Implementing Contingency Management

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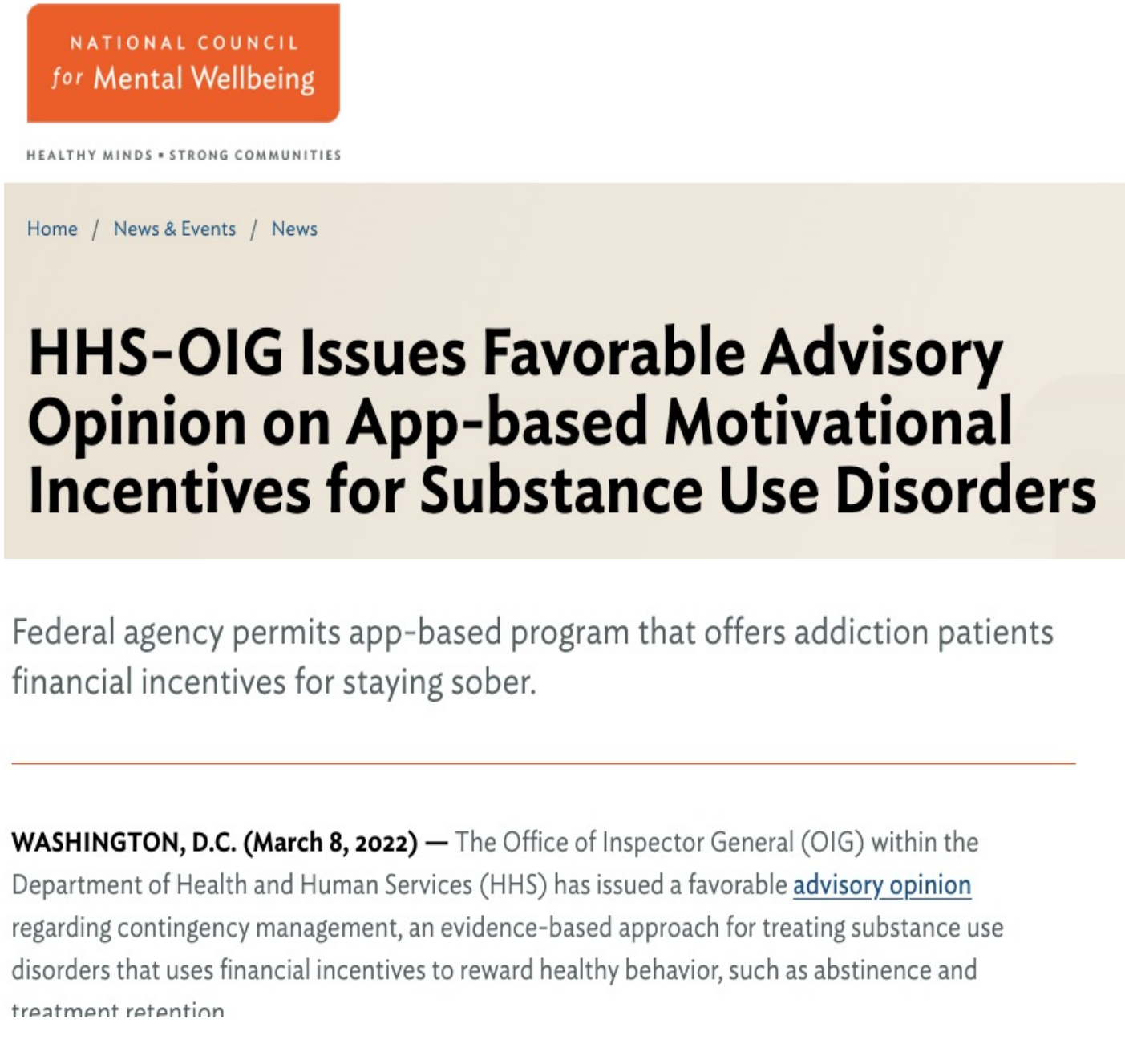


Contingency Management (CM)…NOW!

