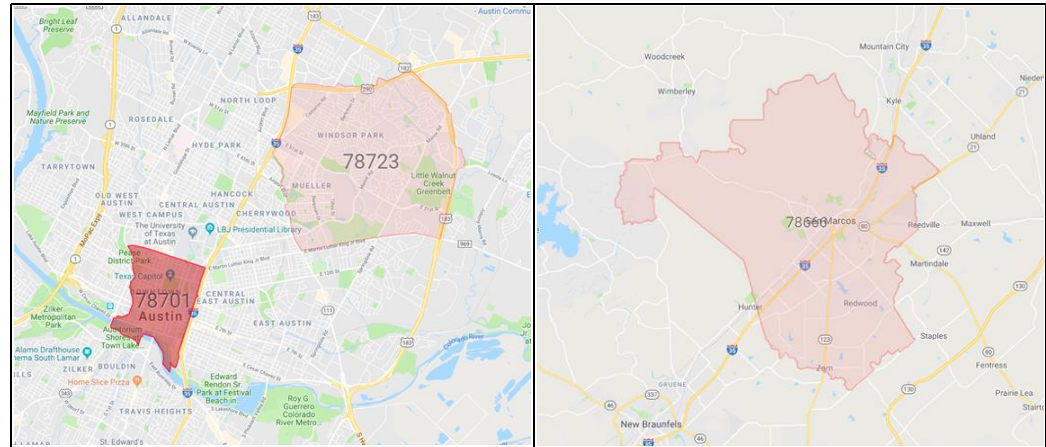


Figure 2. Top 3 zip codes from those hospitalized due to assaults in 2015. There were 50 assaults in 78701, 13 in 78723, and 13 in 78666.

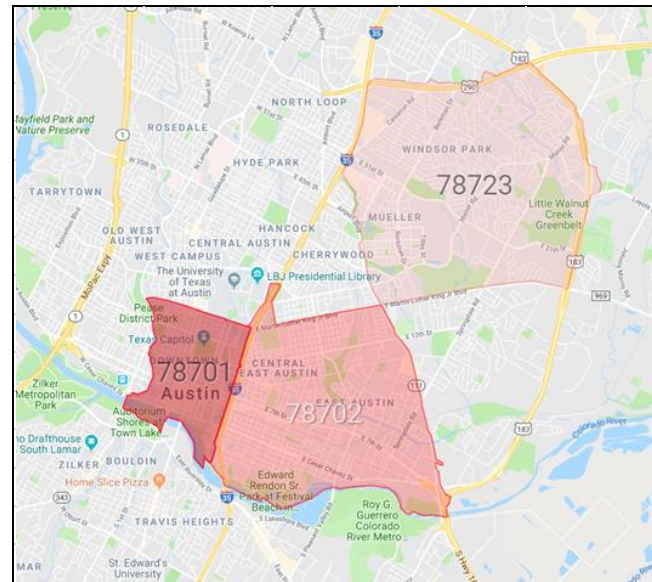


Figure 3. Top 3 zip codes from those hospitalized due to assaults in 2016. There were 48 assaults in 78701, 10 in 78702, and 9 in 78723.



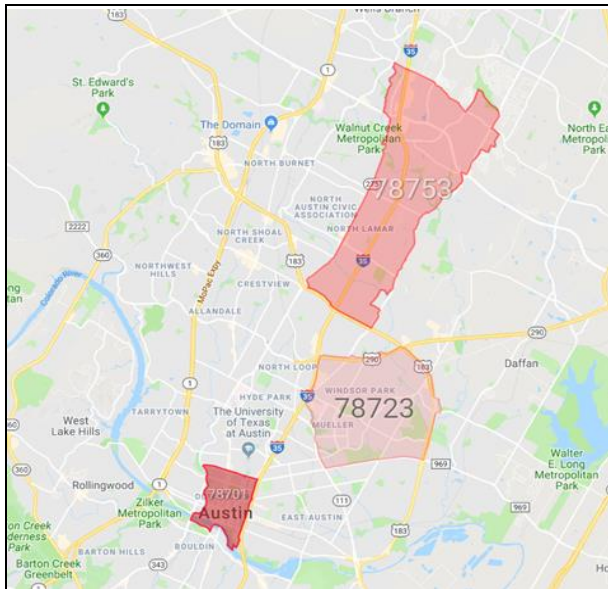


Figure 4. Top 3 zip codes from those hospitalized due to assaults in 2017. There were 43 assaults in 78701, 9 in 78753, and 8 in 78723.

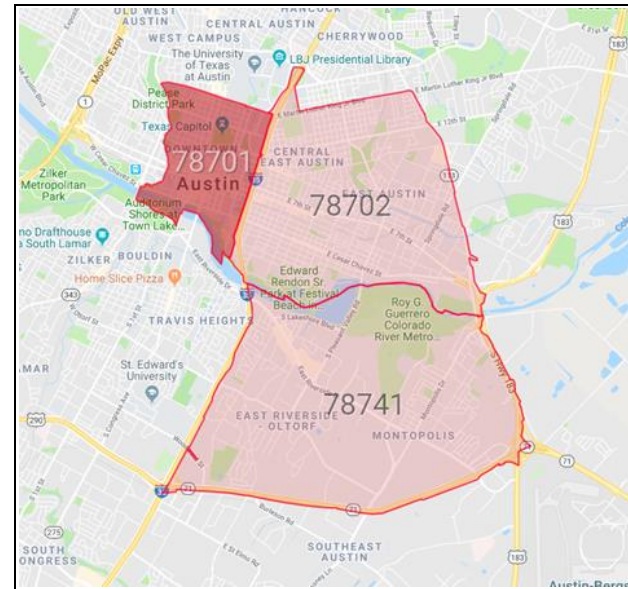


Figure 5. Top 3 zip codes from those hospitalized due to assaults in 2018. There were 36 assaults in 78701, 7 in 78702, and 7 in 78741.



