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AI Regulation in Health Care: How Washington State Can Conquer the New Territory of AI Regulation

Natalie Shen

I. INTRODUCTION

Artificial intelligence (AI) came from a single question from Alan Turing in 1950: “Can machines think?”¹ Just a few years later, John McCarthy coined the term “artificial intelligence” as “the science and engineering of making intelligent machines.”² From the 1980s until now, with the rise of data usage, AI technology has developed at an alarming rate in countless industries, including health care.³ Now, due to technological advancements, AI applications in health care are at an all-time high.⁴

The application of AI to health care began in the 1950s, but it wasn’t until the 1970s that the first model demonstrating the feasibility of AI in health care was developed.⁵ This AI model, a type of machine learning, could use information about a specific disease and apply it to an individual patient to provide physicians with advice on patient management.⁶ Since then, the use of deep learning in health care, starting in the 2000s, marked a significant advancement of AI in health care.⁷

There are many applications of AI in health care, but the main categories involve: disease diagnostics, patient engagement, and administrative tasks.⁸ Disease diagnostics has been a central focus of AI since the 1970s; however, the technology was never implemented into clinical practice because it was not up to par with human diagnostics.⁹ Today, massive tech firms like Google are partnering with health delivery networks to build prediction algorithms from big data that can help clinicians predict high-risk conditions.¹⁰ There are also firms specializing in the diagnosis of certain cancers; however, cancer diagnosis is increasingly complex to understand due to the countless genetic variants

¹ *Artificial Intelligence*, BUILT IN, <https://builtin.com/artificial-intelligence> [https://perma.cc/HN7V-RVGF] [hereinafter “*Artificial Intelligence*”].

² Christopher Manning, *Artificial Intelligence*, STANFORD UNIVERSITY (Sept. 2020), <https://hai.stanford.edu/sites/default/files/2020-09/AI-Definitions-HAI.pdf> [https://perma.cc/U6KC-9F4E].

³ *Id.*; see Thomas Davenport & Ravi Kalakota, *The potential for artificial intelligence in healthcare*, 6(2) FUTURE HEALTH CARE J. 94 (2019).

⁴ See Adam Bohr & Kaveh Memarzadeh, *The rise of artificial intelligence in healthcare applications*, ARTIFICIAL INTELLIGENCE IN HEALTHCARE 25 (2020).

⁵ Vivek Kaul et al., *History of artificial intelligence in medicine*, 92 GASTROINTESTINAL ENDOSCOPY JOURNAL 807, 809 (2020).

⁶ *Id.*

⁷ *Id.*

⁸ Davenport & Kalakota, *supra* note 3, at 94.

⁹ *Id.* at 95.

¹⁰ *Id.* at 96.

of cancer.¹¹ Also, providers are using “population health” models to predict populations at risk of certain diseases that rely on relevant data about a certain population to make effective predictions.¹² The problem with population health models is, often, they lack all comprehensive relevant data such as socio-economic status about a population to make ultra-accurate predictions.¹³ While the applications of AI in health care show promise, there are some drawbacks.

As AI continues to grow, the concerns about potential abuse or misuse of AI grow as well.¹⁴ These concerns have prompted efforts to develop standards and regulations to create a dynamic but trustworthy network of AI and its application in health care.¹⁵ However, there are currently no federal regulations centered around AI in health care.¹⁶ As more complex AI gets integrated into health care, it is vital for state and federal legislatures to catch-up and keep pace.¹⁷ It is not dramatic to say that AI health care regulation can save lives.

The slow-moving nature of our government combined with the ever-changing nature of AI and the complexity of the health care field makes implementing federal AI regulations in health care difficult.¹⁸ As such, this paper will advocate for expanded AI regulation in health care at the state level in Washington. Advocacy on the state level could benefit the local community through bigger and quicker change.

Washington’s proposed automated decision system (ADS) legislation is pioneering the push for artificial intelligence regulation in the public sector.¹⁹ It does not go far enough, however, because it does not focus on the critical area of the use of AI in health care; particularly, the use of AI in disease diagnostics.²⁰ Because there are no federal regulations, states have begun proposing AI legislation.²¹ Specifically, California and New Jersey each have proposed legislation that aim to mitigate risks related to AI decision-making.²² Unlike states like New York, which just enacted a

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ *Legislation Related to Artificial Intelligence*, NCSL (Sept. 15, 2021) <https://www.ncsl.org/research/telecommunications-and-information-technology/2020-legislation-related-to-artificial-intelligence.aspx> [https://perma.cc/NL4E-N72G] [hereinafter “*Legislation Related to Artificial Intelligence*”].

¹⁵ *Id.*

¹⁶ Jamison Chung, *How Will Health Care Regulators Address Artificial Intelligence?*, THE REGULATORY REVIEW (Oct. 18, 2021) <https://www.theregreview.org/2021/10/18/chung-how-will-health-care-regulators-address-artificial-intelligence/> [https://perma.cc/GJH9-XXBT].

¹⁷ Rachel Myers, *How will AI in healthcare be regulated?*, TEAM (Sept. 23, 2021) <https://www.team-consulting.com/insights/how-will-ai-in-healthcare-be-regulated/> [https://perma.cc/K8PV-V6M5].

¹⁸ Ben Leonard & Ruth Reader, *Artificial intelligence was supposed to transform health care. It hasn't*. POLITICO (Aug. 15, 2022), <https://www.politico.com/news/2022/08/15/artificial-intelligence-health-care-00051828> [https://perma.cc/2K29-CHQA0].

¹⁹ Monica Nickelsburg, *Washington state lawmakers seek to ban government from using discriminatory AI tech*, GEEKWIRE (Feb. 13, 2021) <https://www.geekwire.com/2021/washington-state-lawmakers-seek-ban-government-using-ai-tech-discriminates/> [https://perma.cc/2C45-VEPN].

²⁰ Davenport & Kalakota, *supra* note 3, at 95.

²¹ *See generally*, *Legislation Related to Artificial Intelligence*, *supra* at note 14.

²² *New York and New Jersey Make an Early Effort to Regulate Artificial Intelligence*, PERKINS COIE (Sept. 15, 2019), <https://www.perkinscoie.com/en/news-insights/new-york-and-new-jersey-make-an-early-effort-to-regulate-artificial-intelligence.html> [https://perma.cc/4QEK-2GW7]; Jadzie Pierce, *California Introduces Bill to Regulate Automated Decision Systems* (Feb. 19, 2020), COVINGTON, <https://www.insideprivacy.com/artificial-intelligence/california-introduces-bill-to-regulate-automated-decision-systems/> [https://perma.cc/CK3N-C4YL].

bill creating a commission to study and investigate how to regulate AI, California and New Jersey are seeking to regulate the physical technology.²³ This makes their respective proposed legislation much more impactful than New York's legislation, which simply assembled a group of people to study AI regulation. That is why it is vital that Washington, being the leader in AI regulation in the public sector, adopt similar impactful AI regulation that includes health care.

The Washington legislature should incorporate components from proposed ADS legislation from New Jersey and California if Washington wishes to fully and effectively regulate in this arena. Specifically, Washington's proposed ADS legislation should include: (1) the health care provision of New Jersey's ADS legislation; and (2) the continuous impact assessment provision of California's ADS legislation.

This paper will discuss the importance of AI, its application in the health care field, and the risks of AI that would be mitigated through stricter regulations. These risks include: (1) privacy violations, (2) AI discrimination, and (3) job replacement. Further, this paper will offer suggestions on what the Washington legislature should adopt from California's and New Jersey's proposed AI legislation to create robust legislation in AI, particularly in health care. These recommendations include adopting New Jersey's health care provision and California's continuous assessment provision. Finally, this paper will rebut concerns about increasing AI regulation in health care and offer reasons why regulation is the best option.

