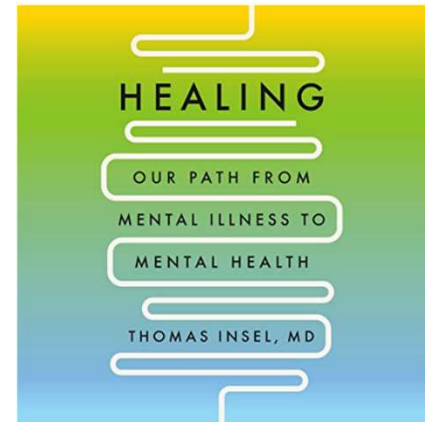


September 11, 2023

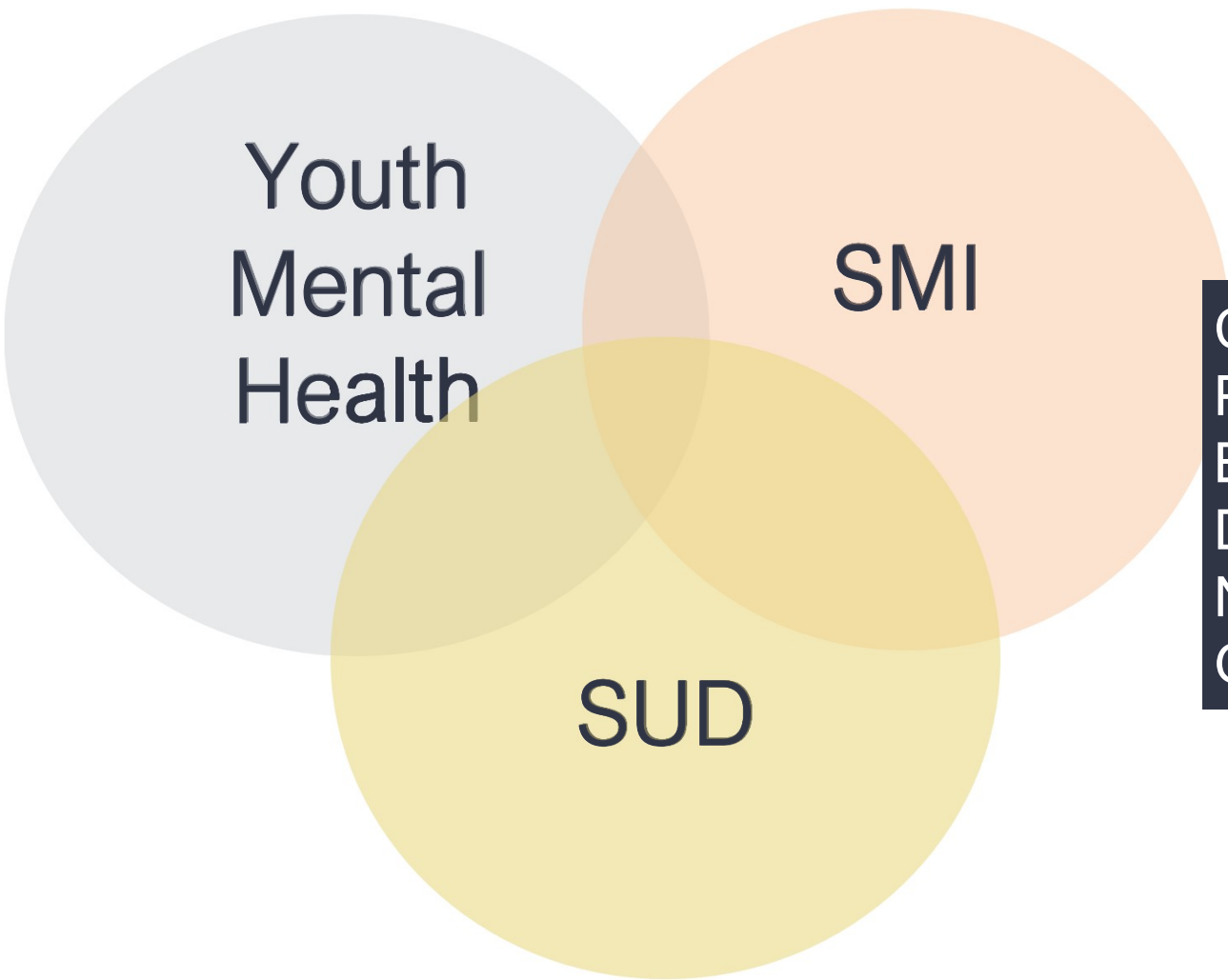
Healing: Our Path from Mental Illness to Mental Health

