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ARTICLES

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We would like to thank our advisors, Maya Manian and Asha Scielzo, for their support. We are also grateful to the American University Washington College of Law for providing a legal education that empowers us to champion what matters.

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LETTER FROM THE EDITORS

Dear Reader:

On behalf of the Editorial Board and Staff, we proudly present Volume 19, Issue 2 of the *Health Law & Policy Brief*. Since its formation in 2007, the Brief has published articles on various topics in health law, bioethics, and emerging medical policy. This issue includes two timely and thought-provoking articles: the first examines the ethical and scientific implications of transplanting animal organs into humans, and the second addresses the legal and moral consequences of expanding physician-assisted suicide. Both articles explore the complex relationship between law and ethics in healthcare, examining the ethical boundaries of medicine and the legal frameworks that shape its future.

Our first article, by Lauren Berry, investigates the ethical, legal, and policy implications of xenotransplantation as a possible solution to the U.S. organ shortage crisis. Ms. Berry explores the potential of using genetically modified pig organs in human transplantation while grappling with profound ethical dilemmas, including animal welfare, informed consent, disease risk, and equity of access. Her analysis proposes a cautious, ethically grounded approach that prioritizes patient safety and transparency while maximizing the health benefits of this revolutionary medical technology.

Our second article, by Jasmine Bouche, urges policymakers to reject the legalization of physician-assisted suicide and euthanasia at the state level. Drawing on legal precedent, ethical reasoning, and international case studies, Ms. Bouche warns of the unintended consequences of state-sanctioned aid in dying, including the erosion of medical ethics, heightened risks for vulnerable populations, and the dangerous expansion of qualifying criteria over time. Her article argues that the United States must safeguard the inalienable right to life by improving palliative care rather than legalizing death as a treatment option.

We would like to thank the authors for their insight, creativity, and cooperation in producing these pieces. We would also like to thank the *Health Law & Policy Brief's* article editors and staff members who worked so diligently on this issue.

To all our readers, we hope you enjoy this issue, that the never-ending complexities of this area of law inspire your own scholarship, and that you continue to anticipate and scrutinize the inevitable challenges that our healthcare system will continue to face.

Sincerely,

Giulia Pastore
Editor-in-Chief

Guy Cheatham
Executive Editor

* * *

PIGS, PEOPLE, AND PROBLEMS:

ETHICAL DILEMMAS IN XENOTRANSPLANTATION

Lauren Berry*

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**Lauren Berry is a rising third-year law student at the Arizona State University Sandra Day O'Connor College of Law. Lauren graduated from Colorado State University with a degree in philosophy and minor in legal studies. Her academic and personal interests lie in the areas of intellectual property, bioethics, and human rights law.*

ABSTRACT

The growing demand for organ transplants in the United States, with over 70,000 individuals on the waitlist, underscores the urgency of addressing the organ shortage crisis. Xenotransplantation, a process involving the transplantation of animal organs, such as those from pigs, into humans, offers a promising solution to this crisis. Its potential is driven by advancements in genetic engineering technologies, such as CRISPR/Cas. Despite its potential, xenotransplantation raises profound ethical, legal, and social concerns. These include animal welfare issues, the risk of zoonotic diseases, questions about human identity, and equitable access to healthcare. This paper examines xenotransplantation through ethical frameworks such as utilitarianism, deontology, and virtue ethics while exploring its regulatory, intellectual property, and public policy dimensions. By emphasizing informed consent, equitable access, and stringent regulatory oversight, the paper advocates for a cautious yet innovative approach. This perspective seeks to maximize the life-saving potential of xenotransplantation while adhering to ethical principles, ensuring that this groundbreaking technology serves society equitably and responsibly.

I. INTRODUCTION

According to the Federal Organ Procurement and Transplantation Network (OPTN), there were 77,087 patients on the human organ transplant waitlist in the U.S. in 2024—a fifteen percent increase from the number of patients on the waitlist in 2019.[1] The unsettling reality is that seventeen people die each day in the U.S. waiting for an organ transplant.[2] Xenotransplantation has the potential to serve as a solution to the nation's organ shortage crisis.[3] Xenotransplantation is the transplantation of living cells, tissues, or organs from one species to another.[4] Pig organs are currently considered the most viable source of animal organs for human transplantation.[5] Recent advancements in genetic engineering, particularly through CRISPR/Cas technology, have brought the possibility of using pig organs for human transplants closer to reality by reducing the risk of immune rejection.[6] Despite its promising benefits, xenotransplantation raises undeniable ethical concerns.[7]

Perhaps the most apparent ethical concerns involve questions about the treatment and welfare of animals, particularly regarding the genetic modification of pigs for medical use in humans.[8] Animal rights advocates argue that the practice exploits sentient beings,[9] while proponents emphasize the utilitarian benefit of saving human lives with science.[10] Furthermore, the procedure introduces philosophical dilemmas about human identity, as the line between what it means to be human and what it means to be an 'animal' becomes increasingly blurred.[11] Additionally, the potential risk of zoonotic disease transmission from pigs to

[1] *National Waitlist Additions by Year*, OPTN METRICS, https://insights.unos.org/OPTN-metrics/.
[2] Nacha Cattan, *Pig Kidney Transplanted into Human Shows Way to Wider Use*, BLOOMBERG (Aug. 16, 2023, 10:52 AM), https://www.bloomberg.com/news/articles/2023-08-16/pig-kidney-transplanted-into-human-body-shows-way-to-wider-use?embedded-checkout=true.
[3] Willow Shah-Neville, *Saving lives with xenotransplantation: how biotechs are solving the transplant shortage crisis,* LABIOTECH (Oct. 5, 2023), https://www.labiotech.eu/in-depth/xenotransplantation-organ-shortage-crisis/.
[4] *Xenotransplantation*, WORLD HEALTH ORG., https://web.archive.org/web/20050113212657/http://www.who.int/transplantation/xeno/en/.
[5] Shah-Neville, *supra* note 3.
[6] *Id.*; Natalia Ryczek et al., *CRISPR/Cas Technology in Pig-to-Human Xenotransplantation Research,* INT'L J. MOLECULAR SCIS. 1, 15 (Mar. 2021).
[7] Andrew Jt George, *Ethics, Virtues, and Xenotransplantation*, 39 PERFUSION 334, 335 (2022).
[8] *Id.*
[9] Bernard E. Rollin, *Ethical and Societal Issues Occasioned by Xenotransplantation*, ANIMALS 1,1 (Sept. 2020).
[10] *See* Christopher Bobier et al., *In Defense of Xenotransplantation Research: Because of, Not in Spite of, Animal Welfare Concerns*, XENOTRANSPLANTATION, Jan.–Feb. 2023, at 1, 2 (arguing that the use of transgenic pigs in research and medicine satisfies the necessary conditions for morally permissible research).
[11] Paula Casal & Andrew Williams, *Human iPSC-Chimera Xenotransplantation and the Non-Identity Problem*, J. CLINICAL MED., Jan. 2019, at 1, 5.

humans complicates the ethical landscape of implementing xenotransplantation on a commercial scale, raising concerns about public health and safety.[12]

This article explores the ethical complexities of using pig organs for human xenotransplantation. By examining the scientific, legal, and ethical dimensions, this article aims to balance the potentially life-saving benefits of xenotransplantation with the moral, legal, and social implications it raises. Section two of this article begins with a background of xenotransplantation and the regulatory framework surrounding it. The third section examines ethical considerations, and the fourth section describes ethical theories as applied to xenotransplantation. The fifth section covers intellectual property and policy implications, while the sixth section explores public opinion and the social implications of xenotransplantation. The seventh section of the article argues for a cautious, yet forward-looking approach to xenotransplantation that respects ethical boundaries while maximizing benefits to human health. This ideal approach to xenotransplantation balances ethical considerations, such as animal welfare and informed consent, with the potential for life-saving benefits.

This article focuses exclusively on xenotransplantation in the United States and does not discuss international xenotransplantation practices, advancements, or policies.

II. BACKGROUND AND REGULATORY FRAMEWORK

Pig-to-human xenotransplantation has gained increased attention due to its potential to alleviate the U.S. organ shortage crisis.[13] Since the 1990s, scientists have explored using pigs as model organisms in xenotransplantation procedures.[14] Pig organs are considered suitable for human transplantation due to similarities in organ size and physiology.[15] While primates share many genetic and anatomical traits with humans, pigs are often the better choice for transplantation due to their large litters, fast reproduction rates, and docile nature.[16] Additionally, primate-to-primate xenotransplantation carries a higher risk of virus transmission, and most larger primates are classified as endangered species.[17] Since millions of pigs are

[12] Laichun Zhang & Lijun Ling, *Are We Ready for Pig-to-Human Clinical Xenotransplantation Trials?*, 28 ACTA BIOETHICA 149, 151 (2022).
[13] Shah-Neville, *supra* note 3.
[14] Ryczek et al., *supra* note 6, at 6.
[15] Shah-Neville, *supra* note 3.
[16] Carl G. Groth, *The Potential Advantages of Transplanting Organs from Pig to Man: A Transplant Surgeon's View*, 23 INDIAN J. UROLOGY 305, 305 (2007).
[17] *Id.*

slaughtered annually for food, scientists assume there would be fewer ethical objections to using pig organs for human xenotransplantation.[18]

Advancements in biotechnology have been crucial in mitigating organ rejection, a major hurdle in xenotransplantation.[19] A key breakthrough has been the use of gene editing technologies to modify pig genomes in ways that reduce the likelihood of immune rejection in human recipients.[20] This technology, better known as CRISPR/Cas, enables scientists to target and alter specific genetic sequences by modifying or deleting antigens that would otherwise trigger immune responses such as hyperacute and acute humoral xenograft rejection.[21] CRISPR/Cas, a powerful tool derived from a bacterial immune system, uses the Cas enzyme like molecular scissors to cut DNA at precise locations, allowing for highly targeted genetic modifications.[22] By removing genes associated with rejection and inserting human genes that help regulate immune responses, scientists have created genetically modified pigs whose organs are more compatible with the human body.[23] In tandem with these genetic advances, progress in immunosuppressive therapies has significantly improved xenograft survival, offering new hope for the broader adoption of pig-to-human organ transplants in the near future.[24]

One groundbreaking case of a pig-to-human organ transplant demonstrated the success of CRISPR/Cas technology in xenotransplantation.[25] In March 2024, surgeons at Massachusetts General Hospital successfully transplanted a pig kidney into Richard Slayman, a 62-year-old man with end-stage kidney disease.[26] Before the surgery, the pig kidney was genetically edited using CRISPR-Cas9 technology to improve its compatibility with the human recipient's body.[27] The kidney had sixty-nine genomic edits, including the removal of pig carbohydrate genes and inactivation of pig endogenous retroviruses, as well as the addition of human

[18] *Id.*
[19] *Id*.
[20] Ryczek et al., *supra* note 6, at 6–7.
[21] Melody Redman et al., *What is CRISPR/Cas9?*, 101 ARCHIVES DISEASE CHILDHOOD EDUC. & PRAC. 213, 213 (2016).
[22] *Id.* at 213–14.
[23] Ryczek et al., *supra* note 6, at 6–10.
[24] *Id.* at 6, 10–11.
[25] Mass General Brigham Communications, *In a First, Genetically Edited Pig Kidney is Transplanted into Human*, HARV. MED. SCH. (Mar. 21, 2024), https://hms.harvard.edu/news/first-genetically-edited-pig-kidney-transplanted-human.
[26] Brandon Chase, *World's First Genetically-Edited Pig Kidney Transplant into Living Recipient Performed at Massachusetts General Hospital*, MASS. GEN. HOSP. (Mar. 21, 2024), https://www.massgeneral.org/news/press-release/worlds-first-genetically-edited-pig-kidney-transplant-into-living-recipient.
[27] *Id.*

complement inhibitors, anticoagulants, and immune regulator genes.[28] The surgical team performing the transplant noted that as they finished connecting the pig kidney, it immediately "pinked up" and began producing urine.[29] Although Slayman passed away two months after the transplant,[30] scientists remain hopeful that similar surgeries could eventually offer a viable option for thousands of patients on organ transplant waitlists worldwide.[31]

