



Speeding Up Plan Evolution: COVID And Pharmacogenetics

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I am a fan of understanding business through biology: evolution is a model system for optimization and long-term survival. Organizations function like multicellular organisms, dependent upon co-operation of various vital ‘organs’ – IT, HR, risk management etc. – as they perform tasks of great complexity. COVID-19 is a once-in-a-lifetime public health crisis engendering economic uncertainty, thereby challenging operations of the whole ‘body.’

COVID recovery statistics tell part of the story: many patients continue to have bothersome symptoms even after the virus is no longer detected in their body. Recovery can go on for months and potentially result in chronic conditions and disabilities.

Organizations have an extensive arsenal of interventions for plan members’ health management, whether through HSAs, extended health, or STD/LTD management. Although there is growing interest in opt-in programs for health management and, in the long run, delaying

claims or preventing more complex health problems, cost pressures are a constant. Certainly, no one wants to duplicate what already exists in the publicly-funded health system.

An optimal benefits strategy would support members by doing the right thing at the right time at the right price.

When individuals are stressed out because of a health issue, it is not the time for them to sort through a multitude of options. How do we achieve both high impact and cost-effective utilization of members’ time and company resources? How do we ensure that plan members are treated fairly, are informed of their best options, and receive hassle-free service?

Simple engagement metrics tell us something is going on, but not much else. For example, a large study, demonstrated variability in utilization of digital CBT: highest engagers represented just 10.6 per cent and 36.5 per cent were low engagers. But is this good or bad?

It can be a major accomplishment for a patient experiencing severe symptoms to simply log into an app. Other users may benefit from sustained interactions.

Each user ‘gets what they need,’ but their patterns of engagement look very different. In digital products, we compare cohorts – users sharing a common experience in a given time frame, such as seeking to address burn-out anxiety while dealing with chronic digestive problems.

Mental Health Cohorts

Depression impacts many plan members, particularly in the 30 to 50 age group. Problems measuring and treating mental health issues contribute to challenges in addressing them. Many people have difficulty admitting they have a disorder. Often finding appropriate medication therapy may take a long time. The effectiveness of most medications depends on genetic factors. Pharmacogenetics (PGx) tests for these genetic factors, optimizing medication therapy based on DNA. By combining expert pharmacological opinion with the individual’s PGx profile, consulting pharmacists can then advise physicians on the optimal course of therapy. This reduces time away from work due to

illness and doctor visits. Plan sponsors avoid the costs of ineffective, sometimes harmful prescriptions, and resulting lost productivity. In this way, this represents a cost effective and high impact intervention.

Greenshield Canada sponsored a study to answer this question: Does the use of PGx testing affect outcomes in patients with mental health conditions (<https://www.greenshield.ca/en-ca/news/stories/encouraging-results-from-gsc-s-pharmacogenomics-study>)?

Outcomes Improved

In a randomized controlled trial (RCT) – where users were randomly assigned to either a control group or intervention group – using PGx medication optimization, all outcomes improved significantly for a cohort of participants with moderate depression and/or generalized anxiety disorder (ClinicalTrials.gov registration: NCT03591224).

PGx-trained pharmacists shared insights revealed by the PGx testing with prescribing physicians who accepted the vast majority of recommendations. By running the six month RCT, researchers established that using proprietary PGx programs speeds anxiety and depression recovery times and attendant disabilities. *Figure 1* shows the prevalence of altered/challenging metabolic profiles identified in the PGx tested cohort of LTD claimants with mental health claims from 2018 to 2020.

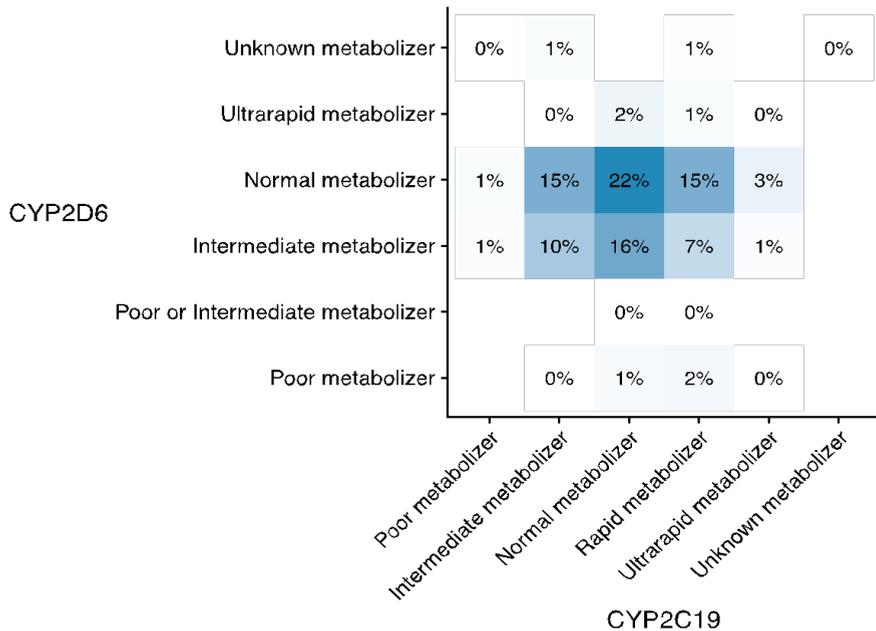
Only 22 per cent of claimants have normal activity of key enzymes responsible for metabolism of 55 drugs routinely prescribed for mental health management. Each drug trial takes at least eight weeks, leading to a high proportion of mental health claims and ineffective treatment.

Optimal Management

Mental health is just one of a dozen areas where PGx helps people feel better sooner. With every additional prescribed medication, the risk of side effects and/or treatment failure increases.

Case in point: the risk of contracting the COVID infection appears to increase with the dose of protein pump inhibitors (PPI). PPIs are the most prescribed medications in North America and

Chart 1
Prevalence Of Altered/Challenging Metabolic Profiles



recommended for use at the lowest effective dose. An ‘effective dose’ can mean different doses for different people. People who have inherently reduced CYP2C19 function (the same enzyme responsible for mental health meds) will have reduced clearance of PPIs. PGx programs, supported by clinical pharmacists, contribute to improved health outcomes for individuals dealing with a wide range of health conditions. With PGx clinical guidelines expanding, new medications are added regularly. Because our DNA doesn’t change, this provides lifetime value. Reports remain relevant and can be referenced anytime a new medication is considered for the individual.

When engaging with a benefit program, people are often already anxious about their health. It is important we understand where they are starting from, emotionally and cognitively. Friction often occurs because we just haven’t given thought to whether, for instance, a person might feel embarrassed. The benefits process may also require four steps when it can be managed with two. These types of impediments are examples of sludge.

GeneYouIn has developed a new PGx subscription program to provide equitable and affordable access to optimal medication management. The cost is based on fixed fee subscription pricing over 24

months. The term matches a customized enrollment and communication program, aimed at achieving a budgeted utilization rate.

Faster Evolution

With PGx, plan members get the right medication at the right dose the first time. Eligible users request an advanced drug response test covering most popular prescriptions, directly through their benefits, just like an EAP request.

Eligible users will have access to their results on an on-going basis, using their own secure account. It includes a personalized results report, a pharmacist’s review and action plan to share with the doctor, and free updating on new medication information. Users can reference their updated report for life, and contact their reviewing pharmacist for clarifications when necessary. **BPM**



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