



# **Bexar County High Utilizer / Homeless Healthcare Analysis**

## **Southwest Texas Crisis Collaborative**

**March 2018**



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## ***Definitions***

## The following analysis is based on detailed patient level data provided by the partner organizations.

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### Definitions: *Safety Net*

- This analysis includes data for the Bexar County “Safety Net” population.
  - Unfunded and Underfunded patients as defined by the providers insurance plans (validated by CHP)
  - Generally includes Medicaid (traditional, managed Medicaid, CHIP). Self Pay/Charity, Carelink, other Charity programs
  - Assumes the data as provided by the partners represents the “Safety Net” population. Minor adjustments were made to the data where appropriate
    - Deleted commercial/managed care patients if submitted
  - A concern was voiced in earlier discussions about incorrectly counting appropriate care when looking at Super-Utilizers or other subsets.
    - We have excluded two Service Lines from the data that do have high utilization and/or cost but where that use/cost is likely appropriate:
      - Pediatric Oncology – among the most expensive cases
      - Neonatology
    - A number of these cases are among the most expensive in the data.
    - Unlikely to impact homeless or mental health picture significantly



Excluded  
Pediatric  
Oncology,  
Neonatology

# What is the official definition of homelessness?

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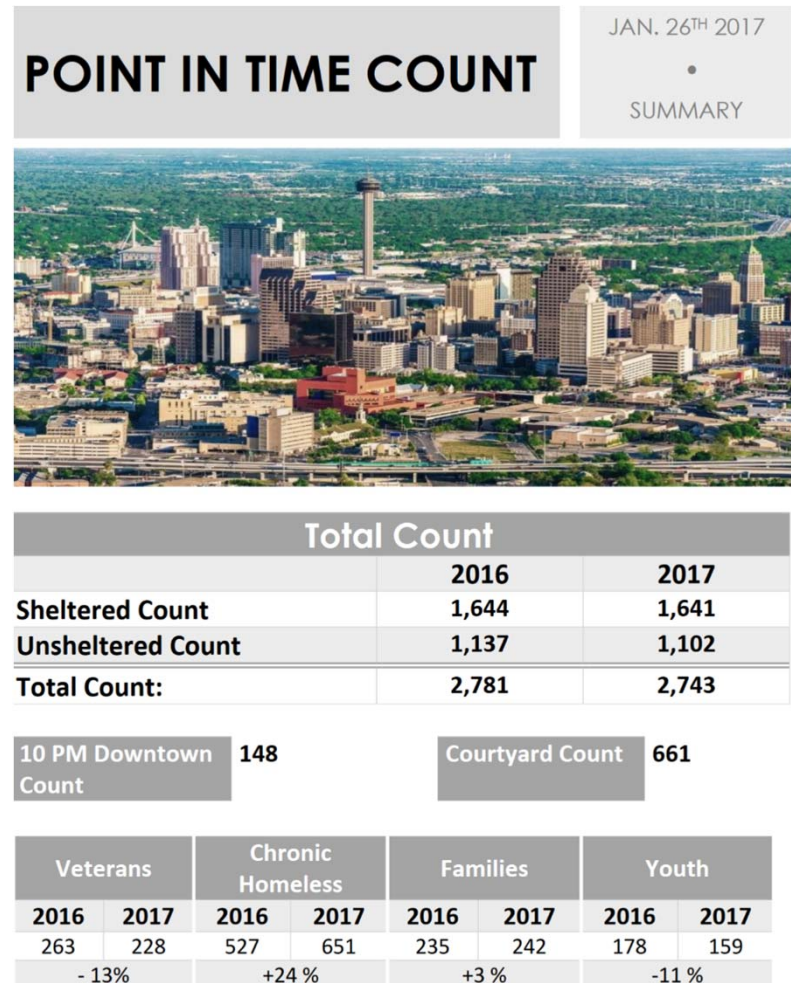
## Definitions: *Homeless*

- There is more than one “official” definition of homelessness. Health centers funded by the U.S. Department of Health and Human Services (HHS) use the following:
  - A homeless individual is defined in section 330(h)(5)(A) as “**an individual who lacks housing** (without regard to whether the individual is a member of a family), **including** an individual whose primary residence during the night is a supervised public or private facility (e.g., shelters) that provides **temporary living accommodations, and an individual who is a resident in transitional housing.**” A homeless person is **an individual without permanent housing** who may live on the streets; stay in a shelter, mission, single room occupancy facilities, abandoned building or vehicle; or in **any other unstable or non-permanent situation.** [Section 330 of the Public Health Service Act (42 U.S.C., 254b)]
  - An individual **may be considered to be homeless if that person is “doubled up,”** a term that refers to a situation where individuals are unable to maintain their housing situation and are forced to stay with a series of friends and/or extended family members. **In addition, previously homeless individuals who are to be released from a prison or a hospital may be considered homeless if they do not have a stable housing situation to which they can return.** A recognition of the instability of an individual’s living arrangements is critical to the definition of homelessness. (HRSA/Bureau of Primary Health Care, Program Assistance Letter 99-12, Health Care for the Homeless Principles of Practice)

**The following analysis is based on detailed patient level data provided by the partner organizations.**

- **Homeless Population**

- The actual number of homeless in Bexar County is unknown
  - The SARAH 2017 Point in Time count identified 2,743 people
  - The SARAH HIMS data set exceeds 38,000 people who have ever been homeless (2010-2016)
- The number of patients identified in this dataset is significantly larger.
  - Includes additional settings such as Jail, Halfway houses, etc.
  - Is a period of time not a point in time but reflects a 12 month “snapshot”
  - Federal definitions for homeless were followed as much as possible in selecting the Homeless population in this analysis



**The following analysis is based on detailed patient level data provided by the partner organizations.**

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- **Definitions: *Mental Health***

- Mental Health includes both traditional mental health issues as well as substance abuse. A substantial proportion of this population are dual diagnosis.
  - In the ICD-9 system it includes the range 290-331, 758 (chromosomal anomalies), 780, 799 and V11 and select diagnoses within V40, V62 (suicidal ideation, homicidal ideation, for example), V70, V71 and V79
  - In the ICD-10 system it is all diagnoses in the range F01-F99 plus G31.09, H93.25, Q90-Q99, select diagnoses within the range of R41-R49 (hallucinations, homicidal ideations, low self esteem, etc.), six select diagnoses in the Z range (antisocial behavior and similar).

## The following analysis is based on detailed patient level data provided by the partner organizations.

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- **Definitions: Cost Data**

- Cost data was submitted for just over 80% of the encounters provided
- Calculated average cost per encounter at a detailed level from those providers
  - For inpatient the average was by DRG, for outpatient by CPT and/or ICD
  - Overall, cost data suggested costs in the range of 100-133% Medicare reimbursement - Reasonable
- Applied these cost factors at the patient level for records lacking cost data
- EMS costs and costs for incarceration have yet to be worked into the cost totals
- Risks / Limitations
  - Cost data does not include:
    - Capitated contracts for professional services that various systems may have
    - Donated services
    - Safety net utilization of urgent care and other for profit health care providers
    - Outpatient pharmaceutical prescriptions that providers may subsidize
  - Depending on how cost accounting is set up, costs may not reflect total administrative costs for safety net programs
  - Available cost data may not be exactly representative of the other providers

## Our initial Super Utilizer definition resulted in ~4,600 individuals in the 2015/16 data

- The Robert Wood Johnson Foundation defines Super-Utilizers as *individuals whose complex physical, behavioral, and social needs are not well met through the current fragmented health care system. As a result, these individuals often bounce from emergency department to emergency department, from inpatient admission to readmission or institutionalization—all costly, chaotic, and ineffective ways to provide care and improve patient outcomes.*
- Definitions vary by program and program focus
  - Camden Coalition
    - High ED Utilizer 8+ ED Visits + 1+ IP Admit/year
    - High IP Utilizer 3+ IP Admits + 1+ ED Visit/year
  - Denver Health 6+ ED visits w/in 6 months
  - Cigna 6+ ED visits w/in 6 months
  - AHRQ 4+ IP Admits/year
  - Pinnacle Health Sys 2+ IP Admits or 6+ ED Visit/6mo

**For our initial analysis we have defined “Super-utilizers” as Safety Net patients who had:**

- **Inpatient - 3+ discharges or had both a serious mental health diagnosis and 2+ discharges**
  - **ER utilization – 9+ visits**
  - **Exclusions – Pediatric Cancer Care, Neonatal**
- N= 4,569 in 2015/16**



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## ***Project Objectives & Process***

# Project Objectives and Process

1. **Review the utilization and costs of healthcare services in Bexar County by the underserved or “Safety Net” community**
2. **Enlist the key providers of healthcare services as partners in the project**
  - Gather data (where available) in a HIPAA compliant manner
  - Engage stakeholders as part of the planning process to own solutions
3. **Create a consolidated data resource to allow analysis of utilization across providers and provider types to determine the scope of the issue**
  - **Volumes** – to the degree possible within the data identify utilization of key healthcare services by the vulnerable populations of Bexar County
  - **Costs** - to the degree possible within the data identify broad cost parameters related to utilization of key healthcare services by the vulnerable populations of Bexar County
  - **Distribution** – understand and outline the above relative to the key providers in the market
4. **Work with partners to develop a model to optimize future care and funding**
  - Based on the volume, utilization and distribution findings work with Partner Organizations to understand and/or develop a model for effectively and equitably funding utilization going forward
  - Create shared measurements



# Partner Organizations



Uncommon Care



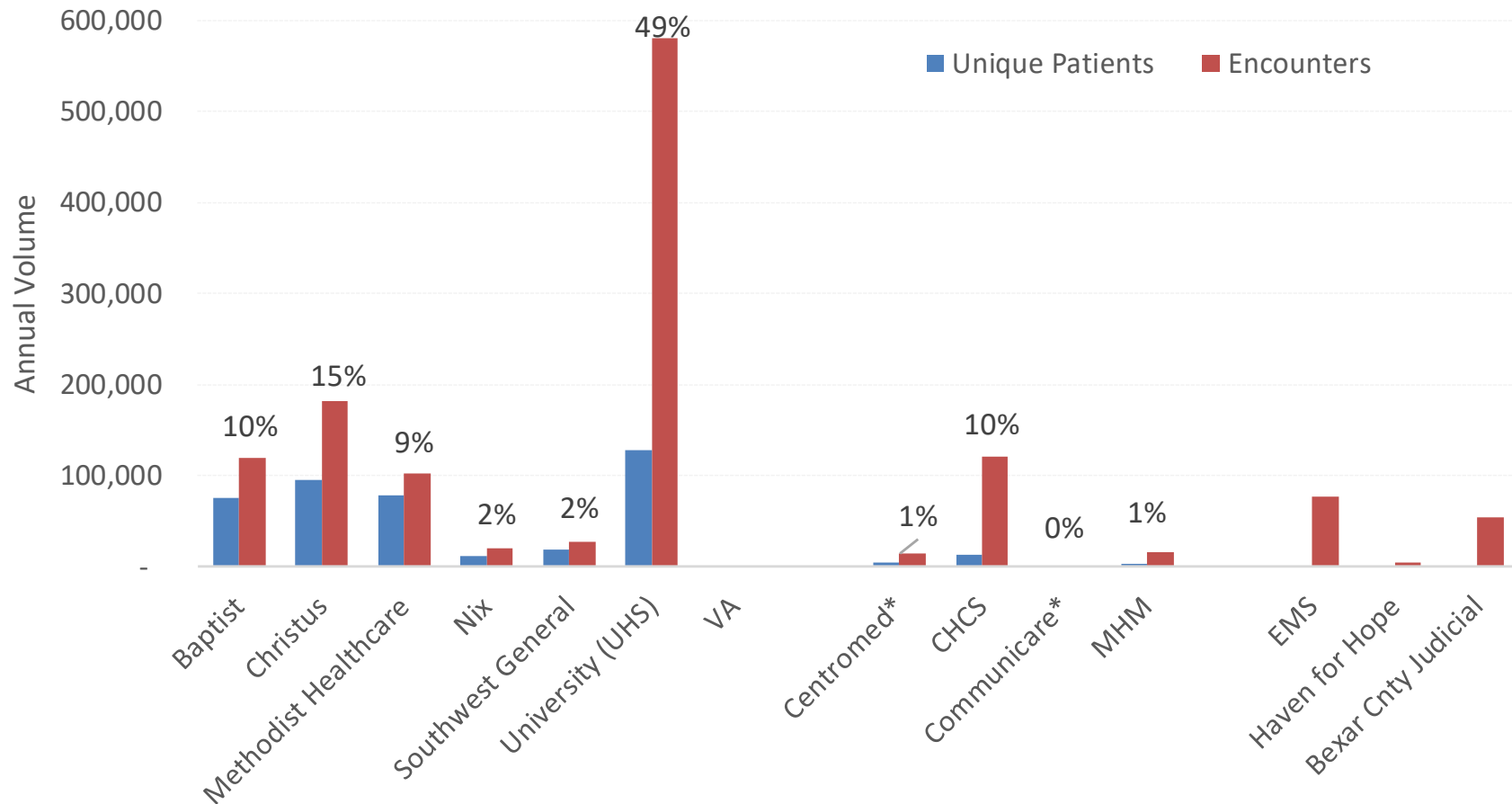
YOUR MEDICAL HOME



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## ***Overview of the Bexar County Safety Net Population***

**The annual volume of unique patients included in the overall study is significant. Encounters across all sites and settings total almost 1.2 million.**



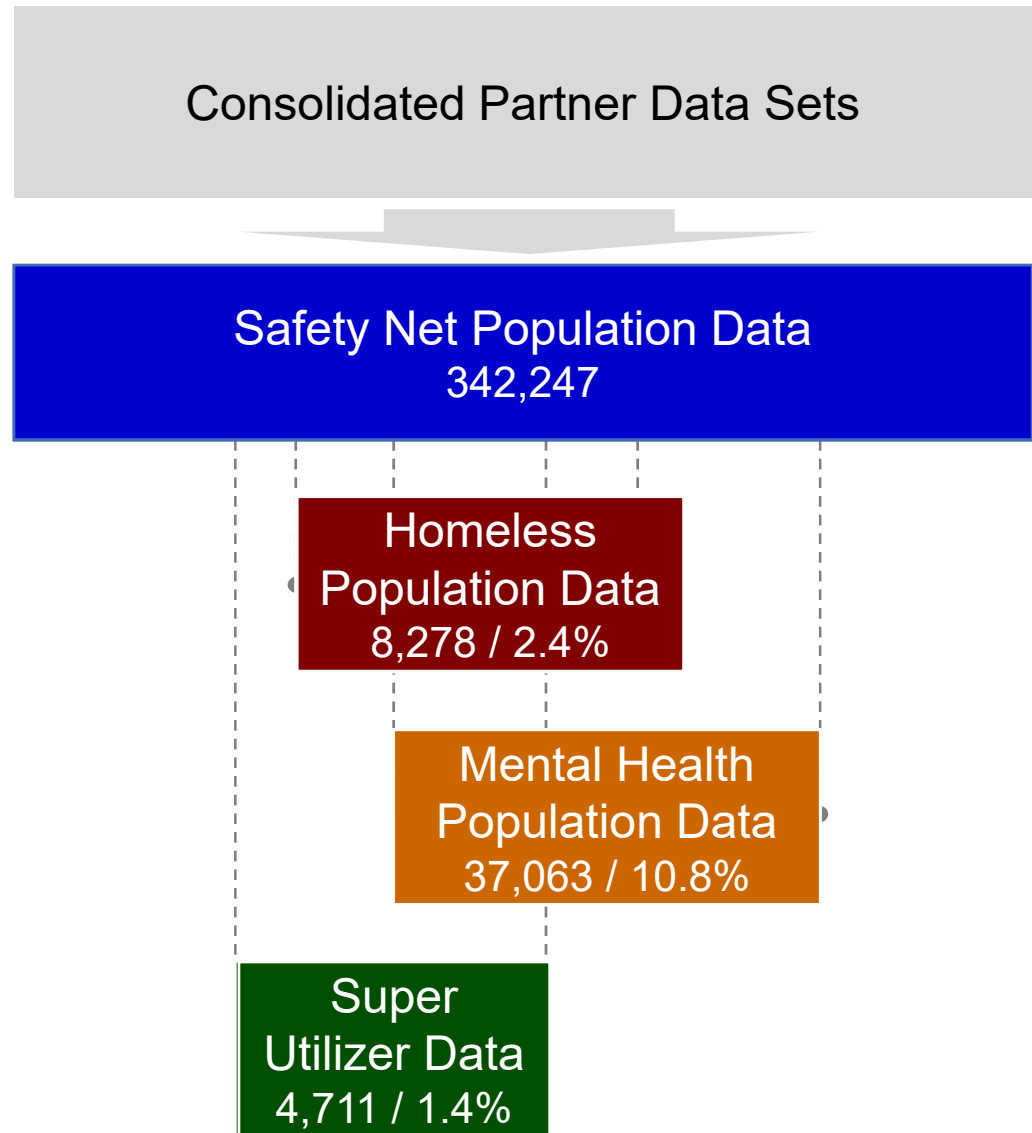
- Distribution of care remained fairly static across all parties

