

**Real-World Impact of Pharmacogenomics and Comprehensive Medication Management
Revealed in New Coriell Life Sciences Study**

*Peer-reviewed findings include \$37 million savings in direct medical charges
and measurable reduction in healthcare resource utilization over 32 months*

PHILADELPHIA – March 15, 2022 – Answering the call for real-world data on the clinical and economic outcomes of pharmacogenomics (PGx) and comprehensive medication management (CMM), [Coriell Life Sciences](#) (CLS) – an international leader in precision medicine – has released new research on the impact of these tools at scale. These findings are detailed in a new peer-reviewed study entitled "[Real-World Impact of a Pharmacogenomics-Enriched Comprehensive Medication Management Program](#)," published in the *Journal of Personalized Medicine*.

“The clinical adoption of pharmacogenomics has been stymied by numerous barriers and concerns. This paper addresses many of them head-on and proves that scalable PGx implementation can significantly lower healthcare costs, improve outcomes, and provide a better experience for patients and clinicians,” says co-author Jeffrey A. Shaman, PhD, MS, Chief Science Officer at CLS.

The retrospective study analyzed the direct outcomes of CLS’ pharmacogenomics-enriched comprehensive medication management (PGx + CMM) program, unified by the [CLS GeneDose LIVE™](#) clinical decision support system, on 5,288 Medicare Advantage members (age 65+) from January 2018 to August 2020. These individuals enrolled in the voluntary program through their healthcare benefits plan with the Teachers’ Retirement System of the State of Kentucky. The program is still ongoing and now has more than 10,000 participants.

The system-wide PGx + CMM implementation included member engagement, at-home saliva collection, and genetic testing to identify unique medication safety risks for each individual. Each patient analysis took into account how an individual’s DNA impacts their response to medication, as well as many more traditional risk factors like drug-drug interactions, lifestyle factors (e.g., foods, alcohol, smoking), and age-related concerns. Using GeneDose LIVE, results were assessed by trained pharmacists from the Know Your Rx Coalition who consulted with each patient to create a medication action plan summarizing any proposed changes. Those recommendations were then given to the patient’s own prescribing physician, who was responsible for implementing any medication changes.

The study’s findings highlight the PGx + CMM program’s positive clinical and economic outcomes, including:

- **Improvements in medication safety**

Studies have shown nearly everyone has variants in their DNA that impact medications and that proved true in this population. 100% of participants had at least one variant known to impact medication therapy outcomes, and 66% of participants had genetic risks detected in a currently prescribed medication.

- **A consistent reduction in healthcare resource utilization**
Among participants, inpatient visits decreased by 14.9%, Emergency Department visits decreased by 6.8%, and outpatient visits decreased by 1.9%.
- **Significant economic savings**
Direct medical charges were reduced by \$218.34 per member per month for a cumulative savings of \$37,027,769 over 32 months. Savings were largely driven by a decrease in Emergency Department visits and inpatient hospitalizations.

“One of the key takeaways we observed was a positive shift in healthcare resource utilization away from acute care services and toward more sustainable and cost-effective primary care options,” notes Dr. Shaman. “As a result of this program, patients, healthcare providers, and the healthcare system as a whole benefited in synergistic ways. This evidence suggests that widespread adoption could significantly advance the goals of the Quadruple Aim in health systems globally.”

About Coriell Life Sciences

Coriell Life Sciences (CLS), a leader in genetic science, is spearheading innovation in precision medicine to reduce healthcare costs and empower a healthier world. With advanced bioinformatics technology, CLS bridges the gap between genetic knowledge and clinical application and offers the most comprehensive medication risk management program on the market. Visit coriell.com, email info@coriell.com or follow [@CoriellLife](https://twitter.com/CoriellLife).

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