Weigh to Quit
A Collaborative Research Project
Today's Presentation

- Research
- Partnership
- Implementation
- Trial
- Data/outcomes
- Challenges & Benefits
Partnership Origin

- Discovery of evidence that weight gain is a problem in successful tobacco control.

- Obesity and smoking are leading public health threats to Oklahoma.

- Scientific evidence of a novel tobacco treatment that works but has not been tested in a public health setting.
The Significance

• Negative thoughts about body image and belief in smoking to control weight are associated with smoking.

• Weight concerns are common in smokers & have negative impact on quitting.
The Significance

- Weight gain is common & a top cause of relapse.
- Average person gains 8-15 pounds.
- 20% of obese people are smokers.
- Obese smokers suffer the highest health consequences.
- Obese gain more weight & are less likely to quit.
Research on Tobacco & Weight

- **Weight control** (restrictive dieting) **while** quitting - not advised.

- Cognitive Behavioral Tx addressing **weight concerns** can increase quit rates and reduce weight gain.

- **Weight control after** quitting has no effect on relapse and can reduce weight gain.
Gaps in the Evidence

Prior studies were:

- Intensive (12 sessions)
- In-person or groups
- Only enrolled women

No studies were:

- Brief
- Phone-based
- Conducted via a quit line
‘Weigh to Quit’ Study Goals

• Test effectiveness of a brief phone-based version of the weight concerns/tobacco cessation intervention

• Test via an RCT

• In a state quit line
Immediate Concern

• The adverse health consequences that can occur as a result of obesity in both adults and children have become a cause of immediate concern both at the national and state level.¹

• Adult obesity rates have doubled since 1980 and two thirds of Americans as well as Oklahomans are now either overweight or obese.²,³

CDC, BRFSS
Preventable Morbidity and Mortality

- **Smoking and obesity** are the two primary contributors to preventable morbidity and mortality.\(^4\)

- Many smokers choose not to quit because of fears of **gaining weight**.\(^5,6\)

- Smokers may **relapse** because of relatively modest weight gain or may gain sufficient weight post-quit to pose a significant health risk.\(^5,6\)

Freedman, 2006; Copeland, 2006; Jeffery, 2000
• Oklahoma’s 2007 Obesity Rate was 28.8 which makes Oklahoma the 8th most obese state.³

• Oklahoma’s 2007 Smoking Rate was 25.8 which makes Oklahoma the state with the 5th highest smoking rate.³

CDC (BRFSS)
Evaluating Feasibility of the Study

- Free & Clear research staff approached the State of Oklahoma to determine if there was interest in collaborating on a research study.

- The Oklahoma Team was interested in making a contribution to the field of public health.

- This novel approach indicated that an important question could be answered relatively quickly.
The Oklahoma Team

- The Oklahoma Tobacco Settlement Endowment Trust (TSET)

- The Oklahoma State Department of Health (OSDH)
  - Tobacco Use Prevention Service
  - Chronic Disease Service

- The University of Oklahoma, Oklahoma Tobacco Research Center (OTRC)
Integrating Tobacco Control with Chronic Disease Programs

- The Centers for Disease Control and common sense have encouraged these two public health programs to find increased opportunities for collaboration.

- The TSET board had recently adopted “fitness and nutrition” as an additional program area in which to focus future funding.

- This study provided the Oklahoma Team with an ideal project to demonstrate integration.
Making the Decision

- Free & Clear staff traveled to Oklahoma to present the study design and research findings upon which the study was conceived.

- The Oklahoma Team considered the impact on quitline reach (money diverted from direct services to research), and deliberated the ultimate outcome that would be realized from this study (cost vs. benefit).

- The Oklahoma Team presented to the TSET Board and OSDH Leadership to gain approval and buy-in.
Negotiation

- Sally Carter (OSDH) coordinated the study partners and facilitated the tasks necessary to reach agreement and implement the study.

- Dr. Laura Beebe (OTRC) provided expert consultation on proposed study protocols to the State of Oklahoma during the negotiation process.

- Numerous meetings and conference calls resulted in an agreement to proceed with the study.
Negotiation

- The State of Oklahoma determined the mechanism to fund the study.

- All parties agreed to establish a Memorandum of Understanding to clarify roles and expectations.
Memorandum of Understanding

- Outlined the State of Oklahoma and Free & Clear’s specific financial commitments to the study.

- Identified Free & Clear as being responsible for the development and delivery of the weight concern interventions and staffing the trial.

- Identified Dr. Beebe (OU-OTRC) as being responsible for conducting the follow-up evaluation calls.

- Identified co-investigators.
Memorandum of Understanding

- Identified the process by which Free & Clear would submit the study data to the University.

- Established who had ownership of the data.

- Defined HIPAA responsibilities and compliance requirements.
Memorandum of Understanding

- Identified the process of how study findings would be disseminated.

