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BIASED BUT REASONABLE: BIAS UNDER THE COVER OF STANDARD OF CARE

Maytal Gilboa[*]

Inequities in the healthcare distribution are widely acknowledged to plague the United States healthcare system. Controversies as to whether antidiscrimination law allows individuals to bring lawsuits with respect to implicit rather than intentional bias render negligence law an important avenue for redressing harms caused by implicit bias in medical care. Yet, as this Article argues, the focus of negligence law on medical standards of care to define the boundaries of healthcare providers' legal duty of care prevents the law from adequately deterring implicit bias and leaves patients harmed by biased treatment decisions without redress for their losses, so long as those decisions fall within the range of medically accepted practices. I term this the problem of "biased-but-reasonable" decision-making.

In medical malpractice, the duty of care is set according to standards of real-world practice, which typically recognize more than one course of treatment as acceptable for a given medical condition. Provided that a physician's choice of treatment for a particular patient falls within the range of those accepted by the professional community, she is perceived as acting reasonably, even if her decision was influenced by implicit bias. In this way, biased-but-reasonable treatment evades the radar of negligence law.

After revealing the concept of biased-but-reasonable, this Article examines the normative problems it creates, particularly with respect to deterrence. Negligence law's failure to assign liability to physicians, whose treatment decisions are influenced by bias but who nonetheless act within the bounds

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of professional standards, creates a situation in which some patients are less costly to treat—and therefore less costly to harm—than others. As long as the architecture of the negligence doctrine enables biased choices to hide under the veil of reasonable care, healthcare providers will remain disincentivized to eliminate it.

Finally, this Article provides a normative framework that identifies biased treatment choices as negligent, even when they fall within the range of what is considered medically reasonable. It then confronts the evidentiary difficulties that prevent patients, harmed by biased choices of treatment, from establishing their entitlement to damages on a theory of negligence. Specifically, it demonstrates that a key element of such a claim—proof by a preponderance of the evidence that their treatment was chosen based on bias rather than objective medical judgment—places an insurmountable burden on most victims of implicitly biased treatment. This Article argues that the loss of chance doctrine can be harnessed to contend with this evidentiary hurdle and illustrates how the use of this doctrine incentivizes healthcare providers to eliminate biased judgments and provide redress for victims of biased medical care.

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I. INTRODUCTION

Healthcare research has shown systematic discrepancies in the level of care provided to patients belonging to different social groups. In particular, women and minorities frequently suffer from two types of judgment errors that negatively affect their care: errors resulting from knowledge gaps[1] and errors resulting from bias.[2] Knowledge gaps are typically discussed in relation to women's underrepresentation in medical research,[3] which translates into clinical uncertainty as to how a disease or its symptoms manifest in female patients, leading to misdiagnoses.[4] Recently, studies have also discussed the damaging effects of knowledge gaps on transgender patients,[5] when healthcare providers treat patients in a way that is reasonable for either male or female patients but not

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[1] *See* Cecilia Plaza, *Miss Diagnosis: Gendered Injustice in Medical Malpractice Law*, 39 COLUM. J. GENDER & L. 91, 92 (2020) (defining knowledge gap in relation to women in healthcare as "the medical community's lack of knowledge about women's health due to women's historical underrepresentation in medical research"); Susan C. Taylor, *Meeting the Unique Dermatologic Need of Black Patients*, 155 JAMA DERMATOLOGY 1109, 1109 (2019) ("Because a small percentage of dermatologic education is dedicated to black patients, knowledge gaps exist, and this lack of education and familiarity on the part of dermatologists undoubtedly negatively affects the dermatologic experience of these patients."); Sharona Hoffman & Andy Podgurski, *Balancing Privacy, Autonomy, and Scientific Needs in Electronic Health Records Research*, 65 SMU L. REV. 85, 88 (2012) (suggesting that electronic health records technology could make an important contribution to medical research because it can facilitate large-scale observational studies that will fill existing knowledge gaps).

[2] *See* Plaza, *supra* note 1, at 101–02 (presenting these two types of errors of judgment as the major pitfalls for women in medical malpractice claims).

[3] For example, the Food and Drug Administration (FDA) still does not require researchers either to represent female cells in early phase research or to perform gender-based analyses in their later phase research, and heart disease is still misdiagnosed in women more than in men. *Id.* at 92, 94, 97.

[4] *See* Trisha Torrey, *How Common Is Misdiagnosis or Missed Diagnosis?*, VERY WELL HEALTH (May 30, 2019), https://www.verywellhealth.com/how-common-is-misdiagnosis-or-missed-diagnosis-2615481 ("A missed diagnosis describes the lack of a diagnosis, usually leading to no or inaccurate treatment. An example would be when a woman is told the small lump in her breast is benign, only to learn later that it is, in fact malignant."); *see also* Plaza, *supra* note 1, at 101 ("[Women] are more likely to receive psychogenic diagnoses and to have their physical symptoms attributed to stress or anxiety, even in the absence of any evidence of psychological illness or distress." (footnotes omitted)).

[5] *See* Anne C. DeCleene, *The Reality of Gender Ambiguity: A Road Toward Transgender Health Care Inclusion*, 16 L. & SEXUALITY 123, 138 (2007) ("Transsexual care is currently seldom taught in medical school, and medical and endocrinology textbooks are often outdated and misinform their readers.").

necessarily for male-to-female or female-to-male transgender patients.[6] This Article focuses on the second type of error, which derives from biased medical judgments.[7] Biased care is the result of a cognitive process through which stereotypes affect the judgment of healthcare providers,[8] making them perceive their patients' conditions as less severe than they are and thus recommend less intensive care than is needed.[9]

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[6] For example, in *LaFurge v. Cohen*, treatment cured the cancer but eventually resulted in removing plaintiff's external urine-collection system. 876 N.Y.S.2d 391, 391–92 (N.Y. App. Div. 2009). The plaintiff claimed malpractice, asserting that a lower dose of radiation adjusted to her specific needs would have cured the cancer while allowing her to preserve her organs. *Id*. The court ruled in favor of the defendant, who claimed, inter alia, that there was no specific standard of care for treating cancer in a transgender person. *See id.* (affirming the trial court's decision in favor of defendants in a case brought by a male-to-female transgender plaintiff who received radiation treatment usually performed to cure vaginal cancer in women); *see generally* Cameron T. Whitley & Dina N. Greene, *Transgender Man Being Evaluated for a Kidney Transplant*, 63 CLINICAL CHEMISTRY 1680, 1680–81 (2017) (discussing a case in which laboratory results of a female-to-male transgender person showed values of glomerular filtration rate that if assessed using a female scale would put him on the transplant list and if assessed using a male scale would not, and concluding that in the specific case, the choice to treat the patient's disease according to the male-scale definition unnecessarily delayed the transplant).

[7] *See* Plaza, *supra* note 1, at 101–02 ("[T]he stereotype that women tend to seek medical attention for minor or frivolous concerns—a stereotype which has been disproven by research—has led to the systematic discounting of women's symptoms . . . by their physicians."); Justin D. Levinson, *Forgotten Racial Equality: Implicit Bias, Decisionmaking, and Misremembering*, 57 DUKE L.J. 345, 386–87 (2007) (suggesting that racial memory encoding may lead to cognitive errors such as framing effects and decision-making problems).

[8] *See infra* Part II (describing the cognitive cycle of stereotyped beliefs and the false inferences of medical decision-makers that their judgment vindicated those stereotypical beliefs, instead of realizing that it was the belief that influenced their judgment); *see also infra* notes 85–91 and accompanying text (providing a thorough explanation of the cognitive mechanisms of such biases).

[9] *See* Kelly M. Hoffman, Sophie Trawalter, Jordan R. Axt & M. Norman Oliver, *Racial Bias in Pain Assessment and Treatment Recommendations, and False Beliefs About Biological Differences Between Blacks and Whites*, 113 PROC. NAT'L ACAD. SCIS. U.S. 4296, 4298–99 (2016) (presenting data from a study in which medical students and residents were asked to rate the pain of either Black or White targets across the same scenarios and finding that students and residents who rated the Black target reported lower level of pain than participants who rated the White target and that those participants who showed higher levels of prejudice rated the Black target's pain even lower); Maytal Gilboa, *The Color of Pain: Racial Bias in Pain and Suffering Damages*, 56 GA. L. REV. 651, 681–85 (2022) (explaining that implicit racial bias disrupts the evaluation of the injury's severity in the minds of healthcare providers, making them believe that a Black person's injury is less severe than it actually is).

The law of negligence is an important tool for battling unconscious bias in healthcare programs,[10] especially in light of controversies over whether Section 1557 of the Affordable Care Act,[11] and the antidiscrimination statutes to which it refers,[12] create a private right of action for implicit (rather than intentional) forms of discrimination.[13] As I discuss throughout this Article, however, negligence law currently fails to provide adequate redress for patients harmed by biased care.[14] The reason for this is that medical providers can be held liable for breaching their duty of care only

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[10] *See* David Benjamin Oppenheimer, *Negligent Discrimination*, 141 U. PA. L. REV. 899, 899 (1993) (stating that negligence is a more appropriate regime for discrimination than intentional torts because "recent studies support the assertion that most discrimination is not the result of malice, hatred, ill will, or bigotry: it is the result of unintended and unconscious stereotyping").

[11] *See* Patient Protection and Affordable Care Act, 42 U.S.C. § 18116 (2010) (prohibiting exclusion or denial of health care services and benefits on the ground prohibited under several existing anti-discrimination statutes).

[12] *See* Civil Rights Act of 1964, 42 U.S.C. § 2000d (1964) (prohibiting discrimination based on race, color, and national origin); 20 U.S.C. § 1681(a) (2018) (prohibiting discrimination based on sex); Age Discrimination Act, 42 U.S.C. § 6102 (1975) (prohibiting discrimination based on age); The Rehabilitation Act of 1973, 29 U.S.C. § 794(a) (2016) (prohibiting discrimination based on disability). Unlike the other statutes, the Age Discrimination Act prohibits discriminatory outcomes even if they result from unintentional discrimination. For a critical review of the Age Discrimination Act on this point, see Teneille R. Brown, Leslie P. Francis & James Tabery, *Should We Discriminate Among Discriminations?*, 14 ST. LOUIS U. J. HEALTH L. & POL'Y 359, 379–80 (2021) ("The Age [Discrimination] Act further states that it is not violated if a program acts in a way that 'reasonably take into account age as a factor necessary to the normal operation or the achievement of any statutory objective of such program or activity' . . . . [The Age Discrimination Act] permits some policies with disparate impact on the elderly, if necessary to achieve the stated policy goal." (quoting 42 U.S.C. § 6103(b)(a)(A)–(B) (2020))).

[13] *See* DAYNA BOWEN MATTHEW, JUST MEDICINE: A CURE FOR RACIAL INEQUALITY IN AMERICAN HEALTH CARE 24 (2015) ("The first action available under Title VI is called a 'disparate impact' claim. . . . To prevail in this case, the plaintiff must show proof that the defendant's discriminatory acts were intentional. . . . The disparate treatment cases have ceased to be relevant in health care because few providers today treat patients with a demonstrable intent to discriminate."); Brown et al., *supra* note 12, at 375 (citing *Alexander v. Sandoval*, 532 U.S. 275, 281, 293 (2001), which "limited the scope of disparate impact discrimination for Title VI," and observing that "the implications of this decision on the interpretation of the Rehab[ilitation] Act and Title IX are not fully resolved"); Elizabeth Sepper, *The ACA's Nondiscrimination Rule: A Right in Search of a Remedy*, HARV. L. SCH.: BILL OF HEALTH (Nov. 12, 2015), https://blog.petrieflom.law.harvard.edu/2015/11/12/the-acas-nondiscrimination-rule-a-right-in-search-of-a-remedy/ ("[T]o successfully mount a claim under Title VI, claimants must demonstrate intentional race discrimination.").

[14] *See infra* Part IV.

when their patients can establish by a preponderance of the evidence that the chosen treatment fell outside the professional standard of care.[15] As this Article explains, patients harmed by biased care decisions can almost never meet this requirement.

Because the duty of care is determined according to "ordinary prudence and real-world practice,"[16] there are often two or more courses of treatment considered medically reasonable for a particular disease or condition, some more intensive and expensive than others.[17] As long as a healthcare provider chooses a course of treatment situated within this reasonable range of care, her conduct does not constitute a breach of duty toward her patients under current negligence law.[18] As I discuss here, this understanding of

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[15] The preponderance of the evidence standard requires a plaintiff in any civil litigation to prove her claims with a probability higher than fifty percent. *See* Dykes v. William Beaumont Hosp., 633 N.W.2d 440, 447–49 (Mich. Ct. App. 2001) (observing that causation in a negligence claim is subject to the preponderance of the evidence standard); Merrell Dow Pharms., Inc. v. Havner, 953 S.W.2d 706, 706 (Tex. 1997) (denying compensation in a mass tort case involving children who suffered limb deformities since the plaintiffs failed to prove that the defendants increased the risk of such deformities by more than fifty percent); FEDERAL CIVIL JURY INSTRUCTIONS OF THE SEVENTH CIRCUIT 1.27, *Burden of Proof* (2017) ("When you have considered all the evidence in the case, you must be persuaded that it is more probably true than not true.").

[16] James Gibson, *Doctrinal Feedback and (Un)Reasonable Care*, 94 VA. L. REV. 1641, 1643, 1646 (2008) (noting that the legal fiction of reasonableness "invites us to use real-world practice as a guide for legal decisionmaking"); *see also* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 13(a) (AM. L. INST. 2010) ("An actor's compliance with the custom of the community, or of others in like circumstances, is evidence that the actor's conduct is not negligent but does not preclude a finding of negligence.").

[17] *See, e.g.*, Gibson, *supra* note 16, at 1644–45 (discussing a hypothetical physician and multiple treatment options for a patient with a swollen lymph node).

[18] A treatment is considered reasonable unless it falls below the minimal accepted standard of care. *See, e.g.*, Hall v. Hilbun, 466 So. 2d 856, 866 (Miss. 1985) ("When a physician undertakes to treat a patient, he takes on an obligation enforceable at law to use minimally sound medical judgment and render minimally competent care in the course of services he provides."); Ramsey v. Physicians Mem'l Hosp., Inc., 373 A.2d 26, 29 (Md. Ct. Spec. App. 1977) (explaining that the physician-defendant did not violate "the minimum standard of care . . . 'expected of a reasonably competent practitioner in the same class to which he belongs, acting in the same or similar circumstances'"); Taylor v. Beardstown, 491 N.E.2d 803, 814 (Ill. App. Ct. 1986) (ruling in favor of the defendant based on the plaintiff's failure to establish that the minimal standard of care was breached); *see also,* Plaza, *supra* note 1, at 112 (discussing the differing preferences of physicians when treating different genders); Bryan A. Liang, *Assessing Medical Malpractice Jury Verdicts: A Case Study of an Anesthesiology Department*, 7 CORNELL J.L. & PUB. POL'Y 121, 121 (1997) ("By punishing physicians for falling short of a pre-established socially optimal level of care, the judicial system can theoretically induce physicians to practice medicine at an acceptable and expected level of error."); Peter Moffett

what constitutes a breach of the duty of care opens the door to the influence of bias within the range of reasonable care, allowing healthcare providers to systematically select inferior treatments for women and minorities based on treatment decisions I define here as "biased-but-reasonable."

