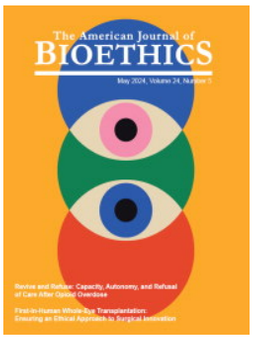

The American Journal of Bioethics

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/uajb20

Revive and Refuse: Capacity, Autonomy, and Refusal of Care After Opioid Overdose

Kenneth D. Marshall, Arthur R. Derse, Scott G. Weiner & Joshua W. Joseph

To cite this article: Kenneth D. Marshall, Arthur R. Derse, Scott G. Weiner & Joshua W. Joseph (2024) Revive and Refuse: Capacity, Autonomy, and Refusal of Care After Opioid Overdose, The American Journal of Bioethics, 24:5, 11-24, DOI: 10.1080/15265161.2023.2209534

To link to this article: https://doi.org/10.1080/15265161.2023.2209534

Published online: 23 May 2023.

THE AMERICAN JOURNAL OF BIOETHICS
2024, VOL. 24, NO. 5, 11–24
https://doi.org/10.1080/15265161.2023.2209534

Taylor & Francis
Taylor & Francis Group

TARGET ARTICLE

Revive and Refuse: Capacity, Autonomy, and Refusal of Care After Opioid Overdose

Kenneth D. Marshall[a], Arthur R. Derse[b], Scott G. Weiner[c,d], and Joshua W. Joseph[c,d]

[a]University of Kansas Medical Center; [b]Medical College of Wisconsin; [c]Brigham and Women's Hospital; [d]Harvard Medical School

ABSTRACT

Physicians generally recommend that patients resuscitated with naloxone after opioid overdose stay in the emergency department for a period of observation in order to prevent harm from delayed sequelae of opioid toxicity. Patients frequently refuse this period of observation despiteenefit to risk. Healthcare providers are thus confronted with the challenge of how best to protect the patient's interests while also respecting autonomy, including assessing whether the patient is making an autonomous choice to refuse care. Previous studies have shown that physicians have widely divergent approaches to navigating these conflicts. This paper reviews what is known about the effects of opioid use disorder on decision-making, and argues that some subset of these refusals are non-autonomous choices, even when patients appear to have decision making capacity. This conclusion has several implications for how physicians assess and respond to patients refusing medical recommendations after naloxone resuscitation.

KEYWORDS

Decision making; informed consent; law; medicine; mental health

INTRODUCTION

Every day in emergency departments (EDs) across the United States, a familiar scenario repeats: a patient who has overdosed on opioid drugs, either through the ingestion of strong prescription opioids such as oxycodone, or via the or fentanyl, is brought to the ED for evaluation after receiving naloxone, a fast-acting antidote. These patients have been rapidly deprived of a euphoric state, and may experience uncomfortable sensations of withdrawal by the time they arrive. Many of these patients do not wish to remain in the ED for an evaluation, much less a prolonged period of observation.

Unfortunately, these patients remain in danger. Many opioids have longer half-lives than naloxone, and patients who are awake and alert may be at risk of a rapid rebound apnea when the naloxone wears off minutes later. Patients can also be at risk of pulmonary edema, which may only manifest after their initial presentation.

Clinical guidelines for emergency physicians (EPs) facing this scenario are sparse and recommend varying durations of observation (Christenson et al. 2000; Clemency et al. 2018, 2019; Gussow 2017). Much recent work has centered on the importance of EPerring overdose patients to rehabilitation programs and initiating medication for addiction therapy (such as buprenorphine). The evidence behind such programs is encouraging, particularly the use of buprenorphine to attenuate withdrawal symptoms and reduce recurrent overdoses (Herring, Perrone, and Nelson 2019). However, treatment referrals and prescriptions are hard to provide when EPs can't evaluate patients in the first place.

While the broad contours of the legal and ethical dimensions of these scenarios are well understood, there has been scant specific guidance on navigating them. The dominant framework for ethical analysis within American emergency medicine is a principlist approach encouraging the clinical practice of beneficence, nonmaleficence, respect for patient autonomy and justice, as typified in the American College of Emergency Physicians (ACEP) Code of Ethics (American College of Emergency Physicians 2017 Section IIB.). In an emergency wherein the patient lacks decision making capacity, no legally authorized decision maker is available, time is of the essence, and a reasonable person would consent, the ACEP Code and U.S. law recognize that beneficence and nonmaleficence are preeminent and intervention in the

CONTACT Kenneth D. Marshall kmarshall2@kumc.edu Department of Emergency Medicine and History and Philosophy of Medicine, University of Kansas Medical Center, Kansas City, KS, USA.

best interest of the patient is warranted. However, after the emergency is resolved, or if the patient regains decision making capacity, the Code and U.S. law recognize the requirement to obtain the autonomous informed consent for continued treatment. Thus, while there are multiple ethically significant features that bear on the analysis of each particular situation, fundamentally these scenarios are about the tension between protecting the well-being of the patient (beneficence) while displaying respect for autonomous choice.

However, in the absence of clear guidance, practicing EPs report a broad variety of clinical and ethical approaches to the post-naloxone patient. In a recent qualitative interview study addressing post-naloxone cases with varying risks, EPs endorsed positions ranging from allowing patients to leave immediately without an examination to the use of physical and chemical restraints to ensure an adequate period of observation (Joseph et al. 2020). Occasionally, interviewees would endorse two radically different approaches over seemingly negligible differences in clinical risk.

In this paper, we use an analysis of the type of choice confronted by resuscitated opioid users, along with current neuroscientific research on the effects of opioid-use disorder on decision-making, to argue that EPs face an ethical dilemma in such scenarios: many but not all opioid users making the choice to refuse observation may choose non-autonomously, and it is difficult or impossible for the EP to discern which choices are autonomous and which are not. This finding has several implications for EPs, including that they should employ more robust conceptions of decision-making capacity (DMC), understand deficits in decision-making caused by opioid use disorder (OUD) and the consequent threats to autonomy, and use that understanding to reframe their response to such scenarios, rearranging incentives to facilitate patients' autonomous choices, rather than merely acquiescing to or thwarting their desires.

FRAMING THE QUESTION: CONCERNS ABOUT AUTONOMY AND CAPACITY

Stage-Setting

These cases present a variety of complications that set them apart from other interactions in which patient preferences and medical recommendations diverge, making them difficult for providers to navigate, and worthy of analysis. Complicating factors include threats to autonomous choice, such as the effects of addiction, intoxication, and withdrawal on DMC, as well as practical features that make the cases more difficult, such as the brief nature of the ED physician-patient relationship, the limited time to make assessments and decisions, the potentially rapid onset of re-intoxication, respiratory arrest, and other life-threatening consequences, and finally, the real and frequent risk of physical confrontation between patient and healthcare team when the patient attempts to leave the ED (Phillips 2016). Many EPs interviewed about this topic reported that patients in this scenario frequently demonstrate a willingness to physically force their way out of the emergency department, often without participating in even the most minimal interview allowing physicians to assess the patient's physical and mental state (Joseph et al. 2020).

In such scenarios, the clinician must quickly ascertain the patient's ability to make such a decision, while also gauging the patient's risk of complications from drug toxicity and reversal, such as rebound apnea, pulmonary edema, aspiration pneumonitis, and the risk of opioid-related death in the short- or medium-term (Kummer et al. 2022; Watson et al. 1998; Weiner et al. 2020). These risks are themselves unpredictable, situation-dependent, and are changing as the epidemiology of the opioid epidemic itself changes. Data from early in the opioid epidemic suggested that as many as a third of patients revived with naloxone were at risk for rebound poisoning (Watson et al. 1998) that put them at risk of death or serious morbidity, with those on longer-acting opioids at increased risk. Subsequent studies during the heroin-predominant era appeared to show that select patients could be released immediately after treatment with naloxone by prehospital services with a mortality rate substantially below 1% (Greene et al. 2019; Kolinsky et al. 2017; Vilke et al. 2003; Willman et al. 2017). However, these studies largely preceded the era of novel synthetic analogues, such as fentanyl derivatives, which have been associated with higher rates of prolonged or recurrent respiratory depression (Sutter et al. 2017), and their applicability in the current era has been questioned (Arens et al. 2017; Cole and Nelson 2017). The EP must also quickly gauge the risks and likelihood of success of any intervention aimed at keeping the patient against their will (whether for observation or even to allow better assessment of their clinical risk and mental capacities). At times, physicians report that merely stalling, inducement, or verbal redirection can coax the patient into participating, but often, the choice is stark: either let the patient walk out the door with virtually no

information exchanged, or resort to physical restraint or chemical sedation.

