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Pain Management, Disorders of Consciousness, and Tort Law: An Emergency Tort to Fix a Longstanding Injustice

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Pain Management, Disorders of Consciousness, and Tort Law: An Emergent Tort to Fix a Longstanding Injustice

ZACHARY E. SHAPIRO* & JOSEPH J. FINS**

We address the systemic undertreatment of pain for individuals diagnosed with disorders of consciousness (DoC). Patients with DoC are often unable to communicate due to damage to their brains, and because DoC patients appear to be insensate, practitioners often believe that these patients are unable to feel pain and may not offer them analgesia, even before painful medical procedures. However, science shows that many DoC patients are able to feel pain, even if they are unable to communicate their distress. This Article moves from recognition of this problem to proposing solutions, in particular exploring what the legal system can do to improve pain management for DoC patients. We propose a novel tort, grounded in strict liability, in order to improve the management of pain for individuals with DoC. We explore how current tort law falls short, and why a new cause of action is the best mechanism to effectuate this necessary shift in medical practice. We aim to muster tort law to quickly reform the medical standard of care, to greatly reduce the risk that individuals with DoC will linger without adequate pain management, so that this medical injustice can be eliminated.

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INTRODUCTION

Those with disorders of consciousness (DoC) present unique medical difficulties that often result in significantly differentiated and substandard care. DoC patients can present with coma, from the vegetative state (VS) to the minimally conscious state (MCS) as well as the Locked-in-State (LIS). Many of these individuals end up segregated in long-term care facilities after acute hospitalization, as damage to their brains usually renders these patients unable to speak, move, or advocate for themselves. This segregation can deny individuals access to proper care,¹ and many DoC patients receive insufficient rehabilitative treatment, limited diagnostic monitoring, and inadequate pain management.²

One patient in the LIS (a state of normal cognition coupled with impaired motor output) described being treated like a “ragdoll” by the staff at his care facility.³ Communicating with a messaging board, as a lack of motor output left him unable to speak, he described never receiving adequate treatment for his pain, a situation exacerbated by understaffing at his facility and his inability to communicate effectively. This patient’s untreated pain left him feeling invisible, which caused significant emotional distress (for him and his spouse), on top of his constant physical discomfort.

Even worse, this patient described an incident that occurred after his eye had become infected, when the nursing home ophthalmologist performed a tarsorrhaphy, a surgical procedure in which the eyelids are sewed shut, without providing pain amelioration therapy beforehand.⁴ In fact, the patient’s mother reported having to physically restrain her son while his eye was being sutured; a situation that would not have occurred had proper pain reduction therapy been provided.

1. See generally JOSEPH J. FINS, RIGHTS COME TO MIND: BRAIN INJURY, ETHICS, AND THE STRUGGLE FOR CONSCIOUSNESS (2015) [hereinafter RCTM].

2. See generally *id.*

3. *Id.* at 191–95.

4. *Id.*

Another example involved a woman in a Phoenix nursing home who carried the diagnosis of being in the VS, who was sexually assaulted in her nursing home and became pregnant.⁵ The nursing home team did not notice her gravid state during the course of her pregnancy and only came to appreciate her condition when she was in active labor, moaning in pain and distress.⁶ That she was in pain suggested that she was not vegetative at all, but rather liminally conscious in the MCS. Through neglect or incompetence, her rape had gone unnoticed, and her pregnancy and brain state had been misdiagnosed, leaving her vulnerable to the pain of childbirth.⁷

After years of hearing similar stories of neglect and the mismanagement of pain in these patients,⁸ it is clear that this situation can occur repeatedly, in even the best care facilities, as most DoC patients are unable to reliably communicate their pain and discomfort. Indeed, scholars have consistently highlighted that pain management is extremely difficult for those with DoC, a problem exacerbated by communication difficulties, therapeutic nihilism, and medical misunderstanding.⁹

The medical standard of care for pain amelioration for those with brain injuries varies depending on an individual's diagnosed cognitive state. While evidence indicates that vegetative patients do not feel pain, as they are unable to generate activation of an integrated pain network,¹⁰ those in the MCS, or those with covert or liminal consciousness,¹¹ are able to perceive and experience pain.¹² Accurate diagnosis of brain state is thus essential to inform the type of pain amelioration that should be offered to patients with DoC. If a minimally conscious patient is misdiagnosed as vegetative, or thought to be insensate, routine pain management

5. See Joseph J. Fins, *When No One Notices: Disorders of Consciousness and the Chronic Vegetative State*, 49 HASTINGS CTR. REP. 14, 14–15 (2019).

6. *Id.*

7. *See id.*

8. *See generally* RCTM, *supra* note 1; Leslie C. Griffin, *Conquering Brain Injury*, 34 J. HEAD TRAUMA REHAB. 366 (2019).

9. *See, e.g.*, F. Riganello, A. Soddu & P. Tonin, *Addressing Pain for a Proper Rehabilitation Process in Patients with Severe Disorders of Consciousness*, FRONTIERS PHARMACOLOGY, Feb. 2021, at 1; Antonino Naro, Placido Bramanti, Alessia Bramanti & Rocco Salvatore Calabrò, *Assessing Pain in Patients with Chronic Disorders of Consciousness: Are We Heading in the Right Direction?*, 55 CONSCIOUSNESS & COGNITION 148, 150–55 (2017); Joseph J. Fins & Maria G. Master, *Disorders of Consciousness and Neuro-Palliative Care: Toward an Expanded Scope of Practice for the Field*, in THE OXFORD HANDBOOK OF ETHICS AT THE END OF LIFE 154 (Stuart J. Youngner & Robert M. Arnold eds., 2016); Camille Chatelle, Aurore Thibaut, John Whyte, Marie Danièle De Val, Steven Laureys & Caroline Schnakers, *Pain Issues in Disorders of Consciousness*, 28 BRAIN INJ. 1202, 1204 (2014) (“Pain management in patients with DOC remains challenging, the assessment being limited by the absence of communication.”); C. Schnakers, C. Chatelle, A. Demertzi, S. Majerus & S. Laureys, *What About Pain in Disorders of Consciousness?*, 14 AAPS J. 437, 437–44 (2012).

10. *See* Stephen Laureys et al., *Cortical Processing of Noxious Somatosensory Stimuli in the Persistent Vegetative State*, 17 NEUROIMAGE 732, 732–41 (2002).

11. *See* Zachary E. Shapiro et al., *Olmstead Enforcements for Moderate to Severe Brain Injury: The Pursuit of Civil Rights Through the Application of Law, Neuroscience, and Ethics*, 95 TUL. L. REV. 525, 542–45 (2021).

12. For a discussion of the nosology of DoC, see *infra* Part I.

might not be provided before that patient undergoes painful medical procedures. However, despite years of progress, accurate diagnoses for this population remain elusive.¹³

The problems of diagnosis and pain management compound each other, because despite recent advances in diagnostic technology, individuals with DoC remain misdiagnosed at an alarming rate, as high as forty-one percent.¹⁴ While improper diagnosis affects care in numerous ways, as a bleak diagnosis can prevent patients with an otherwise optimistic outlook from receiving necessary care, monitoring, and rehabilitation, we focus here on deficiencies in pain management. One of us has discussed the risk of the nihilism attached to the VS,¹⁵ being improperly generalized to other patients with DoC who are, in fact, conscious. This conflation can result in these individuals not receiving proper care and monitoring. With limited monitoring, clinicians may miss the intermittent and fleeting signs of consciousness that can reveal that patients are actually in a higher cognitive state. Unfortunately, such intermittent signs may be the only evidence that DoC patients are conscious and experiencing pain. Because DoC patients are often unable to communicate their pain, and by definition communicate *unreliably if at all*, when these indicia are missed, a practitioner might not provide medication to mitigate discomfort or distress.

This situation demands attention, yet despite previous calls for solutions,¹⁶ a systematic response has not occurred. This Article will help move beyond recognition of this problem toward legal remedies that will better align pain management with the needs of DoC patients. We propose a novel cause of action, an emergent tort grounded in strict liability. This would impose liability on providers (practitioners and institutions) if they fail to administer the same pain amelioration therapies to patients with DoC that they would routinely administer to fully sensate patients, as well as prior to any medical procedure that could cause pain. These “universal pain precautions” are the best way to address the needs of DoC patients and help ensure that misdiagnosis or diagnostic oversight does not inevitably lead to the undertreatment of pain.¹⁷

In Part I, we will provide an overview of the nosology and biology of DoC, while in Part II, we will explain the neuroscientific basis of pain in DoC patients. We will then move toward practical remedies and solutions, examining what we can do to improve pain amelioration for this patient population. In Part III, we will consider some general steps before moving into Parts IV and V for a comprehensive examination of whether tort law can be mustered to help DoC patients receive adequate pain amelioration.

13. See generally Caroline Schnakers, Audrey Vanhaudenhuyse, Joseph Giacino, Manfredi Ventura, Melanie Boly, Steve Majerus, Gustave Moonen & Steven Laureys, *Diagnostic Accuracy of the Vegetative and Minimally Conscious State: Clinical Consensus Versus Standardized Neurobehavioral Assessment*, 9 BMC NEUROLOGY 35 (2009) (highlighting that up to forty percent of MCS patients are misdiagnosed as vegetative).

14. *Id.*

15. See, e.g., Joseph J. Fins, *Disorders of Consciousness, Past, Present, and Future*, 28 CAMBRIDGE Q. HEALTHCARE ETHICS 603 (2019); see also RCTM, *supra* note 1.

16. See, e.g., Joseph J. Fins & James L. Bernat, *Ethical, Palliative, and Policy Considerations in Disorders of Consciousness*, 91 NEUROLOGY 471, 472 (2018).

17. See *id.* at 471.

We believe that a novel tort is one of the most effective and rapid ways to begin the arduous, yet essential, process of improving the standard of care for pain management for patients with severe brain injuries. It is our hope that such a tort will quickly lead to practice reform that will greatly reduce the risk that individuals diagnosed with DoC will linger in pain without adequate analgesia or undergo a painful medical procedure without proper anesthesia, so that these medical injustices can be eliminated.