Biased-but-reasonable decisions provide an affirmative defense to healthcare providers who, most likely unconsciously, choose less intensive and less expensive care for patients belonging to social groups associated with "diminishing stereotypes," that is, stereotypes that lead healthcare providers to underestimate the seriousness of these patients' medical condition.[19] The fact that a range of treatments may be considered medically reasonable care allows physicians to apply inferior care to women and minority patients, so long as the selected treatment remains "consistent with one or another widely accepted standard of care."[20] Biased-but-reasonable decisions not only result in unredressed harm to patients but also create a serious problem of underdeterrence by tolerating—and arguably vindicating—the unequal distribution of treatments within the bounds of the standard of care.[21] Such disparities translate into discrepancies in the cost of caring for—and thus the cost of injuring—patients of different social groups.[22]

To contend with the challenges that biased-but-reasonable decisions pose, this Article presents a three-stage analysis. First, it offers a normative framework for identifying biased treatment choices as negligent, even if they fall within the range of medically reasonable practice.[23] Second, it confronts the evidentiary

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& Gregory Moore, *The Standard of Care: Legal History and Definitions: The Bad and Good News*, 12 W.J. EMERGENCY MED. 109, 111 (2011) ("[T]he good news from a physician's standpoint is that the law only requires 'minimal competence.' The care does not even have to be 'average,' which makes sense; otherwise, 50% of all medical care would be malpractice by definition.").

[19] *See infra* section II.A (discussing the definition of diminishing stereotypes broadly).

[20] M. Gregg Bloche, *Race and Discretion in American Medicine*, 1 YALE J. HEALTH POL'Y L. & ETHICS 95, 109 (2001).

[21] *See* Thomas C. Galligan, Jr., *The Risks of and Reactions to Underdeterrence in Torts*, 70 MO. L. REV. 691, 693 n.9 (2005) ("Tolerance of underdeterrence for certain injury-causing activities not only undermines optimal investments in safety, it also impacts upon the freedom of the involved individuals and it results in inequality.").

[22] *See* Gilboa, *supra* note 9, at 683–84 (positing that medical professionals underestimation of minorities' injury severity translates to lower medical costs, and collecting examples of disparate treatment).

[23] *See infra* section IV.A.

difficulties in requiring plaintiffs to prove by a preponderance of the evidence that the choice of treatment in their particular case was biased.[24] For example, statistical evidence may show that *the likelihood* of being given less intensive treatment for a particular medical condition is higher for Black than White patients in a particular hospital. Yet, statistical evidence is usually insufficient to establish, by a preponderance of the evidence, the contribution of bias to the resulting harm *in a particular case*.[25] Finally, to contend with this evidentiary difficulty, the Article proposes a remedial solution based on the loss of chance doctrine.[26] In particular, it argues that this doctrine, typically invoked in the context of medical malpractice,[27] can provide a basis for liability for biased-but-reasonable medical decisions in a manner that complies with both corrective justice and deterrence considerations.

This Article makes four important contributions. First, it identifies and names the category of biased-but-reasonable decisions, which find a safe harbor under the current law of negligence.[28] Once exposed, biased-but-reasonable treatment choices emerge as the primary challenge for using negligence law to combat implicit bias that results in injury.[29] While conventional application of the negligence doctrine recognizes the negligence of a healthcare provider whose injurious treatment decision falls outside the range of reasonable medical care,[30] biased-but-reasonable cases fly below the radar of negligence law. Second, this Article provides an analysis that exposes the unique normative problems deriving from the current negligence regime that tolerates biased-but-reasonable decisions, leaving victims of biased care without redress.

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[24] *See infra* section IV.B.

[25] *See, e.g.*, Merrell Dow Pharms., Inc. v. Havner, 953 S.W.2d 706, 720 (Tex. 1997) (holding that plaintiffs must do more than introduce statistical evidence to survive a motion to dismiss).

[26] *See infra* section IV.C.

[27] The loss of chance doctrine commonly provides a possible remedial solution where the probability that the defendant's breach of duty caused the patient's failure to heal is lower than the fifty percent chance required by the preponderance of the evidence standard. *See infra* notes 199–204 and accompanying text.

[28] *See infra* section III.A.

[29] *See infra* section III.B.

[30] *See, e.g.*, GORDON L. OHLSSON, 3 MEDICAL MALPRACTICE § 17D.04 (2022) ("[W]hen the defendant is a physician who practices conventional medicine, medical malpractice is an unskillful practice that fails to conform to a standard of care in the profession and results in patient injury.").

In particular, it reveals a severe problem of underdeterrence with respect to negligence toward minorities and women, which, in turn, creates a system of cross-subsidies, with disadvantaged patients paying the cost of defensive medicine practiced on advantaged patients. Third, this Article discusses the evidentiary challenges that biased-but-reasonable decisions entail and proposes a remedial solution that both contends with these challenges and complies with both corrective justice and deterrence considerations.[31] Finally, by uncovering biased-but-reasonable treatment decisions and the normative and evidentiary difficulties that they pose, this Article highlights the need to investigate further and to develop the study of implicit bias in tort litigation,[32] which is still in early stages of study[33] as compared to fields such as criminal law and employment law.[34]

This Article proceeds as follows. Part II describes the characteristics of judgment errors that derive from bias. It explains the cognitive process causing healthcare providers to unconsciously choose inferior treatment for patients associated with what are termed here "diminishing stereotypes." Part III introduces the concept of biased-but-reasonable decision-making that enables biased treatment choices to escape detection and leaves patients

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[31] *See infra* section IV.B.

[32] See *infra* section IV.C.

[33] *See* Jonathan Cardi, Valerie P. Hans & Gregory Parks, *Do Black Injuries Matter?: Implicit Bias and Jury Decision Making in Tort Cases*, 93 S. CAL. L. REV. 507, 509 (2020) ("[T]he body of research on race and racism in tort cases remains surprisingly thin."); Kimberly A. Yuracko & Ronen Avraham, *Valuing Black Lives: A Constitutional Challenge to the Use of Race-Based Tables in Calculating Tort Damages*, 106 CAL. L. REV. 325, 329 n.15 (2018) (noting that only a small number of casebooks covering torts and remedies mention the role of race and gender in damage calculation); MARTHA CHAMALLAS & JENNIFER B. WRIGGINS, THE MEASURE OF INJURY: RACE, GENDER, AND TORT LAW 1 (2010) ("Despite its social importance, the topic of the significance of race and gender in the law of torts has not received sustained attention largely because, on its surface, the world of torts appears divided between those who suffer injury and those who inflict injury, categories that are race and gender neutral."). For the argument that discrimination analysis can contribute to better understanding and developing tort law, see, for example, Yifat Bitton, *Transformative Feminist Approach to Tort Law: Exposing, Changing, Expanding—The Israeli Case*, 25 HASTINGS WOMEN'S L.J. 221, 223–25 (2014).

[34] Cardi et al., *supra* note 33, at 509 ("Much of the previous work on race and the law, including implicit racial bias, has focused on criminal law and trials. Work in the areas of civil law and litigation has largely focused on exploring various forms of race discrimination in employment . . . . In these domains, research has documented the pervasive influence of race in decision making. By comparison, tort law has received much less attention.").

without redress under current negligence law. Part IV then offers a solution comprising three complementary stages: It begins with a normative analysis allowing biased-but-reasonable treatment choices to be identified as negligent; continues by revealing the evidentiary challenges that biased-but-reasonable treatment choices pose for patients who seek to file negligence claims; and last, proposes a remedial tool that both creates a meaningful path for victims of biased treatment decisions to seek redress, and incentivizes healthcare providers to eliminate the risk of biased judgments. The Conclusion summarizes the discussion.

II. THE IMPLICIT INFLUENCE OF STEREOTYPES: UNDERSTANDING BIAS

Studies indicate that stereotypes deeply rooted in American culture[35] have infiltrated the healthcare system and are manifested in systematic discrepancies in treatment recommendations.[36] This Part introduces the process by which stereotypes diminish their subjects' medical symptoms or conditions in the eyes of their healthcare providers. When that happens, healthcare providers may recommend less intensive treatments to patients belonging to groups associated with such stereotypes than they would recommend to White men with similar symptoms. Understanding the cognitive aspect of bias is a necessary first step for introducing the concept of *biased-but-reasonable* treatment choices. This Part examines the "biased" component of such treatment choices, while the next Part explains the "reasonable" component.

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[35] *See* Mikah K. Thompson, *Bias on Trial: Toward an Open Discussion of Racial Stereotypes in the Courtroom*, 2018 MICH. ST. L. REV. 1243, 1244 ("Social science research has made clear that a majority of Americans carry some level of subconscious or implicit bias against racial minorities and that this bias manifests itself in the application of racial stereotypes."); *see also* Cecilia Ridgeway & Shelley J. Correll, *Unpacking the Gender System: A Theoretical Perspective on Gender Beliefs and Social Relations*, 18 GENDER & SOC'Y 510, 513–14 (2004) ("The deeply held cultural belief in the inherent difference between men and women appears to somehow disaggregate the concrete experience of interacting with real men and women into simpler, abstract categories. . . . These abstracted, hegemonic understandings of men and women are roughly consensual in that virtually everyone in the society knows what they are. . . .").

[36] For a brief review of such studies, see *infra* notes 60–84 and accompanying text.

A. DIMINISHING STEREOTYPES

A stereotype is "a widely held but fixed and oversimplified image or idea of a particular type of person or thing."[37] Deeply embedded within social institutions and cultures,[38] stereotypes influence the expectations and perception of their subjects,[39] often without the awareness of the observer, who sincerely believes her judgment to be purely evidence-based.[40] The elusive manner in which stereotypes penetrate the cognitive process of assessment makes even individuals with the best intentions—including healthcare providers, and in particular physicians[41]—susceptible to their influence.[42]

Empirical findings confirming the existence of bias in healthcare still catch physicians—who perceive their work as both altruistic and objective[43]—by surprise. Nevertheless, hospitals and clinics are

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[37] *Stereotype*, OXFORD DICTIONARY, https://www.lexico.com/definition/stereotype (last visited Sept. 11, 2022).

[38] *See supra* text accompanying note 35 (explaining that biases and stereotypes are engrained in cultural and societal beliefs).

[39] *See* Naomi Ellemers, *Gender Stereotypes*, 69 ANN. REV. PSYCH. 275, 276 (2018) ("Stereotypes reflect general expectations about members of particular social groups."); *see also* James L. Hilton & William von Hippel, *Stereotypes*, 47 ANN. REV. PSYCH. 237, 251 (1996) ("[P]eople who have a high need to perceive consistency or structure in their environment are more likely to assimilate behaviors to their stereotypes than people who have a low need to perceive consistency.").

[40] *See* Khiara M. Bridges, *Implicit Bias and Racial Disparities in Health Care*, 43 HUM. RTS. 19, 20 (2018) ("[I]f physicians' choices around which treatments to prescribe and which care to offer are harming their patients of color, it is unlikely that physicians are intentionally doing so; nor is it likely that physicians are aware that they have beliefs about people of color that negatively impact the way they practice medicine."); *see also* Elizabeth N. Chapman, Anna Kaatz & Molly Carnes, *Physicians and Implicit Bias: How Doctors May Unwittingly Perpetuate Health Care Disparities*, 28 J. GEN. INTERNAL MED. 1504, 1504 (2013) ("Cultural stereotypes may not be consciously endorsed, but their mere existence influences how information about an individual is processed and leads to unintended biases in decision-making, so called 'implicit bias.'").

[41] *See* Chapman et al., *supra* note 40, at 1504 (explaining how people are unaware of stereotypes influencing their thoughts); *see also id.* ("All of society is susceptible to these biases, including physicians.").

[42] *See* Alexander R. Green, Dana R. Carney, Daniel J. Pallin, Long H. Ngo, Kristal L. Raymond, Lisa I. Iezzoni & Mahzarin R. Banaji, *Implicit Bias Among Physicians and Its Prediction of Thrombolysis Decisions for Black and White Patients*, 22 J. GEN. INTERNAL MED. 1231, 1236 (2007) ("Implicit race biases are prevalent in the United States in general, and as such it should not be surprising that they are prevalent among physicians as well.").

[43] *See id.* (showing that physicians are influenced by implicit racial biases).

fertile terrain for nourishing stereotypes for two main reasons. First, healthcare providers in these contexts are commonly required to deliver diagnoses based on rapid, sometimes urgent, encounters, rather than on long-term acquaintance with their patients.[44] Studies show that when people have less time to establish a sound impression, they tend to cling to stereotype-attributional processing.[45] Second, and relatedly, the more complex the decision, the more influence stereotypes tend to have on the decision-making process.[46] Medical diagnoses and treatment recommendations require assessing multiple pieces of information[47] and often present

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[44] *See, e.g.*, Mark Linzer et al., *Working Conditions in Primary Care: Physician Reactions and Care Quality*, 151 ANNALS INTERNAL MED. 28, 28 (2009) (questioning physicians about the relation between their experience and reactions to time pressure and patient care); *see also* Mark Linzer, Martha Gerrity, Jeffrey A. Douglas, Julia E. McMurray, Eric S. Williams & Thomas R. Konrad, *Physician Stress: Results from the Physician Worklife Study*, 18 STRESS & HEALTH 37, 38 (2002) ("Physician stress is worsened by work demands such as complex patients and time pressure in patient visits.").

[45] *See* Erin Dehon, Nicole Weiss, Jonathan Jones, Whitney Faulconer, Elizabeth Hinton & Sarah Sterling, *A Systematic Review of the Impact of Physician Implicit Racial Bias on Clinical Decision Making*, 24 ACAD. EMERGENCY MED. 895, 896 (2017) ("Evidence suggests that decision making based on heuristics and biases (vs. a more rational approach) is more likely to occur under certain conditions: time pressure, lack of solid knowledge/information to make a decision, cognitive overload, and fatigue."); *see also* Arie W. Kruglanski & Donna M. Webster, *Motivated Closing of the Mind: "Seizing" and "Freezing,"* 103 PSYCH. REV. 263, 265 (1996) ("[I]ndividuals under a heightened need for closure should rely more on stereotypes than on case-specific or individuating information simply because stereotypes represent preexisiting knowledge structures, ready to be used momentarily, whereas individuating information may require extensive further processing."); Hilton & von Hippel, *supra* note 39, at 252 ("People typically engage in attributional processing only until they have found a sufficient cause for the behaviors they are witnessing.").

[46] *See* Heather M. Kleider, Leslie R. Knuycky & Sarah E. Cavrak, *Deciding the Fate of Others: The Cognitive Underpinnings of Racially Biased Juror Decision Making*, 139 J. GEN. PSYCH. 175, 176 (2012) ("Heuristic strategies (e.g., using stereotypes) are cognitively efficient and thus are a useful alternative to more controlled resource-dependent strategies when the decision-making situation is complex or requires evaluation of multiple pieces of information.").