- Specified authorship guidelines.
References

   Http://222.cdc.gov/nccdphp/dnpa/obesity/index.htm


Research Purpose

Determine the effectiveness of a weight concern intervention in improving tobacco cessation & limiting cessation-related weight gain.
Question for the Field

Is this a valuable addition to tobacco cessation programs that should be offered to participants with weight concerns?
The combined intervention will improve tobacco cessation outcomes measured at 6 months.
Secondary Hypotheses

- Decrease weight gained
- Increase confidence in minimizing weight gain
- Increase confidence in quitting or staying quit
- Increase adherence to tobacco treatment
- Increase healthy behaviors
‘Weigh to Quit’ Study Methods

Smokers calling the Oklahoma Helpline

Assess weight/height
weight concerns, eligibility & interest in the study

Transfer to Coach to obtain consent and administer baseline survey

Randomization to groups & deliver intervention call #1
‘Weigh to Quit’
Study Design

2- Cell Trial

Baseline Measures & Randomization

Usual Care

5 Calls Quit Coach Only

6 -month Follow-up

Intervention

8 Calls Weight Concerns Quit + Weight Coach

Oklahoma Tobacco Helpline
1-800-QUIT NOW
Free help 784-8669
‘Weigh to Quit’ Study Intervention Content

Focus on

- Increase physical activity
- Encourage healthy snacks
- Discourage dietary restriction while quitting
- Body image & maladaptive beliefs about weight
- Motivation and confidence in quitting smoking
- Acceptance of post quit weight gain
‘Weigh to Quit’
Study Intervention

Intervention (call sequence)

<table>
<thead>
<tr>
<th>Intervention Flow</th>
<th>CALL 1 Intake Call</th>
<th>Weight Call 1</th>
<th>CALL 2 Quit Date Cali</th>
<th>CALL 3 Quit Date Follow Up Cali</th>
<th>Weight Call 2</th>
<th>CALL 4 Ongoing Call</th>
<th>Weight Call 3</th>
<th>CALL 5 Ongoing Call</th>
</tr>
</thead>
</table>
Results: Screening Data on Weight

- 34% obese (15% very obese)
- 31% overweight
- 34% normal weight
- 63% concerned about weight gain
Weight Concerns by BMI Categories

- Obese: 78%
- Overweight: 63%
- Normal Wt: 46%
Recruitment for the RCT

- 7,998 called the Helpline & asked questions

- 4,240 (53%) eligible
  - 2,771 (65.3%) yes to offer
  - 2,000 (72.2%) randomized
    (47.2% of eligible)
### Characteristics

**Screened vs. Randomized**

<table>
<thead>
<tr>
<th>Screened</th>
<th>Randomized</th>
</tr>
</thead>
<tbody>
<tr>
<td>39% Obese</td>
<td>49% Obese</td>
</tr>
<tr>
<td>63% Wt concerned</td>
<td>100% Wt concerned</td>
</tr>
<tr>
<td>81% White</td>
<td>79% White</td>
</tr>
<tr>
<td>6% African American</td>
<td>7% African American</td>
</tr>
<tr>
<td>10% American Indian</td>
<td>11% American Indian</td>
</tr>
<tr>
<td>71% Female</td>
<td>77% Female</td>
</tr>
<tr>
<td>52% Uninsured</td>
<td>48% Uninsured</td>
</tr>
</tbody>
</table>
Weight Related Characteristics of Randomized Participants

- 76% believes they are overweight
- Expect to gain 19 lbs
- 40% reported dieting while quitting tobacco
- 76% reported weight gain in prior quit attempts (avg. 17 lbs)
- 57% only willing to gain 10 lbs
Physical Activity of Randomized Participants

- 3 days/week physical activity
- 4 days/week walking
- 5 hours/day sitting
- 31% get no physical activity
- 19% do no walking
- 40% spend > 4 hours sitting
# Tobacco Calls Completed (QC) Intervention vs. Control
# Weight Calls Completed

(WC) Intervention
<table>
<thead>
<tr>
<th></th>
<th>Intervention: 8 proactive calls &amp; unlimited reactive</th>
<th>Controls: 5 proactive calls &amp; unlimited reactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (sd) Tobacco Calls</td>
<td>2.8 (1.7)</td>
<td>3.0 (1.6)</td>
</tr>
<tr>
<td>Range</td>
<td>0-10</td>
<td>0-8</td>
</tr>
<tr>
<td>Mean (sd) Tobacco + Weight</td>
<td>4.1 (2.5)</td>
<td>3.0 (1.6)</td>
</tr>
<tr>
<td>Range</td>
<td>0-13</td>
<td>0-8</td>
</tr>
</tbody>
</table>
Predictors of Completing 4+ Tobacco Calls

- Controls
- Older age
- Male

Controlling for:
- BMI
- Cigarettes per Day
- Insurance
- Years of smoking
- Chronic diseases
Challenges and Opportunities

• Quit Coach adherence to intervention content
  
  Solution:
  – *Booster trainings, call monitoring & feedback*
  – *Increase time and treatment intensity with Weight Coach*

• Variability in participants ability to quit
  
  Solution:
  – *Increase cessation treatment intensity, offer re-enrollment, future research*
Summary

• Ability to translate efficacious treatment into quitline
• Smokers call the quitline despite weight concerns
• Smokers seek help preventing weight gain
Summary

- High prevalence of obesity among callers

- In real world setting, smokers have difficulty completing counseling and meeting quit date goals
Next Steps

- Assess effectiveness of treatment at 6 months for quitting and weight gain
- Assess predictors of quitting
- Assess predictors of weight gain
Productive Collaboration

• **Successful Implementation & Recruitment**
  – Launched on time
  – Recruited all participants in < 9 months

• **Sharing the Findings**
  – 1 paper submitted on prevalence of obesity and weight concerns
  – 2 presentations planned for international conferences
  – More papers underway

• **Potential avenue to increase reach of quitlines**
  – If successful, program can be used to attract more callers
Benefits of Productive Collaboration

• Make a major public health contribution to the country

• Answer an important question relatively quickly

• Provide a model for funding innovative research at state level

• Shape statewide future offerings for both tobacco and weight that is grounded in theory and evidence based
Questions?