I. DISORDERS OF CONSCIOUSNESS

Disorders of consciousness (DoC) is a term that can refer to a range of conditions, including brain death, coma, the vegetative state (VS), the minimally conscious state (MCS), and emergence from the MCS and the Locked-in-State (LIS).¹⁸ These are among the most severe brain injuries, and their underlying biology and nosology remains quite complicated.

When considering DoC, diagnosis is paramount because care and treatment change dramatically based on diagnosis. While the landscape and terminology of DoC are constantly shifting,¹⁹ we will primarily focus on patients diagnosed as either vegetative or minimally conscious. While much of this biology will be familiar to those who have read our past articles or *Rights Come to Mind*,²⁰ it remains necessary to review in some detail here to understand the underlying pain management situation of those experiencing DoC.

A. Vegetative and Minimally Conscious State and the Locked-in-State

There are crucial differences between the VS and the MCS. Bryan Jennet and Fred Plum first coined the term “persistent vegetative state” in a landmark *Lancet* paper from 1972.²¹ The term describes “an organic body capable of growth and development but devoid of sensation and thought.”²² The VS is “a state of intermittent arousal without evidence of consciousness.”²³ This does not mean a

18. Joseph T. Giacino, Joseph J. Fins, Steven Laureys & Nicholas D. Schiff, *Disorders of Consciousness After Acquired Brain Injury: The State of the Science*, 10 NATURE REV. NEUROLOGY 99, 100 (2014).

19. Joseph T. Giacino et al., *Practice Guideline Update Recommendations Summary: Disorders of Consciousness*, 91 NEUROLOGY 450 (2018).

20. See, e.g., Megan S. Wright, Nina Varsava, Joel Ramirez, Kyle Edwards, Nathan Guevremont, Tamar Ezer & Joseph J. Fins, *Severe Brain Injury, Disability, and the Law: Achieving Justice for a Marginalized Population*, 45 FLA. ST. U. L. REV. 313 (2018). See generally RCTM, *supra* note 1.

21. Bryan Jennett & Fred Plum, *Persistent Vegetative State After Brain Damage: A Syndrome in Search of a Name*, 1 LANCET 734, 734 (1972); see Joseph J. Fins, *Once and Future Clinical Neuroethics: A History of What Was and What Might Be*, 30 J. CLINICAL ETHICS 27 (2019).

22. C. Schnakers, *Clinical Assessment of Patients with Disorders of Consciousness*, 150 ARCHIVES ITALIENNES BIOLOGIE 36 (2012); Schnakers et al., *supra* note 13.

23. *Glossary*, WEILL CORNELL MED. CONSORTIUM FOR THE ADVANCED STUDY OF BRAIN INJ., <https://casbi.weill.cornell.edu/glossary> [<https://perma.cc/JX8F-NBBM>]. See generally Jennett & Plum, *supra* note 21, at 734 (providing a thorough explanation of the VS).

vegetative patient is simply static. “In VS, there is spontaneous cycling through eyes-closed and eyes-open states, spontaneous eye and limb movements without evidence of goal-oriented behavior or sensory responsiveness.”²⁴ Vegetative individuals demonstrate “wakeful unresponsiveness,” in which their eyes are open but there is no awareness of self, others, or environment.²⁵ Patients in the VS have sleep-wake cycles, eye movement, and are able to breathe spontaneously without ventilator support.²⁶ While this diagnosis was first described in 1972,²⁷ it was brought to prominence in right-to-die cases such as *In re Quinlan*,²⁸ *Cruzan*,²⁹ and *In re Schiavo*.³⁰

In contrast, individuals who are minimally conscious show fluctuating but reproducible signs of awareness.³¹ The MCS formally entered the medical literature in 2002, after a consensus statement was published in *Neurology* under the rubric of the Aspen criteria.³² Individuals in the MCS are conscious, although this is often not recognized.³³ While these patients are capable of manifesting intermittent emotional and behavioral responses, these behaviors fluctuate in time and occur sporadically,³⁴ making the detection of conscious awareness difficult. Minimally conscious “patients might show intermittent or inconsistent verbal output, object use, response to verbal command, or purposeful communicative gestures (such as eye movements).”³⁵ Recovery from MCS is defined by the emergence of some sort of reliable functional communication and/or functional objects use.³⁶ However, even though prognosis for MCS patients is better than that of patients diagnosed as vegetative, the timeline of recovery remains extremely uncertain, and patients can remain in the MCS without fully recovering consciousness for an extended period.³⁷

While diagnostic criteria have traditionally been governed by observable clinical presentation, new technology has augmented our ability to diagnose and understand DoC. These novel diagnostic methods can result in uncertainty as to whether to rely

24. *Glossary*, *supra* note 23.

25. *See, e.g.*, Jennett & Plum, *supra* note 21, at 734.

26. *Id.* at 735.

27. *See* Zoe M. Adams & Joseph J. Fins, *The Historical Origins of the Vegetative State: Received Wisdom and the Utility of the Text*, 26 J. HIST. NEUROSCIENCES 140 (2017). *See generally* Jennett & Plum, *supra* note 21, at 735.

28. 355 A.2d 647 (N.J. 1976).

29. *Cruzan v. Dir., Mo. Dep’t of Health*, 497 U.S. 261 (1990).

30. *In re Guardianship of Schiavo*, 780 So. 2d 176 (Fla. Dist. Ct. App. 2001).

31. J.T. Giacino et al., *The Minimally Conscious State: Definition and Diagnostic Criteria*, 58 NEUROLOGY 349 (2002).

32. *Id.* at 350.

33. *See generally* RCTM, *supra* note 1.

34. *See, e.g., id.*

35. *Glossary*, *supra* note 23.

36. Giacino et al., *supra* note 18, at 101.

37. *See* Joseph J. Fins, Maria G. Master, Linda M. Gerber & Joseph T. Giacino, *The Minimally Conscious State: A Diagnosis in Search of an Epidemiology*, 64 ARCHIVES NEUROLOGY 1400, 1401 (2007); *see also* Michele H. Lammi, Vanessa H. Smith, Robyn L. Tate & Christine M. Taylor, *The Minimally Conscious State and Recovery Potential; A Follow-Up Study 2 to 5 Years After Traumatic Brain Injury*, 86 ARCHIVES PHYSICAL MED. & REHAB. 746 (2005).

on historical bedside methods of clinical evaluation or to incorporate neuroimaging or other modalities for diagnosis that remain investigational.

The LIS, first described by Plum and Posner in 1966 in the first edition of *Stupor and Coma*,³⁸ is technically not a disorder of consciousness but is often considered one, as these patients are often *functionally equated* with patients in the VS. LIS patients have normal cognition but have a paucity of motor output, leading to the mistaken belief that they lack consciousness, even though they are fully aware. This condition came to public attention in two poignant memoirs, Janet Tavalaro's *Look Up for Yes*³⁹ and Jean-Dominique Bauby's *The Diving Bell and the Butterfly*.⁴⁰ Because of the nature of their injuries, both of these protagonists communicated by blinking their eyes.⁴¹ For Ms. Tavalaro, her consciousness went unrecognized as she lingered, ignored in a nursing home and thought to be in the VS.⁴² Mr. Bauby's rich inner life was communicated one blink at a time into a novel about the brain and his condition that pulls at the heartstrings.⁴³

B. Guidelines, Diagnosis, and Misdiagnosis

In 2018, an evidence-based review of existing literature highlighted that more than twenty percent of patients diagnosed as permanently vegetative might actually recover consciousness.⁴⁴ This helped prompt the development of the new Practice Guideline ("Guideline") for DoC by the American Academy of Neurology; American Congress of Rehabilitation; and National Institute on Disability, Independent Living, and Rehabilitation Research,⁴⁵ which represented an important shift in the standard of care. The Guideline was the product of a multiyear, interdisciplinary effort to improve healthcare for patients with DoC.⁴⁶ Notably, the new Guideline recommended reclassifying the *permanent* vegetative state to the *chronic* vegetative state, referring to any patient who has been vegetative for three months after anoxic injury and twelve months after traumatic brain injury.⁴⁷ The Guideline sought to address the current standard of care, and central to this was the question of diagnostic accuracy and consistency. Individuals with DoC are

38. FRED PLUM & JEROME B. POSNER, *THE DIAGNOSIS AND TREATMENT OF STUPOR AND COMA* (1st ed. 1966).

39. JULIA TAVALARO & RICHARD TAYSON, *LOOK UP FOR YES* (Penguin Books 1998) (1997).

40. JEAN-DOMINIQUE BAUBY, *THE DIVING BELL AND THE BUTTERFLY* (Jeremy Leggatt trans., Alfred A. Knopf, Inc. 1997) (1997).

41. *Id.*; TAVALARO & TAYSON, *supra* note 39.

42. TAVALARO & TAYSON, *supra* note 39.

43. BAUBY, *supra* note 40.

44. Giacino et al., *supra* note 19, at 454; Fins & Bernat, *supra* note 16, at 472.

45. Giacino et al., *supra* note 19.

46. *See generally* Fins & Bernat, *supra* note 16.

47. Fins & Bernat, *supra* note 16, at 471–72; Giacino et al., *supra* note 19, at 453. *See generally* The Multi-Society Task Force on PVS, *Medical Aspects of the Persistent Vegetative State (First of Two Parts)*, 330 *NEW ENG. J. MED.* 1499 (1994); The Multi-Society Task Force on PVS, *Medical Aspects of the Persistent Vegetative State (Second of Two Parts)*, 330 *NEW ENG. J. MED.* 1572 (1994).

misdiagnosed at an extraordinarily high rate.⁴⁸ Research has suggested that the misdiagnosis rate could be upwards of forty-one percent.⁴⁹ One study of patients with traumatic brain injury in chronic care facilities found that “[o]f the 44 patients with a clinical consensus diagnosis of VS, the CRS-R detected signs of awareness in 18 patients (41%).”⁵⁰ Such signs of awareness would not be expected from truly vegetative patients and are indications that the patient was actually minimally conscious.