Principle 2: Improving Treatment Quality Including Payment Reform

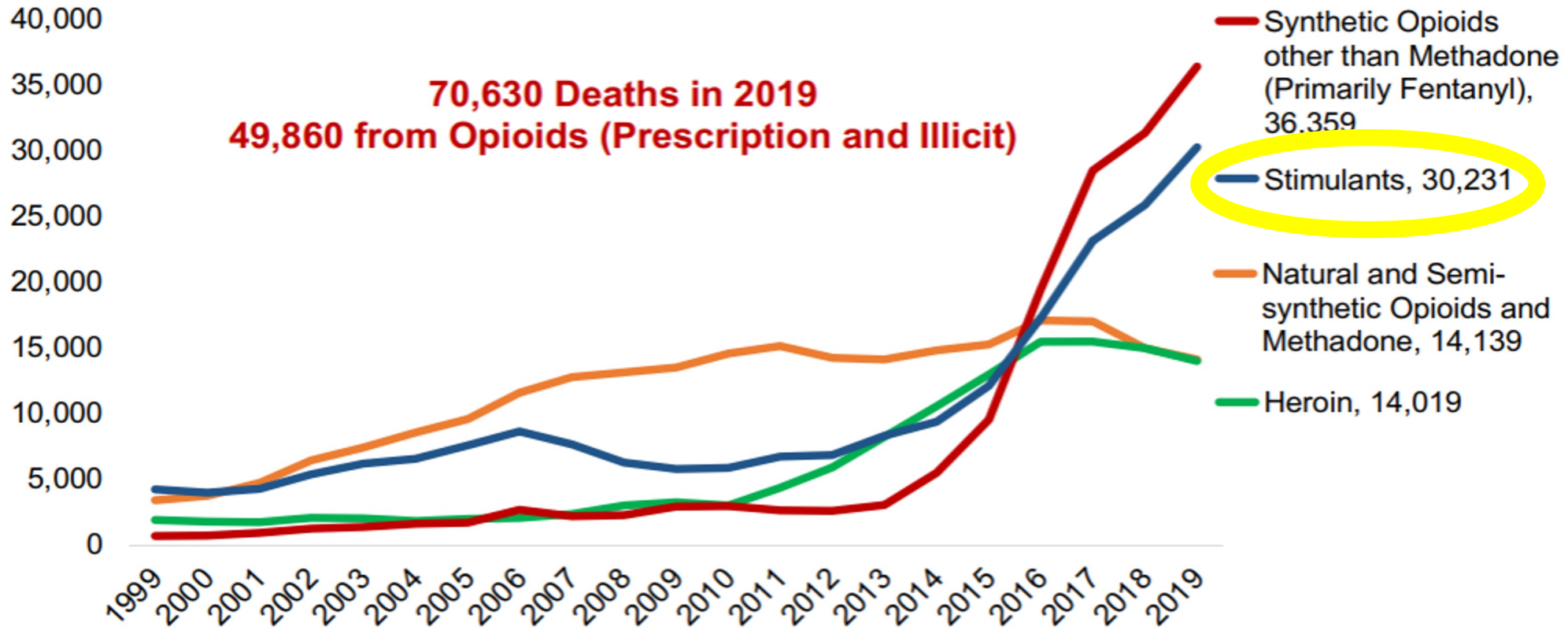
"…motivational incentives, which utilize tangible rewards to reinforce positive behaviors such as abstinence from opioids and to motivate and sustain treatment adherence …should be more widely available."

"These incentives are an integral part of protocol-driven and evidenced-based contingency management programs and can be offered through smartphone applications and smart debit card technology."

(ONDCP National Drug Control Policy, April 2022, p. 49;
ONDCP Drug Policy Priorities for Year One. ONDCP April 2021)

Evolution of Drivers of Overdose Deaths, All Ages

Analgesics → Heroin → Fentanyl → Stimulants



Source: The Multiple Cause of Death data are produced by the Division of Vital Statistics, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), United States Department of Health and Human Services (US DHHS).

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CM: Best Practices

1. CM rewards motivation/accountability (operant conditioning/behavioral economics)

2. GOALS: Breaks down the recovery process into a series of small goals that are:
   - Concrete
   - Attainable

3. This sidesteps the hopelessness of many individuals with substance use disorders

4. Subtly and subconsciously establishes priorities for recovery by:
   - Rewarding critical recovery behaviors
   - Prioritizing critical behaviors through reward intensity
   - Using progressive reward schedules, with setbacks & restore points

CM: Best Practices – Setting Goals

Goals should be:

1. **Frequent** (>1 time per week)

2. **Attainable**

3. **Objective**
   - Attending a therapy session
   - Attending a support group meeting
   - Completing a drug screen
   - Having a negative drug screen
   - Taking prescribed medication

4. The system must be designed to **prevent gaming** of the system

CM: Best Practices – Setting Rewards

Rewards should be:

1. **Immediate** - immediate rewards are twice as effective as delayed rewards (Lussier 2006)

2. **Tangible** and matched to participant needs.

3. Intermittent or **direct monetary** rewards
   (Pulling a ticket from a fishbowl that may contain a prize, of varying values – less expensive, but less potent than immediate, full value rewards.)

4. **Valuable** - low value rewards are half as effective as high-value rewards (Lussier 2006).

The Challenge & the Promise

Contingency Management (CM) is a treatment model for Substance Use Disorder (SUD):

- The best-researched (>100 RCTs) behavioral approach in the field
- The most effective clinical approach AND most cost-effective