The slender nature of the relationship the EP has with the patient compounds difficulties. Unlike a patient refusing surgery recommended in clinic, or a hospitalized patient refusing or desiring an intervention against medical recommendations, in which the provider has some established relationship with the patient, the EP in these cases frequently knows little about the patient's medical or personal history. There is typically no preexisting relationship, and rarely friends or family to speak to, so the only information the EP has to work with is whatever she can discern from the patient during a highly-charged interaction in which the patient is all at once meeting the EP for the first time, potentially experiencing the discomfort of precipitated withdrawal, and refusing the EP's recommendations (Derse 2005; Marco 1999; Marco et al. 2017b). These difficulties may be further exacerbated by mistrust, perceived stigma among patients with opioid-related problems, and fear of law enforcement.

In addition to these practical considerations, there is another feature of these interactions that is unique among patient refusal situations, which is the remarkable rate of care refusal given the balance between risks and benefits of the medical intervention offered. That is, the medical intervention at issue is one of the more benign interventions offered in all of medicine: a period of observation in an emergency department of between 1 and 4 h. There is no testing necessary, and no restrictions on activity aside from staying present in the ED to be monitored. On the other hand, the primary risks in question, rebound apnea or development of post-naloxone pulmonary edema, may cause death or other severe respiratory problems. In total, the intervention is minor, and the risk prevented is grave. Yet, the proportion of patients who make the seemingly irrational choice to refuse any observation is extremely high. The exact rate is unknown, but many physicians report that a large majority of patients in this scenario refuse any observation (Joseph et al. 2020).

The Question: Imbalance Between Risks and Refusal Rates

Why do so many patients who have just been saved from a potentially lethal condition choose to immediately put themselves back at risk, rather than spend a short time in an emergency department bed, attended by providers who just saved their life? This imbalance is unique within medicine, as typically the likelihood of patient compliance with medical recommendations is high if the risk or perceived discomfort is low, provided there are no principled or religious grounds to refuse (e.g. Jehovah's Witness refusing blood products). Contributing to and potentially compounding this imbalance, the vast majority of patients who encounter this scenario suffer from opioid use disorder (previously referred to as opioid addiction), a disease process which may fundamentally distort patients' perceptions of risk, and undermine or at least alter their capacity for rational choice. Together, this raises the question of whether the choice to refuse observation after naloxone is truly autonomous.

An obvious follow-up question is whether a patient in this situation retains DMC. Interestingly, many patients in this scenario appear to satisfy at least some of the conditions for DMC. Such patients will often (brusquely) communicate that they understand the risk of rebound apnea and that it could cause death, as well as the benefit of staying for observation, sometimes by rote repetition of what the physician has told them, but nonetheless insist on leaving anyway (Joseph et al. 2020). This point should not be missed: these patients are able, at least in some formal way, to discuss the risks and benefits of an observation period and communicate a choice to refuse—in other words, demonstrate some of the components of DMC—yet physicians' gestalt impressions of these patients is that they are not choosing autonomously. Rather, instead of authoring their own decision to leave against medical advice, they appear *compelled* to leave the ED, "telling you what you want to hear" as justification. These observations amount to a prima facie case that some, if not many patients are not making autonomous choices when they refuse observation.

This raises more questions. First, if a reflexive choice to refuse observation is not autonomous, is this a clinical scenario in which the patient has capacity but nonetheless makes a non-autonomous choice, or does the patient lack capacity according to a more robust standard? Second, how should the emergency physician, whether through attempts to assess the patient's capacities and choices, or through seeking to influence behavior, respect autonomy while promoting the good of the patient? To consider these questions, we will briefly review the conceptual connections among autonomy, informed consent, and capacity, and then examine the threats to autonomous choice experienced by this patient population, and will see that the concern about autonomous choice is reinforced.

THREATS TO CAPACITY AND AUTONOMY IN THE NALOXONE-REVERSED PATIENT

Autonomy, Informed Consent, and DMC

As mentioned previously, there are reasons to question whether some patients who refuse observation after naloxone make non-autonomous choices, including some patients who appear to meet criteria for decisional capacity. While a comprehensive review of the connections among autonomy, informed consent, and capacity is outside the scope of this paper, a general scheme is that providers appropriately attend to or demonstrate respect for autonomy when they work to engage patients in making informed decisions about healthcare interventions (Faden, Beauchamp, and King 1986). This process, informed consent, is broadly thought to include three components (Beauchamp and Childress 2019; Buchanan and Brock 1989; Grisso and Appelbaum 1998). These are that patients must be:

1. Appropriately informed (often broken into disclosure and comprehension)
2. Free from coercion
3. Have the ability to make a decision (DMC).

For decisional capacity to be present, a patient must satisfy four (Grisso and Appelbaum 1998), and according to many accounts, five (Beauchamp and Childress 2019; Buchanan and Brock 1989; Charland 2011; Lo 2020) criteria. This fifth criteria, a set of values or preferences that relates to the patient's choice, plays a key role in the scenarios under consideration, as is discussed later.

1. Understanding
2. Appreciation
3. Reasoning/deliberation
4. Choice
5. Values

Additionally, capacity is generally taken to be decision-relative. In other words, patients may have capacity to address some aspects of their care depending on their cognitive function and the complexity of the decision at stake (e.g. a patient with dementia may have capacity to choose a pill over an injection, but not whether they need an antipsychotic).

It is worth noting that possession of capacity and assessment of capacity, while tightly connected in practice, are conceptually distinct: a patient may lack capacity but have a treating team assess them to have it, or a patient may possess capacity, but the treating team to assesses the patient as lacking it. Finally, there is a sliding scale implied in the assessment of capacity, as the provider's threshold for capacity determination should rise proportionally to the risk of the treatment or its refusal.

Threats to Autonomous Choice

Patients in this scenario contend with a number of unique factors that threaten to undermine their capacity for autonomous choice that must be considered as we attempt to answer the foregoing questions. Depending on the amount of reversal agent used and the variety and quantity of opioids the patient has in their system, a patient may suffer from residual opioid intoxication, which can cause a variety of direct effects on cognition and decisional capacity (Marco et al. 2017a; Zacny 1995). Alternatively, if a sufficiently large dose of opioid antagonist has been administered relative to the opioids in the patient's system, the patient may instead suffer acute opioid withdrawal, which brings uncomfortable side effects and affects cognition, potentially undermining higher-level decision-making (Neavyn 2015; Rapeli et al. 2006).

In addition to the threats posed by residual intoxication and acute withdrawal, a large proportion of patients in this scenario also suffer from OUD, which involves substantial long-term changes in cognition, risk evaluation, preference-ordering, and decision-making. OUD heavily influences individuals' ability to make choices regarding opioids, a fact that has garnered considerable attention in philosophical and bioethical literature in matters of consent and autonomy to opioid research and treatment. What is less clear is the extent to which neurochemical changes associated with OUD present a threat to autonomous choice when patients make critical decisions that do not involve opioids. It is to this question that we now turn.

