

# Owning the Behavioral Health Population



UNC  
HEALTH CARE

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*March 12, 2019*

# Objectives

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- **What is the problem?**
  - United States
  - North Carolina
- **Why in the world did we do this?**
- **How did it work out?**
- **What did we learn?**

# United States

## How prevalent is mental illness in the US?

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**18%**

Eighteen percent of adults in the United States have a mental, behavioral, or emotional disorder



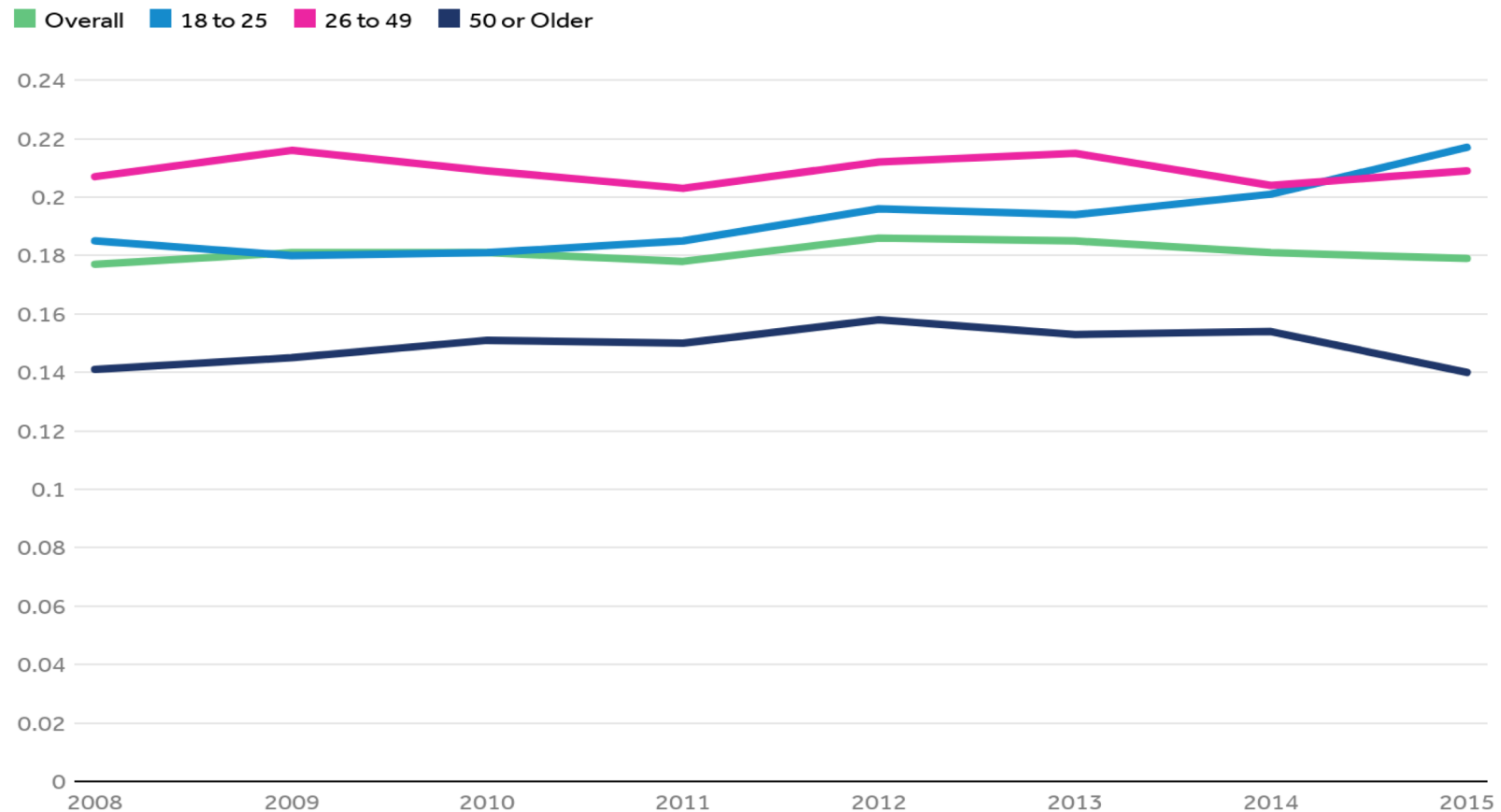
# The prevalence is increasing???

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**NO**

# Prevalence has been relatively stable

12-month prevalence of any mental illness among adults ages 18+, by age group, 2008-2015

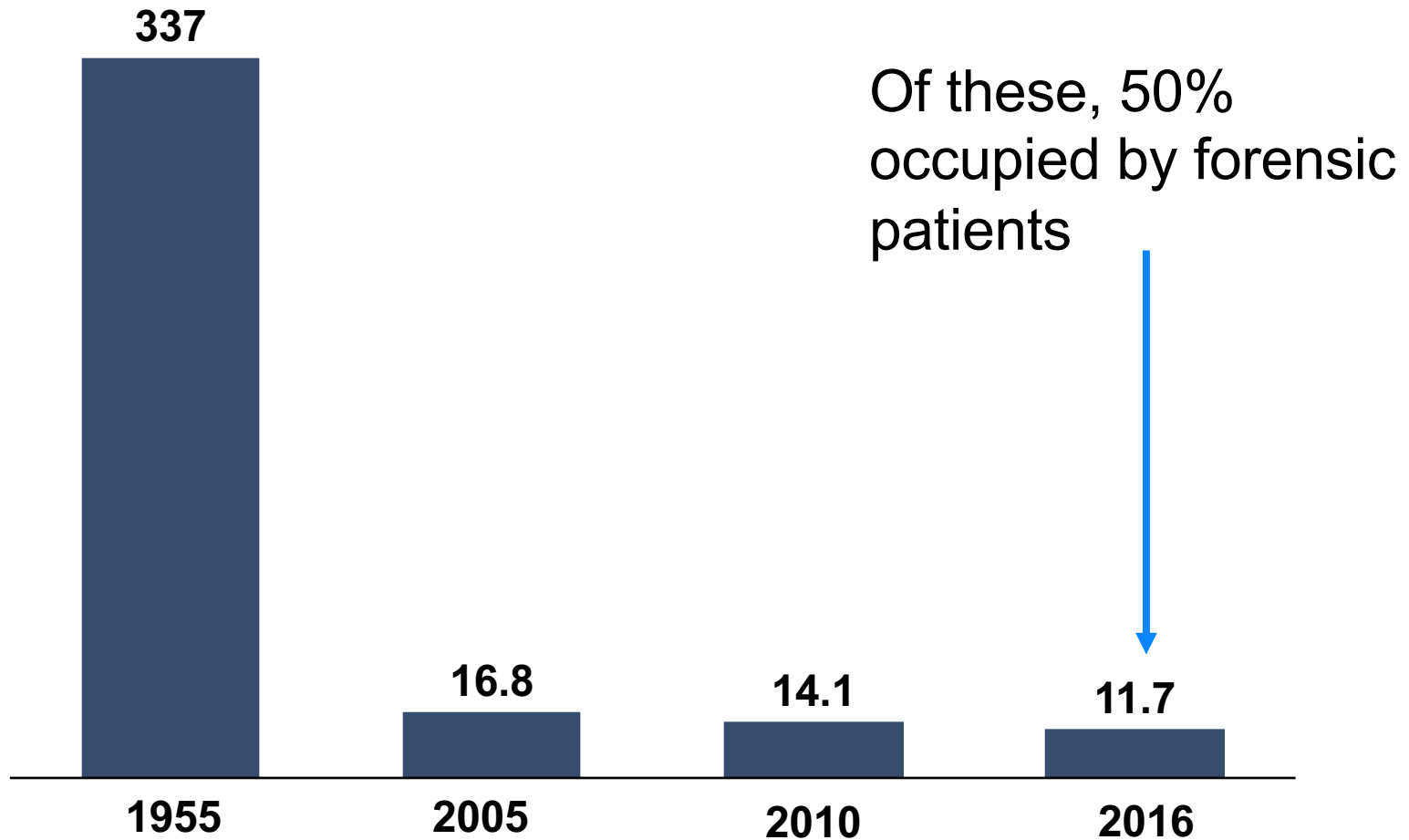


Source: Kaiser Family Foundation analysis of data from SAMHSA 2015 NSDUH (Accessed on July 27, 2017) • [Get the data](#) • [PNG](#)

Peterson-Kaiser  
**Health System Tracker**

# Then what is the problem????

## Psych Hospital Beds Per 100K Nationwide



## Where did these people go?

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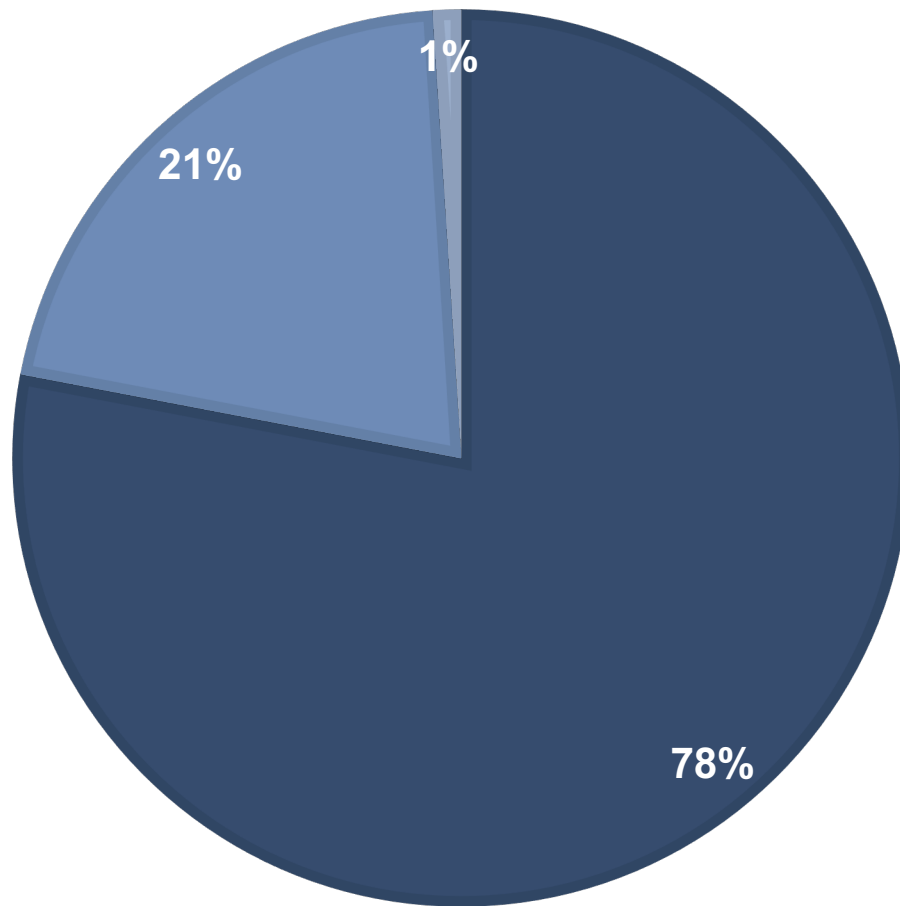
~60% of people in prison  
or jail suffer from mental  
illness