## **Discussion**

For aim 1 of this study, I hypothesized that there would be an increase in PA hospitalizations at DSMC from 2015 to 2018. Overall, the actual number of PA's decreased marginally throughout the time period. The percentage that these PA's made up out of all the hospitalizations at DSMC decreased as well, from making up around 7% to around 5% of all hospitalizations. I also thought that there would be a statistically significant difference between the numbers each year, however this was only the case between 2015 v. 2016 and 2016 v. 2017 in this area. These results were not in agreement with national trends over the last couple years, where crude rates of nonfatal physical assault hospitalizations have been increasing steadily females (WISQARS Nonfatal Injury Reports, n.d.).

For aim 2, I hypothesized that the prevalence of assault hospitalizations would be higher during the warmer months of the year. This was found to be true, agreeing with the heat hypothesis, with the predominant number of assaults occurring between April-June and July-September. These months generally have high temperatures from 80 to 100+°F and low temperatures from 58 to 74°F (Austin Weather 2019 - AccuWeather Forecast for TX 78701., n.d.). It's interesting to note that when running statistical tests for the cumulative four-year span, there was no significant results when comparing April-June to July-September. There was however a significant difference when comparing January-March to April-June and July-September to October-December. This further relates that PA hospitalizations during the warmer parts of the year are more similar than colder parts of the year.

For aim 3, I hypothesized that the proportion of PA hospitalizations would increase during both ACL and SXSW based on a crime report that came out in 2018 following the latter

festival. While the actual number of PA hospitalizations did increase over the four years during ACL, these differences were not found to be statistically significant. For SXSW, the number of hospitalizations actually decreased but were also found to be statistically insignificant.

For my fourth and final aim, I hypothesized that PA hospitalizations would be higher among males, Blacks, and 18-24-year old's. The number of physical assaults ended up being the highest among 25-34-year old's across each year and for the entire span. Something else relevant to note from my results is the increase in the proportion of older adults who made up the sample. They started out around 9% and made it to over 15%, indicating a potential public health population for the older population in Austin.

Males made up a disproportionately larger amount of the patients, at about 88%, despite nearly equal percentages of males and females in the Austin population (U.S. Census Bureau QuickFacts: Austin city, Texas., n.d.). While non-Hispanic Whites dominated the patient racial makeup, it was in agreement with the proportion that they make up with the Austin population. Blacks, however, had a disproportionate representation in this data in comparison to their prevalence in the population. For instance, from 2010 to 2017 Blacks made up 7.6% of Austin's population, but they made up 18.9% of the PA hospitalizations from 2015-2018 (U.S. Census Bureau QuickFacts: Austin city, Texas., n.d.). The sex, racial, and ethnic breakdown of my sample aligned with national data on physical assaults.

The geospatial maps showed the majority of PA hospitalizations close to the hospital, in well occupied and popular areas. In 2015, however, zip code 78666, located in San Marcos, had 13 physical assaults that ended up hospitalized at DSMC. Upon further investigation, these assaults were spread out throughout the year and not due to any event that was out of the ordinary. One potential reason why San Marcos did not remain a major zip code in the following

years could be that one their hospitals, Central Texas Medical Center, merged with a group called Sound Physicians in order to provide in-hospital care, in the fall of 2016 (Central Texas Medical Center and Sound Physicians enter into an agreement to provide hospitalist services). Therefore, it is possible that after this merge, assaults needing hospitalization went there. Throughout the four-year span, 78701, had a disproportionately higher amount of assaults in comparison to any of the other top zip codes, making it the most “risky” region studied. Assaults occurring in this zip code made up 24.25% of the total sample, while the next most prevalent zip code only made up 4.9%.

Overall, the results of this study should play a role in future public health efforts aimed at decreasing the number of physical assaults and their subsequent hospitalizations by targeting specific subpopulations. Any future interventions, based on this study, should focus on males, 25-34-year old’s, Blacks, assaults occurring during the warmer months, and areas within 78701. Another area that could be explored with similar data could be associations with the socioeconomic status of assault patients based on their home zip code in relation to the type of insurance chosen. A comparison of hospitals with and without an injury prevention department could be beneficial for enhancing other hospitals. Dell Seton Medical Center has employed an injury prevention coordinator since 2015 and has subsequently seen a reduction in PA hospitalizations each year (Seton Healthcare Family, n.d.). Lastly, future research could look into the same analyses conducted in this study but with solely sexual assault victims. The patients of this sample may have experienced sexual assault as well however that is not something differentiated in DSMC’s patient registry.

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