- Yet, the least utilized

Brain Reinforcement: The Origins of SUD

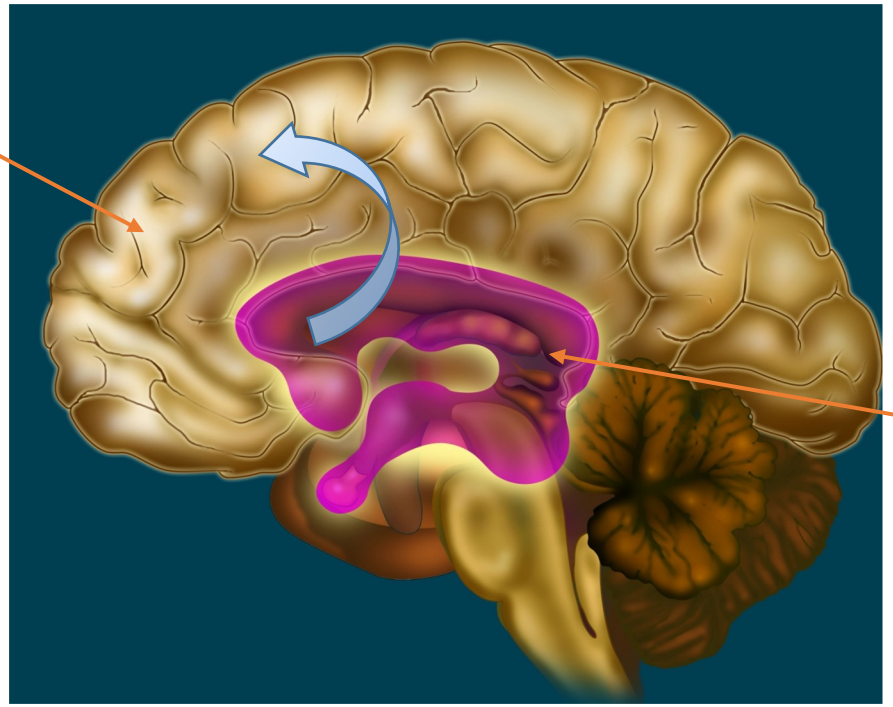
Cortex

Role:

- Reasoning
- Learning
- Decision-making

Interventions:

- Counseling
- Psychotherapy
- Self-help groups



Limbic Drive System

Role:

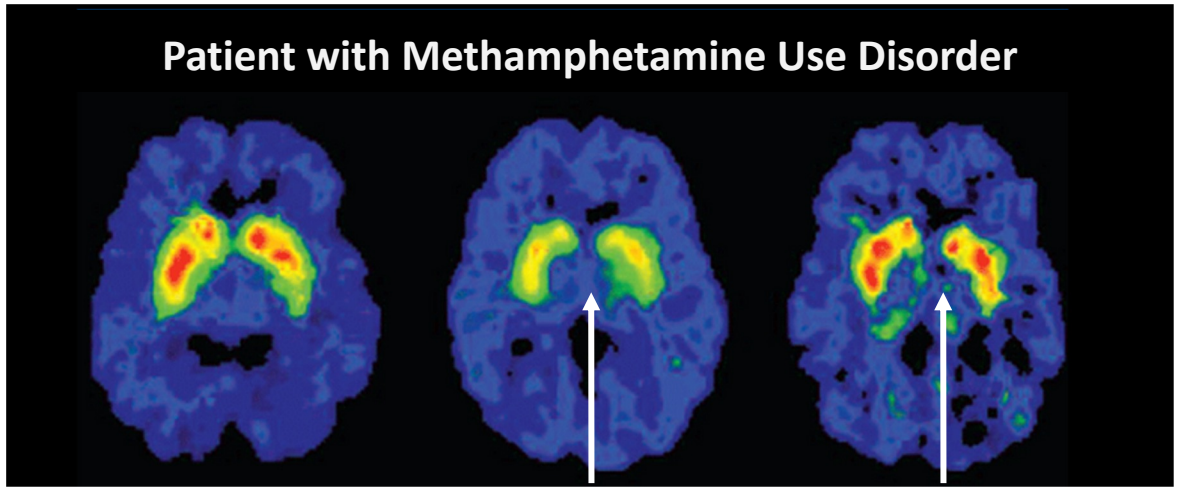
- Signals reward
- Triggers pleasure

Interventions:

- Medications
- Rewards
- Sanctions

SUD is a disease of the motivation system
One year of abstinence shows promising returns

