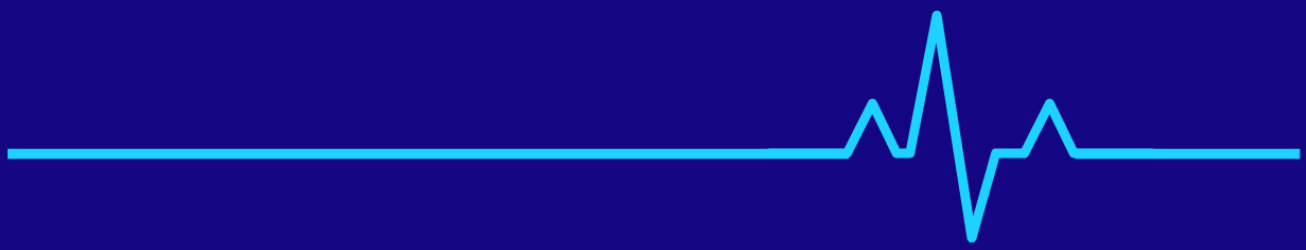
NAI
PRIVACY, TRUST & ACCOUNTABILITY

SEPTEMBER 2026

Benefits of Digital Health Advertising



Why leading U.S. health organizations regularly rely on digital health advertising as a core consumer outreach tool.

Network Advertising Initiative

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I. Introduction

Access to health-related information plays an important role in empowering consumers to understand and manage their health and well-being.[1] Health advertising and online health communication are key components of providing meaningful access, thus improving public health awareness and overall health outcomes. The earlier someone becomes aware of a health condition, the greater their opportunity to achieve a positive health outcome by getting screened earlier, seeking the right treatments, and altering overall behavior. Digital health advertising and communications produce significantly greater behavior change than non-tailored approaches when addressing societal health priorities such as smoking cessation, vaccination, and cancer screening uptake.[2]

These effects, while typically modest at the individual level, are consistent across populations and scalable through digital platforms.[3] Large randomized field experiments further demonstrate that digital health advertising can influence real-world behavior. A randomized online advertising trial involving hundreds of thousands of users found that exposure to tailored health advertisements significantly increased subsequent health-related information seeking, a validated behavioral proxy for downstream health action.[4] More recent large-scale experiments show that data-driven digital public health campaigns are a cost-effective method to positively influence health beliefs and, in some contexts, improve health outcomes such as nicotine quit attempts or vaccination-related engagement.[5] Collectively, this evidence indicates that digital health advertising—particularly when tailored to user characteristics or behavioral context—improves awareness, increases engagement with health information, and contributes positively to measurable behavior change, underscoring its importance as a contemporary public health strategy.

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[1] *See generally* U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, *National Action Plan to Improve Health Literacy*, (2010), Washington, DC, https://odphp.health.gov/sites/default/files/2019-09/Health_Literacy_Action_Plan.pdf; *see generally* Alma Taya and Ying-Chih Chuang, *Internet use for health information, health service utilization, and quality of care in the U.S*, BMC Health Services Research (May 8, 2025), https://link.springer.com/article/10.1186/s12913-025-12807-5, (concluding that using the internet to obtain health information for discussions with healthcare providers has a positive impact on perceived care quality).

[2] *See generally* Mia L. A. Lustria et al., *A Meta-Analysis of Web-Delivered Tailored Health Behavior Change Interventions*, 18 J. Health Commc'n 1039 (2013) (showing that tailored web-based interventions produced significantly greater behavior change than non-tailored approaches).

[3] Paul Krebs, Judith O. Prochaska & J. Christopher Rossi, *A Meta-Analysis of Computer-Tailored Interventions for Health Behavior Change*, 51 Preventive Med. 214 (2010).

[4] Elad Yom-Tov et al., *The effectiveness of public health advertisements to promote health: a randomized-controlled trial on 794,000 participants*, 1 npj Digital Med. 30 (2018).

[5] Susan Athey et al., *Digital Public Health Interventions at Scale: The Impact of Social Media Advertising on Beliefs and Outcomes Related to COVID Vaccines*, 120 Proc. Nat'l Acad. Sci. e2208110120 (2023); Kevin Davis et al., *The Impact of the Tips from Former Smokers® Campaign on Reducing Cigarette Smoking Relapse*, Journal of smoking cessation, Vol. 2022 3435462 (22 Nov. 2022), https://pmc.ncbi.nlm.nih.gov/articles/PMC9708364/ pdf/JOSC2022-3435462.pdf; Katriina Whitaker, *Earlier diagnosis: the importance of cancer symptoms*, *The Lancet Oncology*, 21, 6-8 (2020), https://www.thelancet.com/journals/lanonc/article/piis1470-2045(19)30658-8/fulltext.

Health advertising has been present since the mid-1800s[6] and remains crucial across every point in the patient journey. This paper documents the benefits of digital health advertising by tracing how it operates across two distinct contexts in which Americans encounter health information today: passively, as **consumers** engaging with broadcast, digital, and social campaigns in their everyday lives; and actively through **direct engagement**, such as at the Point-of-Care through digital intake platforms that deliver tailored education during patient visits. Section II highlights research associated with each. Section III sets out the NAI's framework and policy recommendations for ensuring that the benefits described in Section II can continue in a manner that protects consumer privacy.

A. Understanding Digital Health Advertising

In general, health advertising refers to promotional content designed to inform consumers and spread awareness about health-related products and services, or behaviors including medications and treatments (e.g. over-the-counter medications, prescription drugs, medical treatments), medical services (e.g. clinics, specialized medical procedures) health-related products (e.g. vitamins, supplements, wellness products), and "healthy lifestyle" products (e.g. exercise, diets). Data-driven (or tailored) health advertising uses data to tailor advertisements to individuals for whom they are most relevant, therefore maximizing effectiveness. This type of health advertising can generally be categorized as one of the following two types.

1. Health Advertising Reaching Americans in Their Everyday Lives

In most cases, both historically and in the present day, Americans encounter health advertising in a passive setting, for instance where these ads are served across television, streaming services, social media, and online platforms. In addition to companies in the healthcare sector, federal agencies, leading nonprofits, and medical associations also regularly build and deploy public health communication efforts through these channels because of the proven ability to deliver relevant health messages at scale. Particularly for younger as well as harder-to-reach audiences who have migrated away from traditional broadcast media, digital health advertising is a necessary tool to inform individuals and improve health outcomes.

Health advertising is increasingly data-driven, which is an essential component to these campaigns' reach and effectiveness, enabling advertising to more effectively reach the appropriate audiences, and to improve the way the advertising and marketing is received. This type of advertising is usually targeted based on demographic data and other consumer data that is non-sensitive under U.S. privacy laws, while also still being effective in reaching more relevant audiences and providing greater value to individuals.

[6] Keith C. Mages PhD et al., *The History of Drug Advertising*, Weill Cornell Medicine's Samuel J. Wood Library (Apr. 2021).

2. Point-of-Care Media & Direct Engagement

When patients receive care in a healthcare setting, such as a doctor's office, hospital, pharmacy, or a telehealth platform, they are likely to interact with Point-of-Care (POC) media, which provides essential educational information about a patient's health with the goal of facilitating a discussion between the patient and their healthcare provider. Often encountered in waiting rooms, digital check-in devices, and patient portals, POC media enables the delivery of tailored health information to patients, allowing campaigns to reach people at the precise moment they are most engaged with their own health, often immediately before a conversation with a clinician.

For this type of advertising, the data utilized to tailor health information is often considered to be "sensitive" under U.S. privacy laws where it directly relates to an individual's health. When utilizing such data for these purposes, consumer authorization is necessary, as well as the implementation of strong data minimization and retention standards, and effective use of pseudonymized data when practical.

This resource highlights a series of research and data points that demonstrate the beneficial role that health advertising plays for Americans, helping them be more informed, and in many cases resulting in improved health outcomes. The research and case studies presented below highlight two distinct categories of health advertising described above. Collectively, these two distinct contexts in which Americans encounter data-driven health advertising—both in their everyday lives engaging with television, streaming services, social media, and online platforms, and through direct engagement at the point of care—play a vital role in improving public health awareness and overall health outcomes. Of course, the outcomes and effectiveness of health advertising varies significantly based on a series of variables, including the type of advertising, as well as the type and quality of the campaign.

