

# Preventing Prescription Drug Misuse in the Workforce: A Randomized Controlled Trial of the Web-based *Smart Rx* Program

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Center for Workforce Health

E-Mental Health Summit  
Amsterdam, Netherlands  
October 15, 2009

# Who We Are

## ❖ *ISA Group*

Behavioral health R&D firm, established in 1978;  
received over \$30 million in NIH support

## ❖ *Center for Workforce Health*

Provides web-based behavioral health programs  
to workplaces

# Smart Rx

## A Web-based Program to Prevent the Misuse of Prescription Drugs by Working Women

- ❖ Based on a social-cognitive model, designed to raise awareness, increase motivation and teach skills for safe prescription drug use
- ❖ Targets *women*, who are prescribed psychotropic drugs at twice the rate of men
- ❖ A multi-media program, fully audio-narrated, with interactive assessments, animation and graphics

# The Program

http://www.smartrxonline.com - Smart RX - Microsoft Internet Explorer provided by Verizon Online




## SmartRx

Your Prescription for Good Health

- About the Program
  - Opening
  - ✓ Introduction
- Assess Yourself
- Medication Facts
- Smart Rx Use
- Managing Your Health
- Discussion Forum
- Resources

### Introduction

Using this Program



## SmartRxOnline

Your Prescription for Good Health!

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# Assess Yourself

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## Your Use of Prescription Medications

### Self Assessment



Begin Assessment

This program is intended for use by all people not just those who are currently taking prescription medications. There are sections of the program that are useful for learning about safely taking over the counter medications as well as information on preventing medication problems in the event that you do take a prescription medication

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# Medication Facts

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Medications for Sleep

Medications for Depression

Stimulants

Medications for Pain

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## Introduction

### Women and Medication

Age

Genetics

Social Demands

LifeStages

Menstruation

Pregnancy and Breastfeeding

Menopause



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# Medication Facts

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## Medications for Anxiety

## Medications for Sleep

## Medications for Depression

## Stimulants

## Medications for Pain

## Smart Rx Use

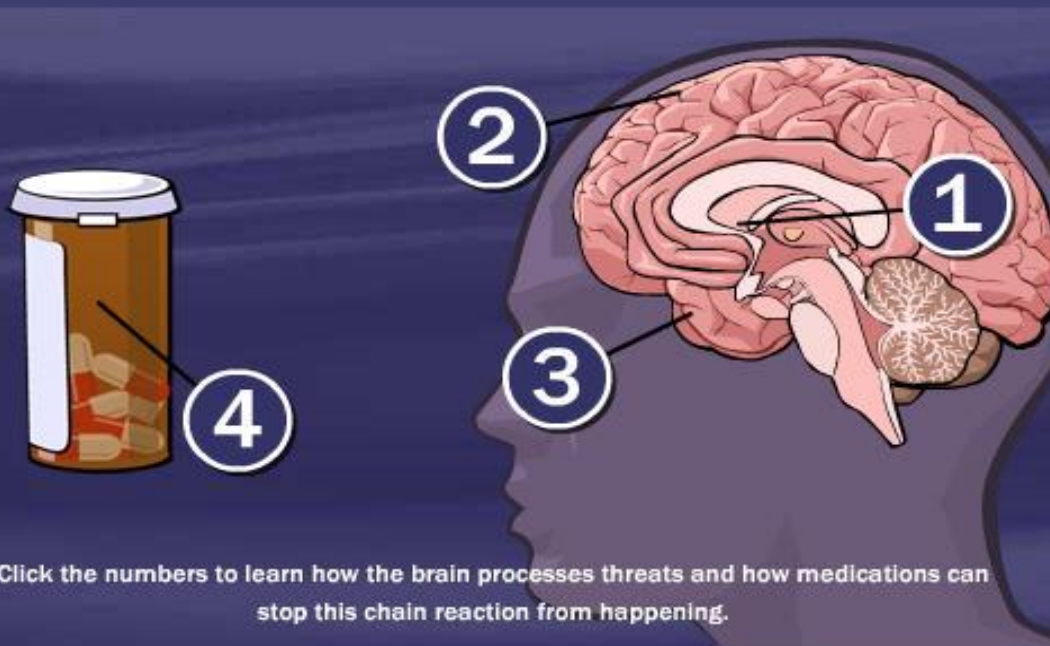
## Managing Your Health

## Discussion Forum

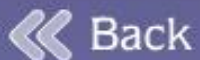
## Resources

## Medications for Anxiety

## How They Work



Click the numbers to learn how the brain processes threats and how medications can stop this chain reaction from happening.



