



Short communication

## Exploring the implications of modified risk claim placement in tobacco advertising

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### ABSTRACT

The United States Food and Drug Administration (FDA) has developed a regulatory process by which tobacco companies can apply to make “modified risk tobacco product” (MRTP) marketing claims that their product poses a lower risk of disease or exposure to harmful constituents. The impact of MRTP claims to promote harm reduction may be limited by perceptions that claims come from the tobacco industry, lack of attention, and the simultaneous presence of health warnings on ads, which may be perceived as conflicting information. Some studies have examined the potential of alternative “modified risk warnings”. We aimed to contribute to this literature by exploring issues of claim attention, perceived source and credibility when viewing MRTP claims within or outside of a warning label. We conducted 11 focus groups with adult smokers and young adult (ages 18–25) non-smokers (n = 54) who viewed three e-cigarette or snus advertisements which varied in where an MRTP message was placed: outside the warning label, inside the warning label, or in a modified label style. Results suggest that MRTP claims presented within or in the style of a warning label (compared to claims outside the label), may be perceived as coming from a government or health-related source rather than a tobacco industry, and thus seem more credible. Yet these formats may receive insufficient message attention, as they are smaller and appear as part of labels consumers are accustomed to ignoring. Future research should further probe effects of MRTP statements and how they vary by message source, channel and format.

### 1. Introduction

The United States Food and Drug Administration (FDA) has developed a regulatory process allowing tobacco companies to submit “modified risk tobacco product” (MRTP) applications to use marketing claims that their product poses lower disease or exposure risks. (US Food and Drug Administration, 2012) To receive authorization, companies must provide evidence that the proposed claims are accurate, understandable, and can lead to public health benefits (e.g., harm reduction for smokers who switch to the proposed lower-harm product) without being offset by unintended consequences (e.g., nicotine product initiation among young non-users). (US Food and Drug Administration, 2012) As of 2021, FDA has authorized MRTP claims for products offered by two brands (General Snus, IQOS), and other decisions are pending.

However, using MRTP claims to promote product switching and harm reduction may have limitations. One issue pertains to source credibility, as the believability and persuasiveness of MRTP claims may be hampered by perceptions that they come from the tobacco industry (Fix et al., 2017; Capella et al., 2012) and are motivated by profit, which may induce consumer skepticism (Byrne et al., 2012; Capella et al., 2012; Owusu et al., 2019). Additionally, the presence of a government warning label on the same ad may seem contradictory to the MRTP claim (Katz et al., 2017).

Several experimental studies have examined the idea of using a “modified risk” warning label, testing either an MRTP statement added to an existing warning (Callery et al., 2011; Wackowski et al., 2019; Kimber et al., 2020) or presented in place of one (Kimber et al., 2020; Nilsen et al., 2020). Some have tested a potential new “not safe but

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safer” warning (Mays et al., 2016; Berry and Burton, 2019; Popova and Ling, 2014; Rodu et al., 2016). Several of these experiments found exposure to the modified warning to be associated with perceptions that the product is less harmful than smoking (Berry and Burton, 2019; Popova and Ling, 2014; Wackowski et al., 2019). However, we are aware of only one qualitative study on the topic (Wackowski et al., 2016). Further, no previous studies have compared the perceived message source and impact of an MRTP claim when presented either within or outside of a warning label. To explore this issue, we present preliminary qualitative results related to consumers’ perceptions of MRTP claims when presented on tobacco ads outside the warning label, inside the warning label box, and in a modified warning label style.

## 2. Material and methods

### 2.1. Participants and recruitment

Data are from 11 focus groups from a broader study on MRTP claim reactions (Wackowski et al., 2020; Wackowski et al., 2021). Six groups focused on snus messages and five on e-cigarette messages<sup>1</sup>. Groups were held (August–October 2019) on a public university campus, with local recruitment. Of the 11 groups, 7 included adult current smokers (i. e., have smoked 100 cigarettes and now smoke every day or some days) and four included young adult (YA) (ages 18–25) non-smokers. Researchers kept group sizes at 3–6 participants each (Richardson, 2014) (N = 54 participants, 29 smokers, 25 non-smokers), due to the variety of messages discussed. Most smoker participants were daily, long-term smokers, and some used e-cigarettes or smokeless tobacco occasionally or in the past (Table 1).