46% of persons in  
homeless shelters suffer  
from mental illness and/or  
substance abuse

## Are people receiving care?

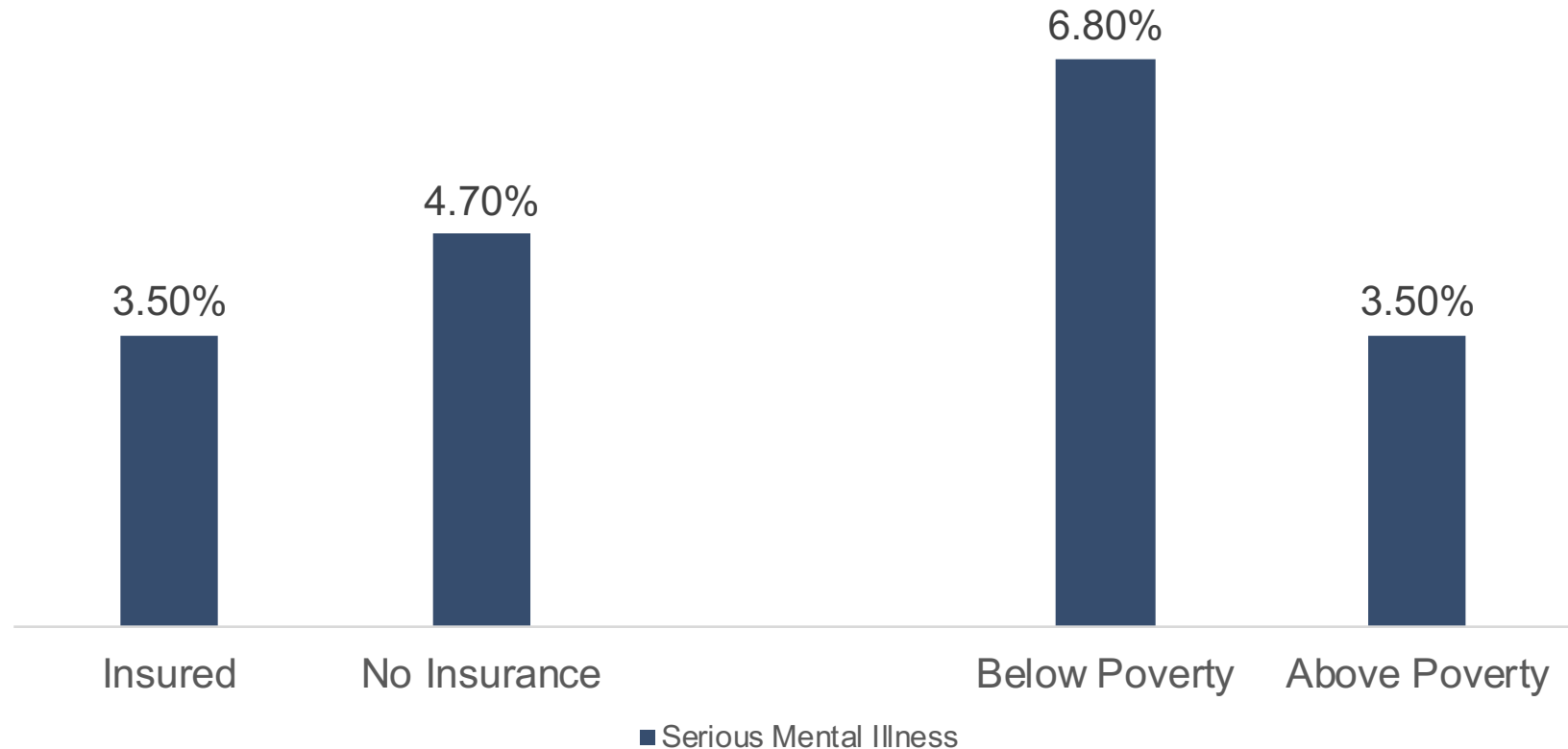
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■ Yes ■ No ■ Unknown

**1 out of 5  
is NOT  
receiving  
care**

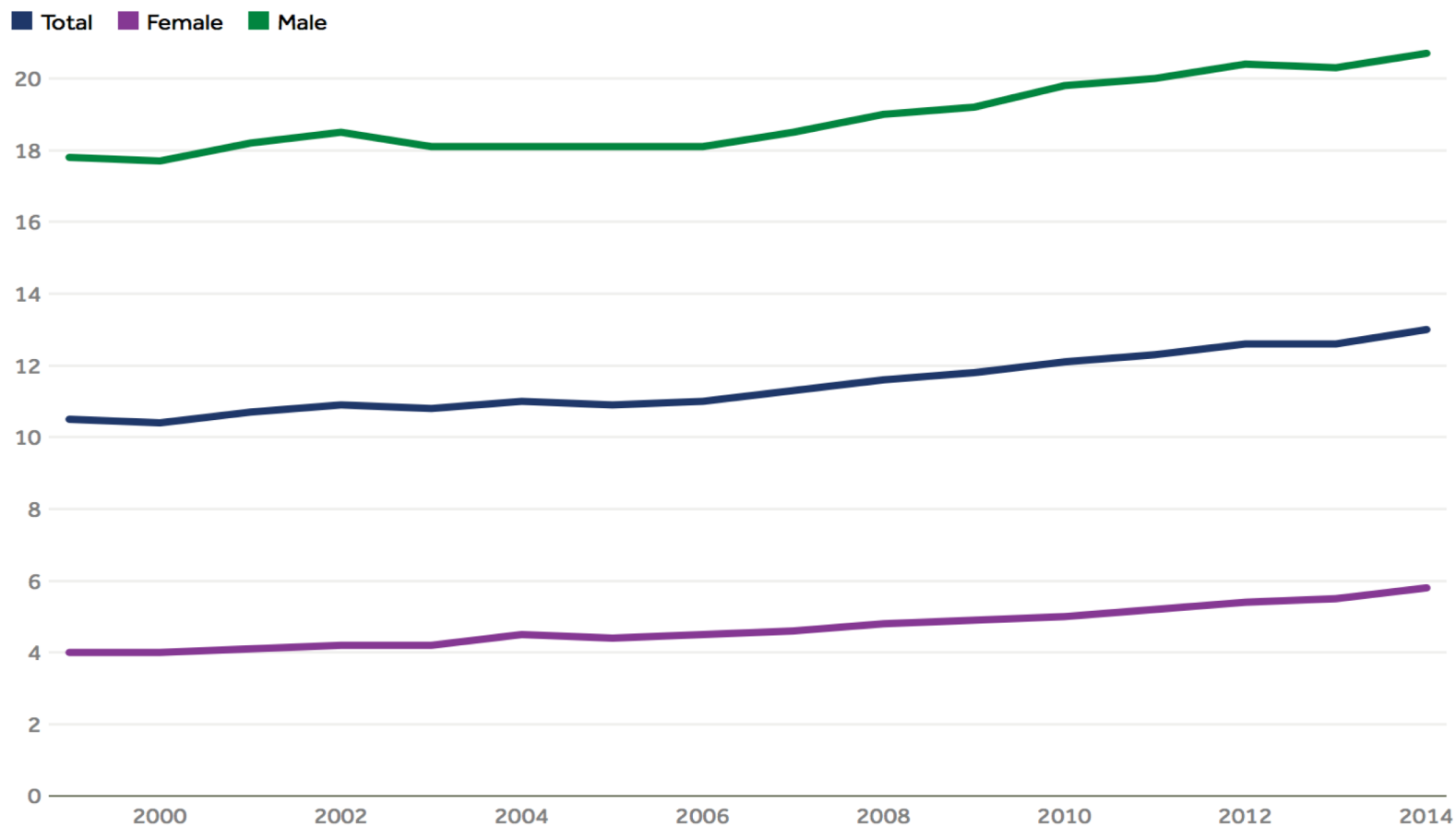
## Why can't people get care?