II. Digital Advertising Benefits Health Equity and Outcomes

As Americans increasingly seek guidance about symptoms, treatments, and wellness options online, data-driven health advertising and digital health communications can serve as additional pathways for consumers to discover trustworthy resources, improving public health awareness, engagement, and—in some cases—measurable positive health outcomes.[7] Data-driven advertising offers a complementary strength: the unique capacity to deliver health information to specific communities that traditional outreach channels have historically failed to reach.

The case studies in this section are organized by the contexts in which Americans encounter health information today: as consumers in their everyday digital lives interacting with television, streaming services, social media, and online platforms; and at the point of care, through clinic check-in platforms and patient intake systems.[8] Federal agencies, leading nonprofits, and medical associations are building and deploying public health communication efforts using these channels, and digital health advertising is essential to these campaigns' reach and effectiveness, particularly for younger as well as harder-to-reach audiences who have migrated away from traditional broadcast media.

Protecting Children & Promoting Long-Term Health

Centers for Disease Control and Prevention (CDC) launched its flagship anti-smoking campaign in 2012. The *Tips from Former Smokers* campaign was delivered across television, radio, digital, and social media channels and highlights real-life stories of people living with serious health effects caused by cigarettes and secondhand smoke. The campaign reached its intended audience of smokers aged 18 through 54 of low socioeconomic status by placing ads in communities and media markets with high smoking prevalence, delivering educational content on the dangers of smoking and the risks to children of secondhand smoke exposure.

Between 2012 and 2018, the CDC estimates that as a result of the campaign more than 16.4 million smokers attempted to quit, and approximately one million successfully quit. During that period, the campaign prevented an estimated 129,000 early deaths and saved approximately $7.3 billion in smoking-related healthcare and other related costs.[9] Research further demonstrates that the campaign sustained behavioral change over time: audience members with higher levels of exposure were associated with a lower risk of relapsing to cigarette consumption.[10]

[7] See Lustria et al., *supra* note 2.

[8] Krebs et al., *supra* note 3.

[9] CDC, *Tips From Former Smokers® Campaign Impact and Results*, CDC Campaign (Oct. 8, 2024), https://www.cdc.gov/tobacco/campaign/tips/about/impact/campaign-impact-results.html.

[10] Kevin Davis et al., *The Impact of the Tips from Former Smokers® Campaign on Reducing Cigarette Smoking Relapse*, Journal of Smoking Cessation 2022, art. 3435462 (2022), https://www.cambridge.org/core/services/aop-cambridge-core/content/view/E6E603A800CCFD0D4A14DA7D16D1A6C0/S1834261200600105a.pdf.

16.4M	1M	129,000	$7.3B
smokers attempted to quit, 2012–2018	successfully quit	early deaths prevented	saved in smoking-related healthcare costs

The FDA launched *The Real Cost* campaign in 2014 to address cigarette smoking among teens, subsequently expanding it later on to target e-cigarette use among youth aged 12–17.[11] The campaign delivers advertising and prevention materials across digital and streaming platforms, social media, and gaming platforms—channels chosen specifically because they are where the target audience spends its time.[12] A peer-reviewed study found that increased exposure to the campaign was associated with a consistent reduction in the risk of e-cigarette initiation among youth, with a 6% reduction in the probability of initiation for every unit increase in the exposure index.[13] The campaign is estimated to have prevented 450,000 youth from starting e-cigarette use between 2023 and 2024,[14] and contributed to the nearly 70% decline in youth e-cigarette use since 2019.[15] An additional evaluation found the campaign prevented up to 587,000 youth from initiating cigarette use over a three-year period, half of whom might have gone on to become established adult cigarette users. In its first two years alone, the campaign was found to save $180 for every dollar spent, totaling more than $53 billion in reduced smoking-related healthcare costs, including premature death, medical care, lost wages, and increased disability.[16]

450,000	70%	$180
youth prevented from starting e-cigarette use, 2023–2024	decline in youth e-cigarette use since 2019	saved for every dollar spent

[11] U.S. Food & Drug Administration (FDA), *The Real Cost Campaign*, Public Health Education Campaign (Aug. 16, 2024), https://www.fda.gov/tobacco-products/public-health-education-campaigns/real-cost-campaign.

[12] Suzanne Santiago et al., *"The Real Cost": Reaching At-Risk Youth in a Fragmented Media Environment*, Am. J. Preventive Med. (Feb. 2019), https://www.sciencedirect.com/science/article/pii/S0749379718322438.

[13] Anna MacMonegle et al., *The Impact of "The Real Cost" on E-Cigarette Initiation Among U.S. Youth*, Am. J. Preventive Med. (Mar. 14, 2025), https://www.ajpmonline.org/article/S0749-3797(25)00071-6/fulltext, ("The odds of reporting e-cigarette initiation at follow-up decreased as exposure to campaign advertisements increased. For every unit increase in the exposure index, there was a 6% reduction in the probability of initiation.").

[14] *Id.*, ("The campaign prevented an estimated 444,252 (95% CI=73,639; 814,866) U.S. youth aged 11–18 years from initiating e-cigarettes between 2023 and 2024.").

[15] FDA, *FDA Educational Efforts Prevented Nearly 450,000 Youth from Starting E-Cigarette Use in One Year*, FDA Press Announcement (Mar. 14, 2025), https://www.fda.gov/news-events/press-announcements/fda-educational-efforts-prevented-nearly-450000-youth-starting-e-cigarette-use-one-year, ("[T]he campaign contributed to the nearly 70% decline in e-cigarette use among American youth that has occurred since 2019.").

[16] *Id.*

Data-driven outreach has also been deployed upstream, reaching parents of adolescents at a critical window for youth health decisions. Since 2020, the American Lung Association and the Ad Council have run *#DoTheVapeTalk*, a national campaign encouraging parents to talk to their children about the dangers of e-cigarettes and vaping. The campaign uses data-driven health advertising to reach parents of children aged 10-14, directing them to conversation guides and educational resources.[17] The campaign was extended to Point-of-Care settings, delivering educational messages to parents and guardians through a digital patient intake platform. Among parents exposed to the campaign, nearly 5% more parents reported being highly likely to discuss vaping risks with their child's doctor, compared to those who were not exposed to the campaign, and more than 4,900 people requested additional resources.[18]

Driving Better Heart & Maternal Health for Women

Heart disease is the leading cause of death among American women, yet for decades it was widely perceived as primarily a "man's disease." In 2002, the National Heart, Lung, and Blood Institute (NHLBI) launched *The Heart Truth*, the first federally sponsored national health education program designed to raise awareness about heart disease in women. This campaign has proven to be very effective, and it was expanded in recent years to include a particular emphasis on reaching underserved populations, such as women of color, who have been found to be at a heightened risk.[19]

The campaign produced clearly measurable changes in awareness: national survey data found that women's recognition of heart disease as their leading cause of death nearly doubled, rising from 30% in 1997 to 56% by 2012, with the greatest gains among younger women aged 25-34.[20] During the same period, female cardiovascular mortality decreased substantially, from approximately 492,000 deaths in 2002 to 399,000 in 2014. Researchers have identified multiple contributing factors to this decline, including advances in treatment and clinical practice and increased awareness among both patients and healthcare providers driven in part by *The Heart Truth* and related campaigns.[21]

[17] Ad Council, *#DoTheVapeTalk: New Youth Vaping Prevention Campaign Uses Dance Challenge to Address Serious Topic*, Ad Council Press Release (Aug. 9, 2022), https://www.adcouncil.org/press-releases/dothevapetalk-new-youth-vaping-prevention-campaign-uses-dance-challenge-to-address-serious-topic.

[18] Phreesia, *Phreesia and the Ad Council Partnership Drives Strong Engagement Across 3 Public Health Campaigns*, Phreesia Network Solutions Press Release (Jan. 26, 2023), https://networksolutions.phreesia.com/press-releases/phreesia-and-the-ad-council-partnership-drives-strong-engagement-across-3-public-health-campaigns/.

[19] Nat'l Heart, Lung, & Blood Inst., *About The Heart Truth® & The Red Dress®*, Education, https://www.nhlbi.nih.gov/education/heart-truth/about (last visited Mar. 20, 2026).

