



The pain lottery

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Abstract: Moral challenges with addiction and overdosing have resulted from the abundance of opioids, but the coronavirus disease of 2019 has prompted reflection on ethical issues that could arise from a shortage. Driven by a duty to plan, some jurisdictions have formed committees to see if standard allocation considerations extend to cover a shortage of opioid pain medication. The problem, we argue, is that the standard allocation protocols do not apply to a shortage of opioids because prognosis only has limited relevance and the moral disvalue of pain is not dependent upon a patient's status as a frontline worker, age, or residence in a disadvantaged community. While the use of lotteries in allocation schemes has been deemphasized in standard allocation schema, we argue for and outline the details of a tiered lottery that first prioritizes opioids needed for emergent procedures and then moves on to allocate opioids based on the severity of a patient's pain. Additionally, we argue that some deception, in the form of withholding information from patients about the implementation and details of a pain lottery, is ethically permissible to address the unique moral tension between transparency and beneficence that arises for the treatment of pain in conditions of opioid scarcity.

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Introduction

Moral challenges with addiction and overdosing have resulted from the abundance of opioids, but the coronavirus disease of 2019 (COVID-19) has prompted reflection on ethical issues that could arise from a shortage. Before the pandemic, some opioid shortages were driven by government regulations in response to the opioid-overdose epidemic (1), and some opioid shortages were reported during the pandemic (2). During the pandemic, allocation mechanisms were quickly developed for ventilators, and adapted for other scarce resources (e.g., critical care beds, extracorporeal membrane oxygenation), that often first sorted patients into groups by prognosis and then applied other considerations such as one's status as a frontline

worker, age, or residence in a disadvantaged community (3). Driven by a duty to plan, some jurisdictions have formed committees to see if standard allocation considerations extend to cover a shortage of opioid pain medication for inpatient settings. First, we argue that pain requires a unique allocation protocol by showing that standard moral considerations do not apply (e.g., age) or apply differently (e.g., prognosis) and highlighting practical aspects of the assessment and treatment of pain that make it different from other scarce medical resources. Second, we outline the details of an ethically defensible lottery schema for distributing opioids in the inpatient setting during a shortage. Finally, we argue that some deception, in the form of withholding information from patients about the implementation and details of a pain lottery, is ethically

permissible to address the unique moral tension between transparency and beneficence that arises for the treatment of pain in conditions of opioid scarcity.

Why pain requires a unique allocation protocol

Common allocation criteria for other scarce medical interventions (e.g., ventilators) have prioritized patients based on medical prognosis, while incorporating factors such as one's status as a frontline worker, age, or residence as tiebreaking considerations. In these schemas, a lottery is used only when all other criteria have failed to distinguish between recipients for the intervention. However, the treatment of pain in the context of scarcity is different from life-prolonging interventions such as ventilators because the purpose of treating pain is to provide immediate relief that should be administered irrespective of the patient's status as a frontline worker, age, or residence. As outlined below, prognosis should only be considered indirectly (i.e., when opioids enable a patient to undergo an emergent procedure that would otherwise be intolerable without pain control), but considerations of prognosis are irrelevant for most patients who fall outside this group.

Additionally, there are several practical differences for the assessment and treatment of pain that motivate the need for a unique allocation protocol. First, unlike assessing a patient's need for a ventilator, determining whether and how much pain a patient is in requires medical professionals to rely on the patient's subjective report. While there are some objective measures of pain (e.g., increased heart rate), the patient's self-report of pain should be prioritized. This is because allocating pain medication based on objectively verifiable conditions risks dismissing those patients experiencing severe pain without lesion (e.g., neuropathic pain), and invites the perpetuation of typical injustices of treating pain (e.g., undertreating the pain of African Americans) (4). Second, unlike assigning a single ventilator to a patient, providing pain medication is not an all-or-nothing act; it is possible to split pain medication among patients such that some degree of relief is provided to several patients rather than dedicating the entire resource to a single patient (5). Third, the same degree of pain alleviation is not morally equal across patients. On a ten-point pain scale, reducing the pain of a patient at a 10 to a 6 is better than reducing the pain of a patient at a 5 to a 1. Therefore, patients in greater pain should be prioritized.