The legal and regulatory framework governing xenotransplantation is complex.[32] In the United States, the Food and Drug Administration (FDA) sets the standards in regulating xenotransplantation products.[33] The FDA regulates xenotransplantation products under the authority of the Public Health Service Act[34] and the Federal Food, Drug, and Cosmetic Act.[35] Regulating xenotransplantation is a collaborative effort involving the FDA's Center for Veterinary Medicine (CVM) and the Center for Biologics Evaluation and Research (CBER).[36]

Institutional review boards (IRBs) play a vital role in overseeing xenotransplantation research.[37] If the FDA approves a xenotransplantation clinical trial, IRBs are tasked with "reviewing and approving the research activities while assuring documentation compliance."[38] Informed consent is an important component reviewed by IRBs, a process by which a research participant provides

[28] Mass General Brigham Communications, *supra* note 25 ("The pig kidney – provided by biotech company co-founded by HMS scientists – was genetically edited to make it more compatible with humans and reduce chance of infection.").
[29] *Id.*
[30] Virginia Hughes, *Patient Dies Weeks After Kidney Transplant from Genetically Modified Pig*, N.Y. TIMES (May 12, 2024), https://www.nytimes.com/2024/05/12/health/richard-slayman-death-pig-kidney-transplant.html. The article points out that there is "no indication" his death was related to the transplant.
[31] Mass General Brigham Communications, *supra* note 25.
[32] Wayne J. Hawthorne, *Ethical and Legislative Advances in Xenotransplantation for Clinical Translation: Focusing on Cardiac, Kidney and Islet Cell Xenotransplantation*, 15 FRONTIERS IMMUNOLOGY, 2024, at 1, 5.
[33] FOOD AND DRUG ADMIN., FDA-2000-D-0129, SOURCE ANIMAL, PRODUCT, PRECLINICAL, AND CLINICAL ISSUES CONCERNING THE USE OF XENOTRANSPLANTATION PRODUCTS IN HUMANS 1, 1 (2016), https://www.fda.gov/regulatory-information/search-fda-guidance-documents/source-animal-product-preclinical-and-clinical-issues-concerning-use-xenotransplantation-products.
[34] 42 U.S.C. § 262.
[35] 21 U.S.C. ch. 9; FOOD AND DRUG ADMIN., PHS GUIDELINE ON INFECTIOUS DISEASE ISSUES IN XENOTRANSPLANTATION, FDA-1996-M-0140 1, 4 (2001).
[36] Peter Marks & Steven Solomon, *Clarifying US Regulations on Xenotransplantation*, 39 NATURE BIOTECHNOLOGY, 1500, 1500 (2021).
[37] Andrew Adams et al., *American Society of Transplant Surgeons-American Society of Transplantation Report of FDA Meeting on Regulatory Expectations for Xenotransplantation Products*, 23 AM. J. TRANSPLANTATION 1290, 1295 (2023) (Institutional review boards provide oversight in FDA human subjects research).
[38] Luz A. Padilla et al., *Informed Consent for Potential Recipients of Pig Kidney Xenotransplantation in the United States*, 106 TRANSPLANTATION 1754, 1755 (2022).

their permission to participate in a clinical trial.[39] The consent process is standard in all clinical trial settings but is especially crucial in the case of a novel procedure with uncertain outcomes, such as xenotransplantation.[40] IRBs serve as crucial safeguards, ensuring that participants in xenotransplantation trials are fully informed.[41] A unique aspect of informed consent for xenotransplantation is that patients must consent to be subject to lifetime surveillance after the procedure, with no ability to opt out.[42]

As regulatory frameworks ensure that xenotransplantation research is conducted responsibly, ethical considerations surrounding these procedures are equally important. Xenotransplantation raises complex ethical issues, such as the risk for the patient, the risk of zoonotic disease, questions of human identity, and concerns for animal rights and welfare.[43] The following section will explore these critical ethical challenges, highlighting the need for a balanced, morally responsible approach to animal-to-human xenotransplantation.

III. ETHICAL CONSIDERATIONS

The breeding, genetic modification, and use of pigs for xenotransplantation present significant ethical concerns, particularly regarding animal welfare.[44] Genetic modifications designed to make pigs more suitable for transplantation intensify these concerns, prompting questions about the treatment and well-being of the animals.[45] Pigs raised for organ transplantation are kept in confined, sterile environments that fail to meet their biological and psychological needs.[46] In the early 1980s, the U.S. agricultural community issued the Council for Agricultural Science and Technology (CAST) Report, which stated that animals are owed nothing more than what it takes to create profit.[47] This position is relevant to concerns about xenotransplantation, as breeding animals solely to harvest organs commodifies their lives and diminishes their intrinsic value as living beings.[48] Philosopher Bernard Rollin believed *telos* was the most reasonable vehicle for describing humanity's moral obligation to animals.[49] *Telos* accommodates an

[39] *Id*.
[40] *Id*. at 1754.
[41] *Id*.
[42] *Id*.
[43] George, *supra* note 7, at 334, 336.
[44] *Id.* at 335–36.
[45] *Id.*
[46] *See* Rollin, *supra* note 9, at 4 (implying pigs require the ability to move freely as evidenced by their traditional upbringing on outdoor pastures with barns to retreat to in severe weather).
[47] *Id.* at 5.
[48] *Id.* at 3.
[49] *See id.* at 4–5 (defining Aristotle's concept of *telos* as the nature of an animal).

animal's biological and psychological needs, and keeping pigs in small cages violates a pig's *telos*.[50]

From an animal rights advocacy perspective, there are strong arguments against xenotransplantation based on the sentience and capacity for suffering of pigs.[51] A 2015 research article by scholars at Emory University revealed that pigs are highly intelligent animals who have demonstrated their capacity for long-term memory, their ability to prioritize important memories, and even their ability to perceive time.[52] More importantly, studies have shown that pigs can feel pain and exhibit pain-related behaviors such as trembling, huddling up, spasms, and stiffness.[53] Pigs used for xenotransplantation are kept in isolation without contact with their mothers or other animals and undergo frequent blood and tissue sampling, causing them psychological and physical distress.[54] Critics of xenotransplantation are concerned about which animal welfare regulations scientists follow.[55]

On the other hand, proponents of xenotransplantation use utilitarian arguments to justify the use of pigs in xenotransplantation by emphasizing the potential to save human lives.[56] Utilitarianism emphasizes the well-being of society by promoting positive outcomes, ensuring an equitable allocation of resources, and minimizing harm to other beings.[57] By framing the use of pigs as a means to alleviate human suffering and address organ shortages, supporters argue that the overall benefit to society outweighs any ethical violations associated with xenotransplantation.[58] Proponents of xenotransplantation argue that since society

[50] *See id.* (noting the use of *telos* to guide moral obligations to animals correlates to acting in accordance with an animal's inherent nature).
[51] L. Syd M. Johnson, *Xenotransplantation: Three Areas of Concern,* THE HASTINGS CTR. (Jan. 19, 2022), https://www.thehastingscenter.org/xenotransplantation-three-areas-of-concern/.
[52] Lori Marino & Christina M. Colvin, *Thinking Pigs: A Comparative Review of Cognition, Emotion, and Personality in Sus Domesticus*, INT'L J. COMPAR. PSYCH., 2015, at 1, 5–7.
[53] Sarah H. Ison et al., *A Review of Pain Assessment in Pigs*, 3 FRONTIERS VETERINARY SCI., 2016, at 1, 4.
[54] Johnson, *supra* note 51.
[55] Sana Baban & Ashlin Amano, *Involuntary Donation: Animal Welfare and Xenotransplantation,* THE HASTINGS CTR. (Dec. 8, 2023), https://www.thehastingscenter.org/involuntary-donation-animal-welfare-and-xenotransplantation/.
[56] *See* Bobier et al., *supra* note 10, at 2.
[57] Murali Krishna & Peter Lepping, *Ethical Debate: Ethics of Xeno-Transplantation*, BRIT. J. MED. PRACS., Sept. 2011, at 46, 47. ("Utilitarianism takes into account the reasonable interests of society in good outcomes, fairness in the distribution of resources, and the prevention of harm to others.").
[58] *See id.* (explaining the Consequentialist view that the suffering and death of animals may be viewed as acceptable for the betterment of a human patient and improvement of human welfare).

has long accepted the industrial farming of pigs for food, using them to save human lives should be equally acceptable.[59]

One of the most profound ethical concerns surrounding xenotransplantation is its potential impact on human identity.[60] The idea of integrating animal organs into human bodies challenges deeply held beliefs about what it means to be human.[61] While some may view the procedure as a promising medical breakthrough, others perceive it as crossing a moral line, violating an invisible boundary between species.[62] This discomfort is not merely aesthetic; it taps into a broader concern that xenotransplantation may erode the conceptual distinction between humans and animals, threatening our understanding of human dignity, uniqueness, and moral status.[63] The fear of creating pig-human hybrids, however scientifically inaccurate, reflects a visceral anxiety about altering the human form in ways that may blur the line between natural and unnatural, human and non-human.[64] This fear is deeply rooted in historical and cultural narratives—from ancient myths of chimeras (also spelled "chimaeras" in British English and some scientific literature) and sphinxes to modern science fiction depictions of grotesque hybrids, which frame such mixing as unnatural or monstrous.[65] These portrayals shape public imagination and raise ethical questions about the limits of biomedical innovation.[66] If human identity is partly defined by the boundaries we draw between ourselves and other species, then xenotransplantation forces us to reconsider those boundaries and confront what, if anything, is lost when they are crossed.

Cultural and religious perspectives also play a crucial role in debates over the sanctity of the human body in xenotransplantation.[67] One 2022 study examined the perspectives of Catholic and atheist/agnostic veterinary students on xenotransplantation.[68] Almost ninety-three percent of practicing and nonpracticing Catholics and nearly ninety-four percent of agnostic/atheist students reported they were in favor of xenotransplantation.[69] A 2024 study revealed that Muslims were

[59] *Id.*
[60] George, *supra* note 7, at 336.
[61] *Id*.
[62] *Id*.
[63] *Id*.
[64] Peta S. Cook, *The Social Aspects of Xenotransplantation,* 7 SOCIO. COMPASS 237, 245 (2013).
[65] *See id*. (explaining that the inclusion of composite beings such as the chimera and the sphinx in stories was used to warn humans of the dangers of mixing disparate species).
[66] *Id*.
[67] Juan Flores-Medina et al., *Do Religious Beliefs Influence the Acceptance of Xenotransplantation? Veterinary Students*, 54 TRANSPLANTATION PROC. 2419, 2419 (2022).
[68] *Id.* at 2419–20.
[69] *Id.* at 2420.

less likely to approve of xenotransplantation than Christians.[70] Jewish law prohibits the use of non-kosher animals, such as pigs, for consumption or in business ventures.[71] However, Jewish law allows for certain commandments in the Bible to be violated to save a human life, implying that xenotransplantation is permissible in the Jewish religion.[72] In some cultures, where the body is regarded as a sacred vessel for the soul, the idea of introducing animal organs through xenotransplantation may be seen as a violation of spiritual or bodily integrity.[73] This belief can contribute to ethical or religious opposition, separate from formal doctrine, and reflects how deeply cultural views shape acceptance of biomedical innovations.

