The Health Information Persuasion Exploration (HIPE™) framework is an evidence-based innovation for building a global health information environment that includes increasing health and digital literacy in populations and combating harmful online health information.

HIPE™ combines the power of social listening with health communication science. The framework employs an AI persuasion algorithm to drive actionable insights and counter responses to harmful or intentionally misleading health information. HIPE™ also leverages machine learning and automated techniques combined with expert analysis to identify trends emerging on social media that have the potential to negatively impact personal health decisions and public safety.

How is the HIPE™ framework different than what exists today?

HIPE™ enables two key opportunities from other approaches: 1) Data-driven insights built on national data to understand how individuals are exposed to and affected by harmful or violent information that is refined with local data and specific population characteristics, and 2) Ability to generate tailored interventions and evaluate the impact on specific populations.

“Together, we have the power to build a healthier information environment.”

Office of the Surgeon General
HEALTH INFORMATION PERSUASION EXPLORATION (HIPE™) FRAMEWORK AND LAB

**How has HIPE™ been applied to date?**

HIPE™ was initially developed by MITRE in response to the harmful narratives surrounding the COVID-19 pandemic. The HIPE™ Lab has successfully identified and illuminated on-going and emerging narratives and persuasion tactics in harmful online health information that contributed to low vaccination rates. The Lab generated evidence-based recommendations that led to the development of counter-messaging campaigns and other interventions in the following underserved communities:

- **Miami-Dade County, Florida:** Partnership with Florida International University from July to December 2021 resulted in 850 COVID-19 vaccinations for Black/Haitian members of 51 local churches. Post-intervention vaccination rates for adults over 18 in Miami-Dade passed 80% (10-15% higher than neighboring counties).

- **Central Valley, California:** Partnership with community health organizations from April to June 2022 resulted in higher vaccination rates in intervention counties compared to non-intervention counties. The 5-11-year-old age group (which was a focus of the campaign) saw a 20% increase in vaccination rates within migrant agricultural communities of Stanislaus and Merced counties.

In 2020, the HIPE™ Lab accurately identified early narratives on social media related to the misuse of Ivermectin intended for livestock to treat and prevent COVID-19 before the first reports of the negative medical consequences associated with its use in humans surfaced. This early warning capability allows for the development of mitigation strategies before harmful narratives are amplified.

**Moving Toward a Healthy Information Environment**

The HIPE™ Lab is expanding beyond COVID-19 to include whole health topics such as climate change, relationships, work/life purpose, creativity, spirituality, sexuality, finances, environment, mental health, and physical health. The HIPE™ Lab will also continue to build on what MITRE has learned to improve health equity and health literacy, developing programs to drive advancement of critical thinking and decision-making.

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The HIPE™ Lab

MITRE has also created the HIPE™ Lab. The HIPE™ Lab will enable collaboration and demonstration for MITRE and external partners to explore trends in harmful online health information impacting health behavior, decision-making, health outcomes, and public safety to create actionable insights. The HIPE™ Lab applies human-centered design principles to address both immediate, person-centric action as well as build resiliency and evidence-based, scalable solutions for the healthy information environment of the future.

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**MITRE’s mission-driven teams are dedicated to solving problems for a safer world. Through our public-private partnerships and federally funded R&D centers, we work across government and in partnership with industry to tackle challenges to the safety, stability, and well-being of our nation.**

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