[20] Lori Mosca et al., *Fifteen-Year Trends in Awareness of Heart Disease in Women: Results of a 2012 American Heart Association National Survey*, 127 Circulation 1254–63 (2013), https://www.ahajournals.org/doi/10.1161/CIR.0b013e318287cf2f.

[21] Donna R. Zwas, *Redressing the Red Dress: Rethinking the Campaign*, Circulation, Volume 137, Number 8 (2018), https://doi.org/10.1161/CIRCULATIONAHA.117.031574.

30% → 56%

women recognizing heart disease as their leading cause of death, 1997–2012

492,000 → 399,000

female cardiovascular deaths, 2002–2014

Despite these strides, heart disease remains the leading cause of death for women,[22] and follow-up research has shown that awareness gains can erode without sustained outreach.[23] In response, NHLBI expanded the campaign's focus in 2024 to younger women and Latina and Black women, recognizing that nearly 75% of women ages 20-39 have one or more modifiable risk factors for heart disease.[24] *The Heart Truth* demonstrates both the power of data-driven communication and the need for ongoing investment: awareness campaigns produce measurable results, but those gains require sustained and adapted outreach to reach populations with the greatest disparities.

The same commitment to reaching underserved women has shaped federal efforts to address other critical women's health challenges, including the ongoing maternal mortality crisis.

Each year in the United States, over 700 women die from pregnancy-related complications,[25] though more than 80% of these deaths are considered preventable. In 2020, the CDC launched *Hear Her*, a national campaign designed to raise awareness of urgent maternal warning signs during and after pregnancy, with particular attention to communities disproportionately affected: American Indian, Alaska Native, and Black women are three times more likely to die from a pregnancy-related cause than White women.[26] [27] The campaign leveraged digital ads on social media platforms that were able to target ads to priority audiences: pregnant and postpartum women; their support networks of partners, family, and friends; and the healthcare professionals who interact with them. The campaign delivered 180 million impressions from digital and social media, driving 390,000 unique visitors to the Hear Her website, which demonstrates a substantial

[22] CDC, *About Women and Heart Disease*, (May 15, 2024), https://www.cdc.gov/heart-disease/about/women-and-heart-disease.html.

[23] Mary Cushman et al., *Ten-Year Differences in Women's Awareness Related to Coronary Heart Disease: Results of the 2019 American Heart Association National Survey: A Special Report From the American Heart Association*, Circulation, Volume 143, Number 7 (2020), https://doi.org/10.1161/CIR.0000000000000907.

[24] National Heart, Lung and Blood Institute (NHLBI), *Working to increase awareness of heart disease in women*, Research Feature (Feb. 15, 2024), https://www.nhlbi.nih.gov/news/2024/working-increase-awareness-heart-disease-women.

[25] Brittany Behm et al., *A National Communication Effort Addressing Maternal Mortality in the United States: Implementation of the Hear Her Campaign*, Journal of Women's Health, Volume 31, Issue 12, (2022) https://doi.org/10.1089/jwh.2022.0428.

[26] CDC Foundation, *Hear Her® Campaign Development and Implementation for American Indians/Alaska Natives*, CDC Foundation Programs (last visited Mar. 23, 2026), https://www.cdcfoundation.org/programs/hear-her-american-indian-alaska-native-campaign; CDC, *Working Together to Reduce Black Maternal Mortality*, CDC Campaign (Apr. 8, 2024), https://www.cdc.gov/womens-health/features/maternal-mortality.html.

[27] CDC, *Hear Her Campaign*, CDC Campaign (last visited Mar. 23, 2026), https://www.cdc.gov/hearher/index.html.

increase in awareness.[28] By engaging the University of Chicago to conduct a rigorous, experimentally grounded evaluation, the CDC demonstrated that the efficacy of digital health communication relies fundamentally on a commitment to measurable impact.[29]

80%	180M	390,000
of maternal deaths considered preventable	impressions from digital and social media	unique visitors to the Hear Her website

Combating the Overdose Crisis

The opioid crisis remains an urgent public health challenge in the U.S., with fentanyl involved in nearly 70% of overdose deaths.[30] In 2022, the White House Office of National Drug Control Policy (ONDCP) partnered with the Ad Council to expand their *Real Deal on Fentanyl* campaign, adding content focused on educating young people about the dangers of fentanyl and the life-saving potential of naloxone, a medication that can reverse an opioid overdose.[31] The campaign reflects a deliberate federal strategy to reach younger Americans through digital platforms where they are most likely to encounter and engage with prevention messaging.

Broader federal efforts to combat the overdose crisis have shown meaningful progress: in 2024, overdose deaths decreased by almost 27%, projected to reach their lowest level since 2019.[32] This decline reflects the combined impact of multiple interventions, including expanded treatment access, law enforcement efforts, and broader naloxone distribution.[33] Digital health campaigns are one component of this multi-pronged response, contributing the capacity to reach younger Americans at the scale and speed the crisis demands.

[28] Behm B, Tevendale H, Carrigan S, Stone C, Morris K, Rosenthal J. *A National Communication Effort Addressing Maternal Mortality in the United States: Implementation of the Hear Her Campaign*. J Womens Health (Larchmt). 2022 Dec;31(12):1677-1685. doi: 10.1089/jwh.2022.0428. PMID: 36525044; PMCID: PMC10964150.

[29] NORC at the Univ. of Chi., *Hear Her Campaign Evaluation*, https://www.norc.org/research/projects/hear-her-campaign-evaluation.html (last visited Sept. 10, 2026).

[30] CDC, *Fentanyl Facts*, (last visited Mar. 23, 2026), https://www.cdc.gov/stop-overdose/caring/fentanyl-facts.html.

[31] Exec. Off. of the President, Off. of Nat'l Drug Control Pol'y, *Report to Congress on the National Media Campaign*,(Dec. 2024), https://www.govinfo.gov/content/pkg/CMR-PREX26-00191760/pdf/CMR-PREX26-00191760.pdf.

[32] CDC, *U.S. Overdose Deaths Decrease Almost 27% in 2024*, NCHS Pressroom (May 14, 2025), https://www.cdc.gov/nchs/pressroom/releases/20250514.html.

[33] Deborah Dowel et al., *Why have overdose deaths decreased? Widespread fentanyl saturation and decreased drug use among key drivers*, The Lancet Regional Health - Americas, Volume 51, 101226 (Nov. 2025), https://www.sciencedirect.com/science/article/pii/S2667193X25002364.

Increasing Diabetes Awareness

In 2016, the American Diabetes Association (ADA) partnered with the CDC, the AMA, and the Ad Council to launch *Do I Have Prediabetes?* The campaign was built around an innovative interactive technique: a one-minute risk assessment that viewers can complete in real time. The campaign's reach is particularly significant given that more than 2 in 5 American adults have prediabetes, but over 80% are unaware of their condition.[34] The campaign has driven concrete action at scale: more than 7.1 million people have visited the campaign website, and 2.1 million have completed the online risk assessment—a direct behavioral step toward diagnosis and prevention.[35] These actions matter because research shows that when people learn they have prediabetes, they are more likely to make lifestyle changes that can cut their risk for type 2 diabetes in half.[36] The campaign also produced measurable awareness gains: recognition of the term "prediabetes" increased from 50% to 68% among English speakers and from 53% to 80% among Spanish speakers.[37]

7.1M	2.1M	50% → 68%
people have visited the campaign website	have completed the online risk assessment	recognition of "prediabetes" among English speakers

Raising Awareness & Preventing Cancer

In 2018, the American Cancer Society (ACS) launched *Mission: HPV Cancer Free*, a public health campaign with the goal of reaching an 80% HPV vaccination rate among 13-year-olds in the U.S. by 2026.[38] The campaign uses data-driven health advertising across digital platforms and social media to educate parents and guardians about HPV and the vaccine.[39] As of 2024, approximately 78.2% of eligible adolescents aged 13-17 have received at least one dose of the HPV vaccine, approaching the campaign's 80% target, with the series completion rate around 62.9%.[40] HPV

[34] Ad Council, *Type 2 Diabetes Prevention Campaign & Media Assets*, Ad Council Campaign (last visited Mar. 11, 2026), https://www.adcouncil.org/campaign/type-2-diabetes-prevention.