II. WHAT IS ARTIFICIAL INTELLIGENCE AND WHY IS IT IMPORTANT?

To contextualize the arguments this paper makes, it is first necessary to understand the basics of artificial intelligence and its importance. Artificial intelligence is the vast area of computer science concerned with building machines capable of mimicking the problem-solving and decision-making capabilities of human intelligence.²⁴ The field of AI is so expansive, however, that no singular definition of AI is universally accepted.²⁵ The definition of a AI changes depending on the goals the AI system is trying to achieve.²⁶ There are three main objectives that investors in AI are trying to achieve: strong AI, weak AI, and AI modeled after human thought.²⁷ Strong AI are systems designed to think exactly as humans do.²⁸ Weak AI, however, are systems not designed to think as humans, but rather are systems designed to perform a narrow task.²⁹ In reality, the most AI development occurs in the third objective where AI is

²³ See A.B. 2269, 2019-20 Leg., Reg. Sess. (Cal. 2020); see also Algorithmic Accountability Act of 2019, S. 1108, H.R. 2231, 116th Cong. (2019).

²⁴ *Artificial Intelligence*, *supra* note 1.

²⁵ *Id.*

²⁶ Bernard Marr, *The Key Definitions of Artificial Intelligence (AI) That Explain Its Importance*, FORBES (Feb. 14, 2018), <https://www.forbes.com/sites/bernardmarr/2018/02/14/the-key-definitions-of-artificial-intelligence-ai-that-explain-its-importance/?sh=232a65a34f5d> [<https://perma.cc/FL45-8BA9>].

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Weak Artificial Intelligence (Weak AI)*, TECHOPEDIA (July 22, 2017), <https://www.techopedia.com/definition/31621/weak-artificial-intelligence-weak-ai> [<https://perma.cc/6DXU-52LR>].

modeled after human thought.³⁰ This objective is when AI developers use human reasoning as a model “to provide better services or create better products.”³¹ But, unlike strong AI, the end goal is not to create an exact replica of a human.³² Thus, most major tech companies’ definition of AI includes some reference to human intelligence.³³

On a broader level, AI works by combining data with processing algorithms that allows the software to identify patterns in the data and automatically learn from those patterns.³⁴ The AI field has many different subfields, but the main two are machine learning and deep learning.³⁵ Many people use machine learning and deep learning interchangeably, but there are key nuanced differences between the two subfields.³⁶

When thinking about the differences between machine learning, deep learning, and AI, think of a Russian doll. The first doll of the Russian doll is AI, with machine learning and deep learning capsulated within it. The next doll within AI is machine learning.³⁷ Machine learning is a subset of AI which leverages structured, labeled data by human experts to make predictions.³⁸ This means that humans determine the features that the machine uses to understand the differences between data inputs.³⁹ After machine learning, the next doll is deep learning.⁴⁰ Deep learning, the center of the Russian doll and a subset of machine learning and AI, relies less on human intervention and is able to ingest and process unstructured data.⁴¹ For example, if a person had pictures of various animals and wanted to sort them based on the types of animal, a deep learning machine could determine the features that differentiate the different types of animals and sort them based on those characteristics.⁴² Whereas a machine learning machine would require a human to pre-set those characteristics before sorting.⁴³ Regardless of what Russian doll of AI is being developed, the goal of AI technology is to create software that can “reason on input and explain on output.”⁴⁴

So why is AI important? Why do companies and the government expend copious amounts of resources into developing and utilizing this technology? One main reason is because AI has the capability to interpret and make complex decisions based on data that is too large for humans to

³⁰ Marr, *supra* note 26.

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Artificial Intelligence: What it is and why it matters*, SAS, https://www.sas.com/en_us/insights/analytics/what-is-artificial-intelligence.html#howitworks [https://perma.cc/YT4T-RQWF] (last visited Oct. 24, 2021).

³⁵ IBM Cloud Education, *What is Artificial Intelligence?*, IBM (June 3, 2020), <https://www.ibm.com/cloud/learn/what-is-artificial-intelligence>, [https://perma.cc/S7L6-K4WA] [hereinafter *What is Artificial Intelligence?*].

³⁶ *Id.*

³⁷ *Id.*

³⁸ IBM Cloud Education, *What is Deep Learning?*, IBM (May 1, 2020), <https://www.ibm.com/cloud/learn/deep-learning> [https://perma.cc/6UMW-A87A].

³⁹ *Id.*

⁴⁰ *What is Artificial Intelligence?*, *supra* note 36.

⁴¹ *Id.*; *What is Deep Learning?*, *supra* note 38.

⁴² *What is Deep Learning?*, *supra* note 38.

⁴³ *Id.*

⁴⁴ *Artificial Intelligence: What it is and why it matters*, *supra* note 34.

comprehend.⁴⁵ AI also has the capability to add intelligence to existing products.⁴⁶ This means the products many people already use can receive a valuable upgrade without needing to purchase a new product.⁴⁷ For example, every time an iPhone user updates their software the capabilities of applications like Siri improve.⁴⁸ There are endless reasons why AI is important in today's world, but the reason that relates to AI use in health care the most is AI's ability to achieve incredible accuracy.⁴⁹ Increased accuracy in the health care field means, for example, that AI can detect cancer on medical images with far more accuracy than before.⁵⁰ To better understand what AI is and how it functions is to examine how it is used in modern society.

A. How Is AI Used In Modern Society?

The use of AI in today's world is practically endless. In fact, most people don't even realize that AI is part of their daily life.⁵¹ For example, Amazon uses your online behavior as a way to predict what you might be interested in.⁵² The same applies to Netflix, where the platform uses algorithms that analyze your viewing activity to predict what you might want to watch.⁵³ An even less overt example is email spam filters, which is a form of machine learning that uses an algorithm to filter out spam emails before the user even sees them.⁵⁴

Some of the more recognizable fields that use AI are: security and surveillance, health care and medical imaging analysis, autonomous cars and aircrafts, and virtual assistants.⁵⁵ Some of the more famous examples of AI are Tesla's automated cars, Siri and Alexa, Google search, and drones.⁵⁶ Regardless of how the AI is used or in what form a person comes into contact with it, it is time to embrace AI as a common occurrence because it is not going anywhere any time soon. With such an expansion of use, the need for comprehensive AI regulation will only increase.

⁴⁵ *What is Artificial Intelligence?*, NETAPP, <https://www.netapp.com/artificial-intelligence/what-is-artificial-intelligence/> [https://perma.cc/2V7X-PUEM] [hereinafter *What is Artificial Intelligence?*].

⁴⁶ *Artificial Intelligence: What it is and why it matters*, *supra* note 34.

⁴⁷ *Id.*

⁴⁸ *See generally*, Jose Adormo, *Roundup: Here's everything new with Siri in iOS 15*, 9TO5MAC (Sept. 22, 2021), <https://9to5mac.com/2021/09/22/roundup-siri-ios-15-everything-new/> [https://perma.cc/52BV-EFJM].

⁴⁹ *Artificial Intelligence: What it is and why it matters*, *supra* note 34.

⁵⁰ *Id.*

⁵¹ Shep Hyken, *Half of People Who Encounter Artificial Intelligence Don't Even Realize It*, FORBES (Jun. 10, 2017), <https://www.forbes.com/sites/shephyken/2017/06/10/half-of-people-who-encounter-artificial-intelligence-dont-even-realize-it/?sh=1b4d434c745f> [https://perma.cc/8U68-5AFF].

⁵² R.L. Adams, *10 Powerful Examples of Artificial Intelligence In Use Today*, FORBES (Jan. 10, 2017), <https://www.forbes.com/sites/robertadams/2017/01/10/10-powerful-examples-of-artificial-intelligence-in-use-today/?sh=e9dd22c420de> [https://perma.cc/BL6Y-75KK].

⁵³ *Id.*

⁵⁴ *Artificial Intelligence*, *supra* note 1; Ben Dickson, *How machine learning removes spam from your inbox*, TECHTALKS (Nov. 30, 2020), <https://bdtechtalks.com/2020/11/30/machine-learning-spam-detection/> [https://perma.cc/VX67-4URT] (last visited Oct. 26, 2021).

