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#### Indoor tanning users' experiences with tanning salon direct to consumer marketing

To the Editor: Growing concern over the public health risk of indoor tanning (IT) has led to recent IT control efforts including restricting access of minors, new warning labels, and increased industry regulations.<sup>1</sup> The tobacco control research and policy model may be useful in shaping IT control approaches, particularly given parallels between IT and tobacco industry strategies.<sup>1,2</sup> An important focus of tobacco control is studying industry marketing, including direct communication with tobacco users, called direct to consumer marketing

(DCM). Tobacco DCM often contains price discounts to increase sales<sup>3</sup> and sustain recipients' smoking.<sup>4</sup> There is a dearth of research related to IT marketing.

We explored tanning bed users' experiences with DCM from IT salons with 2 cross-sectional studies. First, participants in a focus group study of IT motives were asked to describe IT advertisements or promotions they had received. Responses were used to create DCM survey items. Items were added to a follow-up survey of control group participants in a 2 × 2 randomized control trial (2 conditions, 2 surveys) of an online tanning bed behavioral intervention. Control participants did not receive an intervention that may have influenced responses. For both studies, participants were from a large northeastern US university and inclusion criteria were female gender, use of a tanning bed at least once in the past 12 months, and age 18 to 25 years. Recruitment methods for each study included posting study fliers in campus locations and in-class study announcements in undergraduate courses. Fliers instructed interested individuals to contact a study coordinator to enroll. Participants received cash or extra credit compensation. The university institutional review board approved all procedures.

Nine focus groups were conducted with 63 participants (mean age 19.8 years; 92% white, 16% Hispanic). Two authors independently coded and sorted mentions of IT DCM and together came to a consensus regarding final categories.<sup>5</sup> The most common DCM were text messages and emails (Table I), mentioned in 8 of the 9 groups, followed by social media (mentioned in 6 groups) and direct mail (3 groups). The quotes demonstrate the persuasive nature of DCM.

Eighty-five participants completed the survey (mean age 19.8 years; 79% white, 11% Asian, 13% Hispanic). A majority had received emails (71.4%) or direct mail (60.7%) and nearly half received text messages (Table II). Most participants had viewed salon advertisements on social media (88%), although direct contact through social media requests (32.1%) or messages (11.9%) was less common. Approximately 35% of participants agreed that DCM had prompted them to use tanning beds.

The finding that most tanning bed users received a variety of DCM from tanning salons is novel and implies that DCM is an important IT industry marketing tool that may reach the millions of Americans who use tanning beds. There is a need for public health researchers to collect and monitor examples of industry DCM to determine whether the advertising content of direct communications abides by relevant regulations. There was also evidence that DCM may

**Table I.** Types and frequency of direct to consumer marketing reported by focus group participants

Type of DCM	Number of groups that mentioned DCM	Illustrative quotes
Text messages	8 of 9	<p>I work at a new tanning salon ... he [the owner] got this technology from Poland, and basically if you have your Bluetooth on, he has this device that will send you a text message—it's super creepy, I told him not to do it. He's like, "It's the next big thing." But that's another way to lure customers in, if you're like 500 feet away, then it'll send you the text message.</p> <p>And then it's right there, in a text. More enticing to me than to go through my thousands of emails that I have from all these websites ... the more it is in my face, the more I think about it, and the more that it's coming to spring and summer, the more antsy I get about it, and the more I'm wanting to do it.</p> <p>I get text messages on a weekly basis from 2 different salons. It's like, "Oh come in, free tan from 12:00 to 3:00. Dollar tans on Sunday."</p> <p>I got a text 2 weeks ago. It was free tanning for the next 2 weekends and I was like, "Oh. Maybe I should think about that."</p>
E-mails	8 of 9	<p>I would get those e-mails, the texts all the time, and then it was like free tanning weekend a couple weeks ago so my friend and I went in, and it was like \$6 to join. I just got 1 in my email from [salon] and it said, "Help Hurricane Sandy victims," and it was a meet-and-greet with Snooki on it ... I guess we're paying for her signature, which would go to help Hurricane Sandy, but they were trying to connect the 2 to promote her tanning salon, and it blew my mind.</p> <p>The place that I go, I stopped, and a couple of months ago I got an email and it was like, "We miss you." I was like, "Oh really?"</p>
Social media	6 of 9	<p>I think it's more people talking about it, but sometimes some tanning salons will add you on Facebook or something.</p> <p>I see a lot of it on Facebook, like everyone just getting tagged and in these posts for all these promotions and special tanning stuff they have. Yeah, a lot of it is on social media, too.</p> <p>They literally advertise it everywhere though. Like the texts, emails, huge banners. And then there's Facebook, like all the Facebook groups ... I'm a sucker for that.</p>
Direct mail	3 of 9	<p>I get local places in the mail that I've never been to, so I don't know. I guess they send them out randomly.</p>

DCM, Direct to consumer marketing.