Another significant ethical concern in xenotransplantation is the risk of cross-species disease transmission, especially zoonotic diseases.[74] Pigs carry porcine endogenous retroviruses (PERVs), which can infect a xenograft recipient and lead to symptomatic or asymptomatic disease.[75] The eventual heart failure experienced after the first-in-human porcine heart transplantation performed in 2022 was thought to be due to an undetected latent porcine cytomegalovirus infection that had infected the pig before the transplantation.[76] Even if a human xenograft recipient were to survive and show no signs of illness, critics worry that pathogens could spread from the recipient to others, "creating an epidemic or even pandemic disease."[77] To minimize the risks of infection in human recipients, scientists advise using isolated housing and breeding only specific pathogen-free pig herds, as well as lifetime surveillance of patients.[78] Still, "[t]he risk of xenotransplantation-related zoonosis will never be eliminated, and constant vigilance will be required as clinical xenotransplantation proceeds."[79]

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[70] Gabriel Andrade et al., *Moral Approval Xenotransplantation in Egypt: Association with Religion, Attitudes Towards Animals and Demographic Factors*, BMC MED. ETHICS, Dec. 2024, at 1, 12.
[71] John D. Loike & Rabbi Moshe Krupka, *The Jewish Perspectives on Xenotransplantation*, RAMBAM MAIMONIDES MED. J., Oct. 2023, at 1, 3.
[72] *Id.* at 3, 4.
[73] *See* Megan Sykes et al., *The Ethics of Xenotransplantation: Position Paper of the Ethics Committee of the International Xenotransplantation Association*, 10 XENOTRANSPLANTATION 194, 199–200 (2003).
[74] Bobier et al., *supra* note 10, at 3.
[75] *Id.*
[76] Henry Silverman & Patrick N. Odonkor, *Reevaluating the Ethical Issues in Porcine-to-Human Heart Xenotransplantation*, HASTINGS CTR. REP., Sept.–Oct. 2022, at 32, 33.
[77] Bobier et al., *supra* note 10, at 3.
[78] Yong-Guang Yang & Megan Sykes, *Xenotransplantation: Current Status and a Perspective on the Future,* 7 NATURE REVS. IMMUNOLOGY 519, 523 (2007); Padilla et al., *supra* note 38.
[79] Yang & Sykes, *supra* note 78, at 523.

The precautionary principle emphasizes that in xenotransplantation, scientists and policymakers must prioritize minimizing public health risks, given the uncertainty surrounding zoonotic diseases.[80] This principle advocates for erring on the side of caution when there exists potential for serious harm, which is especially important in xenotransplantation, where the risks are virtually impossible to predict.[81] Ethically, the potential harm to society from a new zoonotic outbreak could outweigh the individual benefits of organ transplants.[82]

In the event of a zoonotic disease outbreak, there would be confusing questions of legal liability.[83] A transplant center may be liable in tort for the spread of infectious disease by way of negligence, strict liability, product liability, or public nuisance.[84] Plaintiffs in such suits could include the transplant patient who contracted a disease and other members of the general public who end up contracting a disease from a xenograft recipient.[85] As science advances, legal precedent will need to be established to clarify the roles and responsibilities of stakeholders involved in xenotransplantation.

Next, it is crucial to examine some ethical frameworks that guide decisions in xenotransplantation to better understand its moral implications.

IV. ETHICAL THEORIES

As the scientific possibilities of xenotransplantation advance, a closer examination of its ethical dimensions is essential. This section explores key ethical theories—utilitarianism, deontology, and virtue ethics—to provide a framework for evaluating the moral complexities of xenotransplantation. Each perspective offers different insights into the balance between the potential benefits of cross-species organ transplantation and the ethical implications of animal welfare, human risk, and societal impact.

From a utilitarian standpoint, xenotransplantation could benefit society immensely by addressing the U.S. organ shortage crisis.[86] Utilitarianism is an outcomes-based theory that "takes into account the reasonable interests of society

[80] Colin Michie, *Xenotransplantation, Endogenous Pig Retroviruses and the Precautionary Principle*, 7 TRENDS MOLECULAR MED. 62, 63 (2001).
[81] *Id.* at 62–63.
[82] *Id.* at 63.
[83] Sanders J. Chae & David K. C. Cooper, *Legal Implications of Xenotransplantation*, 4 XENOTRANSPLANTATION 132, 132 (1997).
[84] *Id.* at 136–38.
[85] *Id.* at 136.
[86] Krishna & Lepping, *supra* note 57, at 46.

in good outcomes, fairness in the distribution of resources, and the prevention of harm to others."[87] A utilitarian in support of xenotransplantation, then, might believe that the best way to combat the global organ shortage crisis is to maximize the "good," or utility, which in this case would mean reducing suffering and increasing the well-being of the greatest number of people.[88] Regarding transplantation, philosopher Robert Veatch suggested that "the utilitarian's goal should be to allocate the organ to the individual who is likely to gain the greatest number of quality-adjusted life-years from the organ."[89] From a utilitarian standpoint, is the best option to practice xenotransplantation on patients worldwide? Possibly not. Even if these procedures were widely available, they would likely be expensive and thus only accessible to the wealthiest patients.[90] Additionally, xenotransplantation poses unforeseen long-term societal risks, such as the spread of zoonotic disease, which could create a worldwide pandemic.[91] Balancing immediate benefits to patients with the potential risks to society is crucial in a utilitarian assessment of xenotransplantation, ensuring that public health interests align with upholding ethical standards.

A deontological perspective on xenotransplantation emphasizes the ethical importance of respecting animal rights and adhering to moral duties, independent of the transplant procedure's potential benefits.[92] Deontology, also called duty ethics, contrasts with utilitarianism.[93] Deontology "stresses the intrinsic value of all individual persons, the duty of self-determination, and the cardinal importance of patient autonomy."[94] Regarding xenotransplantation, deontologists may believe that animal and human rights should be valued similarly.[95] Deontologists have raised ethical concerns regarding xenotransplantation because it potentially violates the duty not to harm or cause suffering to sentient beings, regardless of potential benefits to humans.[96] Even if xenotransplantation could save human lives, a deontologist might assert that society must respect animal autonomy and avoid subjecting them to harm or genetic manipulation solely for human benefit.[97]

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[87] *Id.*; Linda Wright et al., *Ethics in Transplantation: Allotransplantation and Xenotransplantation*, *in* KIDNEY TRANSPLANTATION: PRINCIPLES & PRACTICE 694, 694 (Peter J. Morris & Stuart J. Knechtle eds., 2009).
[88] Paul Smith, *Utilitarianism,* in MORAL AND POLITICAL PHILOSOPHY: KEY ISSUES, CONCEPTS AND THEORIES 143, 143 (2008).
[89] Wright et al., *supra* note 87, at 698.
[90] Krishna & Lepping, *supra* note 57, at 47.
[91] Bobier et al., *supra* note 10, at 3.
[92] Krishna & Lepping, *supra* note 57, at 47.
[93] Wright et al., *supra* note 87, at 694–95.
[94] *Id.* at 694.
[95] Krishna & Lepping, *supra* note 57, at 47.
[96] Aysha Karim Kiani et al., *Ethical Considerations Regarding Animal Experimentation*, 63 J. Preventive Med. & Hygiene 255, 255-57 (2022).
[97] *See id*.

Additionally, a deontological approach stresses ethical obligations to patients, particularly regarding informed consent.[98] Patients considering xenotransplantation must be made fully aware of its risks and uncertainties, such as the transfer of zoonotic disease.[99] In summary, a deontological perspective underscores the importance of honoring ethical principles and respecting the rights of both species involved, humans and non-human animals alike.[100]

Lastly, a virtue ethics approach to xenotransplantation centers on the character traits fostered or undermined by engaging in such practice.[101] Virtue ethics, first pioneered by Aristotle, is an ancient form of ethical thinking that came before utilitarianism and deontology.[102] Rather than focusing on actions, virtue ethics focuses on a person's character.[103] In virtue ethics, the individual should strive for their *telos*, or ultimate purpose.[104] For instance, a physician's *telos* might be understood as promoting human well-being by enhancing their patients' health.[105] A doctor might choose not to perform a procedure such as xenotransplantation if it would harm their patient because they care about improving their patient's long-term health.[106] In contrast, a scientist's *telos* might be to increase knowledge and contribute to modern-day scientific advancements.[107] Ultimately, virtue ethics emphasizes that decisions in xenotransplantation should align with the core virtues of an individual's role and purpose.[108] By focusing on virtues relevant to their roles, professionals involved in xenotransplantation can evaluate ethical decisions not solely based on outcomes or rules, but on how their actions reflect their character.[109] A virtue ethics approach thus adds a nuanced layer to the ethics of xenotransplantation, promoting actions that foster moral integrity and respect for both humans and non-human animals.

While utilitarianism, deontology, and virtue ethics provide different ethical lenses in which to view xenotransplantation, ethical considerations also extend to

[98] Jharna Mandal et al., *Utilitarian and Deontological Ethics in Medicine*, 6 TROPICAL PARASITOLOGY 5, 5–6 (2016).
[99] Wright et al., *supra* note 87, at 703.
[100] Gary L. Francione, *Animal Rights Theory and Utilitarianism: Relative Normative Guidance*, 3 ANIMAL L. 75, 81 (1997).
[101] George, *supra* note 7, at 334.
[102] *Id.* at 338.
[103] *Id.*
[104] *Id.*
[105] *Id.* at 338.
[106] *Id.*
[107] *Id.*
[108] *Id.*
[109] *Id.* at 339–41.

the legal and policy frameworks that govern the procedure, including issues of intellectual property and regulation.

V. INTELLECTUAL PROPERTY AND POLICY IMPLICATIONS

Xenotransplantation raises questions about intellectual property rights and biotechnology patents. Biotechnology companies play a pivotal role in patenting genetically engineered animals specifically modified for human organ transplants.[110] The landmark 1980 Supreme Court decision in *Diamond v. Chakrabarty*[111] held that live, human-made organisms are patentable under Title 35 § 101 of the U.S. Code.[112] Yet, despite *Chakrabarty*'s holding, there is an ongoing debate in the U.S. as to whether human-non-human chimeras are patentable.[113] The U.S. allows patent rights for products used in the medical treatment or cure of a patient, but limits the enforcement of such patents.[114] Interestingly enough, human donors of human induced pluripotent stem cells (iPSCs) (used in genetically modified pigs for human xenotransplantation) could seek to enforce their property rights in their biological material.[115] This raises a complex ethical issue, as the question of who owns the genetic material and resulting products is deeply intertwined with concerns about for-profit motives in the biotechnology industry.

Commercializing and patenting genetically modified organisms (GMOs) presents ethical dilemmas.[116] While GMOs have the potential to enhance human life, they also pose risks that could negatively impact both human health and the environment.[117] Some fear that the patenting and commercial use of life forms could lead to adverse environmental changes.[118] For example, the commercialization of genetically modified (GM) fish poses threats to biodiversity,

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[110] Shah-Neville, *supra* note 3.
[111] 447 U.S. 303 (1980).
[112] Diamond v. Chakrabarty, 447 U.S. 303, 315–18 (1980).
[113] Saron Araya, *Should Animal-Human Hybrids be Patentable?*, CORNELL J.L. & PUB. POL'Y, THE ISSUE SPOTTER (October 10, 2023), https://live-journal-of-law-and-public-policy.pantheonsite.io/should-animal-human-hybrids-be-patentable/; Koko Kwisda et al., *Regulatory and Intellectual Property Conundrums Surrounding Xenotransplantation*, 39 NATURE BIOTECHNOLOGY 796, 797 (2021).
[114] Kwisda et al., *supra* note 113, at 798.
[115] *Id.*
[116] *See generally Patenting Genes and Life Forms: Laws and Ethical Issues*, BREALANT (June 27, 2023), https://www.brealant.com/patenting-genes-and-life-forms-laws-and-ethical-issues/.
[117] Ronit Langer & Shruti Sharma, *The Blessing and Curse of Biotechnology: A Primer on Biosafety and Biosecurity*, CARNEGIE ENDOWMENT FOR INT'L PEACE (Nov. 20, 2020), https://carnegieendowment.org/research/2020/11/the-blessing-and-curse-of-biotechnology-a-primer-on-biosafety-and-biosecurity?lang=en.
[118] *Id.*

ecosystems, and food chains.[119] The same concern could be had about GM pigs designed for use in xenotransplantation.[120] GM pigs often contain genetic modifications that make them resistant to certain diseases, such as the porcine reproductive and respiratory syndrome virus (PRRSV),[121] which could have unpredictable effects on the wild pig population if they were to interbreed or interact.[122]

The commercialization and patenting of xenotransplantation technology and processes also pose the issue of: who *actually* owns the organs? Most likely, the owner would be the biotechnology company that "created" the genetically modified animal.[123] For instance, Revivicor Inc. owns the rights to GalSafe pigs, a GM breed that the FDA has approved as a source of organs for potential xenotransplantation procedures.[124] Biotechnology companies, rather than public health organizations, may then control the availability and cost of organs for transplantation. This raises further concerns about whether lifesaving medical treatments could become accessible only to those who can afford them, creating potential barriers to equitable healthcare access.[125] As xenotransplantation research progresses, comprehensive policy considerations are essential to address complex legal and ethical issues surrounding organ ownership, commercialization, and equitable access to biotechnology advancements.

