Web-based Cognitive Behavior Therapy for Substance Use Disorders: A Randomized Trial of *Going Forward*

Douglas W. Billings¹, Rebekah Hersch¹, Gregory L. Greenwood² and Samantha L. Leaf¹

¹Center for Workforce Health & The ISA Group ²Behavioral Health Sciences, OptumHealth

Today's Talk

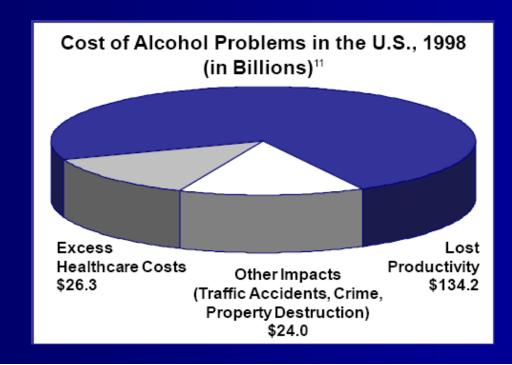
- Overview the impact of substance abuse on the workplace
 - How Internet-based approaches can help
- Going Forward
 - Theoretical background
 - Components
 - RCT and findings

Employers: Why Us?

- Employers ask 4 essential questions:
 - What is the cost of the problem?
 - How much will it cost to fix it?
 - How disruptive will it be?
 - What is the value proposition?

Scope of the Problem

	Indirect	Year of
Health Problem	Cost	Estimate
Alcohol Abuse & Dependence	\$134 Billion	1998
Drug Abuse & Dependence	\$129 Billion	2002
Mental Disorders	\$94 Billion	1992



Why do Employers Bear Most Costs?

- 76 percent of people with drug or alcohol problems are employed
- These workers are also not getting treated
 - Only 2.4m, of the 23.2m needing treatment for drug or alcohol use, received it (National Survey of Drug Use and Health, 2007)

Breaking Down the Employer Costs: Reduced Productivity

- Absenteeism: Alcoholism is estimated to cost 500 million lost workdays annually
- Others suffer
 - 14% of employees had to re-do work within the preceding year
 - More than half of working family members report that their own ability to function at work was negatively impacted

The Workplace is the *Perfect* Place for Substance Abuse Interventions

Country	Cocaine	Cannabis	Tobacco	Alcohol
Colombia	4.0	10.8	48.1	94.3
Mexico	4.0	7.8	60.2	85.9
US	16.2	42.4	73.6	91.6
Belgium	1.5	10.4	49.0	91.1
France	1.5	19.0	48.3	91.3
Germany	1.9	17.5	51.9	95.3
Italy	1.0	6.6	48.0	73.5
Netherlands	1.9	19.8	58.0	93.3
Spain	4.1	15.9	53.1	86.4
Ukraine	0.1	6.4	60.6	97.0

The period of high risk for initiating use of the surveyed substances—previously late adolescence through the early 20s—now extends into the late 20s" (Degenhardt et al., 2008)

Solutions to Workforce Substance Abuse: Web-Based Approaches

- Can reach large numbers of users
- Perfect fidelity across time and place
- Flexibility in accessing
- Effective for addressing sensitive issues such as drug abuse
- Decreased costs

Going Forward: Guiding Principles I

- Based on NIDA manual "A Cognitive Behavioral Approach to Cocaine Addiction"
- Learning processes play a key role in drug abuse/dependence
 - Identify and recognize determinants of drug use
 - Intrapersonal (e.g., negative/positive emotions, reduce withdrawal symptoms)
 - Interpersonal (e.g., particular environmental cues)
 - Skills/resources in high-risk situations

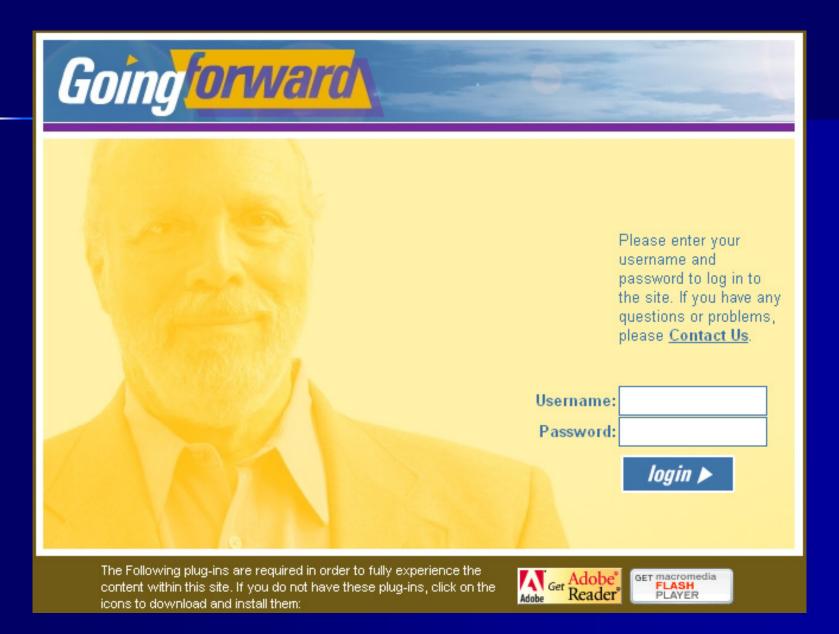
Going Forward: Guiding Principles II

- Help patients recognize situations associated with drug use
 - Avoid those situations that can be avoided
 - For those that can't, coping skills are taught