While this rate of misdiagnosis would be unacceptable in any other field of medicine, it is consistent with prior studies that indicated that between thirty-seven percent to forty-three percent of patients diagnosed as vegetative demonstrated some signs of conscious awareness.⁵¹ Indeed, “the rate of misdiagnosis of VS has not substantially changed in the past 15 years.”⁵² Misdiagnosis is generally even higher for patients with chronic brain injuries.⁵³

Beyond misdiagnosis, some patients who are correctly diagnosed as vegetative may improve over time to an MCS without their signs of consciousness being noted. This situation is quite common,⁵⁴ as the uncertain timeline and open-ended nature of recovery can make determining whether DoC patients have undergone a functional state change difficult.⁵⁵ Indeed, twenty percent of vegetative patients will evolve into MCS based on a timeline that does not fit the normal temporal prognostic boundaries.⁵⁶

In the past, we have highlighted that certain DoC patients have what can be described as covert consciousness, which is when they have discordance between observable behaviors and evidence of consciousness identified on brain scans.⁵⁷ These patients are best described as having cognitive motor dissociation.⁵⁸ The

48. See F.C. Wilson, J. Harpur, T. Watson & J.I. Morrow, *Vegetative State and Minimally Responsive Patients – Regional Survey, Long-Term Case Outcomes and Service Recommendations*, 17 *NEUROREHABILITATION* 231, 231, 233 (2002); Keith Andrews, Lesley Murphy, Ros Munday & Clare Littlewood, *Misdiagnosis of the Vegetative State: Retrospective Study in a Rehabilitation Unit*, 313 *BMJ* 13 (1996); Nancy L. Childs, Walt N. Mercer & Helen W. Childs, *Accuracy of Diagnosis of Persistent Vegetative State*, 43 *NEUROLOGY* 1465 (1993).

49. Schnakers et al., *supra* note 13, at 3.

50. *Id.*

51. See, e.g., Childs et al., *supra* note 48; Andrews et al., *supra* note 48.

52. Schnakers et al., *supra* note 13, at 1.

53. *Id.* at 3.

54. See Daniel J. Thengone, Henning U. Voss, Esteban A. Fridman & Nicholas D. Schiff, *Local Changes in Network Structure Contribute to Late Communication Recovery After Severe Brain Injury*, 8 *SCI. TRANSLATIONAL MED.*, Dec. 7, 2016, at 1; see also Henning U. Voss et al., *Possible Axonal Regrowth in Late Recovery from the Minimally Conscious State*, 116 *J. CLINICAL INVESTIGATION* 2005 (2006).

55. See generally Joseph J. Fins & Zachary E. Shapiro, *Neuroimaging and Neuroethics: Clinical and Policy Considerations*, 20 *CURRENT OP. NEUROLOGY* 650 (2007).

56. See Giacino et al., *supra* note 19, at 455.

57. See *id.* at 452.

58. Nicholas D. Schiff, *Cognitive Motor Dissociation Following Severe Brain Injuries*, 72 *JAMA NEUROLOGY* 1413, 1415 (2015).

covertly conscious includes several groups of DoC patients, all of who are at heightened risk of receiving inadequate pain amelioration therapy before undergoing medical procedures.

This typology has been described previously.⁵⁹ First, this group includes those initially diagnosed as vegetative but who have subsequently improved and whose higher state of consciousness has not yet been recognized. The covertly conscious also includes the patients discussed earlier who were simply misdiagnosed as vegetative when they were actually minimally conscious.

Another group included among the covertly conscious are individuals who experience “a state change from appearing behaviorally vegetative to being overtly minimally conscious after treatment with [certain pharmaceuticals] (such as [amantadine or] zolpidem) or neurostimulation.”⁶⁰ They are most appropriately classified as being MCS patients with underactive, but intact, neural networks. These individuals appear behaviorally vegetative before treatment but are actually minimally conscious, existing in a state of potentiality.⁶¹ While their consciousness may depend on external interventions, these individuals must be accounted for as they are actually minimally conscious and thus can feel and experience pain.

An overlapping subset of patients are covertly conscious individuals with cognitive motor dissociation.⁶² For people with cognitive motor dissociation, a behavioral examination will be unable to reveal an accurate diagnosis as these individuals can have largely intact neural networks but may be unable to manifest signs of consciousness on a behavioral examination.⁶³ While these neural networks cannot be detected with behavioral examination, evidence of consciousness may be found by employing diagnostic neuroimaging.⁶⁴ But this is not yet fully reliable. Patients may also be at risk of unidentified consciousness if the manifestations of awareness were missed because of their intermittent nature, as intermittent awareness leads to an especially high risk that these patients’ consciousness will be overlooked.

All of these patients can be described as possessing covert or liminal consciousness, a framing we have employed in the past.⁶⁵ From a pain management perspective, all of these individuals are vulnerable to the undertreatment of pain.

Accurate diagnosis can be especially difficult if individuals with DoC have already been transferred to a long-term care facility.⁶⁶ These centers are chronically under-resourced, understaffed, and overburdened.⁶⁷ Most centers lack the staffing

59. See generally Fins & Bernat, *supra* note 16, at 472–74.

60. *Id.* at 472.

61. Even with intervention, these individuals may continue to appear vegetative and would thus fall in the final category discussed above. See Fins & Bernat, *supra* note 16, at 472–74.

62. See Schiff, *supra* note 58.

63. See *id.* at 1415.

64. See Martin M. Monti, Audrey Vanhaudenhuyse, Martin R. Coleman, Melanie Boly, John D. Pickard, Luaba Tshibanda, Adrian M. Owen & Steven Laureys, *Willful Modulation of Brain Activity in Disorders of Consciousness*, 362 *NEW ENG. J. MED.* 579, 580–86 (2010).

65. Shapiro et al., *supra* note 11, at 542–45.

66. See generally RCTM, *supra* note 1.

67. See *id.*

that can vigilantly recognize fleeting signs of conscious awareness.⁶⁸ They may also confuse these brain states with fixed and immutable diagnoses and decline to counter the assessment of the hospital from which patients were transferred,⁶⁹ leading to a further failure to identify consciousness and the potential to experience pain. In these facilities, such as the nursing homes described earlier, consciousness can go unnoticed, putting DoC patients at extreme risk of not receiving appropriate analgesic treatment.

The prospect of unnoticed improvement, coupled with the misdiagnosis rate, motivates us to invoke the precautionary principle⁷⁰ to not only reduce the misdiagnosis rate, but also to ameliorate risks that can occur as a result of misdiagnosis or unnoticed functional improvement. Action is paramount, as DoC patients are uniquely vulnerable, unable to advocate for themselves, and entirely reliant on their caregivers to ameliorate both daily and medically induced pain.

II. PAIN AND DISORDERS OF CONSCIOUSNESS

A study investigating central processing of noxious stimuli in post-comatose patients suggested that vegetative patients are unlikely to experience painful stimuli.⁷¹ This is because the activation of the primary cortex is isolated from higher-order associative cortices in vegetative patients, resulting in a significantly reduced probability that these patients experience painful stimuli in an integrated and conscious way.⁷² As studies have confirmed these findings,⁷³ medical consensus has emerged that patients who are truly vegetative are insensate.

In contrast to vegetative patients, those in MCS and covert or liminal consciousness can experience pain. One study examining painful stimuli in MCS patients found brain activation patterns similar to healthy controls in response to noxious stimuli.⁷⁴ Furthermore, the existence of “intact connectivity between primary and associative cortices has also been observed in these patients, suggesting the existence of an integrated and distributed neural processing which makes plausible the existence of conscious pain perception in this population.”⁷⁵

A review of studies concerning pain and DoC concluded that “[t]he suggested pain perception capacity highlighted by neuroimaging studies in patients in a MCS and in some patients in a VS . . . supports the idea that these patients need analgesic treatment.”⁷⁶ Despite this warning, patients with DoC, even those who are diagnosed as minimally conscious, do not reliably receive pain management therapies such as acetaminophen or ibuprofen to help with daily pain or topical anesthetics like

68. *See id.*

69. *See* Joseph J. Fins & Nicholas D. Schiff, *Differences That Make a Difference in Disorders of Consciousness*, 8 *AJOB NEUROSCIENCE* 131 (2017).

70. *See* Fins & Bernat, *supra* note 16, at 474.

71. Laureys et al., *supra* note 10.

72. *Id.* at 739.

73. *See id.*; *see also* Riganello et al., *supra* note 9; Chatelle et al., *supra* note 9.

74. Mélanie Boly et al., *Perception of Pain in the Minimally Conscious State with PET Activation: An Observational Study*, 7 *LANCET NEUROLOGY* 1013, 1018 (2008).

75. Chatelle et al., *supra* note 9, at 1203.

76. *Id.* at 1202.

lidocaine.⁷⁷ In some instances, general anesthesia is not administered, even during medical procedures that can cause pain and discomfort.⁷⁸ While pain amelioration therapies are available to sensate patients—both as a matter of course and policy—in order to minimize unnecessary suffering, analgesics are often not routinely administered to DoC patients due to mistaken belief that these patients are insensate.⁷⁹ This mistake may be an even greater problem than we once knew, as recent studies have provided evidence that individuals with DoC may be more sensitive to pain, and may be in chronic pain, more than previously recognized.⁸⁰

Investigations and interviews have consistently backed up anecdotal reports,⁸¹ and it is clear to us that pain amelioration is not always employed when patients diagnosed with DoC should receive it. For instance, if caregivers believe a patient is vegetative when the patient is actually covertly or liminally conscious, they may not administer a local anesthetic before setting up an arterial line. Examples abound of minimally conscious patients who do not receive reliable treatment with analgesics, such as acetaminophen, despite having conditions that would normally qualify for such treatment and despite the discomfort that results from having a severe brain injury and being unable to reliably move.⁸² In some instances, anesthesia might not be administered to patients diagnosed with DoC before the insertion of a colostomy tube, the creation of a surgical fistula, or the performance of other painful medical procedures, such as the instance recounted in the introduction.⁸³ Pain medication is not administered if the caregiver assumes that the patient is not conscious and thus expects the patient to not experience the same type of painful sensations and stimuli that could be expected in a patient with an intact neural network.