Note: Patient and encounter counts are for total Safety Net population  
 With slight variation data is for time period 4/1/2016 – 3/31/2017  
 \* CentroMed data is for Homeless patients only – not total Safety Net

## Project Process

### *Organization of the Analysis*

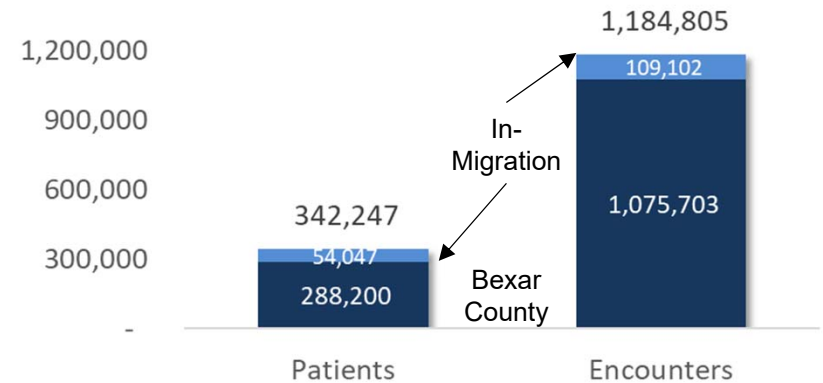
- The following analysis is organized to present a large amount of data as effectively as possible.
- Starting with the submitted data we will review findings about the Safety Net as a whole, Homeless and Mental Health population sub-sets
- The final section further analyzes our patients identified as “super-utilizers”
- Homeless, Mental Health and Super-Utilizer subsets all overlap each other to some degree



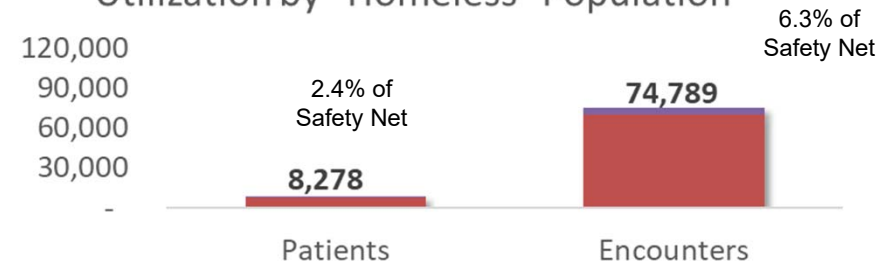
## Overall, service utilization by these patient groups are remarkably consistent from year to year

- 342,247 Safety Net patients generated 1,184,805 encounters or 3.5 encounters per patient
  - 0.2 Discharges per person
  - 0.9 ER Visits
  - 0.6 Hospital OP visits
  - 1.8 Clinic visits
- 16% of patients generating 9% of the Total Encounters seen by Bexar County providers came from outside the county
- Homeless individuals make up just 2.4% of the Safety Net population absorbing 6% of the encounters or 9 encounters/person
- Patients with Mental Health diagnosis sought care across all venues
  - 10.8% of Safety Net (27% of Encounters)
  - Utilization of 8.8 encounters/patient

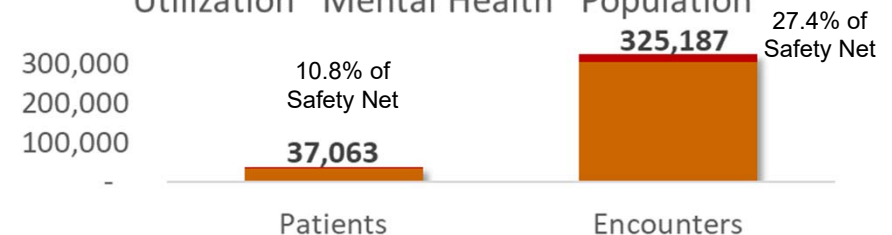
Utilization by "Safety Net" Population



Utilization by "Homeless" Population

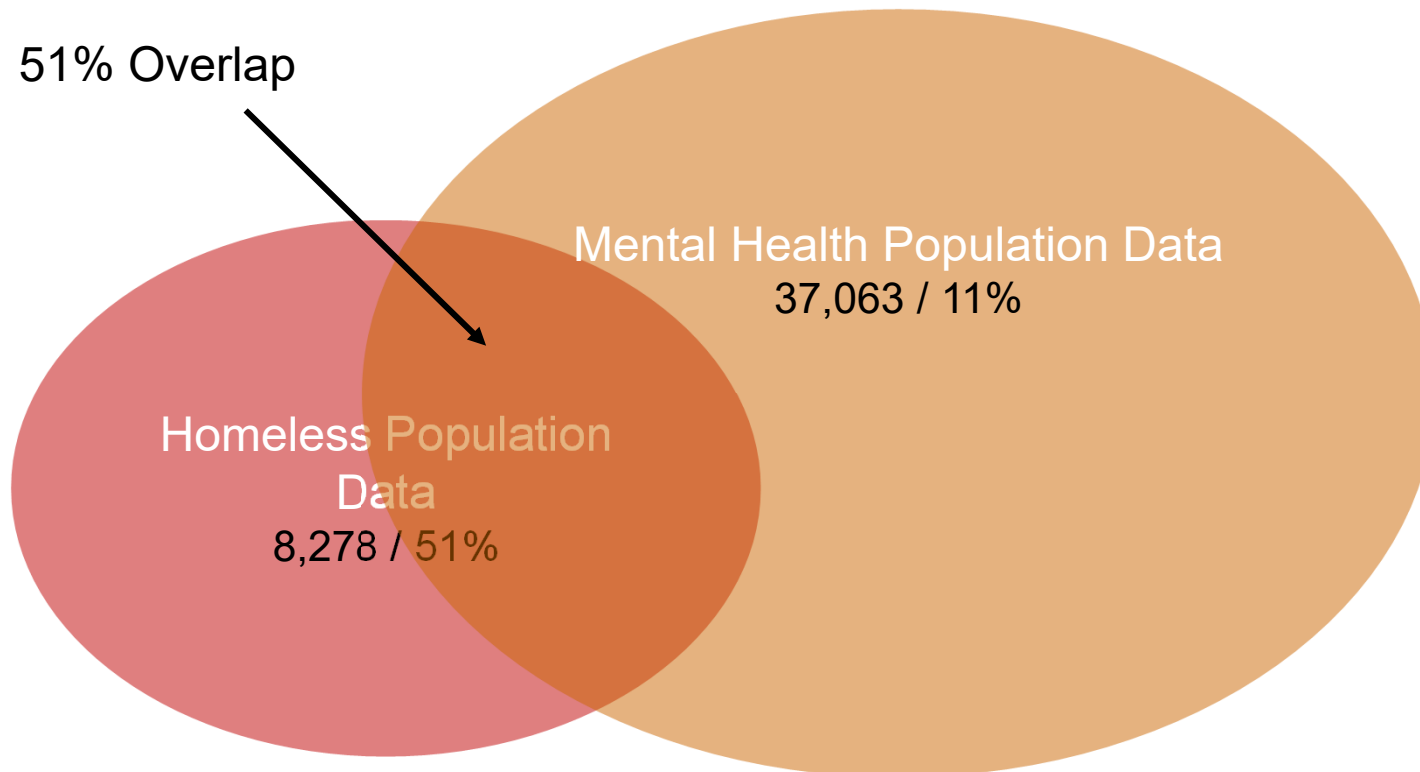


Utilization "Mental Health" Population



51% of **Homeless** patients are in the **Mental Health** population or 4,206 Homeless patients also have a primary Mental Health diagnosis.

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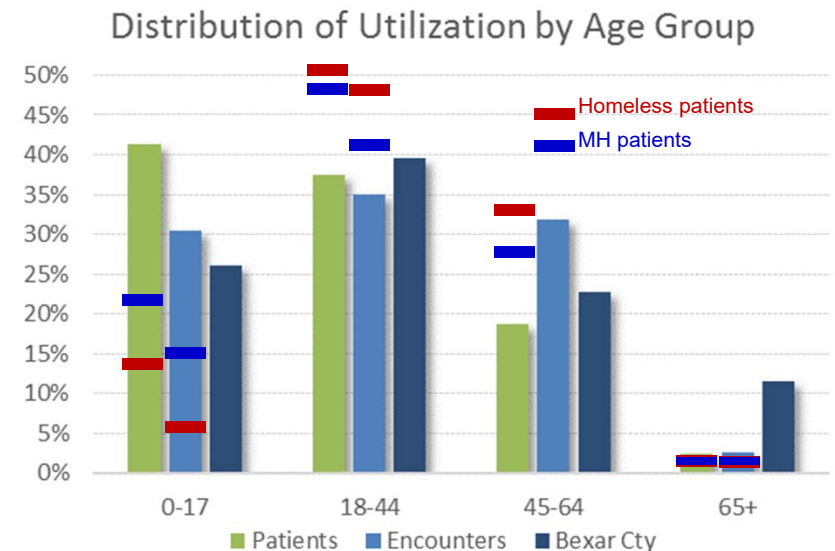
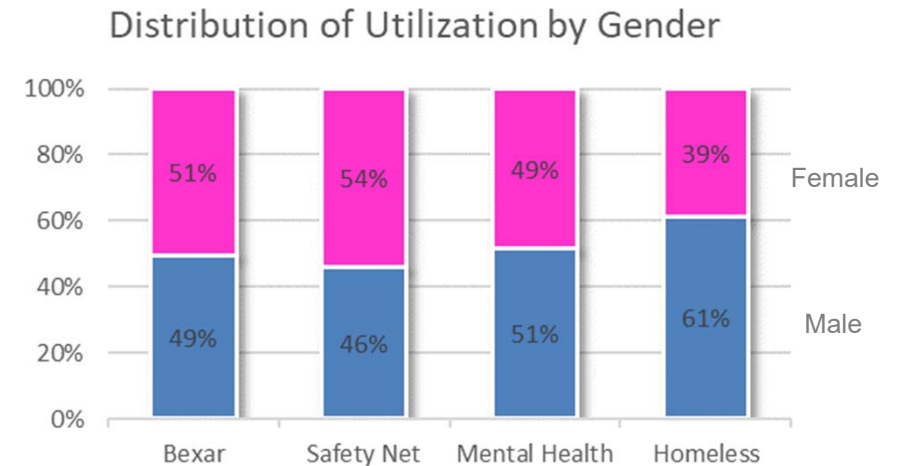


- This strong overlap may indicate that this is not a Haven for Hope problem and/or a homeless issue alone
  - Housing alone and/or improved workflows between Baptist, Methodist and Haven downtown will not solve the problem



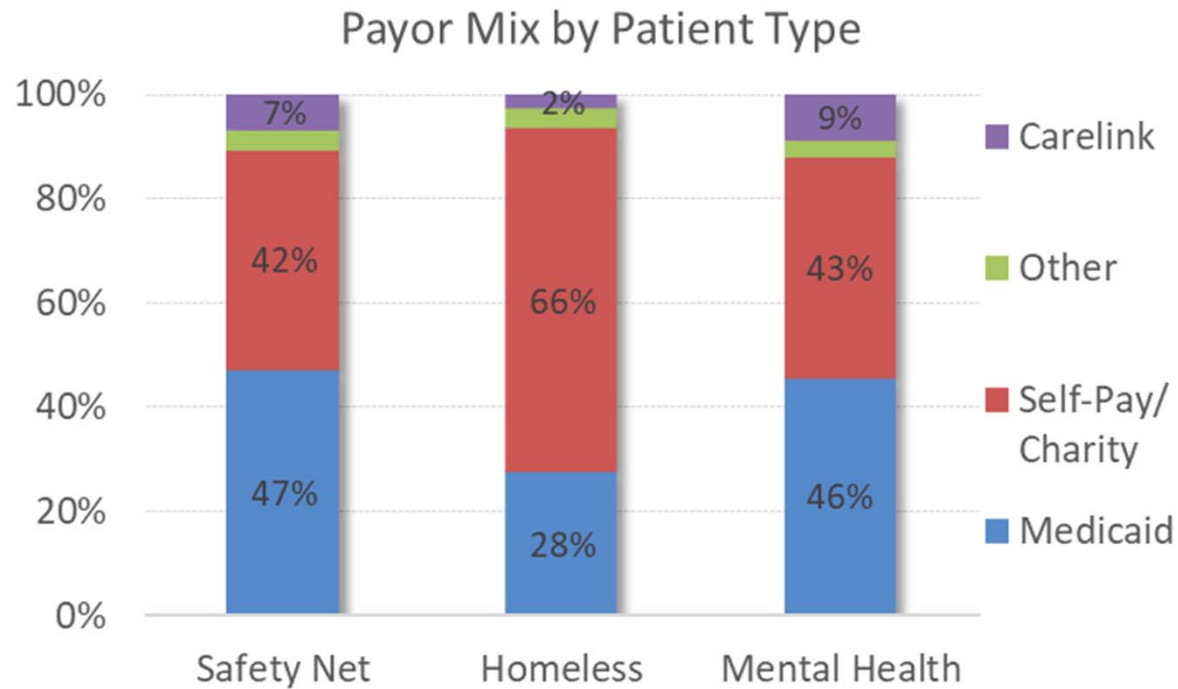
## The distribution of care utilization across the safety net population appears to be in line with the general demographic mix for Bexar County.

