Will consumer behaviour change as genetic testing becomes more accessible?

GENETIC TESTING

By Mick James

At the end of 2013, I managed to engineer a row with my wife. From her side, it went like this:
"How on earth could you sign up for a genetic test without telling me? What if you get really bad news? Where would that leave me and our children?"

Why the row? Three weeks earlier, I'd signed up for 23andMe's test. The bank statement had arrived, and I was confessing to my wife what the unusual charge was for.

Why did I sign up? I'm curious and inquisitive, and I care about my health. I exercise daily, run ultramarathons, don't use caffeine and watch what I eat. Also, an aunt of mine had died with Alzheimer's, which upset me badly, and I was wondering if a genetic test could tell me my chances of sharing her fate.

The test is very easy: you just spit in the phial provided by 23andMe and send it off in their postage-paid box. About six to eight weeks later, the company made my results available via its website. At the time, U.K. customers received reports on approximately 250 conditions, and a great deal of information to help understand and interpret the information.

My results fell into two broad categories:

- **Interesting dinner conversation**. I was told I have a multitude of fifth cousins in the U.S., my hair colour is brown (correct) and I can smell asparagus in my urine (also correct).
- **Medical conditions**. I have increased risk of: restless leg syndrome (which I knew); ocular macular disease (which I didn't know); and diabetes.

The supporting information highlighted diet changes I could make that might lessen my chance of developing ocular macular disease. However for diabetes, my genetic predisposition was clear. Lifestyle (exercise, food and smoking habits) changes might have a far bigger impact. Unfortunately, the test was not able to provide information about my Alzheimer's risk. However, as a consumer, I now know far more about my future health probability than an insurer.

In Europe, insurers are subject to laws that govern whether results of past genetic tests are usable in underwriting. Currently, only limited circumstances exist where genetic test results might need to be disclosed to obtain insurance. Given today's views on privacy, the likelihood policymakers might alter this stance, at least in the near future, appears small.

Will consumers seek genetic tests to anti-select? Short term, probably not. The number of meaningful conditions my test covered was low, and for those conditions, lifestyle factors are often more important. Example: my test covered the BRCA1 and/or BRCA2 mutation, which signals increased risk for breast cancer. Results from this portion of the test could lead to more conversations with physicians.

Can insurers be complacent? Absolutely not. Genetic testing has become so cheap and easy, providers could set up in lightly regulated environments and reach customers via post, leading to more accessible testing for Huntington's disease or other single-defect conditions. Insurers are already looking for ways to collect and leverage genetic information. Insurer Discovery Ltd. recently launched a venture with Human Longevity Inc. to provide subsidised exome and genome sequencing to customers in South Africa and the U.K. The data amassed will provide real and ongoing value for insurers in predictive and experience modelling.

In the next decade, genetic tests might become significant and cheap enough that advisers might start suggesting insurance customers test prior to applying for insurance cover. Lead indicators for anti-selection will appear first in the high-value case market, and insurers should be mindful of this possibility. In the meantime, an honest debate with policymakers around probable outcomes is recommended.

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