Threats to Autonomous Choice Due to Opioid Use Disorder

Substance use disorders (SUD) are typified in part by persons acting on impulses that seem to override other persistent desires, values, and plans, often in ways that are self-defeating even to their most closely-held beliefs or aims. Because autonomy involves a person effectively using some robust capacity of choice, analyzing autonomy or parsing its limiting conditions among patients with substance use disorder

has proven difficult. Perhaps the most famous example is Harry Frankfurt's seminal discussion of freedom of the will in the setting of an "addict's" [sic] competing higher- and lower-order desires, but the issue has been further explored since, including a vigorous debate over recent years regarding persons with opioid use disorder (PWOUD's) ability to consent to heroin treatment (Charland 2002; Frankfurt 1971; Levy 2006a, 2006b). However, these reflections have tended to focus on capacity and autonomy in moments of sobriety by the PWOUDs, when the motivational map finds them torn between (to use Frankfurt's language) first-order desires to get high and avoid withdrawal, and whatever their higher-order desires may be. These discussions tend to focus on persons making decisions under conditions of sobriety and solely regarding drugs of addiction, with variable levels of attention to the connections between the specific neurologic changes of substance use disorder, the elements of the philosophical or ethically relevant concept (capacity, consent, or autonomy), and the features of the particular decisions being discussed. Likely owing to the tremendous complexity of the neurologic and psychological changes of SUDs, some of these accounts have used summative, if imprecise, shorthand to describe the interactions between autonomous choice and SUDs, such as Leshner and Koob's evocative phrase that brains are "hijacked" by their addiction, and thus are unable to cognitively process information relating to their substance of addiction (Leshner and Koob 1999; For an excellent discussion of how using such shorthand can impair analysis of these issues, see Racine and Rousseau-Lesage 2017). What is needed in our case is to attend to the specific features of the choice at hand and what is known about the cognitive impacts of OUD to evaluate whether autonomous choice is threatened.

Features of the Choice

Consider the features of the choice that confronts a patient who has just been revived with naloxone. Even the medical aspects of the choice alone involve considerable abstraction and complexity, and balancing risks that are of low probability. The general scheme physicians use to inform the patient about the recommendation to stay for observation is to explain that the body metabolizes the reversal agent (generally naloxone) more quickly than the opioid in the patient's system, and if the patient leaves to an unmonitored setting, their opioid poisoning could return, causing a range of bad outcomes, including death. This simple fact may be misunderstood by patients, while anecdotal experience the patient may have had or heard about from friends in similar scenarios may disproportionately influence their decision. Non-medical aspects also undoubtedly contribute, which may include concerns that staying may put them at risk of being arrested by law enforcement, other social disincentives (such as friends or family arriving to the ED), distrust of or negative feelings toward the health-care system, avoiding symptoms of withdrawal, a desire to leave to use opioids, or simply anger that a state of intoxication has been reversed by an external agent, among others.

Effects of OUD on Decision-Making

With the foregoing in view, we need to consider what is known about the effects of OUD on the decision-making of PWOUDs. OUD, and substance use disorders generally, are believed to involve a range of effects on neuropsychological function that go beyond the strong impulse to use opioids and avoid withdrawal symptoms, including alterations in executive function and emotion (Baldacchino et al. 2012; Verdejo-García and Bechara 2009), some of which bear directly on the clinical scenario in question.

Our understanding of these changes to neuropsychological function is still evolving, but one suggested framework is that OUD involves an imbalance or dysregulation between two competing cognitive systems that compete to influence decision-making and behavior: a "hot" or impulsive automatic emotional system and a "cold," more rational or deliberative system (Bechara 2005; Bickel et al. 2018; Noël, Brevers, and Bechara 2013; Verdejo-García and Bechara 2009).

According to such theories, opioids produce dramatic changes in the function of the impulsive system (as do other drugs with misuse potential) by causing disproportionately strong signals in the dopaminergic reward centers of the forebrain (Bickel et al. 2018; Hyman, Malenka, and Nestler 2006; Volkow et al. 2011). Repeated activation of these strong reward signals by opioids can cause opioid-related cues to take on incentive salience, and further exposure to these opioid-related cues intensifies the desire to use opioids. The strong positive reinforcement of the reward pathways from opioids and opioid-related cues accounts for the impulsive desire to use in early-stage OUD.

Chronic stimulation of these dopaminergic reward pathways by opioids may cause neural adaptations, whether altered regulation of dopaminergic networks from the reward centers or other neurochemical changes, that create baseline aversive states, marked by anhedonia, dysphoria, or emotional pain (Koob and Le Moal 2005, 2008). Once patients are at this point, opioid activation of further dopaminergic reward signaling offers less of a euphoric state, instead providing relief from these aversive states, which may partly account for compulsive use during the disease's later phase.

These changes to the impulsive system appear to be accompanied by changes to the more reflective system (generally, areas of the prefrontal cortex) as well as parts of the brain that mediate between the impulsive and reflective systems (Bickel et al. 2016, 201; Noël, Brevers, and Bechara 2013; Verdejo-García and Bechara 2009). The mechanisms responsible for these changes remain under study, but include potential direct effects on cortical regions housing the more reflective systems, as well as on systems that feed into these areas, which may functionally constrain the reflective system from functioning properly or from exerting sufficient influence vis-a-vis the impulsive system.

These underlying maladaptations impacting the more reflective system appear to lie behind the problems with executive function that are apparent in individuals with OUD, even with respect to decisions that do not involve opioids, as in our clinical scenario. These impacts on executive function, specifically involving decision-making, are some of the most well-established effects of OUD and SUDs, and bear directly on the clinical scenario in question.

The first of these effects involves the valuation of risk in decision-making. Multiple studies, generally involving gambling tasks that offer non-opioid rewards or punishments associated with predetermined probabilities, have demonstrated that PWOUDs generally make riskier choices than healthy controls. PWOUDs tend to select choices that involve larger risks and larger rewards, and seem insensitive to rising levels of risk for a fixed reward (Baldacchino et al. 2012; Engel and Caceda 2015; Fishbein et al. 2005), an effect which appears to continue even after at least some period of abstinence (Biernacki et al. 2016; Li et al. 2013).

A second way in which decision-making is impacted in OUD is that PWOUDs exhibit exaggerated delay discounting. Delay discounting is the tendency to value an immediate reward over a larger reward at a point in the future. While most people demonstrate delay discounting to varying degrees, PWOUDs demonstrate a marked tendency to overvalue immediate (non-opioid) rewards when compared with healthy controls (Biernacki et al. 2016; Brand et al. 2008; Kirby, Petry, and Bickel 1999; Petry, Bickel, and Arnett 1998). Delay discounting among PWOUDs is more significant than in patients with some other substance use disorders, such as alcohol use disorder (Kirby and Petry 2004), and is greater than that seen in patients who are simply prescribed opioids without OUD (Karakula et al. 2016).

The evaluation and response to risk and temporal discounting fall under the domain of executive function known as "cognitive impulsivity," and are the best studied and understood changes to decision-making in OUD. These increases in impulsivity appear to be accompanied by a third change relevant to decision-making, which is an impairment in strategic planning. Evidence for this deficit comes from studies in which PWOUDs show significantly higher rates of error in solving multi-step problems (again, not involving opioids) when compared to controls matched for relevant factors such as age, educational level, and IQ (Ersche and Sahakian 2007; Ornstein et al. 2000), which suggests further impairment in executive functioning beyond the changes involving cognitive impulsivity. The upshot of these studies is that patients with OUD have marked difficulties appreciating and responding appropriately to risk when making decisions, have exaggerated delay-discounting, and may have difficulty with strategic planning. In sum, OUD appears to lead PWOUDs to prefer and pursue choices that are riskier and more short-sighted, and to be swayed by minor short-term incentives.

We have argued that the high rate of patient refusal to comply with a short recommended observation period after naloxone resuscitation motivates the question of whether these choices are autonomous. We have also shown that the choice itself requires the patient to balance small but significant probabilities of morbidity and mortality against the immediate perceived benefit of leaving the ED. Finally, we have seen that patients with OUD have deficits in precisely the executive domains required to effectively choose in this case: impaired risk perception and response, exaggerated delay discounting, and poor performance in strategic planning. These considerations cohere with the observations of frontline providers, who are surprised at the rate patients refuse observation, but also by how patients seem to display no relief or concern

about nearly dying (Joseph et al. 2020), offering reason to wonder whether how salient higher-order desires are in their decision-making. Adding to this evidence is the observation that even patients who have already experienced an accidental opioid overdose are likely to underestimate their risk of future overdoses, and show little concern about that risk (McGregor et al. 1998). In short, the prima facie concern about these refusals of observation has been reinforced: we have excellent reason to suspect the deliberative capabilities of many patients in this scenario have been corrupted in ways that undermine their ability to make exactly this kind of choice. This suggests that many of these seemingly irrational choices to refuse observation are not autonomous. However, as we shall argue, whether any particular choice to refuse observation is non-autonomous depends on the particularities of the mental state and psychological construction of the patient in question, and unfortunately, it is difficult, if not impossible for EPs to tell which patients choose autonomously.