- When looking at the Gender and Age of patients within the data there are variations from Bexar County averages
  - Gender
    - Females make up 50.7% of Bexar County however they represent 54% of the safety net
      - Women on Medicaid skew the average
    - Men are slightly more likely to have mental health diagnosis (supported by US studies)
    - The majority of Homeless patients are male
  - Age
    - Data excludes Medicare causing large 65+ delta
    - Among homeless population the proportions skew toward 18-64
    - Encounters are more prevalent in the 45-64 age group
      - Particularly among Homeless and Mental Health populations
  - Race/Ethnicity
    - Race and/or Ethnicity was not captured or not accurately captured by most of the providers
    - Empirical data shows a significant racial/ethnic differences in mental health service use



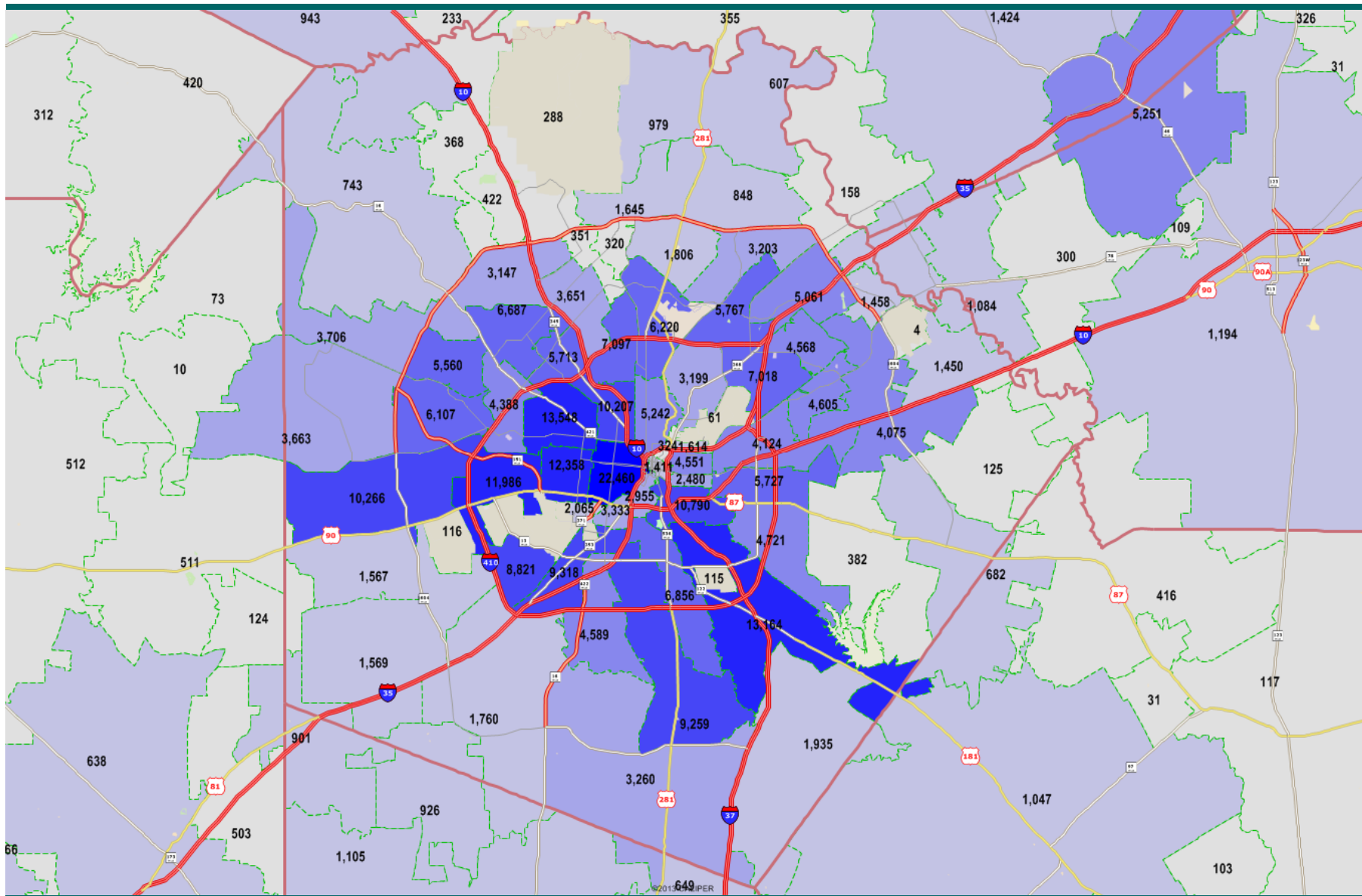
**By definition the patients included in this analysis fall under “Safety Net” payor classes. The majority are Medicaid. The percentage of Medicaid drops with Mental Health patients. For Homeless 66% are unfunded.**

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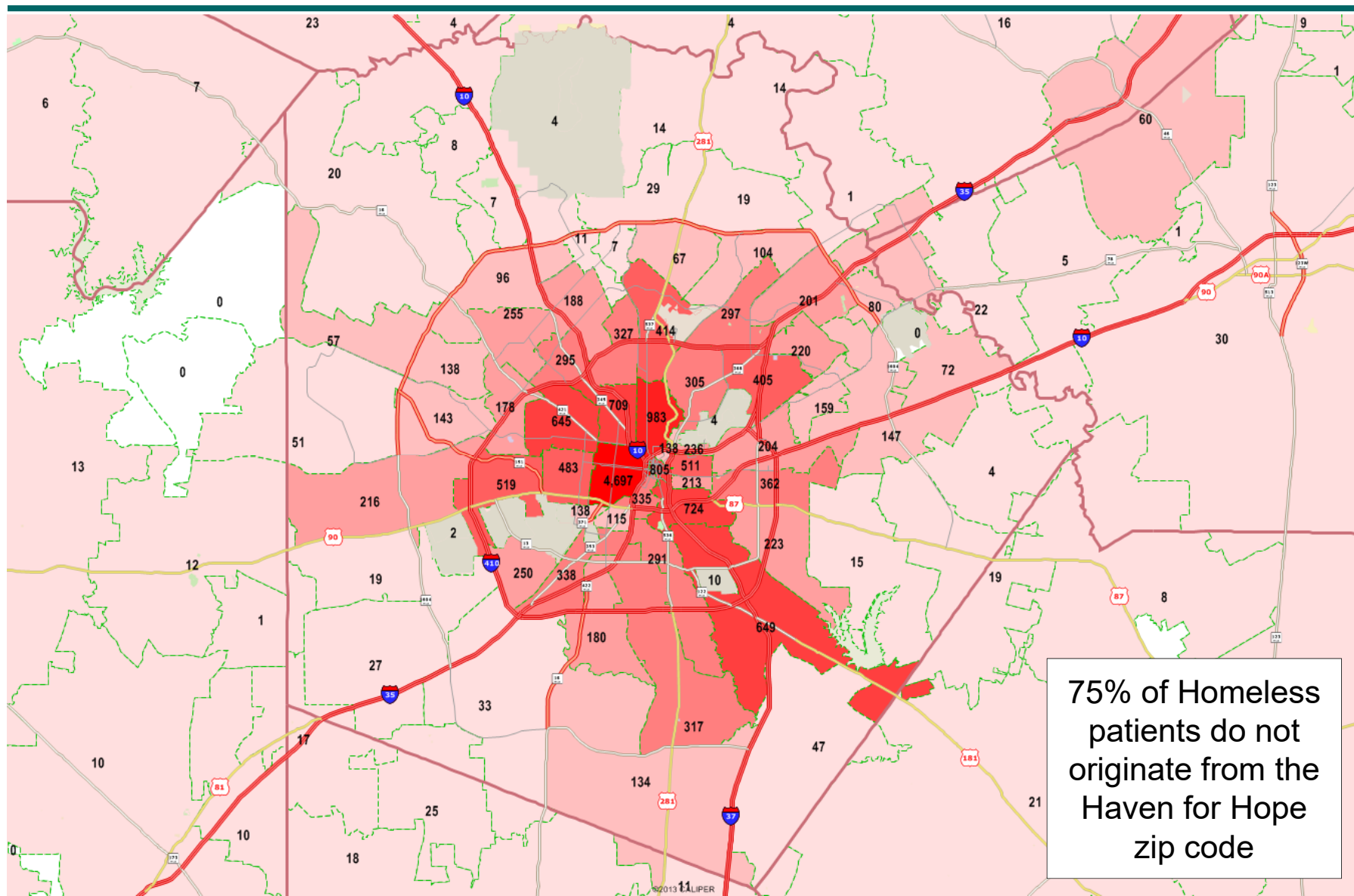
- 28% of patients identified as Homeless (or Near Homeless) had Medicaid coverage
  - Payor classification of last encounter in the data set (could be different throughout the year)
  - May indicate positive action by providers to sign patients up for Medicaid
- There may be additional patients to be considered (Medicare SSI, etc.) but these patients likely make up less than 2% of the total

**Safety Net patients originate from all areas of Bexar County but are more concentrated in southern and western markets.**



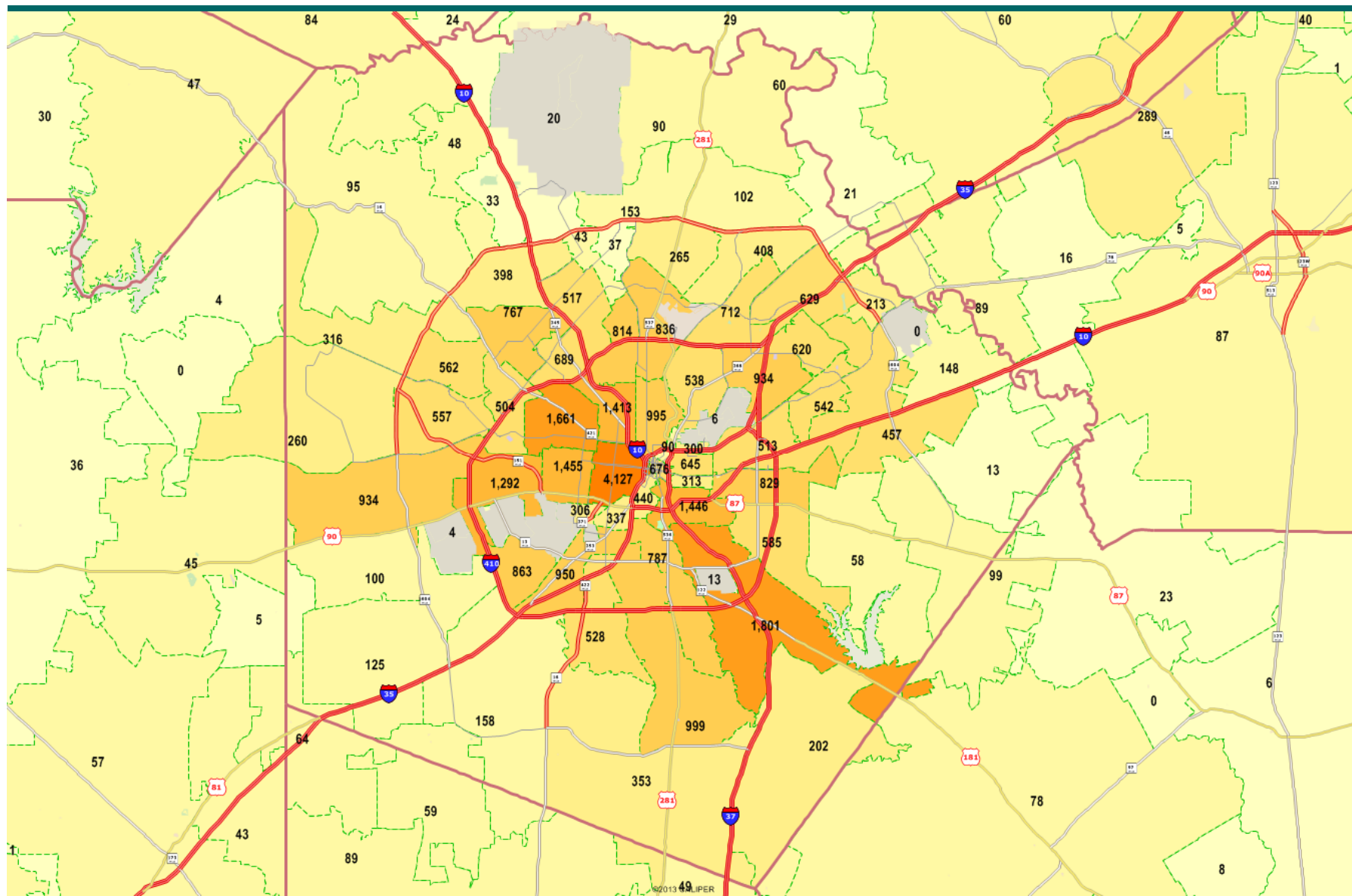
Note: Data from 2015-2016 study

**Homeless patients are much more concentrated with one zip code having 25% of the homeless population. However there is still significant distribution of homeless patients across much of the county.**



Note: Data from 2015-2016 study

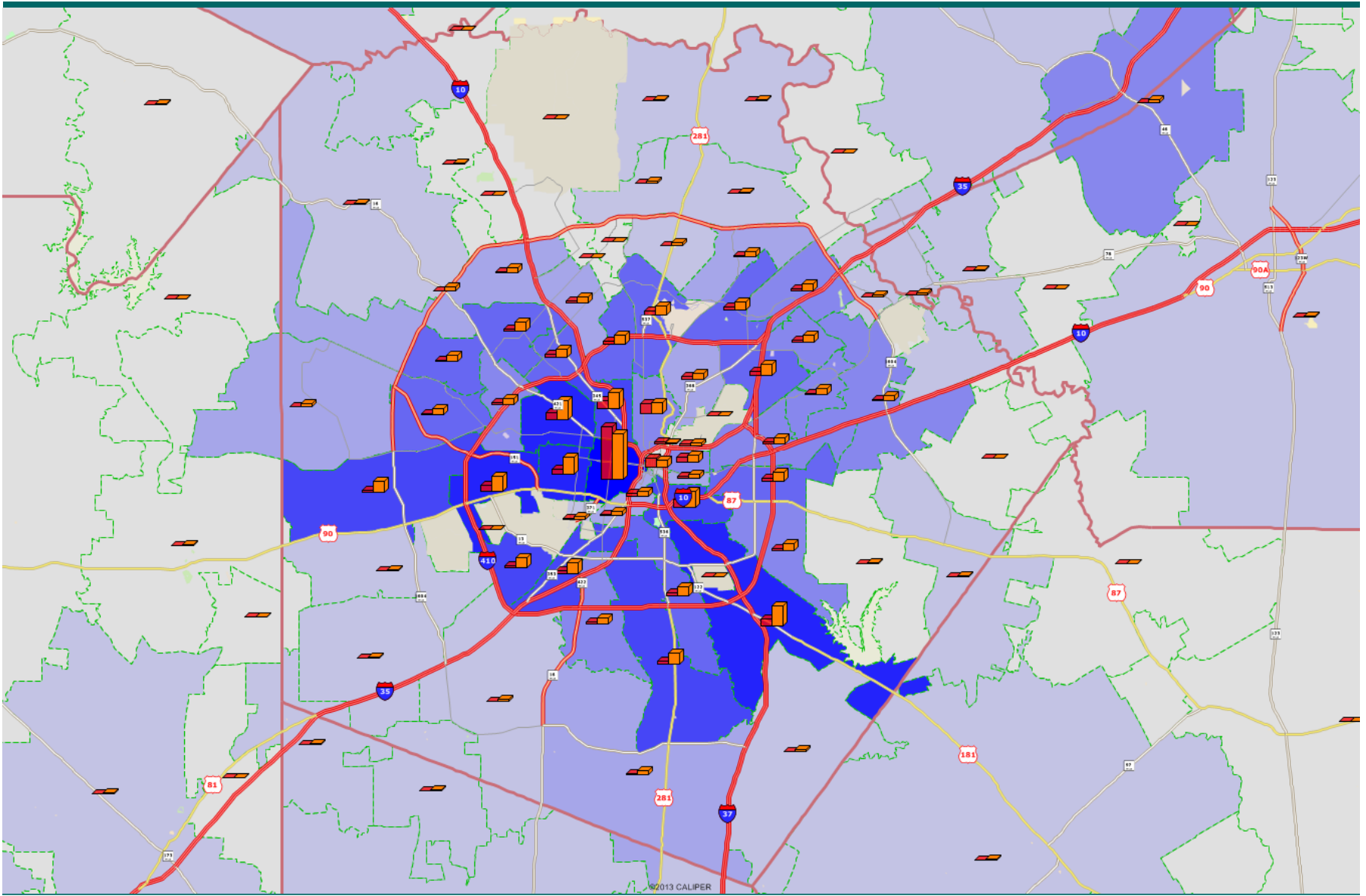
**Patients with MH/BH issues originate from across Bexar County (and outside) but are found in significantly greater numbers in a few key markets, not surprisingly those with larger homeless populations**



Note: Data from 2015-2016 study



**While Safety Net patients are widely distributed across the county Homeless and Mental Health patients are more concentrated in urban areas.**



Note: Data from 2015-2016 study

## Social determinants play a large role in overall health but does not determine where care is provided

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- The Emergency Medical Treatment and Labor Act (EMTALA) ensures that hospitals see all patients presenting to the Emergency Department with an emergency medical condition, regardless of citizenship, legal status, or ability to pay.
- Addressing social determinants will improve overall patient health more than any other single factor.