[35] CDC, *About CDC's First National Prediabetes Awareness Campaign*, CDC Awareness Campaigns (May 14, 2024), https://cdc.gov/diabetes/awareness-campaigns/cdc-national-prediabetes-awareness-campaign.html.

[36] CDC, *Preventing Type 2 Diabetes with the Lifestyle Change Program*, CDC Diabetes Prevention (May 15, 2024), https://www.cdc.gov/diabetes-prevention/lifestyle-change-program/index.html.

[37] *Id.*

[38] American Cancer Society, *American Cancer Society Roundtables*, American Cancer Society About Us (last visited Mar. 11, 2026), https://www.cancer.org/about-us/our-partners/nonprofit-partners/american-cancer-society-roundtables.html.

[39] American Cancer Society, *Our HPV Vaccination Initiatives*, HPV Vaccination Information for Health Professionals (last visited Mar. 11, 2026), https://www.cancer.org/health-care-professionals/hpv-vaccination-information-for-health-professionals/our-hpv-vaccination-initatives.html.

[40] Cassandra Pingali et al., *Vaccination Coverage Among Adolescents Aged 13–17 Years — National Immunization Survey-Teen, United States, 2024*, 74 Morbidity & Mortality Wkly. Rep. (MMWR) (2025), https://www.cdc.gov/mmwr/volumes/74/wr/mm7430a1.htm.

vaccination prevents an estimated 90% of HPV-related cancers when given at the recommended age,[41] making targeted outreach to underserved communities a potentially life-saving step to increase vaccination rates and save lives.

Beyond prevention, data-driven engagement is also helping close gaps in cancer screening. Cancer remains the second leading cause of death in the U.S.,[42] yet screening rates for preventable cancers remain well below national targets: only 18.7% of eligible adults reported being up-to-date with lung cancer screening in 2024.[43] The U.S. Preventive Services Task Force (USPSTF), an independent panel of national experts in prevention and evidence-based medicine, recommends annual lung cancer screening for high-risk adults, but awareness of eligibility remains a major barrier.

Direct engagement campaigns have produced measurable improvement at this awareness-eligibility gap. In a colorectal cancer screening campaign delivered through a point-of-care platform, 40% of responding patients identified risk factors that placed them in the "high risk" category, helping patients self-identify previously unrecognized risk.[44] In a separate Point-of-Care lung cancer screening campaign, the platform vendor reported that patients aged 50-80 with a history of smoking were 234% more likely to complete screening when exposed to the campaign as compared to a control group.[45]

40%
of responding patients identified risk factors placing them in the "high risk" category

234%
more likely to complete lung cancer screening when exposed to the campaign

Supporting these outcomes, awareness and intent data confirm that direct engagement campaigns are reaching patients and motivating them to act. After completing a breast cancer awareness campaign that reached 268,000 patients over ten days, more than 80% of patients exposed to the campaign said they found the information about breast cancer risks and screenings helpful and

[41] American Cancer Society, *American Cancer Society Launches Campaign to Eliminate Cervical Cancer*, American Cancer Society Press Room (June 6, 2018), https://pressroom.cancer.org/HPVcancerfreelaunch.

[42] Centers for Disease Control & Prevention (CDC), *Cancer*, (June 3, 2024), https://www.cdc.gov/cdi/indicator-definitions/cancer.html.

[43] Am. Cancer Soc'y Press Room, *Latest ACS Lung Cancer Data: Only 1 in 5 Eligible Adults in U.S. Screened for Lung Cancer; 62,000 Lives Over 5 Years Could Be Saved if All Eligible Screened*, (Nov. 19, 2025), https://pressroom.cancer.org/2025-lung-cancer-data.

[44] Jackie Drees, *Patients Value Personalized Health Content—Here's What to Know*, Phreesia Network Solutions Blog (last visited Mar. 11, 2026), https://networksolutions.phreesia.com/blog/patient-engagement/patients-value-personalized-health-content-heres-what-to-know/.

[45] *Id.*

72% said they were likely to talk to their doctors about breast cancer risk factors.[46] More broadly, a survey of over 14,000 current and former smokers found that more than half of current smokers knew little or nothing about lung cancer screening,[47] underscoring the critical role data-driven campaigns play in closing the awareness gap that precedes screening action.

Fighting Infectious Diseases

In 2021, the Department of Health and Human Services (HHS) launched *We Can Do This*, one of the largest public health education campaigns in U.S. history, with the goal of increasing COVID-19 vaccine confidence and uptake. The campaign featured more than 7,000 advertisements in 14 languages across multiple channels, with digital ads served using data-driven insights including geographic targeting and audience segments to reach specific minority, racial, and ethnic audiences.[48]

The campaign's measured outcomes were rigorously documented. A peer-reviewed benefit-cost analysis estimated that between April 2021 and March 2022, the campaign resulted in close to 56 million vaccine doses that would not otherwise have been administered. These campaign-attributed vaccinations resulted in an estimated 2.6 million fewer mild COVID-19 cases, nearly 244,000 fewer hospitalizations, and more than 51,000 lives saved. The campaign delivered substantial public health value, generating approximately $732 billion in net benefits and an estimated $90 in healthcare savings per dollar spent.[49]

56M	244,000	51,000	$90
vaccine doses that would not otherwise have been administered	fewer hospitalizations	lives saved	in healthcare savings per dollar spent

[46] *Id.*; Phreesia, *How Phreesia Supports Cancer Prevention*, Phreesia Insights, https://www.phreesia.com/insights/how-phreesia-supports-cancer-prevention/ (last visited Mar. 11, 2026).

[47] Carly Helfand, *Lung Cancer Screening Awareness Is Low. How Can the Industry Get the Word Out?*, DTC Perspectives (May 28, 2022), https://www.dtcperspectives.com/lung-cancer-screening-awareness-is-low-how-can-the-industry-get-the-word-out/.

[48] U.S. Dep't of Health & Hum. Servs., *COVID-19 Vaccination Public Education Campaign Saved Thousands of Lives, Billions of Dollars*, HHS News Release (May 6, 2024), https://www.hhs.gov/about/news/2024/05/06/covid-19-vaccination-public-education-campaign-saved-thousands-lives-billions-dollars.html.

[49] Sydney Turner et al., *Association of a COVID-19 Vaccination Public Education Campaign With Vaccination Uptake and Health Outcomes in the U.S.*, Am. J. Preventive Med., Volume 67, Issue 2 p. 258-264 (Aug. 2024), https://www.ajpmonline.org/article/S0749-3797(24)00110-7/fulltext. (The total campaign benefit was estimated at $740.2 billion against total campaign and vaccination costs of $8.3 billion, with net benefits of approximately $732.0 billion. The campaign and corresponding vaccination costs resulted in returns of approximately $90 for every dollar spent.)

Critically, the campaign's data-driven targeting helped narrow persistent equity gaps. At the beginning of the campaign, vaccination rates differed sharply by race: 50% of White participants, 40% of Latino participants, and 30% of Black participants had received their first dose. Post-campaign, rates converged dramatically: 75% of White participants, 80% of Latino participants, and nearly 80% of Black participants were vaccinated.[50] A separate evaluation found that increasing digital campaign impressions more than doubled the likelihood of vaccination, and that exposure to the campaign's digital content was linked to more positive vaccination beliefs, including fewer safety concerns and greater confidence in vaccine benefits.[51]

In 2022, the AMA (American Medical Association), CDC, CDC Foundation, and Ad Council launched *Get My Flu Shot*, an annual PSA campaign motivating Americans to get vaccinated against seasonal influenza.[52] The campaign emphasizes reaching Black and Hispanic communities, which bear a disproportionate burden of flu hospitalizations.[53] PSAs are distributed nationwide across broadcast, data-driven digital, and social channels, directing audiences to websites for local vaccination information. Early results demonstrate measurable shifts in the attitudinal barriers that most directly predict vaccination behavior: after two years, concerns about flu vaccine risks or side effects decreased from 43% to 33% among Black adults and from 41% to 32% among Hispanic adults.[54] These reductions are significant because vaccine hesitancy driven by safety concerns is among the most cited barriers to flu vaccination in these communities, and sustained attitude shifts over multiple campaign cycles suggest the campaign is addressing root causes of undervaccination rather than producing only temporary awareness.

