

SPEAKER

# Thomas Insel, M.D.

Co-Founder & Executive Chair  
*Vanna Health*

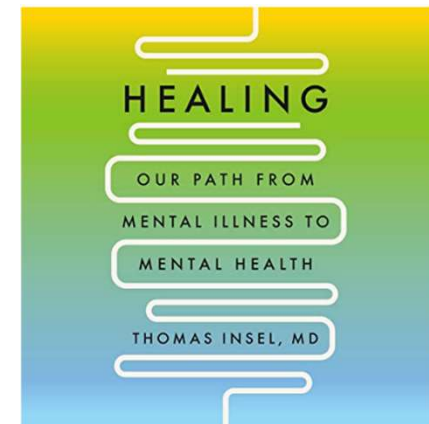


October 5, 2023

# Healing: Our Path from Mental Illness to Mental Health

**Tom Insel, MD**

Former Director, National Institute of Mental Health (2002-2015)  
Co-Founder And Exec Chair: Vanna Health



# The Behavioral Health Crisis of 2023 is 3 Crises



Youth  
Mental  
Health

SMI

SUD

Context:

Pub Hlth Emrg ended 5/11/23

BH Workforce shortage

Digital mh – end of Act I

New federal role

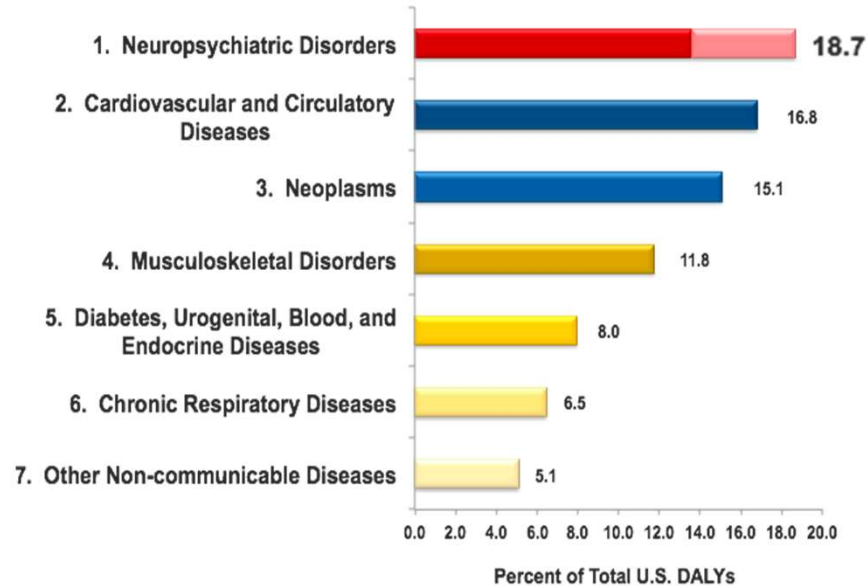
Generative AI

# Outline of Discussion

- Problem statement: spending more and more and getting less and less
- Sources of the problem: crisis of care
- Solutions: innovation for what, how, where, and when

# The Problem: A Crisis in Behavioral Health

No reduction in morbidity or mortality

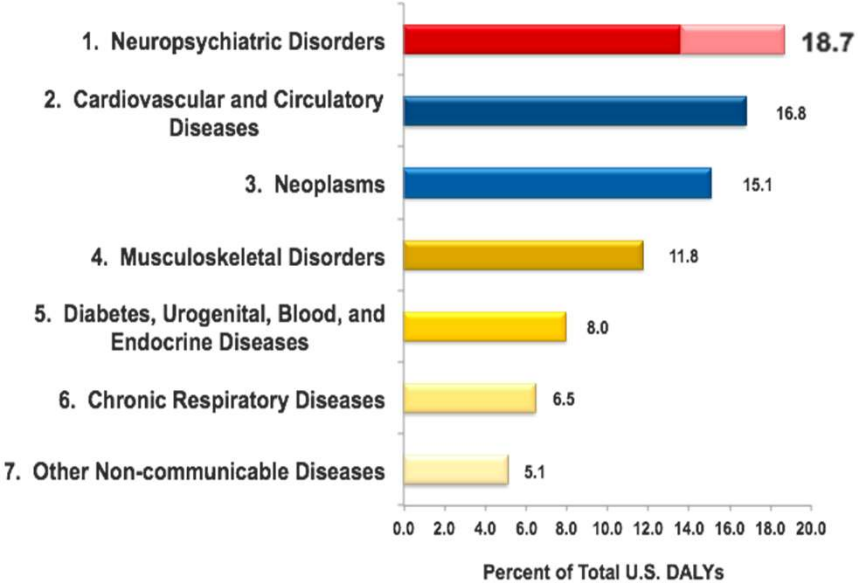


Data from Institute for Health Metrics and Evaluation

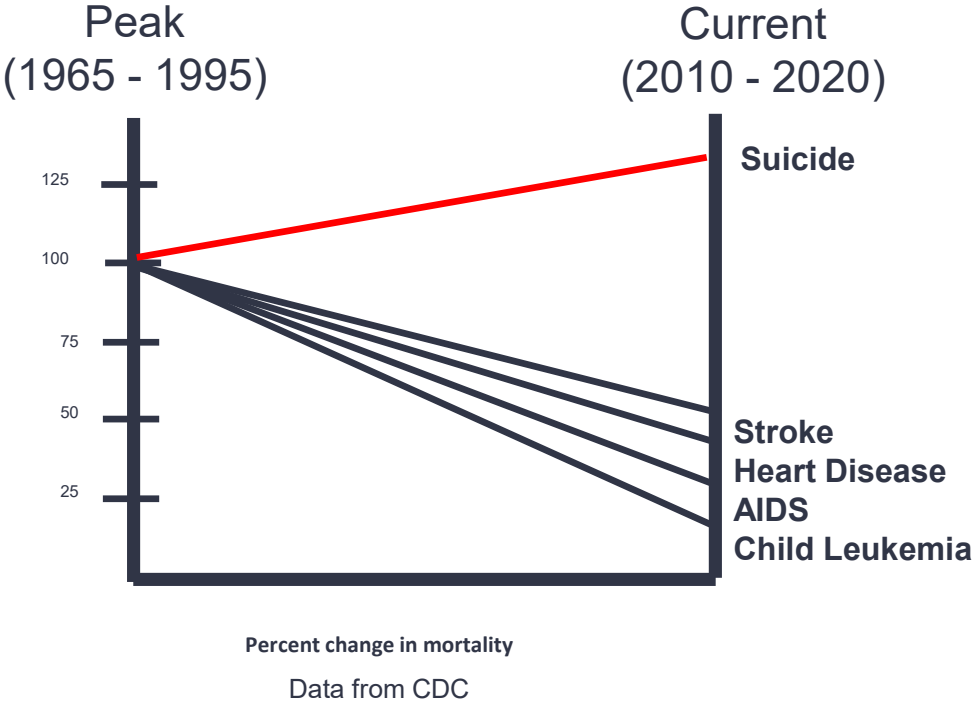
**Morbidity:**  
Prevalence  
Employment/Education  
Housing  
Incarceration  
Life Expectancy  
Poverty