● — Health — ●



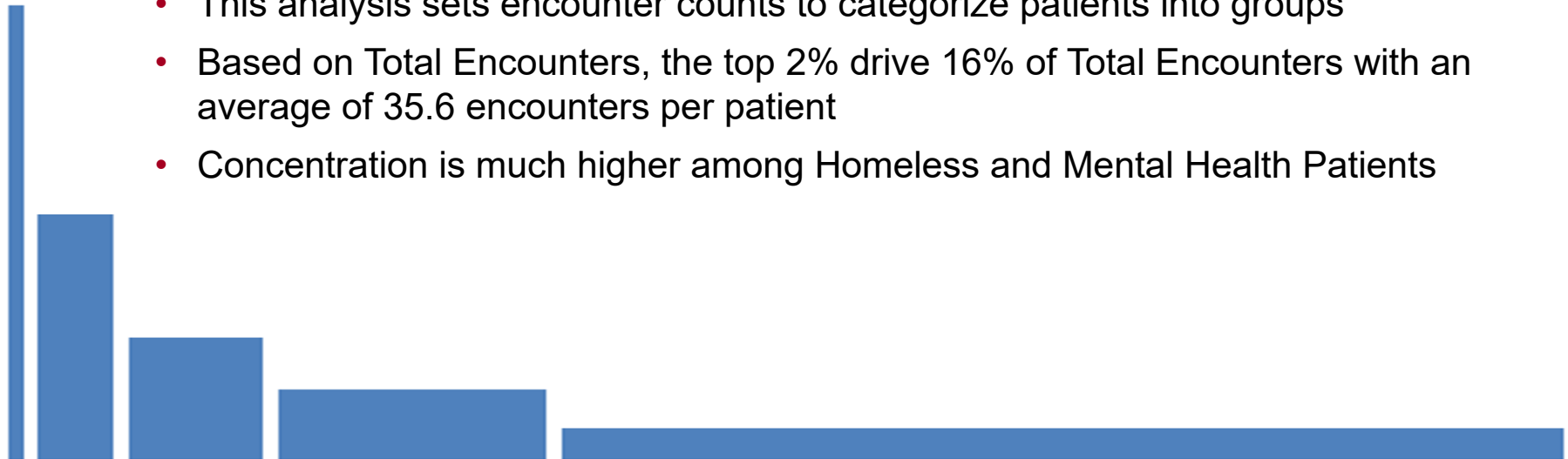
**Social determinants have an outsize impact on health**

*Yale Global Leadership Institute*

Two Percent of the Overall *Safety Net Population* had 24 or more encounters in the 12 month period.

### Safety Net Total

User Category	Encounters	Patients	Encounters	Distribution		Cumulative		Encounters /Year
				Patients	Encounters	Patients	Encounters	
1. High	>= 24	5,233	186,530	1.5%	15.7%	2%	16%	35.6
2. Mid high	12-23	14,472	231,268	4.2%	19.5%	6%	35%	16.0
3. Mid	6-11	31,699	247,606	9.3%	20.9%	15%	56%	7.8
4. Mid low	3-5	62,205	231,199	18.2%	19.5%	33%	76%	3.7
5. Low	1- 2	228,638	288,202	66.8%	24.3%	100%	100%	1.3
	-	342,247	1,184,805	100.0%	100.0%			3.5



- This analysis sets encounter counts to categorize patients into groups
- Based on Total Encounters, the top 2% drive 16% of Total Encounters with an average of 35.6 encounters per patient
- Concentration is much higher among Homeless and Mental Health Patients

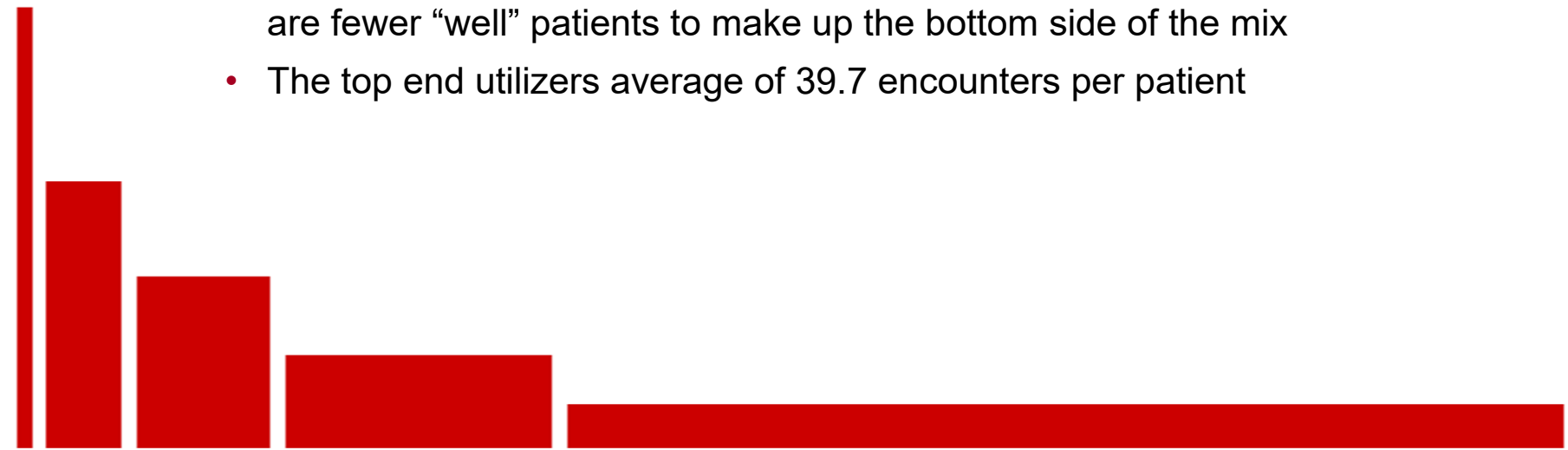


Among **Homeless** patients, 9% had 24 or more encounters in the 12 month period and over 85% of encounters came from the top third of patients.

#### Homeless Patient Total

User Category	Encounters	Patients	Encounters	Distribution		Cumulative		Encounters /Year
				Patients	Encounters	Patients	Encounters	
1. High	>= 24	757	30,017	9.1%	40.1%	9%	40%	39.7
2. Mid high	12-23	1,170	19,053	14.1%	25.5%	23%	66%	16.3
3. Mid	6-11	1,804	14,403	21.8%	19.3%	45%	85%	8.0
4. Mid low	3-5	1,995	7,731	24.1%	10.3%	69%	95%	3.9
5. Low	1- 2	2,552	3,585	30.8%	4.8%	100%	100%	1.4
		8,278	74,789	100.0%	100.0%			9.0

- For Homeless patients the cost curve skews to the right somewhat as there are fewer “well” patients to make up the bottom side of the mix
- The top end utilizers average of 39.7 encounters per patient

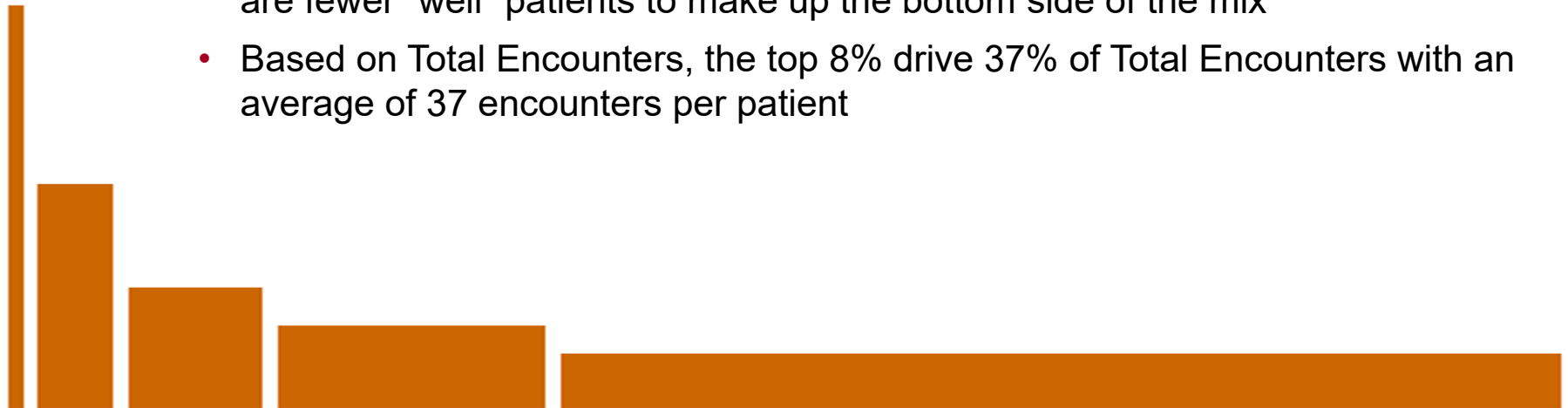


Among **Mental Health** patients, 8% had 24 or more encounters in the 12 months. Concentration among the highest utilizers is the most intense.

#### Mental Health Patient Total

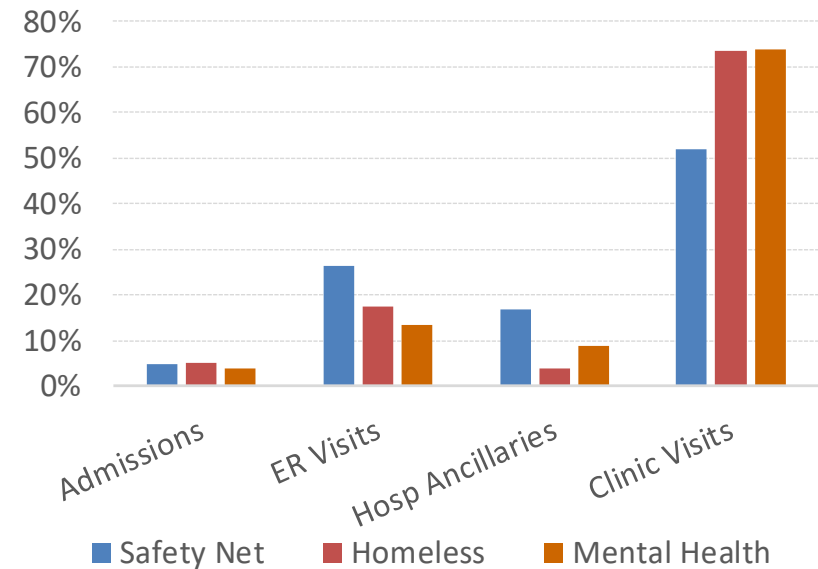
User Category	Encounters	Patients	Encounters	Distribution		Cumulative		Encounters /Year
				Patients	Encounters	Patients	Encounters	
1. High	>= 24	3,071	113,733	8.3%	35.0%	8%	35%	37.0
2. Mid high	12-23	5,956	97,577	16.1%	30.0%	24%	65%	16.4
3. Mid	6-11	8,130	65,297	21.9%	20.1%	46%	85%	8.0
4. Mid low	3-5	8,345	32,408	22.5%	10.0%	69%	95%	3.9
5. Low	1- 2	11,561	16,172	31.2%	5.0%	100%	100%	1.4
	-	37,063	325,187	100.0%	100.0%			8.8

- For Mental Health patients the cost curve skews to the right as well as there are fewer “well” patients to make up the bottom side of the mix
- Based on Total Encounters, the top 8% drive 37% of Total Encounters with an average of 37 encounters per patient



**The safety net population has a high level of clinical utilization. As a percent of total encounters clinic visits dominate for Homeless and Mental Health.**

Visit Category	Safety Net	Homeless	Mental Health
Admissions	57,683	3,723	12,896
ER Visits	311,919	13,119	43,642
Hosp Ancillaries	198,691	2,986	28,951
Clinic Visits	616,512	54,961	239,698
<b>Total</b>	<b>1,184,805</b>	<b>74,789</b>	<b>325,187</b>



- The total volume of encounters absorbed by the Safety Net population is almost 1.2 million
  - Homeless and Mental Health volumes are subsets of the Safety Net total
- Inpatient admissions are a fairly small percentage of the total number of encounters as ambulatory encounters
  - Smaller percentage of total for Homeless and Mental Health

## There is significant patient crossover among the major systems in Bexar County for total *Safety Net* patients

% of patients also having encounters at →

Source	Baptist	Centromed	CHCS	Christus	Methodist	MHM	Nix	SW General	University
Baptist	75,616	1,351	2,619	6,571	7,950	207	2,175	3,150	12,960
Centromed	1,351	5,082	1,344	625	892	26	604	232	1,947
CHCS	2,619	1,344	13,376	1,157	1,888	76	1,514	858	4,283
Christus	6,571	625	1,157	90,414	4,045	52	1,126	2,500	12,385
Methodist	7,950	892	1,888	4,045	70,928	808	1,492	1,413	9,848
MHM	207	26	76	52	808	2,694	19	65	410
Nix	2,175	604	1,514	1,126	1,492	19	12,076	621	2,604
SW General	3,150	232	858	2,500	1,413	65	621	18,193	3,608
University*	12,960	1,947	4,283	12,385	9,848	410	2,604	3,608	127,284

\*Includes Daughters Of Charity

- This represents the challenge for any provider to put together a coordinated care plan for any patient
- Patients from the CentroMed have the greatest level of crossover with other systems (data for CentroMed is Homeless only)
- UHS as a system overlaps a significant number of patients with all other programs
- MHM has both the least crossover of patients and is least utilized among the programs which is most likely related to scale

\*Includes Daughters Of Charity and care provided to jail population

Note: Totals exclude pediatric oncology and newborns

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% of patients also having encounters at →

Source	Baptist	Centromed	CHCS	Christus	Methodist	MHM	Nix	SW General	University
Baptist	100.0%	1.8%	3.5%	8.7%	10.5%	0.3%	2.9%	4.2%	17.1%
Centromed	26.6%	100.0%	26.4%	12.3%	17.6%	0.5%	11.9%	4.6%	38.3%
CHCS	19.6%	10.0%	100.0%	8.6%	14.1%	0.6%	11.3%	6.4%	32.0%
Christus	7.3%	0.7%	1.3%	100.0%	4.5%	0.1%	1.2%	2.8%	13.7%
Methodist	11.2%	1.3%	2.7%	5.7%	100.0%	1.1%	2.1%	2.0%	13.9%
MHM	7.7%	1.0%	2.8%	1.9%	30.0%	100.0%	0.7%	2.4%	15.2%
Nix	18.0%	5.0%	12.5%	9.3%	12.4%	0.2%	100.0%	5.1%	21.6%
SW General	17.3%	1.3%	4.7%	13.7%	7.8%	0.4%	3.4%	100.0%	19.8%
University*	10.2%	1.5%	3.4%	9.7%	7.7%	0.3%	2.0%	2.8%	100.0%

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Note: Totals exclude pediatric oncology and newborns

The picture changes significantly for Homeless patients. Endemic to **Homeless** populations, the overlap in Bexar County is significant across almost all providers.

