



Contingency Management for patients with methamphetamine-associated heart failure in a novel addiction/cardiology clinic

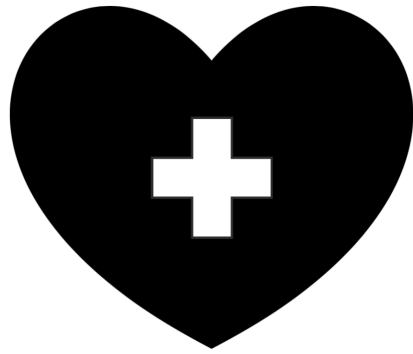
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The problem...

- Methamphetamine use causes heart failure
- Patients with methamphetamine-associated heart failure are:
 - Younger but sicker
 - Hospitalized frequently
 - Less likely to follow up at cardiology clinic after hospital discharge





Heart Plus

Soraya Azari



Marlene Martin



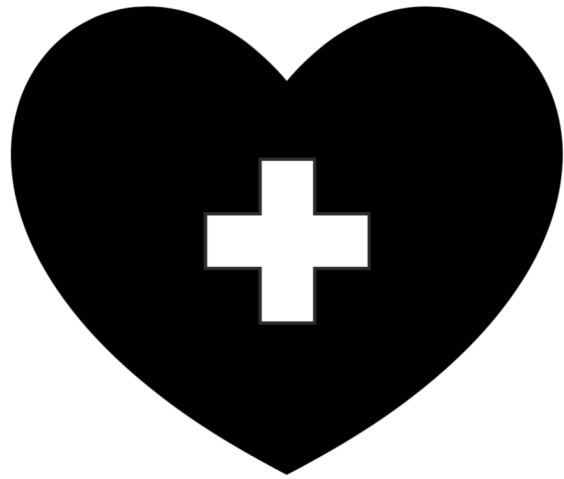
Leslie Suen

Albert Liu

Jonathan Davis

Aims

1. Increase engagement in heart failure clinic
2. Increase access to evidence-based treatment for methamphetamine use disorder
3. Promote teamwork and collaboration across specialties



Heart Plus Clinic

12-week pilot addiction/cardiology co-management clinic
with twice weekly contingency management for patients
with methamphetamine associated heart failure

Things to consider when designing a CM program

- Target Behavior
- Target Population
- Reinforcers
- Incentive Magnitude
- Incentive Proximity to Behavior
- Immediacy of Incentive Availability
- Duration of Intervention

Target Behavior

- **Clinic attendance**
- Methamphetamine use (as evidenced by urine toxicology)

Target Population

- People with stimulant (methamphetamine or cocaine) use disorder

AND

- Heart failure with reduced ejection fraction

AND

- Hospitalization for heart failure exacerbation in the last year

Reinforcers and Incentive Magnitude

- Fishbowl method
- Decided on \$5 gift cards as the minimum (who wants a \$1 gift card!?)
- First Visit:
 - Explanation of program
 - “Priming Draw”



What's in the bowl?

500 Sticky Notes

- 50% = affirmation, no gift card
 - “Good Job”
 - “Way to go!”
- 41.8% = \$5 gift card
- 8% = \$20 gift card
- 0.2% = \$100 gift card

Visits #2-24

1. Point of care urine toxicology on arrival
2. Meet with addiction provider
 - *MI on substance use*
 - ***Contingency management***
 - *(See cardiologist as needed)**
3. Give reminder slip for next visit (pictured)

*full cardiology visit every month



Next appointment: _____

You will earn ____ draw(s) for a
negative urine test

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Davis

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1001 Potrero Avenue (between 22nd and 23rd
Streets)

San Francisco, CA 94110
Building 5, 1st Floor, Suite 1M

12-week Contingency Management Schedule/Cost

SCHEDULE:

- 1st visit: One priming draw
- 2nd visit: 1 attendance draw + 1 draw for neg Utox
- 3rd visit: 1 attendance draw + 2 draws for neg Utox
- 4th visit: 1 attendance draw + 3 draws for neg Utox
- Etcetera

RULES:

- Max out at 8 draws
- # of draws reset if urine is “not negative” or if missed appt

COST PER DRAW:

- 1st clinic priming draw = \$7.78 per draw
- Subsequent draws = \$3.89 per draw

How much does this 12-wk program cost?