# The Problem: A Crisis in Behavioral Health

No reduction in morbidity or mortality

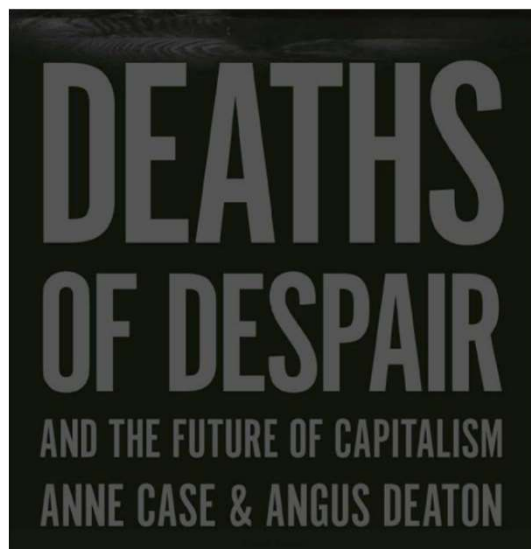


Data from Institute for Health Metrics and Evaluation



Data from CDC

# Deaths of Despair – Lowering Life Expectancy in America (before Covid-19)

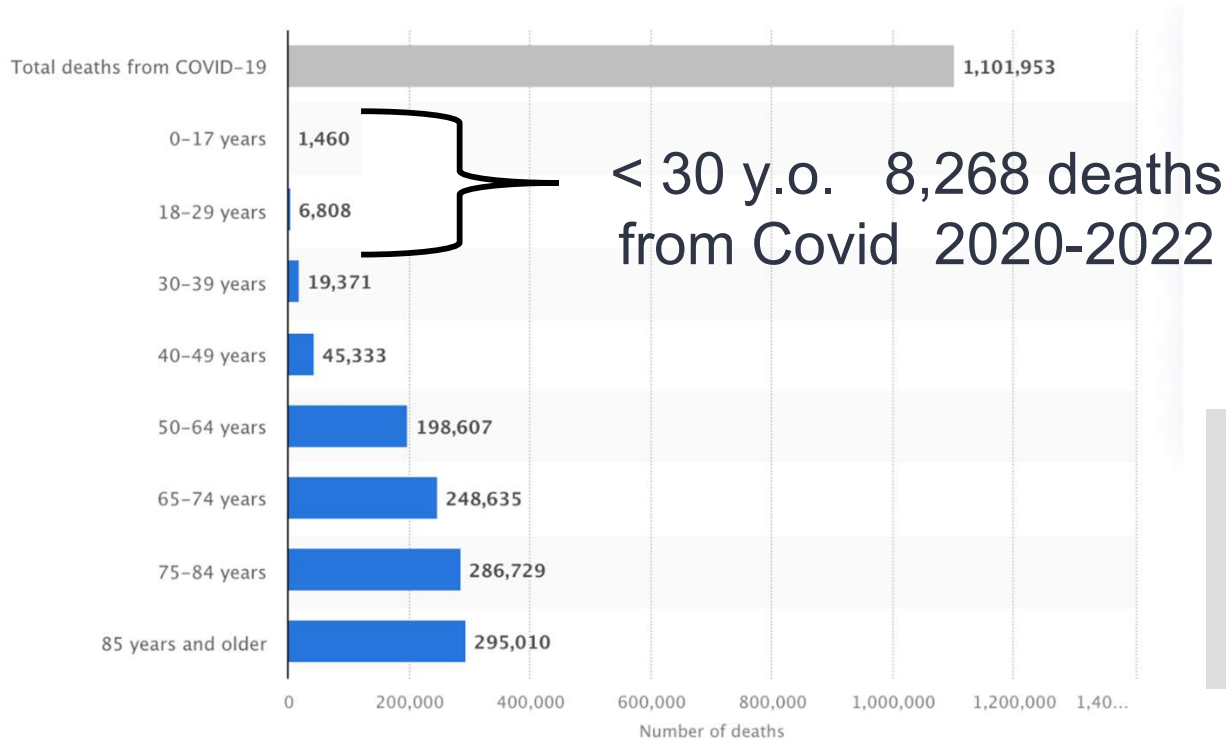


	2000	2019	2021*
Suicide:	29,350	47,511	48,183
Drug OD:	17,415	71,130	103,598
Alcohol:	19,627	39,000	95,000*
<b>TOTAL</b>	<b>66,392</b>	<b>157,141</b>	<b>264,781</b>

Data from CDC NVSS. \*data not comparable

60% increase in suicide death from 2001-2021 in US youth aged 10 – 24.

# Deaths of Despair in Young People During Covid Pandemic



Suicide deaths 2020-2021  
30,930 (< 34 y.o.)

OD deaths 2020-2021 (est)  
62,379 (< 34 y.o.)