### 2.2. Study procedures and materials

During sessions, participants initially discussed three different snus or e-cigarette MRTP claims, presented one at a time as stand-alone text statements (with no source attribution) on overhead slides by the moderator. Messages were informed by previous studies and MRTP applications. Details about those messages, procedures and findings are presented elsewhere (Wackowski et al., 2020; Wackowski et al., 2021). Briefly, although some smokers expressed interest in MRTP statements/products, participants also expressed considerable message skepticism.

Results for this study come from exploratory reactions assessed towards the end of sessions, when participants viewed three versions of a mock snus or e-cigarette ad (depending on group), which featured a message discussed earlier. Each ad contained the same MRTP claim and included an addiction warning in a text box, but ads varied in placement of the MRTP claim (Fig. 1). In the first ad (“Ad1-standard”), the claim was located in the main text of the ad. In the second (“Ad2-Warning Style”), the claim was placed under the warning label, in a separate box that looked similar to the warning label. In the third ad (“Ad3-embedded”), the claim was fully embedded in the warning label box. Groups viewed these ads sequentially, one at a time (Ad1, Ad2, Ad3). For Ad1, participants were asked who they thought each message on the ad was coming from, and how they felt about the MRTP claim, seeing it now on an ad. For Ads 2 and 3, participants were instructed to notice where the MRTP claims were now located, and asked who “it feels like the message is coming from” and how they felt seeing it now. This manuscript focuses on responses to these questions.

### 2.3. Analysis

Research team members completed a thematic analysis, applying codes to transcripts (using Atlas.ti) developed deductively based on the

<sup>1</sup> The larger study included 12 groups; one is not included here because participants did not view the ad stimuli.

**Table 1**  
Focus group participant demographics.

	Adult Current Smokers (n = 29, 7 groups)	Young Adult Non-smokers (n = 25, 4 groups)	Total (n = 54, 11 focus groups)
Sex			
Male	41.4%	24.0%	33.3%
Female	58.6%	76.0%	66.7%
Average Age (and Range)	45 (21–66)	20 (18–25)	32 (18–66)
Race			
White	60.7%	36.0%	49.1%
Black/African American	10.7%	20.0%	15.7%
Asian	10.7%	40.0%	24.5%
Other	17.9%	4.0%	11.3%
Ethnicity			
Hispanic	13.8%	12.0%	13.0%
Non-Hispanic	86.2%	88.0%	87.0%
Highest Education Level			
High school degree/GED	24.1%	36.0%	29.6%
Some college/technical school	24.1%	40.0%	31.5%
College degree or higher	51.7%	24.0%	38.9%
Smoking frequency			
Daily smoking	82.1%	–	82.1%
Some days smoking	14.3%	–	14.3%
Year of Regular Smoking			
0–5 years	18.5%	–	18.5%
6–10 years	3.7%	–	3.7%
More than 10 years	77.8%	–	77.8%
Ever tried e-cigarettes/vaping	82.8%	56.0%	70.4%
Now vape some days	27.6%	20.0%	24.1%
Now vape every day	6.9%	0	3.7%
Ever tried smokeless tobacco (ST)	21.4%	8.3%	15.4%
Now use ST some days	3.6%	0	1.9%
Now use ST every day	3.6%	0	1.9%