% of patients also having encounters at →

Source	Baptist	Centromed	CHCS	Christus	Methodist	MHM	Nix	SW General	University
Baptist	2,626	1,319	995	293	787	50	663	255	1,242
Centromed	1,319	4,714	1,334	449	874	26	603	225	1,853
CHCS	995	1,334	2,802	202	763	36	669	259	1,325
Christus	293	449	202	834	192	10	152	96	371
Methodist	787	874	763	192	1,738	124	439	162	866
MHM	50	26	36	10	124	408	7	10	68
Nix	663	603	669	152	439	7	1,161	162	735
SW General	255	225	259	96	162	10	162	499	277
University	1,242	1,853	1,325	371	866	68	735	277	3,366

\*Includes Daughters Of Charity

- The percentage of overlap is much greater for Homeless patients than the Safety Net as a whole
- UHS continues to have high cross utilization among all other providers
- *A high level of crossover indicates no one provider is able to “see” the entire care episode and care is highly fragmented*

The picture changes significantly for Homeless patients. Endemic to **Homeless** populations, the overlap in Bexar County is significant across almost all providers.

% of patients also having encounters at →

Source	Baptist	Centromed	CHCS	Christus	Methodist	MHM	Nix	SW General	University
Baptist	100.0%	50.2%	37.9%	11.2%	30.0%	1.9%	25.2%	9.7%	47.3%
Centromed	28.0%	100.0%	28.3%	9.5%	18.5%	0.6%	12.8%	4.8%	39.3%
CHCS	35.5%	47.6%	100.0%	7.2%	27.2%	1.3%	23.9%	9.2%	47.3%
Christus	35.1%	53.8%	24.2%	100.0%	23.0%	1.2%	18.2%	11.5%	44.5%
Methodist	45.3%	50.3%	43.9%	11.0%	100.0%	7.1%	25.3%	9.3%	49.8%
MHM	12.3%	6.4%	8.8%	2.5%	30.4%	100.0%	1.7%	2.5%	16.7%
Nix	57.1%	51.9%	57.6%	13.1%	37.8%	0.6%	100.0%	14.0%	63.3%
SW General	51.1%	45.1%	51.9%	19.2%	32.5%	2.0%	32.5%	100.0%	55.5%
University	36.9%	55.1%	39.4%	11.0%	25.7%	2.0%	21.8%	8.2%	100.0%

\*Includes Daughters Of Charity

- The percentage of overlap is much greater for Homeless patients than the Safety Net as a whole
- UHS continues to have high cross utilization among all other providers
- *A high level of crossover indicates no one provider is able to “see” the entire care episode and care is highly fragmented*

When we isolate for **Mental Health** patients in the Safety Net we find that crossover is generally high (driven in large part by the strong overlap with Homeless populations)

% of patients also having encounters at →

Source	Baptist	Centromed	CHCS	Christus	Methodist	MHM	Nix	SW General	University
Baptist	8,792	831	2,611	979	2,020	101	1,313	957	3,600
Centromed	831	2,299	1,341	208	596	23	484	159	1,172
CHCS	2,611	1,341	13,235	1,128	1,884	76	1,508	855	4,255
Christus	979	208	1,128	6,072	773	26	625	405	2,131
Methodist	2,020	596	1,884	773	6,861	301	970	463	2,576
MHM	101	23	76	26	301	828	12	29	154
Nix	1,313	484	1,508	625	970	12	4,682	449	1,878
SW General	957	159	855	405	463	29	449	2,615	1,119
University	3,600	1,172	4,255	2,131	2,576	154	1,878	1,119	16,375

\*Includes Daughters Of Charity

- No one program stands out as a focal point



When we isolate for **Mental Health** patients in the Safety Net we find that crossover is generally high (driven in large part by the strong overlap with Homeless populations)

% of patients also having encounters at →

Source	Baptist	Centromed	CHCS	Christus	Methodist	MHM	Nix	SW General	University
Baptist	100.0%	9.5%	29.7%	11.1%	23.0%	1.1%	14.9%	10.9%	40.9%
Centromed	36.1%	100.0%	58.3%	9.0%	25.9%	1.0%	21.1%	6.9%	51.0%
CHCS	19.7%	10.1%	100.0%	8.5%	14.2%	0.6%	11.4%	6.5%	32.1%
Christus	16.1%	3.4%	18.6%	100.0%	12.7%	0.4%	10.3%	6.7%	35.1%
Methodist	29.4%	8.7%	27.5%	11.3%	100.0%	4.4%	14.1%	6.7%	37.5%
MHM	12.2%	2.8%	9.2%	3.1%	36.4%	100.0%	1.4%	3.5%	18.6%
Nix	28.0%	10.3%	32.2%	13.3%	20.7%	0.3%	100.0%	9.6%	40.1%
SW General	36.6%	6.1%	32.7%	15.5%	17.7%	1.1%	17.2%	100.0%	42.8%
University	22.0%	7.2%	26.0%	13.0%	15.7%	0.9%	11.5%	6.8%	100.0%

\*Includes Daughters Of Charity

- No one program stands out as a focal point

## When multiple providers provide uncoordinated care, costs increase and patient outcomes are worse. However, in the current environment, no one provider can build a care management plan for these patients.

- Another look at the fragmentation of care is the number of patients with only one “source” or system provider of care
  - Among the total Safety Net population 83% of patients access only one system
  - Among Homeless and Mental Health populations 59% of patients seek care across multiple systems

Distinct Sources	Patients	Safety Net %	Patients	Homeless %	Patients	Mental Health %
1	271,466	83%	3,161	41%	20,339	58%
2	45,628	14%	2,250	29%	9,450	27%
3	7,861	2%	1,235	16%	3,313	10%
4	1,623	0%	605	8%	1,124	3%
5	444	0%	296	4%	390	1%
6	151	0%	124	2%	147	0%
7	33	0%	28	0%	33	0%
8	4	0%	4	0%	4	0%
<b>Total</b>	<b>327,210</b>	<b>100%</b>	<b>7,703</b>	<b>100%</b>	<b>34,800</b>	<b>100%</b>

### Homeless Patients Cared for by a Single Source

Source	Single "Source"	% of Total
MHM	329	51%
Centromed	1,330	32%
CHCS	416	18%
Christus	116	18%
University*	462	15%
Baptist	358	15%
Methodist	104	6%
SW General	25	5%
Nix	21	2%

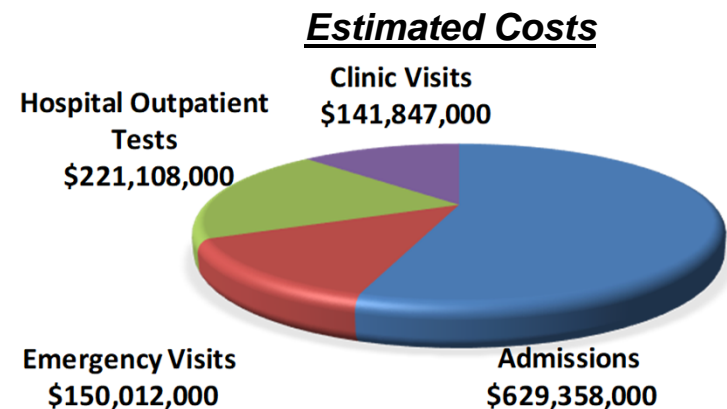
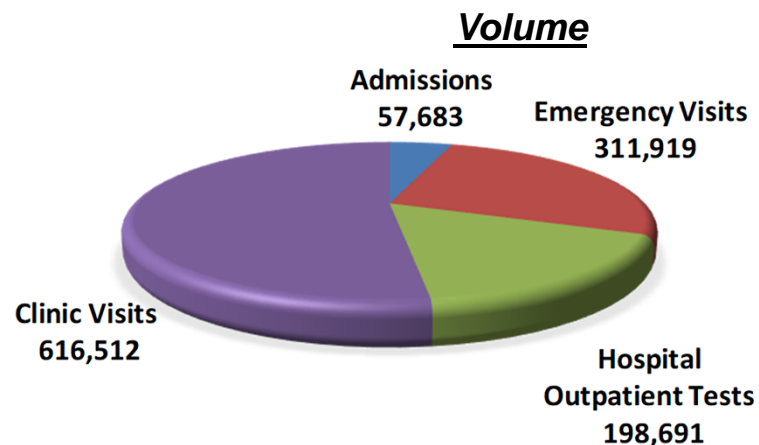
- Every system experiences a relatively high level of Homeless patients crossing between providers to access care
- For Homeless patients a relatively small percentage seek care from a “single source”. For example, only 41% of Homeless patients coming to Baptist only go to Baptist

\*Includes Daughters Of Charity and care provided to jail population

## The Total Cost of providing healthcare for the *Safety Net* population as a whole exceeds \$1.1 Billion annually.

- The volume and cost of care provided for the *Safety Net* population as a whole is widely distributed across the providers.

	Estimated Totals	Admissions	Emergency Visits	Hospital Outpatient Tests	Clinic Visits
Total Cases	1,184,805	57,683	311,919	198,691	616,512
Total Est Cost	\$1,142,325,000	\$629,358,000	\$150,012,000	\$221,108,000	\$141,847,000



- University provides the bulk of encounters in all categories except Emergency Visits
- CHCS provides a large percentage of encounters across a population
- CentroMed visit data is restricted to Homeless individuals throughout the dataset
- Estimated costs are highly weighted to those systems providing more intense services such as inpatient acute care and emergency services

Note: Totals exclude pediatric oncology and newborns

Hospital Ancillaries include outpatient services such as radiology, physical therapy, etc.

**The Total Cost of providing healthcare for the *Safety Net* population as a whole exceeds \$1.1 Billion annually.**

SOURCE	Total Estimated Cost		Admissions		Emergency Visits		Hospital Outpatient Tests		Clinic Visits	
Baptist	\$141,240,000	12%	98,993,000	16%	23,530,000	16%	18,718,000	8%	-	
Centromed	\$2,684,000	0%	-		-		-		2,684,000	2% Homeless Only
CHCS	\$26,385,000	2%	-		-		-		26,385,000	19%
Christus	\$229,880,000	20%	104,752,000	17%	38,455,000	26%	86,673,000	39%	-	
Methodist	\$136,993,000	12%	96,035,000	15%	26,341,000	18%	14,617,000	7%	-	
MHM	\$2,374,000	0%	-		-		-		2,374,000	2%
Nix	\$42,594,000	4%	31,032,000	5%	3,022,000	2%	8,539,000	4%	-	
SW General	\$56,217,000	5%	31,686,000	5%	16,739,000	11%	7,791,000	4%	-	
University*	\$503,958,000	44%	266,860,000	42%	41,924,000	28%	84,770,000	38%	110,404,000	78%
<b>Total</b>	<b>\$1,142,325,000</b>		<b>629,358,000</b>		<b>150,012,000</b>		<b>221,108,000</b>		<b>141,847,000</b>	

- Estimated costs are highly weighted to those systems providing more intense services such as inpatient acute care and emergency services

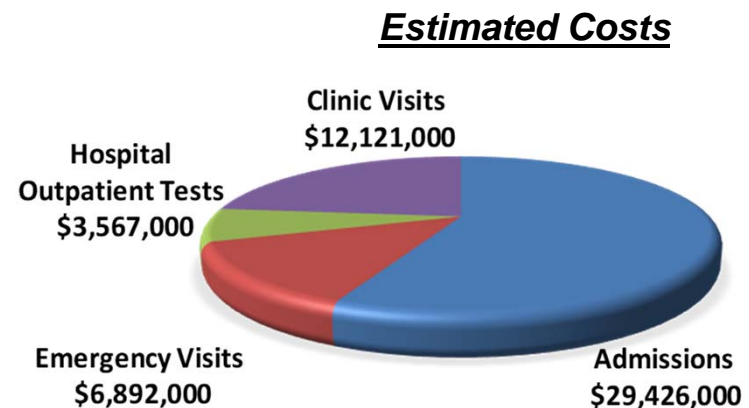
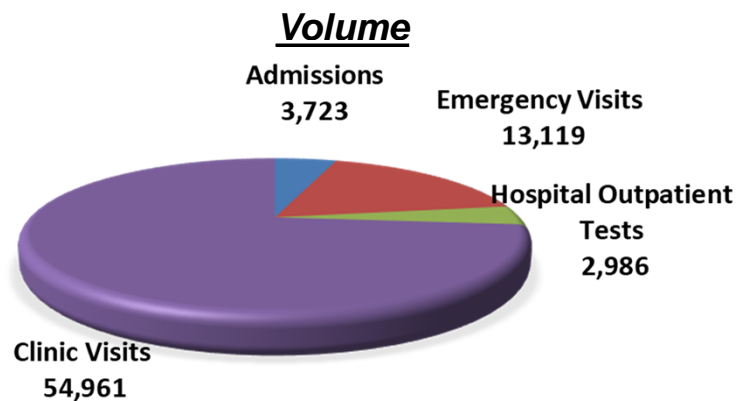
\*Includes Daughters Of Charity and care provided to jail population

Note: Totals exclude pediatric oncology and newborns

## The Total Cost of providing for the *Homeless* population as a whole is almost \$50 million annually.

- The vast majority of encounters for *Homeless* patients is through CHCS via clinical visits. No single provider is the predominant provider of Homeless care across all venues.

	Estimated Totals	Admissions	Emergency Visits	Hospital Outpatient Tests	Clinic Visits
Total Cases	74,789	3,723	13,119	2,986	54,961
Total Est Cost	\$52,003,000	\$29,426,000	\$6,892,000	\$3,567,000	\$12,121,000



- University provides the bulk of Hospital Ancillary encounters while Baptist has the greatest number of discharges and ER visits
- CHCS provides the overwhelming majority of encounters to Homeless persons
- Estimated costs are highly weighted to those systems providing more intense services such as inpatient acute care and emergency services

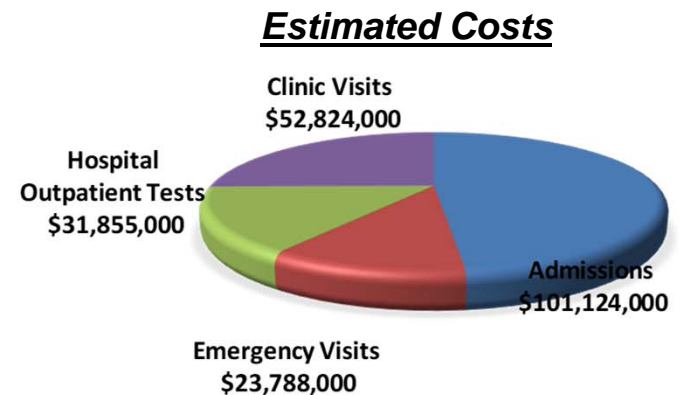
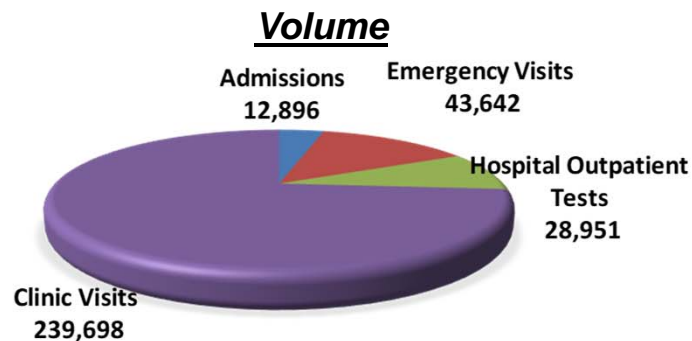
Note: Totals exclude pediatric oncology and newborns

Hospital Ancillaries include outpatient services such as radiology, physical therapy, etc.