43% → 33%
concerns about flu vaccine risks among Black adults

41% → 32%
concerns among Hispanic adults

[50] Joseph N. Luchman, *Association Between the United States Department of Health and Human Services' COVID-19 Public Education Campaign and Initial Adult COVID-19 Vaccination Uptake by Race and Ethnicity in the United States, 2020–2022*, Health Promotion Practice (Dec. 30 2023), https://journals.sagepub.com/doi/10.1177/15248399231221159.

[51] Christopher J. Williams et al., *The Initial Relationship Between the United States Department of Health and Human Services' Digital COVID-19 Public Education Campaign and Vaccine Uptake: Campaign Effectiveness Evaluation*, 25 J. Med. Internet Res. e43873 (May 3, 2023), https://www.jmir.org/2023/1/e43873.; *See also* Athey et al., *supra* note 5.

[52] CDC, *Ad Council, AMA, and CDC Urge Flu Vaccinations with "Get My Flu Shot" Campaign*, CDC Spotlight (Oct. 12, 2022), https://www.cdc.gov/flu/spotlights/2022-2023/ad-council-flu-campaign.htm.

[53] American Medical Association, Ad *Council, AMA, CDC Urge Vaccinations with "Get My Flu Shot" Campaign*, American Medical Association Press Release (Oct. 12, 2022), https://www.ama-assn.org/press-center/ama-press-releases/ad-council-ama-cdc-urge-vaccinations-get-my-flu-shot-campaign.

[54] Families Fighting Flu, *Removing Flu Vaccine Barriers for Ethnic Minority Groups* (Apr. 2023), https://familiesfightingflu.org/removing-flu-vaccine-barriers-for-ethnic-minority-groups/.

More than three in four U.S. adults are missing routinely recommended vaccinations,[55] and direct engagement means have proven particularly effective at converting general vaccine education into patient-provider conversations. In a Point-of-Care educational campaign about the COVID-19 vaccine, 15% more parents and caregivers exposed to the campaign's educational content indicated a high likelihood to have their child vaccinated compared to a control group.[56] Among adults who saw vaccine messages at the point of care, over 35% indicated they were very or extremely likely to talk to their doctors about the vaccine, and 31% reported that the information was mostly or entirely new to them.[57]

Promoting Awareness & Detection for Dementia

The Alzheimer's Association is partnering with the Ad Council to promote early detection of Alzheimer's disease and other dementias.[58] In 2023, the *Some Things Come with Age* campaign was launched specifically to reach Hispanic communities, a population facing 1.5 times greater risk of developing Alzheimer's compared to the non-Hispanic White population.[59] The bilingual, omni-channel campaign educates families about early warning signs that are often mistaken for normal aging and directs them to further resources.[60] In 2025, the campaign expanded with new PSAs focused on Black Americans, who are twice as likely to develop the disease. According to research from 2024, individuals who were aware of the campaign were approximately three times more likely to understand the difference between signs of aging and signs of Alzheimer's disease than those not aware of the campaign.[61] For communities where cultural factors and language barriers have historically limited access to information about cognitive decline, this knowledge gap is a critical precondition for early detection and intervention.

The Alzheimer's Association and Ad Council have used direct engagement to extend hypertension and dementia-awareness campaigns by bringing campaign messaging directly to patients and caregivers at the Point-of-Care. Engagement data from these partnerships indicates that 52% of

[55] Phreesia, *Phreesia Joins Call to Action to Improve Adult Vaccination Rates*, Phreesia News (Jan. 23, 2024), https://www.phreesia.com/news/phreesia-joins-call-to-action-to-improve-adult-vaccination-rates/.

[56] Phreesia, *supra* note 18.

[57] Phreesia, *supra* note 55.

[58] Ad Council, *Alzheimer's Awareness FAQ*, Ad Council Partner ToolKit (last visited Mar. 11, 2026), https://www.adcouncil.org/campaign/alzheimers-awareness/partner-toolkit/faq.

[59] Ad Council, *New Campaign from the Ad Council and Alzheimer's Association Encourages Hispanic Communities to Recognize the Differences Between Normal Aging and Early Signs of Alzheimer's Disease*, Ad Council Press Release (Aug. 16, 2023), https://www.adcouncil.org/learn-with-us/press-releases/campaign-encourages-hispanic-communities-to-recognize-normal-aging-and-early-signs-of-alzheimers-disease.

[60] *Id.*

[61] Ad Council, *New PSAs Aim to Help Families Identify Subtle Signs of Alzheimer's in Loved Ones*, Ad Council Press Release (Apr. 10, 2025), https://www.adcouncil.org/learn-with-us/press-releases/new-psas-aim-to-help-families-identify-subtle-signs-of-alzheimers-in-loved-ones.

patients exposed to Alzheimer's messaging indicated they would raise the topic at their next visit.[62]

3x
more likely to understand the difference between normal aging and Alzheimer's signs

52%
of patients exposed said they would raise it at their next visit

Advancing Mental Health & Emotional Wellbeing

Another Ad Council initiative has applied the same data-driven approach to the broader adult population. *Love, Your Mind* launched in 2023 in partnership with the Huntsman Mental Health Foundation, addresses a substantial need: nearly 70 million adults across the U.S. are likely to experience mental health challenges.[63] The campaign encourages Americans to prioritize their emotional wellbeing and provides free tools and resources through the campaign's website.[64] Research conducted in 2025 found that nearly half of U.S. adults ages 18-44 are aware of *Love, Your Mind PSAs*.[65] A study published in 2025 found statistically significant differences in attitudes between those who were unaware of the campaign and those who were aware: 73% of campaign-aware respondents agreed that actively taking care of their mental health is a top priority, compared to 61% of those unaware.[66] These findings suggest the campaign is meaningfully shifting how millions of Americans think about mental health—sparking conversations, raising awareness, and improving attitudes.[67]

Several of the consumer-facing mental health campaigns have been extended into direct engagement settings through partnerships with the Ad Council, American Foundation for Suicide Prevention, and the Jed Foundation. *Seize the Awkward*, *Love, Your Mind*, and related campaigns have been delivered through digital patient intake platforms to reach patients at the moments most relevant to mental health engagement. Data shows the campaigns translating reach into behavioral intent: nearly half of surveyed patients who viewed the *Seize the Awkward* content said

[62] Phreesia, *Phreesia and Ad Council Partnership Yields High Engagement in Alzheimer's Awareness Campaign*, Phreesia News (Apr. 21, 2021), https://www.phreesia.com/news/phreesia-and-ad-council-partnership-yields-high-engagement-in-alzheimers-awareness-campaign/.

[63] Ad Council, *Adult Mental Health Campaign* (last visited Mar. 11, 2026), https://www.adcouncil.org/campaign/adult-mental-health.

[64] Ad Council, *Game On For Mental Health: The Ad Council, Star Athletes Encourage Fans to Care for Their Minds*, Press Release (Nov. 19, 2025), https://www.adcouncil.org/learn-with-us/press-releases/game-on-for-mental-health-the-ad-council-star-athletes-encourage-fans-to-care-for-their-minds.

[65] *Id.*

[66] Catherine W. Chao, *"Love, Your Mind": The Pioneering Mental Health Initiative From Huntsman Mental Health Institute and the Ad Council*, FOCUS, Volume 23, Number 1 (2025), https://doi.org/10.1176/appi.focus.20240039.