Autonomy, a Choice, and Two Types of Chooser

Accounts of autonomy equate autonomous choice to the process of reflective self-evaluation of our own goals and behaviors, and the ability to harmonize individual goal-directed choices with these more stable or reflectively endorsed values or goods (Beauchamp and Childress 2019; Buchanan and Brock 1989; Dworkin 1988). Because addiction appears to subvert the longer-term values and plans of its sufferers, it has long been thought by philosophers to involve a loss of autonomy. Analysis of the intersection between addiction and autonomy is complicated by the fact that despite the effects of addiction on decision-making, people with OUD are capable in some contexts of resisting the compulsion to use, and beyond that, remain able to plan and pursue longer-term plans and goals, which suggests that domains of autonomous choice remain even among persons with severe addiction.

In recent years, several accounts have been developed to clarify the analysis of autonomous choice among this population. These include re-conceptualizing voluntary choice (as a condition of autonomy) as dynamic rather than static (Racine and Rousseau-Lesage 2017), analyzing autonomy in terms of self-government extended across time (Levy 2006b), or identifying a requirement of freedom from "internal coercive influences" (Müller and Walter 2010). While we agree with the central insight behind all these approaches–that understanding autonomy in substance use disorders is dynamic, highly nuanced, and contextual–even in these analyses the primary concern has been whether or not patients retain autonomy over the pursuit and use of the addictive substance itself. However, we have identified a specific choice unrelated to use of the substance (opioids) for which there is good reason to question whether patients are making autonomous refusals of care.

An unavoidable complication in these cases is that even among patients who refuse observation, specifics differ markedly: in the degree of opioid reversal, spanning from some residual toxicity to marked withdrawal symptoms, in the degree of severity of the chronic effects of OUD on neurologic function, in the patient's specific reasons for wanting to leave the ED, and in their values and longer-term perspectives. To our knowledge, few studies have been conducted to understand the reasons that patients in this scenario on aggregate refuse treatment, but EPs relate a number of reasons that patients in this scenario offer, including mistrust of the health system, fear of legal or social ramifications for staying in the ED, discomfort and the desire to depart to use, a simple aversion to the environment of the ED after the unpleasant experience of naloxone reversal, and the like (Bergstein et al. 2021; Joseph et al. 2020).

Assessing capacity and attending to autonomy is easier in some patients, such as a residually intoxicated patient or someone in whom naloxone has precipitated severe withdrawal, but for others it is much more difficult for the physician. The most difficult patients to assess are actually those who are neither opioid-intoxicated nor in withdrawal. Among this subset of patients we can hypothesize two different types for discussion, both of whom appear sober and demand to leave the ED. It must be noted from the outset that even these two characterizations are of necessity under-described, and patients similar to these will have a variety of impulses, motivations, reasons, and rich value systems or religious commitments that may impact their behavior and that may matter in trying to respond most appropriately to them.

The first patient we imagine is one who listens to the physician discuss the risks of leaving without observation, who understands the risks, emotively connects with the riskiness of their decision, and embraces the decision to leave without observation in a way that resonates with values or plans that are higher-order or stable over time (keeping this account neutral with different conceptions of autonomy). There are many ways that this patient could be

constituted psychologically, but we can imagine that they have long embraced a risk-taking, live-for-the moment, potentially antiauthoritarian ethos (perhaps leading to their initial opioid use). They may suffer from OUD, and it may have eroded their ability to assess and respond to risk, balance present versus future rewards, and strategically plan, but we can hypothesize that this particular patient (who we might call the ego-syntonic refuser) would have refused a period of observation, irrespective of the effects of OUD. In refusing observation, this patient may be making an autonomous choice.

The second patient, on the other hand, is a patient who hears the physician discuss the risks of leaving without observation, and in whom the discussion of risks registers from a formal point of view, but due to the effects of OUD on their executive function, they are unmoved by the discussion. There are innumerable ways this patient could be psychologically constituted, but for the sake of argument, perhaps they tend to plan and often delay gratification for longer-term benefit, striving to make choices according to the best available advice and evidence, and their OUD stems from other causes (such as from an initial opioid prescription). We might imagine that the effects of the disorder have so depleted their capacity to respond appropriately to risk, and so increased their delay-discounting, that even if they can formally understand, and even explain, the risks of their decision, they are unmoved by them in a way that they would be without the effects of OUD. In refusing observation, this patient (the ego-dystonic refuser) makes a non-autonomous choice.

In some ways these two caricatures mirror Frankfurt's "willing and unwilling addicts," but a key difference is that the issue here does not concern their first-order desires for opioids, or even their higher-order feelings about their addiction. It might be that what prompts their desire to leave the ED immediately is a desire to use opioids, or it could be simply that they do not like the bright lights of their ED bay, but those motivations are not essential to the analysis of autonomy. We could imagine that the risk-favoring patient is in a rush to get high again, and still makes an autonomous decision. And we could imagine the second patient also wishes to leave to use opioids, but does not reflectively identify with this desire to use (indeed, they may hate their addiction), and so their decision to leave would not be autonomous. But in both cases, the analysis of autonomy does not change if we stipulate the desire to refuse observation is due to the compulsion to use opioids–particularly in the second case, the non-autonomous nature of the choice is overdetermined.

DETERMINING CAPACITY AND RESPECTING AUTONOMY IN THE NALOXONE-REVERSED PATIENT

An Epistemic Gap

A troubling but critical fact about the two types of patients presented is that the EP faces an epistemic problem: it will frequently be impossible for them to discern between the patient making an autonomous choice and the other who is not. Partly this is simply a matter of time: the EP does not have time to administer a formalized instrument to assess DMC in the ED environment (such as the MacArthur tool, which typically takes at 15–20 min) (Grisso et al. 1995; Grisso, Appelbaum, and Hill-Fotouhi 1997; Grisso and Appelbaum 1998), and even if they did, by administering the test, they would be effectively holding the patient for a substantial portion of the observation period.

But there is a deeper concern about whether some common assessments of capacity, even when more detailed and formal instruments are used, will be able to distinguish between these two types of patients. The problem is that the patient may meet, or at least appear to meet, requirements for DMC, in that they can formally understand, appreciate, and manipulate relevant information, but still make a non-autonomous choice. This is because the deficit in OUD is not predominantly one of information *processing*—OUD sufferers have not generally been found to have deficits in attention, learning, or cognitive flexibility—but in how PWOUDs respond *motivationally* to that information. Using our earlier example, the ego-dystonic refuser may be able to rationally discuss the risks and benefits of an observation period, show that she appreciates her situation, and communicate a choice to refuse—in other words, demonstrate capacity—but yet not choose autonomously.

Thick and Thin Conceptions of DMC

Part of the problem lies in how DMC is conceived and assessed. As mentioned above, some highly influential conceptions of capacity, and the assessment tools and techniques derived from them, focus only on three cognitive aspects of evaluating clinical options (understanding, appreciation, reasoning) as well as the ability to communicate a choice (Grisso and Appelbaum 1998). What these "thin" accounts of

autonomy omit, that some competing conceptions include, is the requirement that the patient be able to relate the choice made to a set of stable or reflectively-endorsed values (Beauchamp and Childress 2019; Buchanan and Brock 1989; Charland 2011; Hawkins and Charland 2020). Given that autonomy or self-determination is valued precisely because of the reflective potential of persons to choose according to values and plans (as opposed to mere goal-oriented choice), neglecting to include this ability in capacity assessments creates a potential gap between the threshold determination of capacity that is meant to be used to foster autonomous choice on the one hand, and truly autonomous choice on the other.

