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# Evaluation of the NC Red Flag Campaign (Phase 1)

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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  $\leq$  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% of merchants can identify 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

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# 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

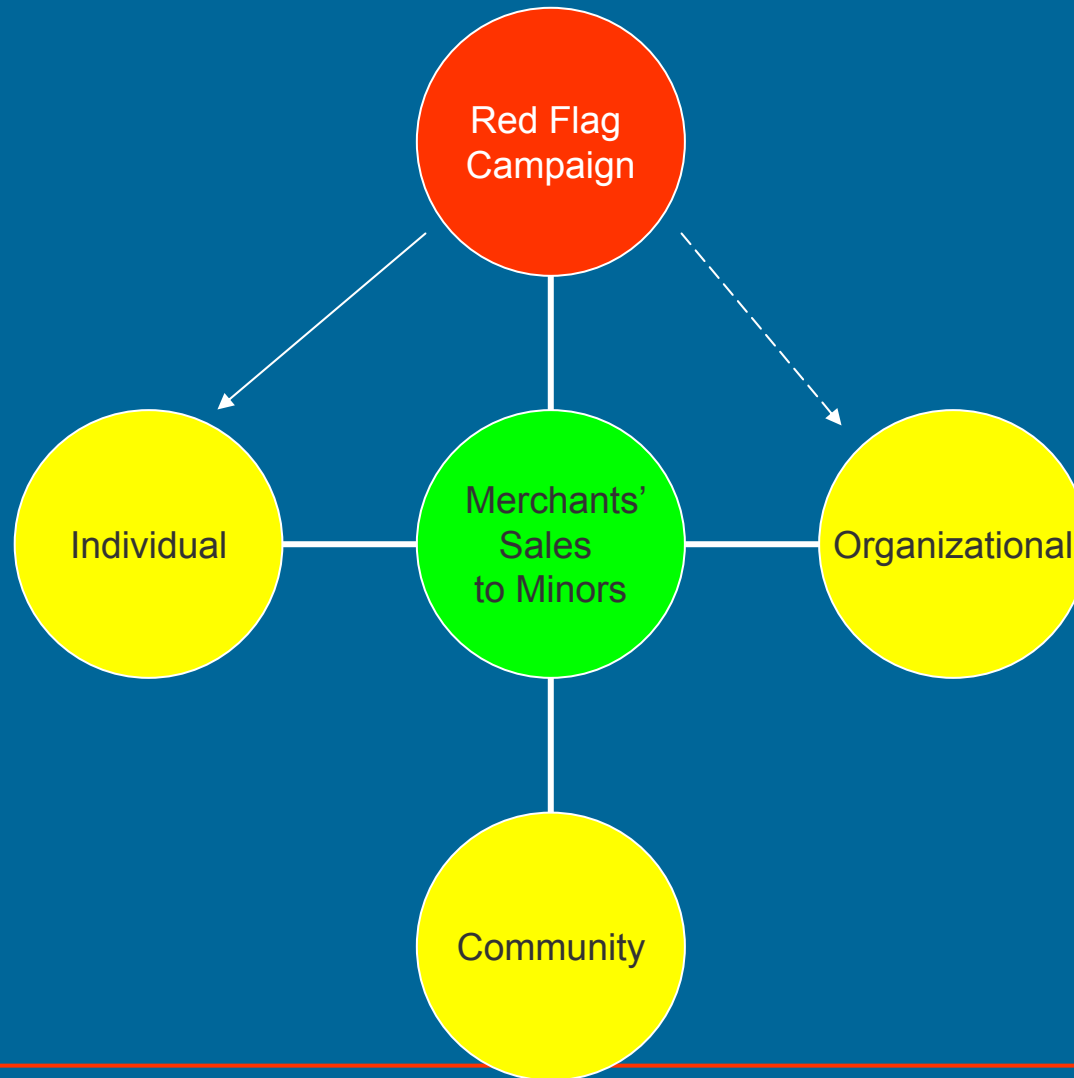




# Guiding Theories

- Public Health Model
  - Host
  - Agent
  - Environment
  
- Ecological Model
  - Individual
  - Organizational
  - Community

# Basic Ecological Model



# 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

	Frequency	Percentage
Conv.Stores/Gas Stations	28	56%
Drug Stores	10	20%
Grocery Stores	12	24%
<b>TOTAL</b>	<b>50</b>	<b>100%</b>
Urban	32	64%
Rural	18	36%
<b>TOTAL</b>	<b>50</b>	<b>100%</b>

# 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

# Primary Method for Age Determination

Method	Frequency (n=51)	Percentage
Checkout scanner	21	41.2%
Calendar	10	19.6%
Color format + other method	9	17.6%
Color format	6	11.8%
Do math	5	9.8%

# 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

<b>Knowledge</b>	<b>% of Dec. 2004 sample</b>	<b>% of July 2005 Sample</b>
Yes – 100%	4%	44%
Yes – red, but not others	4%	19%
Yes – but incorrect	32%	8%
No	52%	29%

# 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.”*

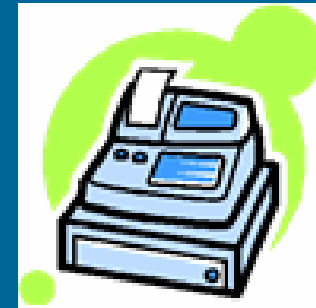
- 18% - not helpful

*“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

		Frequency	Percentage
SEX	Male	22	44%
	Female	28	56%
AGE	17	1	2%
	18-20	30	60%
	21+	19	38%
R/E	White	33	66%
	Other*	17	34%
*Afr. Amer, Asian, Amer Ind, Multiracial			
SMOKING STATUS	Non-smoker	38	76%
	Smoker	12	24%



# 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



# NC DMV Renewal Schedule

Age at Renewal	Age at Next Renewal
16	20
17	20
18	25
19	25
20	25

- *I'm not going to update when I don't need to and pay extra money.*
- *I never have problems buying cigarettes with a red license. I'm not worried about renewing it.*
- *I hate going to the DMV and people check the date anyway.*
- *It doesn't expire till 2009 and I don't have time to stand in line at the DMV.*

# Conclusions

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(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

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(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?

