

An Economic Analysis of HB18-1114

House Bill 18-1114 seeks to enact a “Genetic Counselor Licensure Act”, which would require a license to practice genetic counseling in the State of Colorado. While well intentioned in its effort to guarantee high quality medical services, this bill neglects certain economic realities, namely that requiring licensure will likely establish a professional monopoly, restricting competition and raising prices among consumers. This price increase, in turn, will reduce access to genetic counseling. Keeping in mind this balance between assuring a certain level of care and economic efficiency, I recommend that HB18-1114 instead enact a certification standard instead of pursuing further occupational licensure.

While simpler forms of genetic testing have been available for nearly forty years, only recently has the use of genetic sequencing become powerful and affordable enough to enter into mainstream use among patients. In 1990, the Human Genome Project first sequenced all 3 billion base pairs of the human genome at a cost of nearly \$3 billion. Today, the cost of sequencing the genome has dropped to approximately \$1000. This drastic decrease in cost has created the rise of a new genetic testing industry. In 2017, the global market for genetic testing was estimated at \$5 billion dollars and is expected to more than double within a decade.ⁱ

Today, genetic testing can be used for a variety of reasons. Direct-to-consumer testing companies such as 23andMe offer test kits that can be ordered online. Though they do offer a broad overview of a customer’s genetic profile and may point out certain risk factors, they are generally not used for medical purposes and less specific than tests that might be ordered by a doctor, nurse, or genetic counselor. These more medically focused tests can be used to diagnose or predict conditions in patients such as hereditary cancers or can be used to screen

for genes in parents that could affect children. Other tests can be used to predict drug efficacy, such as antidepressant responsiveness among patients suffering from psychiatric illnessⁱⁱ. Genetic testing, then, has the potential to positively impact consumers and improve health outcomes.

However, the science of genetics is complex and often beyond the lay public's understanding. In the case of a medical genetics test, results require interpretation that consumers may wish to find through consultation with a genetics counselor. Due to the opacity of these tests and their myriad health implications, it may be difficult, then, for consumers to assess the quality of these counselors and their advice. In economic parlance, this constitutes a problem of information asymmetry—consumers may not possess the knowledge necessary to evaluate the quality of the service they are receiving.

This asymmetry constitutes a market failure and thus may warrant government intervention. By demanding licensure of genetic counselors, the state is attempting to ensure a standard of quality and protect consumers. In the case of genetic counseling, where bad service could very well lead to physical or psychological harm, the case for government intervention through licensure seems compelling. In the US, 22 states already require licensure for genetic counselors, and all but two of the remaining 28 are moving towards enacting requirements.ⁱⁱⁱ

Despite the consumer protection rationale and widespread consensus among state legislatures, there may be serious negative consequences from requiring licensure of genetics counselors, and it is possible that the net impact of HB18-1114 will harm the public interest.

Most notably, requiring licensure will create barriers to entry for those wishing to practice genetic counseling, reducing the supply of counselors and raising prices. These barriers

are not insignificant—in requiring certification from the Accreditation Council for Genetic Counseling (ABGC) or the American Board of Medical Genetics and Genomics (ABMGG), HB18-1114 is allowing only those with a master’s level education in genetics to enter the market.^{iv,v}

Though little data is available on the licensure of genetic counselors due to the industry’s recent emergence, the effects of licensure might be deduced by way of analogy. A 2014 study showed that licensing regulations that only permitted physicians to undertake certain medical responsibilities while restricting nurse practitioners from offering the same forms of care raised market prices by as much as 16%. States that relaxed these regulations saw a similar decline in market prices, and health outcomes remained unaffected.^{vi}

This study’s findings are notable for two reasons. First, it shows that the degree to which licensure restricts others from carrying overlapping responsibilities or providing similar services reduces the ability of consumers to find cheaper substitutes and inflates prices. Even if licensure is ultimately deemed necessary, the strictness of regulations must be evaluated while keeping in mind the harm that narrowing choice and raising prices will have on consumers. If only licensed professionals are permitted to provide genetic counseling, supply is reduced and the equilibrium quantity of counseling services decreases. These consultations, even if they were of lower quality, may have provided helpful information and improved consumers’ quality of life.

The second important point is that relaxing licensing restrictions had no overall effect on health outcomes as measured by infant mortality rate, other adverse outcomes, and malpractice premiums. One reason outcomes may not have deteriorated is that although the overall quality of services may have declined, they were sought out at a higher rate and thus

conferred a greater societal benefit. Regardless of the underlying mechanism, relaxing licensure restrictions did not harm the populace. Conversely, strict licensure restrictions may not benefit society as much as is generally assumed.