The disconnect between our ego-dystonic refuser's longer-term values of prudence and their OUD-influenced decision to make the imprudent decision to refuse observation falls precisely into this gap. That is because the primary problem that PWOUDs contend with in executive function is desiderative, not cognitive: the effects of the disorder do not impair their abilities to understand clinical concepts and express a choice, but rather to their ability to respond to, or be moved to act by, those risks in a way that resonates with their longer-term aims. This gap is a major shortcoming in the analysis of DMC among EPs with respect to these clinical scenarios. Historically, much of the emergency medicine literature and teaching on ethics focuses on these more "thin" conceptions of DMC (Adams and Lu 2010; American College of Emergency Physicians 2017; Marco et al. 2017b; Marco and Derse 2012), while more recent texts and statements tend to emphasize the "thick" conception (Iserson and Heine 2023; Siff and Baskin 2020; Sulmasy and Bledsoe 2019). Meanwhile our own research shows that many EPs, perhaps the majority, do not evaluate a patient's ability to relate their clinical choice to the patient's enduring values when the EP assesses capacity (Joseph et al. 2020). Instead, many EPs, guided by the thin conception of capacity, are willing to ascribe it to a patient so long as they appear to understand and appreciate the risks and benefits of the clinical decision, without questioning the patient as to *why* the decision to refuse observation is a good one in the patient's own mind, or *how* it connects to their more deeply-held values, beliefs, or goals.

It bears mention that this epistemic problem cannot be resolved *solely* by adoption of a "thick" conception of capacity, and its attendant assessment techniques, by the EP. The reason for this is the possibility of an ego-dystonic PWOUD who, if pressed on how a decision to refuse observation relates to their values, misleads the physician (whether intentionally or in a confabulatory way) about their own reasons and more deeply-held values to align with their decision to refuse observation. In other words, the urge to get out of the ED without waiting for observation might compel them (intentionally or subconsciously) to offer reasons to justify leaving, including values to undergird this choice, that they might not reflectively endorse.

Thus far, we have argued that many patients who choose to refuse observation seem to be compelled to do so, rather than choosing autonomously. This is amplified by the finding that the neural processes implicated in this decision are precisely those undermined by OUD. Further, we have shown that it is possible for patients to make non-autonomous choices at cross purposes to their own enduring or higher-order values, while still appearing to demonstrate decision-making capacity. Part of this gap between capacity assessment and autonomous choosing can be narrowed in practice by the EP employing a "thick" conception of capacity, but because patients can potentially deceive themselves or the healthcare team about their own motivations, this gap is often irreducible. We believe this represents a clear dilemma for the treating clinician, and that this would be a standard view within bioethics.[1]

A WAY FORWARD

Pulling together the foregoing arguments, when patients refuse observation after naloxone, emergency

[1]A potential objection is that if a patient can coherently relate a decision to some espoused set of values in order to pursue a choice (e.g., to use heroin, or to refuse observation) that appears to conflict with their more enduring values, then that immediate choice represents what the patient truly wants, and thus, the patient not only has DMC, they act autonomously as well. This objection is similar in spirit to the "liberal view" of addiction, which appears to collapse or deny the distinction between the desires that are produced by addiction on the one hand, and desires that stem from more stable or enduring values on the other (Foddy and Savulescu 2006, 2010). This view has several potential difficulties, two of which are worth pointing out here. First, there are good reasons to doubt the contention that because both OUD-conditioned desires and deeper-held desires are both produced through similar neural circuits, they have indistinguishable moral significance (Foddy and Savulescu 2006 p. 9-11; Foddy and Savulescu 2010 p. 4). Given the way OUD appears to dysregulate the normal interplay between deliberative and impulsive systems for behavioral control, these types of desires are in principle neurobiologically distinguishable (Bechara 2005; Bickel et al. 2018; Koob and Volkow 2010; Noël et al. 2013; Verdejo-García and Bechara 2009).

Second, this view denies what is widely agreed both in the lay and scientific understandings to be a defining feature of SUDs (both for PWOUDs as well as those who treat them or care about them), namely that they involve a struggle for the PWOUD to author their own decisions against the compulsion of addiction, which is a core component of what makes addiction such a vexing affliction.(Levy 2006a p. 18; Levy 2006b p. 433; Racine and Rousseau-Lesage 2017 p. 354).

physicians face a high-stakes dilemma wherein they have good reason to doubt that the patient is making an autonomous choice, even in cases wherein the patient appears to have capacity. This concern is amplified by understanding that the type of decision at hand is almost perfectly aligned to the decisional processes that are corrupted by OUD–the deck is stacked in favor of the disorder prevailing, not the patient. This is further complicated by the epistemic gap just discussed: the EP may be able to discern with some certainty whether the patient chooses autonomously, but in many cases, the EP must simply make a judgment.

In these cases, the EP has a range of options. At one extreme would be to adopt a purely paternalistic approach, holding all patients for some minimal observation period, irrespective of how the EP assesses their capacity. At the other, EPs could choose to let nearly all patients refuse observation, so long as they were lucid enough to physically exit the ED. In fact, when interviewed, substantial numbers of EPs practiced along these two extremes of the spectrum of responses to this scenario, using widely variable conceptions of, and tools to assess, DMC (Joseph et al. 2020). For instance, some EPs related that they would require patients to meet very rigorous assessments of DMC in these situations, and might still overrule the patient's desire to leave the ED if the EP concern was high enough, while other EPs reported using the ability to speak clearly and ambulate out of the ED as a proxy for DMC in these patients.

However, there is a third approach. Clinicians can reconceptualize respect for autonomy not in terms of a binary decision between allowing patients to make a dangerous choice or thwarting that choice, but in terms of a process in which the clinician appreciates the threats to autonomy, makes as nuanced an assessment as possible, and uses what is known about the neurobehavioral dysfunction in OUD to tailor their approach. Autonomy is threatened in all patients experiencing these situations. Hence there is an obligation for the clinician to do what is feasible to support the patient's autonomy, whether in using different motivational strategies or maneuvers, in altering the array of incentives and disincentives available, or by appealing to friends or family, all of which can act as external "prostheses" to help the patient overcome the dysfunction in their cognitive control (Hyman 2007, 10; Racine and Rousseau-Lesage 2017, 357).

The first step of this processual approach to respecting autonomy is that EPs should use what we have described as a "thick" conception of DMC, one that requires a connection between a choice and some stable or enduring set of values. Primarily, this is to ensure EPs use the most robust conception of capacity given the concerns about autonomy and the high stakes of the decision. Secondarily, as OUD appears to upset the equilibrium between more reflective and desiderative systems of cognitive control, asking the patient to specifically reflect on how their immediate desire to refuse observation relates to their longer-term aims or values directly maximizes the effect of the reflective system. In our experience, forcing the patient to reflect on this question often either belies a compulsion to leave that seems to have no basis in the patient's deeply held values, revealing a lack of decisional capacity, or just as often provides the patient insight that they lack good reasons to leave and thus choose to comply.

The second concept in the processual approach is that EPs should use what is known about decision-making in OUD, particularly patients' exaggerated delay discounting and over-tolerance of risk, to facilitate compliance. This could take many forms, whether through lowering the disincentives to staying (such as recommending shorter periods of observation as validated in recent studies), or increasing incentives to stay (e.g. food, comfort, or pain relief while in the ED, connecting patient to longer-term resources to address other wants or needs, such as food security or shelter). In our experience and confirmed by other EPs, one of the most powerful motivators is to make a direct appeal specifically to the relationship between the patient and physician. Phrases like "It is my duty to keep you safe, and I won't be doing that if you leave now," or "I am going to be worried about what might happen to you if you don't stay for at least a little while" create an immediate, salient motivational pull on the patient that is much more impactful than comparatively theoretical information about their small but significant risk of morbidity. Such maneuvers can be paternalistic and manipulative, but the intended effect is not to coerce the patient by overriding autonomous choice, but to "restack the deck" to enable autonomous choice insofar as possible.

One particular incentive deserves mention, which is the opportunity to facilitate drug treatment, particularly Medication-Assisted Therapy (MAT) in the ED. ED-initiated MAT has gained rapid acceptance in recent years for its potential to increase successful compliance with longitudinal therapy (D'Onofrio et al. 2015, 2017; Herring et al. 2019; Marshall 2020; Martin et al. 2018; Sokol et al. 2021), but in the

scenarios under study, it also has the powerful benefit of providing relief from opioid cravings or naloxone-induced withdrawal symptoms, without increasing the risk of recurrent overdose (Chhabra and Aks 2020; Herring 2020; Herring, Perrone, and Nelson 2019). In other words, ED-initiated MAT can help restack the motivational deck both during the scenario in question and for days to come.