Beyond policy and intellectual property concerns, the public opinion and social implications of xenotransplantation also play a critical role in shaping its future.

VI. PUBLIC OPINION AND SOCIAL IMPLICATIONS

Public perception of xenotransplantation is complex, often reflecting concerns about ethics, religion, and the natural order.[125] One particularly well-known xenotransplantation effort resulted in widespread negative public perception

[119] Memorandum from Brie Lindsey to Tom Weseloh, Joint Comm. on Fisheries & Aquaculture (April 7, 2014) (on file with the California Legislator Senate Office of Research).
[120] *See generally* Kerry Grens, *The Superpowers of Genetically Modified Pigs*, THE SCIENTIST (Aug. 1, 2018), https://www.the-scientist.com/the-superpowers-of-genetically-modified-pigs-64513.
[121] *Id*.
[122] *See generally* Zicong Xie et al., *Genetically modified pigs are protected from classical swine fever virus*, 14 PLOS PATHOGENS (2018).
[123] *See* Sanders J. Chae & David K.C. Cooper, *Legal Implications of Xenotransplantation*, 4 XENOTRANSPLANTATION 132, 134 (1997).
[124] *See* Revivicor's Vision, REVIVICOR, https://www.revivicor.com (last visited Apr. 9, 2025).
[125] Chase Mitchell et al., *Meta-Analysis of Public Perception Toward Xenotransplantation*, XENOTRANSPLANTATION 1, 1-7 (July–Aug. 2020).

of the procedure.[126] In 1984, pediatric cardiac surgeon Leonard Bailey and his team transplanted a baboon heart into an infant known as Baby Fae, who had been born prematurely twelve days prior with a fatal heart defect.[127] The transplant was at first successful, but Baby Fae tragically passed away twenty-one days later.[128] What came to light later was that a suitable human heart for Baby Fae's transplant became available on the day of her operation and that the surgical team nevertheless decided to move forward with the experimental procedure.[129] This unfortunate case sparked widespread fear of prioritizing scientific advancement over patient welfare.[130] The critique has continued to shape public opinion on xenotransplantation,[131] while also contributing to ongoing discussions about informed consent and ethical considerations in scientific research.[132]

Cultural and religious attitudes further complicate public acceptance of using pig organs in xenotransplantation, particularly in societies with religious prohibitions against pigs.[133] In Islamic and Jewish traditions, pigs are regarded as unclean, and many adherents avoid pork consumption and close contact with pigs.[134] Some focus studies have provided useful perspectives about Islamic and Jewish leaders' attitudes surrounding organ transplantation.[135] These views vary even among religious leaders in the same group.[136] For example, one Muslim participant in a 2022 focus group study voiced that xenotransplantation would be acceptable under Islamic tradition because saving a human life "takes precedence over everything."[137] Similarly, Jewish law greatly values saving human lives.[138] Under Jewish law, rabbis take into consideration whether a patient would live longer with his own organ or with a transplanted pig organ.[139] A cultural concern surrounding xenotransplantation, outside of religious influence, is the "discarding

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[126] *Id.*
[127] Ned Stafford, *Leonard L Bailey: In 1984 He Transplanted a Baboon Heart into a Human Infant Known as "Baby Fae"*, BRIT. MED. J.1, 1 (July 12, 2019).
[128] *Infant Heart Transplantation,* LOMA LINDA UNIV. HEALTH, https://lluh.org/leonard-bailey/infant-heart-transplantation (last visited Apr. 9, 2025).
[129] Claudia Wallis, *Baby Fae Stuns the World*, TIME (Nov. 12, 1984, 12:00 AM), https://time.com/archive/6860827/baby-fae-stuns-the-world/.
[130] *Id*.
[131] *Id.*
[132] *See* Mitchell et al., *supra* note 125, at 1–2.
[133] Gideon Lasco, *The Cultural Anxieties of Xenotransplantation*, SAPIENS (Feb. 15, 2022), https://www.sapiens.org/culture/the-cultural-anxieties-of-xenotransplantation/.
[134] *Id.*
[135] Daniel J. Hurst et al., *The Attitudes of Religious Group Leaders Toward Xenotransplantation: A Focus Group Study*, XENOTRANSPLANTATION, Sept.–Oct. 2022, at 1, 4.
[136] *See id*.
[137] *Id*.
[138] John D. Look & Rabbi Moshe Krupka, *The Jewish Perspectives on Xenotransplantation*, RAMBAM MAIMONIDES MED. J., Oct. 2023, at 1, 1, 3–5.
[139] *Id.*

of life" that occurs when pig organs are harvested for human use.[140] This broader apprehension about compromising the sanctity of life illustrates the deep ethical and spiritual concerns that shape public opinion, emphasizing the need for thoughtful dialogue and cultural sensitivity as xenotransplantation research advances.[141]

As technology progresses, another concern is determining who will have access to xenotransplantation procedures.[142] Organ allocation involves a consideration of multiple factors, including illness severity, post-transplant prognosis, time spent on the waitlist, blood type, immune compatibility, and location.[143] Despite the multiple factors considered in choosing who receives an organ transplant, disparities persist, largely affecting Black, Hispanic, Indigenous Americans, and other people of color.[144] Given the high costs associated with xenotransplantation procedures, there are significant concerns that only the wealthy will benefit from such treatments.[145] This raises critical issues of equity, as it could further entrench healthcare disparities, where those with financial means receive cutting-edge medical care, and lower-income populations are excluded from potentially lifesaving treatments.[146] Socioeconomic disparities are already a pressing issue in healthcare access, and xenotransplantation could further exacerbate these inequalities if the proper preventative steps are not taken.[147] One preventative step could include establishing clinical trials inclusive of diverse ethnic and racial backgrounds to improve representation in healthcare, bridge knowledge gaps, and strengthen the public's trust in new treatments.[148]

Insurance and government funding will play pivotal roles in determining who can access xenotransplantation. If these procedures are prohibitively expensive, they will be limited to a small, privileged segment of the population.[149] In the United States, healthcare is often tied to private insurance, whereas other first-world countries have a universal, multi-payer healthcare system.[150] For U.S.

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[140] Hurst et al., *supra* note 135, at 8.
[141] Lasco, *supra* note 133.
[142] Muhammed Shabil et al., *The Potential and Perils of Xenotransplantation: Addressing Healthcare Inequities*, 62 INT'L J. SURGERY OPEN 632, 632–34 (2024).
[143] *Id.*
[144] *Id.*
[145] *Id.*
[146] Shabil et al., *supra* note 142, at 633.
[147] *Id.*
[148] *Id.*
[149] *Id.*
[150] *See generally* Andrea S. Christopher, *Single Payer Healthcare: Pluses, Minuses, and What it Means for You*, HARV. HEALTH PUBL'G: HARV. HEALTH BLOG (June 27, 2016), https://www.health.harvard.edu/blog/single-payer-healthcare-pluses-minuses-means-201606279835.

patients, access to xenotransplantation would then depend on the quality of their health insurance.[151] This could result in significant disparities, as those with more comprehensive insurance plans may be more likely to afford these cutting-edge treatments, while those without insurance or less robust plans may face insurmountable financial barriers.[152] Without adequate government regulation or insurance mandates,[153] xenotransplantation could become a privilege for the wealthy, further deepening healthcare disparities.[154] The role of government is critical in ensuring that this groundbreaking technology does not become another example of how socioeconomic status can determine access to life-saving medical treatments.[155]

VII. AN ETHICAL APPROACH TO XENOTRANSPLANTATION

A cautious yet forward-looking approach to xenotransplantation is needed to balance the promise of this potentially life-saving medical procedure with the need to uphold ethical principles. Animal welfare should be emphasized by enforcing the humane treatment of animals and limiting genetic modifications to those essential for reducing organ rejection and disease transmission.[156] Rigorous informed consent processes ensure that patients fully understand the risks, benefits, and uncertainties involved, as well as information about the lifetime monitoring that xenotransplantation requires.[157] Equitable access is another cornerstone of the approach, with policies designed to ensure xenotransplantation access to diverse populations without exacerbating healthcare inequalities.[158] Further, robust regulatory oversight and ongoing research are required to minimize risks and ensure that advancements in medical technology serve the greater good without compromising ethical principles.[159] Ultimately, addressing the ethical concerns will require a commitment from policymakers and stakeholders to develop comprehensive policies and ensure that xenotransplantation is pursued in a manner

[151] Marie Chisholm-Burns et al., *Xenotransplantation Could Either be a Friend or Foe of Healthcare Equity*, COMMC'NS MED. 1, 2 (2024).
[152] *See generally* Peter S. Hussey et al., *The Association Between Health Care Quality and Cost a Systematic Review*, 158 ANNALS INTERNAL MED. 27, 27–34 (2013).
[153] Institute of Medicine (US) Committee on Xenograft Transplantation: Science, Ethics, and Public Policy, XENOTRANSPLANTATION: SCI., ETHICS, AND PUB. POL'Y, 81–85 (1996).
[154] *See generally* Marie Chisholm-Burns et al., *Xenotransplantation Could Either be a Friend or Foe of Healthcare Equity*, COMMC'NS MED., 2024, at 1, 2.
[155] *See generally* Yeonwoo Kim et al., *Socioeconomic Disparities in Health Outcomes in the United States in the Late 2010s: Results From for National Population-Based Studies*, ARCHIVES PUB. HEALTH, 2023, at 1, 10.
[156] Hawthorne, *supra* note 32, at 5.
[157] Padilla et al., *supra* note 38, at 1.
[158] Chisholm-Burns et al., *supra* note 151, at 1–2.
[159] Hawthorne, *supra* note 32, at 7.

that is just, compassionate, and beneficial to all members of society, not just the wealthy and privileged.[160]

VIII. CONCLUSION

Xenotransplantation holds great promise for addressing the nation's organ shortage crisis, but widespread implementation remains years away due to scientific, ethical, and regulatory challenges. While the capacity to save human lives is compelling, significant ethical concerns arise, especially regarding animal welfare and the moral implications of modifying life forms for medical use. Ethical frameworks, including utilitarianism, deontology, and virtue ethics, offer varied perspectives on the morality of xenotransplantation, each highlighting different aspects of its ethical complexity. Moreover, the regulatory environment surrounding xenotransplantation is still evolving, with pressing questions about who will control access to these potentially life-saving procedures and how best to balance innovation with ethical safeguards. Public opinion, cultural beliefs, and religious considerations further influence the acceptance and future of xenotransplantation, particularly in societies where traditional values may conflict with the practice. A cautious approach that balances ethical, moral, and social obligations is essential for the widespread practice of xenotransplantation.

[160] *Id.*

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PANDORA'S BOX: RECOMMENDING A PROHIBITION ON PHYSICIAN-ASSISTED SUICIDE AND EUTHANASIA AT THE STATE LEVEL

Jasmine Bouche*

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I. INTRODUCTION

The physician's role in assisted suicide is sparking intense debate throughout the United States and internationally. At the time of writing, ten states and Washington, D.C. have authorized some form of medical aid in dying, while euthanasia remains universally prohibited under general homicide laws.[161] Medical aid in dying and physician-assisted suicide differ from euthanasia in that the patient often self-administers or self-ingests a medication intended to end their life, unlike euthanasia, where a provider directly administers a lethal dose.[162] Given that this complex and highly sensitive issue continues to arise in the public zeitgeist and government policy discussions, especially at the state level, this paper presents an important legal and ethical analysis evaluating the risks inherent to opening the proverbial Pandora's Box of physician-assisted suicide and euthanasia (hereinafter "PAS/E"). As the title suggests, state-permitted PAS/E will create undesirable complications and unintended consequences that cannot be contained or restrained. States should not legalize PAS/E to (1) preserve the inalienable right to life every individual possesses, (2) protect vulnerable populations, (3) prevent the slippery slope caused by the legalization of medical aid in dying— seen in Canada, Belgium, and the Netherlands, (4) safeguard the practice of medicine and the patient-physician relationship, (5) and prevent abuse and misuse. Alternatively, states should focus on expanding palliative care programs, pain management resources, and mental health support systems. The arguments developed below are designed to aid government decision-makers and policy drafters at the state level.

