The Transtheoretical Model to Help Clients Thrive

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Cancer Prevention Research Center
University of Rhode Island

Founder
Pro-Change Behavior Systems, Inc.
• Recovery from Mental and Substance Abuse Disorders: a voluntary and individually driven process of change through which individuals work to improve their own health and well-being, live a productive life, and welcome opportunities for growth.

Recovery is holistic and exists on a continuum of improved health and wellness.

SAMSHA, 2011
Stages of Change

PRECONTEMPLATION

PREPARATION

CONTEMPLATION

ACTION

MAINTENANCE

TERMINATION
Stages of Change
Engagement and Intervention

Issues

• Reach
• Retain
• Progress
• Process
• Success
Programs have to communicate that they are tailored to needs of each patient:

1. Wherever you are at, we can work with that!
2. Traffic light: Red light not ready; Yellow light getting ready; Green light ready.
Proactive alone will not work

A. Kaiser example with smoking
Stage Profiles of Completers and Dropouts of Psychotherapy

The pros and cons of changing across stages of change for 48 behaviors

Decisional Balance of Drug Addiction Treatment Across Stage

![Graph showing T-Scores for different stages of treatment. The stages are represented by PC, C, PR, and A/M. The pink line represents Pros, and the blue line represents Cons. The T-Scores vary across the stages with a peak in PC and a dip in C, followed by an increase towards A/M.](image-url)
Perceived Coercion and Choice Over Participating In Drug Addiction Treatment Across Stage

![Graph showing T-Scores for Perceived Coercion and Choice across different stages (PC, C, PR, A/M). The graph illustrates a trend where Coercion decreases and Choice increases as the stage progresses.]
When social controls (including incentives) are used, programs have to help transform social controls into self controls.

- Air Force example with smoking
Intervention Targeting and Tailoring

One Size Fits All
Intervention Targeting and Tailoring

One Size Fits All

Stage of Change

Targeted (Stage-Matched)
Treatment Groups

1. Action-oriented Manuals
2. Stage-Matched Manuals
3. Stage-Matched Computers & Manuals
4. Counselors & Stage-Matched Computers
<table>
<thead>
<tr>
<th>Pretest</th>
<th>6</th>
<th>12</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Action Manuals

### Stage Manuals

### Computers+

### Counselors+

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## Partner Abuse: Six Month Follow-up with First 250 Participants

<table>
<thead>
<tr>
<th>Victims Report</th>
<th>Standard Care &amp; 3 Individualized Computer Sessions</th>
<th>Mandated Standard Group Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Threatened to hit or throw something</td>
<td>20%</td>
<td>47%</td>
</tr>
<tr>
<td>2. Threw something at me</td>
<td>15%</td>
<td>28%</td>
</tr>
<tr>
<td>3. Kicked with force that could hurt</td>
<td>9%</td>
<td>21%</td>
</tr>
<tr>
<td>4. Beat me up</td>
<td>3%</td>
<td>23%</td>
</tr>
</tbody>
</table>

## Partner Abuse: Six Month Follow-up with First 250 Participants

<table>
<thead>
<tr>
<th>Offender Report</th>
<th>Standard Care &amp; 3 Individualized Computer Sessions</th>
<th>Mandated Standard Group Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Precontemplation Stage</td>
<td>18%</td>
<td>30%</td>
</tr>
<tr>
<td>2. Action Stage with Low Relapse Risk</td>
<td>37%</td>
<td>12%</td>
</tr>
<tr>
<td>3. Couples Therapy</td>
<td>25%</td>
<td>12%</td>
</tr>
<tr>
<td>4. Other Group Therapy</td>
<td>37%</td>
<td>18%</td>
</tr>
<tr>
<td>5. Self-help Books</td>
<td>58%</td>
<td>25%</td>
</tr>
<tr>
<td>6. Talked to Medical Professional</td>
<td>40%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Proactive Cessation With Adolescents in Primary Care

<table>
<thead>
<tr>
<th>Tailored Intervention</th>
<th>Assessment Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.9%</td>
<td>11.4%</td>
</tr>
</tbody>
</table>

Proactive Cessation with Depressed Patients: Abstinence at 18 Months

Tailored Intervention + 24.6%

Assessment Only 19.1%

Proactive Cessation with Patients Hospitalized for Mental Illness

<table>
<thead>
<tr>
<th>Tailored Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
</tr>
<tr>
<td>8%</td>
</tr>
</tbody>
</table>

Adding TTM-tailored Interventions to Midwife Counseling with Pregnant Smokers

Adding TTM-tailored interventions produced 8.2 times the impacts of midwife counseling alone

1. Increased Recruitment
2. Increased Retention
3. Increased Efficacy
4. Decreased Mis-reporting
5. Produced 8.2 times greater impacts

Percentage in Action/Maintenance for Stress Management

\( \chi^2 \) significant (p < .001) at 6, 12, & 18 months (Pre-Action at Baseline Only)

Coaction: The increased probability of progressing to Action on a second behavior (e.g. diet) when individuals have progressed to Action on an initial behavior (e.g. smoking).