[47] Diagnostic and treatment decisions are not only based on examination of results, but also on factors such as the patient's medical history and use of medications. *See* Michael C. Peterson, John H. Holbrook, De Von Hales, N. Lee Smith & Larry V. Staker, *Contributions of the History, Physical Examination, and Laboratory Investigation in Making Medical Diagnoses*, 156 W.J. MED. 163, 163 (1992) ("Arriving at most medical diagnoses requires information obtained from the history, the physical examination, and the laboratory investigation."); J.R. Hampton, M.J.G. Harrison, J.R.A. Mitchell, J.S. Prichard & Carol Seymour, *Relative Contributions of History-taking, Physical Examination, and Laboratory Investigation to Diagnosis and Management of Medical Outpatients*, 2 BRIT. MED. J. 486, 486

high levels of complexity, especially when decisions must be made rapidly.[48]

Circumstances characterized by complexity and urgency tend to activate stereotypes in the decision-maker's mind automatically,[49] that is, without intention.[50] In such contexts, to overcome the influence of implicit bias over their judgment process, people must not only become aware of their stereotyped beliefs but also decide affirmatively not to allow stereotypes to penetrate their judgment.[51]

Because stereotypes that cause healthcare providers to underestimate the severity of their patients' conditions[52] exert what can be described as a diminishing effect,[53] the stereotypes themselves are termed here "diminishing stereotypes." When a physician's judgment is disrupted by stereotypes causing her to underestimate the severity of a patient's aliment, she may recommend a less intensive course of treatment than the patient's

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(1975) ("The making of a medical diagnosis depends on three things: the history obtained from the patient, the signs noticed on physical examination, and the results of laboratory investigations."); JONATHAN R. NICHOL, JOSHUA HENRINA SUNDJAJA & GRANT NELSON, MEDICAL HISTORY (2021) (noting the importance of learning the patient's medical history).

[48] *See supra* note 45 and accompanying text.

[49] *See* Kleider et al., *supra* note 46, at 176 (describing how when people are pressed to make a decision they will revert to racial stereotypes almost automatically to aid in the decision-making process).

[50] *See* B. Keith Payne, *Weapon Bias: Split-Second Decisions and Unintended Stereotyping*, 15 CURRENT DIRECTIONS PSYCH. SCI. 287, 287 (2006) ("[B]ias requires no intentional racial animus, occurring even for those who are actively trying to avoid it.").

[51] *See* Kleider et al., *supra* note 46, at 176 ("Not only are heuristic strategies [involving stereotyping] cognitively efficient, they are automatically activated such that cognitive resources are required to decide *not* to use them when making judgments.").

[52] *See* Gilboa, *supra* note 9, at 651, 674 (reviewing studies on the problem of implicit bias among both medical providers and jurors with respect to the evaluation of pain and suffering, concluding that "implicit racial bias . . . may disrupt the evaluation of severity of injury *in one's mind*, thus making a juror genuinely believe that a Black victim's injury is less severe than it actually is").

[53] Scholars sometimes use the phrase diminishing effect to describe the influence of stereotypes on their "targets" rather than to describe the impact of stereotypes on the decision-maker's judgment. *See* Laurie A. Rudman & Julie E. Phelan, *The Effect of Priming Gender Roles on Women's Implicit Gender Beliefs and Career Aspirations*, 4 SOC. PSYCH. 192, 199 (2010) (describing the impact of gender-based stereotypes on women rather than on the decision-maker's judgment); Anneke Steegh, Tim Höffler, Lars Höft & Ilka Parchmann, *Exploring Science Competition Participants' Expectancy-value Perceptions and Identification: A Latent Profile Analysis*, 74 LEARNING & INSTRUCTION 1, 8 (2021) (discussing the diminishing effect of gender-science stereotypes on feelings of belonging and enjoyment, especially for girls).

condition warrants.[54] For that reason, diminishing stereotypes increase the likelihood of judgment errors[55] and their potentially harmful outcomes.[56] Since diminishing stereotypes target social groups rather than individuals, they contribute to categorical disparities in treatment to the detriment of patients belonging to groups that are subject to these stereotypes.[57]

As the following brief review illustrates, studies have empirically demonstrated the diminishing effect of stereotypes in healthcare in recent years, mainly in relation to Black and women patients. The focus on these particular social groups in the following review should not, however, be interpreted as implying that other social groups are not prone to similar diminishing effects.[58] Indeed, the

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[54] *See supra* note 9 and accompanying text.

[55] *See* Mark L. Graber, Nancy Franklin & Ruthanna Gordon, *Diagnostic Error in Internal Medicine*, 165 ARCHIVES INTERNAL MED. 1493, 1494 (2005) (finding that cognitive errors resulting, among other factors, from faulty knowledge, significantly contributes to diagnostic errors.); ED O'Sullivan & SJ Schofield, *Cognitive Bias in Clinical Medicine*, 48 J. ROYAL COLL. PHYSICIANS EDINBURGH 225, 225 (2018) (noting previous scholars' finding that "at least 13% of diagnostic errors relate to interpretation of test results and 78.9% involve cognitive error during the patient encounter" (citing Hardeep Singh, Traber Davis Giardina & Ashley N.D. Meyer, *Types and Origins of Diagnostic Errors in Primary Care Settings*, 173 JAMA INTERNAL MED. 418, 420 (2013))).

[56] *See* Carlos A. Camargo, Jr. et al., *Safety Climate and Medical Errors in 62 US Emergency Departments*, 60 ANNALS EMERGENCY MED. 555, 555 (2012) ("Medical errors are a major cause of morbidity and mortality in the United States."); Jerome P. Kassirer & Richard I. Kopelman, *Cognitive Errors in Diagnosis: Instantiation, Classification, and Consequences*, 86 AM. J. MED. 433, 440 (1989) (noting that cognitive errors in medical diagnosis may "yield[] anxiety, morbidity, and cost, and . . . threaten[] life").

[57] *See* IMPROVING DIAGNOSIS IN HEATH CARE—COMMITTEE ON DIAGNOSTIC ERROR IN HEALTH CARE 52 (Erin P. Balogh, Bryan T. Miller & John R. Ball eds., The Nat'l Acad. Press) (2015) ("There are indications that biases influence diagnosis."). For a review illustrating racial and gender-based discrepancies in treatments, see *infra* section II.B.

[58] For example, there are hardly any studies indicating that Latino children receive less pain treatment than White children. *See* Janice A. Sabin & Anthony G. Greenwald, *The Influence of Implicit Bias on Treatment Recommendations for 4 Common Pediatric Conditions: Pain, Urinary Tract Infection, Attention Deficit Hyperactivity Disorder, and Asthma*, 102 AM. J. PUB. HEALTH 988, 988 (2012) (referring to Nathalia Jimenez, Kristy Seidel, Lynn D. Martin, Frederick P. Rivera & Anne M. Lynn, *Perioperative Analgesic Treatment in Latino and non-Latino Pediatric Patients*, 21 J. HEALTH CARE FOR POOR & UNDERSERVED 229 (2010), as the only study that showed that Latino children receive less opioid analgesics than White children for early postoperative pain). There are also strong indications that transgender patients are stigmatized, inter alia, as "having a promiscuous sexual history." Nikki Burrill & Valita Fredland, *The Forgotten Patient: A Health Provider's Guide to Providing Comprehensive Care for Transgender Patients*, 9 IND. HEALTH L. REV. 69,

analysis and remedial solution that follow are not confined to any particular social group but rather are fit to contend with the problem of bias in healthcare affecting patients belonging to any social group subject to diminishing stereotypes.[59]

B. ILLUSTRATING THE DIMINISHING EFFECT OF STEREOTYPES IN HEALTHCARE

Racial stereotypes have been proven to play a role in clinical decision-making, regardless of whether the decision-makers are aware of their influence[60] and sometimes even when decision-makers explicitly declare that they are affirmatively trying to avoid them.[61] To illustrate the influence of implicit bias on treatment decisions, consider a recent study in which physicians were randomly assigned to medical files of patients with symptoms of acute coronary syndromes.[62] The medical files were completely identical except for the photos attached to them, which showed the

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101 (2012). At present, however, there are no significant findings indicating that these stereotypes have a diminishing effect. Such an indication may come out in future research.

[59] *See infra* Part IV.

[60] *See* Gordon B. Moskowitz, Jeff Stone & Amanda Childs, *Implicit Stereotyping and Medical Decisions: Unconscious Stereotype Activation in Practitioners' Thoughts About African Americans*, 102 AM. J. PUB. HEALTH 996, 996 (2012) ("[I]mplicit stereotypes could affect [medical professionals'] diagnoses, treatment recommendations, expectations about whether a patient will follow a prescribed treatment, and both verbal and nonverbal behavior toward patients during professional interactions, despite their intention to avoid such biases in conduct."); Jasmine R. Marcelin, Daw S. Siraj, Robert Victor, Shaila Kotadia & Yvonne A. Maldonado, *The Impact of Unconscious Bias in Healthcare: How to Recognize and Mitigate It*, 220 J. INFECTIOUS DISEASES s62, s62 (2019) (suggesting strategies to mitigate unconscious bias and its effect on patient-clinician interactions, both generally and specifically in the field of infectious diseases).

[61] *See* ABA Criminal Justice Section, *Judge Bennett on Implicit Bias in the Courtroom*, YOUTUBE (Mar. 22, 2016), https://www.youtube.com/watch?v=Ge8YzKSuibY (presenting the lecture of retired Judge Mark W. Bennett of the United States District Court for the Northern District of Iowa where he shared his surprise when finding out he had "very high implicit bias against African Americans" after taking the Implicit Association Test (IAT)); *see also* Levinson, *supra* note 7, at 404 (discussing a study investigating the influence of implicit bias on memory errors in legal processes, which showed that participants with lower levels of explicit bias were found to be more racially biased than participants who showed higher levels of explicit bias).

[62] *See* Green et al., *supra* note 42, at 1231 (discussing the research study's design in which clinical vignettes of patients with acute coronary syndrome were e-mailed to internal medicine and emergency medicine residents and then those residents completed a questionnaire and IATs).

face of either a Black or White patient.[63] The identical files enabled the researchers to study the impact of racial bias while controlling for variables such as the patients' economic backgrounds.[64] The researchers found racial disparities in the rates at which the physicians recommended thrombolysis[65] to treat patients with acute coronary syndromes.[66] They attributed these racial disparities to the stereotype that Black patients are perceived as less cooperative than White patients.[67] The higher the degree of implicit bias the study detected, the less likely it was for the physicians to use thrombolysis to treat the syndrome, when the only apparent difference between the patients was their race.[68] The results of this study are consistent with the results of a study undertaken more than twenty years ago, which found disparities in physician responses to identical heart disease symptoms presented by either Black or White patients.[69]

Importantly, none of the studies suggest that the physicians intended to discriminate against Black patients.[70] Nonetheless, the implicit influence of racial stereotypes led the physicians to

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[63] *Id.* at 1232–33.

[64] *Id.* at 1233.

[65] *See* Rick Ansorge, *Thrombolysis*, WEBMD (Mar. 7, 2021), https://www.webmd.com/stroke/thrombolysis-definition-and-facts ("Thrombolysis . . . is a treatment to dissolve dangerous clots in blood vessels, improve blood flow, and prevent damage to tissues and organs.").

[66] *See* Green et al, *supra* note 42, at 1234–35 (finding that while "physicians were more likely to diagnose Black patients than White patients with [coronary artery disease] as a cause of their chest pain," they were "equally likely to give thrombolysis" for White and Black patients, resulting in racial disparity in thrombolysis treatment relative to diagnosis).

[67] *See id.* at 1231 (demonstrating that physicians in this study reported no explicit preference for White versus Black patients, nor did they explicitly note differences in their perception of these groups of patients; however, the IATs the physicians voluntarily took revealed their implicit bias).

[68] Although the researchers designed their examination around a stereotype perceiving Black patients as less cooperative, they conceded that other stereotypes might have contributed to the study result. *See id.* at 1237 ("IATs can be developed to provide a broader range of clinically relevant stereotypes, in addition to the tests we used.").

[69] *See* Kevin A. Schulman et al., *The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization*, 340 NEW ENG. J. MED. 618, 618 (1999) (presenting research data on physician treatment decisions for populations of Black or White patients); René Bowser, *Racial Profiling in Health Care: An Institutional Analysis of Medical Treatment Disparities*, 7 MICH. J. RACE & L. 79, 85 (2001) (discussing the Schulman et al. study and noting that it "indicates that race independently influences how physicians percieve and manage chest pain").

[70] *See, e.g.*, Green et al., *supra* note 42, at 1231 (focusing on unconsious bias).

conclude that the medical conditions of Black patients require less intensive treatment than White patients', and in some cases, no treatment at all.[71] In other words, racial stereotypes and implicit bias led physicians presented with identical clinical information to find that the medical condition of the Black patients was less severe than that of White patients and thus required less intensive treatment. These results are consistent with empirical findings demonstrating that physicians routinely underestimate Black patients' level of pain and provide them with less medication than they give to comparable White patients.[72]

The diminishing effect in pain treatment recommended to Black patients reflects deeply rooted stereotypes presenting Black people as more physically resilient,[73] and accordingly, less susceptible to

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[71] *See* Gilboa, *supra* note 9, at 682 (examining studies that show that Black patients were less likely to receive as much or any pain medication). For studies reviewing the significant connection between the patient's severity of illness and the intensity of treatment in different medical contexts, see generally, Evan G. Wong, Ann M. Parker, Doris G. Leung, Emily P. Brigham & Alicia I. Arbaje, *Association of Severity of Illness and Intensive Care Unit Readmission: A Systematic Review*, 45 HEART & LUNG 3 (2016) (producing meta-analysis that shows that severity of illness is associated with readmission to the intensive care unit in adult patients); James E. Gray Douglas K. Richardson, Marie C. McCormick, Kathryn Workman-Daniels & Donald A. Goldmann, *Neonatal Therapeutic Intervention Scoring System: A Therapy-Based Severity-of-Illness Index*, 90 PEDIATRICS 561 (1992) (offering an assessment aimed at improving therapy-based severity of illness assessment in newborns); *see also* Kristin Halvorsen, *The Ethics of Bedside Priorities in Intensive Care*, SYKEPLEIEN FORSKNING 24 (Jan. 2010), https://sykepleien.no/forskning/2010/11/ethics-bedside-priorities-intensive-care-value-choices-and-considerations ("[T]here is agreement within the medical communities that severity of illness in itself does not constitute an isolated priority criterion with regard to treatment.").

[72] *See* Megann F. Young, Gene Hern, Harrison J. Alter, Joseph Barger & Farnaz Vahidnia, *Racial Differences in Receiving Morphine Among Prehospital Patients with Blunt Trauma*, 45 J. EMERGENCY MED. 46, 47–48 (2013) (finding that Black and Hispanic patients were less likely to get pain reducing treatment in ambulance response settings than White patients); Monika K. Goyal, Nathan Kuppermann, Sean D. Cleary, Stephen J. Teach & James M. Chamberlain, *Racial Disparities in Pain Management of Children with Appendicitis in Emergency Departments*, 169 JAMA PEDIATRICS 996, 998 (2015) (finding that Black children diagnosed with appendicitis were less likely to receive pain medication than White children with appendicitis); Sabin & Greenwald, *supra* note 58, at 988 (finding that pediatricians' implicit attitudes and stereotypes toward Black individuals were associated with treatment recommendations of narcotic medication for pain following surgery).