**Deaths of Despair  
2020 - 2022 (est)  
> 140,000**

Data as of Feb 1, 2023

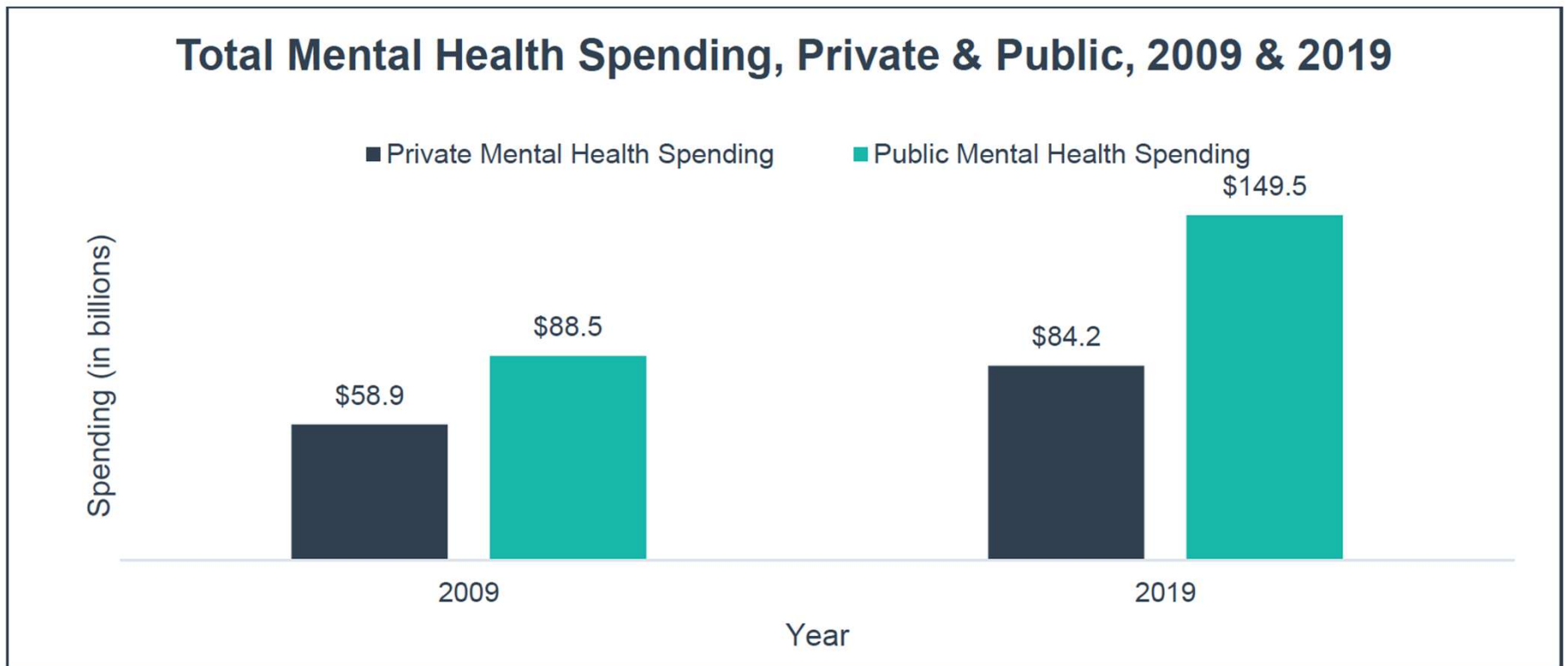
<https://www.statista.com/statistics/1191568/reported-deaths-from-covid-by-age-us/>

[https://www.cdc.gov/nchs/nvss/vsrr/covid\\_weekly/index.htm](https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm)

<https://www.cdc.gov/nchs/data/databriefs/db428-tables.pdf#2>



# Spending More and Getting Less



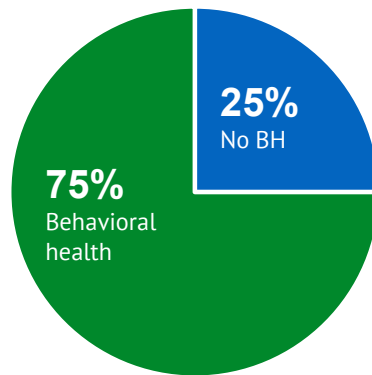
**Average Annual Healthcare Treatment Costs (Services and Prescription Drugs) per Individual by Behavioral Health Category, 2017 Total Population (21 Million Patients)**

BH CATEGORY*	AVERAGE ANNUAL HEALTHCARE COSTS			COSTS RELATIVE TO NO BH	
	TOTAL	BEHAVIORAL HEALTH	MEDICAL/SURGICAL	TOTAL	MEDICAL/SURGICAL
No BH	\$3,552	\$0	\$3,552	1.0x (ref.)	1.0x (ref.)
Any BH (MH and/or SUD)	\$12,272	\$965	\$11,307	3.5x	3.2x
Any MH	\$12,221	\$1,017	\$11,204	3.4x	3.2x
MH, not SMI	\$11,856	\$789	\$11,067	3.3x	3.1x
MH, SMI	\$22,460	\$7,422	\$15,038	6.3x	4.2x
MH, without SUD	\$10,855	\$772	\$10,083	3.1x	2.8x
Any SUD	\$19,796	\$1,989	\$17,807	5.6x	5.0x
SUD, without MH	\$12,923	\$303	\$12,619	3.6x	3.6x
Both MH and SUD	\$25,602	\$3,413	\$22,189	7.2x	6.2x
<b>Total Population</b>	<b>\$5,932</b>	<b>\$263</b>	<b>\$5,669</b>	<b>1.7x</b>	<b>1.6x</b>

\*Note that the "MH, not SMI" and "MH, SMI" categories include some individuals who also have substance use disorders.  
 Source: Davenport, et al., 2020  
 Definitions: BH=Behavioral Health; MH=Mental Health; SUD=Substance Use Disorder; SMI=Serious Mental Illness

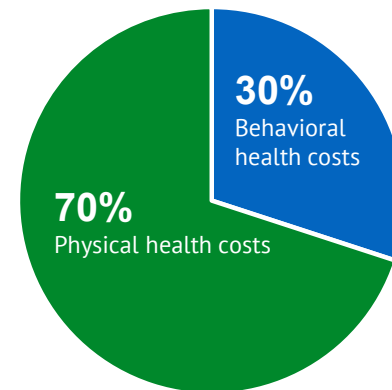
## Economic costs of serious mental illness – commercial and public

**75% of highest cost members  
have a chronic behavioral  
health condition**



**40% have SMI**

**70% of spending for  
members with BH conditions  
is related to physical health**



**Largely driven by ED and  
inpatient utilization**

**Cost of schizophrenia doubled from 2013 – 2019, reaching \$343B**  
Kadakia et al, J Clin Psych, 2022

# Outline of Discussion

- Problem statement: spending more and more and getting less and less
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# ***Why do we have this crisis?***

