

# TEXAS STATE — of — MIND

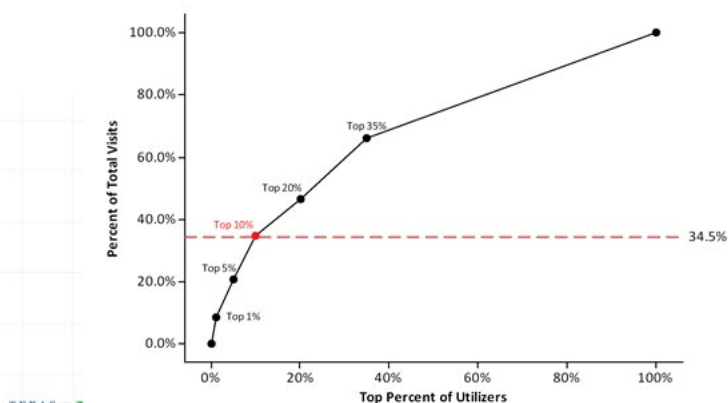
THE MEADOWS MENTAL HEALTH POLICY INSTITUTE

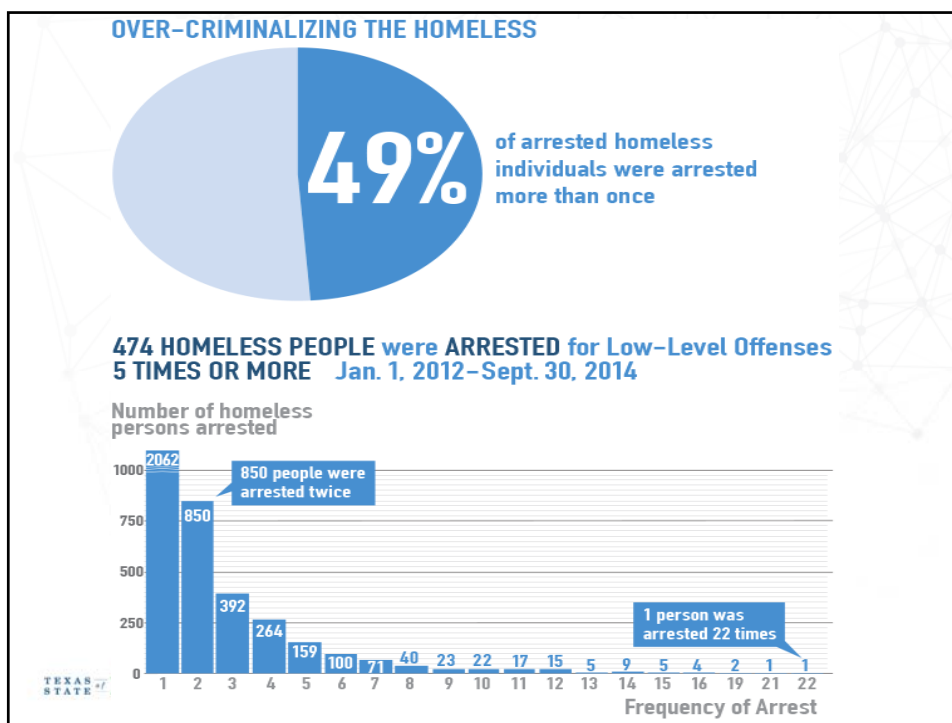
## Supporting Delivery System Transformation Through Data Integration and Analytics

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## The Problem of Small Numbers Driving Big Numbers

- For example, in Lancaster County 5% of ER users accounted for 20% of visits:  
<http://www.jlgh.org/Past-Issues/Volume-6—Issue-3/Predictors-of-Emergency-Department-Super-Utilizers.aspx>

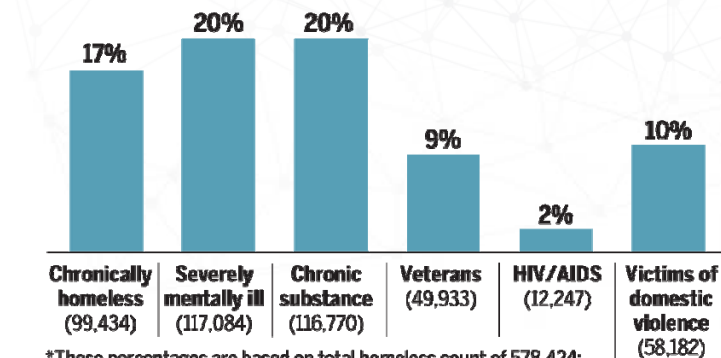




## Who Are the Homeless?

### Who are the homeless?

More than half of all the homeless people counted in the United States report suffering from a physical or psychological problem that makes it especially difficult to get indoors for good. A snapshot of who was living on the streets in the 2014 count\*.