## The Total Cost of providing for the Safety Net population with *Mental Health* issues exceeds \$200 million annually.

- CHCS is the leading provider of encounters for patients with *Mental Health* issues driven by the large overlap of Homeless and Mental Health. No single provider is the predominant provider of Mental Health care across all venues.

	Estimated Totals	Admissions	Emergency Visits	Hospital Outpatient Tests	Clinic Visits
Total Cases	325,187	12,896	43,642	28,951	239,698
Total Est Cost	\$209,591,000	\$101,124,000	\$23,788,000	\$31,855,000	\$52,824,000

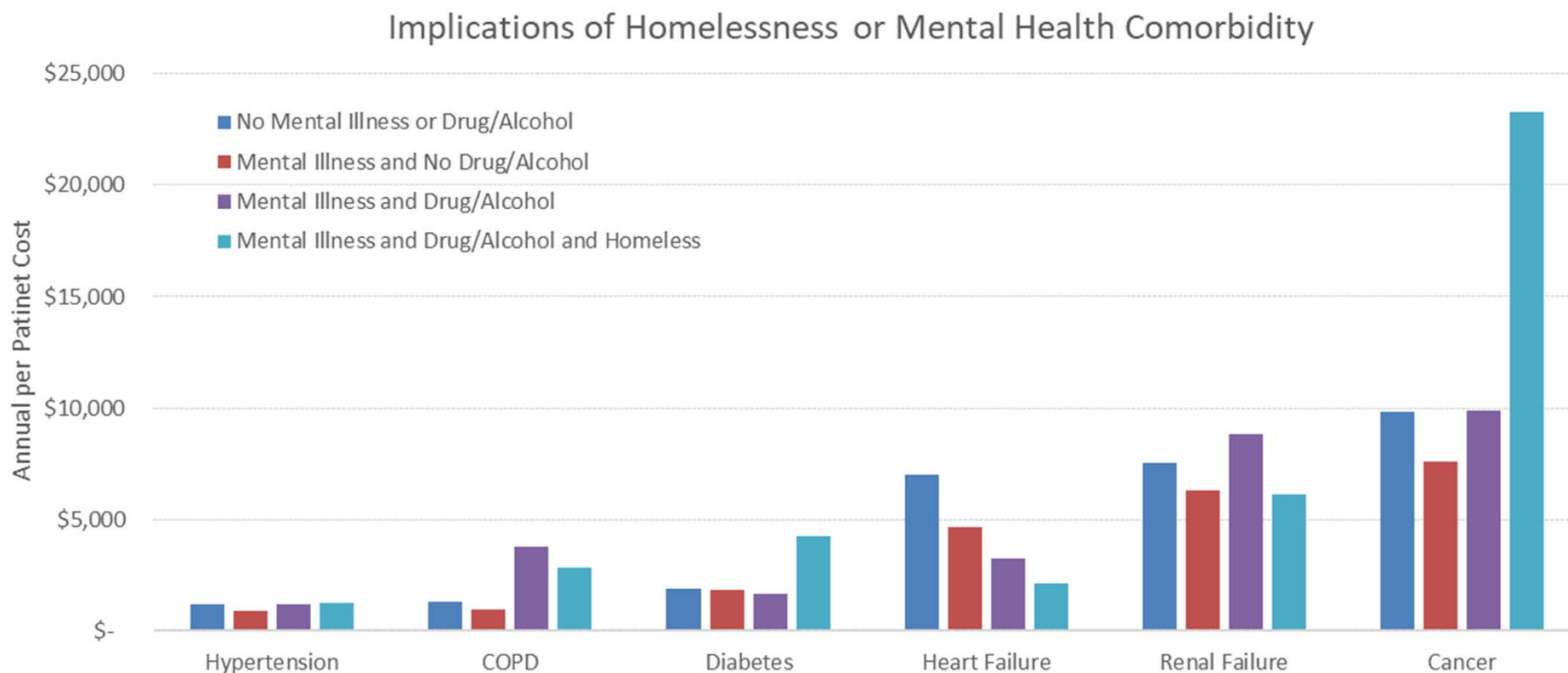


- University provides the bulk of Hospital Ancillary encounters while Baptist has the greatest number of discharges and ER visits
- CHCS provides the overwhelming majority of encounters to Homeless persons
- Estimated costs are highly weighted to those systems providing more intense services such as inpatient acute care and emergency services

Note: Totals exclude pediatric oncology and newborns

Hospital Ancillaries include outpatient services such as radiology, physical therapy, etc.

## The cost of caring for patients rises considerably when co-morbid conditions of Homelessness, Mental Health and Substance Abuse are considered.



## EMS Utilization

Segment	Unique Patients	Hospital IP/ED Encounters	EMS Runs	EMS Runs to Study Providers	EMS Runs to non-Study Providers	% Study Encounters with EMS Run
Safety Net	313,985	320,804	29,705	29,312	393	9%
Homeless	14,614	21,622	5,729	5,633	96	26%
Mental Hlth	33,810	47,175	9,524	9,390	134	20%
Homeless	5%	7%	19%	19%	24%	26%
Mental Hlth	11%	15%	32%	32%	34%	20%

- In the study data, 9% of all IP/ED encounters were associated with an EMS run. For Homeless and Mental Health Patients 26% and 20% of total encounters included EMS support
- In the study data there were almost 30,000 annual EMS runs within the Safety Net population
  - Where the Homeless population made up just 5% of the total Safety Net they generated almost 20% of the total Safety Net EMS runs
  - Patients with Mental Health as a primary diagnosis make up 11% of the Safety Net population but generated almost 32% of the total Safety Net EMS runs



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## ***Bexar County Super-Utilizers***

## What do Bexar County Super-Utilizers look like?

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- Within our initial sample the patients that met the “super-utilizer” definition are extremely diverse. There is not a single “typical” patient type. Many have high levels of use across all services while others “super-utilization” is very focused with one provider or service

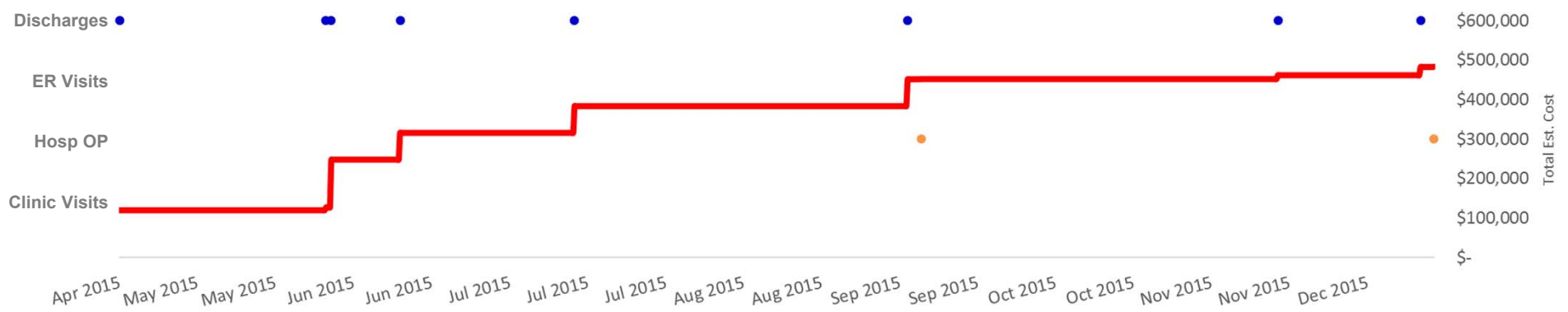
### Within the sample data

- Annual **Emergency Department** visits ranged from 1 to 184
- Annual **Inpatient Admissions** ranged from a low of 1 to a high of 36
- **Hospital Outpatient** service use ranged widely
  - Low of 0 to a high of 64 unique visits to a hospital based ancillary service
  - Lab and radiology were the most commonly accessed services
- **Clinic Visits** were far and away the most common service utilized
  - Again the range of use was wide with many patients not having a single visit to 8 patients who had over 100 clinic visits
- 1 out of 5 are currently homeless
- Many are insured with 61% covered by Medicaid
  - Higher % of Uninsured in the ED
- Diagnoses vary but most have multiple chronic conditions
  - 5 out of 10 have an indication of mental illness
  - 5 out of 10 have an indication of current substance abuse problems

## Bexar County Super Utilizer Profiles

### *Meet Ms. M – Most Expensive Patient*

- Ms. M is a 35-45 year old female. She is not homeless. Over the past year she has had 10 encounters with Bexar County providers with cost estimated at \$484,000
- She has no health insurance coverage
- Her care is exclusively at Methodist. 80% of encounters are inpatient admissions
- One ambulance call within one year
- Medical Problems
  - Pulmonary fibrosis
  - Interstitial emphysema
  - Myopathy
  - Addictions
- Utilization – 10 Total Encounters
  - 8 Inpatient Admissions
    - TeXsan
    - Stone Oak
    - Specialty & Transplant
  - 2 Hospital OP Visits

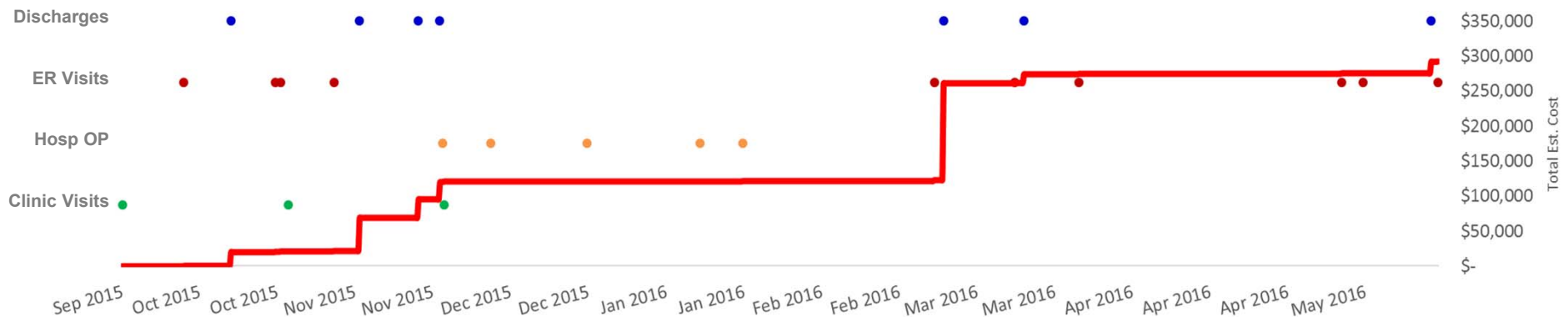


Patient information has been De-identified but utilization and cost data is accurate. These patients are representative of the diverse population of the Bexar County community

## Bexar County Super Utilizer Profiles

### *Meet Mr. G – 5<sup>th</sup> Most Expensive Homeless Patient*

- Mr. G is a 55-65 year old male. He is currently homeless. Over the past year he has had 25 encounters with Bexar County providers with cost estimated at \$292,000
- He has sought care with Baptist, CentroMed, Nix and UHS
- Utilized EMS for 53% of Hospital IP/ER visits (9 runs)
- Medical Problems
  - Osteoarthritis
  - Malnutrition
  - Anemia
  - Encephalitis
- Utilization – 25 Total Encounters
  - 7 Inpatient Admission
  - 10 Emergency Room Visits
  - 3 Clinic Visits
  - 5 Hospital OP Visits

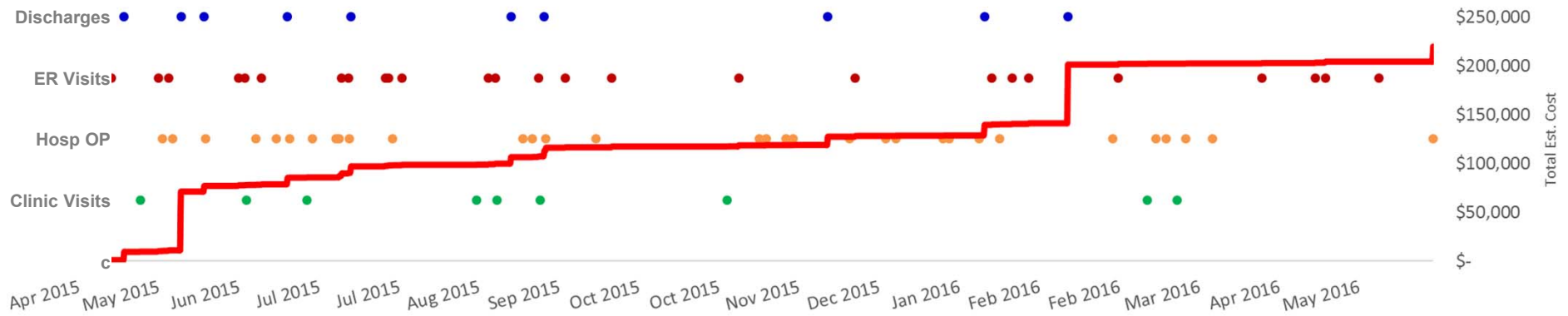


Patient information has been De-identified but utilization and cost data is accurate. These patients are representative of the diverse population of the Bexar County community

## Bexar County Super Utilizer Profiles

### *Meet Ms. C – Homeless High Utilizer*

- Ms. C is a 45-55 year old female. She is currently homeless. Over the past year she has had 82 encounters with Bexar County providers with cost estimated at \$220,000
- She has Medicaid coverage via Superior Star Plus
- She has sought care with Baptist, Christus, Nix and UHS
- Utilized EMS services 11 times or 29% of Hospital Inpatient or ER visits
- Medical Problems
  - Urinary dysfunction
  - Chronic bronchitis / COPD
  - Hypertensive disease
  - Congestive heart failure
- Utilization – 82 Total Encounters
  - 10 Inpatient Admission
  - 28 Emergency Room Visits
  - 10 Clinic Visits
  - 34 Hospital OP Visits

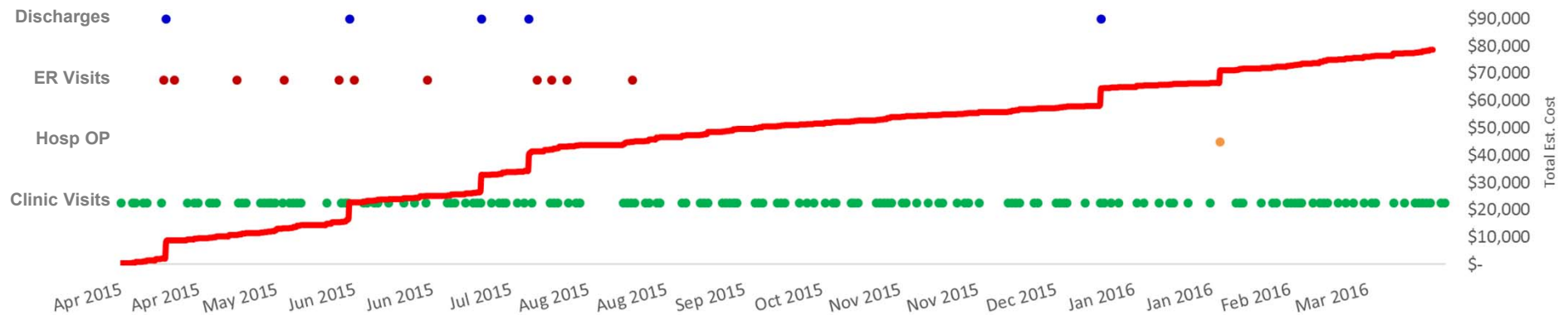


Patient information has been De-identified but utilization and cost data is accurate. These patients are representative of the diverse population of the Bexar County community