[67] *Id.*

they were very likely to search for more information about supporting a friend's mental health, and 60% said they were now likely to reach out to a friend about their mental health.[68] The campaign had a particularly significant impact on young men, a group less likely than women to seek help for serious mental health issues. Surveyed young men were 1.2 times more likely to say they would reach out to a friend about mental health compared with young men in a control group.[69]

60%
said they were now likely to reach out to a friend about their mental health

1.2x
more likely among young men than a control group

A direct engagement partnership has further extended these campaigns to reach Black and Hispanic men in particular. After being exposed to the campaign content, 56% of surveyed men said they were very likely to search for additional mental health information and support, and 60% said they intended to talk to their doctor about how to manage their mental wellbeing.[70]

Suicide is the second leading cause of death among young adults.[71] In 2018, the American Foundation for Suicide Prevention partnered with the Ad Council and the JED Foundation to launch *Seize the Awkward*, a campaign designed to reach 16- to 24-year-olds and encourage mental health conversations with friends who may be at risk.[72] The campaign was expanded to reach Black and Hispanic youth who face additional challenges in accessing mental health support.[73] These efforts align with a growing body of peer-reviewed evidence on the efficacy of media-based mental health awareness campaigns for young people. A 2024 systematic review found that such campaigns were generally associated with reduced stigma and increased help-seeking behaviors

[68] Phreesia, *Phreesia and Ad Council Partnership Yields High Patient Engagement in 3 Mental Health Awareness Campaigns*, Press Release (Oct. 3, 2024), https://networksolutions.phreesia.com/press-releases/phreesia-and-ad-council-partnership-yields-high-patient-engagement-in-3-mental-health-awareness-campaigns/.

[69] *Id.*

[70] Phreesia, *Phreesia and Ad Council Partnership Yields High Patient Engagement in 3 Mental Health Awareness Campaigns*, Press Release (Oct. 3, 2024), https://networksolutions.phreesia.com/press-releases/phreesia-and-ad-council-partnership-yields-high-patient-engagement-in-3-mental-health-awareness-campaigns/.

[71] The JED Foundation, *New Campaign with Ad Council Empowers Young Adults to 'Seize the Awkward'*, Press Release (Jan 17, 2018), https://jedfoundation.org/new-campaign-with-ad-council-empowers-young-adults-to-seize-the-awkward/.

[72] Dentsu, *The Ad Council, dentsu international and VidMob Creative Optimization Case Study* (last visited Mar. 11, 2026), https://assets-eu-01.kc-usercontent.com/27bd3334-62dd-01a3-d049-720ae980f906/3fa835ed-c6bd-4ed2-ac10-2b6120764221/Ad%20Council%20STA%20Case%20Study.pdf.

[73] AdCouncil, *New Mental Health PSA from Seize the Awkward Encourages Young Adults to Say "We Can Talk About It"*, Ad Council Press Release (Oct. 25, 2022), https://www.adcouncil.org/learn-with-us/press-releases/new-mental-health-psa-from-seize-the-awkward-encourages-young-adults-to-say-we-can-talk-about-it.

among youth.[74] A separate 2025 scoping review demonstrated that among individuals aware of mental health campaigns, behavior change—including intentions to seek help and engage in activities to enhance mental health—was the most improved outcome compared to those unaware of the campaigns.[75]

Driving Treatment Awareness and Adherence

Alongside public health and nonprofit campaigns, direct-to-consumer prescription drug advertising (DTC advertising) keeps consumers informed of illnesses, available treatments, and it promotes adherence to prescription drug schedules. For example, a survey from 2020 found that 76% of respondents exposed to DTC advertising were more likely to talk to their healthcare provider about treatment options, with one-quarter of respondents reporting that they had already done so.[76]

76%
more likely to talk to their provider about treatment options

1 in 4
had already talked to their provider about treatment options

On adherence, DTC advertising often serves as a helpful reminder to take necessary medication by emphasizing the salience of a particular condition and increasing the perceived benefits of treatment. For example, a study from 2023 found that exposure to DTC advertising likely enhances consumer welfare by increasing prescription drug adherence across all age groups.[77] The same study also found positive spillover effects of DTC advertising, observing that branded pharmaceutical advertising often leads to an increase in the adoption of lower-cost generic substitute drugs, especially amongst the elderly. These claims are supported by additional research, which has found that DTC advertising increases the number of office visits for advertised conditions, as well as continued engagement with physicians through multiple consecutive follow up visits over time.[78] This evidence collectively demonstrates that DTC advertising measurably moves patients from unawareness to treatment-seeking, and encourages existing patients to stay on necessary medications and seek out lower-cost alternatives.

[74] Mallorie T. Tam et al., *A Systematic Review of the Impacts of Media Mental Health Awareness Campaigns on Young People*, Health promotion practice vol. 25,5, p. 907-920 (2024), https://pubmed.ncbi.nlm.nih.gov/38468568/.

[75] Ruth Plackett et al., *The Effectiveness of Social Media Campaigns in Improving Knowledge and Attitudes Toward Mental Health and Help-Seeking in High-Income Countries: Scoping Review*, J Med Internet Res 2025;27:e68124 (2025), https://www.jmir.org/2025/1/e68124.

[76] Sullivan HW, Aikin KJ, Berktold J, Stein KL, Hoverman VJ. *Direct-to-Consumer Prescription Drug Advertising and Patient-Provider Interactions.* J Am Board Fam Med. 2020 Mar-Apr;33(2):279-283. doi: 10.3122/jabfm.2020.02.190278. PMID: 32179611.

[77] Abby Alpert, Darius Lakdawalla & Neeraj Sood, N, *Prescription drug advertising and drug utilization: The role of Medicare Part D*, (No. w21714). Journal of Public Economics, (2023), https://pubmed.ncbi.nlm.nih.gov/37275770/.

[78] Eisenberg, M. D., Rabideau, B., Alpert, A. E., Avery, R. J., Niederdeppe, J., & Sood, N. (2022). *The Impact of Direct-to-Consumer Advertising on Outpatient Care Utilization* (No. w30791). National Bureau of Economic Research.

This effect extends into the clinical encounter itself. DTC advertising is associated with more patients visiting their doctors. where every additional $28 in advertising has been linked to one extra doctor visit within a year. This suggests advertising corresponds directly with patient engagement with the healthcare system, not just passive awareness.[79]

The positive effects of DTC advertising also extend to addressing some of the most serious chronic conditions Americans face. A 2022 study of individuals at risk of cardiovascular disease found that brief exposure to prescription drug advertisements significantly increased favorable perceptions of medication options and patients' stated intent to discuss treatment changes with their doctor, with no measurable negative spillover on participants' diet or exercise intentions.[80]

Encouraging Productive Patient-Provider Conversations

Research on the broader relationship between advertising and patient behavior shows that digital health advertising translates into real changes in how patients manage their health and engage with their clinicians. A 2024 study found that 54% of patients said advertising helped them better manage existing health conditions, while 61% said their overall understanding of their condition would be less comprehensive without such ads.[81] A separate survey found that 83% of patients with chronic conditions perceived treatment advertising as beneficial, with 66% reporting better understanding of their treatment options and 48% citing more informed discussions with their doctors.[82]

The Ad Council has extended a hypertension-awareness campaign by bringing campaign messaging directly to patients and caregivers at the Point-of-Care. Engagement data from this partnership shows that 87% of patients exposed to high-blood-pressure messaging at the point of care indicated they intended to discuss the topic with their healthcare provider.[83]

[79] Jin, Ginger Zhe, and Toshiaki Iizuka. 2005. *The Effects of Prescription Drug Advertising on Doctor Visits.* Journal of Economics & Management Strategy 14(3): 701–727.

[80] Matthew Eisenberg, Yashaswini Singh & Neeraj Sood, *Association of Direct-to-Consumer Advertising of Prescription Drugs with Consumer Health-Related Intentions and Beliefs Among Individuals at Risk of Cardiovascular Disease*, In JAMA Health Forum (Vol. 3, No. 8, pp. e222570-e222570), American Medical Association (2022), https://pubmed.ncbi.nlm.nih.gov/36200632/.

[81] DeepIntent, *MAGNA & DeepIntent Reveal New Pharma Advertising Insights*, (Oct. 10, 2024), https://deepintent.com/deepdive/magna-and-deepintent-reveal-new-pharma-advertising-insights.; MAGNA & DeepIntent, *Beyond the Prescription: Exploring the full impact of pharma ads*, MAGNA Media Trials (Oct. 10, 2024), https://ipg-wp-media-mgl-glb.s3.us-east-2.amazonaws.com/magna/wp-content/uploads/2024/10/27161109/MAGNA-DeepIntent-Beyond-the-Prescription.pdf. (This study surveyed 1,166 patients and 1,001 doctors.)

[82] Swoop, *Empowering Patients: How Pharma Ads Drive Better Health Outcomes*, Swoop Whitepaper (2025), https://swoop.com/wp-content/uploads/2025/08/Empowering-Patients-How-Pharma-Ads-Drive-Better-Health-Outcomes-Whitepaper.pdf. ("Research methodology: 902 Surveyed, 2025 March - July")

[83] Phreesia, *supra* note 18.