**Table II.** Prevalence of direct to consumer marketing among indoor tanning bed users

Indoor tanning DCM survey items	% Of positive responses (95% CI)
Have you ever received an email from a tanning salon that advertised their tanning beds?	71.4%* (62-81.5)
Has a tanning salon ever sent you an advertisement in the mail about their tanning beds?	60.7%* (49.3-71.8)
Have you ever received a text message from a tanning salon that advertised their tanning beds?	47.6%* (36.6-59)
Have you ever seen salon advertisements for indoor tanning beds on Facebook, Twitter, or other forms of social media?	88.0%* (80-94.8)
Have you ever received a friend or follow request from a tanning salon?	32.1%* (21.6-41.8)
Have you ever been tagged in a social media message by a tanning salon?	11.9%* (4.7-18.2)
Receiving a text, email, or social media message about tanning has caused me to use a tanning bed when I would normally not go.	34.5%† (20-50.2)

N = 85 young women who reported indoor tanning use in the past year.

CI, Confidence interval; DCM, direct to consumer marketing.

\*Variable had response options of no or yes. The percentage corresponds to a "yes" response.

†Variable had response options on a 5-point Likert-type scale ranging from strongly agree to strongly disagree. Response options were collapsed so that the percentage corresponds to the amount of "agreed" responses (i.e., agree or strongly agree).

prompt tanning bed use, which is consistent with research on the effects of tobacco DCM on tobacco use.<sup>4</sup> Public health researchers and policymakers

should consider the possible role of DCM, and accompanying price promotions, in sustaining tanning and counteracting IT reduction efforts.

Study limitations included small convenience samples recruited from a single university that had allowed students to use university debit cards at local tanning salons.<sup>6</sup> Although this practice has since been disallowed, the competitive local business environment for IT salons may have resulted in unusually high rates of DCM. The extent to which findings can be extrapolated to other populations and settings remains to be determined.

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#### Aspirin use and melanoma: A UCLA pilot study

*To the Editor:* Acetylsalicylic acid (ASA) use has been associated with reduced risk for many cancers including melanoma.<sup>1</sup> In this study, we aimed to evaluate the association between ASA use and the aggressiveness of melanoma.

Following approval by the institutional review board at the University of California, Los Angeles, a cross-sectional retrospective study of 39 patients with melanoma and ASA use before the diagnosis of melanoma and 109 patients with melanoma without prior ASA use was performed. ASA use was defined as having used ASA for at least 1 month at any time before diagnosis of melanoma. ASA intake was recorded in patients' internist or cardiologist's notes. Patients were selected from the first 148 patients listed in UCLA's melanoma recall database from March 2010 to May 2013 for whom complete information was available. Twelve patients were excluded. Demographics including age, gender, and family history of skin cancer were abstracted from the patients' charts. Daily dose (81 mg or 325 mg) and indication (coronary artery disease, peripheral vascular disease, hyperlipidemia, and atrial fibrillation) for ASA use were also recorded. The following were also recorded for each melanoma case: melanoma type, location (face, acral, trunk, and upper or lower extremity), Breslow depth, Clark stage, presence of ulceration, mitotic activity, presence of metastasis, and treatment mode.

SAS version 9.4 was used for statistical analysis. When controlling for age, gender, and tumor type and location, we used Welch 2-sample Student *t*-test to determine any significant difference in Breslow depth between ASA users versus non-users. Fisher's exact test was used to assess any significant difference in presence of ulceration or metastasis, Clark stage, and mitotic activity between the 2 groups. The significance level was set to  $P < .05$ .

A significant difference was found in Breslow depth between ASA users versus non-users (95% CI: 0.0297-0.8127;  $P = .03517$ ). No significant difference was found in presence of ulceration or metastasis, Clark stage, or mitotic activity between the 2 groups (Table 1).

This study shows that ASA may be associated with reduced Breslow depth. There are proposed