**They can't afford it**

# What is the result?

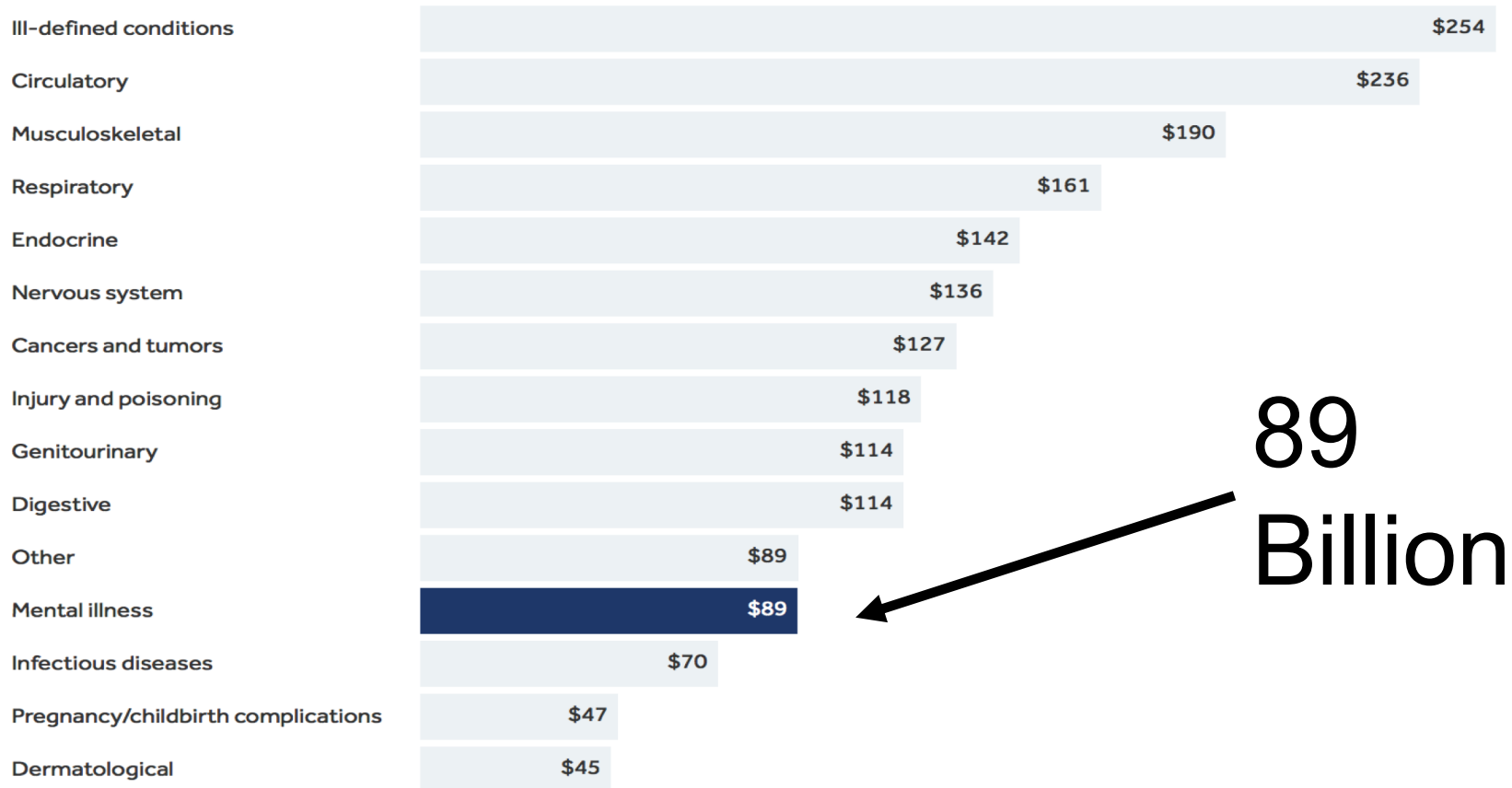
Age-adjusted suicide rates, by sex, 1999-2014



Source: [CDC](#)

# Cost is rising

Total expenditures in \$ billions by disease category, 2013



89  
Billion

Note: Expenditures on nursing home and dental care are not included in health services spending by disease. Data does not include spending on institutionalized population.

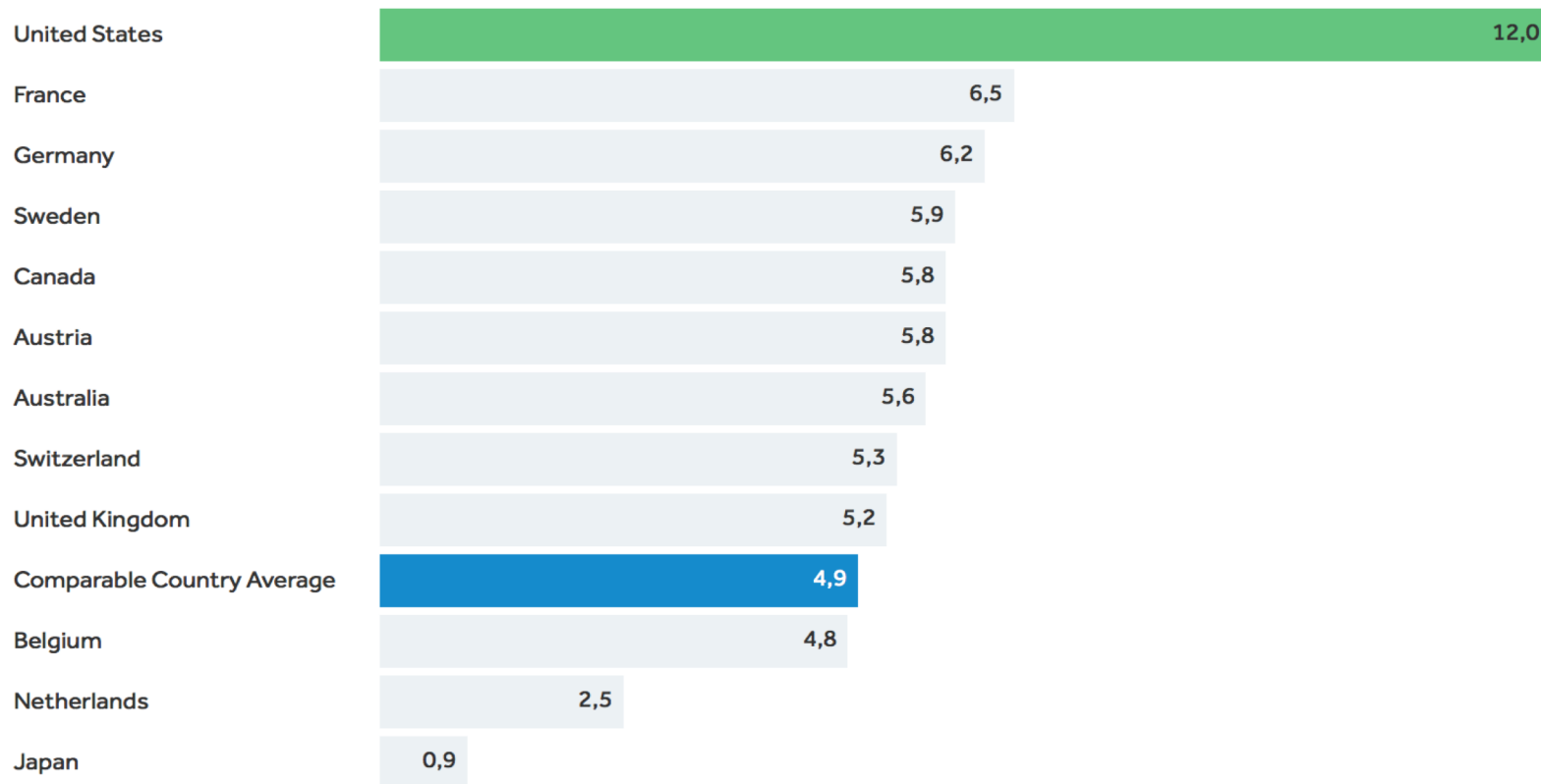
Quelle: Kaiser Family Foundation analysis of data from Bureau of Economic Analysis Health Care Satellite Account (Blended Account) and National Health Expenditure Data • PNG

Peterson-Kaiser  
**Health System Tracker**



# Among comparable countries, the U.S. has the highest rate of death from mental health and substance abuse disorders

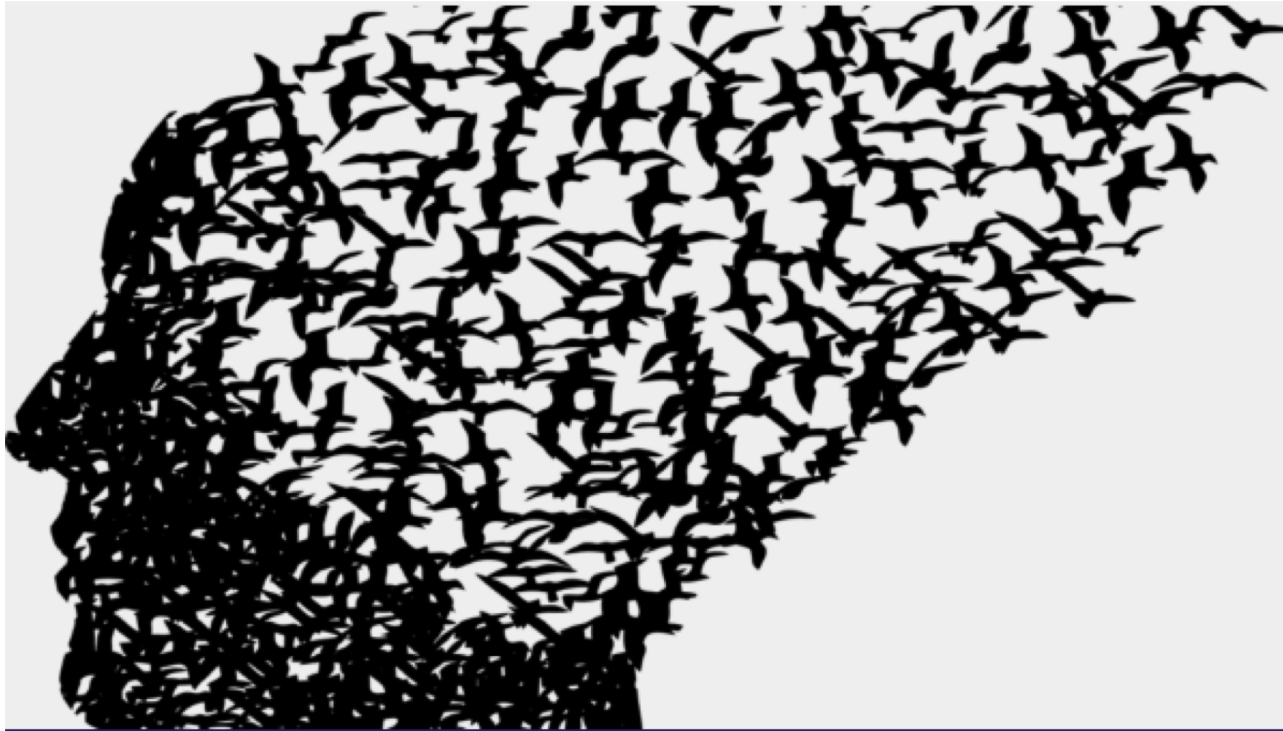
Age standardized death rate per 100,000 population due to mental health and substance use disorders, both sexes, 2015



Quelle: Kaiser Family Foundation analysis of data from Institute for Health Metrics and Evaluation, Global Burden of Disease Study 2015 (GBD 2015) Data Downloads (Accessed July 27, 2017) • PNG

Peterson-Kaiser  
**Health System Tracker**

# North Carolina



**North Carolina gets a 'F' on  
how equally it treats mental  
and physical health issues**

## NC lost 280 mental health beds in 2012

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# Relevant Stats

## In North Carolina...

NEARLY  
**1 in 5** adults have a mental illness  
*(national average over 1 in 6)*