83%	66%	87%
of patients with chronic conditions found treatment advertising beneficial	reported better understanding of treatment options	intended to discuss blood pressure with their provider after point-of-care messaging

Across digital health advertising channels, health messaging is prompting Americans to ask better questions, seek timely screenings, and engage more productively with their healthcare providers. While intent does not guarantee action, the patient-provider conversation is widely recognized as a critical gateway to diagnosis, treatment, and ongoing care management, and messaging that increases patients' readiness to initiate those conversations addresses an important precondition for better health outcomes.

III. Promoting Consumer Privacy While Preserving Digital Health Advertising: A Roadmap for Industry & Policymakers

As demonstrated above, digital health advertising plays a significant role in connecting individuals with relevant information they genuinely need or want regarding medical treatments, medications, or simply how to lead a healthier lifestyle.[84] This is an essential tool to drive early awareness of health conditions and treatments; the earlier a person is made aware of a relevant condition or treatment, the greater their opportunity to secure a positive health outcome. As it has been demonstrated that data-driven health advertising and digital communications improve health equity and empower individuals to take control of their own health, it is essential that advertising and informational campaigns are performed in a way that also protects individual privacy and reduces risk of harm to consumers.

Both industry and policymakers play a critical role in helping to strike this balance. In this section, we discuss the NAI's leadership in helping companies apply consistent, strong protections for consumer data, and we offer a series of recommendations for policymakers to create and implement pragmatic policies that protect privacy but also enable the benefits of digital health advertising.

A. The NAI's Self-Regulatory Initiatives to Promote Consumer Privacy Across Health Advertising

As the leading self-regulatory association for advertising technology companies, the NAI serves a critical role in promoting the strong privacy protections necessary to power the robust digital media ecosystem by working closely with member companies to develop guidance and best practices that align with state and federal requirements. The NAI's Self-Regulatory Framework (NAI Framework) and various guidance documents are central to the NAI's leadership to ensure responsible digital health advertising practices.

(i) The NAI Framework and Privacy Review Program

The NAI published the Network Advertising Initiative Principles and Self-Regulatory Framework (Framework) in 2025, ushering in a new era of self-regulation. Membership in the NAI requires participation in the Framework, which is designed to promote strong privacy practices for members engaged in Network Advertising. The Framework is comprised of three core components: (1) the NAI Principles for Privacy in Network Advertising, which establish baseline privacy standards that all members must adhere to; (2) standards of review for each Principle, serving as a guide for the NAI's annual privacy reviews with members; (3) and privacy guidance, tools, and best practices intended to help members uphold the Principles and develop processes for compliance with evolving U.S. privacy law requirements.

[84] *See* U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, *supra* note 1.

Alongside this new framework, the NAI also launched a Privacy Review Program which is an annual process in which all NAI members participate. The program confirms that members have adequate processes in place to adhere to the NAI Principles and helps bolster their compliance posture by connecting voluntary industry standards and best practices to evolving U.S. privacy law requirements. Each review begins with a questionnaire covering a member's technologies, products, and privacy policies, followed by an interview with NAI staff to discuss best practices, compliance challenges, and emerging trends. As more U.S. states enact comprehensive privacy laws, the program has shifted its focus from enforcing a prescriptive set of NAI-specific requirements toward helping companies understand and align with legal obligations and industry standards—while still demonstrating a strong public commitment to accountability through annual engagement with the NAI.

(ii) Key Guidance

Factor Analysis for Health-Related Sensitive Personal Information

The NAI also released a framework to help businesses and policymakers evaluate when personal information processed in advertising contexts qualifies as sensitive health data under evolving U.S. privacy laws. The Factor Analysis for Health-Related Sensitive Personal Information (HSPI) ("Factor Analysis") addresses a growing challenge: a fragmented regulatory landscape that can lead to over-classification of benign data, under-classification of genuinely sensitive data, or companies withdrawing from jurisdictions altogether. The framework centers on five factors for assessing sensitivity: the source of the data, its contents, its intended use, whether consumers have a heightened expectation of privacy, and the risk of harm. A core insight is that health-data sensitivity is contextual and fact-dependent; even neutral data can become sensitive depending on how it is collected and used. The Factor Analysis is offered as a practical tool to help companies reason through close cases and arrive at sound data classifications while preserving the benefits of responsible health-related advertising.

Demographic Health Advertising Best Practices

The NAI released recommended best practices (known as Demographic Health Advertising Best Practices) outlining how companies can utilize demographic consumer data for health-related advertising. This guidance bolsters consumer privacy protections around sensitive consumer health information, while also providing for effective health advertising to benefit consumers and healthcare professionals.

The NAI Legal & Regulatory Analysis: Sensitive Health Advertising

The NAI published the NAI Legal & Regulatory Analysis: Sensitive Health Advertising. This legal analysis explores state privacy laws, federal enforcement actions, and associated guidance and finds significant conclusions regarding how sensitive health data should be defined and treated.

B. Recommendations for Policymakers

Policymakers, including legislative bodies and regulatory agencies, are crucial for safeguarding privacy while simultaneously facilitating improvements in health outcomes and cost-efficiency. Currently, the United States lacks a single, comprehensive national law governing the use of consumer data. Instead, the collection and processing of this data are managed by a constantly changing and often contradictory array of federal and state laws. This patchwork creates a fragmented regulatory environment that provides protections to only certain consumers, while requiring businesses to comply with diverse and often conflicting requirements. The inconsistency of the evolving legal landscape, which has developed over the past decade, makes compliance difficult for companies and HCPs. Furthermore, it risks unnecessarily restricting beneficial uses of health advertising without offering proportional consumer protections or benefits. The NAI promotes the following key objectives applied to new laws, regulations, and enforcement across the United States.

1. Prioritize Meaningful Privacy Protection and Prevention of Harmful Outcomes, and Avoid Overbroad Definitions or Interpretations of "Sensitive Personal Information."

A critical element in promoting privacy for consumers across digital health advertising is to reasonably define Sensitive Personal Information (SPI) as a subset of Personal Information (PI). At the state level, comprehensive privacy laws distinguish data that may pose a risk of harm to consumers as SPI, and impose heightened requirements on the processing of this data, such as opt-in consent, enhanced disclosures, and stricter data minimization standards.[85] These SPI definitions typically include elements relating to the health of the consumer, such as data *revealing a health diagnosis*.[86] However, definitions of SPI vary by state, particularly regarding the types of health-related data that should be classified as sensitive.[87]

[85] For example, in Connecticut a controller is prohibited from processing SPI concerning a consumer unless such processing is **reasonably necessary in relation to the purposes** (data minimization standard) for which such SPI are processed and **without obtaining the consumer's consent** (consent requirement). *See* Conn. Gen. Stat. § 42-520(a)(1)(D) *as amended by SB 1295, effective July 1, 2026; *see also* Colo. Rev. Stat. § 6-1-1308(7). California is unique in that it does not require opt-in consent for the collection and processing of SPI, but instead requires businesses to separately **disclose the categories of SPI it collects and the purposes for processing** (enhanced disclosure requirement). *See* Cal. Civ. Code § 1798.121; 1798.100(a)(2).

With the exception of California, all comprehensive state privacy laws require opt-in consent for the collection and processing of health-related sensitive data. *E.g.* Colo. Rev. Stat. § 6-1-1308(7); *but see* Cal. Civ. Code § 1798.121. Definitions for health-related sensitive data come in different forms, but typically include personal information revealing a "mental or physical health condition or diagnosis[.]" Conn. Gen. Stat. § 42-515(38); *but see* Washington My Health My Data Act, RCW 19.373.010(8)(a) (defining "Consumer Health Data" to include any data processed to associate or identify a consumer's past, present, or future physical or mental health status).

[86] *See* Tex. Bus. & Com. Code § 541.001(29); Conn. Gen. Stat. § 42-515(38).

[87] *See* Washington My Health My Data Act, RCW 19.373.010(8)(a) (defining "Consumer Health Data" to include any data processed to associate or identify a consumer's past, present, or future physical or mental health status).