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

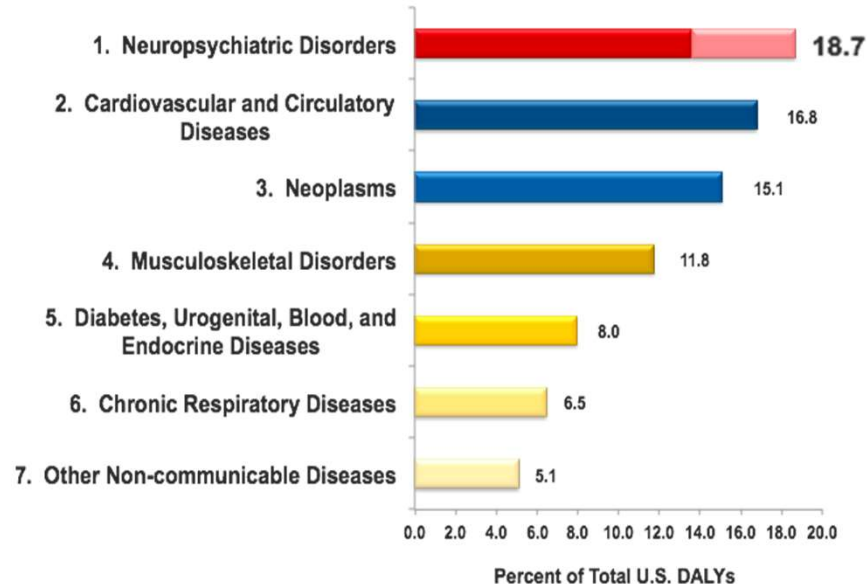
Generative AI

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

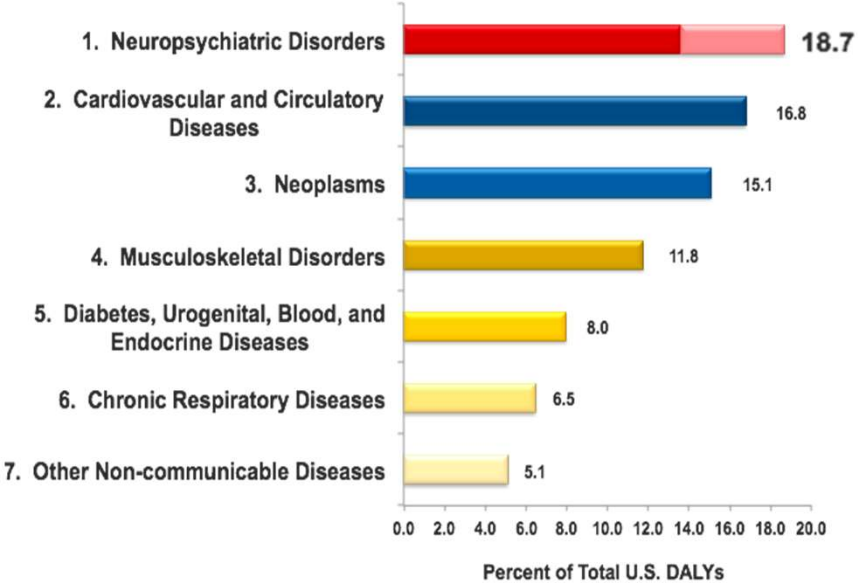


Data from Institute for Health Metrics and Evaluation

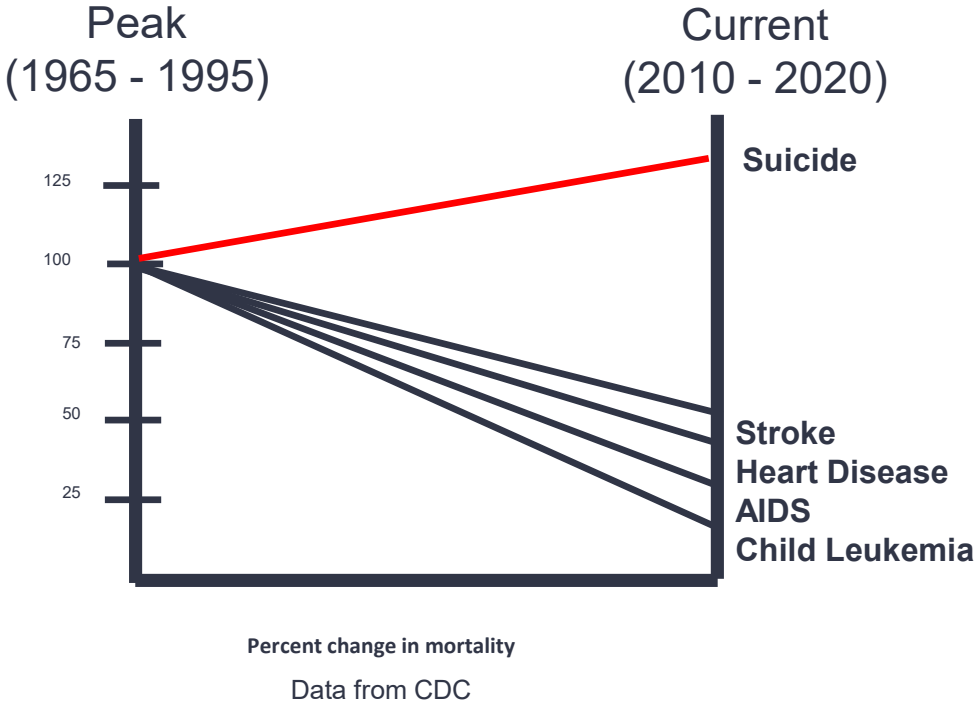
Morbidity:
Prevalence
Employment/Education
Housing
Incarceration
Life Expectancy
Poverty