This might not be a significant problem if we were consistently confident in our diagnostic accuracy. However, because many patients diagnosed as vegetative are actually minimally conscious, either due to misdiagnosis or one of the other factors discussed above,⁸⁴ there is danger in relying on diagnosis to obviate the need for pain amelioration therapy. This danger is exacerbated by the phenotype versus genotype differences that characterize patients with covert or liminal consciousness.

III. MOVING TOWARD SOLUTIONS

Something must be done to protect DoC patients from untreated pain. The Guideline directly acknowledges the unique difficulties in assessing pain and suffering for patients diagnosed with DoC, asserting that “[c]linicians should be

77. See generally Riganello et al., *supra* note 9; Naro et al., *supra* note 9; Schnakers et al., *supra* note 9.

78. See, e.g., RCTM, *supra* note 1, at 191–93.

79. See *id.*; Chatelle et al., *supra* note 9, at 1202.

80. See Davide Sattin et al., *Evidence of Altered Pressure Pain Thresholds in Persons with Disorders of Consciousness as Measured by the Nociception Coma Scale—Italian Version*, 28 NEUROPSYCHOLOGICAL REHAB. 1295 (2018).

81. See, e.g., Griffin, *supra* note 8; Bruno Simini, *Patients’ Perceptions of Intensive Care*, 354 LANCET 571 (1999).

82. See RCTM, *supra* note 1; see also Griffin, *supra* note 8.

83. See *supra* Introduction.

84. See *supra* Section I.A.

cautious in making definitive conclusions about pain and suffering in individuals with DoC.”⁸⁵ However, caution is an insufficient remedy when individuals are suffering. Not only should practice guidelines recognize the difficulty of pain management for patients diagnosed with DoC, but they must encourage specific interventions to reduce the risk of untreated pain.

Part of any solution must be to improve diagnostic accuracy and increase efforts to provide DoC patients with mechanisms that could restore some level of functional communication.⁸⁶ A more accurate diagnosis would demonstrate which conditions (MCS or VS) were vulnerable to the experience of pain and thus lessen the risk of inadequate pain amelioration.

Restoring functional communication is also crucial, as communication could allow DoC patients to express their discomfort when they are in pain, helping ensure treatment. Despite widespread nihilism about the treatment of brain injury, there are emergent therapies that can help patients communicate. These include, but are not limited to, low-tech messaging boards, drugs like zolpidem⁸⁷ and amantadine,⁸⁸ as well as more advanced investigational modalities such as implanting deep brain stimulation devices,⁸⁹ using state-of-the-art neuroimaging techniques,⁹⁰ or employing brain-computer interfaces.⁹¹ These modalities have the potential to restore some level of functional communication to patients in altered states of consciousness. With some ability to communicate, patients could express themselves, albeit in a limited fashion, alerting others to their awareness and perception of pain and distress, thus hopefully ensuring better treatment.

While novel technologies could help these patients, many of the methods for improved diagnosis or technology-based communication are still investigational or require staff training before they could be deployed in a clinical setting.⁹² While some methods could be employed without exorbitant cost, the provision of many of these therapies would impose fiscal stress upon an already strained system. While we have argued that provision of some assistive devices is legally required under the Americans with Disabilities Act of 1990 and the 1999 *Olmstead* decision,⁹³ we recognize that even low-cost initiatives face challenges as there is very little funding

85. Giacino et al., *supra* note 19, at 456.

86. *See, e.g.*, Shapiro et al., *supra* note 11, at 544–45.

87. Calvin Tucker & Kirsten Sandhu, *The Effectiveness of Zolpidem for the Treatment of Disorders of Consciousness*, 24 NEUROCRITICAL CARE 488 (2016).

88. *Id.* at 488.

89. Xiaowei Chen, CheukYing Tang, Hongwei Zhou & Zhenlan Li, *Effect of Amantadine on Vegetative State After Traumatic Brain Injury: A Functional Magnetic Resonance Imaging Study*, 47 J. INT’L MED. RSCH. 1015, 1021–22 (2019).

90. *See* Adrian Owen, *How Science Found a Way to Help Coma Patients Communicate*, GUARDIAN (Sept. 5, 2017), <https://www.theguardian.com/news/2017/sep/05/how-science-found-a-way-to-help-coma-patients-communicate> [<https://perma.cc/M4AK-PK9W>].

91. Jonathan R. Wolpaw, Niels Birbaumer, Dennis J. McFarland, Gert Pfurtscheller & Theresa M. Vaughan, *Brain-Computer Interfaces for Communication and Control*, 113 CLINICAL NEUROPHYSIOLOGY 767 (2002); Caroline Lawrence, Zachary E. Shapiro & Joseph J. Fins, *Brain-Computer Interfaces and the Right to Be Heard: Calibrating Legal and Clinical Norms in Pursuit of the Patient’s Voice*, 33 HARV. J.L. & TECH. 167, 169–70 (2019).

92. *See generally* RCTM, *supra* note 1.

93. *See* Shapiro et al., *supra* note 11, at 532.

or political will to support patients with DoC.⁹⁴ Even less expensive communication therapies require staff training along with allocating increased time spent with patients.⁹⁵ These modest asks could prove unrealistic for a long-term care facility, as many of these facilities are barely making enough to provide care for the majority of their patients.⁹⁶ We have written about the unique difficulties of seeking Medicare reimbursement for therapy for patients diagnosed with DoC, making an already expensive prospect of care even more unrealistic for the majority of American families.⁹⁷

Thus, while drugs, devices, and prostheses have the potential to improve the treatment and diagnosis of patients with DoC, we do not expect there to be a prompt, widespread deployment of technologies in a way that will result in a significant or speedy reduction in the misdiagnosis rate or in a manner that quickly improves the pain management situation for individuals with DoC.⁹⁸ While we believe that some of these changes are required by disability law,⁹⁹ we appreciate that reform will take time. But as we wait for needed change in the system, vulnerable people continue to suffer. An alternate approach needs to take place to accelerate the course of progress and provide immediate relief. In short, we must not be deterred from taking intermediate, and even radical, steps to rapidly fix the problem of insufficient pain management for this particularly vulnerable population.

IV. CHANGES IN THE LEGAL SYSTEM

The urgency of the situation has led us to consider what the legal system can do quickly to improve pain management for those with DoC. While updating the standard of care for pain management for DoC is an essential priority, changes in medical practice are rarely quick. They take time and follow from a slow and steady dissemination of knowledge over years and even decades.¹⁰⁰ Given this reality coupled with the urgency of this situation, we turn to tort law as a remedy. This Part, and the remainder of this Article, will consider whether tort mechanisms could be mustered to improve pain management for patients with DoC.

A. Pain and Tort

Tort law refers to the field of law that compensates individuals for private harm done that does not necessarily rise to the level of criminal behavior.¹⁰¹ A tort is

94. See generally RCTM, *supra* note 1.

95. *Id.*; see also Shapiro et al., *supra* note 11.

96. Diane Calmus, *The Long-Term Care Financing Crisis*, HERITAGE FOUND. (Feb. 6, 2013), <https://www.heritage.org/health-care-reform/report/the-long-term-care-financing-crisis> [<https://perma.cc/UG9S-4HSZ>].

97. See Joseph J. Fins, Megan S. Wright, Claudia Kraft, Alix Rogers, Marina B. Romani, Samantha Godwin & Michael R. Ulrich, *Whither the "Improvement Standard"? Coverage for Severe Brain Injury After Jimmo v. Sebelius*, 44 J.L. MED. & ETHICS 182, 183 (2016).

98. *Id.*

99. See generally Shapiro et al., *supra* note 11.

100. See generally RCTM, *supra* note 1.

101. See generally RESTATEMENT (SECOND) OF TORTS (AM. L. INST. 1979).

defined as “an act or omission that gives rise to injury or harm to another and amounts to a civil wrong for which courts impose liability.”¹⁰² The traditional aims of tort law are “to provide relief to injured parties for harms caused by others, to impose liability on parties responsible for the harm, and to deter others from committing harmful acts.”¹⁰³ Tort causes of action include negligence, assault, battery, false imprisonment, and intentional or negligent infliction of emotional distress.¹⁰⁴ The usual mechanism of compensating patients after a doctor causes harm in a medical procedure, medical malpractice, is a cause of action grounded in tort law.

The idea of using the tort system to better align pain management was advanced in the early 2000s with the rise of the palliative care movement.¹⁰⁵ These proposals were put forth at a time before the opioid epidemic¹⁰⁶ and prior to judgments against the Sackler family and Purdue Pharma,¹⁰⁷ when there was a growing consensus that doctors were overly cautious in treating pain.¹⁰⁸ Even when the situation demanded it, doctors were particularly hesitant to administer opioids due both to fears about patient addiction and worries concerning professional or legal sanctions for overprescribing.¹⁰⁹ Scholars recognized that the medical community seemed to be

102. Cornell L. Sch., *Tort*, LEGAL INFO. INST., <https://www.law.cornell.edu/wex/tort> [<https://perma.cc/2WVZ-BU4S>].

103. *Id.*

104. *Id.*

105. *See, e.g.*, James R. Blaufuss, Note, *A Painful Catch-22: Why Tort Liability for Inadequate Pain Management Will Make for Bad Medicine*, 31 WM. MITCHELL L. REV. 1093, 1096 (2005).