[73] *See* Adam Waytz, Kelly Marie Hoffman & Sophie Trawalter, *A Superhumanization Bias in Whites' Perception of Blacks*, 6 SOC. PSYCH. & PERSONALITY SCI. 352, 356 (2015) (arguing that Black people are sometimes perceived as better able to suppress hunger and thirst); Bowser, *supra* note 69, at 103 (arguing that bias in medical treatment is a result of "the unquestioned knowledge that Blacks are biologically and culturally different").

pain than White people.[74] There is a similar effect observed in clinical decision-making related to women, albeit based on different stereotypes. Studies indicate that healthcare providers are more likely to interpret women's symptoms as exaggerated or psychosomatic than men's.[75] Diminishing effects have similarly been particularly documented in relation to women's complaints about pain.[76] For example, in a study involving more than nine hundred patients, women were found less likely than men to receive analgesia or opiates for acute abdominal pain.[77] Other stereotypes mentioned in studies relating to diminishing women's experience of pain concern the perception of women as less reliable reporters than men.[78] And while misdiagnosis of heart disease in women typically relates to knowledge gaps in research,[79] the stereotypical image of

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[74] *See* Gilboa, *supra* note 9, at 677 (reviewing studies that indicate that Black patients are perceived as having less severe injuries than White patients); *see also* Sophie Trawalter, Kelly M. Hoffman & Adam Waytz, *Racial Bias in Perceptions of Others' Pain*, 7 PROC. NAT'L ACAD. SCIS. U.S. 1, 1 (2012) ("[P]eople assume *a priori* that Blacks feel less pain than do Whites."); Hoffman et al., *supra* note 9, at 4297 (asking participants to rate the pain of gender-matched Black or White targets across the same scenarios and finding that participants who rated the Black target reported lower levels of pain than participants who rated the White target).

[75] *See, e.g.*, Plaza, *supra* note 1, at 105–06 ("[Diagnostic] delays are exacerbated by psychosomatic misdiagnoses, which women receive more often than their male counterparts, and by a discounting of women's pain and other symptoms.").

[76] *See id.* at 107–08 (noting that the discount effect is especially present when "pain misconstrued as menopause or menstrual cramps[]"); Gina Shaw, *Why Women Struggle to Get the Right Diagnosis*, WEBMD HEALTH NEWS (June 8, 2018), https://www.webmd.com/women/news/20180607/why-women-are-getting-misdiagnosed ("Women have a lot more trouble than men do in getting pain taken seriously.").

[77] *See* Esther H. Chen, Frances S. Shofer, Anthony J. Dean, Judd E. Hollander, William G. Baxt, Jennifer L. Robey, Keara L. Sease & Angela M. Mills, *Gender Disparity in Analgesic Treatment of Emergency Department Patients with Acute Abdominal Pain*, 15 ACAD. EMERGENCY MED. 414, 414 (2008) (analyzing the results of a clinical investigation regarding gender disparity in analgesic treatment of emergency department patients with acute abdominal pain).

[78] Diane E. Hoffmann & Anita J. Tarzian, *The Girl Who Cried Pain: A Bias Against Women in the Treatment of Pain*, 29 J.L. MED. & ETHICS 13, 13 (2001) (exploring the influence of emotions on pain perception and how "gender differences may influence the way men and women perceive pain"). For a study that did not find sex or age to be a significant predictor for bias in providing pain reducing treatment, see Young et al., *supra* note 72, at 47.

[79] *See, e.g.*, Plaza, *supra* note 1, at 107 (noting that heart attacks are strongly stereotyped as a "men's disease," similar to stroke and chronic obstructive pulmonary disorder); *see generally Heart Disease Facts*, CTRS. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/heartdisease/facts.htm (last updated Oct. 14, 2022).

women as hysterical[80] also contributes to delays in treating heart disease.[81]

Discrepancies in care observed along gender lines raise concerns that healthcare providers may consider women's reports of their symptoms to be exaggerated and "adjust" their treatment recommendations accordingly.[82] Healthcare providers may thus recommend a less intensive course of treatment—including the option to "delay and monitor"[83]—than they would recommend for the same condition in a male patient.[84]

C. THE COGNITIVE CYCLE OF DIMINISHING EFFECTS

Psychologists offer a possible explanation for the diminishing effect described above: By generating false beliefs, stereotypes

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[80] *See* Elaine Showalter, *On Hysterical Narrative*, 1 NARRATIVE 24, 24 (1993) (reviewing generally the connection of hysterical narrative and femininity in different fields, including medicine).

[81] *See* Gabrielle R. Chiaramonte & Ronald Friend, *Medical Students' and Residents' Gender Bias in the Diagnosis, Treatment, and Interpretation of Coronary Heart Disease Symptoms*, 25 HEALTH PSYCH. 255, 256 (2006) ("Women are more likely than men to be diagnosed with psychological disorders that present with symptoms also common in heart disease. Panic disorder, for example, is characterized by the sudden onset of cardiorespiratory and physiological symptoms such as shortness of breath, tachycardia, nausea, and sweating . . . . These factors work to give greater importance to women's stress and psychological symptoms and may affect the interpretation of cardiac symptoms so that these are perceived as a manifestation of the stress and not as symptoms of [congenital heart disease]."); Cecile M. T. Gijsbers Van Wijk, Katja P. Van Vliet & Annemarie M. Kolk, *Gender Perspectives and Quality of Care: Towards Appropriate and Adequate Health Care for Women*, 43 SOC. SCI. MED. 707, 712 (1996) ("Physicians are more likely to contribute women's health problems to emotional than to physical causes."); Theresa A. Beery, *Diagnosis and Treatment of Cardiac Disease: Gender Bias in the Diagnosis and Treatment of Coronary Artery Disease*, 24 HEART & LUNG 427, 428 (1995) ("Studies report differences in interpretation of women's symptoms by both physicians and women themselves. In one study women often were considered to have psychiatric rather than cardiac causes of their pain even though the results of their cardiac scans were abnormal. The stereotype is of the 'whiny, hysterical, female.' In contrast, men are assumed to be stoic, so when they do complain it is thought that they must be really sick.").

[82] *See* Plaza, *supra* note 1, at 103 (discussing how the discounting of women's pain leads to delays and missed diagnoses).

[83] *See id.* at 103–06 (reviewing studies showing that women experience delays "across the board").

[84] *See* Chen et al., *supra* note 77, at 416 ("[W]omen waited longer for their pain medications than men [to treat their acute abdominal pain,] . . . particularly for opiates.").

introduce a "circular structure"[85] into the minds of those who hold them, influencing their judgment.[86] The idea of a circular structure of beliefs reflects the understanding that people tend to rely on their judgment as evidence confirming their beliefs,[87] without knowing that these beliefs previously influenced their judgment.[88]

The volume of evidence on bias in medical decision-making to the detriment of patients belonging to groups associated with diminishing stereotypes may be a manifestation of cognitive circularity of beliefs present in the healthcare arena. For example, an implicitly biased physician may recommend a less intensive course of treatment to a Black patient than she would to a White patient, such as medication instead of surgery. This physician may be convinced that her recommendation is evidence-based without realizing that her stereotyped beliefs affected her assessment of her patient's condition and thus her treatment recommendation.[89]

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[85] Susanna Siegel, *Cognitive Penetrability and Perceptual Justification*, 46 NOÛS 201, 202 (2012) (using the phrase circular structure to describe the process in which beliefs are penetrated into justification that are seemingly confirming the same beliefs).

[86] *See* Galen V. Bodenhausen, *Stereotypic Bias in Social Decision Making and Memory: Testing Process Models of Stereotype Use*, 55 J. PERSONALITY & SOC. PSYCH. 726, 734 (1988) ("[T]he activation of a social stereotype elicits a selective evidence-processing strategy on the part of decision makers."); John M. Darley & Paget H. Gross, *A Hypothesis-Confirming Bias in Labeling Effects*, 44 J. PERSONALITY & SOC. PSYCH. 20, 20 (1983) (showing the effect of presenting socioeconomic labels on the evaluation of children's academic potential and how this effect was more significant when mixing the labels with supplemental information).

[87] Amos Tversky and Daniel Kahneman identified this sense of confirmation almost half a century ago as an "illusion of validity." *See* Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCI. 1124, 1226 (1974) (discussing how people often rely on a limited number of heuristic methods to simplify complex decision-making and how this simplification can lead to "severe and systematic errors").

[88] Susanna Siegel gives an elucidating description of this circularity of beliefs with following example based on a mundane scenario: "[S]uppose Jill believes that Jack is angry at her, and this makes her experience his face as expressing anger. Now suppose she takes her cognitively penetrated experience at face value, as additional support for her belief that Jack is angry at [her] . . . . She seems to have moved in a circle, starting out with the penetrating belief, and ending up with the same belief, via having an experience." Siegel, *supra* note 85, at 202; *see also* Beth Barker, *Epistemic Injustice and Performing Know-how*, 35 SOC. EPISTEMOLOGY 608, 615 (2021) ("If a hearer or observer is honest, their evaluation is skewed not because they *believe* a stereotype, but because some stereotype operates implicitly in their evaluation.").

[89] *See supra* notes 85–88 and accompanying text.

Patients subject to diminishing stereotypes are more susceptible to errors of judgment,[90] and thus to bad outcomes.[91]

Patients harmed by such errors may seek redress for their injuries on a theory of negligence. As the next Part explains, however, such claims are almost certainly destined to fail.

III. BIASED-BUT-REASONABLE: BIAS UNDER THE COVER OF THE STANDARD OF CARE

In *Pleasants v. Alliance Corp.*, fifteen-year-old Jennifer arrived at the emergency room with severe stomach pain.[92] She was released from the hospital two hours later, then died within hours of returning home.[93] Jennifer's death was later attributed to a rare disease that was difficult to discover and required treatment with antibiotics and surgery.[94] Jennifer's estate sued for medical malpractice but did not base its claim on the defendant physician's failure to diagnose her condition.[95] Rather, it claimed that the defendants negligently failed to keep Jennifer at the hospital for close monitoring, despite her severe pain.[96] The Supreme Court of Appeals of West Virginia upheld the jury's verdict that the defendants were not liable for medical malpractice.[97] Important for our analysis is the court's application of the doctrine of "multiple methods of treatment,"[98] also known as "the two schools of thought rule."[99] This doctrine acknowledges that physicians may

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[90] *See* Hoffman et al., *supra* note 9, at 4296 (finding that physician partcipants endorsed false beliefs about Black patients and rated the Black patient's pain as lower than the White patient's pain, thus making "less accurate treatment recommendations").

[91] *Id*.

[92] *See* 543 S.E.2d 320, 323 (W. Va. 2000) ("Jennifer . . . sought treatment at Women and Children's Hospital for severe stomach pain.").

[93] *Id*.

[94] *Id*.

[95] *Id*.

[96] *Id*. at 328.

[97] *See id*. at 332 (holding "no prejudicial error" and affirming the lower court's verdict for the defense).

[98] *See id*. at 329 (finding no error in giving the multiple methods of treatment instruction).

[99] *See, e.g.*, Chumbler v. McClure, 505 F.2d 489, 492 (6th Cir. 1974) ("Where two or more schools of thought exist among competent members of the medical profession concerning proper medical treatment for a given ailment, each of which is supported by responsible medical authority, it is not malpractice to be among the minority in a given city who follow one of the accepted schools.").

legitimately choose one of two or more professionally accepted courses of treatment to meet the standard of care.[100] As the ruling in *Pleasants* demonstrates, the doctrine may apply not only with respect to alternative treatments for an ailment but also to the alternatives available for monitoring a patient's condition.[101]

Applying the multiple methods of treatment doctrine, the *Pleasants* court held that since *both* releasing Jennifer home with monitoring instructions *and* admitting her to the hospital for closer monitoring were recognized and accepted methods of treating patients with severe pain resulting from gastritis—the diagnosis Jennifer received in the emergency room—the defendant acted reasonably.[102] The ruling in *Pleasants* has recently been studied as an example of the diminishing effect toward women in healthcare,[103] who more often than men are told to "stop worrying and go home and relax."[104]

The appellants in *Pleasants* did not challenge the decision to discharge Jennifer as biased. Indeed, as the following discussion demonstrates, such a claim would have been futile under current law.[105] In the following section, I explain that under prevailing negligence principles, a claim challenging a biased choice of

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[100] *Id.*; *see also* Bickham v. Grant, 861 So. 2d 299, 307 (Miss. 2003) ("[T]here may be more than one treatment option for a medical problem. If the physician chooses one of the reasonable treatment options within the standard of care, that choice does not create liability."); DiFranco v. Klein, 657 A.2d 145, 148 (R.I. 1995) ("[A]s long as a physician exercises the applicable degree of care, he or she may choose between differing but accepted methods of treatment and not be held liable.").

[101] *Pleasants*, 523 S.E.2d at 328 (finding that a multiple methods jury instruction was not erroneous when physician's decided to send Jennifer home with instruction to watch her closely and "to return to the hospital as indicated by the pain sheet" instead of holding her for observation in the hospital).

[102] *Id.* at 328–29.

[103] *See* Plaza, *supra* note 1, at 112–15 (referring to the *Pleasants* ruling to demonstrate what the author generally terms as "the gendered impact of medical malpractice law").

[104] Evers v. Dollinger, 471 A.2d 405, 407 (N.J. 1984) (quoting the defendant-physician to the woman patient). Note that unlike in *Pleasants*, in *Evers* the physician was accused of negligence for failing to diagnose the patient correctly rather than for not choosing the correct course of treatment. *Id.* at 408. As I explain above, the claim in *Pleasants* focused on the defendant's choice to monitor the patient. *Pleasants*, 543 S.E.2d at 323. There is a substantial difference between these types of claims. *See supra* notes 98–102 and accompanying text.

[105] *See supra* note 18 (setting out the standard for current medical malpractice claims); *see also* Mary Crossley, *Infected Judgment: Legal Responses to Physician Bias,* 48 VILL. L. REV. 195, 247 (2003) ("[T]traditional medical malpractice law is unlikely to provide an effective avenue for redressing the influence of physician bias on medical decisions.").

treatment will usually face insurmountable hurdles. To understand why, it is helpful to review the architecture of the standard of care.

A. ONE STANDARD OF CARE, A RANGE OF REASONABLE DECISIONS

Most of our day-to-day activities present some level of risk toward others.[106] We put others at risk when we walk, drive, or even breathe around them.[107] We expose ourselves to liability in negligence, however, only when the risks we impose on others are unreasonable under the circumstances.[108] When that is the case, our conduct does not meet the standard of care,[109] i.e., it is considered negligent. Reasonableness might seem like a dichotomic concept—after all, a defendant is ultimately determined either to have acted reasonably or not. In reality, however, there is often more than one way to act within the boundaries of what is considered reasonable.[110] In such cases, various courses of conduct can satisfy the standard of care. The multiple methods of treatment analysis in *Pleasants*[111] illustrates a particular manifestation of this generic principle of negligence law[112]: When there are several reasonable

[106] *See* Allan D. Miller & Ronen Perry, *The Reasonable Person*, 87 N.Y.U. L. REV. 323, 338 (2012) (stating that most of the choices we all make are not between risk and no risk, but somewhere in between).

[107] *See* Gregory C. Keating, *Pressing Precaution Beyond the Point of Cost-Justification*, 56 VAND. L. REV. 653, 693 (2003) ("There are many activities that we engage in every day—such as driving a car or even breathing city air—that entail some risk of accident or material health impairment.").

[108] *See* RESTATEMENT (SECOND) OF TORTS: RISK OF DIRECT OR INDIRECT HARM §302 cmt. a (AM. L. INST. 2010) ("In general, anyone who does an affirmative act is under a duty to others . . . to protect them against an unreasonable risk of harm to them arising out of the act.").

[109] *See* Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 100 (N.Y. 1928) ("The risk reasonably to be perceived defines the duty to be obeyed, and risk imports relation; it is risk to another or to others within the range of apprehension.").

[110] *See* Maytal Gilboa, *Multiple Reasonable Behavior Cases: The Problem of Causal Underdetermination in Tort Law*, 25 LEGAL THEORY 77, 88 (2019) (discussing cases reflecting multiple reasonable ways to meet the duty of care, and the unique causal problem that they entail).

