This project will enhance the VA’s capability to implement Pharmacogenetic (PGx) testing nationwide. The PHASER program has experienced lower-than-expected uptake by facilities, providers, and patients. This evaluation will use qualitative and quantitative methods to evaluate current implementation strategies and provide actionable information to optimize adoption in VA sites across the country. The PHASER program addresses the VA Strategic Analytics for Improvement and Care Coordination quality measure.

Over 6 years, nearly 50% of Veterans will be prescribed medications that are affected by pharmacogenomics.

The PHASER program was created to offer 250,000 Veterans testing of ten genes that affect the use of up to 37 commonly prescribed medications that could benefit from changing prescribing practices, thus enhancing drug response outcomes. These drug-gene interactions relate to therapies used to treat:

- Cardiovascular disease
- Anxiety and depression
- Opioid use disorders
- Substance use disorders
- Acute and chronic pain

Realizing the health benefits of PGx testing requires uptake by various stakeholders within the VA, including patients, providers, and administrators.

This partnered evaluation will be conducted by investigators at three different facilities, with well-established infrastructure processes, and expertise for undertaking the project. Our operations partners include:

- PHASER National Program
- Precision Oncology
- Office of Primary Care
- Pharmacy Benefits Management Services
- Office of Specialty Care
- Office of Mental Health and Suicide Prevention

This project has the potential to inform policy regarding availability of PGx testing in the VHA healthcare system that could lead to enhanced drug response outcomes and decreased adverse drug events for Veterans across the nation.
Identify implementation strategies and barriers

We are employing a multi-level mixed model design to the three evaluation aims. All program data are collected and managed by the VINCI Data Core for PHASER.

**Evaluation Aims**
- **Aim 1:** Identify factors that promote **facility** adoption of PGx testing
- **Aim 2:** Identify factors associated with **provider** adoption of PGx testing
- **Aim 3:** Identify factors associated with **patient adoption and effectiveness** of PGx testing

We will conduct interviews of key stakeholders at participating sites to help ascertain organizational determinants guided by the Consolidated Framework for Implementation Research.

Our team will also interview providers at low- and high-adopting sites guided by the Theoretical Domains Framework and use regression to identify factors associated with provider adoption.

Finally, we will interview patients who have and have not had PGx testing, use regression to identify factors associated with patient adoption, and survey patients who have had testing.

Optimize implementation processes and inform policy

This Partnered Evaluation Project will facilitate the acceleration of PGx testing at VA health care centers nationwide. This project will help identify implementation determinants, strategies, and outcomes that affect adoption, and effects on patient medication adherence.

PHASER affects a broad range of medications, patients, and providers. The pharmacogenomic testing results provided by PHASER have the potential to impact patients over their lifetime by avoiding preventable adverse drug effects and improving medication response.

This groundwork will create a blueprint to facilitate implementation of future genomic medicine interventions and initiatives across the VA healthcare system.

For more information, check out: https://www.queri.research.va.gov/

If you would like to learn more or partner with us, please contact our Program Coordinator, Beth Jeanes, at elizabeth.jeanes@va.gov.

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