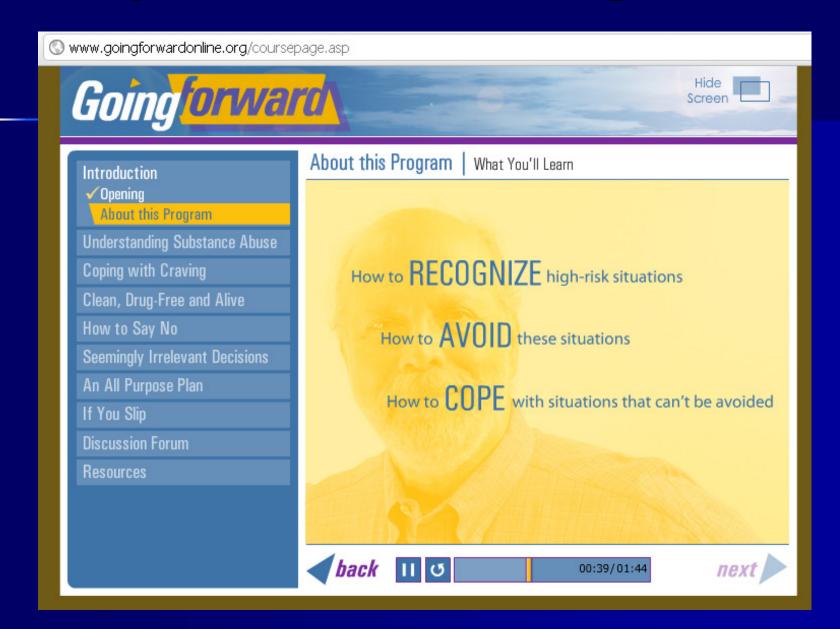
Going Forward: MultiMedia Health Education Principles

- Synchronize pictorial and verbal information
 - Avoid text-only screens
- Allow learners to control and manipulate
- Encourage active information processing
- Tailor to current situation

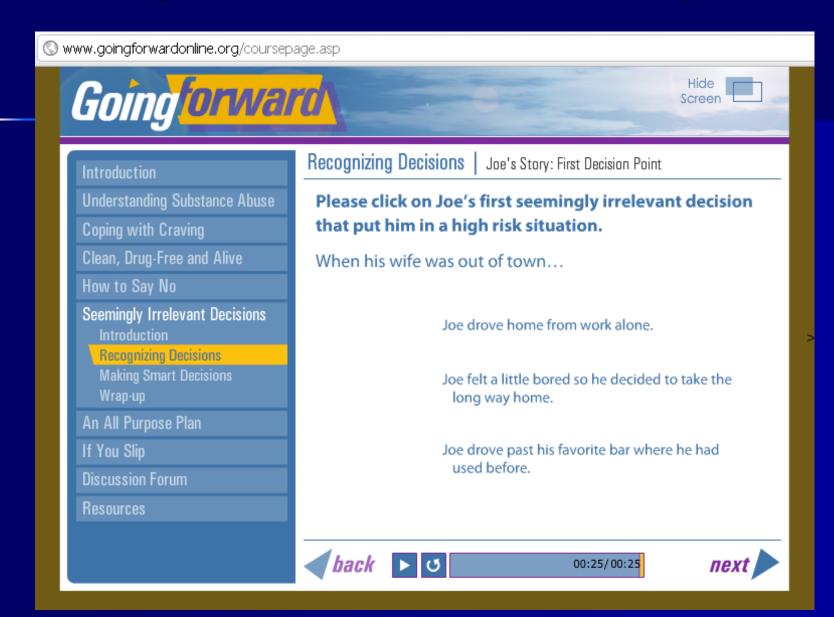
Going Forward: Personal Log-in



Going Forward: Skills Acquired



Going Forward: Interactivity



Going Forward: Recruitment

- Partnered with United Behavioral Health's EAP
 - Receives approximately 2000 calls per day
 - -Approximately 4% are substance use related (i.e., 80 calls)
- UBH identified all members receiving intensive outpatient treatment for any type of substance use disorder within the last 6 months
 - Randomly selected 1,000 members

Going Forward: Procedures

- Inclusion criteria
 - At least 18 years of age
 - Currently receiving, or completed within the last 6 months, treatment for any type of substance use disorder
 - Not currently using illegal drugs
- 153 participants completed baseline
 - Randomly assigned to Going Forward or TAU
 - > 10 weeks
 - Immediate follow-up
 - -3 months follow-up

