

Green Bioethics, Patient Autonomy, and Informed Consent in Health Care

Abstract

Green bioethics is an area of research and scholarship that examines the impact of health care practices and policies on the environment and emphasizes environmental values, such as ecological sustainability and stewardship. Some green bioethicists have argued that health care providers should inform patients about the environmental impacts of treatments and advocate for options that minimize adverse impacts. While disclosure of information pertaining to the environmental impacts of treatments could facilitate autonomous decision-making and strengthen the patient-provider relationship in situations where patients have clearly expressed environmental concerns, it may have the opposite effect in other situations if it serves to make patients feel like they are being judged or manipulated. We argue, therefore, that there is not a generalizable duty to disclose environmental impact information to all patients during the consent process. Providers who practice green bioethics should focus on advocating for system-level changes in health care financing, organization, and delivery and use discretion when bringing up environmental concerns in their encounters with patients.

Key words: green bioethics, consent, autonomy, patient-provider relationship, environment

1. Introduction

Green bioethics is an area of research and scholarship that examines the impact of health care practices and policies on the environment and emphasizes environmental values, such as ecological sustainability and stewardship.[1-14] The conceptual underpinnings for green bioethics can be traced to the work of Van Rensselaer Potter, who conceived of bioethics as encompassing a wide range of issues in biology and medicine, including those that arise in public health and environmental policy.[15] Jessica Pierce and Andrew Jameton expanded upon Potter's work by reflecting on the adverse environmental impacts of health care systems, arguing that providers and administrators should try to minimize these impacts and encourage their patients to do the same.[1] More recently, Cristina Richie has articulated principles of green bioethics and applied them to various topics.[4-8]

According to some green bioethicists, much of the responsibility for making ecologically-mindful choices falls on the leaders of health care organizations, who make decisions concerning energy and resource use, waste disposal, equipment purchases, and other matters with significant environmental impacts.[1,3,4-8] Health care policymakers also play an important role in implementing principles of green bioethics, since decisions about insurance coverage, reimbursement, and product regulation can also affect the environment. For example, National Health Service (NHS) England has made a commitment to reduce its carbon footprint to net zero by 2040.[16] Some responsibility also falls on providers and patients, who make treatment decisions that affect the environment. For example, some medications can have adverse environmental impacts on plant and animal species and ecosystems when they enter the water

supply.[10,11,17] Unnecessary medical tests can also contribute to waste, energy use, and production of greenhouse gases.[8]

We will not challenge the assumption, held by many green bioethicists, that health care practice and policy should be guided, at least in part, by a concern for the environment.[1-3] Instead, our focus in this paper is how best to harmonize green bioethics with autonomous decision-making in a clinical setting.

Some green bioethicists argue that health care providers should inform patients about the environmental impacts of treatments. For instance, in outlining a conception of what she calls ‘green informed consent’ Richie writes, “making reference to the projected amount of resources that will be used in the informed consent process would give patients the fullest information available, leading to truly informed consent [4, p.155]” and that doctors who do not disclose this information (when they are aware of it) are withholding material information. Elsewhere, Richie and Cassandra Thiel say that “green informed consent includes patient education about sustainability in health practices and respects autonomous decision-making for, or against, carbon-intensive treatments.”[8, p. 13] Others have also defended core tenets of green bioethics. [14]

We agree that disclosure of information pertaining to the environmental impacts of treatments could promote autonomous decision-making in situations where patients have clearly expressed concerns regarding the environment. However, we are skeptical of the claim that there is a generalizable legal or ethical duty to disclose environmental impact information to all patients. We shall argue that providers (e.g., physicians, nurses, and pharmacists) should not routinely disclose information about the environmental impacts of treatments during the consent process because this may subvert patients’ autonomous decision-making and damage the patient-provider relationship. Providers should focus on advocating for system-level changes in health care financing, organization, and delivery whilst using discretion when bringing up environmental concerns with their patients.[18,19]

2. Autonomy and Consent in Health Care

The principle of respect for autonomy is one of the pillars of contemporary bioethics. It safeguards the patient’s ability to make decisions in accordance with their own values and provides a philosophical foundation for informed consent in medical practice and research.[20-26] Although respect for autonomy is the primary moral reason for seeking and obtaining consent, consent is also important for fostering communication and trust between providers and patients and securing legal authorization for receiving treatment or participating in research.[25-29]

An autonomous decision is voluntary choice resulting from deliberation about one’s options in consideration of the relevant information and one’s values or interests. To make an autonomous decision, one must have sufficient understanding of the information, the mental capacity to make rational choices, and freedom from outside controlling influences, such as

coercion, undue influence, or deception.[20,26,27] Respect for autonomy in health care thus includes 1) a negative duty not to interfere with the patient's autonomous decision-making, which implies obligations not to lie to, coerce, or manipulate patients; and 2) a positive duty to facilitate autonomous decision-making, which may involve having conversations with patients concerning their preferences for treatment and their informational needs.[26,27]

However, the principle does not trump all other moral considerations. First, it may be permissible to restrict individual choices to promote public health.[27,30,31] Some time-honored public health practices, such as isolation and quarantine, limit autonomy for this reason. [31] Second, a patient's preference for a particular intervention does always obligate a provider to offer it, especially if the intervention is not medically indicated.[32] For example, a surgeon does not have an obligation to perform a double-mastectomy on a healthy, 20-year-old patient at low-risk of developing breast cancer just because they are worried about this unlikely outcome. [34]

Third, matters of justice/fairness can provide reasons to refrain from fulfilling a patient's preference for resource-intensive interventions. One obvious example arises in health systems in which patients must pay for their care. Suppose that a veteran's health system decides to cover the costs of brand name drugs only if there are no equivalent generic drugs available. The main reason for adopting this policy is that it will save approximately 50% on prescription drug costs, which will free up money that can be used to enhance the overall health of the patient population. [35] The fact that some patients at this health system prefer brand-name drugs to generic equivalents does not imply that the system should give patients the choice between generic and brand-name drugs, since there are valid reasons for limiting these choices.