**It's a care crisis.**

Lack of Capacity

*Beds, workforce, safety net*

Lack of Engagement

*60% not receiving care*

Lack of Quality

*Fragmented, episodic, reactive*

Lack of Accountability

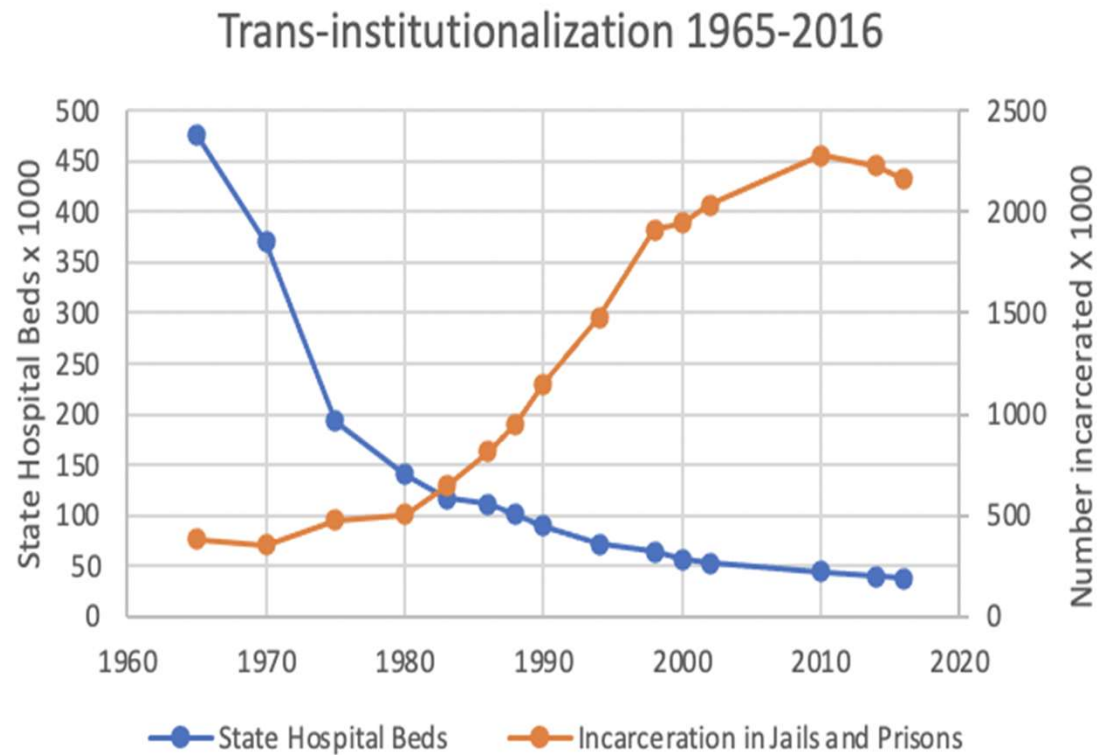
*We don't measure outcomes*

Lack of Equity

*People w SMI = untouchables*

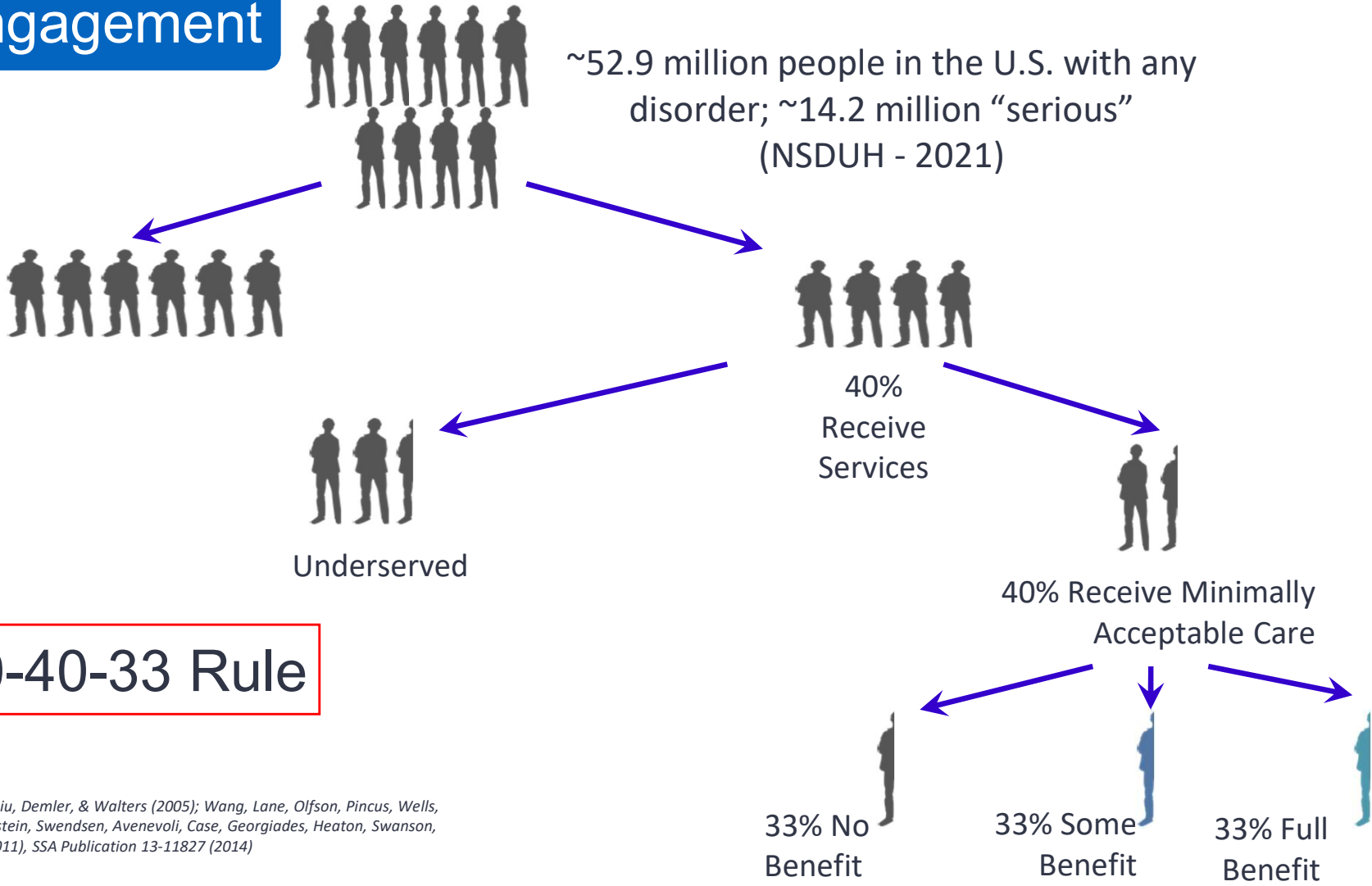
# Lack of Capacity

## Problem: Underinvestment in health facilities for people with SMI



Insel, Healing, 2022

# Lack of Engagement

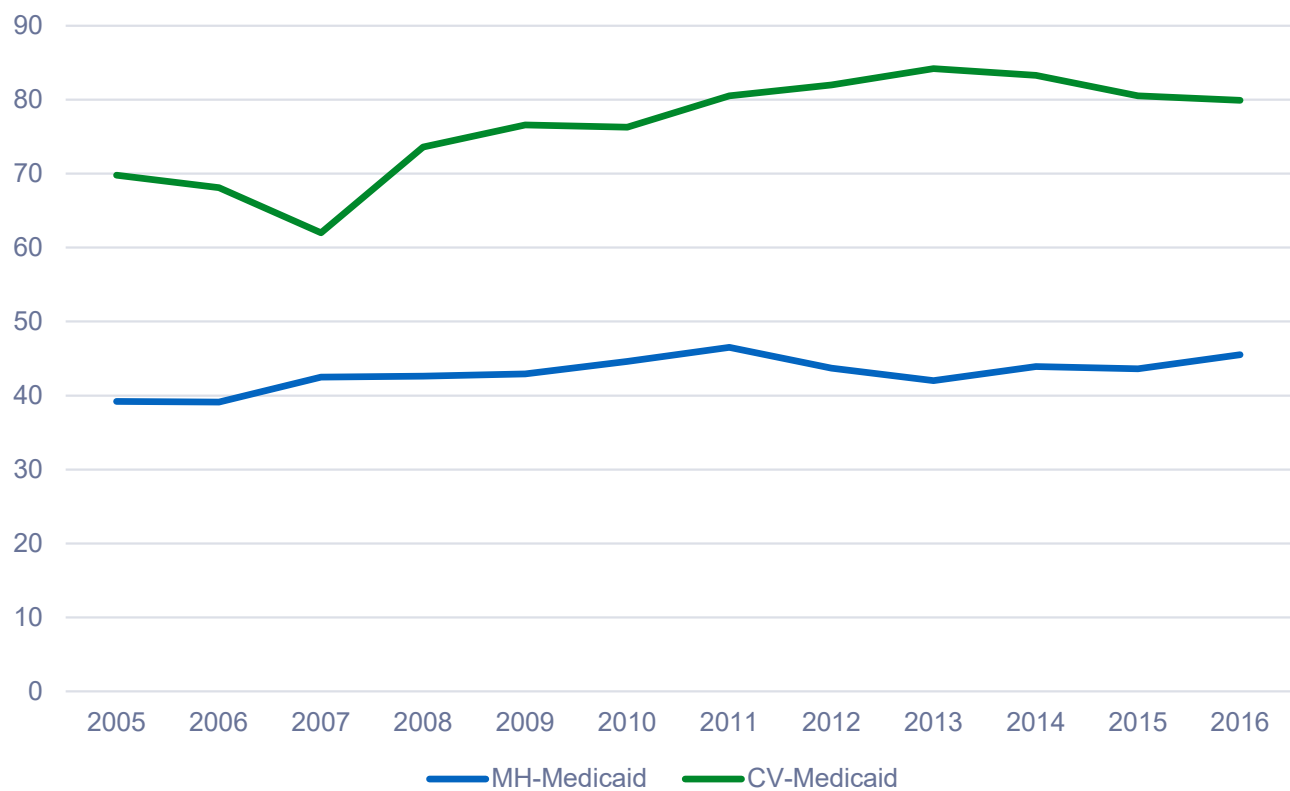


## The 40-40-33 Rule

SOURCES: NSDUH (2021); Kessler, Chiu, Demler, & Walters (2005); Wang, Lane, Olfson, Pincus, Wells, Kessler (2005); Merikangas, He, Burstein, Swendsen, Avenevoli, Case, Georgiades, Heaton, Swanson, Olfson (2011), SSA Publication 13-11827 (2014)

# Lack of Quality

## HEDIS SCORES - Medicaid Population



Cardiovascular  
Beta-blocker  
6 months  
Post-MI

Mental Health  
FU-7  
Post-inpatient



## Lack of Accountability

JAMA Psychiatry | Review