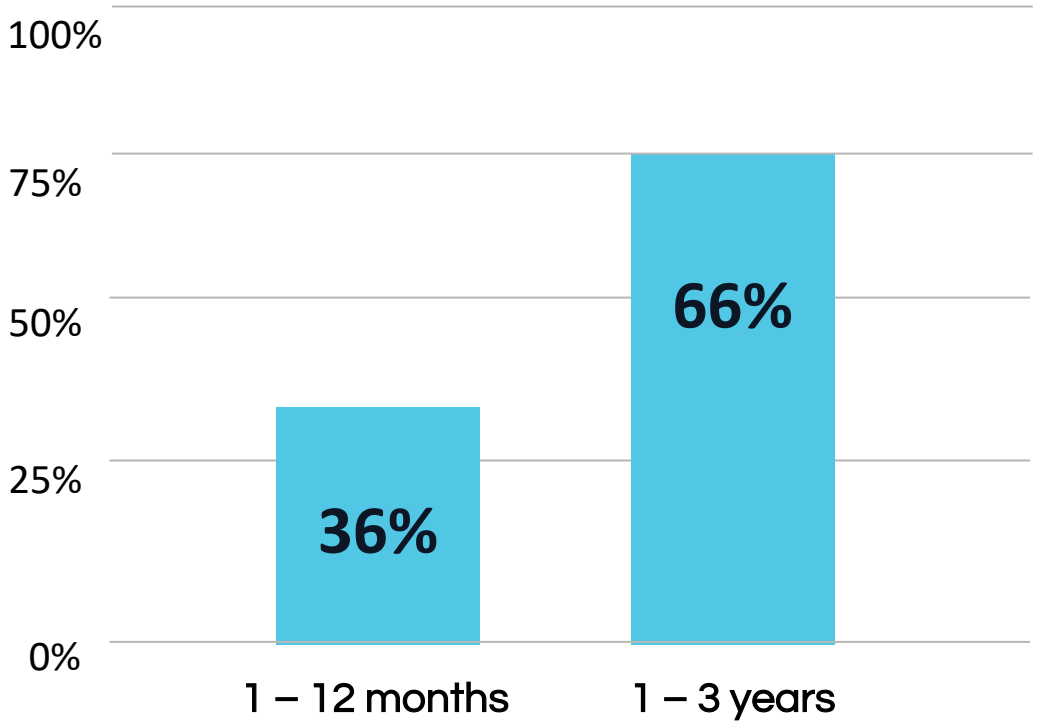
Brain heals after 1 year of recovery



Healthy Control | 1 month of Abstinence | 14 months of Abstinence

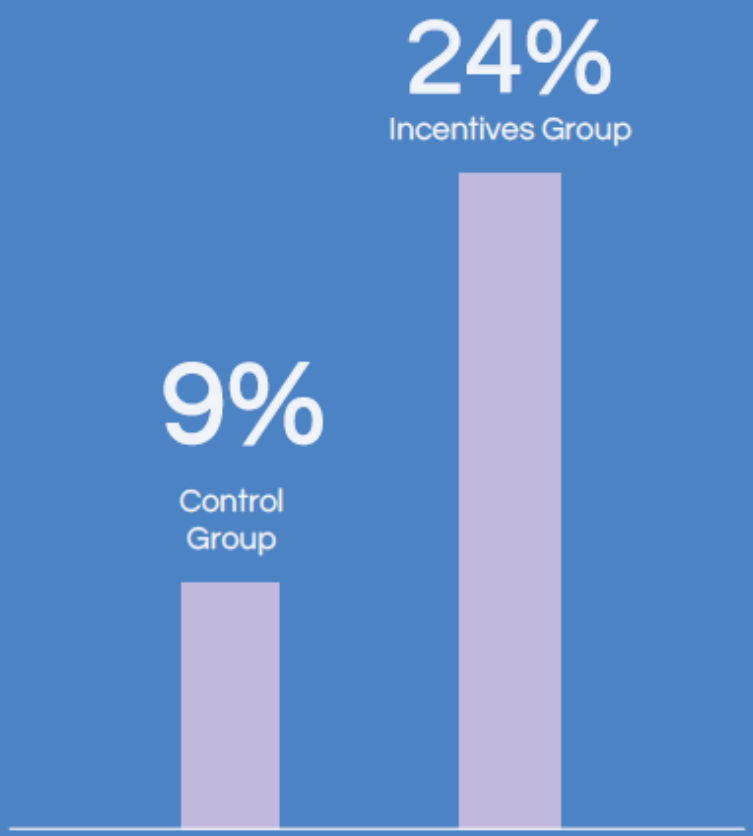
Sources: NIDA 2019, Dennis 2007

Chances for long-term recovery double after 1 year of abstinence



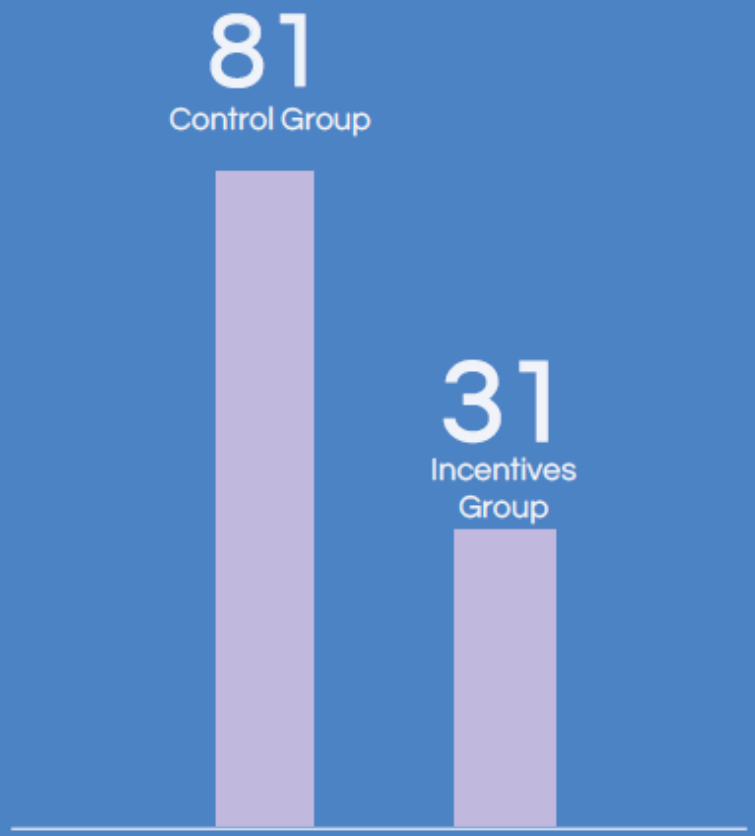
Contingency Management: The Evidence

Drug Abstinence