[111] *See* Pleasants v. Alliance Corp., 543 S.E.2d 320, 329 (W. Va. 2000) (discussing how multiple methods of treatment analysis are fundamental to negligence law).

[112] *See supra* note 100 and accompanying text (noting that there may be more than one treatment method for a medical problem).

ways to meet the standard of care, a defendant can satisfy the duty of care by following any one of them.[113]

Importantly, the multiple methods of treatment doctrine is not confined to treatment through surgery or medication.[114] Rather, it applies to all courses of treatment perceived by the relevant medical community as acceptable under the circumstances for treating a particular medical condition or its symptoms.[115] Accordingly, reasonable treatments may include delaying treatment or releasing a patient home with instructions or recommendations to monitor her condition.[116]

Medical conditions may have more than one reasonable course of treatment because reasonableness is determined based on real-life practice experience informed by professional standards and customs.[117] Since reasonableness is assessed based on an empirical

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[113] *See* Haft v. Lone Palm Hotel, 478 P.2d 475, 472 (Cal. 1970) (explaining that where a father and son drowned in a hotel swimming pool, the hotel breached the duty of care by failing to follow one of two alternatives considered reasonable under the California Health and Safety Code: either providing lifeguard services or posting a warning sign alerting swimmers that there was no lifeguard on duty).

[114] *See* Shectman v. Bransfield, 959 A.2d 278, 284–86 (N.J. Super. Ct. App. Div. 2008) (explaining that where a defendant's psychiatrist was sued by his patient in malpractice for failing to appropriately monitor him, thus missing his deteriorating clinical condition which resulted in suicide attempt, the defendant successfully proved that there was more than one reasonable approach to monitoring a patient in the circumstances and therefore fulfilled his standard of care toward the plaintiff).

[115] *See supra* notes 98–100 and accompanying text (discussing the appropriateness of using multiple treatment methods on patients).

[116] *See Pleasants*, 543 S.E.2d at 329 (discussing how various treatments may be appropriate for a single patient).

[117] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 13 cmt. b (2010) (indicating that the jury should consider evidence of whether the actor complied with custom in its reasonableness analysis); *see also* Gibson, *supra* note 16, at 1646 (noting that reasonableness "invites us to use real-world practice as a guide for legal decisionmaking"). It should be noted that in some jurisdictions, a professional custom is based on the prevailing view of a "considerable number of physicians." For example, in Pennsylvania, the defense requires that a "considerable number of physicians" would find the administered practice appropriate in the circumstances to absolve the physician-defendant of liability. Jones v. Chidester, 610 A.2d 964, 969 (Pa. 1992) (contending that a school of thought on treatment must not be limited to reputable and respected reasonable medical experts but rather there should be a considerable number of such physicians for a course of action to be considered reasonable (citing Duckworth v. Bennett, 181 A. 558, 559 (Pa. 1935))). In other jurisdictions, it is enough to show that a "respectable minority" of physicians in the relevant field finds the chosen course of treatment reasonable in the circumstances to meet the standard of care. According to the "respectable minority approach," it suffices when a defendant-physician can prove that the chosen approach is followed by at least a few physicians and is often considered

reference to generally accepted practice,[118] in principle, there are no limitations on the number of practices that can meet this requirement for a particular medical condition.[119] The law requires physicians merely to select a course of treatment that does not fall below the *minimally* acceptable standard.[120] As long as the chosen course of treatment falls within the accepted range of care, a physician's choice is entitled to deference because the exercise of her professional judgment is based on her experience.[121]

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the best available treatment in somewhat similar cases. *See* Leech v. Bralliar, 275 F. Supp. 897, 902 (D. Ariz. 1967) (concluding that the physician's method of treatment, which had "not been accepted as a proper method of treatment by the medical profession generally," was not an inappropriate method of treatment since it was used by "a respectable minority of physicians").

[118] The empirical nature of these types of arguments requires both the plaintiff and the defendant to prevail in what has come to be known as a "battle of the experts." *See, e.g.*, Galloway v. Rand Pharmacy, Inc., No. 11 C 01583, 2014 WL 5439785, at *3 (N.D. Ill. Oct. 27, 2014) ("Particularly in medical malpractice cases applying Georgia law, plaintiffs generally must present expert testimony . . . ."); Zwiren v. Thompson, 578 S.E.2d 862, 865 (Ga. 2003) ("[T]he question of whether the alleged professional negligence caused the plaintiff's injury is generally one for specialized expert knowledge beyond the ken of the average layperson."); *see also* Bloche, *supra* note 20, at 109 ("Medical malpractice cases commonly turn clinical practice variations into battles of the experts, unresolvable on rigorous empirical grounds, over which standard constitutes 'reasonable care.'"); Plaza, *supra* note 1, at 112 ("Practitioners need only be 'minimally competent,' and a plaintiff's expert must be able to testify that the defendant's actions fell below that minimal standard . . . .").

[119] *See supra* notes 99–100 (discussing the multiple methods of treatment doctrine).

[120] *See* Hall v. Hilbun, 466 So.2d 856, 866 (Miss. 1985) ("When a physician undertakes to treat a patient, he takes on an obligation enforceable at law to use minimally sound medical judgment and render minimally competent care in the course of services he provides."); Ramsey v. Physicians Mem'l Hosp., Inc., 373 A.2d 26, 29 (Md. Ct. Spec. App. 1977) (explaining that the physician-defendant did not violate "the minimum standard of care" that is "expected of a reasonably competent practitioner in the same class to which he belongs, acting in the same or similar circumstances"); Taylor v. Beardstown, 491 N.E.2d 803, 810 (Ill. App. Ct. 1986) (ruling in favor of the defendant based on plaintiff's failure to establish that the minimal standard of care was breached); *see also* Benjamin C. Zipursky, *Reasonableness in and Out of Negligence Law*, 163 U. PA. L. REV. 2131, 2156 (2015) ("[N]egligence law requires, in most cases, only *ordinary* care (rather than extraordinary care)."); Plaza, *supra* note 1, at 112 ("Practitioners need only be 'minimally competent,' and a plaintiff's expert must be able to testify that the defendant's actions fell below that minimal standard . . . ."); Liang, *supra* note 18, at 121 ("By punishing physicians for falling short of a pre-established socially optimal level of care, the judicial system can theoretically induce physicians to practice medicine at an acceptable and expected level of error."); Moffett & Moore, *supra* note 18, at 112 (noting that the good news from a physician's standpoint is that the law only requires "what a minimally competent physician in the same field would do").

[121] *See* Shectman v. Bransfield, 959 A.2d 278, 284–85 (N.J. Super. Ct. App. Div. 2008) (illustrating that, so long as there exists two or more schools of medical opinion, a physician's

This framework should not raise concerns so long as the various treatment options within the range of reasonable care are distributed equally among all patients. But as the empirical studies reviewed in the previous Part show, that is not the case.[122]

B. FACING THE PROBLEM: THE STANDARD OF CARE AS A SAFE HARBOR FOR BIASED DECISIONS

Scholars have recognized that when a physician provides less intensive care to a minority patient, the physician might defend her course of treatment as "consistent with one or another widely accepted standard of care."[123] This observation reflects the phenomenon I identify here as biased-but-reasonable decision-making.

As noted above, empirical evidence shows that inferior, yet medically acceptable treatments, are more often administered to women and minorities, likely due to the influence of diminishing

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decision to choose one course over the other must be "left to the good faith judgement of the experienced [physician]"). Moreover, in some jurisdictions, physicians have an affirmative defense even if it turns out that their choice of treatment was actually incorrect and led to harming the patient, so long as they chose it with "good faith judgment." According to this defense, also known as the "error of judgment rule," when physicians prepare reasonably before making a decision, they are exempt from liability for making the wrong decision as long as they acted in good faith. *See* Saks v. Ng, 890 A.2d 983, 994–95 (N.J. Super. Ct. App. Div. 2006) (reviewing the error of judgment rule); *see also* Ezell v. Hutson, 20 P.3d 975, 976–77 (Wash. Ct. App. 2001) (reviewing Washington's acceptance of the doctrine by holding that the "error in judgment" instruction was proper); *Hall*, 466 So.2d at 866 ("A physician does not guarantee recovery. . . . A competent physician is not liable *per se* for a mere error of judgment, mistaken diagnosis or the occurrence of an undesirable result."). For economic analysis supporting the error of judgment rule, see Robert Cooter & Ariel Porat, *Lapses of Attention in Medical Malpractice and Road Accidents*, 15 THEORETICAL INQUIRIES L. 329. 341–42 (2014), which generally maintains that by tolerating some lapses of judgment, negligence law may actually induce defendants to make better choices of investment in precautions. Some jurisdictions have rejected the rule. *See* Papke v. Harbert, 738 N.W.2d 510, 516–17, 527 (S.D. 2007) (finding that jurors should no longer be instructed that physicians are not liable for good-faith errors); Rogers v. Meridian Park Hosp., 772 P.2d 929, 933 (Or. 1989) (en banc) (ruling that a physician may be negligent while still making a mistake in good faith).

[122] *See supra* notes 72–74 and accompanying text.

[123] Bloche, *supra* note 20, at 109 (observing, in addition, that "so long as the defense can marshal its own expert to support the adequacy of the care provided, the plaintiff's need to carry the burden of proof presents a daunting obstacle to success."); *see also* Plaza, *supra* note 1, at 112 ("[M]edical malpractice standards are largely protective of physicians . . . [who] need only be 'minimally competent,' . . . [while] a plaintiff's expert must be able to testify that the defendant's actions fell below that minimal standard.").

stereotypes and implicit bias on the part of the medical providers responsible for treatment.[124] Although inferior treatments are more likely, in turn, to yield harmful outcomes among women and minorities, the negligence doctrine offers no meaningful avenue for redress. Indeed, the architecture of the standard of care as contemplating a range of acceptable medical practices creates a safe harbor for biased treatment choices by physicians influenced by diminishing stereotypes.[125] So long as the course of treatment a physician provides is considered *medically* reasonable, the physician is deemed to have met the *legal* standard of care.[126] Accordingly, a patient whose course of treatment was influenced by diminishing stereotypes is left without redress, even if she can prove that the chosen course of treatment ended up harming her.[127] Provided the treatment is found to fall within the standard of care, the physician's choice of treatment would not be considered negligent.[128]

From the perspective of distributive equality, the idea that the architecture of the standard of care promotes racial and gender disparities in treatments is clearly worrying.[129] When biased

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[124] *See supra* notes 1, 41, 72 and accompanying text.

[125] *See* Crossley, *supra* note 105, at 245–46 (discussing how the acceptance of multiple methods of treatments creates a barrier to less efficacious care caused by a physician's bias towards the patient because motivation in choosing a treatment option is not considered when determining whether the physician met the standard of care).

[126] *See id.* at 248 ("Physician liability is probable only if the biased decisions produce conduct failing to conform to the customary standard of care, in which case, the fact of bias is irrelevant to the imposition of liability.").

[127] When no breach of duty occurs, a plaintiff has no right for recovery. *See* JOHN C. P. GOLDBERG & BENJAMIN C. ZIPURSKY, RECOGNIZING WRONGS 30 (2020) (mentioning the old legal maxim, "Where there's a right, there's a remedy").

[128] *See* Bloche, *supra* note 20, at 108–09 ("[T]ort doctrine has long deferred to physician standards of care . . . . Disparities in clinical resource use ensuing from physician discretion and the influences . . . discussed tend to fall within the bounds of tacitly accepted clinical variation.").

[129] The tension between private law and distributional equality has been especially debated among political theorists. *See* Joseph Raz, *On the Value of Distributional Equality*, *in* HILLEL STEINER AND THE ANATOMY OF JUSTICE: THEMES AND CHALLENGES 22, 23 (Stephen de Wijze, Matthew H. Kramer & Ian Carter eds., 2009) (discussing the tension between distributional equality and private law); Samuel Scheffler, *What Is Egalitarianism?*, 31 PHIL. & PUB. AFFS. 5, 13 (2003) (conducting a critical examination of "Luck egalitarianism" with relation to political morality and distributive justice); G.A. Cohen, *On the Currency of Egalitarian Justice*, 99 ETHICS 906, 910–11 (1989) (responding to objections to a policy of equalizing welfare and discussing how it is egalitarian to ensure everyone's welfare is sufficiently high).

decisions take cover under the veil of customary standards of care, not only are they harder to detect, but they may also lead to the impression that tort law tolerates, and even validates, gross inequality.[130] Moreover, disparities in treatment among patients of different social groups yet within the bounds of the standard of care have serious implications from a deterrence perspective.[131] To understand why, consider the following simple numerical example.

Assume that a patient arrives at the hospital presenting with coronary artery disease,[132] which entails an expected harm of $250K (probability of 0.5 for harm of $0.5M), and that three courses of treatment are available, which differ in their respective costs to the hospital and risks to the patient. Treatment A, a surgical procedure, costs $100K and reduces the patient's expected harm to $50K (probability of 0.1 for harm of $0.5M);[133] Treatment B, involving medications (but no surgery), costs $25K and reduces the patient's expected harm to $125K (probability of 0.25 for harm of $0.5M);[134] Last, Treatment C, involving a newly developed surgery and close monitoring of the patient, costs $249K and reduces the patient's expected harm to $5K (probability of 0.01 for harm of $0.5M).[135] For simplicity, assume further that the treatments do not expose patients to any additional risks,[136] and that treatments A, B and C are considered generally acceptable by the American Heart Association.[137]

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[130] *See* CHAMALLAS & WRIGGINS, *supra* note 33, at 8 ("As [legal actors] operate in institutional contexts, common forms of cognitive bias—particularly habits of thought that make it harder to imagine different outcomes—can affect expectations about what is normal and reasonable and therefore ultimately impact legal liability.").

[131] *See id*. at 15 (noting deterrence is the major goal of tort law and that such deterrence is often accomplished using compensation).

[132] *See Coronary Artery Disease (CAD),* CTRS. FOR DISEASE CONTROL & PREVENTION (July 19, 2021), https://www.cdc.gov/heartdisease/coronary_ad.htm ("Coronary artery disease (CAD) is the most common type of heart disease in the United States. . . . [The] disease is caused by plaque buildup in the walls of the arteries that supply blood to the heart (called coronary arteries) and other parts of the body.").

[133] Social costs totaling $150K; $100K+0.1×0.5M=$150K.

[134] Social costs totaling $150K; $25K+0.25×0.5M=$150K.

[135] Social costs totaling $254K; $249K+0.01×0.5M=$254K.

[136] In reality, risks associated with surgery differs greatly from risks associated with medication. The example puts aside this possibility for simplicity purposes.

[137] The American Heart Association is a non-profit organization dedicated to fighting heart disease and strokes by funding cardiovascular medical research and providing a source of information about healthy living and appropriate cardiac care. *See About Us*, AM. HEART

To demonstrate the effects of biased-but-reasonable decision-making in this example, consider the basic rule of negligence, expressed in the seminal Learned Hand formula.[138] Pursuant to this rule, physicians are required to invest in precautions to reduce the risk of harm only when the cost of the precautions is lower than the cost of the expected harm.[139] Accordingly, although Treatment C yields the best outcome for patients and might be available for use at some hospitals, because it is socially wasteful,[140] a physician who does not follow this course will not be liable in negligence. Nor will a physician be liable in negligence if she follows either of treatments A or B, which entail identical costs from a social welfare point of view.[141] Nevertheless, these options distribute those costs differently as between the hospital and the patient.[142]

Recall that the physician's assessment of the severity of the patient's condition is considered a critical factor in choosing the course of treatment,[143] and is therefore expected to influence the physician's choice of care as between Treatments A and B. In light of findings demonstrating the apparent influence of stereotypes on

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ASS'N., https://www.heart.org/en/about-us (last visited Sept.. 17, 2022) (detailing the American Heart Association's mission and impact).