⁵⁵ Roger Brown, *Where is Artificial Intelligence Used Today?*, BECOMING HUMAN AI (Dec. 4, 2019), <https://becominghuman.ai/where-is-artificial-intelligence-used-today-3fd076d15b68> [https://perma.cc/K5AG-TK2H].

⁵⁶ *Id.*; *Artificial Intelligence*, *supra* note 1.

B. Risks of the General Use of AI

The use of AI does not come without risks. Even Elon Musk, an industry leader in AI technology, has argued that “AI is far more dangerous than nukes.”⁵⁷ One of the more immediate risks of AI is job replacement.⁵⁸ According to a 2019 Brookings Institution study, AI could affect all occupations.⁵⁹ The study went on to illustrate that better-paid, white-collar jobs will likely be the most exposed to AI.⁶⁰ This suggests that middle and upper-middle class worker are most likely to be impacted by AI in the workforce; however, CEOs are likely protected from AI interference.⁶¹ This conclusion may be attributed to AI’s ability to employ high level statistics and learn to complete nonroutine tasks.⁶²

Additionally, the study even outlined that Washington state is highly exposed to AI and may experience a high rate of AI job disruption.⁶³ This is due to Seattle’s specialization in both advanced manufacturing and technology, which are both industries the Study identified as high risk for job disruption from AI.⁶⁴ Washington’s possible exposure to AI job replacement places an even greater importance on adopting more comprehensive AI regulation. Regulation of AI is seen as the only viable option for limiting the negative effects of AI, such as job replacement.⁶⁵

Although AI has impacted employment, the overall risks may be mitigated by the uptake of employment in AI related industries. The COVID-19 pandemic has increased the rate at which AI is replacing humans in the workforce because companies are trying to keep operating costs low and avoid workplace infections.⁶⁶ But with the decrease in jobs from AI in one sector, brings the increase of jobs from AI in other sectors.⁶⁷ Specifically, those jobs could include engineers, research scientists, architects, sales engineers, and consultants, to name a few.⁶⁸

Another major concern with AI is privacy, or lack thereof.⁶⁹ As AI technology matures, it magnifies the ability to use personal information in a way that infringes on personal privacy by “raising analysis of personal

⁵⁷ Mike Thomas, *7 Dangerous Risks of Artificial Intelligence*, BULTIN, <https://bultin.com/artificial-intelligence/risks-of-artificial-intelligence> [https://perma.cc/SAA4-UPGM] (last visited Oct. 26, 2021).

⁵⁸ *Id.*

⁵⁹ MARK MURO ET AL., WHAT JOBS ARE AFFECTED BY AI? 11 (BROOKINGS, NOV. 2019), https://www.brookings.edu/wp-content/uploads/2019/11/2019.11.20_brookingsmetro_what-jobs-are-affected-by-ai_report_muro-whiton-maxim.pdf [https://perma.cc/7ASC-L76Z].

⁶⁰ *Id.* at 23.

⁶¹ *Id.* at 12.

⁶² *Id.* at 22.

⁶³ *Id.* at 19.

⁶⁴ *Id.* at 15, 19.

⁶⁵ *See generally*, Lindsay Wagner, *Artificial Intelligence in the Workplace*, AMERICAN BAR ASSOCIATION (June 10, 2022), https://www.americanbar.org/groups/labor_law/publications/labor_employment_law_news/spring-2022/ai-in-the-workplace/ [https://perma.cc/8WCK-2QW2].

⁶⁶ Alana Semuels, *Millions of Americans Have Lost Jobs in the Pandemic – And Robots and AI Are Replacing Them Faster Than Ever*, TIME (Aug. 6, 2020), <https://time.com/5876604/machines-jobs-coronavirus/> [https://perma.cc/HHF5-C4XE0].

⁶⁷ MURO ET AL., *supra* note 59, at 23-24.

⁶⁸ *Id.* at 24.

⁶⁹ Thomas, *supra* note 57.

information to new levels of power and speed.”⁷⁰ Increased data collected by AI leaves the door open for that data to be misused.⁷¹ AI can compromise privacy in many ways such as: data exploitation, identification and tracking, prediction, and profiling.⁷²

A prime example of AI intruding on privacy is through facial recognition software which uses a database of photos, such as mugshots and driver’s license photos, to identify people in videos or pictures.⁷³ Facial recognition software has progressed rapidly and is being used everywhere from airports, malls, to law enforcement.⁷⁴ For example, many police departments in cities including New York, Chicago, Detroit, and Orlando have begun utilizing facial recognition technology which has spawned major concern over misidentification and invasion of privacy through constant surveillance.⁷⁵

Facial recognition software is even being utilized by countries like China as a tool for authoritarian control.⁷⁶ China’s misuse of facial recognition software has spurred many cities and states to enact legislation banning the use of facial recognition software in certain situations.⁷⁷ California, Oregon, and New Hampshire have all enacted legislation that prohibits the use of facial recognition with police body cameras.⁷⁸

The last main concern surrounding AI is AI discrimination and socioeconomic inequality.⁷⁹ Humans build algorithms that run AI, and humans have biases that get written into those algorithms.⁸⁰ This means that bias is often engrained in the outcomes AI is designed to predict.⁸¹ An example of AI bias is in the perpetuation of housing discrimination.⁸² AI technology that evaluates potential tenants often uses court records to make determinations about prospective tenants.⁸³ These court records reflect a criminal justice system with a long history of racism and sexism, which means the determinations made by the AI system from these court records are skewed from the beginning.⁸⁴ For example, a study conducted at

⁷⁰ Cameron F. Kerry, *Protecting privacy in an AI-driven world*, BROOKINGS (Feb. 10, 2020), <https://www.brookings.edu/research/protecting-privacy-in-an-ai-driven-world/> [https://perma.cc/G8G4-DQKD].

⁷¹ See generally, Guy Pearce, *Beware the Privacy Violations in Artificial Intelligence Applications*, ISACA NOW BLOG (May 28, 2021), <https://www.isaca.org/resources/news-and-trends/isaca-now-blog/2021/beware-the-privacy-violations-in-artificial-intelligence-applications> [https://perma.cc/WE6G-Q5YM].

⁷² Michael Deane, *AI and the Future of Privacy*, TOWARDS DATA AND SCIENCE (Sept. 5, 2018), <https://towardsdatascience.com/ai-and-the-future-of-privacy-3d5f6552a7c4> [https://perma.cc/3T4T-X2NA].

⁷³ Kerry, *supra* note 70; Nicole Martin, *The Major Concerns Around Facial Recognition Technology*, FORBES (Sept. 25, 2019), <https://www.forbes.com/sites/nicolemartin/2019/09/25/the-major-concerns-around-facial-recognition-technology/?sh=1c5875ca4fe3> [https://perma.cc/P7LY-2ZFR].

⁷⁴ Martin, *supra* note 73.

⁷⁵ *Id.*

⁷⁶ Kerry, *supra* note 70.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ Thomas, *supra* note 57.

⁸⁰ Olga Akselrod, *How Artificial Intelligence Can Deepen Racial and Economic Inequities*, ACLU (July, 13, 2021), <https://www.aclu.org/news/privacy-technology/how-artificial-intelligence-can-deepen-racial-and-economic-inequities/> [https://perma.cc/F4CM-ACAQ].