increased by 2.7x



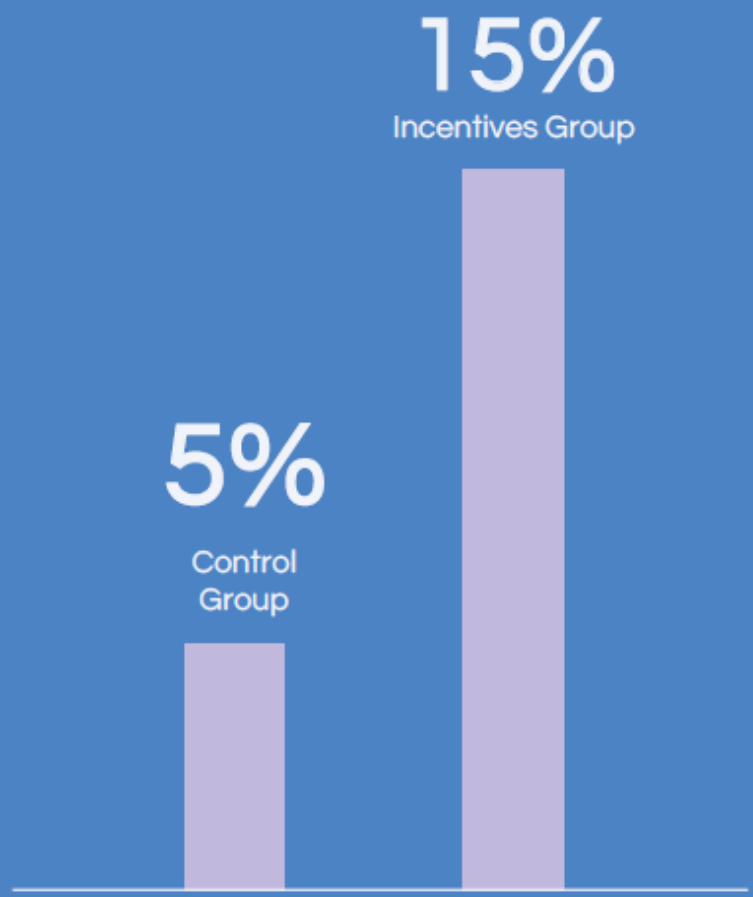
% of patients reaching 4 weeks of continuous abstinence in 12-week study. n=800 cocaine/meth using patients. Peirce et al 2006

Drinks per Month
Reduced by 62%



Proof-of-concept pilot, n=30 heavy drinkers, 1-3 selfie breathalyzer tests/day over 28 days, earned $219 on avg. Pilot Study Publication: Alessi & Petry 2013