[138] The formula, first articulated in *United States v. Carroll Towing Co.*, 159 F.2d 169, 173–74 (2d Cir. 1947), by Judge Learned Hand, and was later endorsed by courts as well as the RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 3 cmt. e (AM. LAW INST., 2010), suggesting a risk-benefit balancing test to assess negligence, substantially similar to the Learned Hand formula, whereby the benefit is the advantage that the defendant gains if he or she refrains from taking precautions and when the costs of precautions exceed this benefit, the defendant should be held liable in negligence.

[139] The formula is also known as the B<PL rule, according to which liability in negligence should be determined based on the relation between investment in precaution (B) and the product of the probability (P) and magnitude (L) of harm resulting from the accident. In the formula's terms, if PL exceeds B, then the defendant should be liable in negligence. Conversely, if B equals or exceeds PL, then the defendant should not be held liable. 1 DAN B. DOBBS, PAUL T. HAYDEN & ELLEN M. BUBLICK, DOBB'S LAW OF TORTS § 161 (2d ed. 2022).

[140] The social cost that Treatment C entails is higher than the total cost of harm, $254K>$250K.

[141] The total costs of each of them amount to $150K. *See supra* notes 133–134 and accompanying text.

[142] Of all three treatments, Treatment B entails the highest risk for the patient, followed by Treatment A. Treatment C entails the lower risk to the patient, but as aforementioned, is also socially wasteful.

[143] *See supra* notes 85–88 and accompanying text.

physicians' assessment of the severity of their patients' illnesses,[144] the choice between these treatments might be biased to the detriment of patients belonging to social groups associated with diminishing stereotypes.[145] Unconsciously influenced by those stereotypes,[146] the physician in our example may underestimate the severity of symptoms presented by patients belonging to those social groups, and accordingly recommend less intensive treatment than is appropriate for their medical condition.[147] For instance, if the patient in our example is Black, the influence of racial stereotypes may result in a greater likelihood that the physician will recommend the less intensive Treatment B than if the patient were White.[148] Since both Treatments A and B, however, are considered reasonable courses of care for coronary artery disease, this bias would remain under negligence law's radar,[149] even if Black patients suffer statistically worse outcomes.

There are two interrelated problems here. First, the physician in our example will not be liable in negligence, even if her choice of treatment was biased and ended up harming the patient.[150] This seems wrong. The chosen treatment might in itself be considered reasonable, but the fact that the choice was motivated—even unconsciously—by racial bias should have legal implications. The solution I propose in Part IV explains the type of redress that victims of bias such as the patient in our example can claim.[151] A

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[144] *See supra* notes 8–9 and accompanying text (discussing the effect of stereotypes on physicians' patient assessments).

[145] *See supra* section II.B.

[146] *See infra* notes 165–166 (discussing the unconscious influence of bias in physicians).

[147] *See supra* notes 65–72 (describing a study finding unconscious bias in physicians treating different racial groups).

[148] Importantly, different intersectional effects may either sharpen or reduce the discrepancies in treatment choices as well. For instance, the discrepancies might be different if the Black patient is a woman or a man. The theoretical analysis and proposed solution in Part IV can be, in principle, inclusive of such intersectional differences.

[149] If each treatment option is legally acceptable, there would be no strong reason to investigate why the doctor chose one treatment over the other. *See* 1 STEVEN E. PEGALIS, AMERICAN LAW OF MEDICAL MALPRACTICE § 3:3 (3d. ed. 2022) ("A physician choosing one or the other method would not violate a 'standard' of good medical practice . . . .").

[150] As long as these courses of treatment are considered reasonable practices *ex ante*, the multiple methods of treatment doctrine applies because the physician's conduct seems to comply with the standard of care. *See supra* notes 97–100 and accompanying text.

[151] In Part IV, I explain that if the influence of prejudice can be proven, the answer to this question is that the choice of treatment is unreasonable, and the problem of successfully suing in malpractice is mostly evidentiary. *See infra* notes 182–198 and accompanying text.

second concern is that over time, the standard of care toward Black patients (or patients associated with any other group subject to diminishing stereotypes) would be established as the less intensive Treatment B. This concern is intensified in light of a different—yet, I argue, related—phenomenon of defensive medicine, to which I now turn.[152]

To reduce their exposure to malpractice liability, physicians have become overcautious.[153] This defensive tendency is suspected to be particularly acute in physicians' provision of medical services to White male patients.[154] There are several reasons for this. First, tort damages are typically estimated based on the victim's loss of future earning capacity, and the earning capacity of women and minorities is, on average, lower than that of White men.[155] Negligence toward White men is therefore more costly than negligence toward women

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[152] *See* U.S. CONG., OFF. OF TECH. ASSESSMENT (OTA), DEFENSIVE MEDICINE AND MEDICAL MALPRACTICE 1 (1994) (defining defensive medicine as a phenomenon in which "doctors order tests, procedures, or visit, or avoid high-risk patients or procedures, primarily (but not necessarily solely) to reduce their exposure to malpractice liability").

[153] *See* David A. Katz, Geoffrey C. Williams, Roger L. Brown, Tom P. Aufderheide, Mrk Bogner, Peter S. Rahko & Harry P. Selker, *Emergency Physicians' Fear of Malpractice in Evaluating Patients with Possible Acute Cardiac Ischemia*, 46 ANNALS EMERGENCY MED. 525, 526 (2005) (finding that emergency room physicians who feared malpractice lawsuits were more likely to admit patients and order testing); Steven D. Pearson, Lee Goldman, E. John Orav, Edward Guadagnoli, Tomas B. Garcia, Paula A. Johnson & Thomas H. Lee, *Triage Decisions for Emergency Department Patients with Chest Pain: Do Physicians' Risk Attitudes Make the Difference*?, 10 J. GEN. INTERNAL MED. 557, 560 (1995) (finding a relationship between increased risk aversion and admission of patients with chest pain).

[154] *See* Sally Satel & Jonathan Klick, *The Institutes of Medicine Report: Too Quick to Diagnose Bias*, 48 PERSPS. BIOLOGY & MED, S15, S20–S21 (2005) ("If doctors believe that white patients are systematically more likely to sue, or perhaps if the damages awarded or settlements reached in medical malpractice cases are significantly higher for white patients than minority patients in the event of an adverse outcome . . . , doctors will have the incentive to engage in defensive medicine by expending more resources on white patients.").

[155] *See* Martha Chamallas, *The Architecture of Bias: Deep Structures in Tort Law*, 146 U. PA. L. REV. 463, 481 (1998) ("Because women in the past stayed out of the workplace to raise children, women have a lower work-life expectancy than men, despite the fact that women generally live longer than men. Because of higher rates of unemployment and of incarceration, minority men also have a lower work-life expectancy than white men."). Where there is no established earnings record, damages are based on actuarial tables, which consider the plaintiff's race and gender and therefore lead to lower damages awards. *See* United States v. Bedonie, 317 F. Supp. 2d 1285, 1315 (D. Utah 2004) ("Using race and sex adjustments to calculate lost income significantly reduces the awards that the victims would otherwise receive."); Ronen Avraham & Kimberly Yuracko, *Torts and Discrimination*, 78 OHIO ST. L.J. 661, 667 (2017) (arguing that the use of race and gender based tables should be terminated, and that damages should be calculated by using "blended tables" instead).

and minorities. Second and relatedly, since medical malpractice lawyers tend to charge their clients on a contingency basis,[156] minorities and women might find it more difficult to find a lawyer to represent them.[157] As a result, physicians know both that they are more likely to be sued for malpractice by White male patients, and that if they are in fact sued and found liable in negligence, these patients' damages will likely be greater than those of female or minorities patients.

Importantly, as with other implicit biases, defensive medicine is not necessarily driven by explicit intentions. Studies describe a process in which overcautious practices that begin with concern about malpractice liability "become so ingrained in customary practice that physicians are no longer aware of the original motivation for doing them."[158] Therefore, if the patient in our example is White, the physician might tend to choose the more intensive (and expensive) Treatment A, or even the socially wasteful Treatment C,[159] over Treatment B.

Negligence law's tolerance of disparities in medical treatments within the bounds of medically reasonable care thus may result in a system of intersectional cross-subsidy.[160] Given the reality of finite

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[156] *See* Herbert M. Kritzer, *The Wages of Risk: The Returns of Contingency Fee Legal Practice*, 47 DEPAUL L. REV. 267, 270–71 (1998) (illustrating that payment through contingency fees considers the time and expenses of the expected litigation).

[157] *See* CHAMALLAS & WRIGGINS, *supra* note 33, at 178 (addressing the practice of damage caps on pain and suffering damages and explaining that "caps thus appear to exacerbate the tendency of attorneys . . . to factor in the race [and gender] of the injured party as one of the 'potential risks' in tort cases").

[158] U.S CONG., OFF. OF TECH. ASSESSMENT (OTA), DEFENSIVE MEDICINE AND MEDICAL MALPRACTICE 22 (1994); *see also*, Gibson, *supra* note 16 (asserting that the law encourages overcompliance instead of mere compliance, leading to over-precautionary level of care among physicians, which becomes the "new standard"); Elad Asher, Yoav Parag, Lior Zeller, Ronit Yerushalmi & Haim Reuveni, *Unconscious Defensive Medicine: The Case of Erythrocyte Sedimentation Rate*, 18 EUR. J. INTERNAL MED. 35, 38 (2007) ("When physicians are no longer aware of the original motivation for ordering a test, they may, over time, begin practicing unconscious defensive medicine, which then becomes a major cultural component of the modern health care system.").

[159] Recall that Treatment C is the safest but at the same time also socially wasteful. *See supra* note 140 and accompanying text.

[160] *See* Dominique E. Martin et al., *Ethical Challenges in Nephrology: A Call for Action*, 16 NATURE REV. NEPHROLOGY 603, 604 (2020) (studying the inequity of access to different medical procedures and encouraging "ethical analysis" of these disparities); *see also* Yolonda Wilson, Amina White, Akilah Jefferson & Marion Danis, *Intersectionality and Clinical Medicine: The Need for a Conceptual Framework,* 19 AM. J. BIOETHICS 8, 8 (2019)

resources,[161] if the physician in our example reduces the risk of being sued for malpractice by choosing either Treatment A, or even the socially wasteful Treatment C, when her patient is White,[162] disparities within the standard of care allow the Black patient's less costly and inferior, but still reasonable, care to pay for the White patient's more expensive care. Since Black patients are statistically less likely to sue for malpractice to begin with,[163] the fact that the less intensive, less costly Treatment B is still considered medically reasonable further reduces the chances that a physician will become liable for damages for adverse outcomes if the patient is Black. This analysis provides a possible explanation to the empirical evidence on disparities in medical care.[164] These disparities are, at least partly, a result of biases pulling in opposite directions. While defensive medicine may influence the physician in our example to choose Treatment A (or even C) if the patient is White, stereotype-driven bias may influence her to choose Treatment B if the patient is Black.

Given the unconscious nature of diminishing stereotypes, to eliminate this cycle of biases, physicians first must become aware of their biases.[165] And indeed, scholars have particularly noted the

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(highlighting how "intersectionality acknowledges how multifaceted differences shape the patient-clinician interaction" and "how institutional practices within the clinical environment . . . unfairly advantage some and disadvantage others"); Guy David, Richard C. Lindrooth, Lorens A. Helmchen & Lawton R. Burns, *Do Hospitals Cross-subsidize?*, 37 J. HEALTH ECON. 198, 198 (2019) (explaining how some paying groups are treated differently than others "[i]n health care markets, [where] cross-subsidies are often considered the principal mechanism through which hospitals provide unprofitable care").

[161] *See* Martin et al., *supra* note 160, at 604 ("Clinicians who are responsible for managing limited healthcare resources may experience ethical anxiety if they are uncertain how to approach decision-making . . . if resource constraints limit their ability to provide appropriate care to those in need."); Thomas Vanhecke, Mihirkumar Gandhi, Peter A. McCullough, Michael H. Lazar, K. P. Ravikrishnan, Phillip Kadaj & Robert L. Begle, *Outcomes of Patients Considered for, But Not Admitted to, the Intensive Care Unit*, 36 CRITICAL CARE MED. 812, 812 (2008) ("With rising [healthcare] costs, resource utilization and asset allocation has become very important to critical care medicine.").

[162] It is given that Treatment C, the safest of the three, reduces the risk for the patient to zero.

[163] *See supra* notes 155–157 and accompanying text (discussing the variety of reasons that Black patients are less likely to pursue malpractice cases, including actuarial tables that consider race and gender when determining damages, resulting in insufficient awards).

[164] *See supra* note 160 and accompanying text.

[165] *See* Dipesh P. Gopal, Ula Chetty, Patrick O'Donnell, Camille Gajria & Joe Blackadder-Weinstein, *Implicit Bias in Healthcare: Clinical Practice, Research and Decision Making*, 8

value of developing educational tools to raise awareness about implicit biases among physicians.[166] Nevertheless, awareness cannot and should not replace tort law. When a biased treatment choice results in harm to a patient, the cost of that harm should be imposed on the physician or her employer, not on the patient. In this way, the healthcare system will be forced to internalize the costs of harmful biases operating under their roofs and be incentivized to eliminate it. To enable victims of bias to sue for their harms, however, negligence law's tolerance of biased-but-reasonable decision-making by healthcare providers must be eradicated from within, beginning with challenging the idea that bias can ever be reasonable. I turn to that challenge next.

IV. IDENTIFYING BIASED-BUT-REASONABLE DECISIONS AS NEGLIGENT

Having uncovered the problem of biased-but-reasonable treatment decisions, in this Part I propose a three-stage solution. The first stage involves the normative core of defining biased choices as unreasonable per se, thus allowing such choices to be deemed negligent even when the treatment selected is considered medically reasonable. The second stage turns to explore the uncertainty involving cases of biased-but-reasonable medical decisions. In these cases, plaintiffs are required to prove that the choice of treatment *in their particular case* was biased so that their harm can be causally linked to the defendant's negligent conduct, rather than to a good faith exercise of judgment concerning the appropriate treatment. The third and final stage then sketches a remedial

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FUTURE HEALTHCARE J. 40, 43 (2021) ("Awareness of implicit bias allows individuals to examine their own reasoning in the workplace and wider environment. It asks for personal accountability and a single question: 'If this person were different in terms of race, age, gender, etc., would we treat them the same?'").

[166] *See* Green et al., *supra* note 42, at 1237 ("[N]ew approaches to addressing disparities might include confidential feedback mechanisms to make physicians aware of disparities in their own cohort of patients, securely and privately administered [Implicit Association Tests] to increase physicians' awareness of unconscious bias, and targeted education to mitigate its effects on clinical decision making."); Christine Motzkus, Racquel J. Wells, Zingyue Wang, Sonia Chimienti, Deborah Plummer, Janice Sabin, Jeroan Allison & Suzanne Cashman, *Pre-Clinical Medical Student Reflections on Implicit Bias: Implications for Learning and Teaching*, 14 PLOS ONE, Nov. 15, 2019, at 1–2 (suggesting that pre-clinical medical students explore implicit bias through the Implicit Association Test to lay a foundation for developing and understanding of the tendency of unconscious bias).

solution to contend with this evidentiary challenge while complying with both corrective justice and deterrence considerations.