OVER  
**1 in 7** adults with mental illness are uninsured  
*(national average over 1 in 7)*

NEARLY  
**1 in 10** youth have a mental illness  
*(national average approximately 1 in 12)*

OVER  
**1 in 13** youth have private insurance that does not cover mental health  
*(national average 1 in 13)*



**45%**  
of residents  
are covered by  
employer-based  
health insurance  
*(national average 49%)*

Sources: Mental Health America (2018); The Henry J. Kaiser Family Foundation (2016)

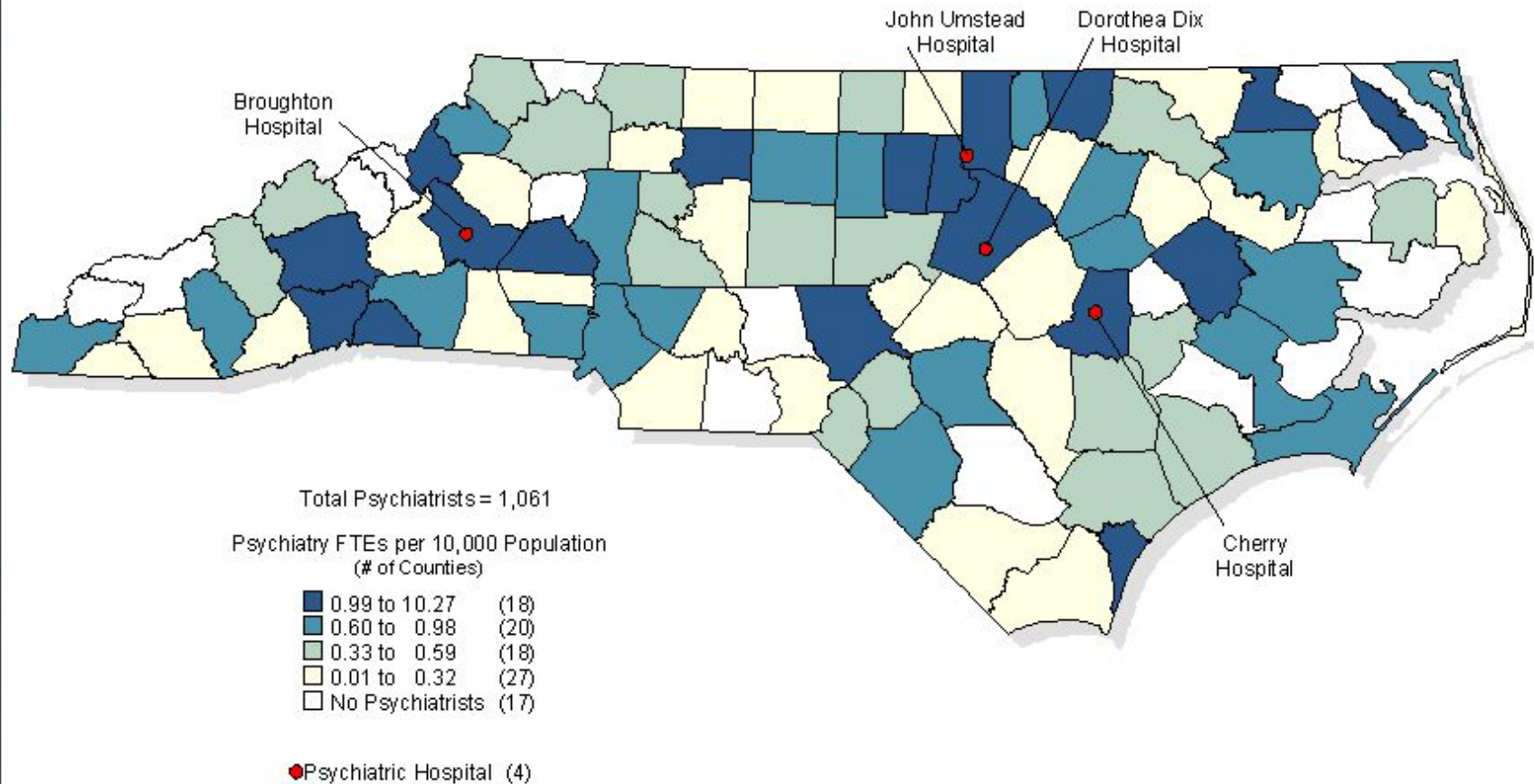
How Do North Carolina's Statutes Measure Up?

**49** out of **100** points  Grade:





## Psychiatrist Full-Time Equivalents per 10,000 Population North Carolina, 2004

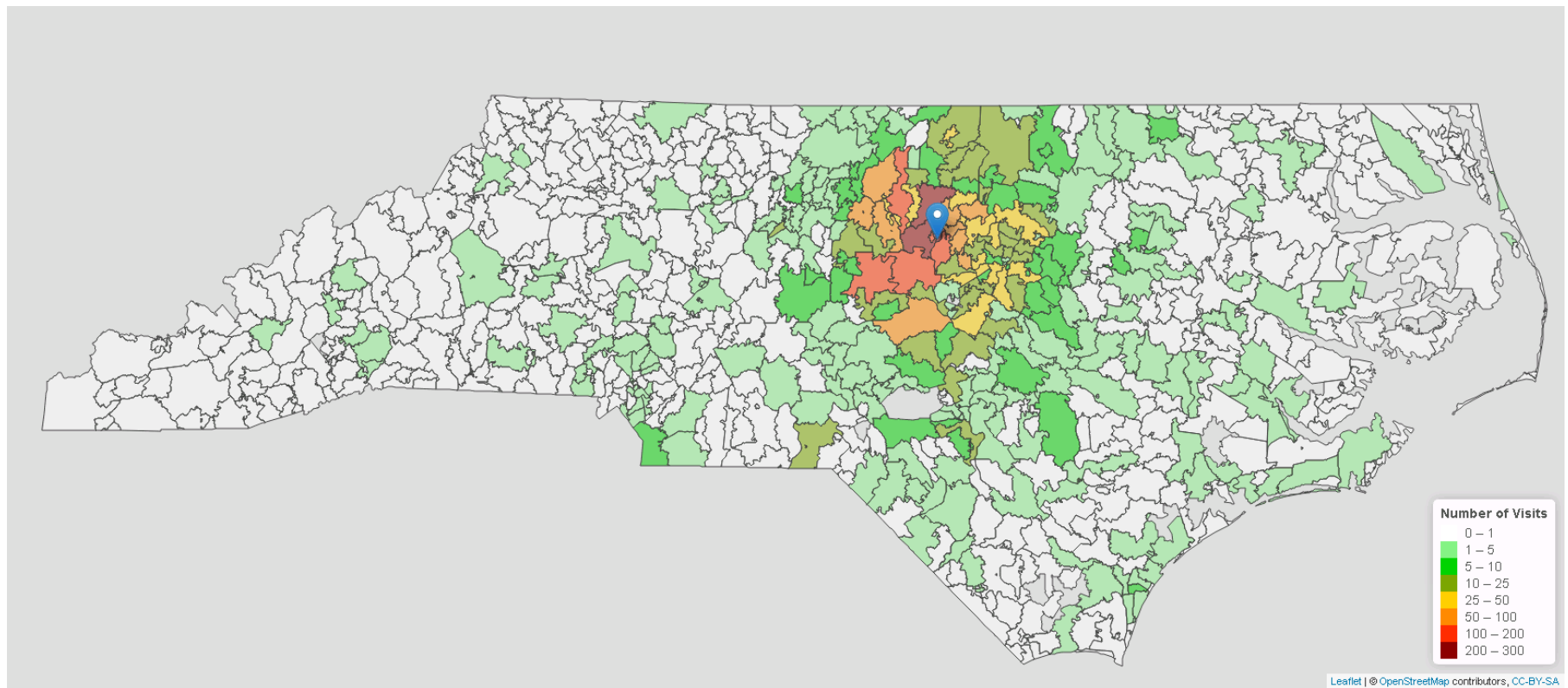


Source: LINC, 2005; North Carolina Health Professions Data System, with data derived from the North Carolina Medical Board, 2004; NC DHHS, MHDDSAS, 2005.

Produced by: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

\*Psychiatrists include active (or unknown activity status), in-state, nonfederal, non-resident-in-training physicians who indicate a primary specialty of psychiatry, child psychiatry, psychoanalysis, psychosomatic med, addition/chemical dependency, forensic psychiatry, or geriatric psychiatry, and secondary specialties in child psychiatry and forensic psychiatry.

# Behavioral Health Encounters Map





# In the beginning

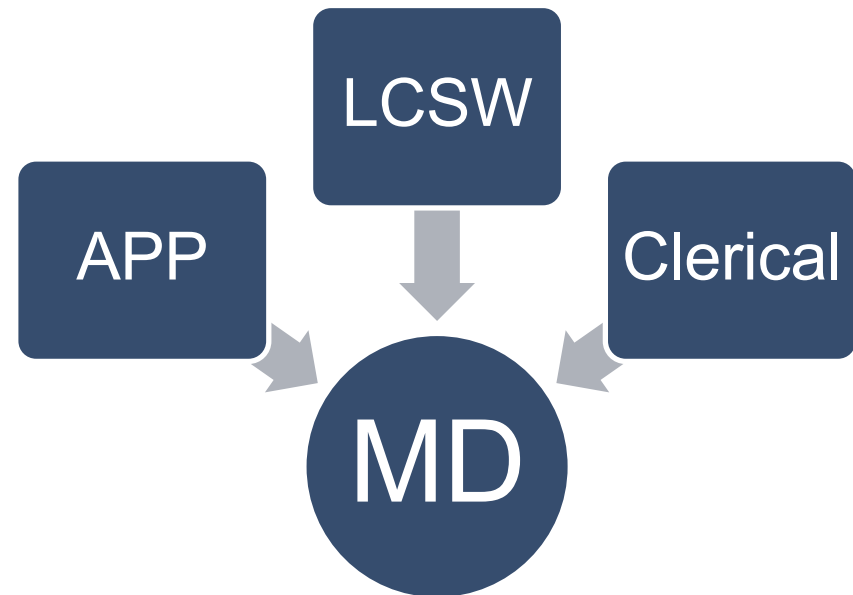
## Original infrastructure to support psych patients was not adequate and not well aligned operationally