Smoking Quit Rates
Increased by 3x



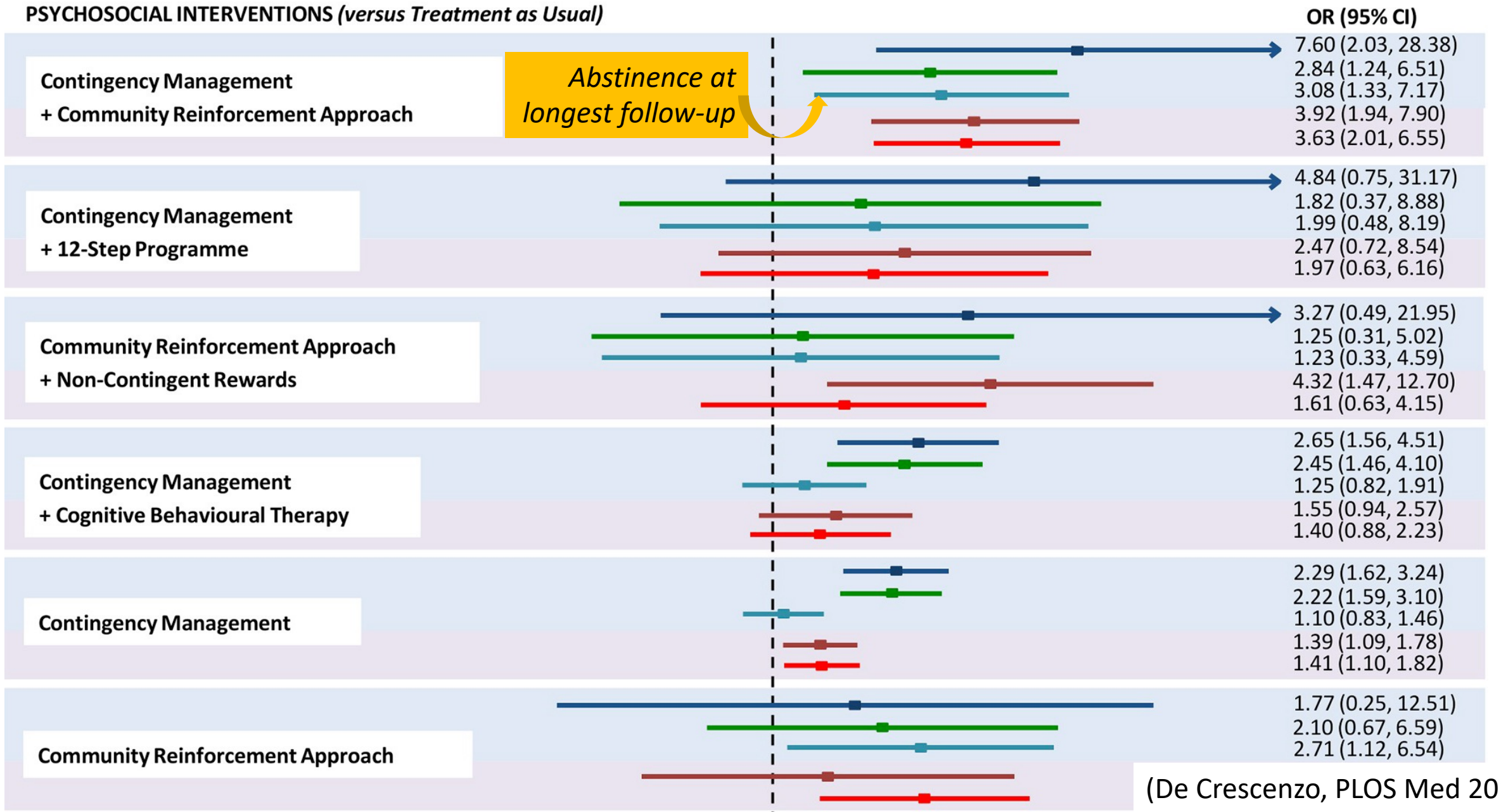
% of patients testing negative for nicotine at 9-months. n=442 GE employees. Volpp et al 2009

Contingency Management: The Evidence

In various populations, settings & treatment modalities:

- **Dual Diagnosis Patients**
  Negative drug tests: 59% (CM) vs. 25% (Control) (Bellack et al 2006)
- **People Experiencing Homelessness**
  Abstinence @ 6 months: 41% vs. 15% (Millby et al 2000)
- **Criminal Justice System**
  Days of abstinence: 27 vs. 19 (Carroll et al 2006)
- **Pregnancy**
  Opioid-negative samples: 90% vs. 82% (Jones et al 2001)
- **Adolescence**
  Smoking abstinence @ 1 month: 53% vs. 0% (Krishnan-Sarin et al 2006)

CM: Duration of Effect



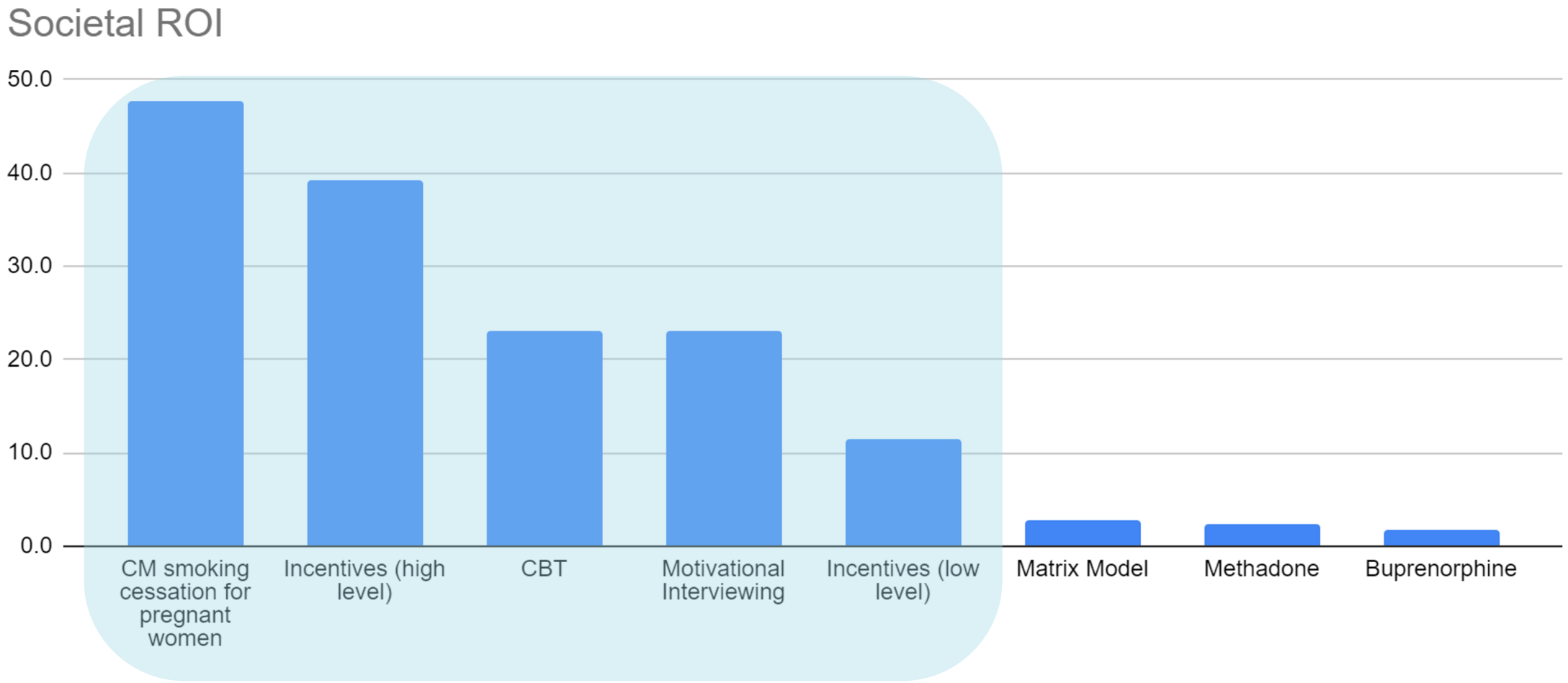
(De Crescenzo, PLOS Med 2018)

