RX Optimization
WITH MACHINE LEARNING & PREDICTIVE ANALYTICS

THE IMPACT
OF MEDICINE DISPENSING ERRORS

$30.1 billion
Annual cost of adverse drug reactions in the United States.

$78.5 billion
Annual cost of prescription misuse for opioid alone in the United States.

37%
Percentage of preventable medication errors that is attributed to dosing errors.

11%
Percentage of preventable medication errors that is attributed to drug allergies or harmful drug interactions.

100
Estimated number of undetected dispensing errors that can occur each day as a result of the significant volume of medications dispensed.

Analance

PREDICTIVE ANALYTICS SOLUTIONS FOR HEALTHCARE

The Challenges of Prescribing Medicine

When it comes to prescription processes and solutions, optimization is key. The consequences of prescribing errors are too serious and too costly to ignore—billions of dollars in the United States alone. As such, safe and preventative medication regimens are a priority in the healthcare space today.

It has become increasingly crucial for healthcare professionals to:

- Make better prescribing decisions
- Streamline processes
- Eliminate preventable waste and reduce costs
- Prevent high-risk situations
- Be proactive in safeguarding public health and safety
- Drive better patient outcomes

ANALANCE SOLUTION:
Reducing Costs While Improving Treatment

Leverage predictive analytics and machine learning to deliver optimized prescription solutions. Explore drug database data (such as the PDMP), live clinical laboratory results, toxicology data, and historical patient data to identify variables associated with optimal outcomes.

Build a machine learning algorithm that predicts whether or not a drug will be optimal for the individual patient—with summaries and findings easy to explore through dashboards and reports.

Next Steps

Relying on data-backed predictions not only enables personalized prescribing for patients—improving the overall patient experience—but it also reduces the risk of negative or adverse drug reactions, which costs the United States billions of dollars yearly. The risk of substance abuse or misuse, which is equally costly, is also decreased.

With visibility into possible drug outcomes, healthcare professionals can further streamline the prescription process, putting measures in place to mitigate preventable medication errors and cut down on wasteful healthcare spending.

SOURCES:

1. National Institutes of Health, "Clinical and Economic Burden of Adverse Drug Reactions"
2. National Institute of Drug Abuse, "Opioid Overdose Crisis"
3. NEHI, "Preventing Medication Errors: A $21 Billion Opportunity"

ABOUT DUCEN

Ducen helps Business and IT users of Fortune 1000 companies with advanced analytics, business intelligence and data management through its unique end-to-end data science platform called Analance. Analance is an enterprise-class, state of the art integrated platform that delivers power and ease of use to business users and data scientists with a seamless experience and platform scalability to support business growth and strategy.

📞 *For more information, contact us.*