Evaluation of the NC Red Flag Campaign (Phase 1)

University of North Carolina School of Medicine
Tobacco Prevention and Evaluation Program
April 13, 2006
Background

- Tobacco sales to minors in NC
  - 14.8% in 2005, but some counties > 25%

- Synar: statewide rate ≤ 20%

- NC licenses – colored borders in 2000
Background

- North Carolina driver’s licenses
  - red border = under 18
  - yellow border = 18 to 20
  - green border = 21 and over

- Dec. 2004 survey: only 4%
  - 4% of merchants can identify colors
The Response: Red Flag Campaign

- Launched: April 2005
- First wave targeted 3 districts
- To roll out over 3-year period
- UNC TPEP contracted for evaluation
The Response: Red Flag Campaign

- Packets mailed to tobacco retailers
  - Posters
  - Brochures
  - Stickers
  - Option to order buttons
Context
Merchants’ methods to ID

- Doing math on own
- Specialty calendars
- Checkout scanners
- Electronic age verification systems
- Different license formats
Format of Other States’ Licenses

- Vertical format (14)
- Color-coding
- Under 18/21 labels
Guiding Theories

- Public Health Model
  - Host
  - Agent
  - Environment

- Ecological Model
  - Individual
  - Organizational
  - Community
Basic Ecological Model

- Red Flag Campaign
- Merchants' Sales to Minors
- Organizational
- Individual
- Community

UNC School of Medicine
Methodology: Merchant Survey

- Brief lit review/Ecological model
- Survey tool
- IRB
- Trained interviewers
- Piloted in target and other counties
- Interviewed 51 merchants
  - 2 teams of 2, reconciled responses
- Data analysis, report
## Merchant Sample

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conv.Stores/Gas Stations</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td>Drug Stores</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Grocery Stores</td>
<td>12</td>
<td>24%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>50</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td>Urban</td>
<td>32</td>
<td>64%</td>
</tr>
<tr>
<td>Rural</td>
<td>18</td>
<td>36%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>50</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Merchant Surveys

- Primary method used to ID
- Awareness/Knowledge/Use of colored borders
- Awareness of Red Flag campaign
- Beliefs about helpfulness of colored borders
- How determine who to card
- Visible signage
Results: Merchant Surveys
<table>
<thead>
<tr>
<th>Method</th>
<th>Frequency (n=51)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checkout scanner</td>
<td>21</td>
<td>41.2%</td>
</tr>
<tr>
<td>Calendar</td>
<td>10</td>
<td>19.6%</td>
</tr>
<tr>
<td>Color format + other method</td>
<td>9</td>
<td>17.6%</td>
</tr>
<tr>
<td>Color format</td>
<td>6</td>
<td>11.8%</td>
</tr>
<tr>
<td>Do math</td>
<td>5</td>
<td>9.8%</td>
</tr>
</tbody>
</table>
Awareness of/Knowledge about Color Format

- 94% awareness of color format
  - 44% could describe all 3 colors
  - 19% could identify red (but not other colors)
  - Total of 63% knew red = no sale
## Comparison with Earlier Survey

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>% of Dec. 2004 sample</th>
<th>% of July 2005 Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – 100%</td>
<td>4%</td>
<td>44%</td>
</tr>
<tr>
<td>Yes – red, but not others</td>
<td>4%</td>
<td>19%</td>
</tr>
<tr>
<td>Yes – but incorrect</td>
<td>32%</td>
<td>8%</td>
</tr>
<tr>
<td>No</td>
<td>52%</td>
<td>29%</td>
</tr>
</tbody>
</table>
Awareness of Red Flag Campaign

- 41% awareness of Red Flag campaign
  - Of these, managers had talked to 76%
    - 31% of total sample
  - Trained 52%
    - 22% of total sample
- Other ways: media, mail, email
- No awareness of sponsor
Merchants’ Beliefs about Helpfulness of Color Format

- 63% - helpful or would be helpful
  “It’s better than trying to do the math.”

- 18% - not helpful
  “We don’t really need it, because our cash register system works.”

- 20% - other responses (ambivalent)
Merchants: Most Helpful Method

- 70% - technology based systems
  - Checkout scanners, EAVs
- 14% - calendars
- 6% - color format
  (with or without other method)
How merchants decide to check ID

- By looks – 66% of those who responded
- New customers – 5%
- Combination of the two – 20%
- Total – 91% use looks or recognition of customer
Visible Signage Related to Checking ID

- 96% visible signs
- 57% We Card/Philip Morris
- 37% We Card/PM AND Red Flag
- 2% Red Flag only
Methodology: Student Survey

- Survey tool
- IRB
- Interviewed 50 students with NC licenses
- Data analysis, report
## Student Sample

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22</td>
<td>44%</td>
</tr>
<tr>
<td>Female</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>18-20</td>
<td>30</td>
<td>60%</td>
</tr>
<tr>
<td>21+</td>
<td>19</td>
<td>38%</td>
</tr>
<tr>
<td><strong>R/E</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>33</td>
<td>66%</td>
</tr>
<tr>
<td>Other*</td>
<td>17</td>
<td>34%</td>
</tr>
<tr>
<td>*Afr. Amer, Asian, Amer Ind, Multiracial</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SMOKING STATUS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>38</td>
<td>76%</td>
</tr>
<tr>
<td>Smoker</td>
<td>12</td>
<td>24%</td>
</tr>
</tbody>
</table>
Results:
Student Survey
Age and Color Border on License

- 60% of sample had incorrect border color
- 18-20 year olds with red border; 21-24 year olds with yellow border
<table>
<thead>
<tr>
<th>Age at Renewal</th>
<th>Age at Next Renewal</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>
I’m not going to update when I don’t need to and pay extra money.

I hate going to the DMV and people check the date anyway.

I never have problems buying cigarettes with a red license. I’m not worried about renewing it.

It doesn’t expire till 2009 and I don’t have time to stand in line at the DMV.
Conclusions
(1) The Red Flag campaign has been successful. (63% color format knowledge vs. 8% in a pre-campaign survey)
(2) 41% merchants aware of campaign, \( \frac{3}{4} \) of whom learned about campaign from managers. Indicates room for improvement in managerial training.
(3) Majority (70%) prefer technology-based system for checking ID. 47% currently have one.
(4) 63% thought color system helpful or would be helpful if
* had necessary training
* all licenses used format
* colors and age matched consistently
(5) Most respondents (91%) decide who they will card by looks or recognition.
(6) Most stores have We Card/other P.M. signs posted visibly, compared to 39% of stores with Red Flag materials.
(7) Only 40% of sample of college students had licenses with correctly colored borders because licenses had not expired and mismatch not a problem in purchasing tobacco/alcohol.
Recommendations
(1) Collaborate with the DMV so that licenses expire on same timeline as change in color code.
(2) Highlight complementary role color format can play with existing, utilized systems.
(3) Consider implementing incentive system for managers to train employees.
(4) Consider additional studies to look at
* predictors of merchant behavior
* further methods to improve merchant protocol
(5) Collaborate with other agencies for more comprehensive approach (multiple levels of ecological model).
(6) Plan for more comprehensive evaluation of Red Flag campaign – ideally with pre and post-campaign measures, comparison community without campaign.
Evaluation of 2006 Campaign

- Two counties
  - One Phase 2 county (2006 campaign)
  - One Phase 3 county (2007 campaign)

- Pre and post-test measures in both counties
  - Data to be collected in April and July of 2006
Questions?