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Daily Coverage = 88 hrs

12 hours = MD +  
multiple LCSW,  
APP, Clerical

12 hours = Psych  
resident with  
inpatient duties



# Psych volume was continuing to rise

## Seasonality

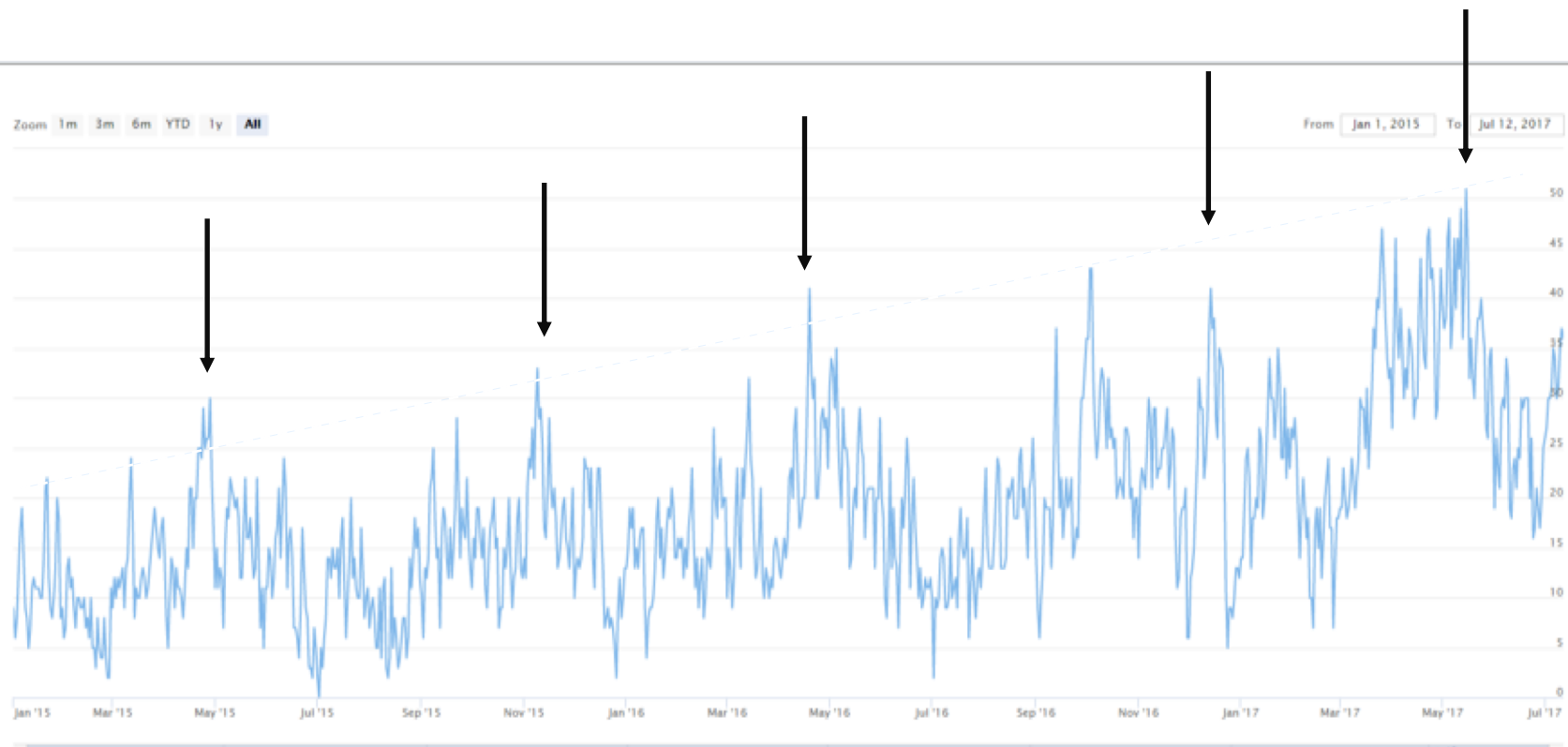
Lull during the summer

Two peaks – December and May

## Increasing Volume over time

Steep growth slope

No evidence of leveling



Noon Psych Census 01/2015 – 07-2017

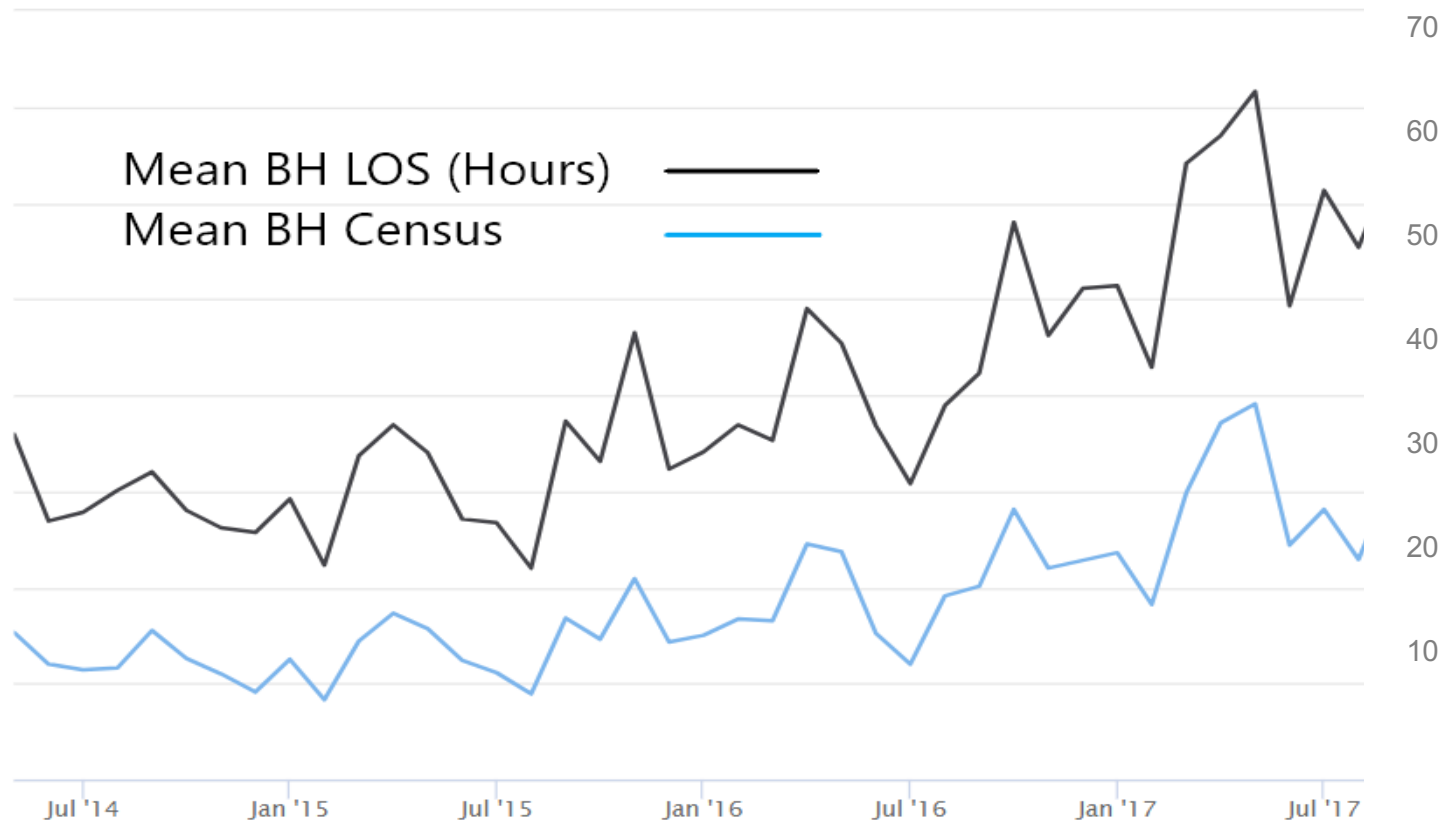
## DAILY Noon Behavioral Health Census: March 1, 2017 – May 31, 2017