### Implementing Measurement-Based Care in Behavioral Health A Review

Cara C. Lewis, PhD; Meredith Boyd, BSc; Ajeng Puspitasari, PhD; Elena Navarro, BA; Jacqueline Howard, BA; Hannah Kassab, BSc; Mira Hoffman, BSc; Kelli Scott, PhD; Aaron Lyon, PhD; Susan Douglas, PhD; Greg Simon, MD; Kurt Kroenke, MD

However, it is underused; less than 20% of practitioners (17.9% of psychiatrists, 11.1% of psychologists, and 13.9% of masters-level practitioners) engage in MBC, and as little as 5% use it according to its empirically informed schedule (ie, every session). These rates reflect the status quo in the United States, the United Kingdom, and Australia despite policies recommending PRO use.

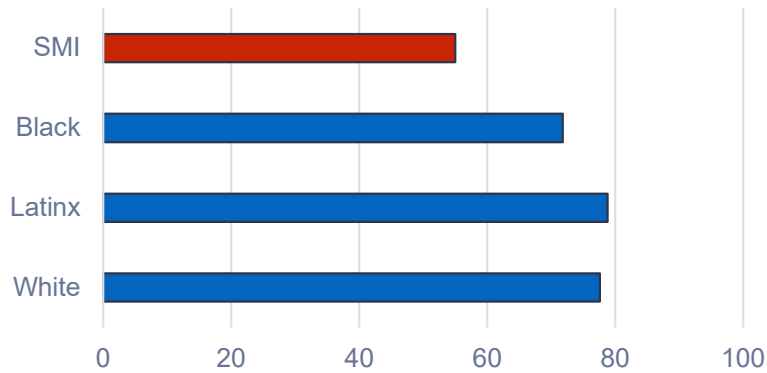
JAMA Psychiatry. doi:[10.1001/jamapsychiatry.2018.3329](https://doi.org/10.1001/jamapsychiatry.2018.3329)

Published online December 19, 2018.

# Lack of Equity

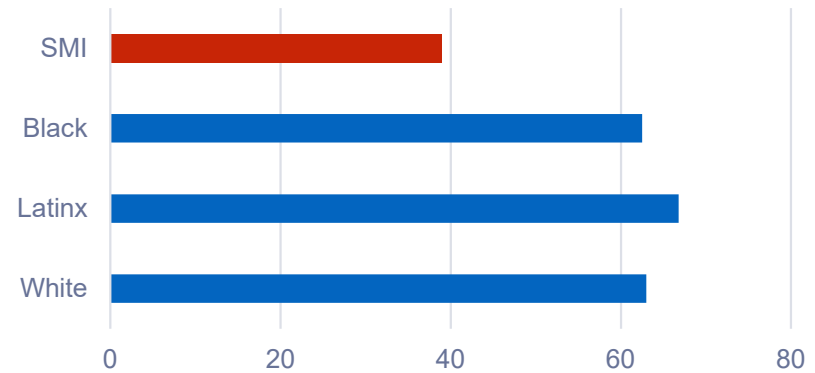
## People with SMI Are America's Untouchables

### Life Expectancy



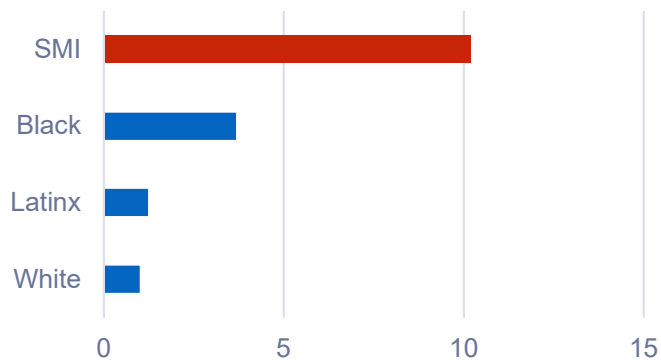
<https://www.cdc.gov/nchs/data/vsrr/vsrr015-508.pdf>