<table>
<thead>
<tr>
<th>Coaction in</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>1.0</td>
</tr>
<tr>
<td>TTM Intervention Group</td>
<td>1.5-3.5</td>
</tr>
</tbody>
</table>

Exercise Staging: Adherence Group Progression to A/M by Group (pre-action at baseline)

Dietary Fat Staging: Adherence Group Progression to A/M by Group (pre-action at baseline)

Two Years of Primary Care Counseling

I. No effects on any of the four target behaviors

II. No increased effect on four behaviors treated effectively with TTM-tailored interventions
Two Years of Worksite Campaign

I. No effects on any of the multiple targeted behaviors

II. No increased effect on multiple behaviors treated effectively with TTM-tailored interventions
Costs per health condition and behavior and percentage of successful employees at long-term follow-up who participate in our programs

<table>
<thead>
<tr>
<th>Health Related Condition</th>
<th>Cost per Employee</th>
<th>Costs per 1,000 employees</th>
<th>% of long-term successes per 1,000 employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>$6,000</td>
<td>$232,000</td>
<td>N/A</td>
</tr>
<tr>
<td>Stress</td>
<td>$4,100</td>
<td>$2,700,000</td>
<td>65%</td>
</tr>
<tr>
<td>Smoking</td>
<td>$4,000</td>
<td>$880,000</td>
<td>25%</td>
</tr>
<tr>
<td>Diet Risk</td>
<td>$7,000</td>
<td>$2,000,000</td>
<td>45%</td>
</tr>
<tr>
<td>Exercise Risk</td>
<td>$3,800</td>
<td>$1,700,000</td>
<td>45%</td>
</tr>
<tr>
<td>Weight Risk</td>
<td>$3,900</td>
<td>$1,700,000</td>
<td>30%</td>
</tr>
<tr>
<td>Non-adherence: Statins</td>
<td></td>
<td></td>
<td>60%</td>
</tr>
<tr>
<td>Non-adherence: Anti-</td>
<td></td>
<td></td>
<td>60%</td>
</tr>
<tr>
<td>Hypertensive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>$6,400</td>
<td>$1,900,000</td>
<td>70%</td>
</tr>
</tbody>
</table>

Dr. Alberto Colombi, Medical Director for PPG Industries
Elements of Well-being (2013)

1. Physical Health
2. Social Well-being
3. Community Well-being
4. Financial Well-being
5. Purpose

Well-being RCT

- Determine the effects on multiple risks and multiple domains of well-being of Pro-Change’s effective LifeStyle Programs:
  - Online program for stress management
  - Telephonic coaching program for exercise management
- 3 group design

Baseline Demographics

- 39 States represented
- 59% female
- 52% currently employed
- 5.2% full time student
- 42.7% never smoke
- 20% reported no depression

Age:
Mean = 48.35 (13.53)
Range = 18-86

Chronic conditions:
Mean = 3.74 (3.09)
Range = 0-34

Behavior risks:
Mean = 4.14 (1.44)
Range = 0-9

Baseline Demographics: BMI

### Baseline Stage of Change

#### Regular Exercise

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>PC</td>
<td>30.2% (1250)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>32.7% (1354)</td>
<td></td>
</tr>
<tr>
<td>PR</td>
<td>27.4% (1132)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>5.8% (239)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.9% (161)</td>
<td></td>
</tr>
</tbody>
</table>

#### Stress Management

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>PC</td>
<td>31.0% (1282)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>26.3% (1089)</td>
<td></td>
</tr>
<tr>
<td>PR</td>
<td>22.8% (941)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>8.1% (336)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>11.8% (488)</td>
<td></td>
</tr>
</tbody>
</table>

### Number of Behavior Risks Mean Differences (T1-T2)

<table>
<thead>
<tr>
<th>Group</th>
<th>Multiple Imputation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Coach</td>
<td>-1.18</td>
</tr>
<tr>
<td>Stress Online</td>
<td>-0.82</td>
</tr>
<tr>
<td>Control</td>
<td>-0.49</td>
</tr>
</tbody>
</table>

### IWBS: Emotional Health Mean Differences (T1-T2)

<table>
<thead>
<tr>
<th>Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Coach</td>
<td>14.54</td>
</tr>
<tr>
<td>Stress Online</td>
<td>12.03</td>
</tr>
<tr>
<td>Control</td>
<td>7.75</td>
</tr>
</tbody>
</table>

Life Evaluation Categories: T1

Life Evaluation Categories: T2

Inclusive Care

Inclusive Research + Inclusive Practice

= 

Inclusive Care
Changing to Thrive

Using the Stages of Change to Overcome the Top Threats to Your Health and Happiness

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CO-FOUNDER OF PRO-CHANGE BEHAVIOR SYSTEMS, INC.