## Bexar County Super Utilizer Profiles

### *Meet Ms. X – Individual with the greatest number of encounters*

- Ms. X is a 45-55 year old female. She is currently homeless. Over the past year she has had 246 encounters with Bexar County providers with cost estimated at \$79,000
- She has Medicaid coverage via Superior
- The vast majority of encounters are CHCS clinical visits with fairly low cost
- 2 Ambulance runs within the one year period
- Medical Problems
  - Schizoaffective disorder
  - Suicidal Ideation
  - Diabetes mellitus
- Utilization – 246 Total Encounters
  - 5 Inpatient Admission
  - 11 Emergency Room Visits
  - 229 Clinic Visits
  - 1 Hospital OP Visits

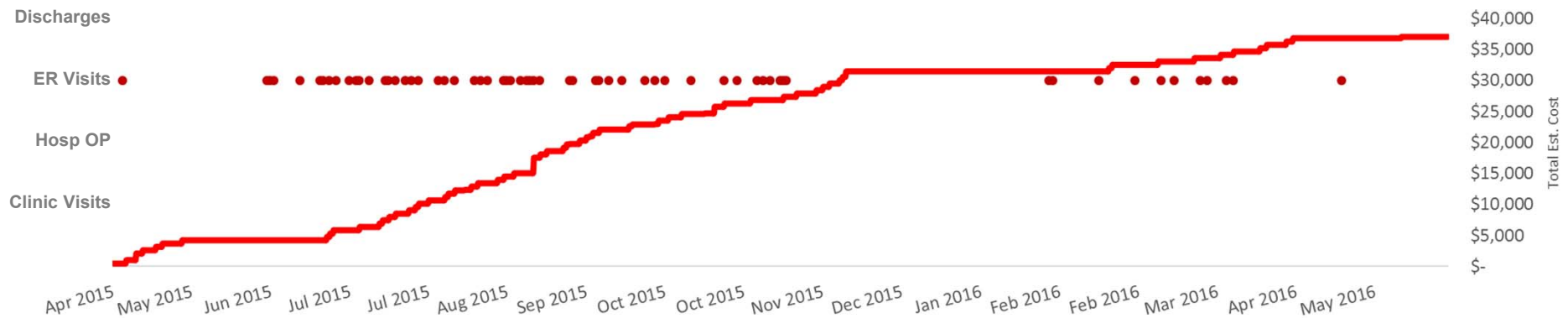


Patient information has been De-identified but utilization and cost data is accurate. These patients are representative of the diverse population of the Bexar County community

## Bexar County Super Utilizer Profiles

### *Meet Mr. G – Highest number of Emergency Visits*

- Mr. G is a 45-55 year old male. He is currently homeless. Over the past year he has had 71 encounters with Bexar County providers with cost estimated at \$37,000
- Exposure to Bexar County providers is only via the ER. There are no other visit types
- Utilized EMS for just 8% of ER visits (7 EMS runs)
- Primary Medical Problems
  - Rheumatism
  - Chronic pain syndrome
  - Alcohol abuse / Alcoholic polyneuropathy
- Utilization
  - 71 Emergency Room Visits
    - 8 Baptist
    - 8 University
    - 1 Mission Trail
    - 2 Nix
    - 52 SW General

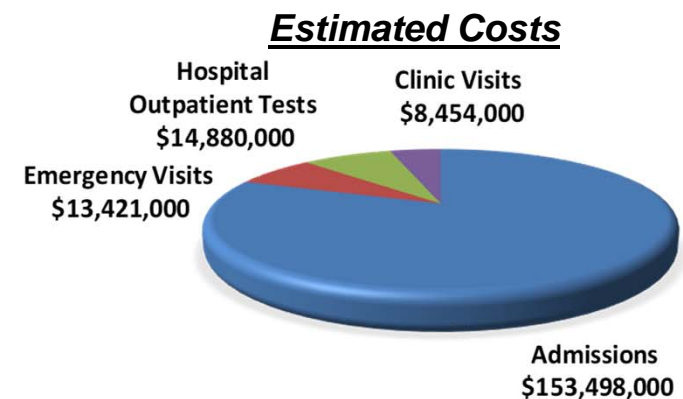
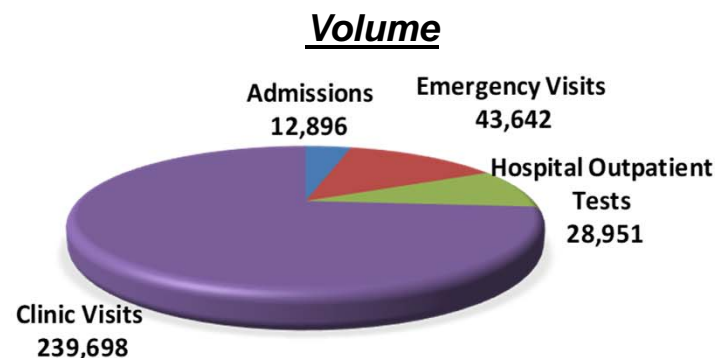


Patient information has been De-identified but utilization and cost data is accurate. These patients are representative of the diverse population of the Bexar County community

## The Total Cost of providing care for the “Super-Utilizers” (4,569 individuals) exceeds \$190 million annually

- No single provider is the predominant provider of care across all venues for these patients.

	Estimated Totals	Admissions	Emergency Visits	Hospital Outpatient Tests	Clinic Visits
Total Cases	78,928	13,806	22,412	10,968	31,742
Total Est Cost	\$190,253,000	\$153,498,000	\$13,421,000	\$14,880,000	\$8,454,000



- University provides the bulk of Hospital OP encounters while Baptist has the greatest number of discharges and ER visits
- CHCS provides the overwhelming majority of clinic encounters to Homeless super-utilizers
- Estimated costs are highly weighted to those systems providing more intense services such as inpatient acute care and emergency services

Note: Totals exclude pediatric oncology and newborns

Hospital Ancillaries include outpatient services such as radiology, physical therapy, etc.



## What do Bexar County Safety Net Super-Utilizers look like?

Percent of Super-Utilizer Patients with each Diagnosis	
Mental Health W/Substance Abuse	56%
Disgestive Disease	43%
Heart Disease	36%
Endocrine Disorders	31%
Orthopedic Issues	28%
Injuries & Poisoning	27%
Neurological Disorders	27%
Pulmonary Disorders or Disease	25%
Kidney/Urinary Issues	25%
Infectious Disease	25%
Skin Problems	20%
Ear Nose Throat Issues	18%
Cancer	15%
Orthopedic Injuries	11%
Gynecological Issues	8%
Pregnancy	7%
Neurologic Injury	1%
Burns	1%
Other Factors	40%

- Patients meeting “super-utilizer” definition are generally dealing with multiple chronic conditions
- A large percentage suffer from mental and behavioral health issues...often significant ones
- Super-utilizers may face an array of complex social challenges such as \*
  - Financial insecurity
  - Childhood trauma
  - Domestic violence
  - Food insecurity
  - Functional illiteracy
  - Housing deficit or insecurity
  - Language barriers
  - Transportation limitations
  - Disabilities
  - Lack of insurance

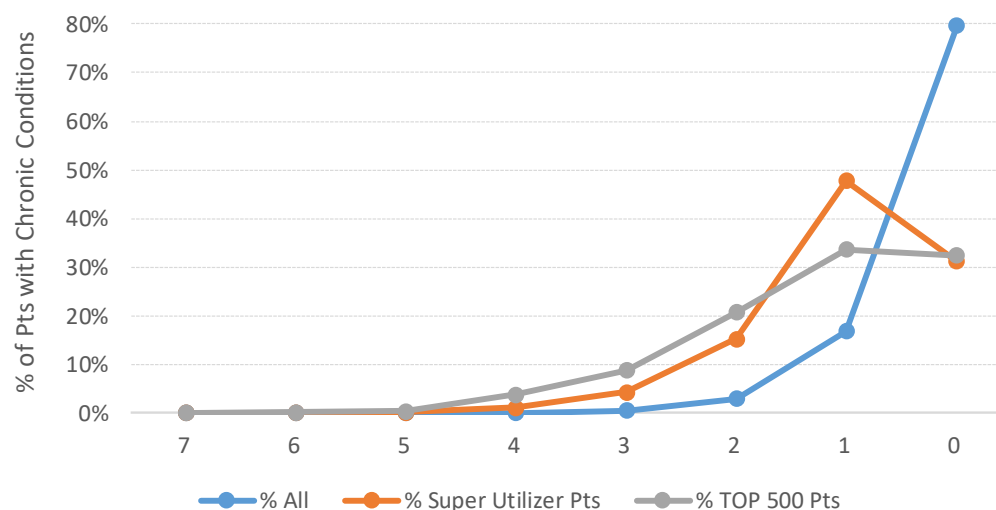
*Based on 4711 patients from Bexar County Safety Net patient database*

## The Super Utilizer population has a disproportionately high prevalence of multiple chronic conditions. Not surprisingly, the presence of multiple conditions is an even greater issue among the top 500 utilizers.

- The 7 chronic conditions measured include:
  - Heart Failure
  - Cancer
  - Kidney Failure
  - COPD
  - Diabetes
  - Mental Health/Subs Abuse
  - Hypertension
- Among the Super Utilizers more than 5 out of 10 people have one or more of the above.
- With the Top 500 more than 20% have two or more
- In general costs increase with each additional comorbidity however among the Top 500 costs are remarkably consistent on a per person basis regardless of the number of conditions

Chronic Conditions	Safety Net Patients	Super Utilizer Population	TOP 500 Patients	% All	% Super Utilizer Pts	% TOP 500 Pts
7	-	-	-	0.0%	0.0%	0.0%
1	34,049	1,977	168	16.9%	47.8%	33.6%
0	160,810	1,292	162	79.6%	31.2%	32.4%
<b>Total</b>	<b>201,983</b>	<b>4,138</b>	<b>500</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Adult only. Does not include pediatric patients who make up a large percentage of the Safety Net population



## When looking into the patient record for a diagnosis in any position (beyond Primary) the presence of Mental/Substance Abuse is overwhelming among the Super Utilizer population

- Within the Super Utilizer group none of the other “primary diagnosis” groups had less than 65% co-morbid mental health problems with an average of >79%
- In the disconnected health care system that currently exists, the overlap between chronic/acute medical and mental/behavioral health conditions can be invisible

Diagnosis	%	#	% MH Only	%SA Only	%Dual	%Tot MH_SA
MH/SA	57%	2,464	26%	8%	66%	100%
Digestive	43%	1,837	19%	20%	39%	78%
Heart	38%	1,629	21%	14%	41%	77%
Endocrine	31%	1,354	25%	14%	35%	73%
Orthopedic	29%	1,248	22%	12%	43%	78%
Neurological	26%	1,138	26%	12%	40%	78%
Injuries/Poison	26%	1,137	20%	11%	54%	85%
Kidney/Urinary	26%	1,116	23%	14%	33%	70%
Pulmonary	24%	1,023	23%	15%	39%	76%
Infectious Disease	23%	999	18%	19%	38%	75%
Skin	20%	859	20%	13%	43%	76%
Cancer	16%	693	23%	15%	28%	65%
ENT	15%	649	21%	11%	46%	78%
Orthopedic Inj	11%	486	18%	14%	52%	84%
Gynecology	8%	364	27%	12%	34%	73%
Pregnancy	7%	319	24%	18%	25%	68%
Neurological Injury	1%	59	25%	7%	42%	75%
Burns	0%	20	5%	20%	60%	85%
Other	68%	2,931	19%	15%	44%	78%

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## ***Year to Year Comparison: Safety Net Patients***

## Year to Year Comparison: Safety Net Patients

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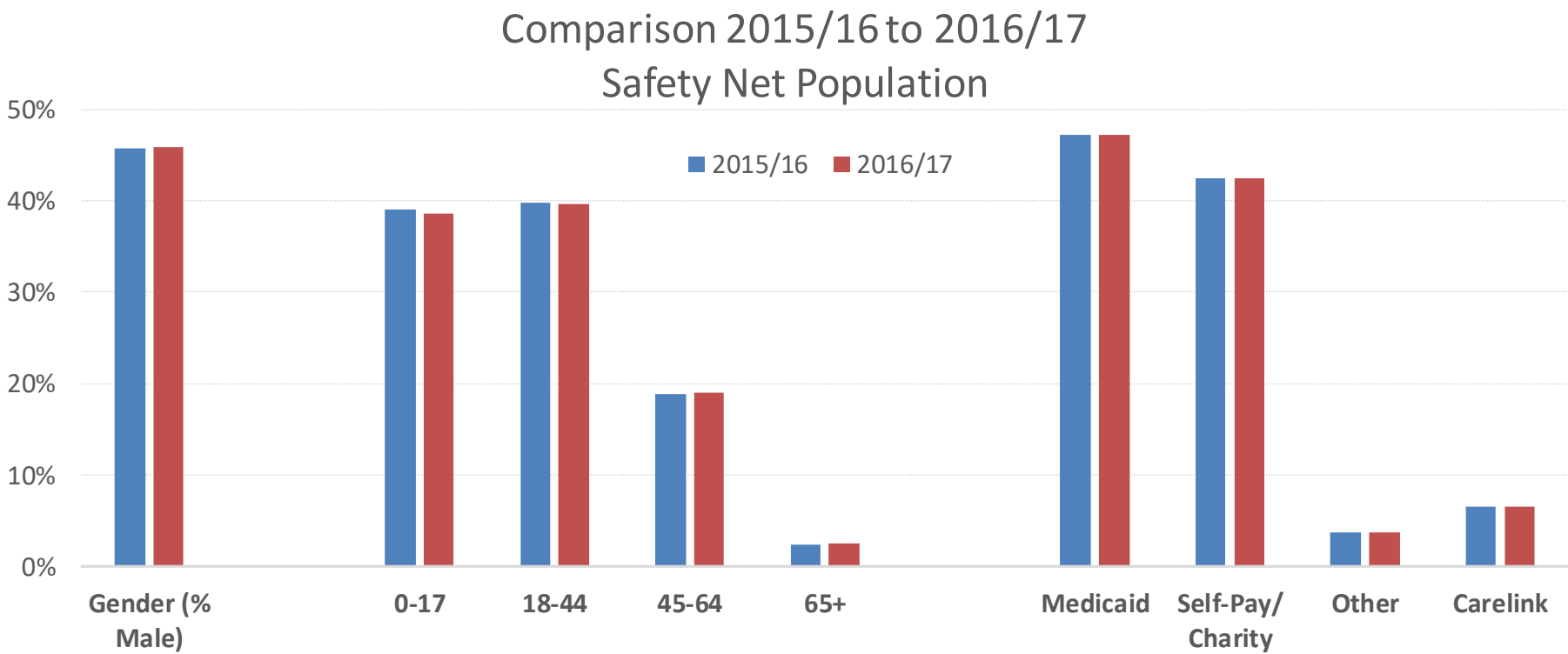
- STCC has collected Bexar County “Safety Net” health care utilization data for two annual reporting cycles (4/15-3/16 and 4/16-3/17) and will continue to review and analyze data on an ongoing basis to determine how effective STCC strategies and initiatives are at optimizing health care services, and improving the health of this underserved population.
- Initial observations on a comparison of both reporting cycles:
  - The safety net population that needs health care services is growing slightly
  - The demographics of this population remains stable
  - The cost of providing services continues to increase faster than inflation
    - Inpatient costs rose less sharply than outpatient testing and clinic costs
    - Costs for mental health patients increased at a more rapid rate than average cost
  - Close to ½ of the patients receiving services in the 2<sup>nd</sup> reporting cycle also utilized health care services during the previous reporting period
  - While only 22% of the people classified as “super utilizers” were still considered to be classified in the same manner in both reporting cycles, 54% of the initial super utilizer group continued to utilize the health system at a rate higher than the average of the overall safety net population.