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

University of California, Berkeley found that people of color seeking loans to purchase or refinance homes have been collectively overcharged by \$450 million each year by lenders using AI to generate decisions on loan pricing.⁸⁵

Not only are there concerns about AI bias, but also of AI's widening of socio-economic inequality.⁸⁶ The widening of socio-economic inequality stems from the changing nature of work itself.⁸⁷ AI is reshaping the workforce by disrupting certain jobs traditionally held by minority workers. For example, Black and Latino workers are more likely to lose their jobs due to AI automation because they are overrepresented in most jobs that are at high risk of being changed or eliminated from AI automation.⁸⁸ AI, however, is also adding other jobs.⁸⁹ The problem is the jobs AI might be disrupting compared to the jobs AI is adding may not be held by the same demographic of people.⁹⁰ Most jobs AI is creating are in data analytics and technology,⁹¹ and those statistically not held by minorities.⁹² This means AI itself contributes to the already disastrous socio-economic inequality in America.⁹³

The risks of AI outlined above are not exhaustive. There are countless other risks that come with the use of AI.⁹⁴ How the United States chooses to regulate AI will determine how those risks impact society.⁹⁵ Even with all the possible risks of AI, there are myriad promising applications of AI, especially in the ever-growing health care field. Before outlining how these general risks of AI manifest themselves in the health care field, the problems AI can fix and AI's emerging role in health care will be addressed first.

III. PROBLEMS AI CAN FIX IN HEALTH CARE

The use of AI in health care is booming as health care providers and entities continue to find ways to cut costs, improve the quality of care, and increase access to health care in underserved communities.⁹⁶

⁸⁵ Robert Bartlett et al, *Consumer-Lending Discrimination in the FinTech Era*, 143 J. OF FINANCIAL ECON. 30 (2022).

⁸⁶ Thomas, *supra* note 57.

⁸⁷ Mike Walsh, *Algorithms Are Making Economic Inequality Worse*, HARVARD BUSINESS REVIEW (Oct. 22, 2020), <https://hbr.org/2020/10/algorithms-are-making-economic-inequality-worse> [https://perma.cc/9CX2-7WWX].

⁸⁸ Abigail Johnson Hess, *The pandemic accelerated job automation and Black and Latino workers are most likely to be replaced*. CNBC (March 17, 2021), <https://www.cnbc.com/2021/03/17/black-latino-workers-most-likely-to-be-replaced-by-automation-report.html> [https://perma.cc/UD7T-UGMW]. The jobs that are considered "high risk" for elimination by AI are jobs that contain repetition. These include jobs like fillers, packers, sorters, stockers, data, and data entry.

⁸⁹ MURO ET AL., *supra* note 59, at 24.

⁹⁰ *Id.*; Walsh, *supra* note 87.

⁹¹ Jessica Stillman, *21 Future Jobs the Robots are Actually Creating*, INC. (Feb. 4, 2022), <https://www.inc.com/jessica-stillman/21-future-jobs-robots-are-actually-creating.html> [https://perma.cc/MQR4-4Q56].

⁹² Galen Gruman, *The state of ethnic minorities in U.S. tech: 2020* (Sept. 21, 2020), <https://www.computerworld.com/article/3574917/the-state-of-ethnic-minorities-in-us-tech-2020.html> [https://perma.cc/M5DR-P59B]. A 2019 *Wired* survey found that racial minorities made up only 5% of Silicon Valley tech firms and only 16% of tech firms overall.

⁹³ Walsh, *supra* note 87.

⁹⁴ Thomas, *supra* note 57.

⁹⁵ *Id.*

⁹⁶ JONES DAY, *Artificial intelligence and health Care – Key Regulatory Considerations for U.S. Operations*, JONES DAY, <https://www.jonesday.com/en/insights/2018/01/artificial-intelligence-and-health-carekey-regulat> [https://perma.cc/8SCD-GAGV] (last visited Nov. 3, 2021).

AI algorithms can process and make decisions at a fraction of the time compared to humans.⁹⁷ This reduced decision time makes AI algorithms more cost-efficient and contributed to the increased implementation of AI over the last year.⁹⁸ Jai Verma, a health technology expert, predicts AI is going to streamline the process and reduce operating costs because most costs are associated with manual labor that would become automated by AI.⁹⁹ The push for AI in health care for cost-reducing purposes will only increase as health care providers try to mitigate the impact of the COVID-19 pandemic.¹⁰⁰

Not only can AI cut costs but it can also improve the quality of care.¹⁰¹ AI can improve the quality of care by reducing human error, diagnosing diseases earlier, increasing efficiency, and streamlining patient management.¹⁰² Moreover, AI can improve communication capabilities between doctors and patients by providing appointment reminders and encouraging patients to give direct feedback of their care.¹⁰³ In turn, this leads to better care because it enables the patient to get timely care.¹⁰⁴

AI in health care is a powerful approach that will help provide underserved communities gain access to health care.¹⁰⁵ Underserved communities often have a shortage of trained health care workers and technology to provide quality health care.¹⁰⁶ Sometimes, those communities do not have access to any standard health care facility.¹⁰⁷ This lack of access and trained medical staff means people residing in those communities experience a higher risk of being untreated and dying.¹⁰⁸ AI can help mitigate the desperate impacts of lack of access to health care through applications such as telehealth.¹⁰⁹ Telehealth is a platform that allows the patient to consult with a doctor online instead of in person.¹¹⁰ However, telehealth is not just limited to doctor consultations. Some telehealth applications allow physicians to remotely monitor a

⁹⁷ Upendra Patel, *Artificial Intelligence in Healthcare: Top Benefits, Risks and Challenges*, TRISTATE TECHNOLOGY, (Oct. 22, 2020) <https://www.tristatetechnology.com/blog/artificial-intelligence-in-healthcare-top-benefits-risks-and-challenges/> [https://perma.cc/37BN-VC4M].

⁹⁸ *Id.*

⁹⁹ Kavita Chandran, *Can A.I. ever replace human doctors? Health tech experts weigh in*, CNBC (Nov. 20, 2019), <https://www.cnbc.com/2019/11/20/can-ai-ever-replace-human-doctors-health-tech-experts-weigh-in.html> [https://perma.cc/ZPH4-GZXS].

¹⁰⁰ *New report shows how AI in health is critical for COVID-19 response and recovery*, NOVARTIS, <https://www.novartis.com/node/1386/printable/print> [https://perma.cc/FJ82-FKGC] (last visited Nov. 14, 2021).

¹⁰¹ Tom Peterson, *12 Reasons Why Automated Care is Helpful to the Healthcare Industry*, ADVANCED DATA SYS. CORP. (Nov. 4, 2020), <https://www.adsc.com/blog/reasons-why-automated-care-helpful-in-healthcare-industry> [https://perma.cc/YA83-NSQ9].

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ Patel, *supra* note 97.

¹⁰⁶ Jennifer Bresnick, *Top 12 Ways Artificial Intelligence Will Impact Healthcare*, HEALTHIT ANALYTICS (April 30, 2018), <https://healthitanalytics.com/news/top-12-ways-artificial-intelligence-will-impact-healthcare> [https://perma.cc/BXD5-PP35].

¹⁰⁷ Patel, *supra* note 97.

¹⁰⁸ *Id.*

¹⁰⁹ Bresnick, *supra* note 105; *see also* *What is telehealth?*, TELEHEALTH.HHS.GOV, <https://telehealth.hhs.gov/patients/understanding-telehealth/> [https://perma.cc/M2SK-YA26] (last visited Nov. 14, 2021).

¹¹⁰ *What is telehealth?*, *supra* note 109.

patient's blood pressure, temperature, and other vital signs.¹¹¹ By taking over manual monitoring, AI powered telehealth is more affordable and can provide a greater number of benefits. These benefits have given disenfranchised groups access to the medical system. Remote monitoring, however, is not the only AI application in telehealth.