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## Medications for Sleep

### How They Work



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## Medications for Pain

### Concerns

Things that

That the

That I will

That I will

That I will

That I will

That I will

That the

That I will

What if I

What is a

**Concern: I won't get relief from my pain**



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medication

such concern  
pharmacist  
addresses the issue.

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Know the Risks

Record Keeping

Avoid Medication Problems

Stopping Your Medications

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## Know Your Medication

### Assertiveness is Key



Assertive body language includes:

- Maintaining direct eye contact.
- Maintaining an erect posture.
- Speaking clearly and audibly.
- Not using a soft, whiny, or muffled voice.
- Using facial expressions and gestures to add emphasis to your words.

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## Know Your Medication

### Doctor Visits

**Click on the photos to hear women asking for the information they need.**



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## Avoid Medication Problems

### Types of Medication Problems

#### Medication Problems:

Drug Misuse

Physical Dependence

Tolerance

Drug Addiction

Click each term to learn more.

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## Avoid Medication Problems

### How Problems Happen



JD-Misused meds for depression



WK-Abused meds for the high



DD-Got depressed and abused



BV-Difficulty recognizing problem

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# Managing Your Health

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  - Pain Management
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### Anxiety

Coping Strategies to Decrease Anxiety



Relaxation

Positive Thoughts

Exercise

ID Personal Triggers

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## Pain Management

### Steps to Pain Management

#### Things to remember:

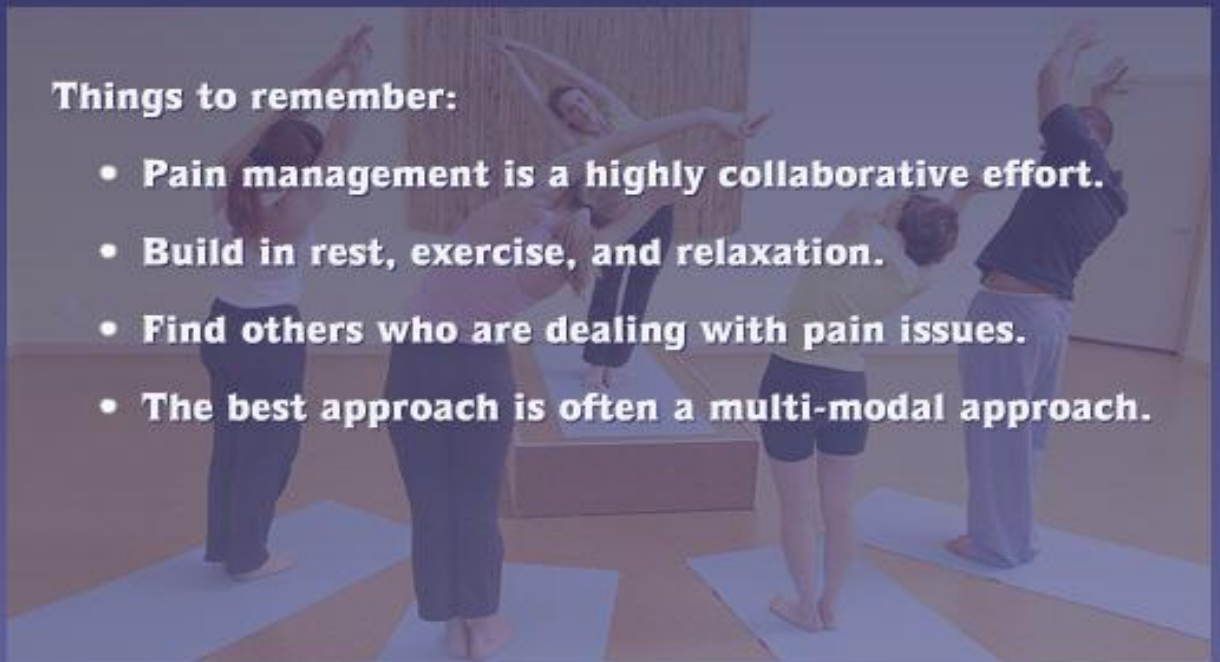
- **Pain management is a highly collaborative effort.**
- **Build in rest, exercise, and relaxation.**
- **Find others who are dealing with pain issues.**
- **The best approach is often a multi-modal approach.**

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# Discussion Forum

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## Discussion Forum

Share Your Views

Welcome to the user discussion forum.  
This is a place for women who are using the  
SmartRx program to meet and learn from each other.