Perfect attendance, Utox all negative	\$615/patient (on average)
50% attendance	\$307/patient (on average)
10 patient pilot assuming 50% attendance	\$3070 in gift cards



Proximity to behavior



Twice weekly clinic! Rationale:

- Urine stays + for methamphetamine for 24-72 hours
- Patients with sick hearts benefit from frequent engagement

Immediacy of incentive



Going to the lab for standard urine toxicology

-- More accurate BUT delay between testing and contingency management

VERSUS



Point of care urine toxicology

-- Less accurate BUT immediate results

Duration of incentive

- 3 months
 - Typical length of CM program
 - Limited by funding

Results – Recruitment (Jan/Feb 2020)

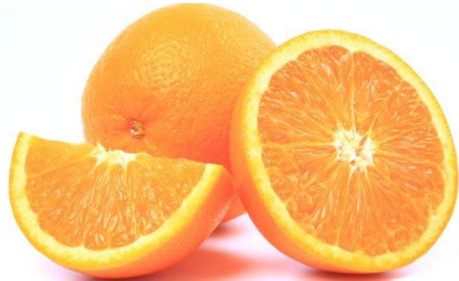
19 patients were referred

- 2 from primary care, 3 from cardiology clinic, 14 through the hospital

9 patients were enrolled

- Majority of non-enrolled patients were lost to f/u

3/2/20 = First Day of Heart Plus Clinic!!!



Results – Heart Plus Clinic 1st Visit

- 7 out of 9 (78%) of patients came to Heart Plus!
- 2 emergency room visits prevented
 - 1 for heart failure exacerbation
 - 1 for gout flare



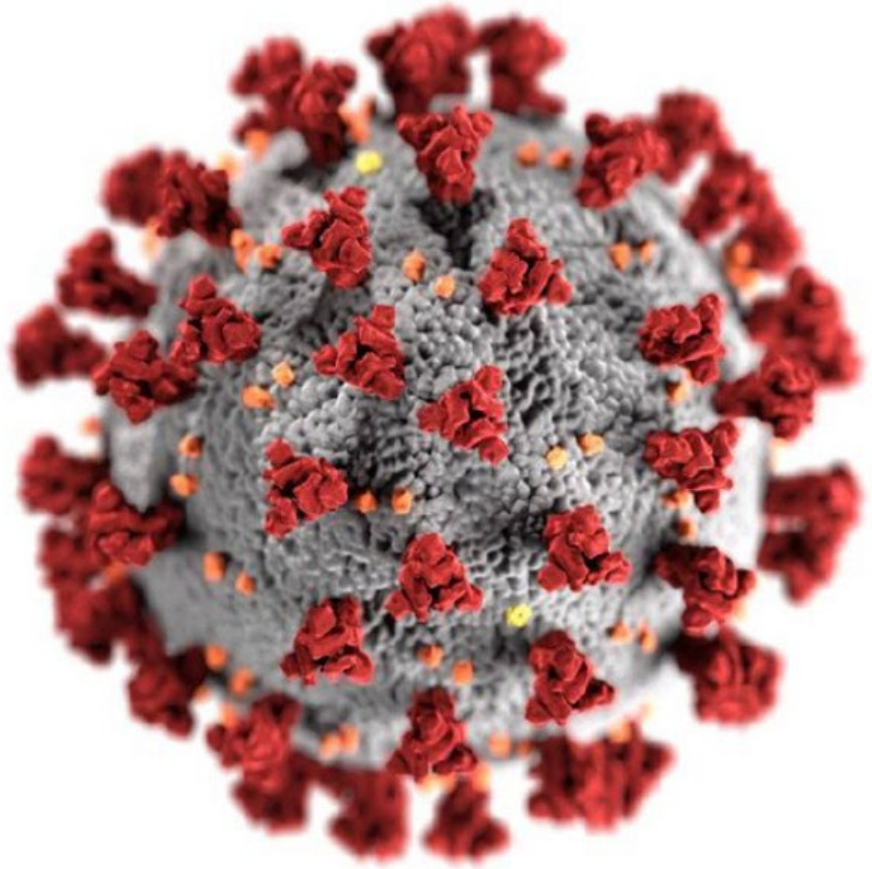
Results – Heart Plus Clinic 2nd Visit

- 6/7 patients came to second visit!*
- All urine toxicology was negative for stimulants
- Average fishbowl bowl prize: \$7 (range \$0-\$20)

*The one patient who came to the first visit but didn't come to the second visit had a disabling gout flare. He called ahead of the appointment time to cancel.



Results – Heart Plus Clinic 3rd Visit



**Initial Finding: Heart Plus is associated
with increased engagement!**

Pre Heart + Attendance: 45%

Heart + Initial Attendance: 78%

Next Steps

- 2nd larger pilot clinic n=20 is underway
- Currently conducting patient interviews for a mixed methods analysis of Heart Plus
- Received funding to expand the clinic

Lessons Learned

- Keep it simple
- Get hospital lab approval for point of care urine toxicology ASAP
- Make sure to get buy-in from the whole team
- CM is fun and positive for patients and the healthcare team

Resources

- **ATTC Contingency Management for Healthcare Settings Toolkit/Training**
- Dr. Bryan Hartzler YouTube Lecture
 - “Implementing Contingency Management: The Case for Customizing to Your Setting Needs”



Thank You!

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