106. *See generally* Ameet Sarpatwari, Michael S. Sinha & Aaron S. Kesselheim, *The Opioid Epidemic: Fixing a Broken Pharmaceutical Market*, 11 HARV. L. & POL’Y REV. 463, 466–74 (2017); Barry Meier, *Origins of an Epidemic: Purdue Pharma Knew Its Opioids Were Widely Abused*, N.Y. TIMES (May 29, 2018), <https://www.nytimes.com/2018/05/29/health/purdue-opioids-oxycotin.html> [<https://perma.cc/2A6H-EH9T>].

107. *See, e.g.*, Oklahoma *ex rel.* Hunter v. Purdue Pharma, No. CJ-2017-816, 2019 Okla. Dist. LEXIS 3486, at *4–5 (D. Okla. Aug. 26, 2019).

108. *See, e.g.*, Gilah R. Mayer, Bergman v. Chin: *Why an Elder Abuse Case is a Stride in the Direction of Civil Culpability for Physicians Who Undertreat Patients Suffering from Terminal Pain*, 37 NEW ENG. L. REV. 313, 314 (2002) (arguing that courts should establish practice guidelines for the management of pain); Jacob B. Nist, *Liability for Overprescription of Controlled Substances: Can It Be Justified in Light of the Current Practice of Undertreating Pain?*, 23 J. LEGAL MED. 85, 86 (2002) (discussing prescription drug addiction and physician liability); Rima J. Oken, *Curing Healthcare Providers’ Failure to Administer Opioids in the Treatment of Severe Pain*, 23 CARDOZO L. REV. 1917, 1923 (2002) (presenting model legislation holding healthcare providers liable for providing inadequate palliative care to their patients); Barry R. Furrow, *Pain Management and Provider Liability: No More Excuses*, 29 J.L. MED. & ETHICS 28, 33–41 (2001); Michael J. Reynolds, *Morphine or Malpractice: Should Courts Recognize a Legal Duty to Prescribe Opiates for Treating Chronic Pain*, 15 ST. JOHN’S J. LEGAL COMMENT. 79, 81 (2000) (concluding that courts should provide a remedy for inadequate pain treatment); Ben A. Rich, *A Prescription for the Pain: The Emerging Standard of Care for Pain Management*, 26 WM. MITCHELL L. REV. 1, 4–5 (2000) (advocating for new clinical practice guidelines in inadequate pain management medical malpractice suits); Tonya Eippert, *A Proposal to Recognize a Legal Obligation on Physicians to Provide Adequate Medication to Alleviate Pain*, 12 J.L. & HEALTH 381, 402 (1998).

109. *See generally* David A. Fleming, *Relieving Pain: What Are Today’s Ethical and Legal*

constantly underutilizing pain medication, a condition that some termed “opiophobia.”¹¹⁰ There was a sense that medical schools were failing to train physicians sufficiently or consistently in pain and symptom management,¹¹¹ and a consensus quickly developed that physicians were, in general, undertreating the pain of their patients.¹¹² Remedies were advanced by major philanthropic organizations to improve palliative and end-of-life care.¹¹³ In 2000, the Veterans Administration advanced pain as a fifth vital sign with the hopes that this would be a potential tool to reform medical practice.¹¹⁴ Proposals were motivated in part by perceived deficiencies in medical malpractice law that made it difficult for patients to recover in situations where they had received inadequate pain management.¹¹⁵

Legal remedies took different forms. Some championed model legislation to impose liability on healthcare providers for failure to administer proper pain management.¹¹⁶ This would have involved the creation of a novel tort specifically to compensate patients who received inadequate pain amelioration therapy. Others discussed reforming medical malpractice law to more specifically recognize a duty to alleviate unnecessary suffering or to actively require the administration of pain medication.¹¹⁷ However, none of these proposals gained significant traction, and the notion of a tort for inadequate pain amelioration has fallen by the wayside, especially given the emergent information about the risk of opioid addiction with drugs like OxyContin and Fentanyl.

B. A Novel Tort for DoC

It may seem counterintuitive or countercultural to argue for the greater use of pain medication given the devastation of the Opioid Epidemic. But we contend that for a population whose pain remains undertreated, legal remedies that ensure access to *appropriate* analgesia is indicated. This would include opioid analgesia when medically indicated, as well as non-opioid analgesia when these agents were appropriate, consistent with the WHO stepwise approach to pain management.¹¹⁸

It is essential to stress that improving pain management for those with DoC does not necessarily require increased opioid analgesic treatment. Indeed, many routine

Risks?, 99 MO. MED. 550 (2002).

110. See Furrow, *supra* note 108, at 28.

111. See Sharon Abele Meekin, Jason E. Klein, Alan R. Fleischman & Joseph J. Fins, *Development of a Palliative Education Assessment Tool for Medical Student Education*, 75 ACAD. MED. 986, 987–99 (2000).

112. See Furrow, *supra* note 108, at 28; see also Mayer, *supra* note 108, at 313; Rich, *supra* note 108, at 14–21.

113. See Joseph J. Fins, ON THE ROAD FROM THEORY TO PRACTICE: PROGRESSING TOWARDS SEAMLESS PALLIATIVE CARE (2003).

114. See *Pain as the 5th Vital Sign Toolkit*, DEP’T OF VETERANS AFFS. (Oct. 2000), <https://www.va.gov/painmanagement/docs/toolkit.pdf> [<https://perma.cc/NWA3-RCHQ>].

115. See generally Furrow, *supra* note 108.

116. See Oken, *supra* note 108, at 1923.

117. See Furrow, *supra* note 108, at 33–34.

118. See Aabha A. Anekar & Marco Cascella, *WHO Analgesic Ladder*, NAT’L CTR. FOR BIOTECHNOLOGY INFO., <https://www.ncbi.nlm.nih.gov/books/NBK554435/> [<https://perma.cc/R2FS-5QZD>] (May 15, 2022).

medical procedures that DoC patients undergo might simply necessitate over-the-counter analgesic methods, such as administration of acetaminophen, ibuprofen, or even topical anesthetics. Most DoC patients' daily discomforts, such as headaches or muscular-skeletal discomfort, can also be treated without opioids. The broader medical profession is already moving in this direction, recognizing that, in many instances, less addictive pain therapies can be just as effective at providing relief.¹¹⁹ Studies have already found that a combination of acetaminophen and ibuprofen can be as effective as opioid treatments in certain cases.¹²⁰ Non-opioid analgesics will be more appropriate for most of the medical procedures and daily discomforts that patients diagnosed with DoC undergo.

Thus, it would be a misconstrual of our argument to view our proposal as a call for increased opioid agents with all their known liabilities. Instead, it is a call for improved pain management for a small population, consistent with prevailing and evolving knowledge about pain and symptom management and the corollary risk of addiction and dependency. In fact, there is data to indicate that when individuals with severe brain injuries recover to higher levels of functional independence and their pain (or psychiatric symptoms) are not managed appropriately, they are at risk of self-medication and addiction. Thus, proper pain and symptom treatment may functionally *decrease* both the morbidity and mortality of untreated pain and the incidence of addiction in this vulnerable population.

We must also recognize that all fears of opioid abuse and addiction are not created equally. In particular, many of the concerns related to greater opioid use, particularly in terms of the risk for addiction and negative downstream consequences, are almost purely absent when dealing with patients diagnosed with DoC. Many of these patients, even ones who can be expected to improve from the VS to an MCS, will still not progress sufficiently to have independent, active lives. Therefore, many of the concerns about opioid abuse, and the toll it can take on an individual's public and private life, are significantly reduced when considering patients diagnosed with DoC.

For such patients, any fear of opioid addiction or dependence has to be weighed against their vulnerability to suffering. The notion that we would underadminister opioid analgesics because of downstream fears of addiction or dependence rings particularly hollow when considering the realities of patients diagnosed with DoC. In such cases, the duty to relieve suffering and ensure patient comfort is heightened, especially since the individuals are unable to communicate pain or discomfort to their providers or caregivers. As a result, secondary impacts should rightfully be of reduced concern.

A separate worry is that our focus on DoC and pain could counter the prevailing narrative of the moment when there is a concerted effort to reduce opioid use and disincentivize unnecessary pain management. We recognize that any call to increase analgesic use could have the unintended effect of countering some of the prevailing medical narrative surrounding pain management, especially at a time when the

119. Francesca L. Beaudoin, *Combination of Ibuprofen and Acetaminophen Is No Different than Low-Dose Opioid Analgesic Preparations in Relieving Short-Term Acute Extremity Pain*, 23 *BMJ EVIDENCE-BASED MED.* 197, 197–98 (2018).

120. Andrew K. Chang, Polly E. Bijur, David Esses, Douglas P. Barnaby & Jesse Baer, *Effect of a Single Dose of Oral Opioid and Nonopioid Analgesics on Acute Extremity Pain in the Emergency Department: A Randomized Clinical Trial*, 318 *JAMA* 1661, 1661–67 (2017).

medical profession must shoulder its share of blame for the current climate of abuse and addiction.¹²¹

However, it is precisely because of this current climate that the recognition of those diagnosed with DoC is even more important. It would be a great injustice if patients with DoC were further ignored because of national trends that have nothing to do with them. Indeed, as discussed above, many of the concerns about opioid abuse and dependence are entirely absent when dealing with patients diagnosed with DoC, and thus, the risk/benefit calculus when deciding whether to administer opioid analgesics is entirely different. Nor is it our intention to minimize the experience of sensate patients who do not receive adequate treatment for their pain. The medical profession must walk a perilous path, recognizing the risks of opioid abuse while not minimizing or ignoring the physician's duty to relieve suffering, especially unnecessary suffering that could be addressed through proper pain management.

With these provisos we propose a new tort concerning inadequate pain amelioration *specifically and solely* for patients diagnosed with DoC.¹²² Novel torts, often referred to as "emergent torts," can be developed and disseminated through legislation or through judicial decision-making.¹²³ In fact, many of the causes of action we know today arose as specialized suits under particular tort theories, such as negligent infliction of emotional distress.