The Problem: A Crisis in Behavioral Health

No reduction in morbidity or mortality

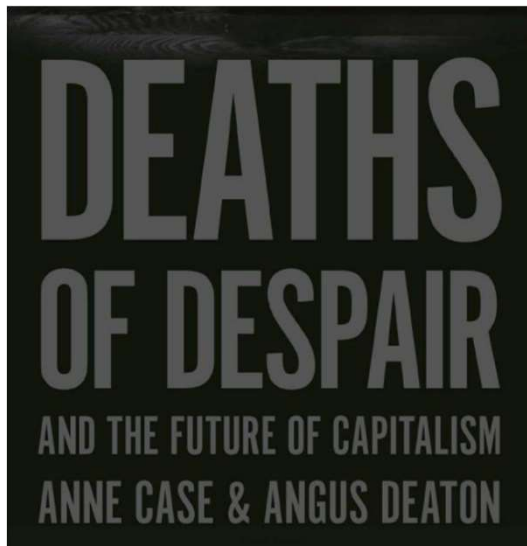


Data from Institute for Health Metrics and Evaluation



Data from CDC

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

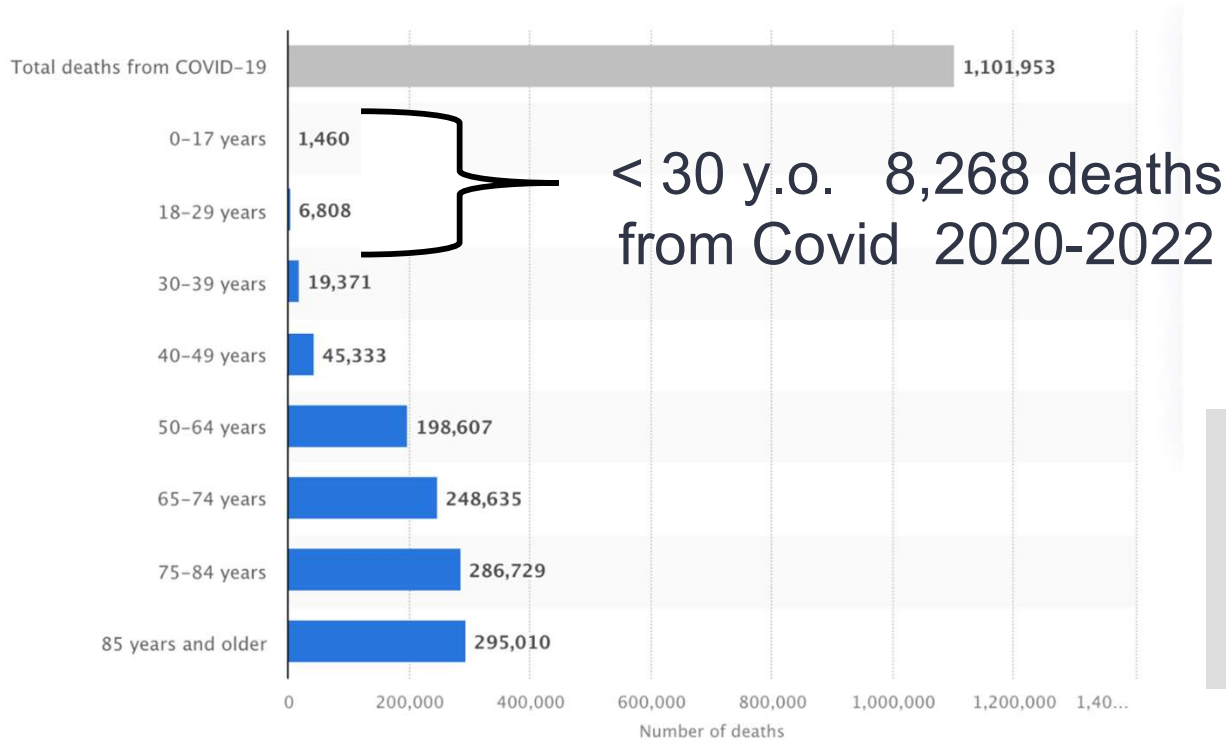


	<u>2000</u>	<u>2019</u>	<u>2021*</u>
Suicide:	29,350	47,511	48,183
Drug OD:	17,415	71,130	103,598
Alcohol:	19,627	39,000	95,000*
TOTAL	66,392	157,141	264,781

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**

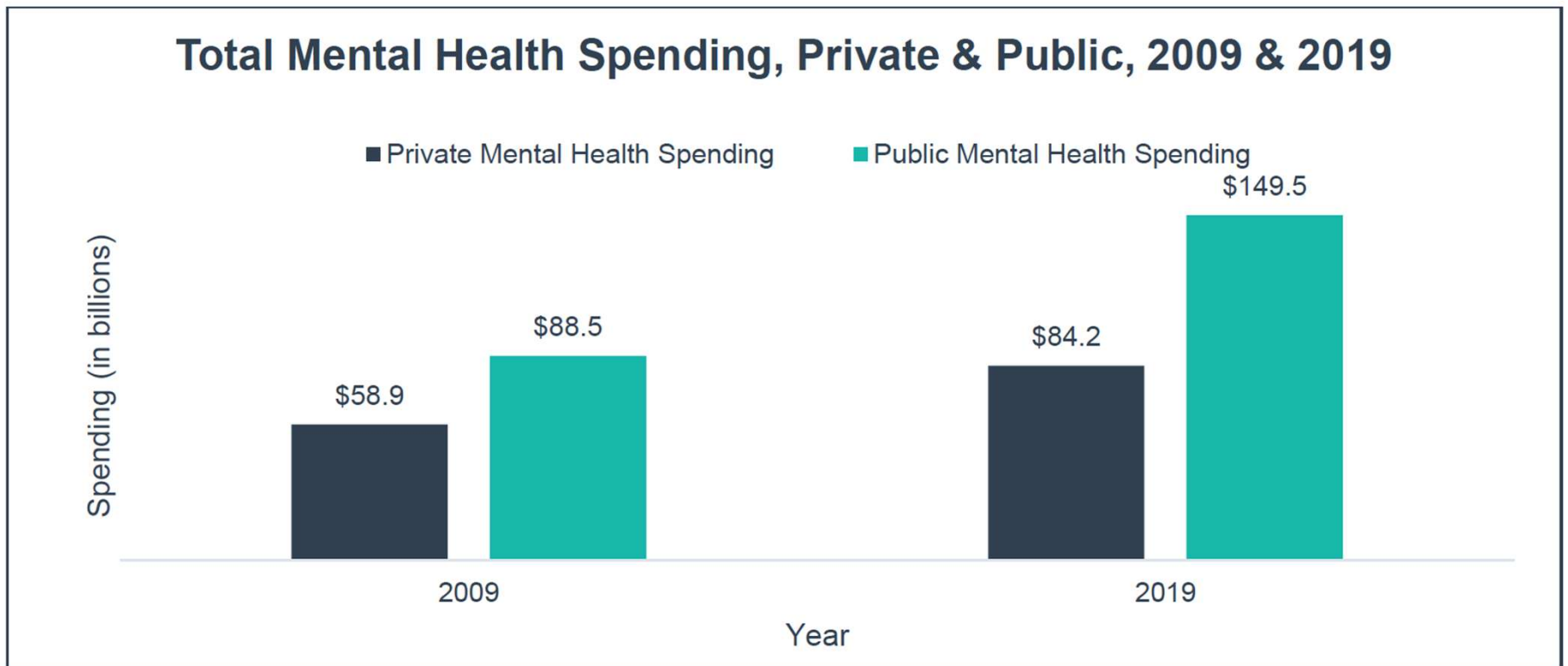
Data as of Feb 1, 2023

<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/data/databriefs/db428-tables.pdf#2>

Spending More and Getting Less



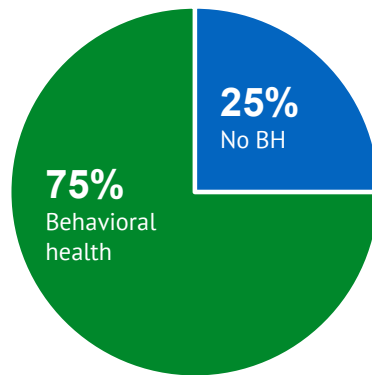
Average Annual Healthcare Treatment Costs (Services and Prescription Drugs) per Individual by Behavioral Health Category, 2017 Total Population (21 Million Patients)

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
Total Population	\$5,932	\$263	\$5,669	1.7x	1.6x