AI can search through expansive data sets from thousands of patients to compare similar illness profiles to produce a pattern that can suggest next steps to the physician.¹¹² Moreover, AI can be used to deliver real-time clinical information (like lab results and x-rays) into virtual platforms using algorithmic integration.¹¹³ These abilities, partnered with the telehealth technology, can provide physicians with the ability to give quality remote health care.¹¹⁴ Not only will telehealth improve access to health care for people in underserved communities, it will also increase access to specialists that are located far away from a person's hometown.¹¹⁵ Telehealth removes the geographical and socioeconomic barriers that many face in accessing quality health care.¹¹⁶

A. AI's Strong Emerging Role in Health Care

AI has been applied in the health care field for decades, and its application will continue as the complexity and amount of big data rises.¹¹⁷ One of the main ways AI is used in health care is disease diagnostics.¹¹⁸ Generally, AI disease diagnostics functions by using "complex algorithms, hundreds of biomarkers, imaging results from millions of patients, aggregated published clinical research, and thousands of physician's notes"¹¹⁹ to identify a pattern of disease in a scanned image, such as an x-ray.¹²⁰ This pattern is then given to the physician to aid in diagnosing the disease.¹²¹ AI disease diagnostics is particularly helpful in areas where the diagnostic information is already digitized, such as: detecting types of cancer based on CT scans, assessing heart problems based on electrocardiograms and cardiac MRI images, and classifying skin lesions in skin images.¹²² For example, in 2017, researchers at Stanford developed an AI program that was trained to classify images of skin lesions as benign or malignant skin cancers.¹²³ This program utilized a deep neural network

¹¹¹ Sindhu Kutty, *Leveraging The Power Of AI In Telehealth*, FORBES (Dec. 2, 2020), <https://www.forbes.com/sites/forbesbusinesscouncil/2020/12/02/leveraging-the-power-of-ai-in-telehealth/?sh=36e817c459bf> [https://perma.cc/XUF5-UEMK].

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *What is telehealth?*, *supra* note 109.

¹¹⁶ *Id.*

¹¹⁷ Davenport & Kalakota, *supra* note 3, at 95-6.

¹¹⁸ *Id.*

¹¹⁹ Abhimanyu S. Ahuja, *The impact of artificial intelligence in medicine on the future role of the physician*, 6 PEERJ. 7702 (OCT. 4, 2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6779111/> [https://perma.cc/PE4F-YC49].

¹²⁰ Markus Schmitt, *Artificial Intelligence in Medicine*, DATA REVENUE BLOG <https://www.datarevenue.com/en-blog/artificial-intelligence-in-medicine> [https://perma.cc/ES7C-XLVF] (last visited Nov. 4, 2021).

¹²¹ *Id.*

¹²² *Id.*

¹²³ Esteva et al. *Dermatologist-level classification of skin cancer with deep neural networks*, NATURE 542, 115 (Feb. 2, 2017), <https://www.nature.com/articles/nature21056> [https://perma.cc/JM76-F4YQ].

trained to compare about 130,000 skin lesion images against over 2,000 diseases to achieve the classification accuracy of a board-certified dermatologist.¹²⁴

AI disease diagnostics, however, will not replace physicians anytime soon.¹²⁵ Instead, it will be used as a tool physicians can interpret during the diagnosis period.¹²⁶ Given that AI in disease diagnostics will not replace human physicians, the ultimate question becomes: Why is AI in disease diagnostics necessary? The answer is because AI disease diagnosis presents an innovative solution to rising health care costs and lack of accessible health care.¹²⁷ AI can make a conclusion about a possible disease in seconds, which is a fraction of the time a human physician would spend reaching the same conclusion.¹²⁸ Cutting the time a physician would spend consulting other physicians and examining scans enables for a quicker diagnosis and ultimately cuts costs.¹²⁹

Additionally, physicians receive years of medical training before they are equipped to diagnose diseases.¹³⁰ This means that fulfilling the population's needs for physicians is not yet possible.¹³¹ As a result, the physicians that are practicing are put under great strain and are less accessible to the general public.¹³² The speed of AI disease diagnosis allows those in-demand physicians to save consultancy time and make quick and accurate diagnoses.¹³³

There are, however, some challenges to using AI in disease diagnostics. The main limitation to the use of AI in disease diagnostics is the requirement that the cross-referencing data be digitized.¹³⁴ If there is not a large digital database with similar images that the AI can cross-examine, the AI will likely not produce an accurate output.¹³⁵ However, someone would be hard-pressed to find an area of health care that is not digitized, especially in today's world.¹³⁶

With the huge success and impact AI disease diagnostics has had and can have in the future, it is more important than ever that there is proper AI regulation in health care. To ensure the continued success of AI in disease diagnostics, and health care generally, there must be firm regulations that reduce the possible risks of AI. It is important to remember that while humans can reap the benefits of AI in health care, they also experience the risks if the AI is not regulated. Regulation of AI in health care can quite literally save lives.

¹²⁴ *Id.*

¹²⁵ Schmitt, *supra* note 120.

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *See generally, Id.*

¹³⁰ Nouman Iftikhar, *Artificial Intelligence (AI) for Disease Diagnosis*, THINKML BLOG (Feb. 21, 2021), <https://thinkml.ai/artificial-intelligence-ai-for-disease-diagnosis/> [https://perma.cc/GK5A-8C7N].

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

¹³⁴ Schmitt, *supra* note 120.

¹³⁵ *Id.*

¹³⁶ *See* STEFANINI GROUP, *Digital's Imprint in Health Care: Changing Lives for the Better*, STEFANINI GROUP (JUL. 17, 2019), <https://stefanini.com/en/trends/news/digital-imprint-in-health-care-changing-lives-for-the-better> [https://perma.cc/H5AY-ZCME].

B. Concerns About AI in Health Care

The same risks of general AI use show themselves in the use of AI in health care. First, the general concern of privacy is relevant in the health care setting through possible Health Insurance Portability and Accountability Act (“HIPAA”) violations. HIPAA is a federal law that “required the creation of national standards to protect sensitive patient health information from being disclosed without the patient’s consent or knowledge.”¹³⁷ The main goal of HIPAA is to ensure individuals’ health information is protected while also allowing the exchange of private health information needed to further quality health care.¹³⁸

A study completed in 2018 suggested that current laws and regulations are nowhere near sufficient to protect an individual’s health information in the wake of AI development.¹³⁹ The study found that, using AI, it is possible to identify individuals “by learning daily patterns in step data” from activity trackers and smartphones and “correlating it to demographic data.”¹⁴⁰ The study also found that, after two years of data mining involving more than 15,000 Americans’ data, HIPAA’s privacy standards need to be revisited and reworked.¹⁴¹ For example, tech companies, who are not covered by HIPAA, are buying health data that is supposed to be anonymous, but “their whole business model is to find a way to attach names to this data and sell it.”¹⁴² And they can do it if they have the right information, such as step data.¹⁴³ While HIPAA, in large part, protects individuals’ private health information, the 2018 study clearly suggests that individuals’ data is not as protected as we think.

Second, AI can have unanticipated discriminatory consequences against particular groups.¹⁴⁴ In fact, algorithm bias and discrimination in health care occurs at an alarming rate.¹⁴⁵ For example, a machine learning program created to analyze skin lesions and distinguish between malignant and benign moles only collected viable data from Caucasian people.¹⁴⁶ This led the developers to worry that the machine would misdiagnose people of color because the machine would not perform well when analyzing images of people of color.¹⁴⁷ Similarly, a 2020 *New England Journal of Medicine* article explained that AI algorithms have regularly

¹³⁷ *Health Insurance Portability and Accountability Act of 1996 (HIPAA)*, CTR. FOR DISEASE CONTROL AND PREVENTION, <https://www.cdc.gov/php/publications/topic/hipaa.html> [https://perma.cc/6XJH-LKJ2] (last visited Nov. 14, 2021).

¹³⁸ *Id.*

¹³⁹ University of California Berkeley, *Artificial intelligence advances threaten privacy of health data*, SCIENCE DAILY (Jan. 3, 2019), <https://www.sciencedaily.com/releases/2019/01/190103152906.htm> [https://perma.cc/HM5P-683G].

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ Sharoma Hoffman & Andy Podgurski, *Artificial Intelligence and Discrimination in Health Care*, CASE W. RES. U. (Dec. 2020), at 17, https://case.edu/law/sites/case.edu.law/files/2021-01/Sharona%20CLE%202021_0.pdf [https://perma.cc/5S2Q-B5MR].