Rather than expanding negligence or changing current torts, we propose the creation of a new emergent tort with its own distinct elements. Our proposed tort would assign liability to providers if a caregiver fails to administer the same pain amelioration therapies to patients diagnosed with DoC as they would give to any other patient in the setting of routine care or prior to performing any medical procedure which would be expected to cause pain or distress. If individuals with DoC do not receive the standard pain management therapies, liability would be imposed, even without specific evidence showing that pain resulted from the inadequate provision of analgesics, as it may be difficult for patients with DoC to *report* that they were in pain. In this way, the tort would function as a strict liability offense, designed purely to regulate caretaker behavior and to prophylactically ensure that individuals with DoC receive the proper standard of care and do not linger in pain. This tort would change medical behavior by ensuring that providers could no longer rely on patients' seeming lack of consciousness or absence of usual and expected responses to painful stimuli to justify declining to provide pain amelioration.

The tort will require that the pain amelioration therapy be noted on patients' charts so that records can be kept for monitoring purposes. This tort will thusly ensure that caregivers cannot depend on patients' DoC diagnosis in deciding whether or not to

121. See generally Richard Gentry Wilkerson, Hong K. Kim, Thomas Andrew Windsor & Darren P. Mareiniss, *The Opioid Epidemic in the United States*, 34 EMERGENCY MED. CLINICS E1 (2016).

122. We note that the goal of this Article is not to devise a concrete strategy for how to implement a new tort. Rather, we aim to explore whether a new tort concerning pain management for individuals with DoC could be a useful and effective mechanism to effect practice changes to improve the pain management situation of individuals with DoC.

123. Anita Bernstein, *How to Make a New Tort: Three Paradoxes*, 75 TEX. L. REV. 1539 (1996).

administer pain management therapies and will make sure that pain amelioration is documented for record keeping and auditing.

It should be kept in mind that this tort is designed to supply individuals diagnosed with DoC with the *same* routine pain management that would be provided to fully awake and conscious patients. In this way, we do not run the risk of overcorrecting regarding pain medication, but rather enforcing an even playing field where doctors cannot simply rely on diagnoses of DoC to address patients' pain. The hope is that this tort would tip the scale in favor of making sure that especially vulnerable patients with a DoC will not experience unnecessary pain, especially when they are unable to inform us of their discomfort.

1. What Makes This Proposal Different?

While past scholars wrote about the possibility of a new tort that could compensate any patient who suffered needless pain due to the inadequate provision of pain ameliorative therapies,¹²⁴ our proposal would limit liability only to situations involving inadequate pain management for individuals with DoC. This crucial difference makes our proposal narrowly tailored when compared to past efforts. This increases the chance of effecting positive change for our particular patient population without risking unintended systemic consequences that could arise from a general pain management tort for all patients. Indeed, narrowly tailoring this tort for patients with DoC removes many of the concerns that scholars mustered against past proposals to use tort law to better align pain care, such as the risk of broad, unintended consequences to the medical and legal system.¹²⁵

We are sensitive to the fact that this change will result in some DoC patients receiving pain management therapies who may not benefit from them because they are definitively in the VS and insensate. There is little dispute that patients properly diagnosed as vegetative are insensate. However, given the high rate of misdiagnosis and the mistaking of MCS patients as vegetative, we believe that the precautionary principle counsels "universal pain precautions" as the default standard of pain care for DoC patients.¹²⁶ Given that the pain amelioration therapies provided will be those offered to fully sensate individuals routinely, we do not believe that the minor risks associated with the "over-treatment" of some vegetative patients is significant enough to outweigh the potential harms that an error of omission would constitute for the sensate DoC patient.

Moreover, we are not advocating for constant provision of pain medication to individuals diagnosed with DoC. Rather, we are proposing a narrowly tailored mechanism to ensure that these individuals will receive the same standard of care provided to a typical patient. In this way, our tort proposes a relatively narrow solution that could be effective but is unlikely to trigger unintended negative externalities to the healthcare system broadly.

124. See, e.g., Furrow, *supra* note 108, at 32–40; Mayer, *supra* note 108.

125. See generally Blaufuss, *supra* note 105.

126. See Fins & Bernat, *supra* note 16, at 473–76.

2. Medical Malpractice Is Insufficient

Currently, the best legal mechanism provided for recovery from injuries such as improper pain management lies in medical malpractice. While medical malpractice may seem to provide an ideal mechanism for recovery, the truth is that malpractice is extremely poorly suited to address inadequate pain management. In particular, any malpractice claim for DoC patients related to pain would face heightened difficulties, arguably preventing them from recovering damages even when there has been insufficient provision of pain amelioration therapies prior to a painful medical procedure.

To prove medical malpractice, a plaintiff must demonstrate specific elements to show culpability. These include showing that a doctor-patient relationship existed, that the doctor's care was somehow negligent and violated the standard of care, that the doctor's actions caused a specific injury that would not have occurred in the absence of negligence (causation), and that the specific injury resulted in specific damages, such as unusual pain, suffering, or significantly increased medical expenses.¹²⁷

On its face, it would appear that medical malpractice provides a perfectly acceptable mechanism for recovery if patients with DoC are not given proper pain medication. The lack of provision of proper analgesics would both violate the standard of care and result in excess pain since pain would normally be ameliorated by sufficient analgesia. Because the other necessary elements mentioned above would be easily provable, it seems as if malpractice could be readily established. In fact, medical malpractice suits for inadequate pain management have been successful in the past.¹²⁸

However, in the unique circumstances presented by individuals with DoC, malpractice claims face considerable difficulties, particularly when establishing causation and proving injury. Because patients diagnosed with DoC cannot readily communicate, they are generally unable to inform us whether or not they were suffering pain at any given time. Without firsthand evidence of pain, it would be very difficult to prove that pain actually occurred, a necessary element in establishing malpractice.

Of course, for sensate, communicative patients, proving that pain was caused in a malpractice suit alleging insufficient pain management would normally be simple. The patients could establish their experience of pain by providing direct testimony.¹²⁹ However, for patients with DoC, it could prove exceedingly difficult in an adversarial proceeding. While it is possible that pain could be inferred from secondary indicia such as a spike in heart rate or dilation of the pupils, these signs could be fleeting, easily missed, and would neither definitively indicate the presence

127. J. D. LEE & BARRY A. LINDAHL, *MODERN TORT LAW: LIABILITY AND LITIGATION* § 25:1 (2d ed. 2002); see also Blaufuss, *supra* note 105, at 1117.

128. See Mayer, *supra* note 108, at 339; see also Timothy McIntire, *Ouch! That Really Hurts. Pain Management in the Elderly and Terminally Ill: Is This a Legal or a Medical Problem?*, 6 N.Y. CITY L. REV. 151, 164–65 (2003).

129. See generally Mayer, *supra* note 108.

of pain nor causality.¹³⁰ For example, a fever or emotional upset can both cause these same autonomic responses.

Beyond ascribing these findings to untreated pain, there is the question of their identification and documentation. Unless these indicia were noted by the medical care team and then recorded in the patient's file, there may be nothing linking these secondary indicia to pain experienced by the patient.¹³¹ Absent the patient's voice in the trial, establishing the existence of pain and its etiology as a consequence of a failure to treat, as opposed to some other factor, would prove exceedingly difficult.

Patients with DoC would also face structural difficulties succeeding on malpractice claims in certain states. For instance, in New York, where the authors of this Article reside, it is accepted that "[i]n a medical malpractice action, damages for pain and suffering can be awarded only if it is established that the patient consciously experienced pain and suffering."¹³² Furthermore, a "patient's comatose condition after the act of malpractice precludes any recovery for conscious pain and suffering."¹³³ Generally:

A claim to recover damages for conscious pain and suffering requires proof that the injured party experienced some level of "cognitive awareness" following the injury. Thus, to obtain the "benefit" of the legal fiction that money damages can compensate for a victim's injury, the law requires as a prerequisite to recovery that the victim have cognitive awareness, and therefore the plaintiff has the threshold burden of proving consciousness for at least some period of time following an accident in order to justify an award of damages for pain and suffering.¹³⁴

Such schemes add another barrier to recovery for patients in altered states of consciousness since proving conscious awareness of the pain could be impossible due to their brain injury.¹³⁵ Without concrete evidence that a doctor's lack of administration of pain management therapies actually resulted in specific pain to patients, DoC patients' medical malpractice suits would likely be ineffective.

This is to say nothing of the time and expense related to bringing malpractice claims¹³⁶ and the risks associated with bringing weaker claims. These are heightened concerns for DoC patients since these individuals can neither advocate for themselves nor bring claims directly. Instead, they must rely on a family member,

130. See Joseph J. Fins, Judy Illes, James L. Bernat, Joy Hirsch, Steven Laureys & Emily Murphy, *Neuroimaging and Disorders of Consciousness: Envisioning an Ethical Research Agenda*, 8 AM. J. BIOETHICS 12, 13–17 (2008).

131. See *id.*

132. 76 N.Y. JUR. 2D *Malpractice* § 396 (2022).

133. *Id.*; see also *Jones v. City of New York*, 395 N.Y.S.2d 10 (App. Div. 1977).

134. 36 N.Y. JUR. 2D *Damages* § 66 (2022).

135. This is beyond the philosophical challenge of proving consciousness in the first place. There is a deep philosophical literature that asserts that the only consciousness one can truly know is one's own. When it comes to the sentience of another, the evidence is inferential through meaningful responses through gestures or language.

136. *The Expenses of Medical Malpractice Suits*, GILMAN & BEDIGIAN, LLC, <https://www.gilmanbedigian.com/the-expenses-of-medical-malpractice-suits> [<https://perma.cc/7E6L-K7E9>].

surrogate, or guardian to recognize that they are in distress and then be savvy enough to navigate the legal system to bring a claim, an expensive proposition with a small chance of recovery. The incentives would be further warped for a guardian in this situation who faces the prospect of an adversarial proceeding that would pit the plaintiff against the very institution where their loved one is still receiving care. Surrogates may decline to pursue legal remedies due to fear of retribution or that future care could be compromised, especially given the long-term dependency on ongoing institutional care.