Going Forward: Baseline Demographics

	Experimental	Control
Age	M = 38.8 (9.6)	M = 37.3 (11.1)
Gender		
	25 (44.0%)	33 (44.0%)
Female	43 (55.1%)	42 (56.0%)
Education		
< High school	2 (2.6%)	4 (5.3%)
High school	26 (33.3%)	14 (18.7%)
Vocational	5 (6.4%)	8 (10.7%)
Some college	24 (30.8%)	40 (53.3%)
4 year college	16 (20.5%)	7 (9.3%)
>4 year degree	5 (6.4%)	2 (2.7%)
Drugs past 30 days		
Yes	20 (26.7%)	13 (17.8%)
No	55 (73.3%)	60 (82.2%)
	Gender Male Female Education < High school High school Vocational Some college 4 year college >4 year degree Drugs past 30 days Yes	Gender Male 35 (44.9%) Female 43 (55.1%) Education < High school 2 (2.6%) High school 26 (33.3%) Vocational 5 (6.4%) Some college 24 (30.8%) 4 year college 16 (20.5%) >4 year degree 5 (6.4%) Drugs past 30 days Yes 20 (26.7%)

Going Forward: Outcomes

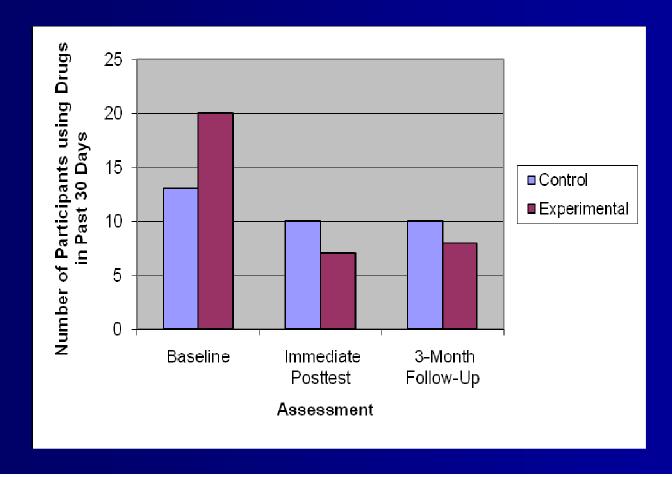
- Primary
 - Lapse
 - > Yes/no item of drug use in the past 30 days
 - WHO Health and Workplace Performance
 - > Absenteeism
 - ➤ Presenteeism (ratio of own performance to average worker's performance)
- Secondary
 - Knowledge of relapse prevention skills
 - Self-Efficacy
 - Negative affect
 - Positive social situations
 - Craving
 - Physical concerns

Going Forward: Utilization and Model

- Of the 78 people who were randomized into the experimental condition
 - -57 (73%) viewed at least one module
 - -33 (42%) viewed the entire program
- Growth curve modeling
 - Estimated each participant's growth trajectory
 - Examined if the amount of variance in that trajectory could be accounted by condition
 - Examined if amount of program utilization could account for growth trajectories

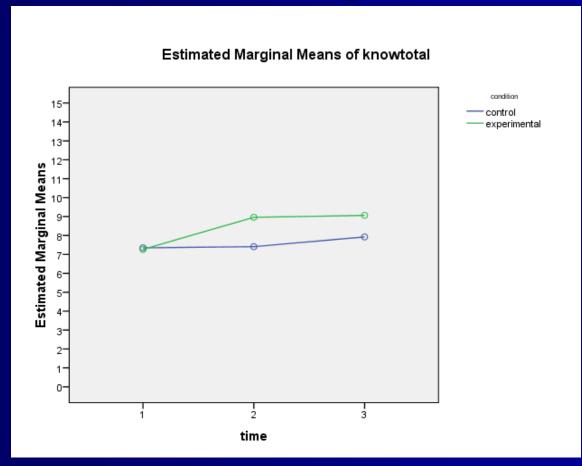
Going Forward: Effect of Condition

- Primary
 - Work performance: No effect
 - Lapse (t = 1.22, n.s.)



Going Forward: Effect of Condition

- Secondary
 - Self-efficacy: No effect
 - Knowledge (t = 2.79, p < .05)



Going Forward: Effect of Utilization

- Primary
 - Work performance: No effect
 - Lapse: No Effect
- Secondary
 - Knowledge: t = 2.70, p<.05
 - Self-Efficacy
 - \triangleright Negative affect: t = 2.06, p < .05
 - ➤ Positive social situations: t = 2.24, p < .05
 - > Craving: t = 1.45, n.s.
 - ➤ Physical concerns: t = 2.22, p < .05

Going Forward: Promise and Challenge

Promise

- Some hints that those in the program condition were less likely to lapse
- Secondary measures of knowledge and selfefficacy were positively impacted
 - Especially among those who fully viewed the entire program

Challenge

- Utilization was disappointing
 - > Online forum was included but not used
 - > Participants were not paid for utilization