### Employment - 2019



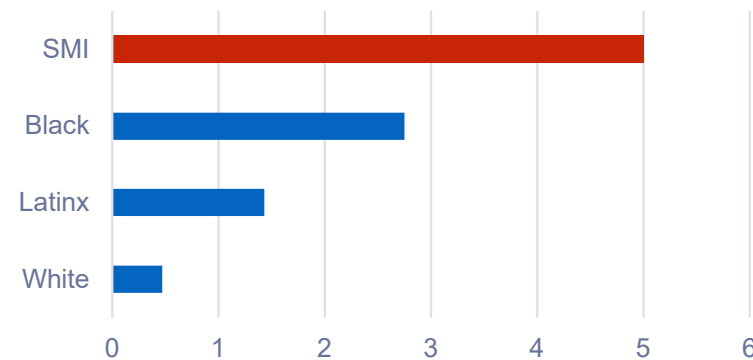
<https://www.bls.gov/opub/reports/race-and-ethnicity/2019/pdf/home.pdf>

### RR Police Use of Force



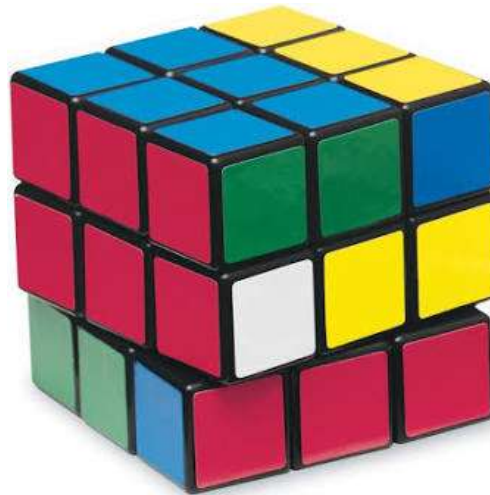
Laniyonu and Goff BMC Psychiatry (2021) 21:500

### Incarceration (Prison)



<https://www.pewresearch.org/fact-tank/2020/05/06/share-of-black-white-hispanic-americans-in-prison-2018-vs-2006/>

# Solutions



## **Three Surprising Aspects of MH Care**

- **Some of the most effective providers are the least expensive (e.g. peers)**
- **Some of the most effective interventions are non-medical (e.g. clubhouses)**
- **Some of the sickest patients are least likely to engage but most likely to recover (and can become some of your best providers)**

## Telehealth 1.0



## Telehealth 2.0

*Speech*  
*Voice*  
*Face emotion*  
*Wearable data*  
*Digital scribe*  
*Chat-GPT*

# Generative AI – Will it transform mental healthcare?



← Thread



Robert Scoble   
@Scobleizer

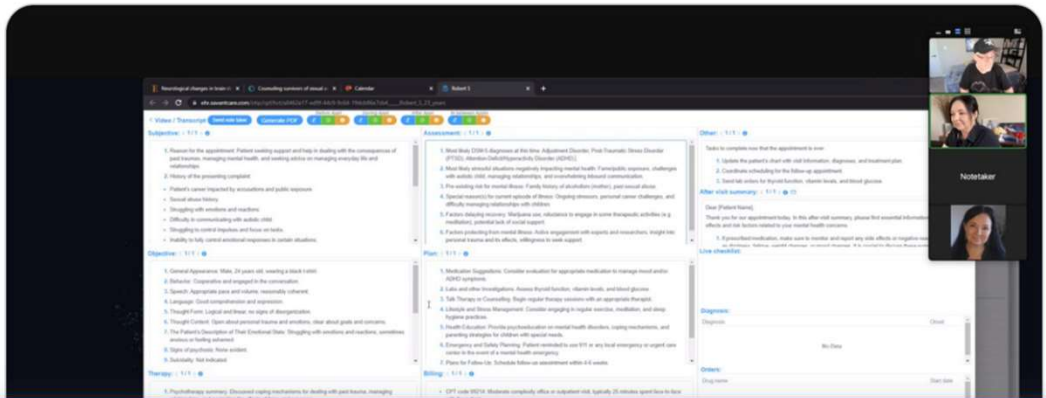


This is the scariest tweet I've made in a long time.

On Friday I met with a psychiatrist, [@MundinMd](#) and did a 30 minute session, where I was her patient.

These are the notes that the system she was using, which uses [@OpenAI](#)'s GPT as back end, made.

Wow. Thread:



...

Generating customized reports for patients, providers, payers.

Prompt:

*Summarize our session in an empathic, uplifting tone with emojis that a 20-year-old will appreciate, in 150 words or less.*

## Problems

Lack of Capacity

Lack of Engagement

Lack of Quality

Lack of Accountability

Lack of Equity

## Innovative “Solutions”

Investment

Person-centered online care

Training, Coordinated Care

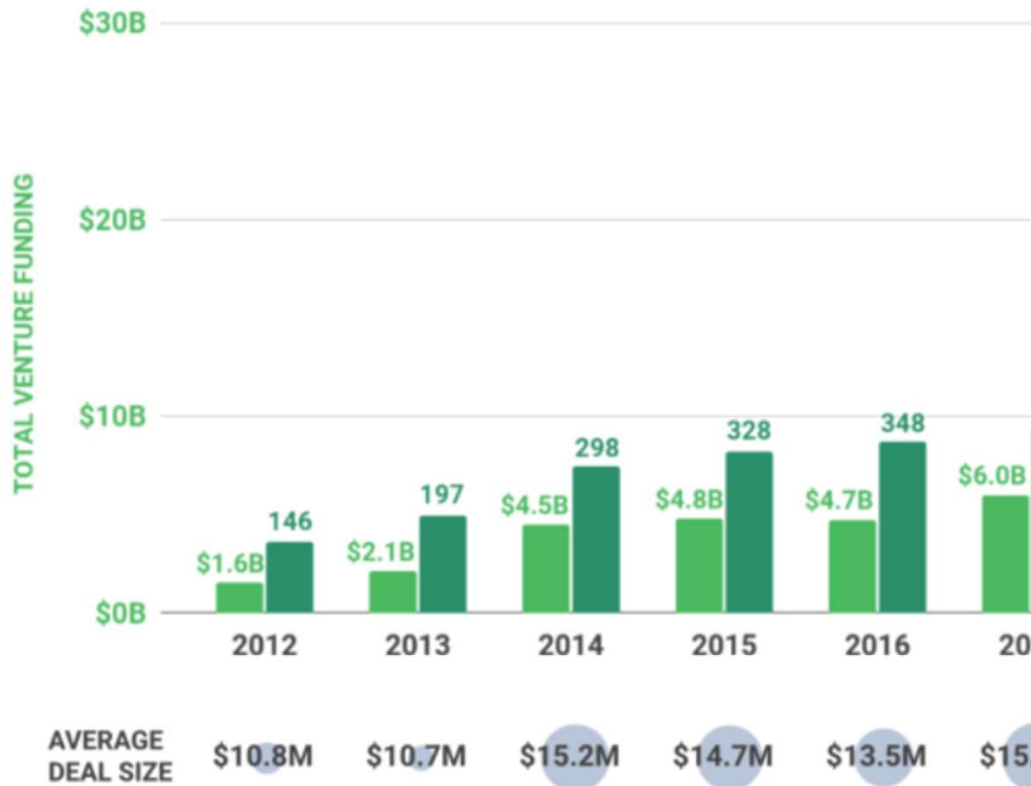
Measurement/Value Based Care

Recovery Based Care



## U.S. DIGITAL HEALTH FUNDING AND DEAL SIZE

2012-2022



Note: Includes U.S. deals >\$2M; data through December 31, 2022  
 Source: Rock Health Digital Health Venture Funding Database