Real-world Controlled Studies: DynamiCare Platform

Substance, Design, Population	Control Group	Intervention Group	Other Results	Citation
Alcohol Use Disorder RCT; Suburban Medicaid + Commercial Insureds	TAU, N=32 90-d Retention: 3%	N=29 24% (χ2 (1,61)=5.9, p<.05)	Abstinence: 16% TAU vs. 33% Intervention	Hammond et al., *J Subst. Abuse Tx* (2021) 126:108425
Opioid UD/MAT Clinic Control, Case-matched Inner-city Medicaid	TAU, N=85 Negative Urines (mos 1-4): 17%	N=85 33% (p<0.05)	Attendance/Retention: 36% TAU vs. 52% Intervention	DeFulio et al., *J Subst. Abuse Tx* (2021) 120:108188
OUD/MAT + Stim UD Subset Analysis Inner-city Medicaid	TAU, N=62 Negative Urines (mos 1-4): 13%	N=62 29% (p<0.05)	Attendance: Incentives 20% > TAU for 60-120 d (p<0.05)	DeFulio et al., *Frontiers in Psychiatry* (2021) 12:778992
Tobacco UD in Pregnancy Sequential assignment Diverse SES – 33 states Online	Best Practices, N=60 7d Abstinence by Birth: 13.3%	N=60 36.7% (OR=3.76, 95% CI= 1.4,13.65)	*[*FDA Breakthrough Device Designation]*	Kurti et al., *Preventive Medicine* (2020), 140:106201
Tobacco UD in Pregnancy RCT Diverse SES – 33 states Online	Best Practices, N=48 Abstinence thru birth & 24 wks postpartum incl. 12 wks post-incentives	N=42 Adjusted OR=3.82 95%CI=1.63,8.92, P=.008		Kurti et al., *JAMA Network Open* (2022)5:e2211889
Nicotine (Vaping) UD In Youth (17-21 y/o); RCT 4 wk Online Pilot Study	Monitoring Control N=5 Abstinent Samples: 8%	N=22 55% (p<.001)		Palmer et al., *Drug & Alc. Depend.* (2022) 232:109311

Cost-Benefit - from the Payers' Perspective

>$30 in societal benefits for every $1 invested; ROI is positive in Year 1



Source: Wash. State Inst. for Public Policy, 4/2021

The Science is Clear: Incentives Work

Behavioral Incentives Recommended by.

- SURGEON GENERAL.GOV
- NIH National Institutes of Health
- AMERICAN SOCIETY OF ADDICTION MEDICINE FOUNDED 1954 ASAM
- NHS

- ➔ Verified by over 100 randomized controlled trials
- ➔ Analyzed by >10 meta-analyses
- ➔ Only requires $100-200 per month in incentives

The New York Times

This Addiction Treatment Works. Why Is It So Underused?

An approach called contingency management rewards drug users with money and prizes for staying abstinent. But few programs offer it, in part because of moral objections to the concept.

By Abby Goodnough

Oct. 27, 2020

"The biggest question is **how do we get the payers on board** with this," said Eric Gastfriend, the chief executive of DynamiCare Health, a technology company in Boston that has worked with BrightView and other treatment programs to provide contingency management through a phone app that patients can use to share saliva test results with providers in real time, via video.