At 8pm that same day, we hit our all-time high of 64 BH patients

# Length of stay for BH patients excessive

**MONTHLY Mean BH LOS in Hours (Black) and Mean Census (Blue)**

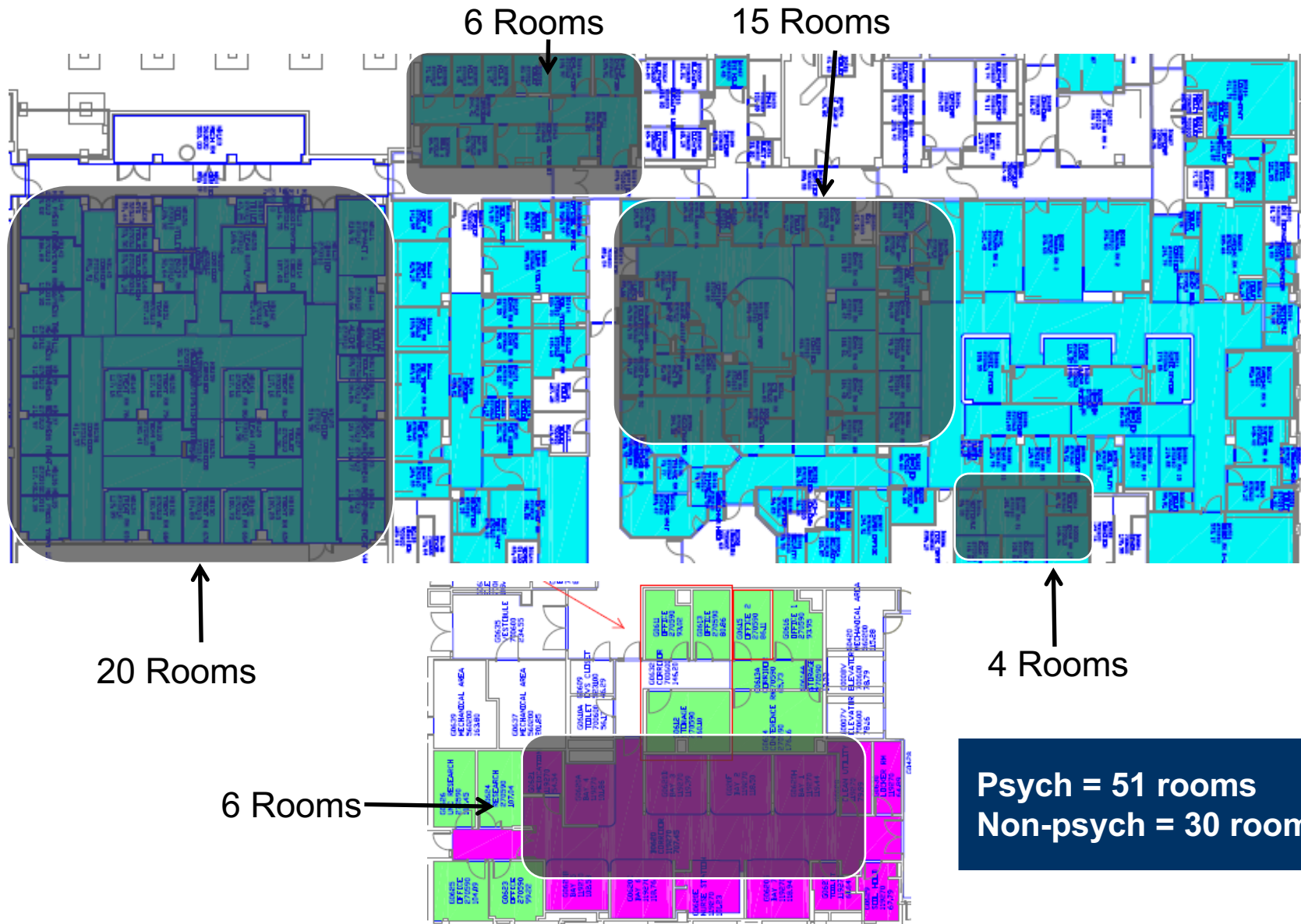


## Time to be seen was excessive

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36 hours

# Psych patients often occupied >50% of ED clinical space



# Financial impact was considerable

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## Assumptions

- For each behavioral health patient in a bed for more than 24 hours, ED loses 2.2 bed turns
- In a sample month, we had 395 beds-days in which a behavioral health patient occupied a bed >24 hours
- We net an average of \$114 per patient encounter (not including facility fee)



# Huge financial impact

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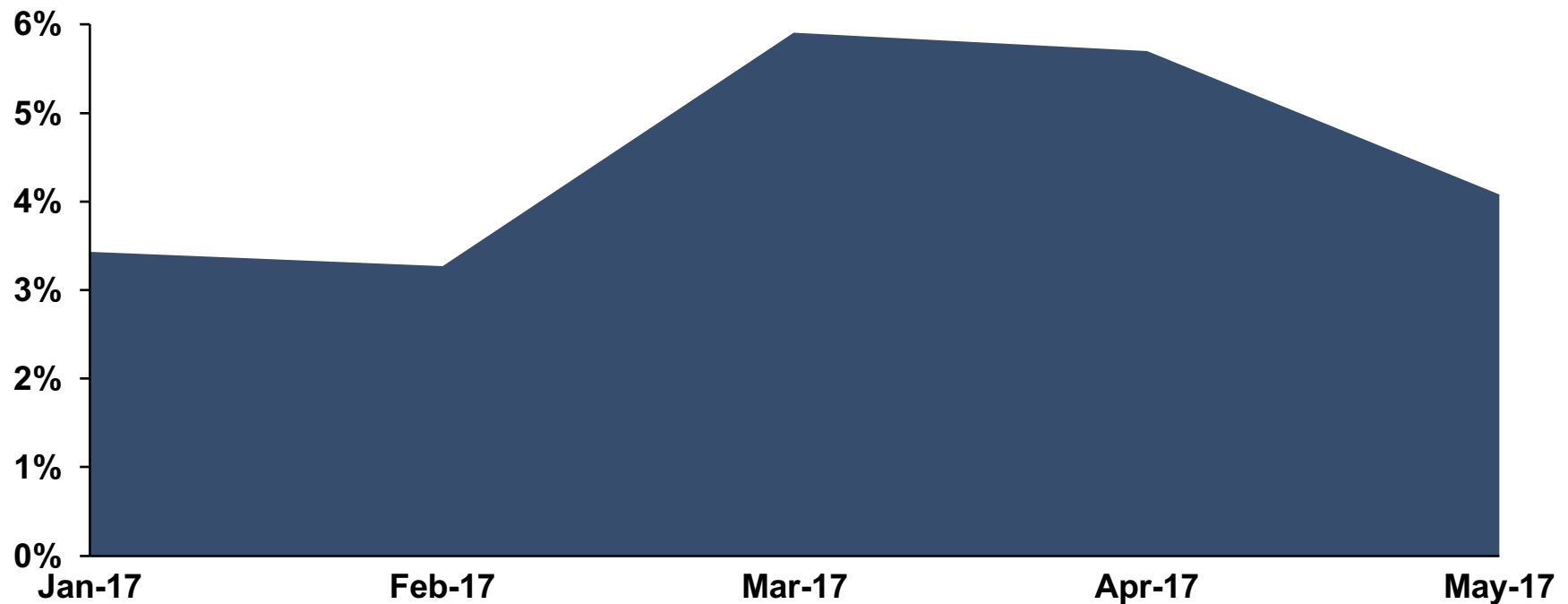
**In a single month the Department lost ~ \$100,000. This translates into a \$1.2 million loss annually**

**And it would appear that we had the patients to fill those bed days but they were walking out the door**

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**Left Without Being Seen (LWBS) Rate**

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# My Autistic Son Has Been Waiting Over 200 Hours in the ER for a Psych Bed in North Carolina



**For 11-year-old in ER, The  
Wait for a Psych Bed is 10 Days**

October 17, 2017 by [Taylor Knopf](#)

[f](#) 2.7k [t](#) Tweet [in](#) 0

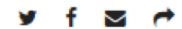
*For more than 250 hours in the UNC Emergency Department, Liam Harrison waited for an inpatient bed to open at one of North Carolina's few psychiatric facilities. Maybe today will be the day he gets one.*

Liam Harrison. Photo courtesy the Harrison family.

**This family of an autistic child waited in the  
hospital ER over 200 hours. Here's why.**

BY CLIFF BELLAMY

OCTOBER 17, 2017 01:00 PM, UPDATED OCTOBER 17, 2017 09:07 PM



Natania Barron with her son, Liam, 11. **NATANIA BARRON** SUBMITTED



# We started to get terrible social media feedback

Twitter

Facebook

Google Plus.....



**Linda McDonough** @briannas\_m... · Oct 16, 2017

239hrs. To [#UNC](#) 's credit, they have added have added 2 new BED areas. BUT Illegal restraint seen yesterday, kid facedown with knee in back.



**Linda McDonough** @briannas\_m... · Oct 16, 2017

Liam has waited 238hrs for child psych bed, but many in the ER have waited even longer. We need beds for them too. .[@ncdhhs](#) .[@NC\\_Governor](#)



# PSYCHOPOLYPSE

Residency match that year was horrid  
Trouble recruiting faculty  
Lost 5-8000 in ED volume  
Faculty wellness down the tubes

# The intervention

## Challenging finances

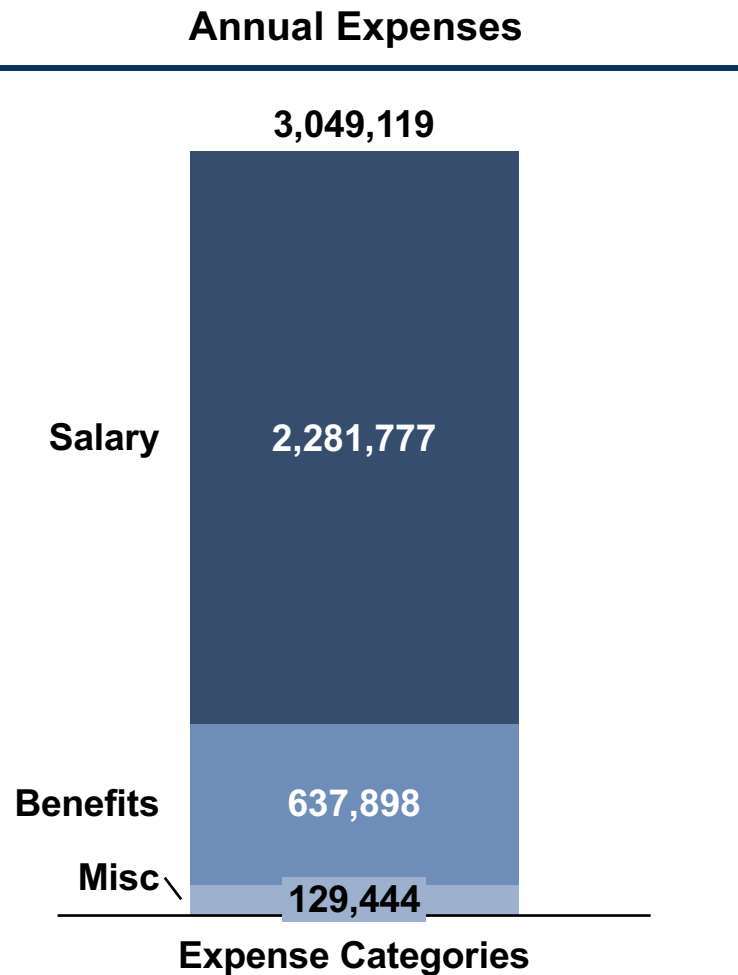
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### Net professional collections per patient:

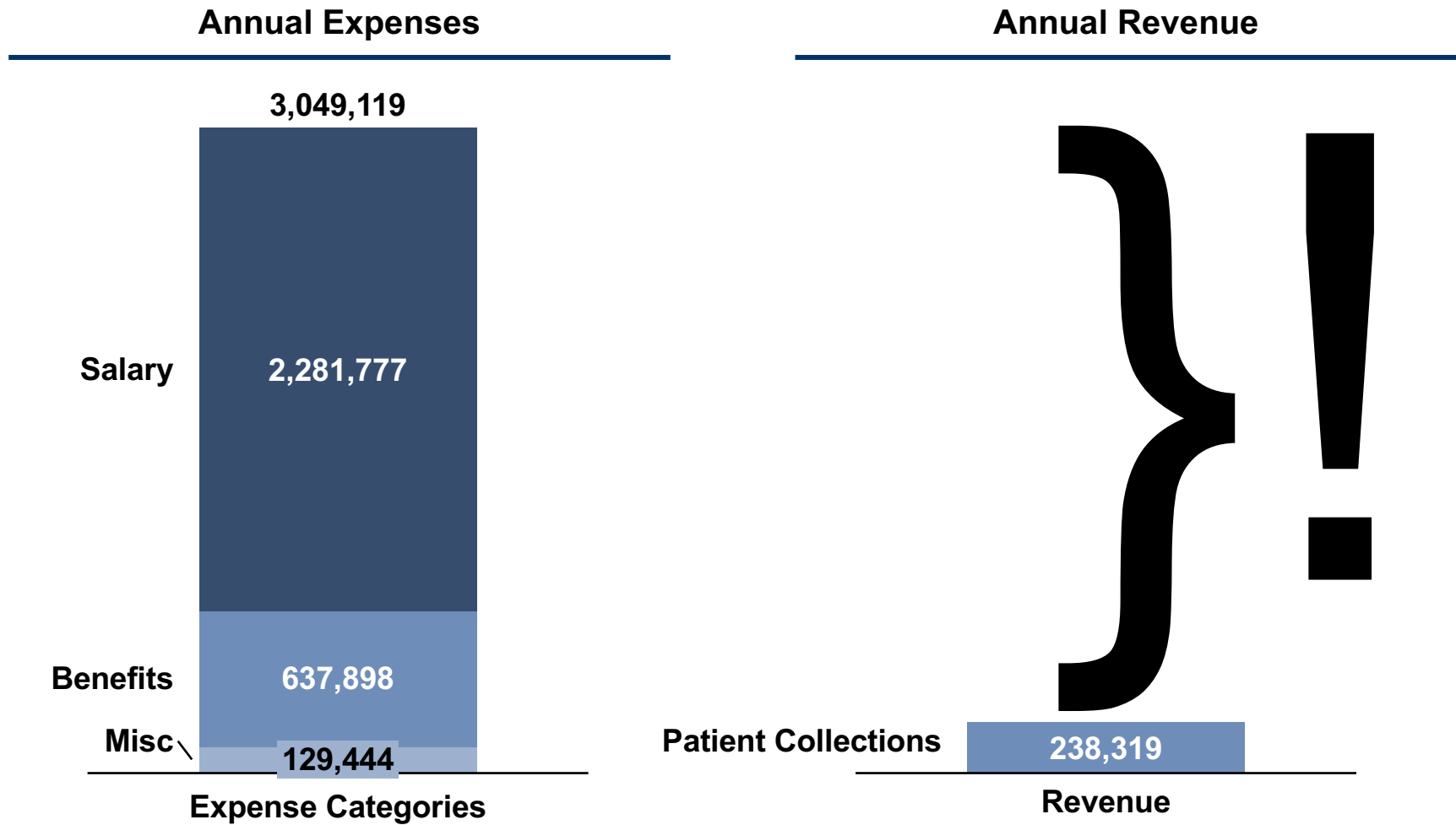
- **Emergency Medicine**  $\approx$  \$114
- **Psych Emergency Services**  $\approx$  \$ 50



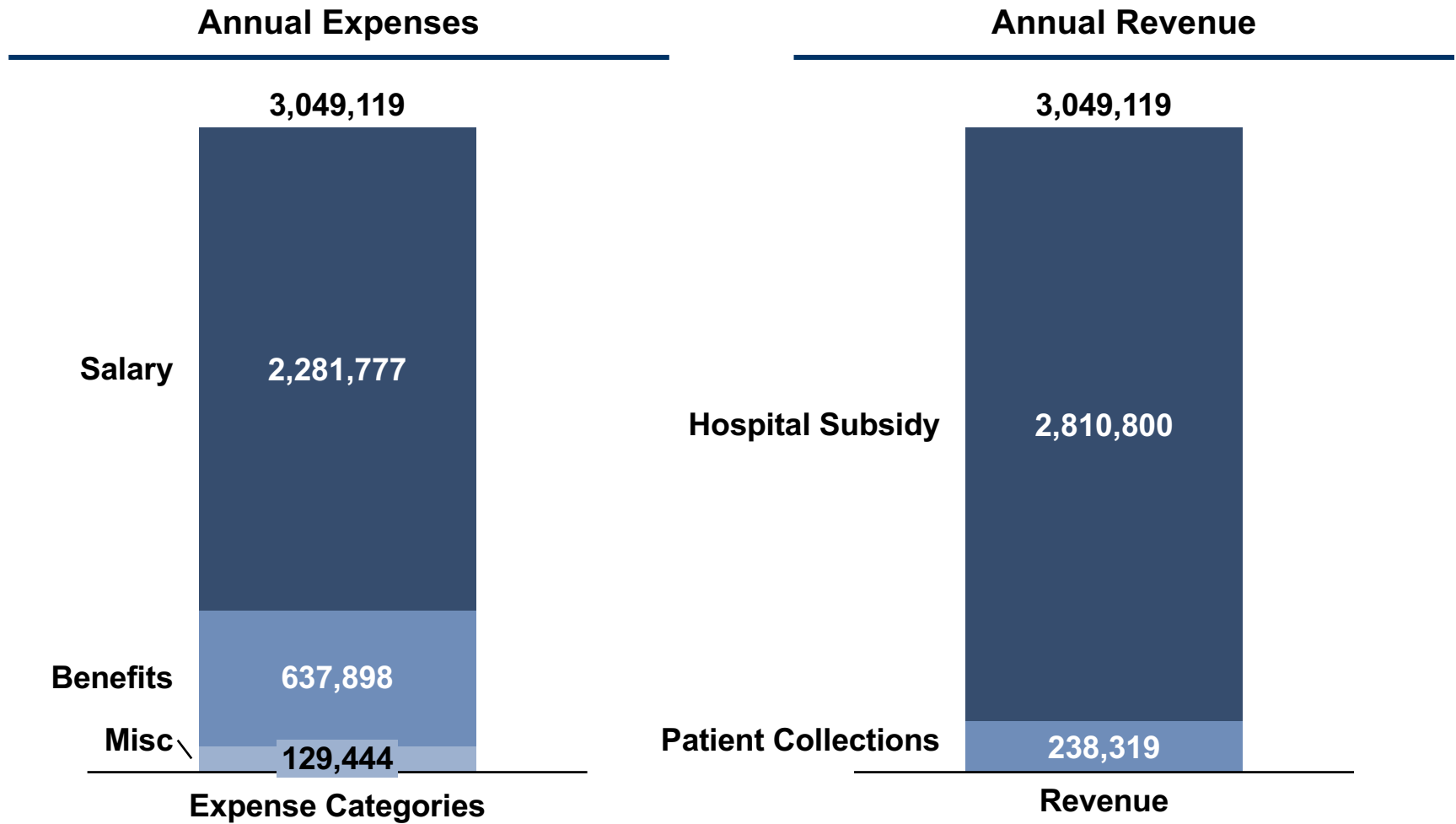
# Expenses for psych services significant



## Patient collections cover a fraction of expenses



# Hospital commitment



## **July 2017 – Emergency Medicine took over**

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**Led by Dr. Angela Strain**

- **MD: 2 FTEs**
- **Nurse Practitioners: 4 FTEs**
- **Social Workers: 7.4 FTEs**
- **Administrative Support: 1 FTE**