Finally, as we have argued, in some cases the EP will have to make a bare judgment. In cases wherein the patient is not judged to have DMC, coercive maneuvers to temporarily restrict the patient's liberty may be necessary, as the patient cannot make an autonomous choice, and the physician's duty of beneficence to protect the patient's health and safety prevails. However, in such situations, the minimum measures necessary to ensure the patient's safety should be employed until the patient is no longer under threat or has regained DMC, and the physician should take immediate steps to help remove potential obstacles to the patient regaining autonomy, such as treating symptoms of withdrawal.

CONCLUSION

We have argued that some patients who choose to refuse a period of observation after naloxone resuscitation may be making non-autonomous choices, even when meeting common criteria for DMC. This requires EPs and other frontline providers to alter their approach to such patients, by using a thick conception of decision-making capacity to evaluate patients, by understanding the particular deficits in decision-making experienced by patients with OUD, and finally by using these insights to change the motivational landscape faced by the patient in order to facilitate autonomous choice and maximize patient well-being.

Additionally, there is still much to be learned that could augment clinical responses to these scenarios. As mentioned above, there is a paucity of research on why patients with OUD are non-compliant with medical recommendations. While this paper focuses on refusal of observation after naloxone, noncompliance rates with treatment for other sequelae of drug use, for instance treatment for infective endocarditis, are markedly higher among patients with OUD than patients without SUDs causing significantly worse outcomes among those who are noncompliant with treatment (Kimmel et al. 2020, 2021; Mishra et al. 2022). Research to understand why patients choose not to comply with medical recommendations, to identify techniques to better assess their decision-making, and to identify strategies to improve treatment compliance with medical therapy for patients with OUD would be invaluable for clinicians and patients.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author(s).

FUNDING

The authors acknowledge the support of the Greenwall Foundation's Making a Difference Program for support of this work.

ORCID

Kenneth D. Marshall http://orcid.org/0000-0002-4077-2086
Arthur R. Derse http://orcid.org/0000-0003-1896-1849

REFERENCES

Adams, J. G., and D. W. Lu. 2010. Ethical issues. In *Harwood-Nuss' Clinical Practice of Emergency Medicine*, ed. A. B. Wolfson, G. W. Hendey, and A. Harwood-Nuss, 5th ed., 1674–1678. Philadelphia, PA: Lippincott Williams & Wilkins.

American College of Emergency Physicians. 2017. *Code of ethics for emergency physicians*. Dallas, TX: American College of Emergency Physicians.

Arens, A., T. Olives, J. Laes, and J. Cole. 2017. It's not just heroin anymore. *Clinical Toxicology* 55 (6):608. doi:10.1080/15563650.2017.1286015.

Baldacchino, A., D. J. K. Balfour, F. Passetti, G. Humphris, and K. Matthews. 2012. Neuropsychological consequences of chronic opioid use: A quantitative review and meta-analysis. *Neuroscience and Biobehavioral Reviews* 36 (9): 2056–2068. doi:10.1016/j.neubiorev.2012.06.006.

Beauchamp, T. L., and J. F. Childress. 2019. *Principles of biomedical ethics*. 8th ed. New York: Oxford University Press.

Bechara, A. 2005. Decision making, impulse control and loss of willpower to resist drugs: A neurocognitive perspective. *Nature Neuroscience* 8 (11):1458–1463. doi:10.1038/nn1584.

Bergstein, R. S., K. King, G. J. Melendez-Torres, and A. D. Latimore. 2021. Refusal to accept emergency medical transport following opioid overdose, and conditions that may promote connections to care. *The International Journal on Drug Policy* 97:103296. doi:10.1016/j.drugpo.2021.103296.

Bickel, W. K., A. M. Mellis, S. E. Snider, L. N. Athamneh, J. S. Stein, and D. A. Pope. 2018. 21st century neurobehavioral theories of decision making in addiction: Review and evaluation. *Pharmacology, Biochemistry, and Behavior* 164:4–21. doi:10.1016/j.pbb.2017.09.009.

Bickel, W. K., A. M. Mellis, S. E. Snider, L. Moody, J. S. Stein, and A. J. Quisenberry. 2016. Novel Therapeutics for Addiction: Behavioral Economic and Neuroeconomic Approaches. *Current Treatment Options in Psychiatry* 3 (3):277–292. doi:10.1007/s40501-016-0088-3.

Biernacki, K., S. N. McLennan, G. Terrett, I. Labuschagne, and P. G. Rendell. 2016. Decision-making ability in current and past users of opiates: A meta-analysis. *Neuroscience and Biobehavioral Reviews* 71:342–351. doi:10.1016/j.neubiorev.2016.09.011.

Brand, M., M. Roth-Bauer, M. Driessen, and H. J. Markowitsch. 2008. Executive functions and risky decision-making in patients with opiate dependence. *Drug and Alcohol Dependence* 97 (1–2):64–72. doi:10.1016/j.drugalcdep.2008.03.017.

Buchanan, A. E., and D. W. Brock. 1989. *Deciding for others: The ethics of surrogate decision making*. Cambridge; New York: Cambridge University Press.

Charland, L. C. 2002. Cynthia's dilemma: Consenting to heroin prescription. *The American Journal of Bioethics: The American Journal of Bioethics* 2 (2):37–47. doi:10.1162/152651602317533686.

Charland, L. C. 2011. Decision-making capacity and responsibility in addiction. In *Addiction and responsibility*, ed. Society for Philosophy and Psychology, J. S. Poland, and G. Graham, 139–158. Philosophical Psychopathology: Disorders of the Mind. Cambridge: MIT Press.

Chhabra, N., and S. E. Aks. 2020. Treatment of acute naloxone-precipitated opioid withdrawal with buprenorphine. *The American Journal of Emergency Medicine* 38 (3):691.e3–691.e4. doi:10.1016/j.ajem.2019.09.014.

Christenson, J., J. Etherington, E. Grafstein, G. Innes, S. Pennington, K. Wanger, C. Fernandes, J. J. Spinelli, and M. Gao. 2000. Early discharge of patients with presumed opioid overdose: Development of a clinical prediction rule. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 7 (10):1110–1118. doi:10.1111/j.1553-2712.2000.tb01260.x.

Clemency, B. M., W. Eggleston, E. W. Shaw, M. Cheung, N. S. Pokoj, M. A. Manka, D. J. Giordano, L. Serafin, H. Yu, H. A. Lindstrom, et al. 2018. Hospital Observation Upon Reversal (HOUR) with naloxone: A prospective clinical prediction rule validation study. *Academic Emergency Medicine* 26 (1):7–15. doi:10.1111/acem.13567.

Clemency, B. M., J. J. Lynch, T. Creighton, and H. A. Lindstrom. 2019. Emergency department risk stratification after opiate overdose is just the beginning. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 26 (8):944–945. doi:10.1111/acem.13772.

Cole, J. B., and L. S. Nelson. 2017. Controversies and carfentanil: We have much to learn about the present state of opioid poisoning. *The American Journal of Emergency Medicine* 35 (11):1743–1745. doi:10.1016/j.ajem.2017.08.045.

D'Onofrio, G., M. C. Chawarski, P. G. O'Connor, M. V. Pantalon, S. H. Busch, P. H. Owens, K. Hawk, S. L. Bernstein, and D. A. Fiellin. 2017. Emergency department-initiated buprenorphine for opioid dependence with continuation in primary care: Outcomes during and after intervention. *Journal of General Internal Medicine* 32 (6):660–666. doi:10.1007/s11606-017-3993-2.

D'Onofrio, G., P. G. O'Connor, M. V. Pantalon, M. C. Chawarski, S. H. Busch, P. H. Owens, S. L. Bernstein, and D. A. Fiellin. 2015. Emergency department–initiated buprenorphine/naloxone treatment for opioid dependence: A randomized clinical trial. *JAMA* 313 (16):1636–1644. doi:10.1001/jama.2015.3474.

Derse, A. R. 2005. What part of "no" don't you understand? Patient refusal of recommended treatment in the emergency department. *The Mount Sinai Journal of Medicine, New York* 72 (4):221–227.

Dworkin, G. 1988. *The theory and practice of autonomy. Cambridge Studies in Philosophy*. Cambridge; New York: Cambridge University Press.