The pain lottery

Simple lotteries aim to give all candidates an equal chance of receiving a scarce resource, have the practical advantage of being relatively easy to implement, and the moral advantage of promoting fairness, resisting corruption, and building trust in the integrity of the distribution process (6). However, simple lotteries have been criticized for ignoring ethically relevant differences (e.g., prognosis with or without treatment, expected life-years, status as a front-line worker) (7). As mentioned above, the use of a lottery for distributing scarce resources has been deprioritized (not outright rejected) on standard allocation criteria because it is only used when all other standards of allocation have failed to differentiate recipients. To counter this shortcoming, some have defended the use of weighted lotteries whereby one's chances of receiving a scarce resource are responsive to ethically relevant individual differences (e.g., having a high score on the Area Deprivation Index) (8). The worry with weighted lotteries for the treatment of pain is that a patient with a lower pain score (e.g., 7) still has a significant chance of receiving pain medication over a patient with a much higher pain score (e.g., 10). Further, it is also possible for lower pain patients (e.g., 7) to flood a lottery that contains patients at all levels of severe pain, even further reducing the chances that the patients in the most pain do not receive relief.

Given these considerations, we describe a tiered lottery for use in an opioid shortage that first places patients into tiers before running the lottery to distribute pain medication. Our tiered lottery is one ethically defensible way that a pain lottery could be operationalized for the treatment of all patients who are, or will be, in pain. Our scheme presumes that treating physicians are aware of and have exhausted all non-opioid treatments for pain and focuses on how to allocate opioids to patients for whom severe pain nevertheless persists. Winners of the pain lottery should receive only enough opioids to move them out of a state of severe pain (i.e., to a 6 or below). A triage team should be used to run the lottery at a frequency that is responsive to the effective duration of the administered analgesic as well as the severity and duration of the expected shortage.

The first category of patients to enter the lottery are those patients who need an emergent procedure that will cause severe pain, even if they are not currently in severe

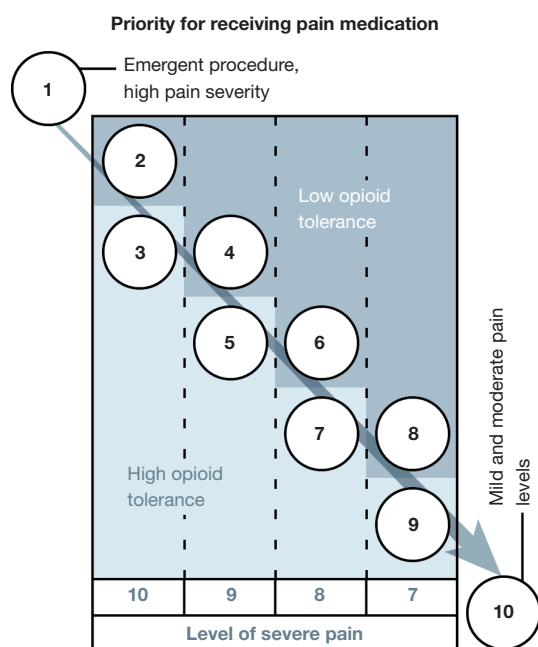


Figure 1 The tiered pain lottery described above with nine groups in order of priority.

pain (e.g., they need a quintuple bypass or amputation of a gangrenous foot today). One reason for prioritizing these patients based on prognosis is because it is better to prevent death or disability and prevent severe pain than it is to merely intervene on occurrent severe pain. Another reason is that these cases involve medical staff actively performing procedures that would, if not adequately palliated, cause severe pain to the patient and significant moral distress to staff. Importantly, patients who consent to emergent procedures must be informed that the treatment of their postoperative pain will be subject to the constraints of a pain lottery.

If there are not enough opioids to treat all the patients in this group, then prognosis may be used to prioritize patients within this group. For example, a patient who is expected to live longer than one year after an emergent procedure should be prioritized over a patient who is expected to live less than one year after an emergent procedure. This is the only stage of the pain lottery where prognosis is considered. The lottery continues until all patients in this category are treated before moving on to the second category, while noting that some reserves should be kept on hand for future patients that may need emergent procedures.

The second category consists of all remaining patients experiencing severe pain. Severe pain is defined as a 7–10

on a validated pain scale. The consideration of prognosis is eschewed in this category because the moral value of alleviating occurrent severe pain is independent of how long the patient is expected to live. Two patients currently in severe pain have an equal claim on opioids for the alleviation of their pain even though one of the patients may have a much better prognosis. Instead of considering prognosis, patients in this second category should be first placed into five tiers based on the level of their pain (i.e., 1–6, 7, 8, 9, and 10 are all different tiers). Our scheme presumes a level of scarcity such that only those in severe pain (i.e., 7–10) are eligible to be placed in the pain lottery. Patients in mild to moderate pain (i.e., 1–6) may be unlikely to receive opioids even in circumstances of resource abundance due to the attendant risks of opioid use.