Beyond this, it is notoriously difficult to accurately assess pain in medical malpractice claims,¹³⁷ a problem that plagues even conscious, conversant patients. Although there are analog pain scales,¹³⁸ their completion is based on the patient's subjective experience. Given this, commentators have asserted that "pain is completely subjective—there is no diagnostic test a physician (or the courts) can use to verify the existence or amount of pain an individual is suffering."¹³⁹ As the perception of pain is idiosyncratic, it is difficult to prove that any given pain is truly excessive or directly caused by the doctor's negligence, as opposed to the normal difficulties and expected discomfort from ongoing care or undergoing medical procedures.

For patients with DoC, not only would malpractice suits face these traditional difficulties, but they would feature plaintiffs who could not verbalize their pain or explain what they were feeling at a particular moment. Such claims would be extremely unlikely to succeed, highlighting how poorly suited medical malpractice is to remedy this specific problem. Indeed, recovery through medical malpractice for inadequate pain treatment can be so difficult that one scholar opined, "the harsh reality is that no real civil recourse exists for patients whose pain is treated inadequately."¹⁴⁰ The lack of viable responses in law for this problem helps motivate our call to create a novel tort that would specifically and exclusively address insufficient pain amelioration for individuals with DoC.

In recent years, scholars have written about how advances in neuroimaging, which have the potential to impact many areas of law,¹⁴¹ may allow us to measure pain more accurately in legal settings.¹⁴² However, we have designed our tort so that it does not depend on measuring pain, as our proposed tort does not require that the claimant establish that they actually felt pain at any particular point. Instead, our proposal would function under a strict liability scheme. Strict liability removes concerns about subjective measurements of pain and questions of causation that

137. See Furrow, *supra* note 108, at 36; see also Blaufuss, *supra* note 105, at 1118–19.

138. See generally Domenica A. Delgado, Bradley S. Lambert, Nickolas Boutris, Patrick C. McCulloch, Andrew B. Robbins, Michael R. Moreno & Joshua D. Harris, *Validation of Digital Visual Analog Scale Pain Scoring with a Traditional Paper-Based Visual Analog Scale in Adults*, 2 J. AM. ACAD. ORTHOPAEDIC SURGEONS, Mar. 2018, at 1.

139. Blaufuss, *supra* note 105, at 1097.

140. Mayer, *supra* note 108, at 339.

141. See, e.g., Zachary E. Shapiro, *Truth, Deceit, and Neuroimaging: Can Functional Magnetic Resonance Imaging Serve as a Technology-Based Method of Lie Detection?*, 29 HARV. J.L. & TECH. 527 (2016).

142. See generally A.C. Pustilnik, *Imaging Brains, Changing Minds: How Pain Neuroimaging Can Inform the Law*, 66 ALA. L. REV. 1099 (2015).

significantly complicate the assessment of fault and damages in current malpractice claims. Rather, we focus liability solely on the practitioner's behavior. Past proposals for a tort concerning inadequate pain management did not rely on strict liability and thus suffered from the same problems in determining pain discussed above.

Our new cause of action would focus only on whether the standard of care in terms of pain medication provisions for patients with a DoC was the same as for other patients. To establish a violation, one would simply look at a DoC patient's medical charts, which should note whether pain management therapies were administered when otherwise appropriate in other patient populations. If no pain therapy was administered, or none was noted on the chart, then liability would be imposed. This mechanism would ensure that doctors could no longer rely on a patient's purported lack of consciousness to ameliorate pain while providing an easier mechanism to ensure that DoC patients were routinely receiving proper pain management care.

3. Models for Our Tort

When proposals were advanced in the past, scholars were quick to point out shortfalls with the concept of a general tort action concerning pain management.¹⁴³ They highlighted that tort law is an imperfect mechanism for addressing the structural problem of the undertreatment of pain and that creating a new cause of action could be an overly broad tool for something that should be addressed via practice changes and greater physician education.¹⁴⁴ Scholars also voiced concerns about how impactful expanded tort liability from medical malpractice would be in changing medical practice, questioning whether the threat of tort liability actually changes the behavior of medical providers as it relates to treating patients.¹⁴⁵

In the case of medical malpractice, it is unclear to what extent tort liability actually deters negligence.¹⁴⁶ The lack of pressure could result from the fact that “[t]ypically, physicians are not personally held financially responsible for adverse medical malpractice decisions or the litigation costs associated with [] medical malpractice claims.”¹⁴⁷ Because of the system of malpractice insurance and “because [] insurers usually do not base malpractice premiums on past claims [against] individual physicians[,]”¹⁴⁸ the looming specter of medical malpractice liability exerts only limited pressure on the behavior of any one individual doctor.

The lack of effect on physician behavior could also be the result of the broader aims of medical malpractice law, which penalizes doctors broadly for not following the standard of care or for actions that are generally negligent. While being more careful and more closely adhering to practice guidelines are noble goals, they are broadly focused and do not direct physician attention to specific changes in practice. Rather, a doctor worried about malpractice should simply strive to do the best job

143. See Blaufuss, *supra* note 105, at 1107–10.

144. *Id.*

145. Gary T. Schwartz, *Reality in the Economic Analysis of Tort Law: Does Tort Law Really Deter?*, 42 UCLA L. REV. 377, 399 (1994).

146. See generally Blaufuss, *supra* note 105, at 1096.

147. *Id.* at 1108.

148. *Id.*

possible in their daily work without necessarily changing their conduct in any one specific situation.

While it appears that the general field of medical malpractice has not significantly altered physician behavior, there are examples of tort liability successfully effectuating narrow, focused changes to medical practice. In fact, tort law has been most successful in positively modifying medical practices when the modifications sought are particularized, concrete, and noncomplicated.¹⁴⁹ We model our tort for inadequate pain management for individuals with DoC on other narrowly tailored efforts that affected a specific change in medical practice. This should ultimately allow the novel tort to be an effective mechanism to trigger the limited shift in practice that we desire.

For instance, in the case of *Tarasoff v. Regents of the University of California*,¹⁵⁰ the California Supreme Court considered whether a therapist had a duty to warn a potential victim after the therapist's patient expressed a credible intent to harm that person. The court held that mental health professionals have a duty not only to their specific patients but also to individuals who are specifically and credibly threatened by those patients.¹⁵¹

In *Tarasoff*, a mentally unstable patient told his psychiatrist that he had a plan to kill a young woman.¹⁵² While the psychiatrist made some efforts to alert the authorities, he did not specifically warn the potential victim.¹⁵³ After the patient actually undertook this plan and murdered the young woman, the California Supreme Court had to decide whether the therapist had any duty to warn the young woman, even though she was not his patient.¹⁵⁴ The court decided this question in the affirmative, establishing that mental health professionals have a duty to warn individuals of credible threats of imminent harm from patients.¹⁵⁵

This decision resulted in particularized widespread changes to the practices of psychiatrists and psychologists in California, who quickly realized that they could be held legally liable for failure to specifically undertake a particular action, in this case, warning individuals who are threatened by dangerous patients. Scholars pointed out that “[a]ccording to a study . . . *Tarasoff* was effective in rendering psychiatrists and psychologists, especially in California, considerably more willing to notify potential victims and also public authorities when dealing with dangerous patients.”¹⁵⁶ When faced with the prospect of liability and given the ability to undertake a simple and clear action to remove the risk, psychiatrists changed their practice.

Tort liability has also been able to successfully change surgical practice by necessitating the adoption of guidelines and precautions to minimize the chance that a surgeon will accidentally leave a surgical tool in a patient after surgery has been completed. These precautions were developed and adopted in the wake of various

149. *Id.* at 1093–1132.

150. 551 P.2d 334 (Cal. 1976).

151. *Id.* at 345–46.

152. *Id.* at 341.

153. *Id.* at 340.

154. *Id.* at 342–43.

155. *See id.* at 348.

156. Blaufuss, *supra* note 105, at 1105.

tort-based lawsuits, which imposed significant liability on careless surgeons who accidentally left surgical tools or sponges inside their patients after surgery.

After facing litigation, hospitals developed specific guidelines and quickly changed their practice to avoid liability. Indeed, “to prevent such lawsuits and better protect patients, hospitals [developed] a variety of new operating-room procedures, from computerizing the way they keep track of surgical tools to bearing down on doctors who seem overly eager to close up a patient before all tools have been accounted for.”¹⁵⁷ To reduce the threat of liability, hospitals began installing computers in operating rooms that functioned to help nurses and doctors keep track of surgical instruments. Furthermore, many hospitals changed their practice to require nurses themselves to count both larger surgical instruments, as well as smaller ones, such as surgical needles.¹⁵⁸ This shift in practice, which was relatively minor and targeted, was triggered by the specter of looming tort liability.

Another example of tort liability effectuating a particularized change in medical practice occurred after the case of *Helling v. Carey*, which took place in 1974 in the state of Washington.¹⁵⁹ In this case, a court found malpractice as a matter of law whenever a doctor did not include a glaucoma pressure test within a routine eye exam.¹⁶⁰ This was highly significant, as prior to *Helling* it was well accepted that the standard of care did not include the routine use of this eye exam.¹⁶¹ In fact, the clear consensus amongst doctors was that this glaucoma test did not need to be provided to patients under the age of forty.¹⁶² Despite the eye exam not being the typical standard of care before the case, the court still found the doctor liable, holding as follows:

Under the facts of this case reasonable prudence required the timely giving of the pressure test to this plaintiff. The precaution of giving this test to detect the incidence of glaucoma to patients under 40 years of age is so imperative that irrespective of its disregard by the standards of the ophthalmology [sic] profession, it is the duty of the courts to say what is required to protect patients under 40 from the damaging results of glaucoma.