¹⁴⁵ *Id.* at 1.

¹⁴⁶ *Id.* at 18; see also Adelwole S. Adamson & Avery Smith, *Machine Learning and Health Care Disparities in Dermatology*, JAMA DERMATOLOGY (Nov. 2018), at 1247, <http://jamanetwork.com/journals/jamadermatology/article-abstract/2688587>.

¹⁴⁷ *Id.*

underestimated African Americans' "risk of kidney stones, death from heart failure, and other medical problems."¹⁴⁸

An even more prevalent example of AI discrimination is an algorithm commonly used by health systems to identify patients that should receive special attention.¹⁴⁹ This algorithm displayed significant racial discrimination due to its reliance on past health care costs to determine who could potentially get high-risk conditions.¹⁵⁰ Racial minorities regularly spend less money on health care costs because they often face health care access barriers.¹⁵¹ This means their spending history does not reflect their true health status and may preclude them from obtaining necessary health care.¹⁵² Moreover, medical problems such as hypertension, diabetes, renal failure, and high cholesterol are prevalent in the African American community; the algorithm failed to reveal that African Americans were sicker than their Caucasian counterparts who received referrals for special attention.¹⁵³

Lastly, the emergence of AI in health care leaves many health care workers in fear of losing their jobs.¹⁵⁴ As AI develops, some health care workers will see their job replaced by an algorithm.¹⁵⁵ Researchers predict that the healthcare jobs most likely to be replaced with AI are those dealing with digital information, radiology, and pathology.¹⁵⁶ However, AI is not at the stage where it can replace the doctor-patient relationship.¹⁵⁷ AI technology is not advanced enough to replace the emotional connection that only a human can provide.¹⁵⁸

Health experts say, however, that while AI might not fully replace health care workers, AI has changed the health care landscape.¹⁵⁹ The once tedious administrative tasks left to health care professionals to complete, can now be completed by an algorithm.¹⁶⁰ This means that health care workers that specialize in those administrative tasks could risk job loss.¹⁶¹ However, even with the possible administrative position job replacement, in areas like pathology, it is unlikely that there will be a substantial change in the health care workforce for the next 20 years.¹⁶² With these concerns in mind, it is important that any AI regulation addresses these concerns.

¹⁴⁸ Hoffman & Podgurski, *supra* note 144, at 1.

¹⁴⁹ *Id.* at 17.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ Mohit Sharma, *Impact of Artificial Intelligence on Jobs in Healthcare*, MINDFIELDS BLOG, <https://www.mindfieldsglobal.com/blog/impact-of-ai-on-jobs> [https://perma.cc/PZV2-FEPB].

¹⁵⁵ Amy Baxter, *How AI Will Impact the Healthcare Workforce*, CARDIOVASCULAR BUSINESS (Nov. 5, 2019), <https://www.cardiovascularbusiness.com/topics/health-it/how-ai-will-impact-healthcare-workforce> [https://perma.cc/8E2Z-TMLA].

¹⁵⁶ Davenport & Kalakota, *supra* note 3, at 97.

¹⁵⁷ Kavita Chandran, *Can A.I. ever replace human doctors? Health tech experts weigh in*, CNBC (Nov. 20, 2019), <https://www.cnbc.com/2019/11/20/can-ai-ever-replace-human-doctors-health-tech-experts-weigh-in.html> [https://perma.cc/ZPH4-GZXS].

¹⁵⁸ Sharma, *supra* note 154.

¹⁵⁹ Chandran, *supra* note 157.

¹⁶⁰ Baxter, *supra* note 155.

¹⁶¹ *Id.*

¹⁶² Davenport & Kalakota, *supra* note 3 at 97.

IV. TIME TO REGULATE

There are legitimate challenges to consider when implementing stricter AI regulations. Stifling innovation, especially in the health care field, could be damning; particularly when the field is built on innovation. Moreover, creating a patchwork of state AI regulations could cause companies to migrate to cities with less strict regulations, which might not include Washington. While those challenges are valid, the need to protect medical privacy, increase AI accountability, and reduce AI discrimination in health care substantially outweigh those challenges.

A. Why is the Federal Government Not Regulating This?

There are currently no federal regulations that target the use of AI in health care settings.¹⁶³ The Food and Drug Administration (FDA), however, is responsible for reviewing and approving most AI-driven medical products and regulating AI software based on its intended use and risk to patients.¹⁶⁴ The FDA approval process does not examine if the product is “safe or effective for use in patients.”¹⁶⁵ Rather, it merely approves medical devices for sale¹⁶⁶ and has been rightly criticized and labeled as “the weakest and most nonsensical program in the FDA.”¹⁶⁷ This approval scheme is a very complex framework that has only approved locked algorithms which are “algorithms that have been developed using machine learning but will not change beyond the policy of regulatory submission.”¹⁶⁸ The push is now for the FDA to implement regulations for adaptive algorithms, which are algorithms that continuously learn and change as they are used.¹⁶⁹ The US government has not issued formal regulations on AI in health care because of the complexity of regulating such a dynamic technology in a heavily regulated field like health care.¹⁷⁰

Even though there are no formal health care AI regulations, Congress has attempted to regulate the general use of AI. In 2019, the FDA published a discussion paper explaining proposed regulations for

¹⁶³ Jamison Chung, *How Will Health Care Regulators Address Artificial Intelligence?*, THE REGULATORY REVIEW (Oct. 18, 2021), <https://www.theregreview.org/2021/10/18/chung-how-will-health-care-regulators-address-artificial-intelligence/> [https://perma.cc/GJH9-XXBT].

¹⁶⁴ *How FDA Regulates Artificial Intelligence in Medical Products*, PEW (Aug. 5, 2021), <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2021/08/how-fda-regulates-artificial-intelligence-in-medical-products> [https://perma.cc/DB3Z-927L].

¹⁶⁵ Elaine Silvestrini, *FDA 510(k) Clearance Process*, DRUGWATCH, <https://www.drugwatch.com/fda/510k-clearance/> [https://perma.cc/Z8TG-NRV7] (last modified Mar. 15, 2021).

¹⁶⁶ *Id.*

¹⁶⁷ Silvestrini, *supra* note 165.

¹⁶⁸ Rachel Myers, *How will AI in healthcare be regulated?*, TEAM (Sep. 23, 2021), <https://www.team-consulting.com/insights/how-will-ai-in-healthcare-be-regulated/> [https://perma.cc/K8PV-V6M5] (last visited Nov. 5, 2021).

¹⁶⁹ FOOD AND DRUG ADMINISTRATION, *Executive Summary for the Patient Engagement Advisory Committee Meeting* (Oct. 22, 2022), <https://www.fda.gov/media/142998/download> [https://perma.cc/N2RW-EENP]; *Id.*

¹⁷⁰ Heinz-Uwe Dettling et al., *How the challenge of regulating AI in healthcare is escalating*, EY (Jul. 27, 2021), https://www.ey.com/en_gl/law/how-the-challenge-of-regulating-ai-in-healthcare-is-escalating [https://perma.cc/Q9XF-637T]; Robert E. Moffit, *How to End the Overregulation of Medical Care*, (Aug. 4, 2020) <https://www.heritage.org/health-care-reform/commentary/how-end-the-overregulation-medical-care> [https://perma.cc/U9QB-BW9X].

modifications to AI software as a medical device (SaMD).¹⁷¹ That same year, the Algorithm Accountability Act (AAA) was introduced to Congress.¹⁷² The AAA would have covered businesses that “made more than \$50,000,000 per year; held data for greater than 1,000,000 customers; or acted as a data broker to buy and sell personal information.”¹⁷³ Moreover, the AAA would direct the Federal Trade Commission (FTC) to require qualified businesses to complete impact assessments to evaluate the AI system’s impact on “accuracy, bias, discrimination, privacy, and security.”¹⁷⁴ These federal regulations, however, have not been enacted.

