



Permissionless Innovation in Insurance Markets

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We live in an uncertain world, prone to tragedies during what seems like the worst possible times. Thus, since the earliest-known societies, humans have sought ways to mitigate these uncertainties. Insurance is one such highly effective tool.

Insurance practice consists of two main parts: underwriting and rating. An

insurance company must, with some degree of accuracy, determine how much risk is associated with a group of individuals undertaking a certain activity, and then charge each of those individuals a rate that will adequately cover the anticipated losses. The calculations and decision-making processes that go into this task can be incredibly complex.

In general, the more information the insurance company can access, the more efficiently the company can distribute the risk it is assuming. For example, life insurance companies already consider information about an applicant's occupation and hobbies, as well as family and personal health history when writing a policy. It is critical to the long-term financial health of an insurance company to develop policies using as much accurate information as possible.

Thus, outright bans on the types of information insurance companies can access are concerning. A much better approach is to carefully consider the likely risks and benefits of allowing insurance companies access to certain types of information and to adopt a permissionless innovation stance towards the issue.

Permissionless Innovation

Scholar Adam Thierer lays out the permissionless innovation framework in his book of the same name by contrasting it with the prevailing attitude known as the precautionary principle. Under a precautionary model, "New innovations should be curtailed or disallowed until their developers can prove that they will not cause any harm to individuals, groups, specific entities, cultural norms, or various existing laws, norms, or traditions."

Permissionless innovation flips that approach on its head and alternatively "refers to the notion that experimentation with new technologies and business models should generally be permitted by default." Only when an opponent can compellingly convince policymakers that a new

innovation will cause serious, irreparable harm to society should innovation be inhibited by regulation.

Use of Genetic Testing in Insurance Markets

Over the last two decades, the cost of sequencing a genome has fallen at an astonishing pace. Thus, genetic testing is now affordable for most consumers. An entire industry has sprouted up to offer individuals a DNA evaluation on everything from ethnic heritage to nutrition recommendations. Several companies in this industry, like 23andMe, have become household names.

Innovation in this field has already profoundly impacted medicine. Genetic testing is now serving to tailor pharmaceutical prescriptions to individual patients, detect serious diseases like cancer earlier, and help prospective parents avoid bearing children afflicted with life-threatening diseases.

The future looks even brighter in this field. Eventually, physicians may be able to sequence any individual at birth and determine, with reasonable accuracy, his or her susceptibility to a host of diseases along with the most effective treatments for these likelihoods.

Such information would be as valuable to insurance underwriters as it is to physicians. Understanding an applicant's likely medical risks and what kinds of treatments for which they may be a good candidate can help the underwriter to create a well-tailored policy that fits that individual applicant.

Genetic Information Nondiscrimination Act

The federal government has already placed limitations on what information some types of insurers can access. The Genetic Information Nondiscrimination Act (GINA) prohibits health insurers from using genetic information to make decisions about eligibility, premiums, contribution amounts, or coverage terms. Additionally, forty-eight states have similar prohibitions against the use of genetic information in health insurance.

GINA does not apply to life insurance companies or long-term care (LTC) insurance companies. This makes sense when considering the difference between their policies and health insurance policies. Health insurance reimburses third-party providers for medical procedures. Often these are routine procedures costing in the thousands of dollars or less, rather than in the hundreds of thousands. Both life insurance and LTC insurance protect against the death of a provider and chronic medical conditions respectively, in turn demanding hefty payments.

Additionally, health insurance was made mandatory by the Affordable Care Act. Anyone who does not purchase health insurance is penalized, though that penalty is now assessed at zero dollars due to a provision in the most recent change to tax law. Life insurance and LTC insurance are entirely voluntary products sold on the private market.

Finally, health insurance premiums are reassessed every year, while life insurance and LTC insurance policies are usually structured to have flat premiums for the

entire lifespan of the policy.

These differences make it imperative that life and LTC insurers accurately calculate the risks associated with each applicant. Failure to do so could result in the assumption of too much risk and inadequate finances to cover policyholders.