These sorts of findings have been mirrored in other studies. A 1978 study by Lawrence Shepard at the University of Chicago studied differences in dental costs between “reciprocity” and “nonreciprocity” states. Reciprocity in this case meant that states honored out-of-state dental licenses, while nonreciprocity states demanded licensure within their own jurisdiction. Shepard found that the more restrictive (i.e. nonreciprocal) states had dental costs that were 12-15% higher than their less regulated neighbors^{vii}. Likewise, a 2000 study that analyzed the dental health of incoming Air Force personnel around the country found no correlation between stringency of regulation in their home states and better outcomes.^{viii}

One might argue that these studies do not apply to the current bill because the responsibilities of a genetic counselor are generally more complex and consequential than those split between these medical professionals. Deciding to have an abortion, a prophylactic mastectomy, or any other form of preventative surgery on the basis of a predictive genetic test are indeed consequential, life-altering choices. But it is worth noting that these decisions are not made by genetic counselors and their patients in isolation. Any medical procedure sought out by patients on the basis of a genetic finding will require further consultation with medical professionals, who may reject the counselor’s advice or suggest a second opinion from another counselor. Consumers are already afforded a level of protection under the current system.

In aggregate, the aforementioned findings cast some doubt on the degree to which licensure improves outcomes and protects consumers. The late Nobel Laureate Milton

Friedman went to so far as to say, regarding medicine, “I myself am persuaded that licensure has reduced both the quantity and quality of medical practice...I conclude that licensure should be eliminated as a requirement for the practice of medicine.”^{ix}

Friedman’s statement may strike some as reckless, dangerous, and radical. But doing away with licensure altogether looks more reasonable when considering deregulation in light of the alternative: certification. Certification means that, like licensure, Colorado’s government could determine the standards that must be met in order for someone to call themselves a “Licensed Genetic Counselor” but would not attempt to prevent others from offering similar services. Certification still addresses the problem of information asymmetry—consumers would know that the appellation of “M.D.”, “D.D.S”, or in this case, perhaps, “L.G.C.”, ensures a certain level of training, and they could still seek out cheaper alternatives if they so choose.

In conclusion, I believe the present bill is too restrictive in that it seeks to prevent the practice of “genetic counseling without being licensed by the director of professions”. Moreover, because licensees generally enjoy more political power than a diffuse consumer base, enacting a licensure requirement will be difficult to revoke should the legislature decide in the future that less stringent measures would better serve the people of Colorado. While some intervention may be warranted, I suggest moving more slowly in introducing restrictions. For now, the legislature should require that the title “Licensed Genetic Counselor” be reserved only for those who have received certification from the ABGC or ABMGG but should not move to prevent the provision of genetic counseling by unlicensed practitioners. At minimum, the bill should be amended to recognize licensure from other states, which would likely have no impact on the quality of care provided while protecting consumers from inflated prices.

ⁱ *Global Genetic Testing Market Forecast*. Accessed March 26th, 2018. Retrieved from:
<https://www.inkwoodresearch.com/reports/global-genetic-testing-market-forecast-2018-2026/>

ⁱⁱ *What are the types of genetic tests?* Accessed March 26th, 2018. Retrieved from:
<https://ghr.nlm.nih.gov/primer/testing/uses>

ⁱⁱⁱ *States Issuing Licenses for Genetic Counselors*. Accessed March 25th, 2018. Retrieved from:
<https://www.nsgc.org/p/cm/ld/fid=19>

^{iv} *ABMGG-Accredited Training Programs*. Accessed April 10th, 2018. Retrieved from:
http://www.abmgg.org/pages/training_accredprog.shtml

^v *Accredited Programs*. Accessed April 10th, 2018. Retrieved from:
<http://gceducation.org/pages/accruited-programs.aspx>

^{vi} Morris M. Kleiner & Allison Marier & Kyoung Won Park & Coady Wing, 2016. "Relaxing Occupational Licensing Requirements: Analyzing Wages and Prices for a Medical Service," *The Journal of Law & Economics*, vol. 59(2), pp. 261-291.

^{vii} Shepard L, 1978. "Licensing Restrictions and the Cost of Dental Care," *The Journal of Law & Economics*, vol. 21(1), pp. 187-201.

^{viii} Kleiner, M.M. & Kudrle, R.T. 2000, "Does Regulation Affect Economic Outcomes? the Case of Dentistry", *The Journal of Law & Economics*, vol. 43(2), pp. 547-582.

^{ix} Reinhardt, U.E. (2013), "The Dubious Case for Professional Licensing", *New York Times*, 11 October. Accessed March 26th, 2018. Retrived from:
<https://economix.blogs.nytimes.com/2013/10/11/the-dubious-case-for-professional-licensing/>