Assigning individual tiers to the different states of severe pain maximizes benefit and fairness. Greater pain comes with greater benefit upon alleviation, which means that tiering allocation according to greater pain means achieving, or, at least attempting to achieve, the greatest benefit. Similarly, the greater the pain state, the greater the claim one has on opioids. Fairness is maximized, because the possibility of patients with weaker claims (e.g., patients with a pain score of 7) will not be allocated opioids until those with stronger claims (e.g., patients with higher pain scores) receive the medicine necessary to make their severe pain moderate (9).

Each severe pain tier should be further divided based on the patient's opioid tolerance following the current standard of care (e.g., the Food and Drug Administration defines opioid tolerance for extended-release opioids) (10). This creates eight groups of patients based on pain severity and opioid tolerance. Patients in a pain category who are not opioid tolerant should be prioritized over opioid tolerant patients to increase the amount of overall pain reduction that can be achieved in a category for a given stock of opioids. Only when there are no more patients in a particular category should patients in the next category be placed in a lottery to receive pain medication. *Figure 1* illustrates the tiered pain lottery described above with nine groups in order of priority (*Figure 1*).

Transparency vs. beneficence in an opioid shortage

Claims about the moral good of transparency regarding resource scarcity and allocation are common in the documents meant to guide allocation decision-making.

These documents sometimes recommend posting signage informing patients of the relevant scarcity and the allocation protocol being used and suggest that clinicians carefully explain to patients how the allocation protocol is affecting their care (11). However, the implementation of a lottery for the allocation of scarce pain medication raises unique challenges to transparency, because informing patients of the details of an allocation schema for pain may significantly threaten the feasibility of that scheme.

Informing patients that their self-report of pain will directly impact their chances of receiving pain medication may incentivize some patients to overstate their pain level. Unlike the allocation of scarce resources for medical conditions that can be objectively verified, the assessment of pain relies almost exclusively on the patient's self-report, rendering the effectiveness of the scheme highly dependent upon honest patient cooperation. Additionally, if patients are informed that they are receiving an attenuated dose of pain medication (recall that patients should only receive enough opioids to treat severe pain by reducing them to a 6 or less), disclosing this fact may reduce the degree of pain reduction experienced by the recipients. Because the experience of pain is especially susceptible to psychological factors, merely informing patients that they are receiving an attenuated dose of opioids may produce a placebo effect that causes them to experience less reduction in pain (12). Implementing a pain lottery, or any comparable scheme that relies on the subjective report of pain with complete transparency creates a moral tension between transparency on one hand, and the equitable, maximally beneficial distribution of pain medication on the other.

Given the significant disvalue of transparency when implementing a pain lottery, clinicians may withhold information about the pain lottery from patients. Clinicians may elicit the self-report of patient's pain without disclosing that their self-report will directly affect their categorization in a lottery that will determine whether they receive pain medication. Additionally, clinicians may withhold information about the attenuated dosage of pain medication to maximize the benefits for the patient. If patients directly inquire about these matters, then clinicians should respond truthfully. Withholding such information is compatible with beneficence-based exceptions to full disclosure in the process of obtaining informed consent (13). As noted above, withholding information about the pain lottery is not permissible for patients in the first category because the possibility of undertreatment for their postoperative pain may directly affect whether they consent to a life-saving

procedure.

Some may object that the obligation to obtain informed consent requires the disclosure of all information germane to a patient's medical care and that, as a result, our recommendation to withhold information about the implementation of a pain lottery amounts to a violation of patient autonomy. These objectors may claim that withholding information about a pain lottery asks clinicians to revert to the old medical paternalism whereby a patient's medical diagnosis or information about treatment options were withheld in the name of benefitting the patient (14). However, withholding information about the implementation of a pain lottery is different in important respects. First, withholding information about the existence of a pain lottery has nothing to do with the patient's diagnosis. Second, there is no decision-changing detail of the pain medication that is being withheld from the patient. Unlike withholding the chance of a negative side effect to solicit a patient's assent to a particular treatment that they might otherwise refuse, withholding information about the reduced dosage of pain medication is highly unlikely to change a patient's desire to have the medication. In these ways, withholding information about the implementation of a pain lottery is importantly different from withholding information about a patient's diagnosis or treatment risks that characterize the medical paternalism bioethics was created to resist.

One might also object that withholding information from patients runs the risk of damaging trust in the doctor-patient relationship. However, professional society statements (15), legal rulings (16), and bioethicists (17) agree that there may be exceptions to truth-telling in the doctor-patient relationship, which presumes there can be other goods that may outweigh the risk of potentially trust-damaging deception. The values of justice and beneficence served by withholding information about the pain lottery from patients is just the sort of instance where alternative values may justify some risk to trust of the medical profession.