B. How States are Taking Control on AI Regulation

Since there are no federal regulations, state lawmakers are beginning to propose legislation to regulate AI in various ways.¹⁷⁵ Out of the 17 states that have proposed AI legislation, only four—Alabama, Colorado, Illinois, and Mississippi—have enacted legislation.¹⁷⁶ This paper will discuss California’s and New Jersey’s proposed AI regulations.

Before outlining the two states’ AI regulation, it is important to point out that the respective statutes use the term “automated decision systems” (ADS) instead of AI in their proposed regulation.¹⁷⁷ The legislatures of both states use ADS as an umbrella term that includes any “computational process, including one derived from machine learning, statistics, or other data processing or artificial intelligence techniques, that makes or facilitates human decision making.”¹⁷⁸ Both states use the term ADS to regulate AI.¹⁷⁹

1. New Jersey’s Algorithmic Accountability Act

On February 25, 2020, the New Jersey legislature introduced the New Jersey Algorithmic Accountability Act (NJAAA) that sought to prohibit certain discriminations by ADS.¹⁸⁰ The NJAAA explicitly states that “a health care provider shall not discriminate through the use of an automated decision system against any person or group of persons who is a member of a protected class.”¹⁸¹ Discrimination under the health care provision occurs if the system selects members of a protected class for participation or eligibility “for health care services at a rate that is disproportionate to

¹⁷¹ *How FDA Regulates Artificial Intelligence in Medical Products*, *supra* note 164.

¹⁷² BECKAGE, *Accountability and the Use of Artificial Intelligence* (Mar. 19, 2021), <https://www.beckage.com/artificial-intelligence-law/accountability-and-the-use-of-artificial-intelligence/> [https://perma.cc/Z3WW-2Z34].

¹⁷³ *Id.*; (citing Algorithmic Accountability Act of 2019, S. 1108, H.R. 2231, 116th Cong. (2019) at § 2(5)).

¹⁷⁴ *Id.*

¹⁷⁵ *Legislation Related to Artificial Intelligence*, *supra* note 14.

¹⁷⁶ *Id.*

¹⁷⁷ Algorithmic Accountability Act of 2019, S. 1108, H.R. 2231, 116th Cong. (2019); A.B. 2269, 2019-20 Leg., Reg. Sess. (Cal. 2020).

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ Algorithmic Accountability Act of 2019, S. 1108, H.R. 2231, 116th Cong. (2019).

¹⁸¹ *Id.*

the rate at which the system selects” people who are not members of a protected class.¹⁸²

NJAA applies to entities that have one of the following characteristics:

- (1) have greater than \$50,000,000 in average annual gross receipts for the three taxable-year period preceding the most recent fiscal year; (2) possess or control personally identifiable information on more than 1,000,000 New Jersey consumers or 1,000,000 consumer computers or mobile telecommunications service devices; or (3) are data brokers.¹⁸³

The NJAAA would require businesses that meet a certain revenue threshold, or are data brokers, to conduct an ADS impact assessment and data protection impact assessment aimed at reducing the risk of using “high-risk” automated decision systems.¹⁸⁴ An automated decision system impact assessment is a study evaluating the ADS system and how its trained data impacts fairness, discrimination, privacy, and security.¹⁸⁵ A data protection impact assessment is a study evaluating how much the system “protects the privacy and security of personal information the system processes.”¹⁸⁶

2. California’s Automated Decision Systems Accountability Act

On February 14, 2020, California introduced the Automated Decision Systems Accountability Act of 2020.¹⁸⁷ The Act would require any business in California that utilizes an ADS to “continually test for biases during the development and usage of the ADS.”¹⁸⁸ The Act also required qualified businesses to complete an ADS impact assessment to determine whether the “ADS has a disproportionate adverse impact on a protected class.”¹⁸⁹ The impact assessment, at a minimum, must include a description of the ADS, its purpose, and the “relative benefits and costs of the ADS in light of its purpose.”¹⁹⁰

Most importantly, if a business makes any modifications to an ADS, they are required to conduct an additional ADS impact assessment and resubmit that assessment no later than 60 days after the modification.¹⁹¹

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ PERKINS COIE, *New York and New Jersey Make an Early Effort to Regulate Artificial Intelligence* (Sept. 5, 2019), <https://www.perkinscoie.com/en/news-insights/new-york-and-new-jersey-make-an-early-effort-to-regulate-artificial-intelligence.html> [<https://perma.cc/4QEK-2GW7>].

¹⁸⁵ Algorithmic Accountability Act of 2019, S. 1108, H.R. 2231, 116th Cong. (2019).

¹⁸⁶ *Id.*

¹⁸⁷ A.B. 2269, 2019-20 Leg., Reg. Sess. (Cal. 2020).

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

C. How Washington State is Pioneering the Charge to Regulate AI

Washington's proposed AI regulation would establish AI regulation for public agencies that use or develop ADS technology.¹⁹² The Act states that a public agency may not “develop, procure, or use an automated decision system that discriminates against an individual, or treat an individual less favorably than another.”¹⁹³ The Act would require any public agency to complete an algorithm accountability report before the agency may develop, procure, or use an ADS.¹⁹⁴ The algorithm accountability report operates similarly to New Jersey's and California's impact assessments by requiring a description of the purpose.¹⁹⁵ However, the accountability report goes a few steps further by also requiring a description of any reasonably foreseeable capabilities outside the scope of the intended purpose.¹⁹⁶ The accountability report must also contain a description of how the agency will ensure that all people operating the AI or have access to it are knowledgeable about data management and the AI's capabilities.¹⁹⁷ Moreover, the public agency must give notice to the person impacted by the ADS of the fact that the system is in use, what decisions will be used to train the system, what policies and guidelines apply to its development, and how the person may contest any decision made by or involving the ADS.¹⁹⁸

Unlike California's and New Jersey's legislation, Washington's Act would regulate more than just businesses—it would regulate the entire public sector. This means that any AI technology the Washington government uses to analyze data to make or support their decisions will be subject to this Act.¹⁹⁹ For example, such technology could include technology that analyzes crime reports to suggest where police resources should be deployed.²⁰⁰ According to Jennifer Lee at the ACLU of Washington, this technology can “replicate existing racial biases in policing as opposed to actually decreasing crime” so it is vital that there is regulation that limits the perpetuation of discrimination in AI.²⁰¹

Washington's Act would be the first of its kind. This would make Washington a leader in AI regulation and establish some of the most concrete AI regulations in the US.²⁰² The Act, however, does not address some important issues that including provisions from California's and New Jersey's regulations could solve.

¹⁹² Monica Nickelsburg, *Washington state lawmakers seek to ban government from using discriminatory AI tech*, GEEKWIRE (Feb. 13, 2021, 8:00 am), <https://www.geekwire.com/2021/washington-state-lawmakers-seek-ban-government-using-ai-tech-discriminates/> [https://perma.cc/2C45-VEPN].

¹⁹³ S.B. 5527, 2019 Leg. Reg. Sess., 116th Cong. (2019).

¹⁹⁴ *Id.*

¹⁹⁵ S.B. 5527, 2019 Leg. Reg. Sess., 116th Cong. (2019); *see also* A.B. 2269, 2019-20 Leg., Reg. Sess. (Cal. 2020); Algorithmic Accountability Act of 2019, S. 1108, H.R. 2231, 116th Cong. (2019).

¹⁹⁶ S.B. 5527, 2019 Leg. Reg. Sess., 116th Cong. (2019).

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

¹⁹⁹ Nickelsburg, *supra* note 192.