*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

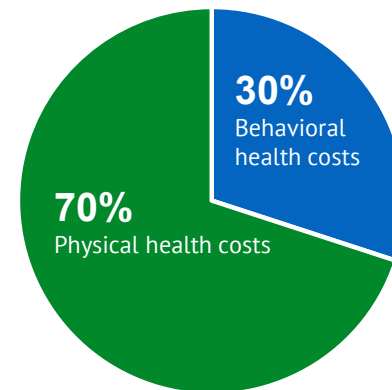
Economic costs of serious mental illness – commercial and public

**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
Kadokia et al, J Clin Psych, 2022

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

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

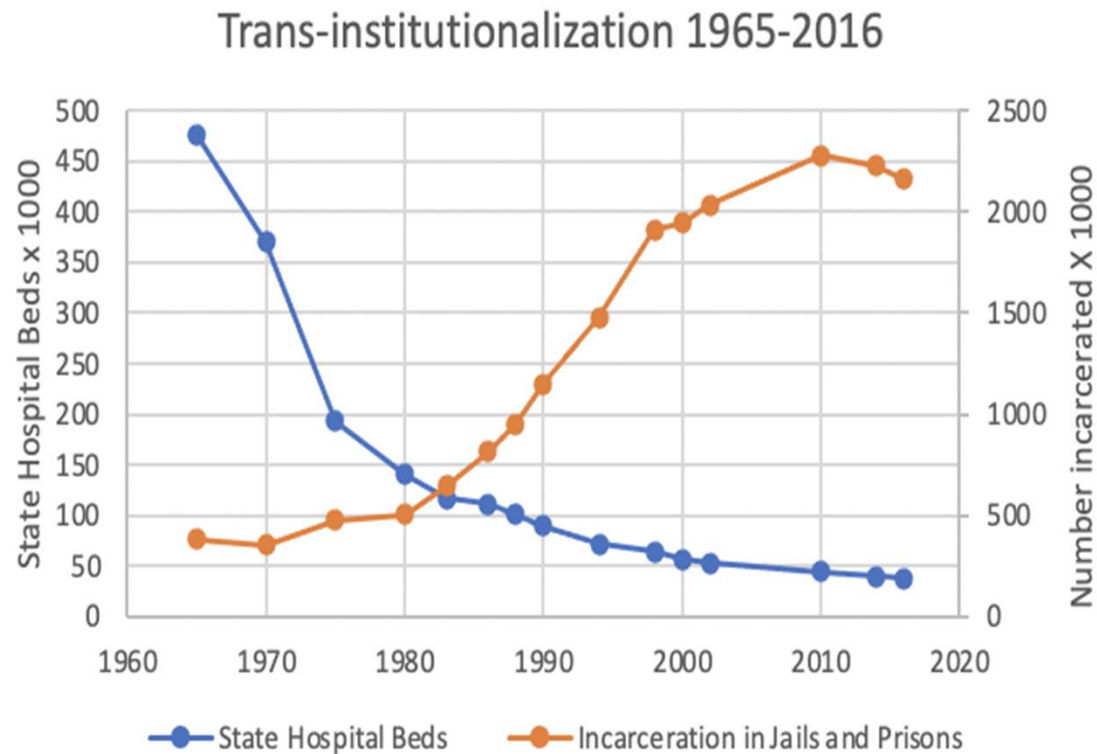
We don't measure outcomes

Lack of Equity

People w SMI = untouchables