II. OPERATING CONTEXT: POLITICAL, LEGAL, AND MEDICAL

The foundational creeds structuring Western society endow all individuals with the inalienable right to life. Specifically, in the United States, the Declaration of Independence bestows all men with "certain unalienable rights…among these are Life, Liberty and the pursuit of Happiness."[163] The Universal Declaration of Human Rights, which is adopted by the United States, broadly prescribes the same covenant, immediately noting the "recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world," as well as the "right to life, liberty and security of person."[164] At a global level, although not adopted by the United States, the European Convention on Human Rights states, "[e]veryone's right to life shall

[161] *MAID: Medical Aid in Dying. Should Medical Aid in Dying Be Legal?*, BRITANNICA (Nov. 8, 2024), https://euthanasia.procon.org/states-with-legal-physician-assisted-suicide/.
[162] *Id.*
[163] THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776).
[164] G.A. Res. 217 (III) A, Universal Declaration of Human Rights (Dec. 10, 1948).

be protected by law."[165] These precepts ordain the negative rights which form the legal basis of human autonomy in the West, imposing a non-interference duty on others and the government as pertains to fundamental, individual freedoms.[166] Conversely, positive rights implicate affirmative measures entitling a person to achieve certain goods, treatments, or services, obliging others, namely governments and related institutions, to act in support of particular needs.[167] In a society founded on inalienable rights, PAS/E ultimately puts the negative right to life directly at odds with the idea of a state-sanctioned, positive right to die or be killed, as defined and advocated for by supporters of PAS/E.[168]

The United States Supreme Court has contemplated the tension between the negative and inalienable right to life and the idea of a state-sanctioned, positive right to be killed in the context of PAS/E. The Court has also teased out the distinction between the negative right to life, allowing refusal of medical treatment, and the positive right to be assisted in dying or to be killed. In *Cruzan*, the first Supreme Court case concerning the right to die, the family of a woman in a persistent vegetative state attempted to terminate her life-sustaining support.[169] Ultimately, the Court held that competent and incompetent individuals enjoy the negative right to refuse medical treatment under the Due Process Clause.[170] The dissent continued the discussion further, underscoring that the right to refuse medical treatment is a matter of fundamental civil rights and is consistent with the United States' constitutional history and traditions: ""[t]he inviolability of the person" has been held as "sacred" and "carefully guarded" as any common-law right."[171]

This position was affirmed seven years later in *Vacco v. Quill*, a case in which physicians and patients challenged the constitutionality of New York's ban on physician-assisted suicide.[172] The Court reiterated the distinction between assisting suicide and withdrawing life-sustaining treatment as one that is "widely recognized and endorsed in the medical profession and in our legal traditions, [and] is both important and logical; it is certainly rational."[173] In its analysis, the Court

[165] Convention for the Protection of Human Rights and Fundamental Freedoms, Nov. 4, 1950, 213 U.N.T.S. 222.
[166] Manuel Velasquez, et al., *Rights*, MARKKULA CTR. FOR APPLIED ETHICS AT SANTA CLARA UNIV. (Aug. 8, 2014), https://www.scu.edu/ethics/ethics-resources/ethical-decision-making/rights/.
[167] *Id.*
[168] *Id.*
[169] *Cruzan v. Dir., Mo. Dep't. of Health*, 497 U.S. 261, 261 (1990).
[170] *Id.*
[171] *Id*. at 304-305 (Brennan, J. dissenting) (internal citations omitted).
[172] *Vacco v. Quill*, 521 U.S. 793, 797 (1997).
[173] *Id*. at 800.

emphasized that the negative right to refuse treatment was distinguishable because it did not possess the illegal intent to kill.[174] The Court asserted that the ban was rationally related to the state's legitimate interest in "preserving life" and safeguarding vulnerable individuals from pressure to end their lives.[175]

In that same year, in *Washington v. Glucksberg*, a group of physicians, patients, and a non-profit organization challenged Washington state's ban on physician-assisted suicide.[176] Plaintiffs claimed the ban on physician-assisted suicide violated the Fourteenth Amendment's Due Process clause by denying terminally ill patients the right to choose death over life, arguing that the decision in *Cruzan* sanctioned a right to refuse treatment also supported an accompanying legal right to die or be killed.[177] However, the Court held that the positive right to assisted suicide or euthanasia was not a fundamental right protected by law.[178] Following its review of *Cruzan* in response to Plaintiffs' arguments, the Court was exceedingly clear "we certainly gave no intimation that the right to refuse unwanted medical treatment could be some-how transmuted into a right to assistance in committing suicide."[179] The Court distinguished between the personal decision to end one's life and the concept of a legally-protected right to die or be killed, stating that although one can certainly choose to end one's life, the government cannot provide a legal avenue for doing so:

> "The decision to commit suicide with the assistance of another may be just as personal and profound as the decision to refuse unwanted medical treatment, but it has never enjoyed similar legal protection. Indeed, the two acts are widely and reasonably regarded as quite distinct."[180]

The Court upheld Washington state's ban on physician-assisted suicide, but ultimately left the question open-ended for further debate at the state level.[181]

Notably, the legal distinction between the negative right to terminate treatment and the positive right to die is mirrored in the long-standing tradition of the medical profession. Since as early as 400 BCE, the Hippocratic Oath has enshrined a right to life in medical ethics while concurrently denying a right to assisted death, proclaiming physicians must "keep [the sick] from harm and

[174] *Id*. at 801-02.
[175] *Id*. at 808-09.
[176] *Washington v. Glucksberg*, 521 U.S. 702, 707-08 (1997).
[177] *Id*. at 708, 725.
[178] *Id*. at 709.
[179] *Id*. at 725.
[180] *Id*. at 725-726.
[181] *Id*. at 736.

injustice. I will neither give a deadly drug to anybody who asked for it, nor will I make a suggestion to this effect."[182] Furthermore, in ancient Greek communities, despite the Hippocratic Oath forbidding PAS/E, abating treatment was considered "appropriate when patients were 'overmastered by disease.'"[183] This position holds in the modern day, with the American Medical Association's (AMA) code of ethics rejecting physician-assisted suicide, stating such actions are fundamentally incompatible with the physician's role as healer.[184] Dozens of professional associations have adopted this stance, including the World Health Organization (WHO), the American Nurses Association, the American Psychiatric Association, the American Society of Anesthesiologists, the American Neurological Association, the American Academy of Orthopedic Surgeons, the American Society of Clinical Pathologists, and the American Academy of Pain Medicine.[185]

As states confront the difficult topic of PAS/E, understanding the political, legal, and medical operating environment is requisite. Since its inception, the United States has emphasized an inalienable, negative right to life that cannot be interfered with, especially by the government.[186] The Supreme Court has analyzed the issue multiple times, repeatedly asserting that there is no positive right to die and distinguishing it from the permissible right to refuse medical treatment.[187] This same covenant has an even longer-standing tradition in the medical profession.[188] As state government decision-makers inevitably grapple with the question of legalizing PAS/E, this political, legal, and medical landscape contextualizes the discussion and sets the groundwork for the understanding that there is no historical or ethical antecedent to the legalization of PAS/E in the United States. As a result, states should approach the topic cautiously so as not to unravel traditional political, legal, and medical ethics in the United States.

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[182] Hippocratic Oath pmbl. (ca. 400 B.C.E.).
[183] Lois Snyder & Daniel P. Sulmasy, *Physician-Assisted Suicide*, 135 ANNALS OF INTERNAL MED. 209, 210 (Aug. 7, 2001), https://www.acpjournals.org/doi/full/10.7326/0003-4819-135-3-200108070-00015.
[184] *Code of Medical Ethics: Physician-Assisted Suicide*, AM. MED. ASS'N, https://code-medical-ethics.ama-assn.org/ethics-opinions/physician-assisted-suicide (last visited Dec. 7, 2023) [hereinafter *Code of Medical Ethics*].
[185] Ryan Anderson, *Always Care, Never Kill: How Physician-Assisted Suicide Endangers the Weak, Corrupts Medicine, Compromises the Family, and Violates Human Dignity and Equality*, THE HERITAGE FOUND. (Mar. 24, 2015), https://www.heritage.org/health-care-reform/report/always-care-never-kill-how-physician-assisted-suicide-endangers-the-weak/#_ftn111.
[186] *See* THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776).
[187] *See Cruzan*, 497 U.S. at 280-81; *Glucksberg*, 521 U.S. at 705-06; *Vacco*, 521 U.S. at 797.
[188] *See* Hippocratic Oath pmbl. (ca. 400 B.C.E.) ("I will do no harm or injustice to [my patients]. I will not give a lethal drug to anyone if I am asked, nor will I advise such a plan[.]").

III. PANDORA'S BOX: ARGUMENTS AGAINST LEGALIZATION

A. The Legalization of Physician-Assisted Suicide and Euthanasia Impermissibly Alienates the Inalienable Right to Life.

There are many reasons why states should not legalize PAS/E—the primary one being that states must refuse to classify any group of individuals as legally eligible to be killed. This would immediately undermine the natural, inalienable right to life that all individuals enjoy and upon which the nation's foundation is constructed.[189] For example, legally permitting the killing of those who are terminally ill and likely to die soon would codify the notion that certain lives receive different legal protection than others in state law. For those individuals, their supposed inalienable right to life would become alienable. Notably, the question of whether someone possesses an alienable or inalienable right to life then turns solely on health status or disability, a designation which ironically enjoys legally protected class classification.[190]

As the disability rights group Not Dead Yet explains, legalizing PAS/E for individuals who are terminally ill or suffering creates a double standard for how health care providers and government authorities might respond to an individual's stated wish to die.[191] Some people would receive suicide prevention while others would receive suicide assistance, with the critical difference between the two groups being the individual's health status.[192] This approach to expressed suicidal ideation has already appeared in language used by the Ninth Circuit, which wrote that unlike "the depressed twenty-one year old, the romantically devastated twenty-eight year old, the alcoholic forty-year-old . . . a terminally ill competent adult cannot be cured" and is supposedly "unable to enjoy the presence of family or friends."[193] Instead of protecting those individuals and providing them equal treatment under the law, legalizing PAS/E may cause suicidal persons with disabilities, terminal illness, or severe impairment to receive different medical and legal treatment than able-bodied suicidal individuals, thus creating an incoherent right to life based on health.[194] Rather than implementing a divergent statutory

[189] THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776).
[190] *Protected Class*, THOMSON REUTERS, https://us.practicallaw.thomsonreuters.com/5-501-5857 (last visited Dec. 11, 2023).
[191] Diane Coleman, *Assisted Suicide Laws Create Discriminatory Double Standard for who gets Suicide Prevention and who gets Suicide Assistance: Not Yet Dead Responds to Autonomy, Inc.*, 3(1) DISABILITY & HEALTH J. 43 (2010).
[192] *Id*.
[193] *Compassion in Dying v. Washington*, 79 F.3d 790, 821 (9th Cir. 1996).
[194] *See* Coleman, *supra* note 191, at 41.

framework,[195] state-level regulations should seek to respect the innate dignity of all individuals, including vulnerable populations. Legally allowing these individuals to opt to die or be killed based on their health status would instead incorporate discrimination into the law.[196]

Rather than permitting a government calculus on which lives are worth living, states should uphold the deeply rooted political and legal tradition in the United States that protects the inalienable right to life for all individuals, giving them equal protection under the law.[197] If states were to legalize PAS/E, the "right to die" would not be inherent but would be inevitably contingent upon criteria that bill writers determined sufficient to invoke the right. As a result, state policymakers, who are subject to political, financial, and personal incentives, would be elevated to "sit in judgment on the live[s] of other human beings]."[198] Empowering fallible individuals to make irreversible determinations about the worth and value of others' lives is a Pandora's Box that states should be hesitant to open. Opening Pandora's Box by legally protecting avenues to access physician-assisted suicide or euthanasia, even for a narrow exception like terminal illness, opens the door to unconstitutional applications and an unraveling of the fundamental, established right to life endowed upon all Americans.[199] To preserve the inalienable right to life for every citizen, state-sanctioned PAS/E should not be permitted in any circumstance.