We therefore hold, as a matter of law, that the reasonable standard that should have been followed under the undisputed facts of this case was the timely giving of this simple, harmless pressure test to this plaintiff and that, in failing to do so, the defendants were negligent¹⁶³

157. Edward Felsenthal, *Legal Beat: Forgotten Surgical Tools Spur Lawsuits*, WALL ST. J., Dec. 11, 1992, at B12.

158. Schwartz, *supra* note 145.

159. 519 P.2d 981 (Wash. 1974).

160. *Id.* at 983.

161. *Id.* at 985.

162. *Id.* at 982.

163. *Id.* at 983.

After this decision, a study found that the level of routine glaucoma testing of patients under forty by ophthalmologists in the state of Washington increased substantially, highlighting the effectiveness of the tort liability in changing medical practice.¹⁶⁴

Furthermore, scholars have noted that tort liability has generated positive changes in the medical practice surrounding informed consent. For instance, a Harvard University study of physicians found that “the threat of liability led almost seventy-eight percent of physicians to spend more time ‘explaining risks’ to patients.”¹⁶⁵

In sum, these examples of tort liability provide evidence for how tort law can effect targeted change in medical practice, as well as provide a roadmap for our proposal to follow. They highlight that tort law is most effective in changing medical practice when the changes are particularized, noncomplicated, concrete shifts in specific settings rather than widespread general nudges. Our strict liability tort was designed with this in mind, so that we could replicate past successful efforts while avoiding mistakes of the past. This will allow our tort to improve medical behavior in an effective, discrete, and positive way.

V. WHY TORT IS THE BEST WAY FORWARD

A tort concerning pain management for DoC patients, grounded in strict liability, would be a novel and effective mechanism to trigger the necessary practice shifts in pain management for patients diagnosed with DoC. While we recognize that tort law is by no means a perfect way to change medical practice, in this specific instance, there are reasons to be optimistic about this particular path forward.

Ensuring that routine pain management therapies are provided to individuals diagnosed with DoC is more analogous to the discreet shifts in practice discussed above, rather than the broader nudge created by malpractice schemes. Such a change would not require widespread training, changes in medical education, development of new skills, or paradigm shifts. The tort would create a clear, easily achievable obligation on the physician and care team. Furthermore, the tort would be narrowly targeted at the specific situation it hopes to ameliorate, rather than focused on improving doctor behavior and conduct in general. Simply stated, the tort would align pain management care for patients with DoC to be the same as those without DoC. This relatively minor change, if successful, would have a significant positive effect, greatly reducing the chance that patients with DoC might have to linger in untreated pain without the provision of pain management therapies.

As *Helling* demonstrates,¹⁶⁶ shifts in medical standards of care do not always have to begin within the medical field itself. Indeed, courts will occasionally dictate the appropriate medical standard of care and impose liability according to a standard that the medical field itself has not yet adopted. This would be similar to our proposed tort, which would impose a new standard of care for pain management for individuals diagnosed with DoC. A new tort would remove the ability of providers to rely on

164. Jerry Wiley, *The Impact of Judicial Decisions on Professional Conduct: An Empirical Study*, 55 S. CAL. L. REV. 345, 360, 363 (1982) (stating that twenty-seven percent of ophthalmologists reported increased testing).

165. See Schwartz, *supra* note 145, at 400–02.

166. See *Helling*, 519 P.2d 981.

patients' DoC as an excuse to not provide analgesics. This is a concrete change with actionable steps that providers can undertake to reduce the chance of liability.

Another advantage is that we do not expect this expanded tort liability to be too burdensome to courts or too broad of a solution for this particular problem. When designing new torts, one must be extraordinarily careful to not hastily implement any change that could drastically, and unexpectedly, alter care for a significant part of the medical system or that could result in overburdening our already busy courts.¹⁶⁷ Such concerns were mustered against past proposals concerning pain management, which could have imposed widespread and uncertain liability. We note that patients diagnosed with DoC represent a particularly small patient population,¹⁶⁸ so we would not expect a new tort to flood courts with novel causes of action, overwhelming our legal system. Nor should assigning liability be terribly burdensome on a court, as establishing whether or not pain amelioration was provided should be as simple as consulting the patient chart. These factors limit the scope of our proposed tort compared to past proposals, ensuring that the new cause of action would not overburden the system, result in cascading and widespread liability, or effect potentially negative unintended consequences.

Ultimately, this tort should be able to shift medical practice without requiring complicated new training, as it would simply generalize the current standard of care for pain management to *all patients*. The shift would be simple and could be implemented easily by hospitals and care facilities. Compliance would simply require education, informing practitioners and caregivers that they must treat DoC patients just like they would treat others, basically a “do unto others as you would have them do unto you” approach. Given this, we would not expect the implementation of this shift in practice to be difficult, burdensome, or costly—making the ease of implementation a major advantage of our tort.

A final advantage of using tort to shift practice is that it allows us to change the situation for DoC patients in a rapid and highly visible way without waiting for the longer process of diffusion and adoption of new practice guidelines. The situation of inadequate pain management for DoC patients, coupled with the misdiagnosis rate, is not a new problem, and has been recognized by scholars for quite some time. Despite this recognition and urgent calls for change,¹⁶⁹ the situation has not been remedied. This lack of progress should motivate us to look for alternative solutions, while increasing our willingness to offer bold proposals and novel ideals. We believe that a new tort, specifically one concerning pain management for patients with DoC, is one of the few ways to quickly and effectively change routine medical practice for the better.

CONCLUSION

While we believe that our proposed tort would be effective in improving the situations of those diagnosed with DoC, it is important to recognize that our push for

167. See generally Timothy B. Dyk, *Federal Circuit Jurisdiction: Looking Back and Thinking Forward*, 67 AM. U. L. REV. 971 (2018).

168. See Shapiro et al., *supra* note 11.

169. See generally RCTM, *supra* note 1.

greater access to pain medication is confined to this particular patient population. As society grapples with the scope of the Opioid Epidemic, we recognize that advocacy for greater access to pain medications, even for a small patient population, may seem discordant with the more pressing issue of addiction to opioids as a threat to public health. We also acknowledge that some might view this emergent tort as incentivizing greater opioid use. We would counter this, as we did above, by highlighting that we are calling for appropriate treatment for a discrete population that for too long has been vulnerable to the undertreatment of pain. They should not be casualties of efforts to counter the Opioid Epidemic.

We confine our call for change not only because of the Opioid Epidemic but also because we recognize and appreciate the difficulties in caring and providing treatment for those suffering with DoC.¹⁷⁰ Recognizing this difficulty, we are not trying to design our tort with the goal of overly punishing doctors or caregivers—who in most cases are trying to provide the best care possible for their patients with DoC—given the myriad challenges of patient care, especially after the COVID-19 Crisis.¹⁷¹

Rather, we have proposed our strict liability tort because we recognize an urgent problem and understand that traditional mechanisms for fixing this problem are likely to be ineffective and slow. We have endeavored to keep our tort narrowly tailored and focused, so that it can achieve the desired goal of reforming pain management for those with DoC without being overly putative or burdensome, either to doctors, institutions, or the courts themselves.

We are motivated by the continuing medical injustice of insufficient pain amelioration for this population, a problem that has been recognized for years but still persists today. Given the severe and repeatable nature of the injustice and the extreme vulnerability of those with DoC, we believe now is the time for bold solutions.

Of course, our idea for a new tort is only one part of our quest to improve pain management for those with DoC. We here renew our call for expanded education and research concerning DoC and severe brain injury.¹⁷² There must be more efforts made to inform medical professionals about DoC and pain management. This can allow professionals to recognize signs of pain in DoC patients and begin offering improved pain management, even before there is a looming threat of tort liability. These goals should go hand-in-hand with demanding more funding, research, and focus on those with DoC, who are often ignored by society. Those with DoC and severe brain injuries remain overlooked, despite the growing potential for these individuals to improve and regain functions that will allow them one day to reintegrate into the society that their brain damage and its associated stigma have segregated them from.¹⁷³

170. See generally Teresa A. Rummans, M. Caroline Burton & Nancy L. Dawson, *How Good Intentions Contributed to Bad Outcomes: The Opioid Crisis*, 93 MAYO CLINIC PROCEEDINGS 344 (2018).

171. See generally Barrie J. Huberman et al., *Phases of a Pandemic Surge: The Experience of an Ethics Service in New York City During COVID-19*, 31 J. CLINICAL ETHICS 219 (2020).

172. See Shapiro et al., *supra* note 11, at 565. See generally PLUM & POSNER, *supra* note 38.

173. See Zachary E. Shapiro et al., *Designing an Americans with Abilities Act*:

In this sense, while a new tort should help stop the undertreatment of pain for individuals with DoC, it is but one step in the journey of improving care for those with DoC.

If a sensate individual underwent surgery without sufficient anesthesia or was not provided a topical anesthetic prior to a painful catheter insertion, the medical system would recognize the error very quickly, and that person would have a chance of being compensated through existing medical malpractice schemes. At a minimum, a patient complaint would allow the injustice to be noted and addressed.

For patients diagnosed with DoC, these traditional mechanisms cannot function, because the suffering individual is unable to communicate their pain. Because of this, we may not ever know how much pain and suffering was caused, even if the individual eventually transitions to a higher functional state. We must recognize the extreme vulnerability of this population and understand that simply standing by and waiting for changes in medical practice or the invention and dissemination of better diagnostic and communication technology is insufficient.

While past proposals concerning torts for inadequate pain management did not gain traction, there is unique potential for a tort concerning pain management for patients with DoC to change medical practice and improve care without running the risk of large-scale unintended consequences or unforeseen negative externalities. A narrowly tailored tort, grounded in strict liability, would provide a beneficial mechanism to rapidly align pain management for patients with DoC with that of sensate patients so that the risk of insufficient pain treatment can finally become a relic of the past.