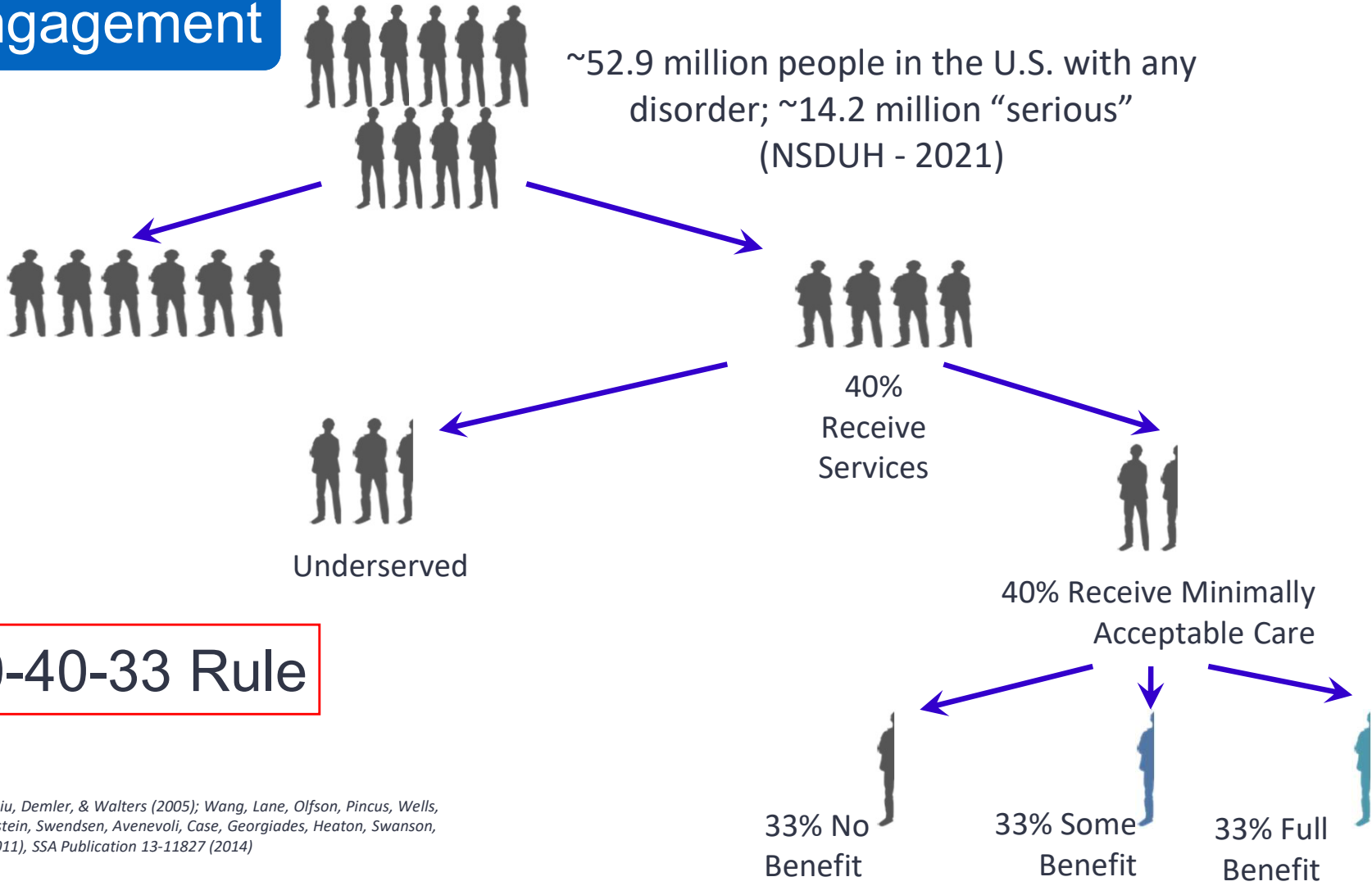
Lack of Capacity

Problem: Underinvestment in health facilities for people with SMI



Insel, Healing, 2022

Lack of Engagement

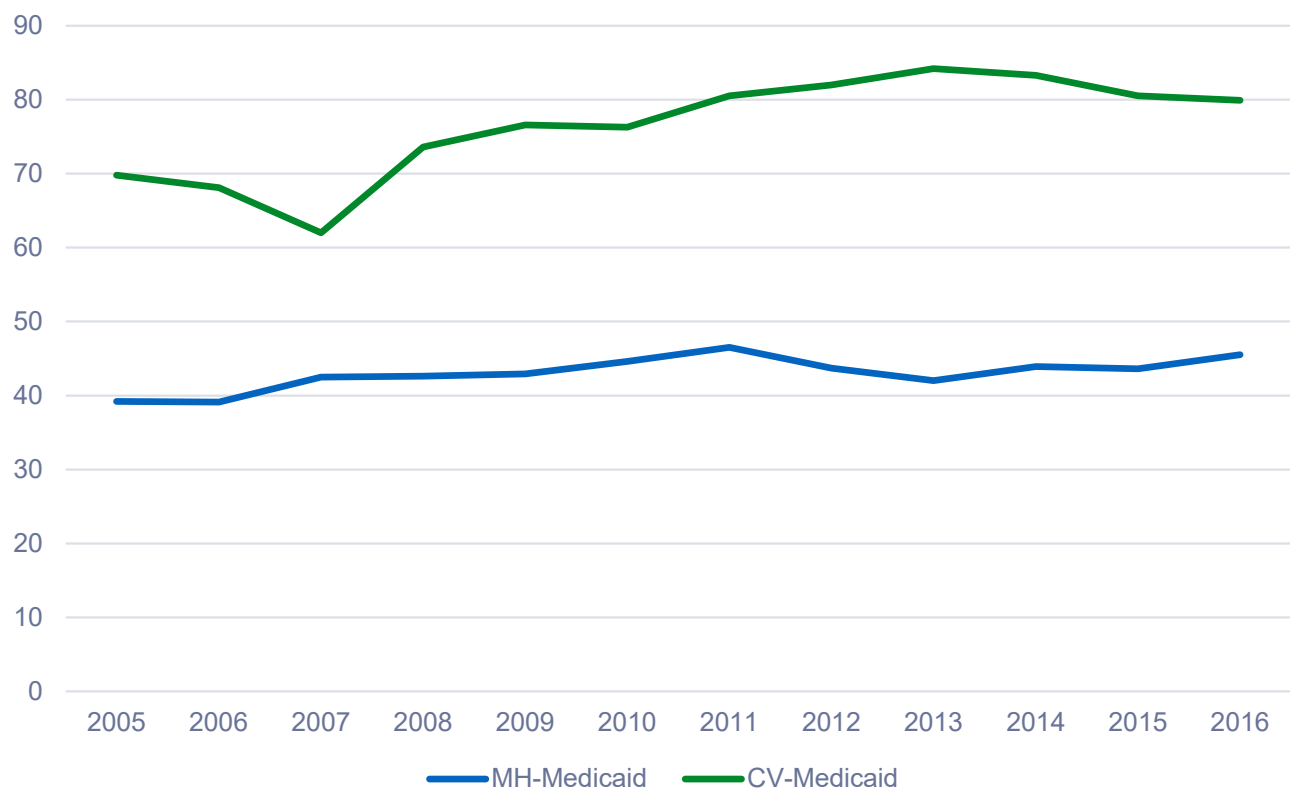


The 40-40-33 Rule

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.

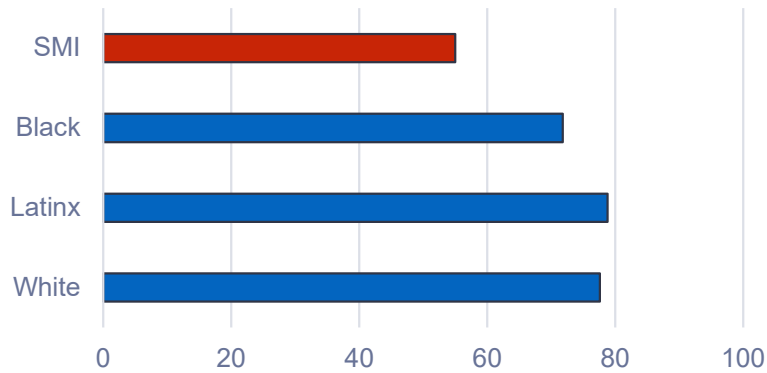
JAMA Psychiatry. doi:[10.1001/jamapsychiatry.2018.3329](https://doi.org/10.1001/jamapsychiatry.2018.3329)

Published online December 19, 2018.