# Investment

## 2022 TOP FUNDED CLINICAL INDICATIONS

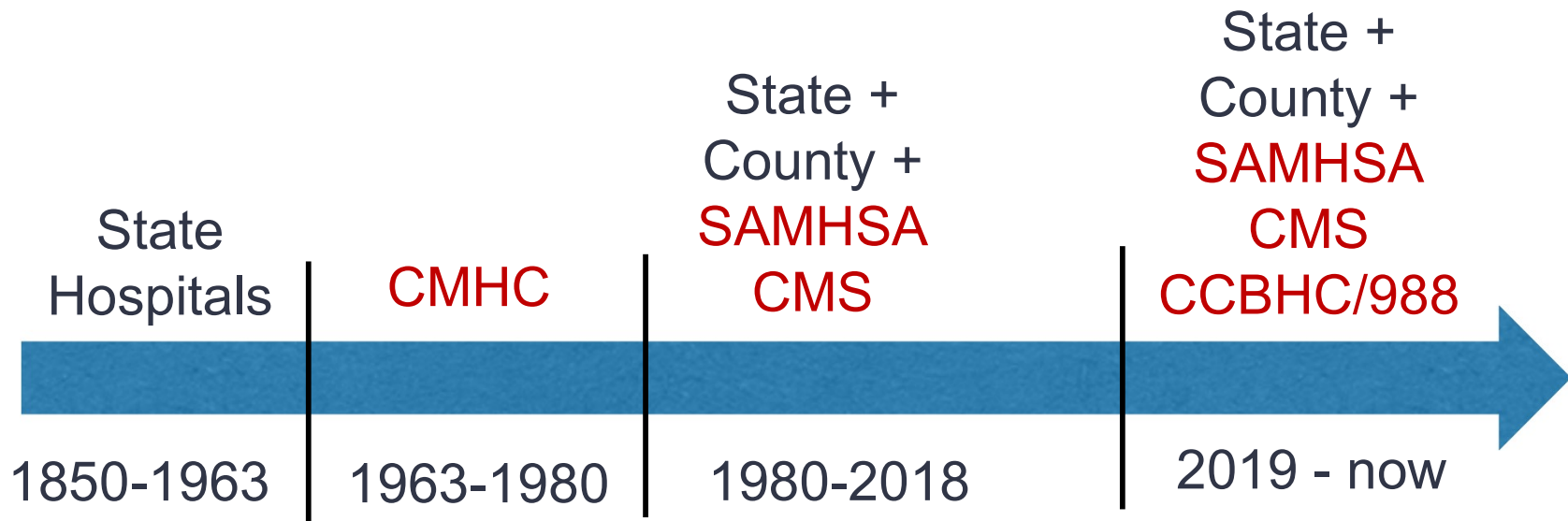
2018-2022; integers equate to funding rank

	2018	2019	2020	2021	2022
MENTAL HEALTH	\$1.4B 1	\$1.0B 1	\$2.7B 1	\$4.8B 1	\$2.1B 1
CARDIO-VASCULAR	\$0.6B 5	\$0.6B 2	\$1.2B 4	\$1.8B 3	\$1.3B 2
ONCOLOGY	\$0.4B 8	\$0.6B 3	\$1.3B 3	\$1.4B 5	\$1.2B 3
PRIMARY CARE	\$1.0B 2	\$0.5B 6	\$1.7B 2	\$1.7B 4	\$1.0B 4
REPRODUCTIVE & MATERNAL HEALTH	\$0.4B 6	\$0.6B 4	\$0.6B 7	\$1.4B 6	\$0.8B 5
DIABETES	\$0.4B 7	\$0.5B 5	\$0.8B 6	\$1.8B 2	\$0.8B 6



## Investment

# History of Public Investment in Mental Health



## Bipartisan Safer Communities Act 6/24/22

- CCBHC expansion via CMS (\$8.5B)
- School-based mental health programs (\$240M)
- Funds for crisis services (\$150M)

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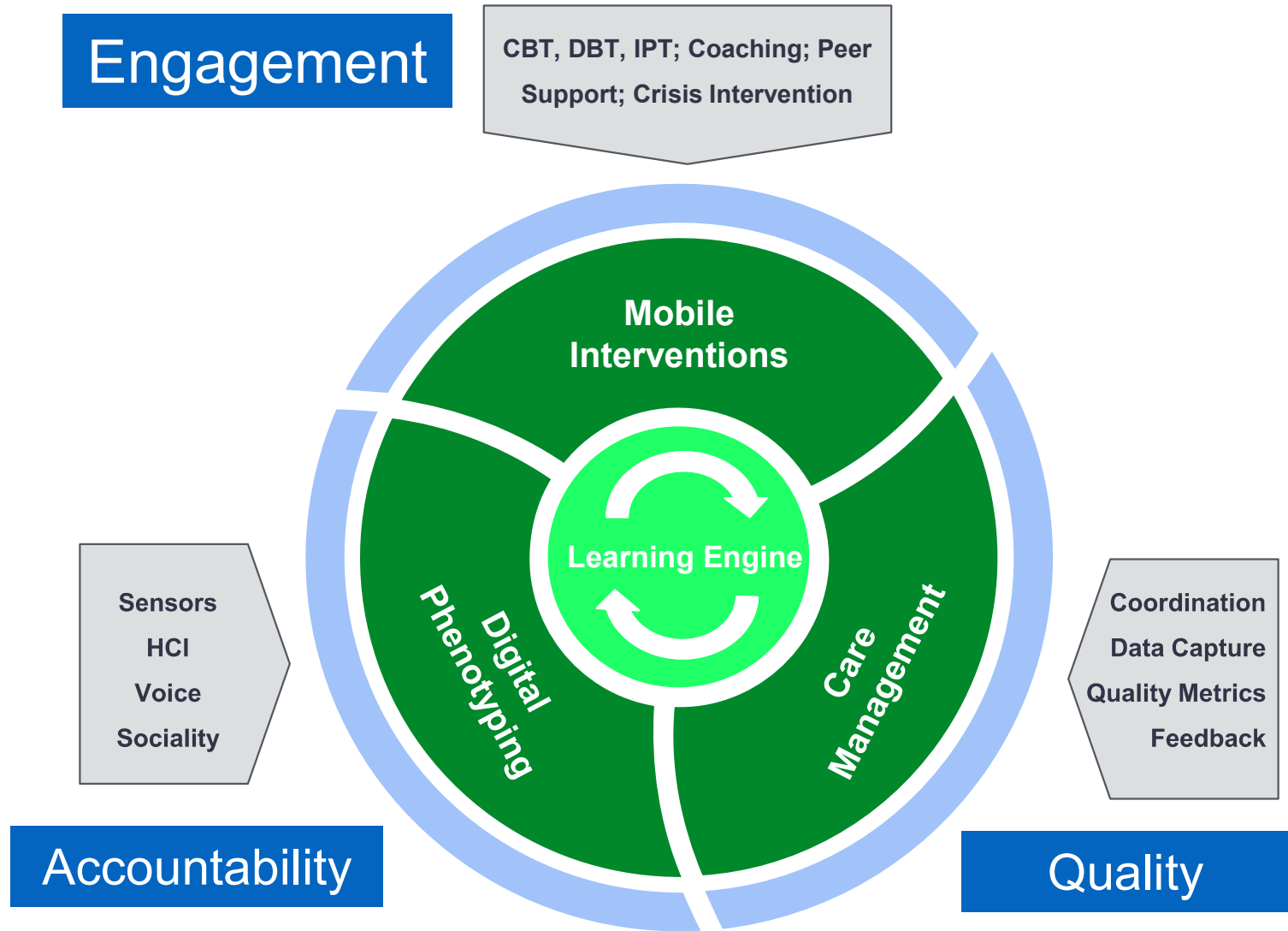
Training, Coordinated Care