Note: Inclusion criteria included being at least 18 years old and able to read and speak English. For smoker groups, adults of any age 18 or over were eligible to participate. For the young adult non-smoker groups, age eligibility was limited to ages 18–25. Current smokers were defined as those who smoked at least 100 cigarettes in their lifetime and now smoke every day or some days. Across all groups, recruitment was aimed at including participants who were not current regular (i.e., daily) users of e-cigarettes or smokeless tobacco, although they may have used these in the past or may be occasional users. Due to recruitment error, one smoker in the snus groups did indicate daily ST use and one smoker in the e-cigarette groups indicated daily e-cigarette use. Another smoker in the e-cigarette groups reported occasional e-cigarette use during screening, but daily use during the session. Six groups focused on snus claims (4 with current smokers and two with young adult non-smokers) and five on e-cigarette/vaping claims (3 with current smokers and two with young adult non-smokers).

focus group guide (e.g., perceived claim source) and inductively following iterative transcript reviews (e.g. source credibility). After OAW and MR discussed and agreed on codes/definitions (using samples of transcript text), OAW independently coded four transcripts (reviewed by MR for agreement), and MR coded the remaining transcripts (reviewed by OW). We refined preliminary draft results upon re-review



**Fig. 1.** E-cigarette and Snus Stimuli Ads with Modified Risk (MR) claims placed in different ad locations. Note: Manipulated test e-cigarette ads are on the top row and test snus ads are on the bottom row. Brand names and visual elements are blurred in this figure for reproduction purposes. The modified risk claim in the e-cigarette ads states: “Switching completely from cigarettes to vaping products can greatly reduce harms to your health.” The modified risk claim in the snus ads states: “Switching completely from cigarettes to snus can greatly reduce your risk of lung cancer and lung disease.”

of coded text, with exemplifying quotes selected (sometimes edited for brevity and clarity). This study was approved by Rutgers University’s Institutional Review Board.

### 3. Results

#### 3.1. Reactions to “standard” ad claim (Ad1)

When viewing Ad1, participants across groups reported perceiving the source of the MRTP claim to be the product brand or a related industry source (e.g., “vape industry”, “advertising company”). A few mentioned that it might be from researchers/scientists “hired by the brand” or advertising company, or that the company was “trying to twist the words of certain studies without those studies’ approval”. In contrast, participants across groups indicated thinking the warning label was from the Surgeon General, FDA or another health or governmental source. Some noted that the warning came from the brand (e.g., Camel), but that the brand was required to add it.

The inclusion of an MRTP claim in the ad prompted mixed reactions. Some smokers noted that seeing it within an ad (versus as a stand-alone text statement) made them somewhat more open to the statement and product: “I think it puts it in a little more positive light with the statement that’s in blue...knowing that it’s not as dangerous as cigarettes”

(*snus group, female smoker*). Non-smokers also recognized that the ad and claim could be appealing, though not necessarily to them personally (“I think that the statement along with like the pictures makes it more appealing if I was someone who was trying to switch from cigarettes to something else...but to me, personally, as a nonsmoker, no”, *female non-smoker*).

However, others expressed opposite sentiments. One smoker was turned off by the MRTP claim because of the simultaneous warning label, stating, “That just lost me...I don’t even want to try it no more” (*snus group, female smoker*). Others commented that the claim appeared to overtly come from a tobacco company in an attempt to sell their product, which was viewed negatively: “I think I’d be more disinterested because it’s like clearly from an advertising. So like the statement has less credibility to me” (*e-cigarette group, female non-smoker*).

#### 3.2. Reactions to claim in warning label style (Ad2)

When the MRTP claim was presented in a warning label style, a few participants still perceived it as coming from the brand/industry (“It’s still from Camel”, *snus group, male smoker*). Yet, several across groups noted and agreed the claim appeared as though it was from the same source as the warning message (e.g., Surgeon General, FDA), given its proximity to the warning and similar font and format (“It looks like

there's the continuation of this message from the government", *e-cigarette group, female non-smoker*). Participants across groups noted that this might change how they or others view the MRTP statement, indicating they might regard it "more seriously" because it feels more "official", "credible", or "accurate": "...I would immediately think this is being sent to me by the government, and I would trust that fact a little more..." (*e-cigarette group, female non-smoker*).