The NAI recommends taking a risk-based approach that focuses on preventing uses of data that present special risks of harm, while preserving valuable uses of data that benefit both consumers and businesses. Public policy frameworks that create an overbroad definition of SPI and encompass virtually all data related to health or the human body should be avoided, as this approach unnecessarily puts restrictions on valuable uses of data that is neither inherently sensitive, nor generates significant risk of harm. For example, including information about *any* health-related "treatment" as a form of SPI could sweep in harmless information, such as whether a consumer has purchased band-aids (to "treat" a cut or scrape) after seeing an ad for band-aids, or purchased ibuprofen (to "treat" a minor ache or pain) after seeing an ad for a particular brand of over-the counter pain reliever.

This distinction is particularly important in the context of digital health advertising and marketing, where tailored ads provide significant benefits to consumers based on non-sensitive health conditions, such as over-the counter medications, skin protection and therapy, and overall health and wellness communications—while related to health and the human body—are not reasonably considered sensitive.

A definition of SPI should therefore focus on uses of PI that pose specific, heightened risks of harm, and avoid sweeping in additional data types without carefully balancing the potential benefits with potential risks. The NAI recommends adoption of a thoughtful, risk-based approach in defining SPI, consistent with the NAI's Factor Analysis for Health-Related Sensitive Personal Information, which considers a confluence of factors to aid in this evaluation, such as how the data is collected, what it contains; how it is used; and what risks it creates.

2. Promote the Use of De-identification and Anonymization Where Possible to Reduce Privacy Risks.

At both the federal and state levels, de-identification of all forms of PI–which may include nonsensitive PI, SPI, or even Protected Health Information under HIPAA–is widely recognized as effective for safeguarding consumer privacy while simultaneously enabling innovative digital advertising and data analysis. As the name suggests, the act of de-identifying PI involves the stripping away of all identifiers–such as names, email addresses, and even pseudonymous identifiers–so the remaining data cannot reasonably be used to infer information about, or otherwise be linked to, a particular consumer, and thus is no longer treated as PI under the law.

Therefore consumer privacy laws, particularly those that pertain to SPI, should establish a clear definition and criteria for de-identified data so that it no longer meets the definition of PI. As an example, the Health Information Portability and Accountability Act (HIPAA) creates a robust framework for de-identification that is applied to covered medical records. However, for other types of SPI that are not covered by HIPAA, de-identification standards are fragmented as they are derived from varying state and federal laws and regulations. Policymakers should embrace a clear, consistent standard that ensures strong protections for consumers while also providing a

framework that can create a consistent standard for businesses, such as the way that industry standard audits (e.g., SOC II) can be relied upon to show the adequacy of other business practices.

3. Promote Balanced Data Minimization Standards that Enable Beneficial Uses of Data with Meaningful Guardrails.

Effective data minimization is essential for consumer privacy and data protection in digital media, which relies on personal information processing. To achieve this without eliminating valuable data uses, data minimization policies must be carefully scoped. This means maximizing transparency and setting clear, enforceable limits on processing purposes, while avoiding overly restrictive limits, such as blanket prohibitions on data sharing. The NAI recommends the following core elements for effective data minimization policies:

- **Disclosure and Limitation of Purpose**: Businesses should identify and disclose the PI collected and the specific, reasonable purposes for which it will be processed. Processing of PI should be restricted solely to these disclosed purposes.
- **Consumer Control**: Data processing should align with the notice provided to consumers and their stated preferences. Consumers must also be given the right to opt out of processing their PI for legally or similarly significant purposes.
- **Data Retention**: Businesses should implement policies to retain and process PI only for the time reasonably necessary to fulfill the purpose for which it was originally collected. When those purposes have been met, businesses should be directed to delete or de-identify the PI.

Processing restrictions should allow for reasonable supplementary processing, such as responsible digital advertising practices, provided the processing is reasonably necessary to, or compatible with, the disclosed purposes . Crucially, policymakers should avoid outright bans on the sharing or selling of SPI, as these types of draconian approaches limit beneficial uses of SPI the consumer may receive when they affirmatively consent to such uses.

Many state privacy laws exemplify this balanced approach to data minimization. They often require companies to disclose the purposes for processing and limit permissible collection to data that is "adequate, relevant and reasonably necessary to serve those purposes."[88] These laws are further strengthened by giving consumers appropriate controls over specific processing activities—for instance, requiring explicit notice and consent for certain processing of SPI and offering opt-out mechanisms for other data uses. This balanced approach prevents broad restrictions on how businesses can process data for important and beneficial activities, such as tailoring advertising to consumer interests and benefits, as long as the processing remains proportionate to those purposes and consumers are afforded suitable transparency and control.

[88] *See* for example, Or. Rev. Stat. § 646A.578(1)(a)-(b); Tex. Bus. & Com. Code §§ 543.101(a)(1), 541.204(a)(2).

4. Promote Effective Consent Models for Collection and Processing of Sensitive Health Information.

Policymakers should carefully consider how consent models are applied to SPI, promoting clear and easily operable approaches for consumers. Establishing the right approach is critical, as some consent models may use language or interactive elements that can confuse consumers and make it difficult to make informed decisions about the sharing and processing of their sensitive data. A well-reasoned consent framework should incorporate principles that have been widely accepted, such as requiring consent language that is easy for consumers to read and understand while avoiding confusing language, such as double negatives, misleading statements, or deceptive language that may frustrate the consumer's ability to make an informed choice. Conversely, models that require authorization in a manner beyond traditional informed consent are impractical and overly burdensome, such as requiring consumers to read a lengthy document that contains a long list of enumerated information and statements, and requiring the consumer to sign and date the authorization.[89]

To be clear, effective consumer privacy frameworks cannot rely on any one recommendation mentioned above as the sole mechanism for privacy protection. Instead, it is when these ideas work together–a thoughtful definition of SPI; promoting de-identification where possible; strong data minimization standards; and an effective consent framework–that enables consumers to enjoy the benefits of digital health advertising while ensuring their privacy is appropriately safeguarded.

[89] Washington's My Health My Data Act provides such an authorization requirement, which is an outlier among all other health data laws in the United States.

IV. Conclusion

Digital health advertising occupies a distinctive place in the contemporary consumer and public health landscape. It is one of the few tools that can deliver tailored, relevant health information at the scale of the U.S. population while reaching the specific communities where that information is most likely to make a difference. As the case studies in this paper demonstrate, its value is not confined to any single setting. It reaches Americans as consumers, through the broadcast, digital, and social channels that increasingly shape how people learn about their health; and through direct engagement, where tailored education meets patients in the moments surrounding a clinical visit, at the point where they are most ready to act.

These two contexts are complementary, and the strongest evidence of impact emerges where they reinforce one another. The federal and nonprofit campaigns documented here—spanning tobacco cessation and youth vaping prevention, maternal and cardiovascular health, vaccination, cancer screening, prediabetes detection, and mental health support—achieve their measurable results in part because data-driven targeting allows a consistent message to follow a person from the screen in their living room to the tablet in the waiting room. A patient may encounter a message in their daily life or through direct engagement and ultimately act on it in conversation with a provider. Digital health advertising is what makes that continuity practical at the scale of the U.S. population.

The evidence presented here does not suggest that digital advertising is, on its own, sufficient to solve any of these public health challenges. Awareness campaigns operate alongside clinical care, community programs, policy interventions, and individual decision-making, and their contributions are often most visible at the population level rather than in any single patient encounter. Nonetheless, the consistent finding across this body of work is that tailored, data-driven communication reaches people more effectively than untargeted alternatives, and that this reach translates measurably into better-informed patients, more productive conversations with healthcare providers, and improved health behaviors and outcomes.

Realizing these benefits over the long term depends on a policy environment that protects consumers without foreclosing the responsible data practices that make this work possible. As set out in Section III, the NAI and its member companies remain committed to advancing both consumer privacy and the responsible use of data in health advertising—through a thoughtful definition of sensitive personal information, the promotion of de-identification, balanced data minimization standards, and effective consent models that together safeguard privacy while preserving the value these campaigns deliver. We invite policymakers, regulators, civil society organizations, and our partners in the public health community to engage with us in building a framework that preserves the benefits described in this paper while protecting the consumers those benefits are meant to serve.