Key Summary of Published Article

Pharmacogenomics

Medication Management in an Employee Population

What is the potential utility of an employer-sponsored pharmacogenomic-enriched comprehensive medication management (PGx + CMM) program?

Background

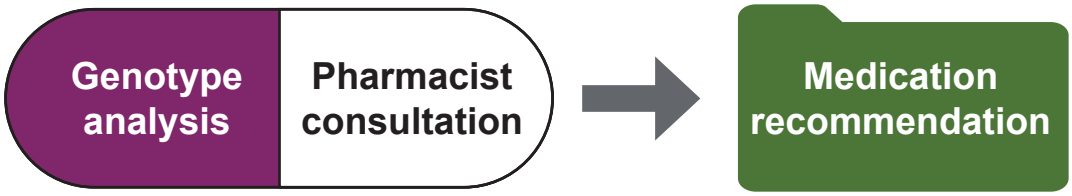
Most Americans take medication, but ineffectiveness and side effects are common because it is hard to predict how a drug will affect a certain person. When added to CMM, PGx—using a person's genetic information to tailor their medications—may be able to reduce these problems.

Methods

Adults who take medication (n = 7,500) were invited to participate in a PGx + CMM program through their employer. DNA was analyzed in those who opted to participate, and a pharmacist used the results to evaluate their current medication regimen and recommend applicable changes.

Results

Program components



Program outcomes

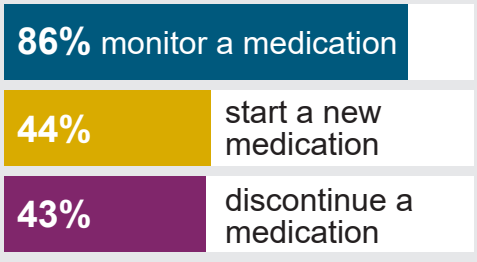
86%

of participants received ≥1 recommendation

>5

recommendations per participant on average

Most common recommendations



The PGx + CMM program identified previously undetected medication issues and has the potential to improve workforce medication management.

1. Keogh M, Fragala MS, Peter AP, et al. Early insights from a pharmacogenomic-enriched comprehensive medication management program implementation in an adult employee population. *J Occup Environ Med*. 2022;64(12):e818-e822. doi:10.1097/jom.0000000000002705

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Pharmacogenomics
Medication Management in an Employee Population

Article title: Early Insights From a Pharmacogenomic-enriched Comprehensive Medication Management Program Implementation in an Adult Employee Population

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Citation: Keogh M, Fragala MS, Peter AP, et al. *J Occup Environ Med.* Published online September 22, 2022. doi 10.1097/JOM.0000000000002705

Background

- In the United States, treatment with therapeutic medications is common; however, in greater than 50% of people who take them, medication effectiveness is suboptimal or adverse side effects are experienced.[1]
- Pharmacogenomics (PGx) is a branch of pharmacology that uses genetic information from an individual or population to guide medication decision-making.
- **Objectives:** In this study, the investigators evaluated participation in an employer-sponsored PGx-enriched comprehensive medication management (PGx + CMM) program in a workforce population and its utility for identifying individual medication risks.

Methods

- The study population consisted of employees and dependents who (1) met eligibility requirements for the Coriell Life Sciences PGx + CMM program; (2) enrolled in the program between February and August of 2021; and (3) consented to study inclusion upon completion of the program (ie, completed a medication action plan [MAP]).
  - Eligibility requirements for the PGx + CMM program included enrollment in an employer-sponsored health plan, being ≥18 years of age, and having been prescribed ≥1 medication and been at potential medication risk as determined by evaluation of medical claims records from the 12 months prior to the start of the program.
- A clinical decision support system that integrates PGx information, US FDA drug labels, guidelines, medication costs, and patient-specific information was used to assess medication risk by a pharmacist.
- Based on the assessment of medication risk and patient interview, a pharmacist provided a MAP for patients to review with their healthcare provider; MAPs were also provided for patients and their providers to discuss current medications.

Results

- Of the 7,500 employees and dependents offered enrollment in the PGx + CMM program, 802 (10.7%; mean age, 54.4 years; 75% female) enrolled, and 469 (58.5%) of those enrolled completed a MAP.
- Among the 437 (54.5%) patients who provided consent for study inclusion
  - An average of 6.9 medications per patient were prescribed before the patient started the program; the most frequently prescribed medications that could be affected by a patient's MAP were atorvastatin (25.4%), metformin (24.3%), metoprolol (13.5%), and bupropion (12.8%).
  - There were 375 (85.8%) patients who received actionable medication recommendations in their MAP, an average of 5.2 per person; the most common were to have an healthcare provider monitor a medication in 322 (85.9%) patients, initiate a new medication in 165 (42.9%) patients, and discontinue a medication in 161 (42.9%) patients.

Conclusions

- The findings from this study demonstrate the implementation of a PGx + CMM program in a workforce population can lead to previously unidentified opportunities for medication management.

References

1. Spear BB, Heath-Chiozzi M, Huff J. Clinical application of pharmacogenetics. *Trends Molec Med*. 2001;7(5):201-204. doi:10.1016/s1471-4914(01)01986-4