A. UNREASONABLE CHOICE OF REASONABLE TREATMENT

A first step for addressing the problem of biased-but-reasonable decision-making is to discuss the *normative identity* of a treatment choice that is medically reasonable on the one hand but influenced by diminishing stereotypes on the other. The normative question is straightforward: Is such a treatment choice *legally* unreasonable, even though it falls within the bounds of what is considered *medically* reasonable?

I argue that the answer is yes. Even when the chosen course of treatment seems to fit within the accepted standards of medical practitioners, its selection cannot be considered reasonable if it was based on implicit bias.[167] Indeed, in professional malpractice cases, we analyze whether the defendant's conduct was negligent by comparing it with accepted standards and customs employed in practice.[168] We do that because such standards and customs provide us with descriptive means to assess whether the physician's conduct was indeed reasonable. But that does not mean that the determination of whether a physician was acting reasonably is based only on descriptive grounds. As Benjamin Zipursky rightly observes, whether a particular conduct is considered reasonable is

[167] For an observation generally identifying the idea of discrimination as a tort-like negligence, see Sophia Moreau, *Discrimination as Negligence*, 36 CAN. J. PHIL. 123, 130 (2013) (locating the tortous wrong "in the agent's failure to make reasonable accommodations for the victim"). Below, I develop the case of bias as negligence that may also be explained in terms of unreasonable risk. Whether the view of bias as unreasonable behavior developed here can be accommodated with Moreau's definition of discrimination as negligence is a question beyond the scope of this Article.

[168] *See supra* note 117 and accompanying text.

at its core a normative question,[169] rather than a descriptive one.[170] It is the moral, rather than the descriptive, ground of reasonableness that renders a discriminatory choice of treatment unreasonable, even when the treatment itself is medically acceptable under the circumstances. To hold that a treatment choice motivated by bias is appropriate would therefore compromise the moral ground of reasonableness.[171] Put differently, a physician cannot meet her duty of care if her treatment recommendation is built on prejudice, regardless of whether the course of treatment is in itself medically reasonable.

This understanding of what is expected of a reasonable physician can be translated into the Restatement definition of reasonable risk and precautions.[172] When choosing a course of treatment, healthcare providers need to consider, in addition to the risks associated with various options in view of the patient's medical condition, *the risk of making biased decisions*. Recall that the negligence doctrine does not require proof of intent.[173] In fact, in

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[169] *See* Zipursky, *supra* note 120, at 2150 ("[T]here is no non-normative answer to the question of who would count as a reasonable person."); *see also* Arthur Ripstein, *Reasonable Persons in Private Law*, *in* REASONABLENESS AND LAW 255, 256 (Giorgio Bongiovanni, Giovanni Sartor & Chiara Valentini eds., 2009) ("We can distinguish the rational person, who does what seems best from her situation given her ends, from the reasonable person, who takes appropriate regard for the interests of others."); Maytal Gilboa, *Linking Gains to Wrongs*, 35 CAN. J.L. & JURIS. 365, 367 (2022) (observing that the empirical tendency often involved in determining whether a behavior is reasonable may disguise the normative nature of reasonability, which manifests the defendant's compliance with her duty to the defendant).

[170] *See* Zipursky, *supra* note 120, at 2158 (observing that the idea that "reasonable" is epistemic and adjectival rather than adverbial is a mistake).

[171] *See id.* at 2168 ("We are, in effect, asking juries to make a value judgment, but not one about which risks ought or ought not be taken. It is a value judgment about what a person who displayed appropriate care to others, at some level, would do and think right to do to diminish the risk to others. Although centered, in some way, in social mores, the question is really a moral one about what care we owe others.").

[172] *See* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 3 (AM. L. INST. 2010) ("Primary factors to consider in ascertaining whether the person's conduct lacks reasonable care are the foreseeable likelihood that the person's conduct will result in harm, the foreseeable severity of any harm that may ensue, and the burden of precautions to eliminate or reduce the risk of harm."); *see also* Zipursky, *supra* note 120, at 2159 ("The Restatement view . . . links the reasonable person standard to the reasonableness of a risk and the reasonableness of taking (or not taking) a precaution of a certain kind.").

[173] For the difference between intentional and negligent torts, see, for example, RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 5 cmt. a (AM. L. INST. 2010) (indicating that intentional torts are generally deemed considerably more serious than torts of mere negligence).

many cases, negligence reflects "an inattentive failure to perceive or appreciate the risk involved in the actor's conduct."[174] Accordingly, a physician need not be aware that stereotypes influenced her medical judgment when selecting a course of treatment to be negligent; she may be negligent merely by failing to account for the risk of such an influence.[175] It is ignoring this risk that constitutes a breach of duty.

To reduce the risk of bias, physicians must be open to learning more about how bias operates and how it may affect their treatment decisions to the detriment of their patients. Physicians must then learn how to implement this awareness and translate it into their practice. Recall that when people engage in complex decision-making in intense environments, stereotypes may take an automatic lead.[176] To offset this tendency, physicians must affirmatively accustom themselves to considering the possibility that their patient care decisions may be influenced by bias,[177] especially in emergency settings requiring quick decisions.[178] This is a costly cognitive effort.[179] The normative assumption,[180] however, is that these costs are justified to reduce the risk of biased judgments.[181]

B. THE EVIDENTIARY CHALLENGE

Acknowledging the existence of a duty to reduce the risk of biased judgments is a necessary step towards creating a framework that allows patients to sue in negligence for harms resulting from biased

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[174] *Id.* § 3 cmt. k.

[175] *See id.* (explaining that negligence often reflects a failure to perceive a risk).

[176] *See* Dehon et al., *supra* note 45, at 896 (discussing how high-pressure situations, cognitive overload, and fatigue may lead to decision-making based on biases).

[177] *See supra* note 51 and accompanying text.

[178] *See supra* notes 44–51 and accompanying text.

[179] Recall that to overcome the automatic penetration of prejudice into judgment, people must not only become aware of their stereotyped beliefs but also affirmatively decide not to use stereotypes in their judgments. *See supra* note 51 and accompanying text.

[180] This assumption derives from the understanding of the normative foundations of the concept of reasonableness. *See supra* notes 169–171 and accompanying text.

[181] *See, e.g.*, RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 3 cmt. k (AM. L. INST. 2010) (noting that in cases where the burden of precautions is paying more attention in the course of ordinary care, the unreasonableness of the defendant's inattentiveness can be inferred as a matter of common sense).

treatment choices.[182] It is not sufficient, however, to provide a complete answer to the problem of biased-but-reasonable decision-making. To explain why, consider again the example discussed in Part III,[183] demonstrating that implicit bias may increase the likelihood that physicians will select the less intensive and less costly Treatment B for Black patients but the more intensive and more costly Treatment A, or even the socially wasteful Treatment C, for White patients showing similar symptoms. Recall that despite their differences, both Treatments A and B were considered medically acceptable courses of treatment (for both White and Black patients). Now consider the following additional information.

According to statistics published by the American Heart Association,[184] considering variables such as the treatment's mortality rate, the patient's likelihood of a full recovery, and the cost of the procedure, it is reasonable for Treatment A to be administered in *two out of five* patients diagnosed with coronary artery disease. Yet, statistical evidence from the hospital that treated the patient in our example shows that although two out of five White patients do, in fact, receive Treatment A, only *one out of five* Black patients receives Treatment A, while the remainder receive Treatment B. Assume that the patient in our example is Black, that he received Treatment B, and that subsequently, his condition worsened. Finally, assume that in retrospect, it can be proven that the plaintiff would have recovered had he received Treatment A, so we know that the choice of Treatment B caused the patient's harm.[185]

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[182] In such a case, the patient's harm is considered within the risk unreasonably created by the defendant's negligent risk of bias and therefore meets the requirement of proximate causation between the harm and the physician's biased choice of treatment. *See id.* § 29 ("An actor's liability is limited to those harms that result from the risks that made the actor's conduct tortious."). Note that to impose liability in tort, a court must find both factual and proximate causation. *See id.* §§ 9, 26 cmt. a (requiring "legal cause" to establish liability for tortious conduct and defining legal cause as both factual and proximate cause). While the former is considered to be based on questions of fact and hinges upon the result of the but-for test, the latter narrows the relevant factual causes based on normative grounds. *See id.* § 26 cmt. d. (referring to "all necessary elements of an outcome are described as causes" and thus including both the conduct and causal set of conditions "as the cause of a harm").

[183] *See supra* notes 132–137 and accompanying text.

[184] *See supra* note 137.

[185] However, we still do not know the motivation that led to its choice, which is the central point developed below.

These additional details highlight the further hurdle a patient seeking to establish his physician's negligence in allowing bias to influence her treatment decision must confront: the patient must prove by a preponderance of the evidence that the physician's biased decision-making was the cause of injury *in her particular case*.[186] The problem here is that Treatment B is generally perceived as an acceptable choice in the circumstances. Although we know that a physician's judgments may, in general, be influenced by stereotypes,[187] there is of course the possibility that the physician in this case selected Treatment B based on her unbiased clinical assessment.[188] And if the physician's conduct was not biased in the particular case, then the patient is not entitled to redress, even in the unfortunate event that the treatment failed.[189] After all, it is the involvement of bias that makes the choice of treatment negligent.[190] But how can the patient in our example know if he received Treatment B based on an unbiased judgment or a biased one?

Recall that while on average, two out of five patients receive Treatment A, only one out of five Black patients receives it. This means that one out of the four patients who received Treatment B should have received Treatment A. Therefore, the probability that bias, rather than an unbiased clinical assessment, influenced the physician's choice of Treatment B over Treatment A for the Black patient is one-in-four, i.e., twenty-five percent. Under the preponderance of the evidence rule, however, the patient is required to prove the likelihood his physician deviated from the standard of care *in his case* is greater than fifty percent.[191] Accordingly, statistical evidence of bias will almost always fail to establish the patient's individual negligence claim.

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[186] *See supra* note 15 and accompanying text (discussing preponderance of the evidence standard).

[187] *See* Green et al., *supra* note 42, at 1236 (discussing the prevalence of implicit race biases in the United States including among physicians).

[188] To be exact, there is a seventy-five percent possibility because according to the example, there is a one-in-four chance that the receipt of Treatment B was based on a biased choice, and therefore a three-in-four chance that it was based on unbiased clinical judgment.

[189] Activities, even reasonable ones, entail some risk. We only expose ourselves to liability in negligence for harms resulting from unreasonable risks. *See supra* notes 106–108 and accompanying text. If the harm resulted from a choice of treatment that put the patient in reasonable risk, the physician should not be held liable.

[190] This considers that under the normative contention, biased choices as such are unreasonable. *See supra* section IV.A (providing analysis supporting this contention).

[191] *See supra* note 15 and accompanying text.

This seems wrong. First, the nature of implicit bias makes it almost impossible to prove that a physician's bias influenced her treatment decisions with respect to *a particular patient* because even the physician herself is likely unaware of her biased decision-making.[192] Insisting that patients prove that bias was the driving force behind the choice of an otherwise medically reasonable treatment makes the patient's burden of proof practically impossible.[193] A rigid implementation of the preponderance standard therefore completely frustrates the patient's ability to claim redress in our example, as well as in similar cases of biased-but-reasonable decision-making. Second, insisting that the patient proves that the choice of treatment *in his case* was more likely biased than not may lead to a situation known as "recurring misses."[194] In recurring misses, plaintiffs routinely fail to prove meritorious claims because the chances of establishing one or more of the claim's elements systematically fall below fifty percent.[195] Recurring misses in general, and particularly in cases involving biased-but-reasonable decision-making, therefore severely undermine deterrence,[196] while placing the cost of uncertainty entirely on the shoulders of patients.

The example above illustrates the prevalent negligence regime's failure to provide redress to victims of bias in healthcare because that bias is frequently concealed behind reasonable treatment

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[192] *See* Marcelin et al., *supra* note 60, at s64 ("However, by definition [healthcare professionals] may lack awareness of their own potential unconscious biases.").

[193] *See* MATTHEW, *supra* note 13, at 207 (citing Gordon B. Moskowitz, Jeff Stone & Amanda Childs, *Implicit Stereotyping and Medical Decisions: Unconscious Stereotype Activation in Practitioners' Thoughts About African Americans*, 102 AM. J. PUB. HEALTH 996 (2012) (noting that to prove implicit bias patients basically need to exercise mind reading).

[194] The term "recurring misses" was introduced by Saul Levmore in relation to cases where a wrongdoing is systematically missed due to evidentiary difficulties preventing the plaintiff from proving the existence of a causal link between a defendant's wrong and the plaintiff's harm. *See generally* Saul Levmore, *Probabilistic Recoveries, Restitution and Recurring Wrongs*, 19 J. LEGAL STUD. 691, 706 (1990) (discussing the negative effects of the preponderance-of-the-evidence rule and designing rules for cases of "recurring misses").

[195] *See id.* at 706 (explaining how recurring misses may be a present danger in cost-justified medical or other precautionary procedures where an identifying feature is that "there is a wrongful party is more than 0 percent but possibly never more than 50 percent likely to have cause an injury"); *see also* ARIEL PORAT & ALEX STEIN, TORT LIABILITY UNDER UNCERTAINTY 128 (2001) (discussing cases where imposition of liability is warranted but fails).

[196] *See* PORAT & STEIN, *supra* note 195, at 127 (explaining that in situations where the probability of inflicting damage is typically below 0.5, deterrence is severely compromised).

decisions. As a result, physicians (and, more importantly, the hospitals and clinics that employ them) are not required to internalize the risk of exposing their patients to bias.[197] Accordingly, they lack the proper incentives to eliminate this risk. Holding the physician and hospital liable for the totality of a patient's harm in the above example is clearly not the answer, because it remains more likely than not that the harm materialized despite the physician's unbiased clinical medical judgment, rather than as a result of bias.[198] It also seems wrong, however, to excuse the physician entirely from liability for the patient's harm that may have materialized from the ever-present risk of bias to which the physician and the hospital exposed him. The following section offers a possible avenue to contend with these practical and normative quandaries.

C. REMEDYING BIAS: DAMAGES FOR BIASED-BUT-REASONABLE DECISIONS AS LOSS OF CHANCE TO HEAL

In this last section, I propose that a loss that might have resulted from a proven bias can be framed as the loss of a chance to heal. The loss of chance doctrine traditionally concerns instances in which a defendant's medical negligence decreased a patient's chances of recovery or survival.[199] The use of this doctrine is especially significant when the defendant's negligence decreased the chances of recovering from an ailment the plaintiff was unlikely to recover

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[197] *See supra* note 18 (demonstrating how physicians employing biased-but-reasonable decision-making have not breached a duty towards her patient and therefore are not required to pay for the risk of exposing their patients to bias).

[198] *See supra* note 188 and accompanying text.