### 3.3. Reactions to embedded claim in warning box (Ad3)

Similarly to Ad2, several participants across groups noted that the embedded MRTP claim seemed to come from the same source as the warning (e.g., Surgeon General). Some suggested this was clearer with Ad3 than Ad2: "It makes you unquestionably think it's coming from the Surgeon General" (*male non-smoker*). As with Ad2, multiple participants across groups agreed that this presentation would make the MRTP statement seem more "official," "credible," "convincing," "believable" and trustworthy, and that they might consider it more closely or "seriously" ("Cause it's in the box, you know, everything in the box is important"). As one participant elaborated, "It makes it a little bit more believable because it's not just the R&D or the lab rats that are putting this out. It's the Surgeon General where they have access to much more credible documentation and credible information" (*e-cigarette group, male smoker*). However, others noted it probably would not make a difference in influencing their behavior: "...I would look at that and be like, 'Oh, yeah? Okay, alright. The government thinks we should switch, too.' But that wouldn't make me switch" (*snus group, female smoker*).

### 3.4. MRTP claim attention

Some participants preferred the standard version of the ad, where the MRTP claim was more prominently displayed ("...there it's like that's the first thing that I'm gonna read and pick up on..."). A few noted that when the MRTP claim was in or near the warning label, it could be less likely to be noticed or read because it was small and/or warnings may be ignored. One participant noted this could be a limitation, even if the message seemed more credible:

- "I feel like it makes it more credible, but it also makes it like smaller and harder, so the chance that people are gonna read it is really reduced. Because they assume it's the same label in every single package they've read a million times so they're not gonna read it again and again." (*e-cigarette group, female non-smoker*)

## 4. Discussion and conclusions

Studies have begun examining the impact of MRTP claims, including in the context of tobacco warning labels. This study suggests that MRTP messages presented within or in the style of a warning label may be more likely to be perceived as coming from a government source than a tobacco industry source, and in turn seen as more credible and believable. This is significant given that these factors may influence message persuasiveness (Petty and Cacioppo, 1986; Noar et al., 2016), and thus potential receptivity to MRTPs. However, a potentially opposing consideration for this format is insufficient message attention, an important precursor of message effects (Petty and Cacioppo, 1986; Noar et al., 2016), given that claims presented this way may be smaller and/or missed by consumers who are desensitized to warnings. Future experimental research probing effects of MRTP claim placement on recall and intentions could further inform format considerations.

Although not examined here, another important concern is that including MRTP messages within warning labels may undermine the warning message itself. A previous study found that warning recall and credibility were lower when an MRTP message was added to a warning label (Wackowski et al., 2019). Other studies have found that inclusion of an MRTP claim on an ad may weaken the warning's effects (Katz

et al., 2017; Berry and Burton, 2019). This raises concerns of whether MRTP claims could inadvertently lead consumers to devalue the warnings, conflate *lower* risk of MRTP products with *low* risk, and unintentionally increase product appeal among non-users.

Study limitations include use of a small, local sample. Discussions were brief, the order of ads was not rotated, and ads were viewed following earlier group discussions about MRTP statements, which may have influenced subsequent perceptions and participant fatigue. Future research may benefit from more focused and experimental studies on this topic.

### 4.1. Conclusions

Our research adds to current understandings of the relevance of MRTP message source, and provides a snapshot of reactions consumers may have to MRTP/warning presentation formats. Findings indicate that MRTP claims presented in a warning label or a warning style may be perceived as coming from a government source and as more credible, but may potentially receive less attention than those in ad text. More research is needed on the effects of MRTP statements, and how these may vary by message source, channel and format.

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### CRediT authorship contribution statement

**Olivia A. Wackowski:** Conceptualization, Methodology, Formal analysis, Writing – original draft, Funding acquisition. **Stefanie K. Gratale:** Writing – review & editing. **Mariam T. Rashid:** Validation, Writing – review & editing, Project administration. **Kathryn Greene:** Writing – review & editing. **Richard J. O'Connor:** Conceptualization, Writing – review & editing.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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