Lack of Equity

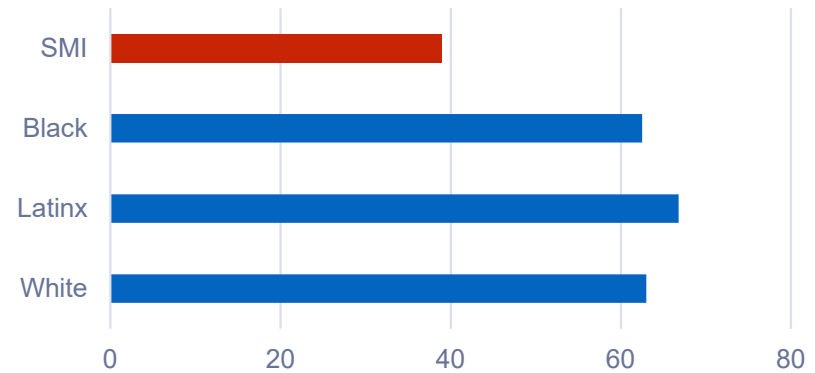
People with SMI Are America's Untouchables

Life Expectancy



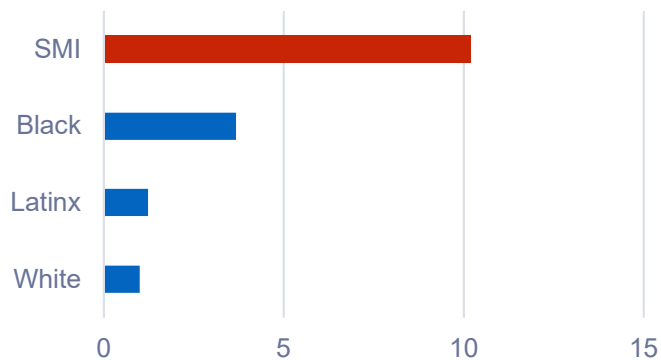
<https://www.cdc.gov/nchs/data/vsrr/vsrr015-508.pdf>

Employment - 2019



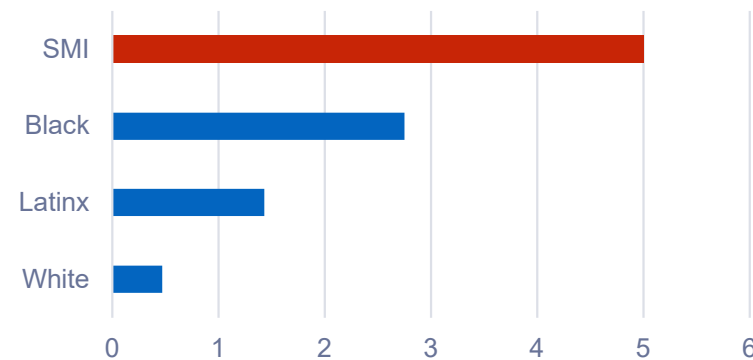
<https://www.bls.gov/opub/reports/race-and-ethnicity/2019/pdf/home.pdf>

RR Police Use of Force



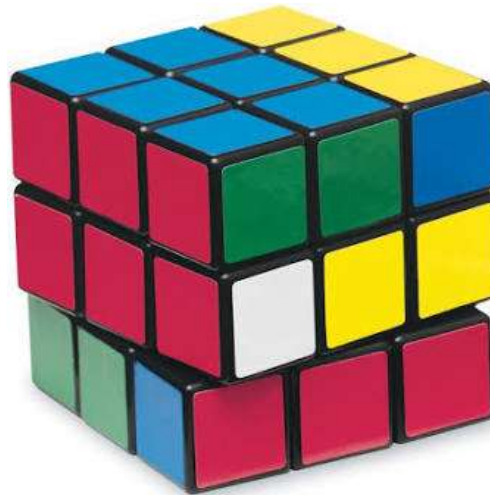
Laniyonu and Goff BMC Psychiatry (2021) 21:500

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

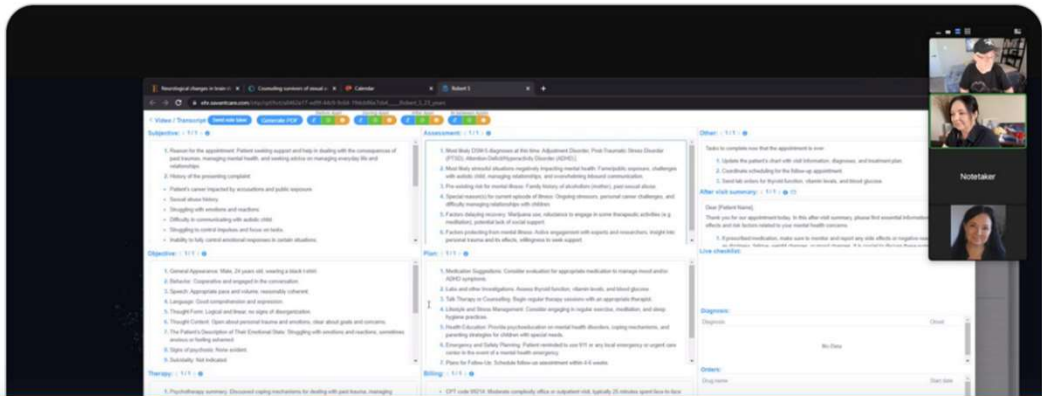


This is the scariest tweet I've made in a long time.

