accuracy of 4 FIT tests, one automated (AUTO) and 3 POC, for detecting advanced neoplasia (advanced adenomas and carcinomas) using colonoscopy as a gold standard. Methods. We are enrolling subjects ages 50 to 85 at 3 academic medical centers in Iowa, Texas, and North Carolina who were scheduled for a screening or surveillance colonoscopy. Each subject completed 4 different FIT tests on a single stool specimen. Based on colonoscopy results, we calculated sensitivity, specificity, and predictive values. We used PROC GLIMMIX models in SAS to compare sensitivity and specificity across the different tests, accounting for the within-patient correlation. Results: We currently have 641 subjects who completed FIT and colonoscopy. Mean age is 61.2 (±7.5) years, 63% women, 63% non-Hispanic white, and 31% Hispanic. We found advanced neoplasia, including 5 carcinomas, in 68 subjects. The sensitivities for detecting these neoplasia were 3%, 22%, 28%, and 16% (AUTO), respectively. Corresponding positive predictive values were 18%, 21%, 33%, and 24% (AUTO). Specificities were 97%, 89%, 90%, and 94% (AUTO), respectively, and corresponding negative predictive values were 89%, 91%, 92%, and 90% (AUTO). We found statistically significant differences in sensitivity ($P < 0.01$) and specificity ($P < 0.01$) across tests. Conclusions: Early data suggest that FIT products may vary in their sensitivity and specificity for detecting advanced colorectal neoplasia. This variability could have important impacts on the effectiveness of efforts to limit the burden of colorectal cancer by increasing population-based screening rates through fecal blood testing.

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## Detecting Effective Tobacco Control Messages via Linguistic Analysis and Item Response Theory

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Current health communication research on tobacco control often examines the persuasion effects of messages in an experimental setting, which produces small effect sizes and limits the external validity of how well the tested messages will perform in real word settings. In the new media landscape, (anti)smoking and (anti)vaping messages are posted, shared, and disseminated across media platforms by a broader set of users. Tracking the persuasion effects of each message can be challenging with the experimental approaches. Novel analytic methods are needed to evaluate the effective strategies for tobacco control communication. We apply linguistic analysis and item-response theory to antismoking/antivaping messages to detect their persuasion effects on cognitive and emotional outcomes at an individual message level. Methods: We recruited respondents from social media and crowdsourcing platforms ($n = 6{,}566$). The eligible current smokers were randomly assigned to one of the 80 antismoking and antivaping messages, or 16 food advertisements (the control group). We measured attitudes toward vaping/smoking, emotional arousal, and intention to quit smoking or vape. We mined text data from each stimulus message to examine their linguistic characteristics and its links to the persuasion outcomes. Results: Majority of participants were White (86%) and female (55%). Antismoking messages were more likely to reveal anxiety ($P = 0.01$) and dangers or concerns ($P < 0.01$), compared to the control messages; and express high expertise and confidence compared to antivaping messages ($P = 0.04$). We report linguistic properties of each message and their relationship to antismoking attitudes, emotional arousal, intention to quit cigarettes, and intention to vape. Visualized patterns of message effectiveness demonstrate text/image-based antivaping messages, compared to video-based antivaping messages, unintentionally increased participants' favorable attitudes toward e-cigarettes. Conclusions: These message-level analyses can help identify best candidate messages that generate positive persuasion outcomes, which, in turn, can inform the selection of messages for health education and campaigns.

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## Caregiver Intention To Restart Vaccinations After Childhood Cancer Treatment

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Timely vaccination after childhood cancer treatment is vital for protecting against vaccine-preventable diseases during survivorship. However, caregiver intention for restarting vaccinations, such as getting catch-up or booster vaccines, after cancer treatment is unknown. Methods: We surveyed primary caregivers ages 18 or older with a child who had completed cancer treatment in the prior 3–24 months ($N = 129$; participation rate = 60.3%). Participants were asked about demographics, their child's vaccination status, and healthcare factors (e.g., provider recommendations, barriers). We examined the influence of whether the oncology care team recommended catch-up or booster vaccines on caregiver intention to restart vaccines using multivariable generalized linear models. Vaccine barriers were examined by intention in chi- square tests. Results: Caregivers were primarily aged 30–49 years (82.0%), mothers (81.2%), college graduates (44.8%), married (89.1%), and Non-Hispanic (90.3%). In total, 67% of caregivers intended to restart vaccines for their child and 49.6% reported that they had a discussion with the cancer care team about catch-up or booster vaccines. Caregivers who discussed vaccines with their child's cancer care team were much more likely to report intention to restart vaccination (Relative Risk (RR) = 1.82, 95% CI 1.37–2.45). The most common barrier to restarting vaccines after cancer was not knowing which vaccines to get, which was common across both groups (intend to restart = 31% vs. did not intend = 40.5%, $P = 0.29$). Of caregivers, 93.1% who intended to restart vaccines felt vaccines were safe compared to 79.5% of those who did not ($P = 0.02$). Conclusions: Caregivers of childhood cancer survivors need guidance for restarting vaccinations after cancer treatment, including information