## Major Observations from year over year comparison

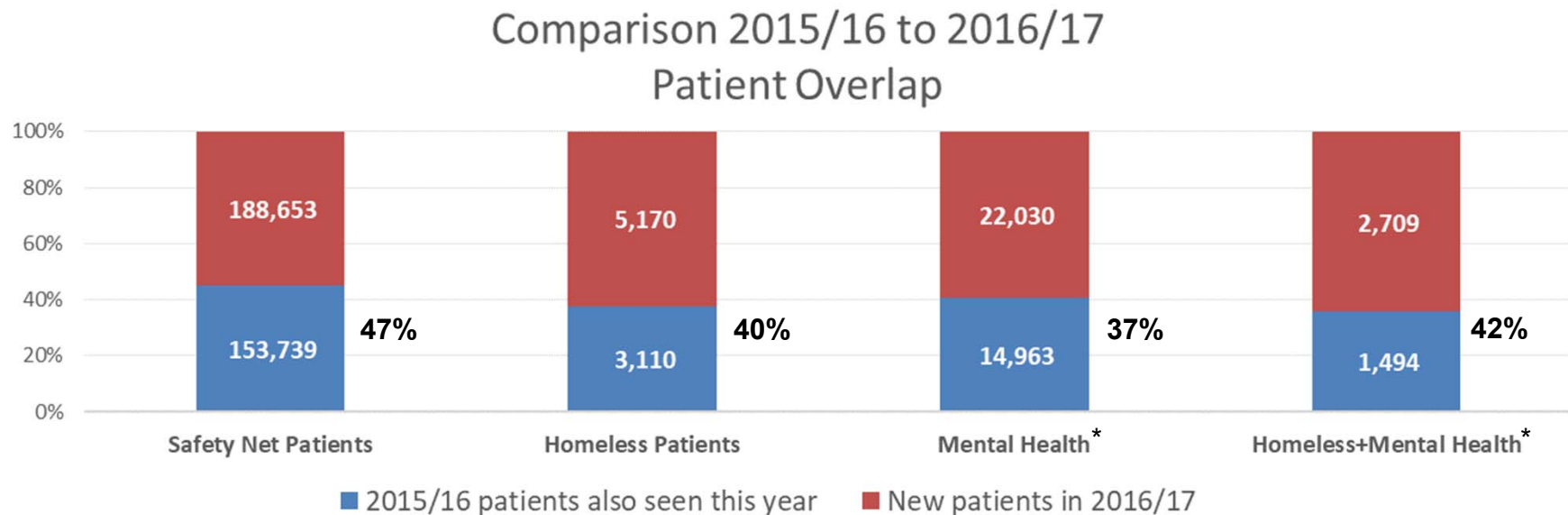
- Overall, utilization increased for the safety net population proportionate to population but disproportionately in several of our focus areas.
- Costs appear to have increased disproportionate to inflation in all areas
- While super utilizers represent only 1.4% of the total Safety Net population, they drive one of every 6 dollars of cost
- Super utilizers have higher than expected Medicaid coverage

	2015/16	2016/17	Change	% Change	% of Total Safety Net
<b>Group Population</b>					
Safety Net	341,316	342,247	931	0.3%	100.0%
Mental Health	35,032	37,063	2,031	5.8%	10.8%
Homeless	7,711	8,278	567	7.4%	2.4%
Super Utilizers	4,569	4,711	142	3.1%	1.4%
"Top 500"	500	500	-	0.0%	0.1%
<b>Encounters</b>					
Safety Net	1,184,289	1,184,805	516	0.0%	
Mental Health	330,478	325,187	(5,291)	-1.6%	
Homeless	73,204	74,789	1,585	2.2%	
Super Utilizers	76,085	78,928	2,843	3.7%	
"Top 500"	13,904	14,514	610	4.4%	
<b>Total Cost (in \$millions)</b>					
Safety Net	\$1,094	\$1,142	\$48.0	4.4%	100.0%
Mental Health	\$202	\$210	\$7.5	3.7%	18.3%
Homeless	\$46	\$52	\$5.6	12.2%	4.6%
Super Utilizers	\$182	\$190	\$8.5	4.7%	16.7%
"Top 500"	\$78	\$79	\$1.8	2.3%	7.0%
<b>Patient Funding</b>					
	# with Medicaid	# with Medicaid	Change	2016/17 % w/Medicaid	
Safety Net	160,865	161,638	773	47%	
Mental Health	15,438	16,943	1,505	46%	
Homeless	2,069	2,285	216	28%	
Super Utilizers	2,820	2,865	45	61%	
"Top 500"	384	406	22	81%	

# Patient Demographics are very stable across the two data sets



## Roughly half of the patients that utilized healthcare services last year show up in the updated data set



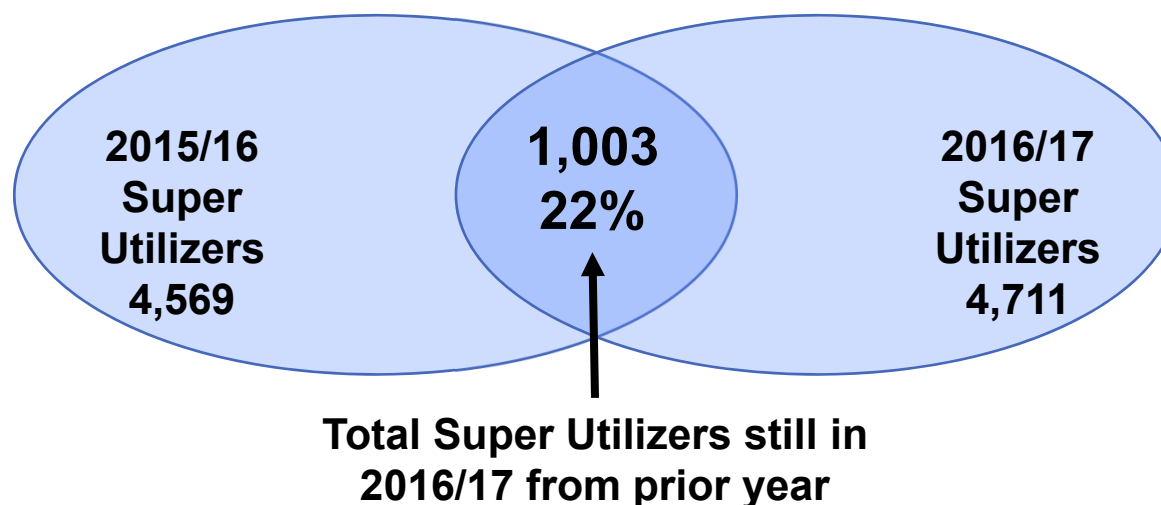
- While total patients and encounters is fairly consistent from 2015/16 to 2016/17 there is a significant difference in the individuals that make up the data sets
  - It is important to note that the 342,247 unique Safety Net patients do not represent the entire Safety Net population but that portion identified receiving services at the partner organizations this year.
- The low level of overlap is not unexpected
  - Subgroups in the analysis suffer from numerous barriers in access to care
  - Do not participate as needed in low acuity high volume primary care
  - Only show up when health needs become more critical (and costly)

\* Mental Health counts in this analysis include Primary as well as Secondary Diagnosis and therefore exceed patient totals for Mental Health patients elsewhere in the presentation



**Although the overall “population” of Super Utilizers is steady, turnover of individuals within that group is high. In the updated data, only 22% of 2015/16 Super Utilizers remained.**

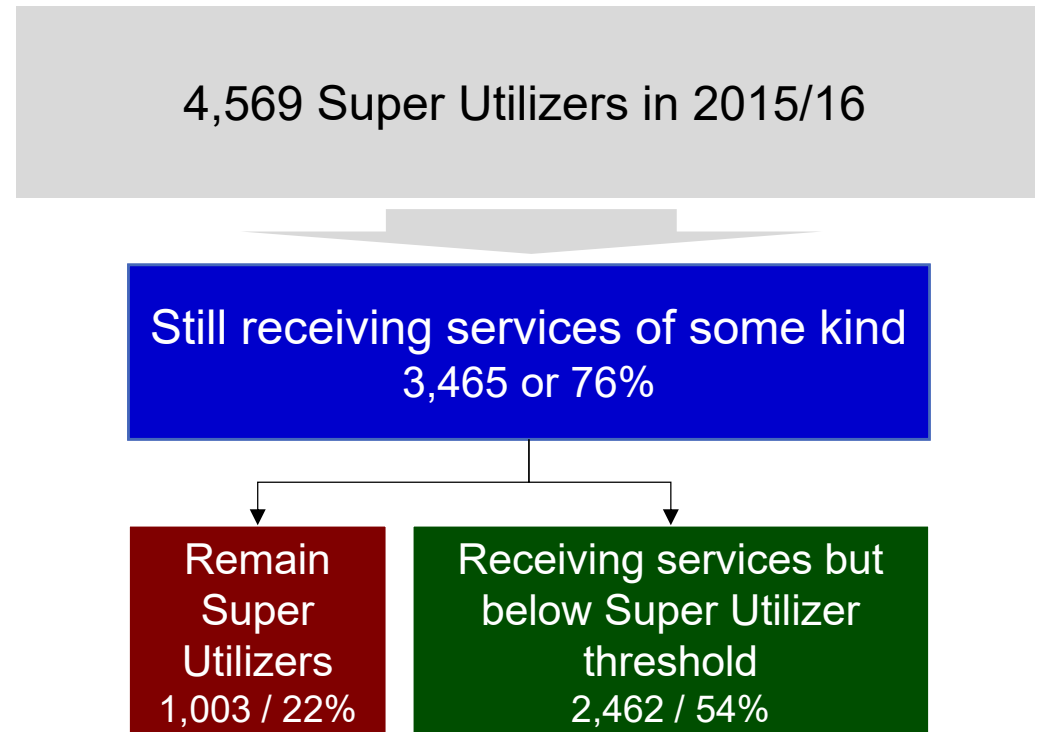
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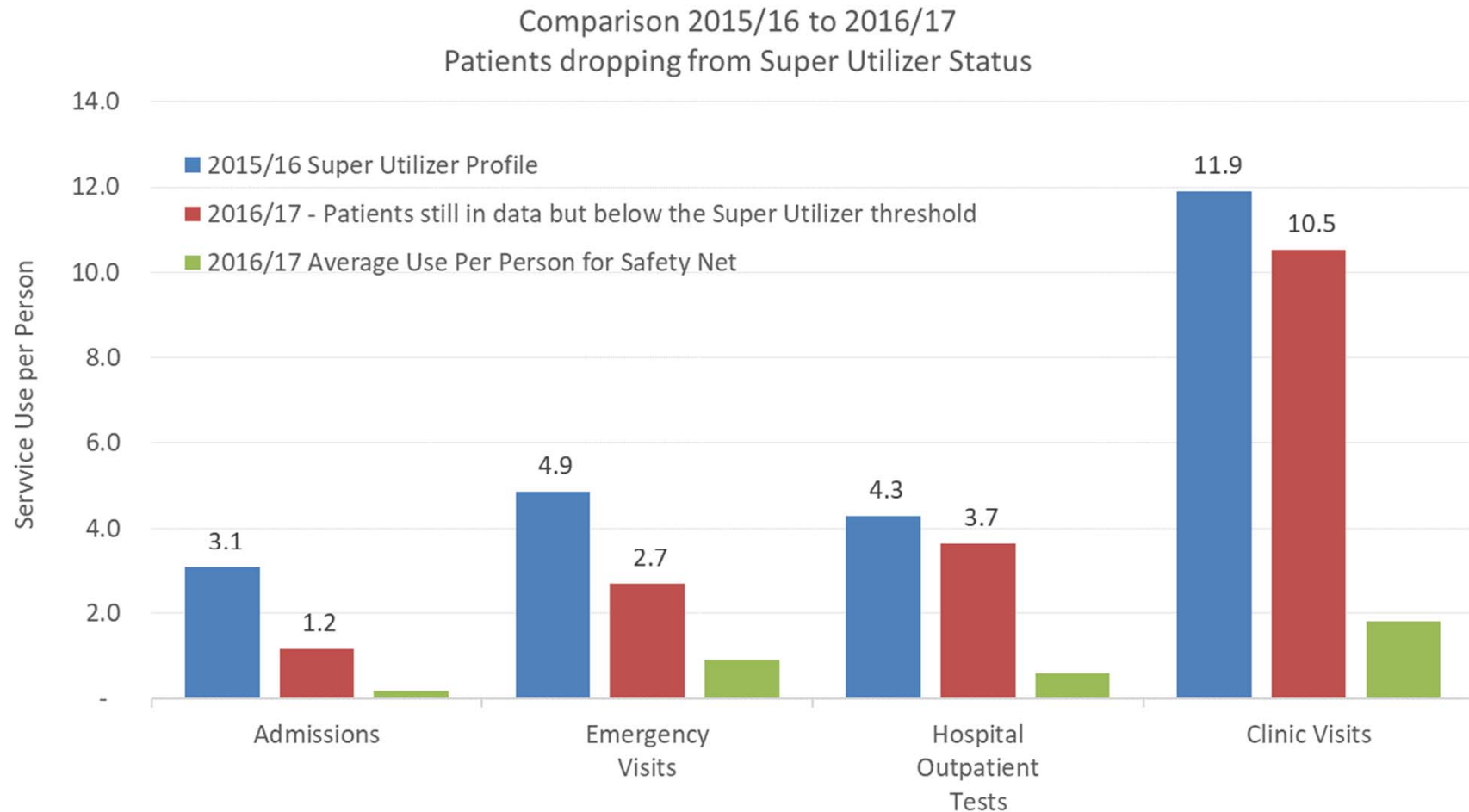
- The Super Utilizer population grew 3.1% from 2015/16 to 2016/17
- There was significant turnover – 78% of last years patients fell below the threshold but were replaced with an almost equal number of new patients
- This level of turnover is in line with other studies of Super Utilizer turnover:
  - “Only 28% of Super-Utilizers were still Super-Utilizers 1 year later” - Health Affairs 2015<sup>1</sup>

## So what happened to the 2015/16 Super Utilizers?

- Of the 4,569 Super Utilizers identified in the 2015/16 data
  - 1,003 remain Super Utilizers or 22%
  - 2,462 remain in the data but drop below the SU threshold (54%)
  - 1,104 drop completely out of the data
    - Comparable studies suggest as many as 540 of these individuals may have died
- By comparison, according to a 2015 Denver study, reasons for turnover vary but a percentage of patients:
  - Remain super utilizers (5%)
  - Lose and regain Super Utilizer status over a year (16%)
  - Access the “system” albeit inefficiently, get better and drop below the threshold (67%)
  - Die - not always related to health conditions (12%)



## Individuals that drop out of Super Utilizers status generally remain relatively high utilizers of healthcare services



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## ***Conclusions***

## Conclusions

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- The Southwest Texas Crisis Collaborative, an innovative new public/private partnership to transform health care delivery, improve care and reduce the cost for parts of the “safety net population” in San Antonio has been launched
- Based on our detailed study:
  - Providing care for the Safety net population cost San Antonio/Bexar County healthcare providers \$1.2 Billion annually
  - The cost of care for the “super utilizer” population within the safety net and homeless population is almost \$190 Million annually
  - Improving the health of this population is difficult due to their clinical complexity, multiple social factors and the current fragmented approach to care for these patients.
    - No one organization can handle it by themselves
    - Requires an integrated approach to care
  - Developing collaborative strategies that allow community providers to coordinate their sociological and clinical interventions for this population can dramatically improve the lives of these patients