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

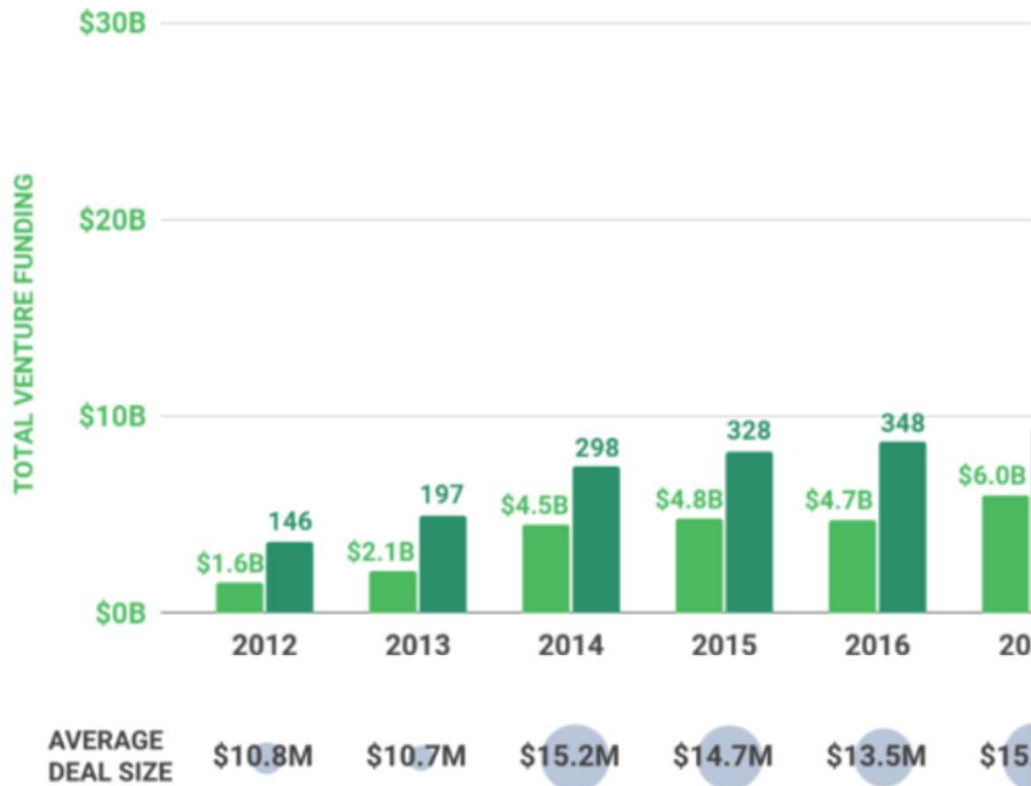
Measurement/Value Based Care

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

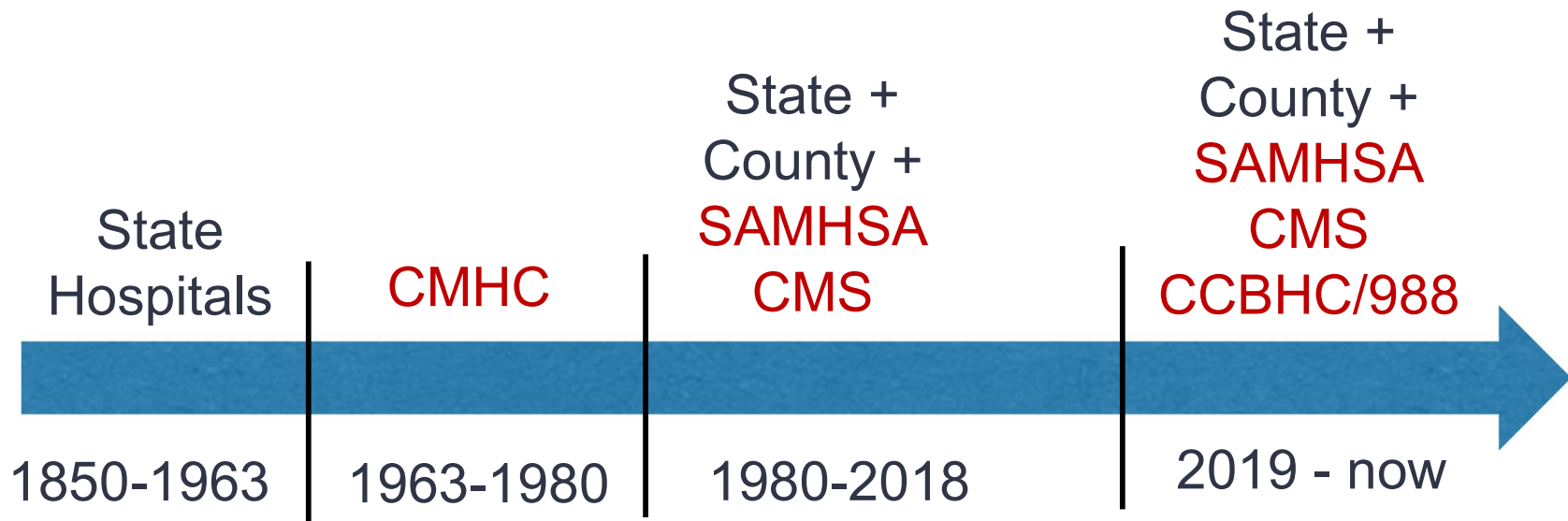
2022 TOP FUNDED CLINICAL INDICATIONS

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)

Problems

Lack of Capacity

Lack of Engagement

Lack of Quality

Lack of Accountability

Lack of Equity

Innovative “Solutions”

Investment

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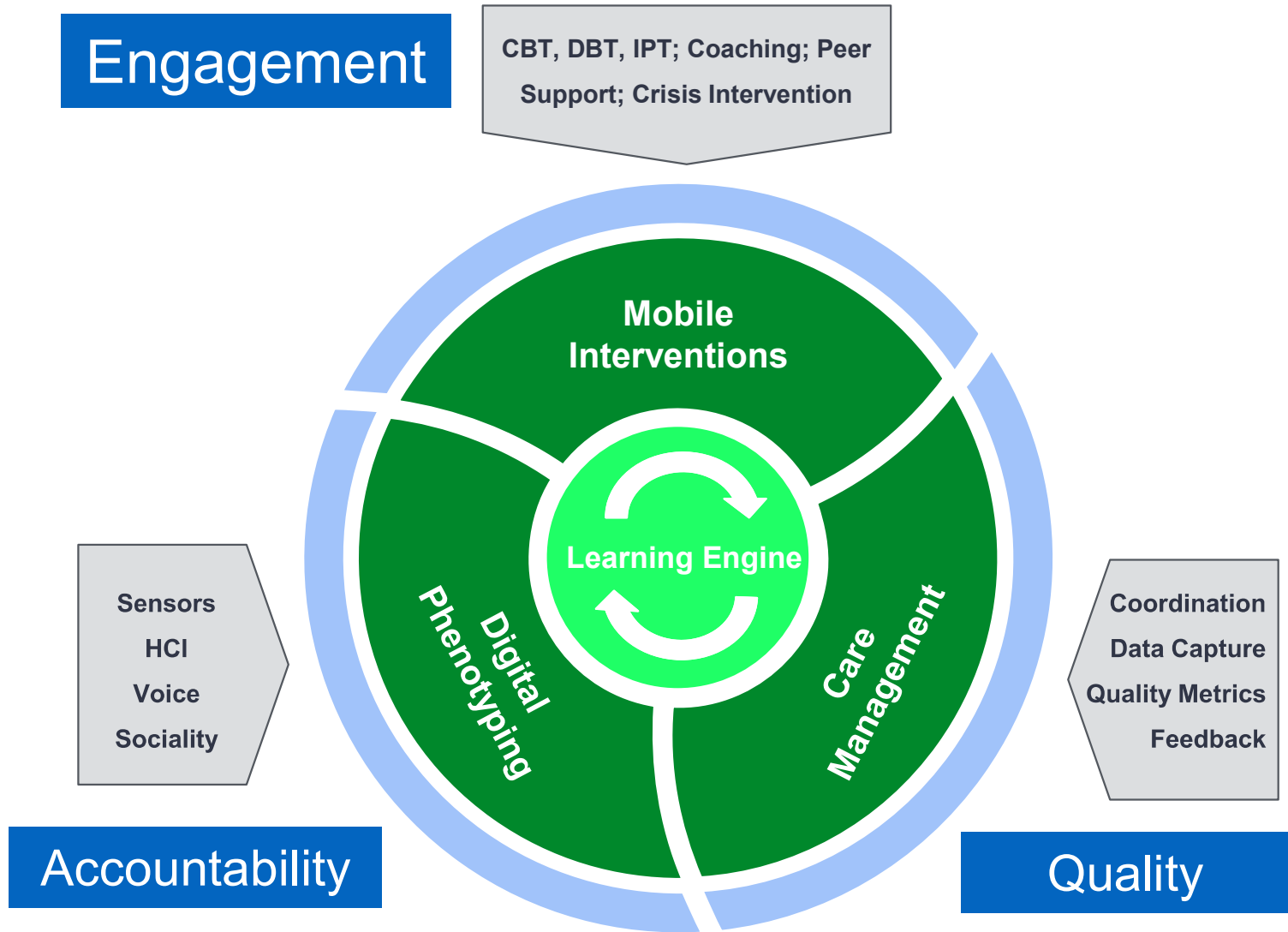
Training, Coordinated Care