[199] *See* Christian v. Tohmeh, 366 P.3d 16, 28 (Wash. App. 2015) ("In a lost chance suit, a plaintiff carries the burden of producing expert testimony that includes an opinion as to the percentage or range of percentage reduction of the better outcome."); Herskovits v. Grp. Health Coop. Puget Sound, 664 P.2d 474, 476–77 (Wash. 1983) (holding the defendant liable in negligence regarding plaintiff's decedent's reduced chance of survival following defendant's failure to timely diagnose cancer); Clune v. Moore, 142 A.D.3d 1330, 1331–32 (N.Y. App. Div. 2016) (holding generally that medical malpractice claims based on loss of chance are actionable when plaintiffs are deprived of a "substantial possibility" of recovery); Almonte v. Kurl, 46 A.3d 1, 25 (R.I. 2012) ("Pursuant to the loss of chance doctrine, '[l]oss of chance occurs when the defendant's negligent conduct caused the plaintiff to lose a chance to avoid the ultimate harm.'"); McIlhenny v. Crown Park Inv., 27 Phila. Co. Rptr. 568, 583 n.7 (Pa. C.P.. 1994) (noting that in Pennsylvania, courts have been routinely applied the loss of chance doctrine in medical malpractice cases as well as in other cases).

from in any event.[200] Such cases pose a problem of factual causation[201] because the plaintiff cannot satisfy the but-for test widely acknowledged as the dominant test for establishing a causal link between a defendant's wrongful behaviour and the plaintiff's resulting harm[202]: Indeed, in such cases, the plaintiff's loss—her failure to recover—would have likely occurred regardless of the defendant's negligence.[203] The loss of chance doctrine, however, contemplates an award of damages in proportion to the likelihood that the defendant's wrongful behavior contributed to the plaintiff's ultimate injury, which would have been compensable in full had causation been provable.[204] In this way, the loss of chance doctrine permits partial redress to a plaintiff whose claim would otherwise fail outright. Before addressing the implementation of the loss of chance doctrine to cases of biased-but-reasonable medical decisions, however, a twofold comment about the nature of the factual uncertainty that these types of claims entail is in order.

First, whenever bias is proven based on statistics, whether *a particular choice* was influenced by bias is always a matter of probability, typically lower than fifty percent.[205] Having established

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[200] *See, e.g.*, Brian Casaceli, *Losing a Chance to Survive: An Examination of the Loss of Chance Doctrine Within the Context of a Wrongful Death Action*, 9 J. HEALTH & BIOMEDICAL L. 521, 550 (2014) (reviewing the different interpretations of what the decrease of chance represents in different jurisdictions in light of wrongful death statutes, noting that "loss of survivorship claims compensate for the loss of a chance to live").

[201] The but-for test is the dominant test applied in the law to a examine the existence of a causal link between a defendant's wrongdoing and a plaintiff's harm. *See* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 26 (AM. L. INST. 2010) ("Conduct is a factual cause of harm when the harm would not have occurred absent the conduct.").

[202] *Id.*; *see also* Doull v. Foster, 163 N.E.3d 976, 990 (Mass. 2021) (adopting a but-for factual causation standard as set forth in the Restatement and abandoning the substantial contributing factor test in cases involving multiple tortfeasors or multiple causes, except for toxic tort cases).

[203] *See* Ernest J. Weinrib, *Causal Uncertainty*, 36 OXFORD J. LEGAL STUD. 135, 157 (2016) (describing the factual causation difficulties due to uncertainty in cases involving the negligent misdiagnosis of cancer, for instance). For that reason, courts are reluctant to apply the loss of chance doctrine until the ultimate harm actually occurs. *See, e.g.*, Kramer v. Lewisville Mem'l Hosp., 858 S.W.2d 397, 404 (Tex. 1993) (finding that the loss of chance is subject to the Wrongful Death Statute which authorizes claims only for conduct that actually causes death).

[204] For a thorough description of the doctrine in the common law world, see Weinrib, *supra* note 203, at 157–58.

[205] *See supra* notes 182–198 and accompanying text.

the existence of bias based on statistics, patients who belong to a group targeted by bias should not be obliged to prove that the bias was directed against them *personally*, mainly because it was not. Such patients are targets of bias because they *are associated with a particular social group*.[206] Asking them to prove whether the statistics is demonstrated in their personal case ignores this inherent feature of bias. Once the existence of bias toward a particular social group is established, any member of this social group should therefore be able to claim they were exposed to an unreasonable risk of bias. Second and relatedly, exposing a patient to biased care is one hundred percent unreasonable behavior.[207] The fact that it is unclear to what extent this unreasonable behavior actually affected a particular patient's condition does not change this observation. Biased-but-reasonable medical decisions do not pose an uncertainty quandary regarding the proof of breach of duty of care toward patients associated with the group exposed to bias. The only uncertainty that remains in these situations is one of causation, that is, the question of whether the unreasonable exposure to bias actually contributed to a particular patient's harm. While the prevalent tort doctrine is quite reluctant to impose liability when the breach of duty is unproven by a preponderance of the evidence, probabilistic-based solutions, such as the loss of chance doctrine to which I now turn, have been acknowledged as acceptable remedial solutions where uncertainty undermines the plaintiff's ability to establish the requirement of causation.[208] Having identified the remaining problem of biased-but-reasonable as one of causation, I now turn to demonstrate how victims of biased treatment may have a strong compensation claim based on their loss of chance to heal.

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[206] *See, e.g.*, Moreau, *supra* note 167, at 124 (noting that implicit forms of discrimination "are often . . . proceeds from hostility towards, or contempt of, the person excluded-hostility that is not merited by any action of this particular person but is directed at him because of some feature he is presumed to have by virtue of his membership in some group."); *see also supra* note 40 and accompanying text.

[207] *See supra* section IV.A.

[208] *See* PORAT & STEIN, *supra* note 195, at 127 (asserting that the loss of chance doctrine, which allows a plaintiff to recover the percentage of damages that can be causally attributed to the defendant, may provide recovery for plaintiffs even if the plaintiff cannot preponderantly prove that the defendant was negligent. Porat and Stein acknowledge, however, that the prevalent tort law is more reluctant to impose liability in cases of uncertainty with respect to infrigment than in cases of uncertainty with respect to causation).

As mentioned above, the problem of proof of causation in biased-but-reasonable cases is that the likelihood that the treatment decision was influenced by an unreasonable risk of bias usually falls below fifty percent.[209] Because civil plaintiffs must prove by a preponderance of the evidence—that is, by a probability greater than fifty percent[210]—that the defendant's wrongful behavior caused their losses, their claims for redress would inevitably fail. In our example, the chance that racial bias to which the hospital exposed all Black patients contributed to the decision to treat them with the less intensive Treatment B is twenty-five percent. That means that there is a seventy-five percent chance that the physician offered the patient (the less intensive but still medically considered reasonable) Treatment B based on an unbiased clinical judgment. Traditionally, these chances would lead to absolving defendants of tort liability.[211] Harnessing the loss of chance doctrine in the context of biased-but-reasonable medical decisions, however, provides a possible avenue for contending with this outcome. The patient in our example can base his negligence claim on the diminution in his chance of recovering from the ailment that brought him to the hospital for treatment.[212] On this theory, the patient should be compensated for the twenty-five percent decrease in his chance to heal.[213] Importantly, the suggested use of the loss of chance doctrine should apply to any patient belonging to a social group that statistics show is systematically exposed to the risk of biased treatment choices in that hospital. Each such patient who received Treatment B and failed to recover could sue for their loss of chance to heal.[214]

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[209] *See supra* section IV.B.

[210] *See supra* note 15 and accompanying text.

[211] *See supra* note 18.

[212] *See supra* note 199; *see also* Weinrib, *supra* note 203, at 157 (discussing loss of chance doctrine in medical malpractice cases).

[213] *See* Weinrib, *supra* note 203, at 157–158 (defining loss of chance doctrine as "the proportion of damages that corresponds to the degree to which the defendant's negligence diminished the likelihood of the plaintiff's survival or recovery"). Accordingly, the loss of chance framework should be adopted in this case to compensate for the percentage chance that a bias was acted upon.

[214] Because only plaintiffs for whom the chosen treatment failed can use the proposed solution, a mechanism involving class actions seems less relevant. Note that the proposed assessment of treatment failure is based on the primary reason for receiving the treatment, which is the ailment with which the patient arrived at the hospital. *See supra* note 212 and accompanying text.

Setting the amount of recovery in our example at twenty-five percent of the value of the patient's loss makes sense both from corrective justice and deterrence perspectives. In terms of corrective justice, one possibility is to perceive the loss of chance doctrine as protecting an independent right that belongs to the plaintiff.[215] Under this interpretation of the doctrine, a defendant who infringes this right should be held liable in negligence for one hundred percent of the plaintiff's loss of chance attributed to this wrongful behavior.[216] In our example, that would mean liability for one hundred percent of the twenty-five percent decrease in the patient's chance of healing. This interpretation of the loss of chance doctrine has been contested by corrective justice scholars, who have contended that "[t]he right to the chance of avoiding an injury and the right to be free from the ultimate injury are both rights against injuries that are merely different stages of the maturation of the same unreasonable risk."[217] This observation implies that almost any claim for loss of an outcome can be formulated as a claim for loss of a chance of an outcome.[218] Ernest Weinrib suggests a different rationale for how loss of chance can comply with corrective justice. Weinrib proposes viewing the loss of chance as a manifestation of the particular way in which the defendant injured the plaintiff's right to competent medial care,[219] which, as established above, includes the right to care that is free of bias.[220] The remedy for a violation of the right to competent care must correspond to the injury that the violation causes.[221] Because the injury is framed in terms of a loss of chance, the remedy can

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[215] *See* Weinrib, *supra* note 203, at 158–60 (explaining how the loss of chance doctrine is an independent right as "one has a right not only to one's physical integrity . . . but also to the chance of maintaining or restoring one's physical integrity").

[216] That is, this approach views the lost chance itself as the basis of the plaintiff's cause of action. *Id.* at 158.

[217] *Id.* at 160.

[218] *See id.* at 159 (citing Gregg v. Scott [2005] UKHL 2, [2005] 2 AC 176) (providing an example of how these cases commonly deal with providers misdiagnosing cancer and the resulting adverse effects on patients' recovery chances).

[219] *See id.* at 160 ("[I]n the misdiagnosis situation the plaintiff has a right to a course of conduct consisting in the defendant's provision of competent medical care. The chance of recovering from the medical condition is an incident of this right.").

[220] *See supra* section IV.A.

[221] *See* ERNEST J. WEINRIB, CORRECTIVE JUSTICE 82 (2012) ("What the defendant has done *to* the plaintiff determines what the judge requires the defendant to do *for* the plaintiff. The defendant is now obligated to return what the defendant unjustly took from the plaintiff.").

similarly be calculated in probabilistic terms, which set the damages in our patient's case at twenty-five percent of the patient's loss.[222]

From a deterrence perspective, applying the loss of chance doctrine to biased-but-reasonable decisions makes perfect sense. The doctrine confronts the problem of underdeterrence that arises when healthcare providers are exempted from liability for imposing an unreasonable risk of bias on patients associated with a particular social group when the probability of bias is below fifty percent.[223] The calculation of damages awarded through the loss of chance doctrine ensures that defendants internalize exactly the loss that they cause by negligently exposing their patients to bias. They will accordingly be incentivized to find effective methods to eliminate bias.

Admittedly, the proposed solution is not flawless. Its main challenge may be a tendency to overcorrect. For example, statistical evidence apparently suggesting bias might, in some instances, be caused by treatment disparities deriving from knowledge gaps rather than from biased medical judgments.[224] Clearly, physicians and hospitals in practice today should not bear liability for decades of biased research policies. As the ruling in *Pleasants v. Alliance Corp.*[225] demonstrates, however, the line between knowledge gaps and prejudice is blurry. When physicians confront less familiar or rare medical conditions that are hard to diagnose, determining whether they provided reasonable care requires focusing on how they chose to examine and monitor the patient or treat her symptoms.[226] Finding disparities in these latter practices may also raise an inference of bias, which could be confirmed by statistical evidence.[227] Indeed, the proposed solution requires further development to refine the analysis of when the selection of one treatment over another can be viewed as a sign of bias. Such

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[222] *See* Weinrib, *supra* note 203, at 160 ("Because the chance can be expressed as a probability, that probability can therefore also figure in the calculation of damages.").

[223] *See, e.g.*, PORAT & STEIN, *supra* note 195, at 128 (discussing cases where the probability of bias is below fifty percent).

[224] *See supra* note 1 and accompanying text.

[225] 543 S.E.2d 320, 323 (W.Va. 2000).

[226] For the discussion of this ruling, see *supra* notes 92–104 and accompanying text.

[227] *See, e.g.*, Plaza, *supra* note 1, at 102 (noting the systematic discounting of women's symptoms and the pervasive distrust of women patients).

developments, however, can occur through implementation of the solution's basic principles over time as cases are litigated.

Another potential challenge to the proposed solution is that it might intensify the already problematic tendency toward defensive medicine by healthcare providers.[228] A possible response to this argument would be that currently, racial and gender bias appear to contribute to defensive medicine by encouraging a system of cross-subsidies in which disadvantaged social groups receiving less expensive treatment pay the cost of physicians' fear of being sued by advantaged ones.[229] The proposed solution may assist in distributing the range of medically reasonable treatments more evenly among all patients. Under the assumption of limited healthcare resources, that would not necessarily exacerbate the undesirable phenomenon of defensive medicine and would reduce the administration of unnecessarily costly care for some patients at the expense of others.

V. CONCLUSION

The study of discrimination and tort law doctrine is still in early stages of development compared to other legal fields, such as employment law and criminal law.[230] This Article zeroed in on a key element of the negligence doctrine—the requirement of proving that the defendant breached the duty of care toward the plaintiff. In a medical malpractice case, the defendant breaches the duty of care when she deviates from the range of practices the medical community considers to be medically acceptable, i.e., the standard of care. Naturally, some treatments falling within the standard of care are more intensive and costly than others. In this Article, I argued that this architecture provides a safe harbor for biased treatment choices under the cover of reasonable care.

When physicians underestimate the severity of their patients' conditions due to the influence of "diminishing stereotypes,"[231] they may recommend less intensive treatment than is appropriate.

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[228] *See supra* notes 152–154 and accompanying text.

[229] *See supra* note 160 and accompanying text.

[230] *See* Cardi et al., *supra* note 33, at 509 (noting how previous work on race, including implicit bias, has focused largely on criminal law and discrimination in employment and that "[b]y comparison, tort law has received much less attention").

[231] *See supra* note 19 and accompanying text.

These errors of judgment render patients who are victims of these stereotypes more susceptible to adverse medical outcomes.[232] Yet, when several treatments are considered medically reasonable, physicians who provide inferior care as a result of implicit bias can avoid liability by showing that their treatment was within the accepted range of medical standard.[233] This negligence regime, which tolerates biased-but-reasonable treatment decisions, may be the reason, at least in part, for observed patterns of race and gender inequities in medical treatment. The Article demonstrated that it is almost impossible under this regime to hold physicians, whose biased choices ended up harming their patients, liable in negligence, thus leaving these patients without any redress for their losses and creating a severe problem of underdeterrence.

To contend with these problems, this Article first proposed a normative analysis to identify biased treatment decisions as negligent, regardless of whether the selected treatment is medically accepted. Then, it confronted the evidentiary problem that victims of biased treatment decisions face by proposing a solution based on a probabilistic analysis and the loss of chance doctrine. While admittedly imperfect, this solution provides a balanced, much-needed, response to both the normative and evidentiary difficulties that biased-but-reasonable medical decisions pose, and thus takes an important step toward achieving equality in the application of tort law.

[232] *See supra* notes 90–91 and accompanying text.

[233] *See supra* notes 99–100 and accompanying text.