B. The Legalization of Physician-Assisted Suicide and Euthanasia Implicates a Slippery Slope of Consequences as Evidenced by the Steady Expansion of Qualifying Populations in Belgium, the Netherlands, and Canada.

Although PAS/E is typically legalized first in the narrow instance of terminally ill, competent adults experiencing extreme suffering, evidence from Belgium, the Netherlands, and Canada demonstrates that the "right to die" becomes impossible to restrain once it is permitted within careful confines.[200] As Judge Noonan wrote in *Compassion in Dying,* any attempt to define the category of constitutionally protected assisted suicides is "inherently unstable," such that

[195] *See id.* at 43-44.
[196] *See id.*
[197] *See* THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776).
[198] Anderson, *supra* note 185, at 20.
[199] *Id.* at 20.
[200] *See* Lydia S. Dugdale, et al., *Pros and Cons of Physician Aid in Dying*, 92 YALE J. BIOLOGY & MED. 747, 749 (2019).

ultimately, the right would have to be available to all adults.[201] Though well-intentioned, laws that restrict physician-assisted suicide to competent, terminally ill adults in pain raise complex questions, such as how to address the needs of individuals suffering from debilitating mental illness, terminally ill youth, or persons lacking the competency to advocate for themselves. If a provider can provide PAS/E to satisfy the request of a competent patient, that medical decision making can easily be applied to cases in which a patient is unconscious, incompetent, or otherwise unable to make such a request for themselves, but in a situation similar to which competent individuals generally make the request.[202] With Pandora's Box cracked open, a slippery slope of consequences is unavoidable.[203] Given that this slippery slope is an inherent and inevitable consequence of legalizing any form of PAS/E, states should legally foreclose the topic in its entirety to protect their citizens. Studies analyzing PAS/E in Europe demonstrate this slippery slope: once PAS/E is legalized in narrow confines, its scope generally expands over time, and problematic ramifications arise in practice. Particularly, in the Netherlands and Belgium, which have PAS/E laws dating back to the early 2000s, euthanasia has by far become the dominant practice, although PAS/E is also legal.[204] This trend is consistent across borders; in countries like the Netherlands and Belgium, where both practices are legal, the majority of facilitated deaths fall under euthanasia rather than physician-assisted suicide.[205]

There has been a steady increase in qualifying criteria since initial legalization, with PAS/E in these European countries now covering conditions beyond terminal illness, including depression, dementia, or being "tired of life."[206] In Belgium, anything that causes unbearable suffering constitutes sufficient grounds for euthanasia, the focus not on the ailment itself but the suffering it causes.[207] In practice, this has included not just terminal illness, but deafness, blindness, bipolar disorder, Asperger's Syndrome, and other psychiatric

[201] *Compassion in Dying*, 79 F.3d at 590-91 (noting that if the right to assisted suicide and the right to act on one's beliefs regarding life are based on the Fourteenth Amendment, then the right to suicide and assisted suicide must be granted to no less than all sane adults (discussing *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833, 851 (1992)); George J. Annas, *The Promised End: Constitutional Aspects of Physician-Assisted Suicide*, 335 NEW ENGLAND J. MED. 683, 684-85 (1996).
[202] John Keown, *A Right to Voluntary Euthanasia? Confusion in Canada in Carter*, 28 NOTRE DAME J.L., ETHICS & PUB. POL'Y 1, 23 (2014).
[203] *Id*.
[204] Dugdale, *supra* note 200, at 749.
[205] Mark A. O'Rourke et al., *Reasons to Reject Physician Assisted Suicide/Physician Aid in Dying*, 13 J. ONCOLOGY PRAC. 683, 685 (Aug. 29, 2017), https://ascopubs.org/doi/full/10.1200/JOP.2017.021840.
[206] Dugdale, *supra* note 200.
[207] De Hert M, Van Assche K, *Euthanasia for unbearable suffering caused by a psychiatric disorder: improving the regulatory framework*. WORLD PSYCH., 2024 Feb;23(1):54-56.

illnesses.[208] Similarly, in the Netherlands, lethal injections have been administered to individuals with non-terminal diagnoses such as anorexia, blindness, tinnitus, and psychological disorders.[209]

A study conducted by a law and medical ethics professor at the University of Cambridge found that, since the legalization of euthanasia, the Dutch guidelines requiring an explicit request from patients to perform euthanasia had been violated with "virtual impunity."[210] Over half of the cases in the study were found to be nonvoluntary, i.e., lacking an explicit patient request.[211] In a separate investigation into Dutch hospitals, "doctors and nurses reported that more requests for euthanasia came from families than from patients."[212] It was concluded that "families, the doctors, and the nurses were involved in pressuring patients to request euthanasia."[213] Moreover, in 1966, two Dutch doctors were acquitted after claiming medical necessity when prosecuted for the involuntary euthanasia of disabled infants.[214] The providers argued that if necessity justifies ending the life of a patient who requests it, it can also justify ending the life of a patient who cannot request

[208] Dugdale, *supra* note 200, at 749; *see* Naftali Bendavid, *For Belgium's Tormented Souls, Euthanasia-Made-Easy Beckons*, WALL ST. J. (June 14, 2013, 10:30 PM), http://www.wsj.com/articles/SB10001424127887323463704578495102975991248 (discussing adult twins who are blind and received euthanasia upon multiple requests after "their condition worsened and threatened their independence"); Trudo Lemmens, *What Counts as Evidence? A Uniquely Valuable Analysis of a Belgian Criminal Case Involving Euthanasia*, JOTWELL (May 4, 2023) (reviewing Marc De Hert, Sien Loos, Sigrid Sterckx, Eric Thys & Kristoff Van Assche, *Improving Control Over Euthanasia of Persons With Psychiatric Illness: Lessons from the first Belgian Criminal Case Concerning Euthanasia*, 13 Frontiers in Psychiatry (2022)), https://health.jotwell.com/what-counts-as-evidence-a-uniquely-valuable-analysis-ofa-belgian-criminal-case-involving-euthanasia/.

[209] *See Euthanasia Clinic Criticised for Helping Woman with Severe Tinnitus to Die*, DUTCH NEWS (Jan. 19, 2015), https://www.dutchnews.nl/2015/01/euthanasia-clinic-criticised-for-helping-woman-with-severe-tinnitus-to-die/; *Woman, 70, is Given Euthanasia After Going Blind*, DUTCH NEWS (Oct. 7, 2013), http://www.dutchnews.nl/news/archives/2013/10/women_70_gets_euthanasia_after/; Joke Mat, *In the Netherlands, Nine Psychiatric Patients Received Euthanasia*, (Jan. 2, 2014), http://www.nrc.nl/nieuws/2014/01/02/in-the-netherlands-nine-psychiatric-patients-received-euthanasia/.

[210] John Keown, *Euthanasia in the Netherlands: Sliding Down the Slippery Slope*, 9(2) NOTRE DAME J.L., ETHICS & PUB. POL'Y 407, 437 (1995) ("Doctors have killed with impunity. . . . [I]t was the primary purpose of doctors to shorten the lives of over 10,000 patients in 1990, the majority without the patient's explicit request.").

[211] *Id*. at 431–32.

[212] Herbert Hendin, *The Dutch Experience*, 17 ISSUES L. & MED. 223, 235 (2002).

[213] *Id*.

[214] *See* Henk Jochemsen, *Dutch Court Decisions on Nonvoluntary Euthanasia Critically Reviewed*, 13(4) ISSUES L. & MED. 447 (1998).

it.[215] Moreover, reports of severely disabled newborns being euthanized continue to spring up in the Netherlands.[216]

Similarly disconcerting, a 2010 study discovered that 66 of 208 assisted deaths in Belgium were administered without an explicit patient request.[217] In 2014, Belgium removed age restrictions on euthanasia, becoming the first country to allow doctors to euthanize terminally ill consenting minors.[218] Belgium's published data demonstrate that vulnerable populations are especially likely to be euthanized.[219] Recently, the European Court of Human Rights considered Belgium's euthanasia law for the first time, following the euthanasia of a "64-year-old woman with treatment-resistant depression and a personality disorder."[220] The case was brought by the woman's son, who found out only after the fact that she had been euthanized and argued that the right to life had been violated.[221] Ultimately, the European Court found that there was no violation of the right to life because the euthanasia occurred per Belgium's euthanasia law.[222] Another case recently came before the Belgian Constitutional Court, concerning the euthanasia of a 38-year-old woman due to a personality disorder.[223] Although the doctors were again acquitted, the above-discussed data and legal cases in Europe demonstrate the slippery slope of legalizing PAS/E. Once Pandora's Box is open, it is difficult to prevent the scope of qualifying factors from widening to encompass a larger demographic, complaints regarding problematic applications, such as euthanasia

[215] *Id.* at 455 ("If a court accepts an appeal to the defense of necessity on the basis of a conflict of duties, it logically would have to accept that in certain circumstances there is a duty to kill.").
[216] *See* Government of the Netherlands, *Termination of Life Newborn Infants and Late-Term Abortion*, https://www.government.nl/topics/euthanasia/euthanasia-and-newborn-infants, (last visited Dec. 11, 2023) (stating that physicians may "terminate the lives of newborn infants" if the infant's suffering is "unbearable [with] no prospect of improvement.").
[217] Kenneth Chambaere et al., *Physician-Assisted Deaths Under the Euthanasia Law in Belgium: A Population-Based Survey*, 182(9) CANADIAN MED. ASS'N J. 895, 896-98 (2010) (noting that situations "without explicit patient request" are the following: patient was comatose or had dementia, decision was in the patients' best interest, discussion would have been harmful to the patient, the patient had previously expressed a wish to end their life, or the patient had written an advanced directive).
[218] Derek Blyth, *Federal Parliament Passes Euthanasia Law for Minors*, FLANDERS TODAY, (Feb. 14, 2014), http://www.flanderstoday.eu/politics/federal-parliament-passes-euthanasia-law-minors.
[219] Dugdale, *supra* note 200, at 749 ("Published data from the Flanders region of Belgium highlights that vulnerable populations are especially likely to be euthanized. From 2007 to 2013, the largest increases in rates of granting euthanasia requests were among women, those 80 years or older, those with lower educational achievement, and those who died in nursing homes.").
[220] De Hert M, Van Assche K, *Euthanasia for unbearable suffering caused by a psychiatric disorder: improving the regulatory framework*. WORLD PSYCH., 2024 Feb;23(1):54-56.
[221] *Id.*
[222] *Id.*
[223] *Id.*

without explicit request, consistently arise, and despite criminal and constitutional challenges, the legal protections for PAS/E, once implemented, are not scaled back.