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

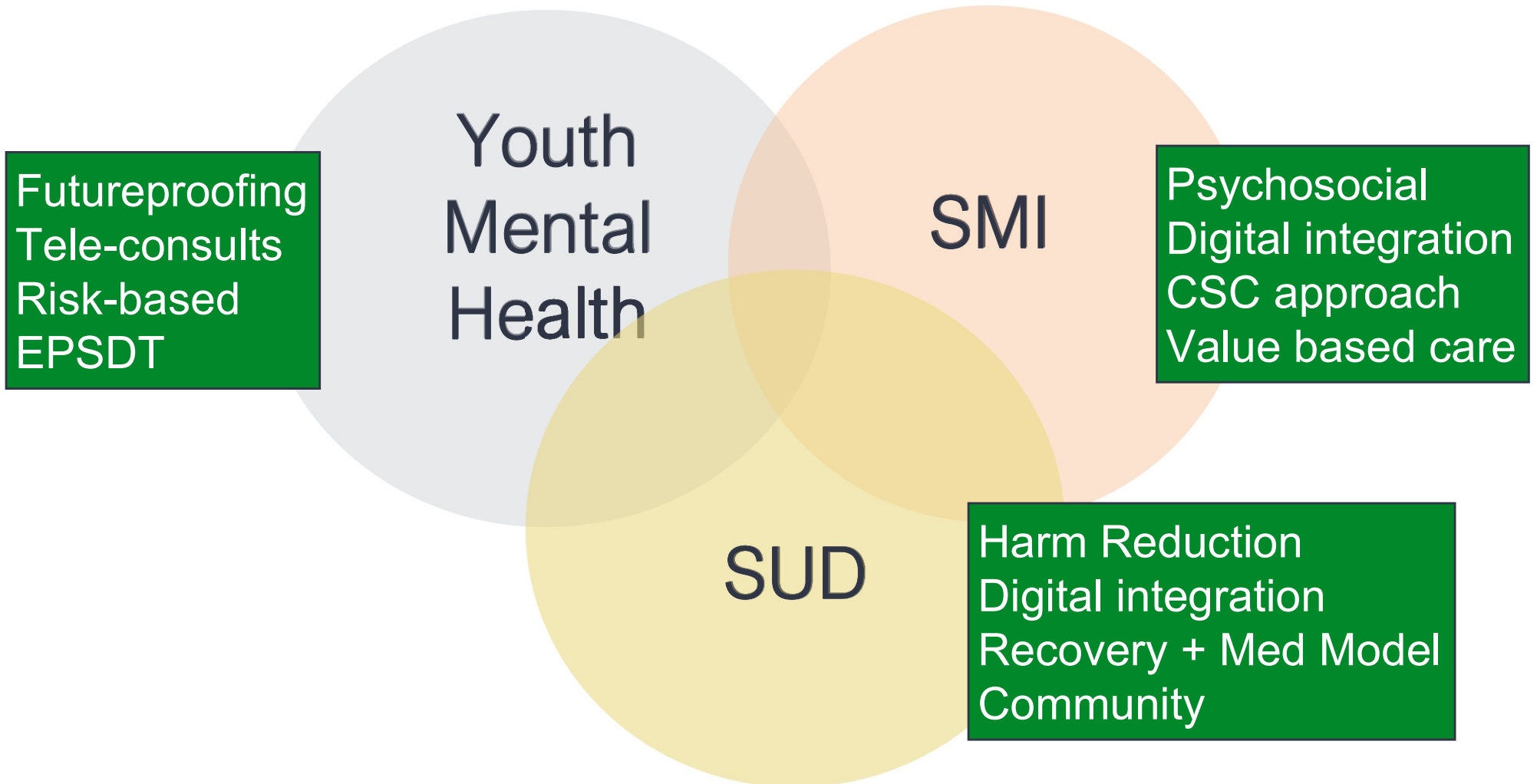


Recovery

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

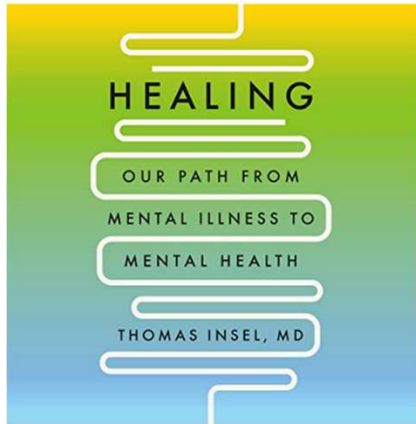
**Recovery Requires Us to Think Beyond Symptoms
Recovery Invites Us to Redefine Care**

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!



www.thomasinselmd.com

tinsel0@gmail.com