Conclusions

Allocating opioids for the inpatient setting amidst a shortage requires a novel scheme because many of the standard considerations do not apply (e.g., age, residence, status as a frontline worker), or do not apply in the same way (e.g., prognosis). While lotteries have tended to be deemphasized for use in allocation schema, they have

renewed moral plausibility in the context of treating pain. Furthermore, the treatment of pain in a shortage raises a unique dilemma between transparency and beneficence that can be reasonably resolved in favor of beneficence.

Very different ethical considerations for allocating opioids in a shortage may apply in outpatient settings, where a complicated interplay of societal agencies have resulted in government-imposed restrictions that can problematically create the resulting opioid shortages.

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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References

- Rodriguez-Monguio R, Naveed M, Seoane-Vazquez E. Predictors of shortages of opioid analgesics in the US: Are the characteristics of the drug company the missing puzzle piece? *PLoS One* 2021;16:e0249274.
- Farrell NM, Hayes BD, Linden JA. Critical medication shortages further dwindling hospital resources during COVID-19. *Am J Emerg Med* 2021;40:202-3.
- Emanuel EJ, Persad G, Upshur R, et al. Fair Allocation of Scarce Medical Resources in the Time of Covid-19. *N Engl J Med* 2020;382:2049-55.
- Cintron A, Morrison RS. Pain and ethnicity in the United States: A systematic review. *J Palliat Med* 2006;9:1454-73.
- Joint Statement on Multiple Patients Per Ventilator. The Society of Critical Care Medicine (SCCM), American Association for Respiratory Care (AARC), American Society of Anesthesiologists (ASA), Anesthesia Patient Safety Foundation (APSF), American Association of Critical-Care Nurses (AACN), and American College of Chest Physicians (CHEST). March 26, 2020. Available online: <https://www.sccm.org/Disaster/Joint-Statement-on-Multiple-Patients-Per-Ventilato>
- Jecker NS, Wightman AG, Diekema DS. Vaccine ethics: an ethical framework for global distribution of COVID-19 vaccines. *J Med Ethics* 2021;medethics-2020-107036.
- Rawlings A, Brandt L, Ferreres A, et al. Ethical considerations for allocation of scarce resources and alterations in surgical care during a pandemic. *Surg Endosc* 2021;35:2217-22.
- White DB, McCreary EK, Chang CH, et al. A Multicenter Weighted Lottery to Equitably Allocate Scarce COVID-19 Therapeutics. *Am J Respir Crit Care Med* 2022;206:503-6.
- Broome J. Fairness. *Proceedings of the Aristotelian Society* 1991;91:87-101.
- FDA. Extended-release (ER) and long-acting (LA) opioid analgesics Risk Evaluation and Mitigation Strategy (REMS). Available online: www.fda.gov/downloads/drugs/drugsafety/postmarketdrugsafetyinformationforpatientsandproviders/ucm311290.pdf. Accessed January 19, 2023.
- Michigan Department of Health and Human Services. Appendix 9.3 – Michigan Guidelines for Implementation of Crisis Standards of Care and Ethical Allocation of Scarce Medical Resources and Services During Emergencies and Disasters. Available online: https://www.michigan.gov/-/media/Project/Websites/coronavirus/Folder2/Folder2/MDHHS_Ethical_Guidelines_-_November_30_2021_FINAL_12-6-21.pdf?rev=ec752e970a2e4419b2b080b5baffbc97. Accessed January 19, 2023.
- Fortunato JT, Wasserman JA, Menkes DL. When Respecting Autonomy Is Harmful: A Clinically Useful Approach to the Nocebo Effect. *Am J Bioeth*

- 2017;17:36-42.
13. Crutchfield P, Tyler G, Michael R. Placebos and a new exception to informed consent. *AJOB Neuroscience* 2018;9:200-2.
 14. Oken D. What to tell cancer patients. A study of medical attitudes. *JAMA* 1961;175:1120-8.
 15. Snyder L; American College of Physicians Ethics and Human Rights Committee. American College of Physicians ethics manual. *Ann Intern Med* 2012;156:73-104.
 16. *Canterbury v Spence* (1972) 464 F 2d 772, 789 (DC Cir).
 17. Richard C, Lajeunesse Y, Lussier MT. Therapeutic privilege: between the ethics of lying and the practice of truth. *J Med Ethics* 2010;36:353-7.

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