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² *Id.*

1. Filling the Gaps in Washington State's Proposed Legislation

a. Gap Filled by New Jersey's Algorithmic Accountability Act

While Washington's proposed regulation addresses legitimate concerns related to public agencies' use of AI, the regulation needs to go beyond the public sector. In the health care setting, only publicly funded entities like Medicaid will be affected by this Act.²⁰³ While, as of 2018, Medicaid serves approximately 1.8 million people in Washington,²⁰⁴ as of 2019 more than half of Washington's population has employer-sponsored health insurance.²⁰⁵

These employer-sponsored health plans are a form of private health insurance.²⁰⁶ This means that by Washington's Act only covering public health agencies, the majority of Washingtonians will be subjected to unregulated AI when receiving medical care. Allowing most health care providers to be out of compliance with the Act does not make logical sense. Therefore, the Washington State legislature should adopt the health care provider provision from the NJAAA, which explicitly states that any health care provider who develops or uses AI is subject to regulation under the Act.²⁰⁷

b. Gap Filled by California's Automated Decision Systems Accountability Act

Washington's Act requires any public agency in the state to complete, and get approved, an algorithmic accountability report before they can develop or use AI.²⁰⁸ This means a one-time approval of AI technology is passable. But, if the Washington legislature really wants to support the Act's purpose of improving transparency and accountability, the legislature should adopt the continuous assessment provision in California's Automated Decision Systems Accountability Act. This addition would improve Washington's legislation because AI in general, and especially in health care, is developing at a high rate.²⁰⁹ As AI technology grows and improves, it only makes sense that each development should be subject to a new accountability assessment.

²⁰³ *Id.*; Robin Rudowitz et al., *10 Things to Know about Medicaid: Setting the Facts Straight* (Mar. 6, 2019), <https://www.kff.org/medicaid/issue-brief/10-things-to-know-about-medicaid-setting-the-facts-straight/> [https://perma.cc/Z3DD-AUR5].

²⁰⁴ Louise Norris, *Washington and the ACA's Medicaid expansion*, HEALTHINSURANCE.ORG (Oct. 6, 2020), <https://www.healthinsurance.org/medicaid/washington/> [https://perma.cc/2RK7-LG2D].

²⁰⁵ Jenny Yang, *Health insurance status of the population of Washington 2019*, STATISTIA, <https://www.statista.com/statistics/238847/health-insurance-status-of-the-total-population-of-washington/> [https://perma.cc/73E7-ANC3] (last visited Nov. 4, 2021).

²⁰⁶ *Private health insurance*, HEALTHINSURANCE.ORG, <https://www.healthinsurance.org/glossary/private-health-insurance/> [https://perma.cc/D55L-ARLB] (last visited Nov. 4, 2021).

²⁰⁷ Algorithmic Accountability Act of 2019, S. 1108, H.R. 2231, 116th Cong. (2019).

²⁰⁸ S.B. 5527, 2019 Leg. Reg. Sess., 116th Cong. (2019).

²⁰⁹ Ahuja, *supra* note 119 at 7.

D. Challenges to Imposing Stricter AI Regulation

While there is promise in implementing stricter AI regulations, there are also great challenges to overcome. Regulating AI in health care requires legislatures to balance the need to protect patients and nurture innovation.²¹⁰ By increasing the regulatory hoops AI developers must jump through, the legislature could stifle innovation due to developers needing to freeze their production process to get approval.²¹¹ These increased hoops could cost the AI developers more money and time that they often do not have.²¹² This kind of regulatory framework possibly favors developers who are in it for financial gain instead of good.²¹³ The technology that will rake in more profits ends up being the technology that hits the market, rather than technology that might benefit the public more but only makes marginal profits. This is because developers that make higher profits are more likely to take on the cost of regulatory approval.²¹⁴ To combat this consequence of increased regulations, states could provide incentives to AI developers that would offset the cost of waiting for regulatory approval. These incentives would also lessen the burden on public good over higher profits on smaller AI developers.

With these increased regulatory hoops only being required in the states that adopt AI regulation, the challenge then becomes geography.²¹⁵ A patchwork of AI regulation by the states puts a huge burden on companies, especially large national corporations, to ensure total compliance in every state of operation. An example of this scenario is currently playing out with data privacy laws.²¹⁶ As of 2019, there are no federal data privacy laws, so the states have taken it upon themselves to regulate in this arena.²¹⁷ For example, each state has data breach laws that each impose different requirements on businesses.²¹⁸ These varying requirements sparked businesses to reevaluate and change their multi-state operations.²¹⁹ The same effects of compliance with differing data privacy laws could also occur with differing AI laws. An AI development company might move its operations outside of Washington or not market its product in Washington to avoid the strict AI regulations. The effect of companies or businesses moving out of Washington could ultimately lead to decreased AI innovation and implementation. This effect could especially be unfavorable in Washington since Seattle is one of the top

²¹⁰ Heinz-Uwe Dettling et al., *supra* note 170.

²¹¹ See generally, *Id.*

²¹² *Id.*

²¹³ Gideon Kimbrell, *Is Regulation Killing Innovation In Health Care?*, FORBES (May 19, 2018), <https://www.forbes.com/sites/forbestechcouncil/2018/03/19/is-regulation-killing-innovation-in-health-care/?sh=75ddf6cc158c> [https://perma.cc/C6UV-5NUX].

²¹⁴ *Id.*

²¹⁵ See Francois Candelon et al., *AI Regulation is Coming*, HARVARD BUSINESS REVIEW (Sept-Oct. 2021), <https://hbr.org/2021/09/ai-regulation-is-coming> [https://perma.cc/AZC7-L4GN].

²¹⁶ Boyd Garriott et al., *The Case for Uniform Standards Grows as States Sew More Laws Into Patchwork of Data-Privacy Regulations*, WASHINGTON LEGAL FOUNDATION (Sept. 27, 2019), <https://www.wlf.org/2019/09/27/publishing/the-case-for-uniform-standards-grows-as-states-sew-more-laws-into-patchwork-of-data-privacy-regulations/> [https://perma.cc/NND9-LCKL].

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ *Id.*

tech cities in the nation with companies like Amazon, Boeing, Google, Costco, Starbucks, and Microsoft all having roots in the greater Seattle area.²²⁰

V. CONCLUSION

AI is a part of almost every aspect of our world. Its implementation into our society has exploded over the last few decades and has established a foothold in health care. Health care professionals utilize AI in many ways including in disease diagnostics by using an algorithm that can help identify diseases in an x-ray image by scanning thousands of other similar images. AI disease diagnostics benefits health care by reducing costs, increasing access to care, and improving quality of care. These benefits, however, come with risks such as AI discrimination, medical privacy, and loss of jobs. AI in health care has had great success and impact, and to continue this trend, there needs to be concrete regulations that will reduce the impact of the possible risks associated with AI.

There are currently no federal regulations regulating AI. As a result, states have taken it upon themselves to implement AI regulations that aim to regulate AI in various sectors. Specifically, both California and New Jersey have proposed legislation that seek to regulate AI. California's Automated Decision System Accountability Act requires businesses to complete impact assessments prior to the implementation of any AI algorithm. Moreover, any time the algorithm is updated, the business must complete another impact assessment before the AI can be utilized. Additionally, New Jersey's Algorithmic Accountability Act seeks to specifically regulate health care providers who use AI by requiring providers to complete similar impact assessments as used in California.

Washington is pioneering AI regulation with proposed regulation that seeks to regulate the public sector. Washington wants to enact sweeping AI regulation by regulating the whole public sector, but it is missing a huge subsector of entities that utilize AI by not including private health care providers in its regulation. While this groundbreaking regulation imposes important parameters, it still has gaps that can be filled by provisions of both California's and New Jersey's AI regulations. Specifically, if Washington wants to effectively regulate in this arena, it must include (1) the health care provision in New Jersey's ADS legislation, and (2) the continuous impact assessment provision in California's ADS legislation. Adopting the two provisions from New Jersey's and California's AI regulations would strike a balance between saving lives and encouraging innovation.

²²⁰ Brandon Woods, *Guide to the Top Tech Companies in Seattle in 2021*, CAREER KARMA (July 14, 2020), <https://careerkarma.com/blog/best-tech-companies-seattle/> [https://perma.cc/E22N-YR5R].