Measurement/Value Based Care

Recovery Based Care



# The Digital Mental Health Landscape



## Problems

Lack of Capacity

Lack of Engagement

Lack of Quality

Lack of Accountability

Lack of Equity

## Innovative “Solutions”

Investment

Person-centered online care

Training, Coordinated Care

Measurement/Value Based Care

Recovery Based Care



# The Road to Equity: Recovery



**The 3 P's: People, Place, Purpose**

# We know how to deliver the 3 P's

People  
Place  
Purpose



# But health care doesn't pay for the 3 P's



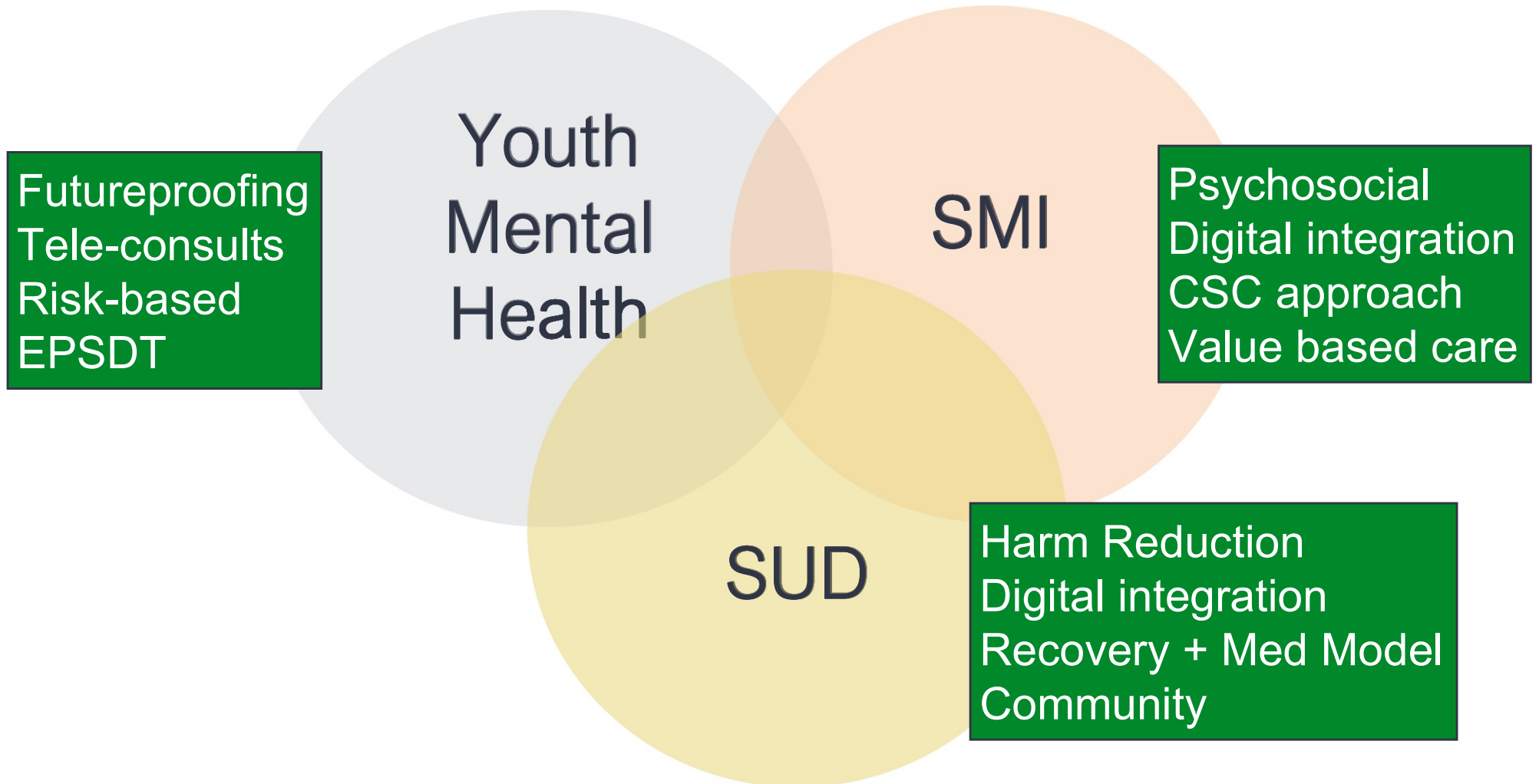
# **Recovery**

**The problems can be defined as medical  
The solutions need to be defined as social,  
environmental, and political**

**Recovery Requires Us to Think Beyond Symptoms  
Recovery Invites Us to Redefine Care**

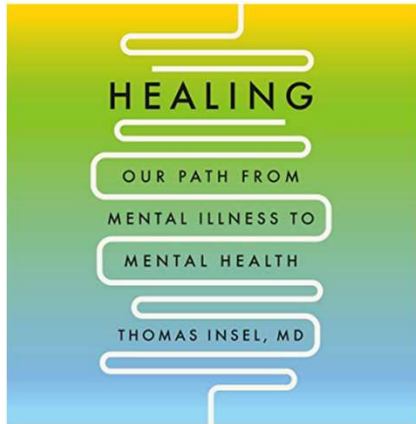


# The Behavioral Health Crisis of 2023 is 3 Crises



# Summary

- We face a crisis in mental health and a crisis in mental healthcare
- We have solutions for engagement, quality, and accountability
- We need a recovery model to bend the curve for SMI
- The problems are medical; the solutions are much broader



# Thank You!



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