Similarly, Canada legalized medical aid in dying in 2016 for a specific population: competent adults suffering intolerably from irremediable medical conditions in which their death was reasonably foreseeable.[224] The criteria were amended in 2021, removing the requirement that death be reasonably foreseeable.[225] Now, Canada provides a two-track approach depending on whether one's death is reasonably foreseeable.[226] For those whose death is reasonably foreseeable, their medical aid in dying request only has to be signed by one witness, rather than two, and they no longer have to complete a ten-day reflection period.[227] For those whose death is not reasonably foreseeable, they are now eligible for medical aid in dying following the completion of a 90-day assessment.[228] The 90-day assessment is conducted by medical professionals familiar with the patient's condition, can provide further counseling services, and discuss any available alternative options that might alleviate the patient's suffering.[229] Set to go into effect in March 2027, individuals whose only underlying condition is mental illness will also become eligible for medical assistance in dying.[230]

Reviewing the countries that have already legalized PAS/E, like Belgium, the Netherlands, and Canada, the reach of PAS/E only appears to expand once it is permissible. In Canada, PAS/E was at first exclusively available to terminally ill individuals but is now extended to cover anyone suffering unbearably from illness or disability.[231] Soon, it will also include those with mental illness.[232] In the Netherlands, PAS/E was first legalized for individuals suffering from an incurable condition, including adults, terminally ill infants, and children older than 12 with

[224] Tabitha de Bruin, *Assisted Suicide in Canada*, CAN. ENCYCL. (Dec. 3, 2021), https://www.thecanadianencyclopedia.ca/en/article/assisted-suicide-in-canada#:~:text=Between%201892%20and%202016%2C%20assisted,to%20allow%20physician%2Dassisted%20suicide.
[225] *New Medical Assistance in Dying Legislation Becomes Law*, GOV'T CAN. (Mar. 17, 2021), https://www.canada.ca/en/department-justice/news/2021/03/new-medical-assistance-in-dying-legislation-becomes-law.html.
[226] de Bruin, *supra* note 224.
[227] *Id.*
[228] *Id.*
[229] *Id.*
[230] *Medical Assistance in Dying: Overview*, GOV'T CAN., https://www.canada.ca/en/health-canada/services/health-services-benefits/medical-assistance-dying.html (last viewed Mar. 17, 2025); *see also Canada's Medical Assistance in Dying (MAID) Law*, GOV'T CAN. https://www.justice.gc.ca/eng/cj-jp/ad-am/bk-di.html (last viewed Mar. 17, 2025).
[231] Fergus Walsh, *How Assisted Dying has Spread Across the World and how laws Differ,* BBC (Nov. 29, 2024), https://www.bbc.com/news/articles/c1dpwg1lq9yo.
[232] *Id.*

parental consent.[233] In 2023, this was expanded to encompass terminally ill children of all ages.[234] Likewise, in Belgium, as stated above, PAS/E was first legalized for adults in 2002 and then expanded to include minors in 2014.[235] As demonstrated, once PAS/E is legal, its qualifying criteria only broaden, and in no instance do the requirements become more restrictive.

Although the American jurisdictions that have legalized physician-assisted suicide have thus far confined it to terminal illness, states confronting this decision can see from countries like Canada, the Netherlands, and Belgium that legalization in that limited scenario is not a terminus. Instead, crossing the boundary into legally protected PAS/E leads to widening indications, implicating repeated recalculations of eligibility criteria. Such expansion inevitably triggers the concerns evidenced in Europe, including infanticide and involuntary euthanasia. Understanding that (1) despite safeguards, the grave consequences of the legalization of PAS/E are its inherent consequences, and (2) in no instance has its legalization remained constrained to the initial criteria or population, states should reject its legalization entirely to protect their citizens' right to life.

C. The Legalization of Physician-Assisted Suicide and Euthanasia Corrupts the Practice of Medicine by Undermining the Patient-Physician Relationship and the Trust Necessary to Sustain it, while also Altering the Medical Profession's Role in Society.

The legalization of PAS/E also threatens to fundamentally distort the doctor-patient relationship by reducing patient trust in doctors and the doctor's commitment to the life and health of their patients.[236] The medical profession is centered around the guiding principle that the physician is a healer, meant to act in the best interest of the patient.[237] One cannot strive to eliminate disease or ease suffering if the patient's life has ended, and death, by any nature, cannot serve as a remedy. Enlarging the physician's role to include "dispenser of death" would irrevocably alter the profession as it has been known since its inception.[238] Because laws governing medical treatments shape the way physicians behave, these laws, in turn, shape the doctor-patient relationship.[239] Legalizing PAS/E may lead patients

[233] *Dutch to Widen 'Right-to-Die' to Include Terminally Ill Children*, REUTERS (Apr. 14, 2023, 9:54 AM), https://www.reuters.com/world/europe/dutch-widen-right-to-die-include-terminally-ill-children-2023-04-14/
[234] *Id.*
[235] Blyth, *supra* note 218.
[236] *Id.* at 16.
[237] Hippocratic Oath pmbl. (ca. 400 B.C.E.).
[238] Leon R. Kass, *Dehumanization Triumphant,* FIRST THINGS (Aug. 1996), https://www.firstthings.com/article/1996/08/dehumanization-triumphant.
[239] *Id.*

to question whether their doctor is wholeheartedly prioritizing their best interests. Moreover, the relationship between doctor and patient is already asymmetric, with the physician holding the knowledge and power, and if PAS/E is legal, patients may not feel comfortable speaking candidly to their provider, given the blurred line between healing and harm that has been introduced. [240] Although few studies are collecting such data, in a random sample of approximately one thousand American adults, 20% answered they would trust their physician less if euthanasia were legalized.[241] This response rate was higher in certain populations, with 27% of elderly people (age 65+) and 32% of Black people responding that the legalization of PAS/E would lower their trust in medical providers.[242] Between one-fourth and one-third of adults reporting that the legalization of PAS/E would create distrust, especially in minority or elderly populations, is significant and would alter the doctor-patient relationship for both providers and patients. Demonstrating this point, a study conducted in Boston revealed that cancer patients self-reported they would more likely than not switch doctors if their attending physician indicated they had performed a PAS/E.[243]

Moreover, research demonstrates that patients with high levels of hopelessness and depression are more likely to request PAS/E.[244] These individuals typically do not desire death for its own sake but instead view it as a better alternative to their current state.[245] However, in the case of terminal illness, physicians are generally uneducated on how to address the psychological or emotional suffering the patient is experiencing.[246] As a result, these physicians are unable to present feasible alternatives to their patients.[247] Yet, suicidal ideation often wanes when comfort and relief are offered in the form of more adequate treatment for depression, pain management, or palliative care.[248] Remarkably, in Oregon, where physician-assisted suicide is legal, patients were referred for psychiatric evaluations in less than 5.5% of the 859 cases since the law went into

[240] O'Rourke, *supra* note 205; M. Hall, F. Trachtenberg, & E. Dugan, *The impact on patient trust of legalising physician aid in dying*, J. MED. ETHICS 2005;31:693–697; *Washington v. Glucksberg*, 521 U.S. 702, 731 (1997).
[241] M. Hall, F. Trachtenberg, & E. Dugan, *The impact on patient trust of legalising physician aid in dying*, J. MED. ETHICS 2005;31:693–697.
[242] *Id*.
[243] Ezra Klein, *The Argument for, and Against, Euthanasia*, WASH. POST (June 7, 2011), https://www.washingtonpost.com/blogs/wonkblog/post/the-argument-for-and-against-euthanasia/2011/05/19/AGqGN3KH_blog.html.
[244] Kathryn A. Smith, et al., *Predictors of Pursuit of Physician-Assisted Death*, 49(3) J. PAIN & SYMPTOM MGMT. 556 (2015).
[245] *See* Robert L. Fine, *Depression, Anxiety, and Delirium in the Terminally Ill Patient*, 14(2) BAYLOR UNIV. MED. CTR. PROC. 130 (2001).
[246] *Id.*
[247] *Id.*
[248] Anderson, *supra* note 185, at 21.

effect.[249] As one psychiatry professor aptly put it: "this constitutes medical negligence. . . . [t]o abandon suicidal individuals in the midst of a crisis. . . . It undermines sound medical ethics."[250] In most instances, when individuals present suicidal ideations, they are recommended a variety of treatments, evaluations, and continued care.[251] Instead of recommending PAS/E to patients who request it, doctors should use the request as an opportunity to gain insight into the patient's suffering, understand what is motivating the request, and tailor a combination of targeted treatment alternatives properly addressing the situation.

Understanding the implications on the practice of medicine, states should decline to legalize PAS/E to preserve the sanctity of the healthcare system, the doctor-patient relationship, and the role of medical professionals. Removing PAS/E as an option will keep a problematic conflict of interest out of the scope of patient care, allowing doctors to prioritize healing and care as indicated by centuries of professional practice and ethics. Doing so would align each state with the stance of many large players in the medical field, including the AMA, which dictates that a physician should aggressively respond to end-of-life needs by respecting patient autonomy and providing appropriate support, comfort, and pain control instead of assisting in suicide.[252]

D. The Legalization of Physician Assisted Suicide and Euthanasia Creates Perverse Financial Incentives and (Ostensibly) Causes Patients to Opt for Aid in Dying Under Duress.

In a country without universal healthcare, the legalization of PAS/E creates perverse incentives for insurance providers, as well as the public and private financing of healthcare.[253] Death saves money, and insurance companies may increasingly encourage PAS/E if legal.[254] In such a scenario, if a doctor discovered their patient's insurance denied treatment but approved PAS/E, that doctor may be disincentivized to present treatment alternatives, especially if the treatment

[249] *Id* at 5.
[250] *Id.*
[251] *See* Fine, *supra* note 245.
[252] *Id*; *Code of Medical Ethics, supra* note 184 ("Instead of engaging in euthanasia, physicians must aggressively respond to the needs of patients at the end of life. Physicians: (a) Should not abandon a patient once it is determined that a cure is impossible. (b) Must respect patient autonomy. (c) Must provide good communication and emotional support. (d) Must provide appropriate comfort care and adequate pain control.").
[253] *See* M. Cathleen Kaveny, *Managed Care, Assisted Suicide, and Vulnerable Populations*, 73(5) NOTRE DAME L. REV. 1275, 1300 (1998).
[254] *Id.* ("[I]t would not be difficult for cost-conscious benefits managers to rationalize an approach that facilitated a patient's choice of assisted suicide by seeing it as beneficial both to the plan and to the patient [them]self.").

alternatives were unaffordable or required a long battle with insurance for authorization.[255] This issue arose in Oregon, where, in 2008, a state-sponsored health plan denied a woman costly lung cancer treatments while simultaneously offering to pay for suicide drugs.[256] Instead of covering the woman's cancer treatments, which amounted to $4,000 per month, her insurance company elected to cover the $50 cost of drugs used for assisted death.[257]

PAS/E is more cost-effective than caring for patients in almost all situations, but exponentially so in long-term care, nursing home care, and end-of-life care[258]. Studies have shown that most healthcare costs can be traced to expenses incurred in the last months of life, meaning employers and insurance companies could accomplish extreme financial savings by encouraging assisted suicide at the appropriate time.[259] This is especially apposite given the increasing number of elderly patients in modern society, the increasing average lifespan, and the increasing cost and prevalence of chronic illness.[260] If legalized, PAS/E would likely be viewed as a cost-effective treatment for and by the elderly.[261]

Ensuring patients are not opting for PAS/E due to financial reasons, duress, or pressure from doctors and insurance is another important reason for states to decline legalizing PAS/E. As seen in Oregon, the legalization of assisted death has led to denials of treatments for the sick and increased pressure on patients to undergo facilitated death due to a lack of financially viable alternatives.[262] To protect the right to life for all state residents, as well as the medical profession's role in diagnosing and treating disease, states should not legalize PAS/E due to the perverse financial incentives that would arise.

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[255] *Id.*

[256] *Death Drugs Cause Uproar in Oregon*, ABC NEWS, (Sept. 30, 2008, 7:06 PM), https://abcnews.go.com/Health/story?id=5517492&page=1.

[257] *Id.*

[258] Mary C. Deneen, BIOETHICS— "WHO DO THEY THINK THEY ARE?", 42 W. NEW ENG. L. REV. 63, 63 (2020).

[259] *See id.* at 1303.

[260] Anderson, *supra* note 185, at 14.

[261] *Id.*

[262] Deneen, *supra* note 258, at 285 (in Oregon, insurance companies have denied physician-recommended treatments, offering life-ending cost coverage as an alternative; in California, insurance providers are permitted to deny life-prolonging treatment and cover lethal medication).