Engel, A., and R. Caceda. 2015. Can decision making research provide a better understanding of chemical and behavioral addictions? *Current Drug Abuse Reviews* 8 (2):75–85. doi:10.2174/1874473708666150916113131.

Ersche, K. D., and B. J. Sahakian. 2007. The neuropsychology of amphetamine and opiate dependence: Implications for treatment. *Neuropsychology Review* 17 (3):317–336. doi:10.1007/s11065-007-9033-y.

Faden, R. R., T. L. Beauchamp, and N. M. P. King. 1986. *A history and theory of informed consent*. New York: Oxford University Press.

Fishbein, D. H., D. L. Eldreth, C. Hyde, J. A. Matochik, E. D. London, C. Contoreggi, V. Kurian, A. S. Kimes, A. Breeden, and S. Grant. 2005. Risky decision making and the anterior cingulate cortex in abstinent drug abusers and nonusers. *Brain Research. Cognitive Brain Research* 23 (1):119–136. doi:10.1016/j.cogbrainres.2004.12.010.

Foddy, B., and J. Savulescu. 2006. Addiction and autonomy: Can addicted people consent to the prescription of their drug of addiction? *Bioethics* 20 (1):1–15. doi:10.1111/j.1467-8519.2006.00470.x.

Foddy, B., and J. Savulescu. 2010. A liberal account of addiction. *Philosophy, Psychiatry, & Psychology : PPP* 17 (1):1–22. doi:10.1353/ppp.0.0282.

Frankfurt, H. G. 1971. Freedom of the will and the concept of a person. *The Journal of Philosophy* 68 (1):5. doi:10.2307/2024717.

Greene, J. A., B. J. Deveau, J. S. Dol, and M. B. Butler. 2019. Incidence of mortality due to rebound toxicity after 'treat and release' practices in prehospital opioid overdose care: A systematic review. *Emergency Medicine Journal : EMJ* 36 (4):219–224. doi:10.1136/emermed-2018-207534.

Grisso, T., and P. S. Appelbaum. 1998. *Assessing competence to consent to treatment: A guide for physicians and other health professionals*. New York: Oxford University Press.

Grisso, T., P. S. Appelbaum, and C. Hill-Fotouhi. 1997. The MacCAT-T: A clinical tool to assess patients' capacities to make treatment decisions. *Psychiatric Services (Washington, D.C.)* 48 (11):1415–1419. doi:10.1176/ps.48.11.1415.

Grisso, T., P. S. Appelbaum, E. P. Mulvey, and K. Fletcher. 1995. The MacArthur Treatment Competence Study. II: Measures of abilities related to competence to consent to treatment. *Law and Human Behavior* 19 (2):127–148. doi:10.1007/BF01499322.

Gussow, L. 2017. Toxicology rounds: No such thing anymore as a 'heroin' overdose patient. *Emergency Medicine News* 39 (3):1. doi:10.1097/01.EEM.0000513572.98973.40.

Hawkins, J., and L. C. Charland. 2020. Decision-making capacity. In *The Stanford encyclopedia of philosophy*, ed. E. N. Zalta. Stanford: Metaphysics Research Lab, Stanford University.

Herring, A. A. 2020. Postoverdose initiation of buprenorphine after naloxone-precipitated withdrawal is encouraged as a standard practice in the California bridge network of hospitals. *Annals of Emergency Medicine* 75 (4):552–553. doi:10.1016/j.annemergmed.2019.12.015.

Herring, A. A., J. Perrone, and L. S. Nelson. 2019. Managing opioid withdrawal in the emergency department with buprenorphine. *Annals of Emergency Medicine* 73 (5):481–487. doi:10.1016/j.annemergmed.2018.11.032.

Herring, A. A., C. W. Schultz, E. Yang, and M. K. Greenwald. 2019. Rapid induction onto sublingual buprenorphine after opioid overdose and successful linkage to treatment for opioid use disorder. *The American Journal of Emergency Medicine* 37 (12):2259–2262. doi:10.1016/j.ajem.2019.05.053.

Hyman, S. E. 2007. The neurobiology of addiction: Implications for voluntary control of behavior. *The American Journal of Bioethics* 7 (1):8–11. doi:10.1080/15265160601063969.

Hyman, S. E., R. C. Malenka, and E. J. Nestler. 2006. Neural mechanisms of addiction: The role of reward-related learning and memory. *Annual Review of Neuroscience* 29 (1):565–598. doi:10.1146/annurev.neuro.29.051605.113009.

Iserson, K. V., and C. E. Heine. 2023. Bioethics. In *Rosen's emergency medicine: Concepts and clinical practice*, ed. R. M. Walls, R. S. Hockberger, M. Gausche-Hill, T. B. Erickson, and S. R. Wilcox, 10th ed., 2451.e51–2451.e63. Philadelphia: Elsevier.

Joseph, J. W., K. D. Marshall, B. E. Reich, K. L. Boyle, K. P. Hill, S. G. Weiner, and A. R. Derse. 2020. How emergency physicians approach refusal of observation after naloxone resuscitation. *The Journal of Emergency Medicine* 58 (1):148–159. doi:10.1016/j.jemermed.2019.09.021.

Karakula, S. L., R. D. Weiss, M. L. Griffin, A. M. Borges, A. J. Bailey, and R. K. McHugh. 2016. Delay discounting in opioid use disorder: Differences between heroin and prescription opioid users. *Drug and Alcohol Dependence* 169:68–72. doi:10.1016/j.drugalcdep.2016.10.009.

Kimmel, S. D., J.-H. Kim, B. Kalesan, J. H. Samet, A. Y. Walley, and M. R. Larochelle. 2021. Against medical advice discharges in injection and non-injection drug use-associated infective endocarditis: A nationwide cohort study. *Clinical Infectious Diseases : An Official Publication of the Infectious Diseases Society of America* 73 (9):e2484–e2492. doi:10.1093/cid/ciaa1126.

Kimmel, S. D., A. Y. Walley, Y. Li, B. P. Linas, S. Lodi, D. Bernson, R. D. Weiss, J. H. Samet, and M. R. Larochelle. 2020. Association of treatment with medications for opioid use disorder with mortality after hospitalization for injection drug use–associated infective endocarditis. *JAMA Network Open* 3 (10):e2016228. doi:10.1001/jamanetworkopen.2020.16228.

Kirby, K. N., and N. M. Petry. 2004. Heroin and cocaine abusers have higher discount rates for delayed rewards than alcoholics or non-drug-using controls. *Addiction (Abingdon, England)* 99 (4):461–471. doi:10.1111/j.1360-0443.2003.00669.x.

Kirby, K. N., N. M. Petry, and W. K. Bickel. 1999. Heroin addicts have higher discount rates for delayed rewards than non-drug-using controls. *Journal of Experimental Psychology. General* 128 (1):78–87. doi:10.1037//0096-3445.128.1.78.

Kolinsky, D., S. M. Keim, B. G. Cohn, E. S. Schwarz, and D. M. Yealy. 2017. Is a prehospital treat and release protocol for opioid overdose safe? *The Journal of Emergency Medicine* 52 (1):52–58. doi:10.1016/j.jemermed.2016.09.015.

Koob, G. F., and M. Le Moal. 2005. Plasticity of reward neurocircuitry and the "dark side" of drug addiction. *Nature Neuroscience* 8 (11):1442–1444. doi:10.1038/nn1105-1442.

Koob, G. F., and M. Le Moal. 2008. Addiction and the brain antireward system. *Annual Review of Psychology* 59 (1):29–53. doi:10.1146/annurev.psych.59.103006.093548.

Kummer, R. L., R. R. Kempainen, T. D. Olives, J. W. Leatherman, and M. E. Prekker. 2022. Naloxone-associated pulmonary edema following recreational opioid overdose. *The American Journal of Emergency Medicine* 53:41–43. doi:10.1016/j.ajem.2021.12.030.

Leshner, A. I., and G. F. Koob. 1999. Drugs of abuse and the brain. *Proceedings of the Association of American Physicians* 111 (2):99–108. doi:10.1046/j.1525-1381.1999.09218.x.

Levy, N. 2006a. Addiction, autonomy and ego-depletion: a response to Bennett Foddy and Julian Savulescu. *Bioethics* 20 (1):16–20. doi:10.1111/j.1467-8519.2006.00471.x.