# New care paradigm



**56 hours of coverage**

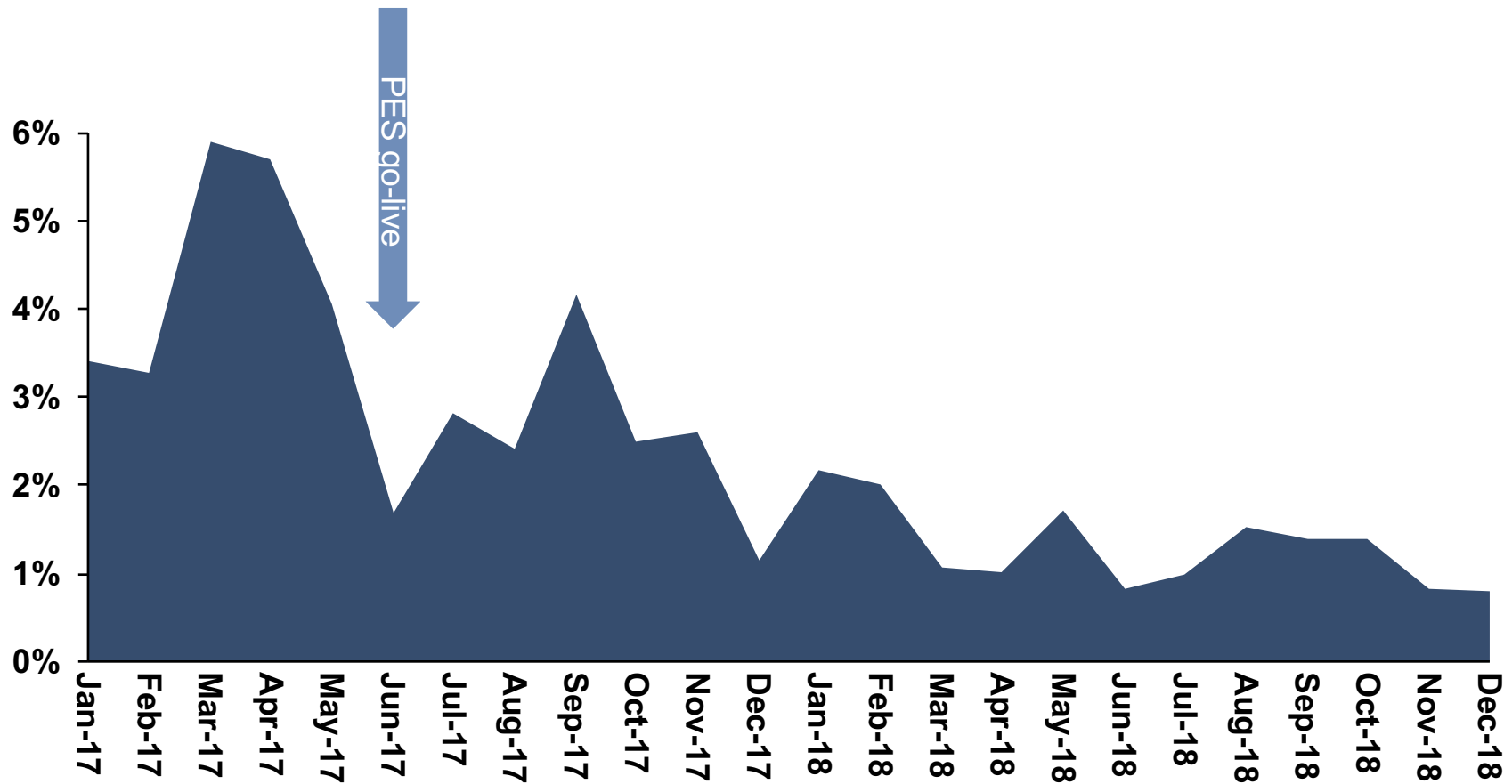
**1 MD – 8 hours**

**LCSW – 24 hours**

**APP – 16 hours**

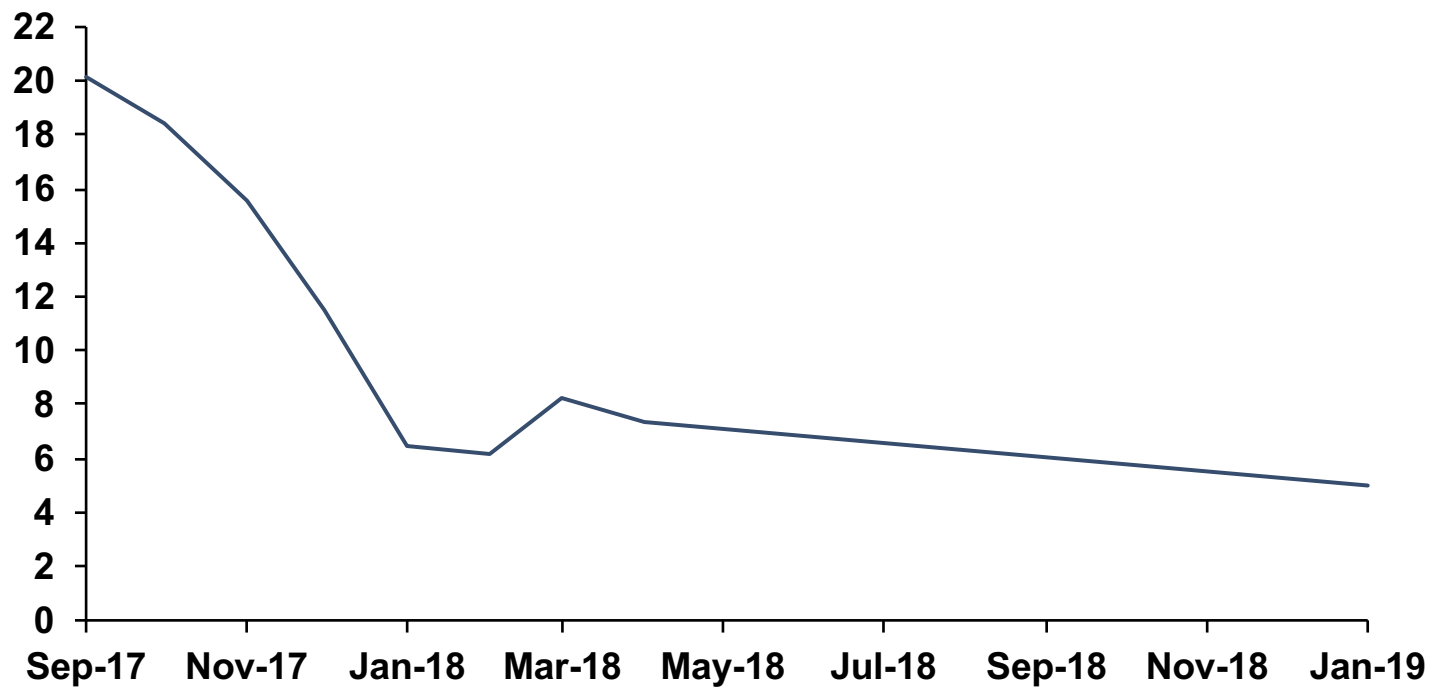
**Clerical – 8 hrs**

# Immediate impact on LWBS



# Door to evaluation improved

## Median Door to Evaluation (hours)



# LOS improved

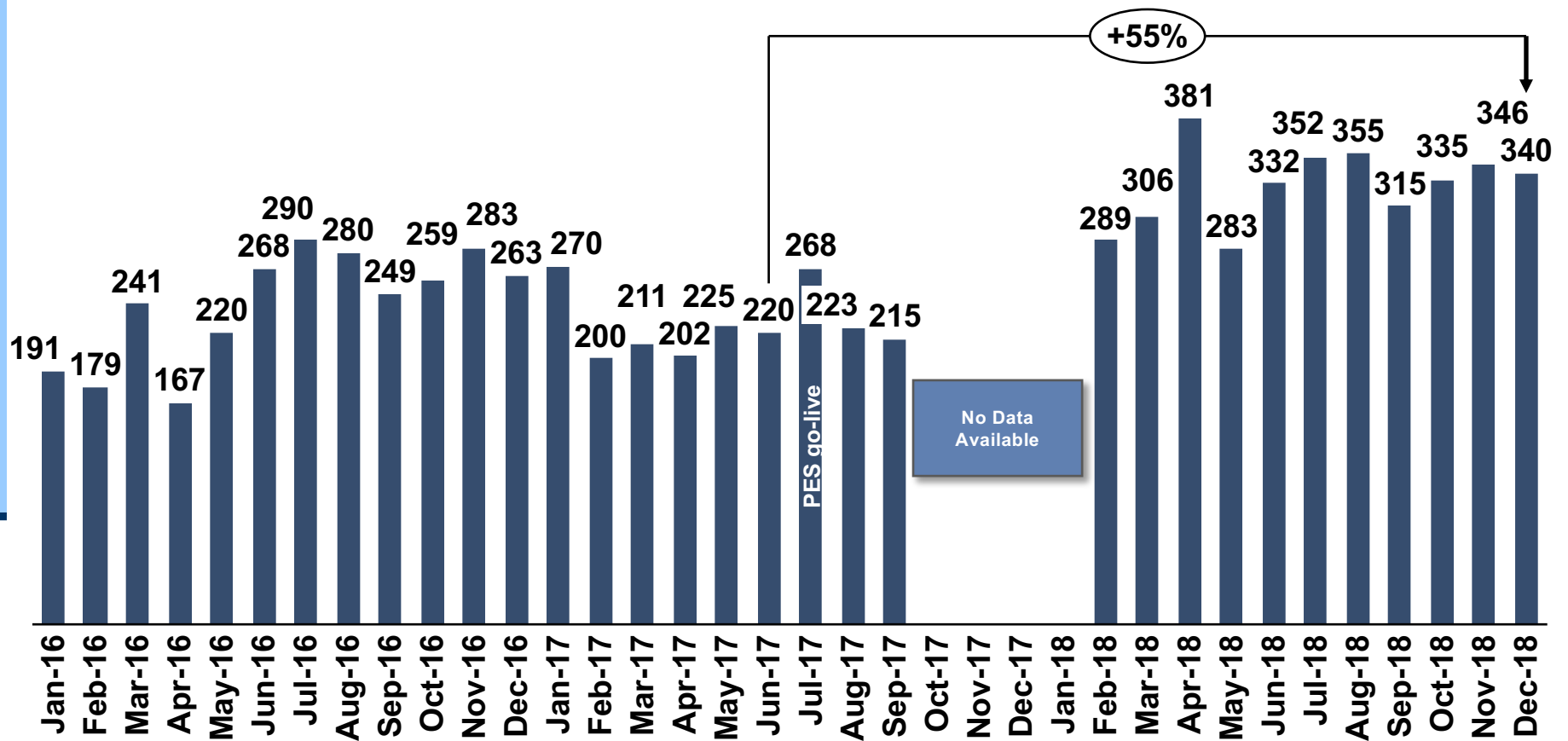
## Median Length of Stay (hours)





# Increased ability to take outside transfers

## ED to ED Outside Transfers



## Other enhancements

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- **Dedicated APP to address primary care needs**
- **Recreation therapy every day**
- **Hospital school for the kids**
- **Dedicated Butterfly Garden for outdoor time**
- **Dedicated case management to assist with placement**

# Challenges and Current State

## Scarce outpatient resources

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Wait time to see any mental health professional in NC is over 4 months

40% of psychiatrists will not accept insurance (of any kind)

8,300 child psych specialists in US for more than 15 million young patients

# Complex patients

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28 years old male

Severely developmentally delayed

Mobile only with walker – mobility status declining

Large and very aggressive

Mother could no longer care for him

Lost ability to walk within days of being in ED

Required long term placement in a psych facility

Very few of these beds

Was in the ED for 142 days

# Complex patients

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6 year old male

Autistic and developmentally delayed

Not potty trained

Cannot feed himself

Extremely violent to himself

Required 2 on 1 care

North Carolina only has one facility in the state who can handle a patient like this

In the ED for 12 weeks

# Complex patients

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76 year old female

Severe dementia

Infected bed sores

Psych facility will not take her as she requires IV antibiotics

Medical floor will not take her as she requires 2 on 1 nursing

PT/OT would not come to the ED

Wound care nurse would not come to the ED

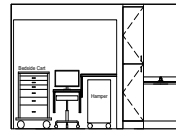
# What does the Future Hold?



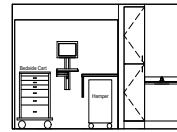
# 36-bed ED Psych Unit (June 2020)



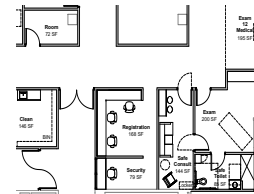
Renovation Plan - Ground Floor  
1/8" = 1'-0"



Typ. Transition Room Above - Computer Work Surface  
1/8" = 1'-0"



Typ. Transition Room Above - Computer Wall Mount  
1/8" = 1'-0"



Renovation Plan - Ground Floor - SAFE Option 2  
1/8" = 1'-0"

10/4/2018 9:03:02 AM



UNC HOSPITALS  
**Emergency Department  
Transition Unit**  
CHAPEL HILL, NORTH CAROLINA

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SHEET NAME:  
Renovation Plan

PHASE:  
SD  
REVISIONS:

ISSUE DATE: 10.04.18  
PROJECT #: 18007  
DRAWN BY: JJS

SHEET NUMBER  
**A2.0**

# Patients and Families teaching Us

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Behavioral Health Lay Navigators



*Patient Advocacy Council*

# Telepsych

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