IV. COUNTER ARGUMENTS

A. Death with Dignity and Autonomy

Because PAS/E generates significant debate due to strongly held, diverse perspectives, any position a state takes will likely be met with public resistance. The salient theme in dialogue supporting PAS/E is that of autonomy.[263] Control over the timing and circumstances of one's death, allowing for a death with dignity, is commonly cited as the rationale for the "right to die."[264] However, the idea that suffering or dying is undignified and justifies legally-protected PAS/E has no logical foundation.[265] As stated above by the Supreme Court, there is a difference between choosing to end one's life and the state providing a legally-sanctioned avenue for doing so.[266] Furthermore, claims that PAS/E is necessary to respect patient autonomy ignore the reality that when legalized under strict confines like terminal illness, "autonomy" is available only in situations where lawmakers or medical professionals permit it. Not only is that decision then not autonomous; it demonstrates that the argument that the right to control the circumstances of one's death should only be available to those who are terminal or suffering lacks a logical basis.[267]

Although arguments for legalization due to personal autonomy are emotive, especially in instances of terminal illness and extreme suffering, hinging legalization on this narrow basis lacks logical coherence. Practically, once the government acknowledges a "right to die" for one classification of people, it is extremely difficult to justify constricting that right, especially for it to truly respect autonomy.[268] However, because PAS/E is intrinsically incompatible with the

[263] *See* O'Rourke, *supra* note 205, at 683-84 (asserting that PAS/PAD focuses more on control than alleviating suffering).
[264] *See id.* at 684 (stating that "…control over the time of death was the dominant narrative rather than symptom control.").
[265] *See* Myung Ah Lee, *Ethical Issue of Physician-Assisted Suicide and Euthanasia*, 26(2) J. HOSPICE & PALLIATIVE CARE 95, 97 (2023) (theorizing that a "suffering life itself does not degrade human dignity. Terminally ill patients may suffer from physical, psychological, and economic problems, but this does not mean they are not dignified. It is just the situations that they face that make them feel undignified.").
[266] *Washington*, 521 U.S. at 725-26.
[267] *See* M. Cathleen Kaveny, *Assisted Suicide, Euthanasia, and the Law*, 58(1) THEOLOGICAL STUD. 124, 141-42 (1997) (raising the moral issue of a government's ability to stop a competent adult from taking action of their free will that will result in their death).
[268] *See generally id.* (stating that "beliefs about these matters could not define the attributes of personhood were they formed under compulsion of the State.").

inalienable right to life, states should designate this argument irreconcilable with the United States' political, legal, and ethical foundations and operating context.[269]

Finally, although respect for personal autonomy is important, autonomy is not necessarily self-justifying. For example, the United States has directed that no one possesses the right to sell themselves into slavery.[270] Though contracts are generally enforceable when the parties have legal capacity, mutual assent, and valid consideration, this rule has limited exceptions, such as contracting oneself into slavery or indentured servitude, which will not be upheld.[271] This is best explained by John Stuart Mill's *On Liberty*:

> "The reason for not interfering . . . with a person's voluntary acts, is consideration for his liberty. His voluntary choice is evidence that what he so chooses is desirable . . . to him . . . But by selling himself for a slave, he abdicates his liberty; he forgoes any future use of it beyond that single act. He therefore defeats . . . the very purpose which is the justification of allowing him to dispose of himself."[272]

This position is expanded upon in the context of PAS/E, with ethicists explaining that death, like slavery, is a termination of freedom, rather than an expression of it.[273] PAS/E as an exercise of freedom is inherently self-defeating, given that without existence, there can be no freedom, liberty, or autonomy.

Instructively, for states, there exists philosophical precedent for establishing narrow legal guardrails that limit personal autonomy in situations where individual life, liberty, and freedom would be extinguished. In general, individuals are free to act as they please as it pertains to themselves if they do not interfere with another's right to their own life, liberty, and property. However, there are policy matters in which the state is allowed to intervene on negative rights and limit specific acts.[274] Like voluntarily contracting oneself into slavery, voluntarily agreeing to PAS/E abdicates one's liberty and autonomy for any future use beyond that single act. Correspondingly, the state has a strong legal justification for refusing to provide a legal avenue for PAS/E in the context of counterarguments for autonomy.

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[269] *See Cruzan*, 497 U.S. at 280-81; *Glucksberg*, 521 U.S. at 705-06; *Vacco*, 521 U.S. at 797.
[270] U.S. Const. amend. XIII; Andrew Sneddon, *What's Wrong With Selling Yourself Into Slavery? Paternalism and Deep Autonomy*, 33(98) REVISTA HISPANOAMERICANO DE FILOSOFIA, Aug. 2001, at 97, 99.
[271] *Id.*
[272] *Id.*
[273] *Id.*
[274] *See id.* at 110 (noting that "at the very least, the state that is going to respect deeply autonomous beings must not do things to interfere with the sort of evaluation of oneself that constitutes the exercise of deep autonomy.").

B. Relief of Suffering

Another poignant argument in favor of PAS/E is to relieve suffering, an outcome medicine has always prioritized.[275] Advocates of PAS/E claim that lethal ingestion or injection is humane and compassionate for those suffering intolerably.[276] Lending credence to these arguments, states that have already legalized physician-assisted suicide have almost always limited it to cases of terminal illness with suffering.[277] However, as previously discussed, there are many logical inconsistencies when exclusively allowing PAS/E for terminally ill populations. Although the practice of medicine aims to alleviate suffering, a central tenet of medicine has been, for centuries, to do no harm and provide no deadly drugs.[278] Furthermore, the standard has never been that physicians are required to do everything possible to alleviate pain. Although health professionals are legally obligated to honor refusals, they are not obligated to honor requests, including for more pain medication.[279] For these reasons, the relief of suffering on its own is insufficient justification for state-permitted PAS/E.

However, the noble and compassionate goal of providing relief to those suffering, especially at the end of life, can be achieved through alternate means that protect the inalienable right to life, honor centuries of medical ethics, and adhere to the nuance between the right to refuse treatment and the "right to die." Given that viable alternatives exist, states should pursue these options to prioritize care for those who are suffering while simultaneously keeping closed the Pandora's Box of consequences that is PAS/E.

V. ALTERNATIVE ACTIONS THAT PROMOTE AUTONOMY, DIGNITY, AND THE RELIEF OF SUFFERING WITHOUT OPENING PANDORA'S BOX.

Instead of legalizing PAS/E, states should focus energy and resources toward effective pain management and palliative care programs. Despite arguments that palliative care and pain management are no different than PAS/E since they both have the potential to result in a more immediate death than would be natural,

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[275] Dugdale, *supra* note 200, at 748.
[276] *Id.*
[277] *MAID: Medical Aid in Dying. Should Medical Aid in Dying Be Legal?*, *supra* note 161.
[278] Hippocratic Oath pmbl. (ca. 400 B.C.E.) ("I will give no deadly medicine to any one if asked[.]").
[279] *Right to Refuse Medical Treatment*, VT. ETHICS NETWORK (last visited Apr. 24, 2025), https://vtethicsnetwork.org/medical-ethics/right-to-refuse-treatment; Jack Resneck Jr., MD, *Physicians, not judges, should direct patient care*, AM. MED. ASS'N (Jan. 31, 2023), https://www.ama-assn.org/about/leadership/physicians-not-judges-should-direct-patient-care.

the Supreme Court in *Vacco* identified the crucial distinction.[280] Although a provider administering aggressive palliative care may hasten a patient's death, the physician's purpose is to ease pain.[281] Conversely, "[a] doctor who assists a suicide, however, "must, necessarily and indubitably, intend primarily that the patient be made dead.""[282] As such, though the outcome may ultimately be the same, the intent is different, which allows providers to adequately assist patient needs in these highly complex and sensitive situations without legalized PAS/E. Through careful pain management and palliative care programs, providers can reduce suffering, respect inherent patient dignity, and promote autonomy while preserving the inalienable right to life and integrity of the practice of medicine. Palliative care focuses on improving a patient's quality of life and is an option at any stage of illness, whether that illness is curable, chronic, or life-threatening.[283] For patients at the end of life, palliative care can overlap with hospice and be provided at home or in a facility.[284] Essentially, palliative care can adequately address the same pain points that the legalization of PAS/E is meant to, without opening Pandora's Box.

Unfortunately, palliative care resources in the United States inadequately fulfill patient needs.[285] As of 2019, approximately 72% of hospitals with 50 beds or more reported a palliative care team, while only 17% of rural hospitals reported a palliative care team.[286] In southern states, half of all hospitals lack a palliative care team.[287] Furthermore, many patients who are terminally ill are undermedicated.[288] Physicians often withhold pain medication due to opioid restrictions; however, these medications have historically been a cornerstone to

[280] *Vacco*, 521 U.S. at 802 (internal citations omitted).
[281] *Id.*
[282] *Id.*
[283] *Cruzan*, 497 U.S. at 310 (Brennan, J., dissenting).
[284] *Id.* at 339 (Stevens, J., dissenting) ("Medical advances . . . and the reorganization of medical care accompanying the new science and technology[] have [] transformed the political and social conditions of death: People are less likely to die at home").
[285] *See id.* at 339 n.11 (Stevens, J., dissenting) (citing Brief for American Medical Association et al. as *Amici Curiae* 6) ("In 1985, 83% of deaths [of] Americans age 65 or over occurred in a hospital or nursing home.").
[286] *Best and Worst States in Providing Access to Palliative Care: 2019 State-by-State Report Card Shows Rapid Growth, but Gaps in Care Remain*, CTR. TO ADVANCE PALLIATIVE CARE (Sept. 26, 2019), https://www.capc.org/about/press-media/press-releases/2019-9-26/best-and-worst-states-providing-access-palliative-care-2019-state-state-report-card-shows-rapid-growth-gaps-care-remain/.
[287] R. Sean Morrison et al., *America's Care of Serious Illness: A State-by-State Report Card on Access to Palliative Care in Our Nation's Hospitals*, 14(10) J. PALLIATIVE MED. 1094, 1095 (2011), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3391707/.
[288] *See Study Finds Signs of Worsening Pain Management for Patients with Terminal Cancer*, DANA-FARBER CANCER INST. (July 22, 2021), https://www.dana-farber.org/newsroom/news-releases/2021/study-finds-signs-of-worsening-pain-management-for-patients-with-terminal-cancer (providing an example that patients with terminal cancer are increasingly visiting hospitals due to insufficient pain medication at home).

pain management at the end of life.[289] As opioid prescriptions for the terminally ill have declined, ER visits due to pain for these populations have increased by 50%, suggesting patients are checking themselves into the ER because they do not have access to sufficient pain medication or management at home.[290] Currently, many patients with advanced cancers are only provided mild analgesics (NSAIDs), which insufficiently address pain and suffering.[291]

Although high doses of pain medication have side effects and may accelerate death by weakening respiratory function, [this double effect principle] has long-standing acceptance in most medical societies and legal jurisprudence and differs from PAS/E given the intent behind the administration of such medications.[292] Since the primary goal and intention of administering such medications is to relieve suffering, rather than hasten death, the secondary outcome of potentially hastened death (i.e., the double effect principle) is recognized and accepted in terminally ill or suffering patients.[293] For patients who are imminently dying and experiencing medically refractory suffering, palliative sedation is another option to relieve suffering without conducting PAS/E.[294] Sedating the patient is a measure that can be legally employed when clinical management by pain and palliative care professionals has been exceeded.[295]

At present, pain medication and palliative care programs fail to adequately care for suffering and dying patients at the end of life. States should focus on building out these types of programs and resources, rather than avoiding the issue through 'solutions' like PAS/E, which instead implicates an entirely new set of problems without addressing the existing shortcomings in care for the suffering, sick, and dying.

VI. CONCLUSION

Because legalizing PAS/E in any form creates complications that cannot be contained or decelerated once released, states must keep Pandora's Box of PAS/E completely closed. In doing so, states will uphold everyone's inalienable right to life, protect the sanctity of the medical profession, and honor the legal distinction

[289] *Id.* ("Opioids are the cornerstone of managing moderate to severe cancer pain[.]").
[290] *Id.*
[291] *Id.*
[292] Jordan Potter et al., *Palliative Sedation, Compassionate Extubation, and the Principle of Double Effect: An Ethical Analysis*, 38 AM. J. HOSPICE & PALLIATIVE MED. 1536 (2021), https://doi.org/10.1177/1049909121998630.
[293] *Id.* at 1537.
[294] *Id.*
[295] *Id.*

between the permissible, negative right to refuse treatment and the prohibited, affirmative right to die or be killed. This, in turn, will protect vulnerable populations, prevent the slippery slope as evidenced by the legalization of PAS/E in Canada, Belgium, and the Netherlands, safeguard the patient-physician relationship, and prevent abuse and misuse. In the alternative, to assist sick, dying, and suffering populations without enduring the consequences of physician-assisted suicide, states should pivot energy and resources into building adequate palliative care and pain management programs for those who need them.