Levy, N. 2006b. Autonomy and addiction. *Canadian Journal of Philosophy* 36 (3):427–447. doi:10.1353/cjp.2006.0018.

Li, X., F. Zhang, Y. Zhou, M. Zhang, X. Wang, and M. Shen. 2013. Decision-making deficits are still present in heroin abusers after short- to long-term abstinence. *Drug and Alcohol Dependence* 130 (1-3):61–67. doi:10.1016/j.drugalcdep.2012.10.012.

Lo, B. 2020. *Resolving ethical dilemmas: A guide for clinicians*. 6th ed. Philadelphia, PA: Wolters Kluwer Health.

Marco, C. A. 1999. Conflict resolution in emergency medicine. *The American Journal of Emergency Medicine* 17 (7):735–736. doi:10.1016/S0735-6757(99)90171-7.

Marco, C. A., J. M. Brenner, C. K. Kraus, N. A. McGrath, and A. R. Derse. 2017b. Refusal of emergency medical treatment: Case studies and ethical foundations. *Annals of Emergency Medicine* 70 (5):696–703. doi:10.1016/j.annemergmed.2017.04.015.

Marco, C. A., and A. R. Derse. 2012. Refusal of life-saving therapy. In *Ethical problems in emergency medicine*, ed. J. Jesus, S. A. Grossman, A. R. Derse, J. G. Adams, R. Wolfe, and P. Rosen, 89–97. Chichester, UK: John Wiley & Sons, Ltd. doi:10.1002/9781118292150.ch15.

Marco, C. A., D. Mann, J. Rasp, M. Ballester, O. Perkins, M. B. Holbrook, and K. Rako. 2017a. Effects of opioid medications on cognitive skills among Emergency Department patients. *The American Journal of Emergency Medicine* 36 (6):1009–1013. doi:10.1016/j.ajem.2017.11.017.

Marshall, K. D., A. R. Derse, K. V. Iserson, N. Kluesner, and L. Vearrier. 2020. Medications for addiction

treatment initiated from the emergency department: Ethical considerations. *American Journal of Emergency Medicine* 38: 343–348.

Martin, S. A., L. M. Chiodo, J. D. Bosse, and A. Wilson. 2018. The next stage of buprenorphine care for opioid use disorder. *Annals of Internal Medicine* 169 (9):628–635. doi:10.7326/M18-1652.

McGregor, C., S. Darke, R. Ali, and P. Christie. 1998. Experience of non-fatal overdose among heroin users in Adelaide, Australia: Circumstances and risk perceptions. *Addiction (Abingdon, England)* 93 (5):701–711. doi:10.1046/j.1360-0443.1998.9357016.x.

Mishra, A. K., B. M. Abraham, K. K. Sahu, A. A. George, J. Sargent, M. J. Kranis, S. V. George, and G. M. Abraham. 2022. Harms and contributors of leaving against medical advice in patients with infective endocarditis. *Journal of Patient Safety* 18 (8):756–759. doi:10.1097/PTS.0000000000001055.

Müller, S., and H. Walter. 2010. Reviewing autonomy: Implications of the neurosciences and the free will debate for the principle of respect for the patient's autonomy. *Cambridge Quarterly of Healthcare Ethics: CQ: The International Journal of Healthcare Ethics Committees* 19 (2):205–217. doi:10.1017/S0963180109990478.

Neavyn, M. J. 2015. *Dopesick decision-making. Ethics on call*. Des Plaines, IL: Society for Academic Emergency Medicine.

Noël, X., D. Brevers, and A. Bechara. 2013. A triadic neurocognitive approach to addiction for clinical interventions. *Frontiers in Psychiatry* 4: 179. doi:10.3389/fpsyt.2013.00179.

Ornstein, T. J., J. L. Iddon, A. M. Baldacchino, B. J. Sahakian, M. London, B. J. Everitt, and T. W. Robbins. 2000. Profiles of cognitive dysfunction in chronic amphetamine and heroin abusers. *Neuropsychopharmacology: Official Publication of the American College of Neuropsychopharmacology* 23 (2): 113–126. doi:10.1016/S0893-133X(00)00097-X.

Petry, N. M., W. K. Bickel, and M. Arnett. 1998. Shortened time horizons and insensitivity to future consequences in heroin addicts. *Addiction (Abingdon, England)* 93 (5): 729–738. doi:10.1046/j.1360-0443.1998.9357298.x.

Phillips, J. P. 2016. Workplace violence against health care workers in the United States. *The New England Journal of Medicine* 374 (17):1661–1669. doi:10.1056/NEJMra1501998.

Racine, E., and S. Rousseau-Lesage. 2017. The voluntary nature of decision-making in addiction: Static metaphysical views versus epistemologically dynamic views. *Bioethics* 31 (5):349–359. doi:10.1111/bioe.12356.

Rapeli, P., R. Kivisaari, T. Autti, S. Kähkönen, V. Puuskari, O. Jokela, and H. Kalska. 2006. Cognitive function during early abstinence from opioid dependence: A comparison to age, gender, and verbal intelligence matched controls. *BMC Psychiatry* 6:9. doi:10.1186/1471-244X-6-9.

Siff, J. E., and B. E. Baskin. 2020. Legal issues in emergency medicine. In *Tintinalli's emergency medicine: A comprehensive study guide*, J. E. Tintinalli, O. J. Ma, D. M. Yealy, G. D. Meckler, J. S. Stapczynski, D. M. Cline, and S. H. Thomas. 9th ed. New York, NY: McGraw-Hill Education.

Sokol, R., E. Tammaro, J. Y. Kim, and T. J. Stopka. 2021. Linking MATTERS: Barriers and facilitators to implementing emergency department-initiated buprenorphine-naloxone in patients with opioid use disorder and linkage to long-term care. *Substance Use & Misuse* 56 (7):1045–1053. doi:10.1080/10826084.2021.1906280.

Sulmasy, L. S., and T. A. Bledsoe. 2019. American College of Physicians ethics manual: Seventh edition. *Annals of Internal Medicine* 170 (12 Suppl 2):S1–S32. doi:10.7326/M18-2160.

Sutter, M. E., R. R. Gerona, M. T. Davis, B. M. Roche, D. K. Colby, J. A. Chenoweth, A. J. Adams, K. P. Owen, J. B. Ford, H. B. Black, et al. 2017. Fatal fentanyl: One pill can kill. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 24 (1):106–113. doi:10.1111/acem.13034.

Verdejo-García, A., and A. Bechara. 2009. A somatic marker theory of addiction. *Neuropharmacology* 56:48–62. doi:10.1016/j.neuropharm.2008.07.035.

Vilke, G. M., C. Sloane, A. M. Smith, and T. C. Chan. 2003. Assessment for deaths in out-of-hospital heroin overdose patients treated with naloxone who refuse transport. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 10 (8):893–896. doi:10.1111/j.1553-2712.2003.tb00636.x.

Volkow, N. D., G.-J. Wang, J. S. Fowler, D. Tomasi, and F. Telang. 2011. Addiction: Beyond dopamine reward circuitry. *Proceedings of the National Academy of Sciences of the United States of America* 108 (37):15037–15042. doi:10.1073/pnas.1010654108.

Watson, W. A., M. T. Steele, R. L. Muelleman, and M. D. Rush. 1998. Opioid toxicity recurrence after an initial response to naloxone. *Journal of Toxicology. Clinical Toxicology* 36 (1–2):11–17. doi:10.3109/15563659809162577.

Weiner, S. G., O. Baker, D. Bernson, and J. D. Schuur. 2020. One-year mortality of patients after emergency department treatment for nonfatal opioid overdose. *Annals of Emergency Medicine* 75 (1):13–17. doi:10.1016/j.annemergmed.2019.04.020.

Willman, M. W., D. B. Liss, E. S. Schwarz, and M. E. Mullins. 2017. Do heroin overdose patients require observation after receiving naloxone? *Clinical Toxicology (Philadelphia, Pa.)* 55 (2):81–87. doi:10.1080/15563650.2016.1253846.

Zacny, J. P. 1995. A review of the effects of opioids on psychomotor and cognitive functioning in humans. *Experimental and Clinical Psychopharmacology* 3 (4):432–466. doi:10.1037/1064-1297.3.4.432.