### Forum Instructions

New to the forum?  
Click here



Registration

Already have a logon name  
and password? Click here



Log In

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✓ Printable Materials

## Other Websites

### Websites and Community Resources

[Alternative Therapies](#)

[Community Resources](#)

[General Health and Mental Health](#)

[Mood Disorders](#)

[Pain Disorders](#)

[Pain Medications](#)

[Pharmaceuticals](#)

[Sleep Disorders](#)

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[Stimulant Medications](#)

[Substance Abuse](#)

[Using Medicine Wisely](#)

[Women's Issues](#)



Click each category for  
a list of Web sites.

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### Printable Materials

Checklists, Worksheets, Directions, and Information

[Checklists and Worksheets](#)

[Directions for Relaxation Exercises](#)

[Information Sheets](#)

Click each category for a list of PDF files.



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# SmartRx

## The Randomized Trial

- 370 employees randomly assigned to Web (SmartRx) or treatment as usual (control)
- Outcome measures: (1) Self-assessments of health practices use and attitudes; and (2) participant ratings
- Health practices included prescription drug use, attitudes toward health care, knowledge, and drug problems (CAGE)

# Sample

- Women working in two hospitals in Ohio and West Virginia
- Easy recruitment, low attrition (4%), good compliance
- Majority educated (83%) had some college or above
- Most did not use computers as regular part of their job
- Many were nurses (37%) or other medical technical (23%)



# Measures

- **National Survey on Drug Use and Health (NSDUH )**
- **Knowledge of Prescription Drug Abuse and Dependency**
- **Perceived Efficacy in Patient-Physician Interactions (PEPPI 5-Item Version)**
- **Treatment Seeking Self-Efficacy and Confidence in Ability to Address Drug Problems**
- **CAGE for Prescription Drug Use**
- **Program Utilization**
- **Reactions to the Program**

# Analyses

- *ANCOVAs* conducted on outcome indices—measuring pre-post differences to test program effects
- *Logistic regression* analysis conducted on behavioral indices - looking at reports of problematic prescription drug use
- Descriptive data analysis on program utilization

# Drug Use Findings

*Baseline Medical Use*  
*Medications taken as*  
*prescribed*

Med	N	%
Anti-Dep	101	28%
Analgesic	82	22%
Anxiolytic	58	16%
Sedative	33	9%
Stimulant	9	3%

# Drug Use Findings

## *Baseline Non-Medical Use*

*Prescription medications  
not taken as  
prescribed*

Med	N	%
Analgesic	24	7%
Sedative	18	5%
Stimulant	5	1%
Anxiolytic	4	1%
Anti-dep	1	0.3%



# Effects of the Intervention

Experimental vs. Control - Knowledge				
Measure	Exp X (SD)	Control X (SD)	F	p
Drug Facts	13.23 (2.40)	12.84 (2.33)	3.75	.025*
Smart Use	13.1 (1.63)	12.90 (1.43)	0.79	.457
Manage Health	6.48 (0.96)	6.40 (0.89)	2.08	.127

# Effects of the Intervention

## Experimental vs. Control – Self-Efficacy

Measure	Exp X (SD)	Control X (SD)	F	p
Doctor Interactions	17.85 (4.33)	17.70 (4.30)	0.38	.687
Medication Adherence	58.82 (11.88)	56.88 (11.72)	4.73	.013*
Manage Problems	28.05 (3.99)	27.43 (3.83)	3.71	.026*

# Effects of the Intervention

Experimental vs. Control – CAGE Questions				
Measure	Exp X (SD)	Control X (SD)	F	p
CAGE Score	.485 (0.83)	.861 (1.19)	3.30	.038*

# Program Utilization

- 178 women in the experimental condition
- 92% program users were in the SmartRx program over 20 minutes
- The average amount of time spent in the SmartRx program was 113 minutes or 1 hour 53 minutes
- The average number of pages viewed was 63
- The average number of visits per user was 4 login sessions
- Forum utilization was low – users came in looking for information but did not initiate conversation



# Program Ratings- % Answering Agree or Strongly Agree

How <i>clear</i> was the program content?	95%
How <i>interesting</i> was the information?	84%
How <i>informative</i> was the information?	83%
How <i>useful</i> did you find the program content?	86%
How <i>easy</i> was the program to use?	90%
How <i>motivating</i> did you find the program content?	67%

# Summary & Implications

SmartRx program users:

- Greater knowledge of proper prescription drug use compared to controls
- Greater self-efficacy in their ability to manage and adhere to pharmaceutical treatment indices compared to controls
- Lower reporting of concerns about their pharmaceutical drug use (CAGE) compared to controls
- Were likely to visit the site on more than one occasion and spend a good amount of time viewing the program
- Were likely to view the program as comprehensive, clear, informative, and useful.

# *Further Question about SmartRx?*

***For questions about this project please contact:***

**Royer Cook, Ph.D., President**

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