Source: U.S. Department of Housing and Urban Development

DAN AGUAYO/STAF

## Some Problems To Solve

- These are different data sets from different sources (arrests, hospitals, homeless count)
- Aggregate vs. individual information
- Duplicate vs. unduplicated counts
- Lack of common identifiers

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## Using A University: The Florida Mental Health Institute



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## Why the Florida Mental Health Institute?

Serendipity

Institute's statutory mission

Reciprocity in Interests:

At state level: Shift to capitated model in Medicaid behavioral health

At county level: Criminal justice/mental health



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## Data Sources

### STATE:

- Medicaid claims files
- Arrest data (adult and juvenile)
- Mental health units of service data
- Mortality files
- Hospital discharge data
- Civil commitment files

### LOCAL:

- Homeless data
- Emergency medical transport
- Court files
- Education data
- Jail data

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## A University Based IDS: Knitting it Together

### Required:

- Business Associate Agreements
- Contracts
- MOUs
- Legislative authorization
- Negotiation, negotiation, negotiation

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## Use Case: A Population Health Approach to Criminal Justice

Assumption: A small group of people show up over and over

- Many with mental illness
- Most charged with minor offenses
- Finding them can lead to more efficient and effective investments

Is this true?

- A “quick and dirty” analysis (Miami-Dade)
- A comprehensive and well-funded analysis (Pinellas County/St Petersburg)

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## Miami-Dade: 97 “Heavy Users” and How They Spent Their Lives

### Inside the walls...

26,640 days in jail  
7,000 days in-patient  
psychiatric beds  
3,200 days state hospital  
2,600 days emergency room

**Total: 39,440 days in  
jails/hospitals/emergency rooms in  
5 years**

**MINIMUM NUMBER OF ARRESTS:  
5+**

### Does this make sense?

There are 177,025 total days in 5  
years (5x97x365)

**22.7% of those days were in a  
jail/hospital/emergency room**

81 days per person *per year on  
average* in a  
jail/hospital/emergency room **(55  
days of the 81 were in jail)**

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## Heavy Users and Costs

Outpatient mental health  
services

-301 claims per user over five  
years (60 per year), with  
average overall average cost  
of \$20,082 per user

Inpatient mental health  
services

-101 days per user over five  
years (20 per year) at average  
cost of \$69,086

Jail

-274 days per user over five  
years (55 days per year) at  
average cost of \$37,113

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## 97 Miami Dade Heavy Users and Medicaid

82 diagnosed as schizophrenic or bipolar

Total costs (more or less):

**\$8,039,620**

59 enrolled in Medicaid

51 used outpatient mental health

46 used inpatient mental health services

43 used pharmacy



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## A Comprehensive Well-Funded Analysis

Pinellas County

3,769 arrestees identified as having a mental illness

Did a four year retrospective analysis funded externally

Data sources included:

- Medicaid claims files
- Units of service
- Hospital ER data
- Arrest records
- Mortality records
- EMS records
- Civil commitment records
- And so on...



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<b>Participant Characteristics by Similar Trajectory of Arrests Pinellas County</b>			
Characteristic	Class 1 n=469	Class 2 n=3,090	Class 3 n=210
Age, %			
51 - 64 years	12	8	8
40 - 50 years	36	32	40
21 - 39 years	48	53	46
20 years or younger	4	7	7
<b>Gender, % women</b>	<b>59</b>	<b>39</b>	<b>30</b>
Race/ethnicity, %			
White	76	74	75
Black	20	21	20
Hispanic	4	5	5
<b>Homeless, %</b>	<b>5</b>	<b>12</b>	<b>44</b>
Serious mental illness, %			
<b>Psychotic disorder</b>	<b>21</b>	<b>22</b>	<b>38</b>
Bipolar 1	33	29	24
Major depression	30	31	28
Other	16	18	20
Substance abuse diagnosis, %	64	67	77
Involuntary Psychiatric Examination, %	46	42	56
<b>ER/IP events, mean</b>	<b>2.2</b>	<b>16.3</b>	<b>9.6</b>
<b>OP events, mean</b>	<b>48.1</b>	<b>24.7</b>	<b>17.9</b>

Notes. Class 1=minimal arrest rate, Class 2=steady, low arrest rate, Class 3=high arrest rate; ER/IP = emergency room/inpatient; OP = outpatient. **Total N = 3769**

## Going Forward: Another Non-Governmental Model



### Issues:

1. Criminal Justice (Dallas County)
2. Emergency Room Admissions (Statewide)
3. Integration of Behavioral Health and Health
4. Efficiency/Effectiveness



## Some Lessons Learned

- Need the ability to do quick analyses and in-depth analyses
- Data access and use are different
- Funding isn't everything, but...
- University incentives may clash with state needs
- State *and* local governments are critical
- Legal issues are exaggerated
- This is some of the best and most fun work possible

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