Motivational Incentives in Drug Abuse Treatment

• History of motivational incentives
• Research with drug abusers
• Translation into clinical practice
Consequences Change Behavior

- Rewards lead to increase
- Punishment leads to decrease
Creativity in the Dolphin
Reward and Punishment In Everyday Life

- Child rearing
- Praise and discipline
- Education
- Grades/honors and detention/suspension
- Business organizations
- Bonuses; promotions and sanctions/demotions
- Criminal justice
- Arrest/incarceration and early release
Behavior Modification in School Settings
Token Economies in Institutional Settings
Punishments

- Are necessary under limited circumstances but-
- Do not teach what to do; only what not to do
- Promote harsh and demeaning atmosphere
- May also do harm (e.g. promote aggression)
Rewards

- Teach new behaviors and promote growth
- Promote positive atmosphere & communication
- Promote self-esteem and self-confidence
Application to Drug Abuse

- Measurable target behavior
- Rewarding consequence
It is the **CONTINGENCY** that matters.........

BEHAVIOR  \[\rightarrow\]  REWARD

**FREE**

Giving things away for free does NOT change behavior
Target Behaviors in Drug Abuse

- Improved therapy attendance
- Decreased drug use
- Treatment plan goal attainment
Rewards and Punishers in Drug Abuse Treatment

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<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
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<tr>
<td>- take-homes</td>
<td>- time restriction</td>
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<tr>
<td>- award ceremonies</td>
<td>- missed services</td>
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<td>- certificates; key chains</td>
<td>- probation</td>
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<td>- status/recognition</td>
<td>- dismissal</td>
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- What incentives are used in your program?
Take-home Incentives Improve Counseling Attendance

Attendance at Weekly Counseling Session

Percent of Patients

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<td>Yes</td>
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Percent of Therapy Sessions Attended

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Take-home Incentive
Incentives Reduce Drug use: Benzodiazepines
Incentives Effects on Benzodiazepine Use

3-month intervention with chronic methadone maintained benzo users:

Percent benzo negative urines

– Before incentives 9%
– During incentives 53%
– After incentives 11%
Motivational Incentives with Monetary Rewards

Research has shown that monetary incentives can:

• Increase treatment retention
• Decrease drug use during treatment
Motivational Incentives Research

• Clients earn vouchers for drug-free urines
  – usually cocaine-free urines
• Vouchers are worth money
• Vouchers are exchanged for
  – retail items (e.g. clothing, sports equipment)
  – services (e.g. rent; bill payments)
Research on Motivational Incentives

Cocaine abusers in drug-free treatment
Cocaine abusers in methadone treatment
Treatment of Cocaine Dependence in a Drug-Free Clinic
Higgins et al., 1994

**Incentive Treatment**
- Community Reinforcement Approach Therapy
- Urine testing 2x/week
- Vouchers
  - Can earn over $1000
  - Actual earnings: $600

**Control Treatment**
- Community Reinforcement Approach Therapy
- Urine testing 2x/week
- No vouchers
Treatment of Cocaine Dependence

Retained Through 6 month Study

Higgins et al., 1994

>8 Weeks of Cocaine Abstinence

Higgins et al., 1994
One-year Follow-up Results

- 60% versus 45% cocaine abstinent
- During-treatment abstinence predicts long-term abstinence
Treatment of Cocaine Abuse in Methadone Patients
Silverman et al., 1996

**Contingent Incentives**
3x weekly urine testing
received vouchers only if urine samples were cocaine negative

Up to $1155 available
Average earnings of $426

**Non-Contingent Incentives**
3x weekly urine testing
received vouchers regardless of urine test results
Treatment of Cocaine Use in Methadone Patients

Silverman et al., 1996
Patient Ratings of Helpfulness

Overall helpfulness of treatment

Used willpower to reduce cocaine use

Silverman et al., 1996
Incentive Therapies Reduce Drug Use

Opioids
(Bickel et al., 1997; Silverman et al., 1996)

Marijuana
(Budney et al., 1991, Budney et al., 2000)

Nicotine (Tobacco smoking)
(Stitzer & Bigelow, 1984; Roll et al., 1996)
Voucher Incentives in Marijuana Dependence Treatment

- Percent with 6 weeks of continuous abstinence
  - Motivational counseling  5%
  - Skills building counseling  10%
  - Counseling plus vouchers  45%

- N-60; total voucher value = $570 over 12 weeks

*Budney et al. JCCP, 68, 1051-61, 2000*
Adaptation into Standard Clinic Settings

Intermittent reward for good behavior reduces cost
Intermittent Reward

• Drug-free patient draws from the “fishbowl”
• Only 50% of draws are “winners”
• Three types of prizes:
  - small- (toiletries; food)
  - large- (cordless phone; CD player)
  - jumbo- (TV; video)
Incentive Programs for Drug Abusers Elicit STRONG Opinions
One Side: Panacea that can cure the drug abuse problem

Other Side: Coercive, manipulative tool
Potential Objections to Incentives

- People should want to change on their own
- Drug abusers shouldn’t get special treatment
- Behavior change won’t last after incentives
TRUTH:

- Incentives guide behavior
- Lead to beneficial change
- Patients feel empowered
Summary

• Incentives have a long history in behavioral psychology and are in widespread use

• Principles can be applied effectively to drug abuse treatment

• Barriers to real world application, including cost and attitudes are being addressed