Extending GINA to Life and LTC Insurers Is Problematic

Recently, scholars suggested extending GINA's prohibition on the use of genetic test results to life and LTC insurers. Concerns ranged from discrimination against those who receive unfavorable test results to the possibility that requiring genetic testing to obtain life or LTC insurance would discourage individuals from seeking out potentially life-saving testing.

While these are valid concerns, a ban on the use of genetic test results may also have unintended consequences.

Primarily, a complete prohibition on the use of such test results would limit insurance companies' ability to offer innovative pricing schemes. Without such a ban, insurance companies could offer premium discounts to applicants who submit genetic test results predicting a relatively healthy life, free from genetic markers for such diseases as breast cancer or Parkinson's. Insurance companies could even offer couples considering starting a family the kinds of policies they can open in their future child's name at low premiums if the couple submits results showing they are not carriers for any life-threatening diseases. Such policies would relate to car insurance companies reducing the premiums of individuals who demonstrate that they are

safe drivers. However, companies could not offer such policies with a complete ban on the use of genetic tests in place.

Additionally, if such prohibitions are enacted at a state level, the first state to pass such a ban would be at a disadvantage due to adverse selection. Individuals who uncover the potential for contracting cancer in their future may travel to the state with the ban in order to open a policy. This would create information asymmetry, skewed to the applicant. If this health risk does not appear in traditional sources of information (health history, family history, and medical records), then the insurance company would not be able to properly account for the risk they are undertaking by insuring the applicant. The likely result would either be more expensive premiums for all those insured, or long-term financial instability.

Other Options

While a complete ban on the use of genetic test results is ill-advised, allowing their use without any regulation whatsoever may also be imprudent. However, there are steps that can be taken to mitigate these risks short of an absolute prohibition.

Limits should be set on the kinds of genetic tests that insurance companies may solicit. Due to the falling price of genetic sequencing, the genetic testing industry has exploded. There are now more than fifty direct-to-consumer (DTC) testing kits available on the market, as well as traditional testing performed in a clinical setting. However, there are concerns regarding the privacy practices of these DTC companies and the accuracy of the tests they sell. To guarantee insurers are using the most

reliable information, they should be limited to soliciting genetic tests that have been ordered by a physician in a clinical setting. Generally, these types of tests have been evaluated for analytical validity, clinical validity, and clinical usefulness. Further, physicians and the laboratories where they practice are required by law to adhere to strict privacy standards when handling genetic data.

Additionally, state policymakers could consider policies similar to the protections enshrined in the Health Insurance Portability and Accountability Act (HIPAA). HIPAA restricts with whom covered entities (health insurers, health care providers, and health care clearinghouses) can share protected information, and requires that covered entities enact safeguards to ensure that such information is not improperly shared. Currently, life and LTC insurers are not covered by HIPAA. Requiring such insurers to protect the genetic test results they receive from applicants in harmony with HIPAA can further protect applicants' privacy.

Finally, policy makers should avoid the temptation to implement an outright and blanket prohibition on insurers denying coverage based on genetic test results. While at first glance such a policy would appear to protect against perceived unfair genetic discrimination, if insurers are forced to cover all applicants regardless of actuarial standing, they would be forced to charge higher prices that adequately account for the increased risk of these applicants. Such a ban led to the triple-digit premium increases in the implementation of the Affordable Care Act. If insurers cannot

charge higher prices to riskier individuals, the long-term fiscal health of the insurer will be compromised.

Conclusion

Insurance is a complex business that relies on enough accurate information to adequately account for an applicant's risks. As genetic testing continues to evolve and become more precise, it will be an increasingly valuable tool for insurers.

Prohibitions on the use of this information would inhibit innovation in the insurance business and could threaten the long-term financial health of the industry.

More importantly, barring genetic testing results would impact consumers

seeking insurance policies. A ban could limit the opportunities for consumers to save money through innovative pricing schemes and cause unnecessarily-inflated premiums. These higher prices would limit the ability of those most vulnerable to obtain protection against life's uncertainties.

However, adopting an attitude of permissionless innovation and allowing insurance companies to use genetic information within reasonable limits could open these valuable products up to more consumers and result in protection and peace of mind for many more.

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