CM: The Challenges

1. **Cost**

   Full-value, evidence-based model: ~$100/month per patient (Petry 2013)

2. **Duration**
   - 6-month, full reward studies:
     CM + CRA (Community Reinforcement Approach) = best longer term effect

3. **On-site Manual Management**
   - Provider education, skills, supervision; patient recruitment & tracking
   - Patient access & staff challenges managing random, observed drug testing
   - Problematic data entry, reward distribution/integrity & fiscal accounting
   - U.S. DHHS OIG criminal sanctions against fraud, waste & abuse

What are effective strategies for overcoming the challenges to implementation?

CM + Tech: Reinforcing Multiple Behaviors

- Provider refers patient to call-line
- Vendor enrolls & trains patient
- Vendor monitors behaviors & loads rewards on debit card
- Provider gets all behavioral data & alerts RE behavioral risks
- Vendor automatically manages CM progressive reward schedule with audit-ready accounting

**DynamiCare has received a positive Advisory Opinion from the US DHHS OIG*

CM + Tech: Why Do Patients Like It?

Patient-Centric Care: Remote, telehealth testing & coaching improves access/acceptance

- Diversity, Equity & Inclusion Needs: Urban, rural, parenting, working, homelessness
- Effective for all objectives: harm reduction, moderation, & abstinence/recovery

Recovery Capital:

- Offers patients a chance to use & build their own lives, support network
- Patient “draws on” recovery capital anytime/anywhere (vs. clinic visits)

Agency:

- Patient is the center of the program, effort, ownership of effort; builds self-efficacy

Validation:

- Patients repeatedly comment: “It’s like getting a pat on the back”, “Look!”
- Easy to achieve, frequent successes build hope, interest, aspirations, resilience

CM + Tech: How Can It Help Providers?

1. Can add **evidence-based care** as an adjunct to all levels of care.
2. Without disrupting care models—& **decreasing staff workload**.
3. Automates drug testing & moves much labor **into the client's hands**.
4. Can **boost attendance**, which boosts morale & revenue.
5. Can track reinforcement schedules, disburse & track rewards.
6. Can measure client compliance & performance.
7. Providers can **measure effectiveness** with concrete, objective goals

How is remote tech-based CM being used?

How can it be funded?

Remote, Tech-based CM in Use

1. >2,600 **patients** across the U.S.
2. In 45 **states**, including rural/mountainous/arctic regions (AK, VT, WV)
3. In >60 treatment **systems:**
   BH systems, healthcare systems, EAPs, re-entry CJ programs,
   collegiate recovery, private insurers & Medicaid
4. Diverse, including disenfranchised **populations**:
   - Inner-city
   - 15-yr incarcerated patients re-entering the community
   - Mothers on WIC
   - Fortune 500 employees, corporate executives traveling across Europe & Asia

CM Adoption & Implementation: Systems

Programs That Have Used a Smartphone App CM System

- Brightview Healthcare – largest **SUD specialty provider** system in OH
- Gosnold – AA-oriented, largest SUD provider system on Cape Cod, MA
- Nationwide telehealth **case management & EAP** systems – Fortune 500 employers
- Gavin Foundation (MA) & NJ Re-entry Corp. – for criminal justice **re-entry**
- Nationally renowned "**AA Model**" inpatient 28-day rehab provider
- **Research**: Baylor, Berkeley, Columbia, J Hopkins, MIT, MUSC, NIDA-CTN, Rand, U VT, …
- Commercial **Insurers** – 1 national, 2 regional, 2 state BCBSs (MA, NJ)
- State **Medicaid** – VT, WV…next: California?
- State **SOR Grants** – NJ, MD; Other state-funded CM: MA, MT, OH

HHS-OIG Issues Favorable Advisory Opinion on App-based Motivational Incentives for Substance Use Disorders

Federal agency permits app-based program that offers addiction patients financial incentives for staying sober.

WASHINGTON, D.C. (March 8, 2022) — The Office of Inspector General (OIG) within the Department of Health and Human Services (HHS) has issued a favorable advisory opinion regarding contingency management, an evidence-based approach for treating substance use disorders that uses financial incentives to reward healthy behavior, such as abstinence and treatment retention.

OIG: The CM Guardrails Checklist…

- ❑ Research-validated evidence-based practices, i.e., formal, per written protocol
- ❑ Rewards should not exceed $200/month/per patient
- ❑ Documented clinical diagnosis & care plan from a licensed professional/clinician
- ❑ Individualized care plans documenting behavioral targets, amounts and schedules
- ❑ Full accounting of every payment, its purpose, the expectation & patient's effort
  e.g., specifically record appointments expected & attended,
  each substance test expected & the result, i.e., consistent or not with goals
- ❑ Gift incentives & their distribution must be accurately inventoried & audit-ready
- ❑ Protections against recruitment, rebates, refunds, or kick-back offers

Funding CM in Today's World

- Commercial Insurers, Employers & EAPs
- Federal Block Grant
- State Legislation/Governor's Initiatives/Alcohol Tax Monies
- State/County Medicaid & Medicaid MCO vendors
- CMS 1115 Waiver
- State Opioid Response Grant
- Opioid Manufacturers' & Distributors' Settlements

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Thank You!

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