This third point is germane to the issue of green informed consent, as one might plausibly claim that a similar rationale would apply to two clinically equivalent interventions with significantly different environmental impacts. In such circumstances, there could be compelling moral reasons to not give patients a choice between these treatment alternatives, assuming that there are no other factors that would weigh against this decision. Indeed, partly in recognition of this sort of concern, Joshua Parker argues that the obligation to minimize the expected environmental harms of medical interventions can only amount to a *pro tanto* obligation [14].

As we noted above, we are not opposed to organizational decisions to limit patient autonomy for environmental reasons. However, we are concerned about incorporating these considerations into the consent process. To elaborate on this point, it will be useful to discuss standards for informed consent disclosure.

3. The Reasonable Person Standard of Disclosure and Environmental Impact Information

The extent to which physicians have a duty to disclose information about environmental impacts of treatments depends on whether the information is relevant (or material) to the decision, and the standard of disclosure that applies it. The word 'duty' used here is ambiguous, because 'duty' could be understood in a legal or ethical sense. We will address both senses in

this paper, while noting they are often conflated in clinical practice and bioethics scholarship, including discussions of green consent.

Historically, legal standards of disclosure in medicine in most countries were provider-oriented; that is, a provider had a legal duty to disclose the information that a reasonable professional peer would disclose in a similar situation.[21] If reasonable peers would view non-disclosure of information as acceptable, then there would be no legal duty for the provider to disclose that information. However, provider-oriented standards have been criticized as paternalistic. For example, a physician could legally withhold information most patients would regard as important, such as the diagnosis of terminal cancer, if professional peers would also do so in that situation. For this reason, provider standards are increasingly being replaced by patient-oriented standards in Western nations.[21,24,36,37]

The two most common patient-oriented standards are the subjective standard and the reasonable patient standard.[21] According to the subjective standard, a provider has a duty to disclose what their patient wants to know. If a provider knows, or can be reasonably expected to know, that their patient wants to receive some information, then they have a duty to disclose it. The moral rationale for this standard is that it may promote autonomy more effectively than provider-oriented standards because it requires providers to address patients' unique informational needs.[23,37]

The subjective standard has not been adopted widely because it raises complex practical and ethical/legal issues for providers. Providers may not have enough time to engage in lengthy conversations with individual patients to ascertain their informational needs. Further, the extent to which a provider has a duty to understand and meet the patient's informational needs is unclear, especially if the patient has not communicated those needs. The standard may therefore open the provider to legal liability if the patient decides, after the clinical encounter, that the provider did not disclose information the patient wanted to know.[21] Accordingly, some have argued that following the subjective standard should be an ethical but not a legal requirement. [21]

Notwithstanding these concerns, the subjective standard provides a compelling rationale for disclosing environmental impact information to patients who have indicated that they want it. However, this is only a marginal point in favor of green consent; indeed, this argument does not distinguish environmental information from any other type of information to which the patient attaches significance. For example, the argument also supports informing a vegan about whether a medication contains animal products. For the argument to generalize to patients who do not clearly attach significance to information about environmental impacts, there must be some basis for claiming the information would be relevant to those patients, which brings us to the reasonable person standard.

According to the reasonable person standard, a provider has a legal duty to disclose information that a reasonable person would want to know with respect to a particular decision. If a reasonable person would want to know about the environmental impacts of treatments, then the provider has a duty to disclose it. While the reasonable person standard avoids some of the

pitfalls of the other standards, it faces a key problem of its own, namely: what would the reasonable person want to know?[21] Disputes about what the reasonable person would want to know continue to arise; for example, there is an ongoing debate about the disclosure of financial interests to patients and research subjects.[29,38]

We lack the space to address controversies about the reasonable person standard. However, we can begin with one widely-endorsed approach that construes the reasonable person as a hypothetical, ordinary person who makes prudent decisions to promote their own wellbeing [21,39,40] Wellbeing consists of the things that most people would want to have, such as physical and mental health, respectful treatment, and financial security. Under this type of approach, providers should disclose information that is relevant to promoting the ordinary patient's wellbeing.[39] Medical information, such as information about the benefits and risks of different treatment options, is obviously relevant, and some non-medical information related to wellbeing, such as financial costs of different treatments that a patient might bear, may also be relevant.

Does the wellbeing approach imply that there is a legal duty to disclose environmental impact information to patients? We think not. While the environment is essential to supporting human health, there is not a straightforward connection between the environmental impact of the choices a person makes and their own wellbeing. The greenhouse gases produced by using metered dose inhaler (MDI), for example, are not likely to have a direct and tangible impact on that patient's health; rather, as Parker recognizes, the problem is instead that they may be understood to constitute an indirect harm, as a small causal contribution to humanity's collective impact on the global climate.[14]

While there is little debate about whether the reasonable person standard supports disclosure of benefits and risks of treatments to the patient, it is far from obvious that the reasonable person standard supports the disclosure of environmental impacts of treatments. To support this claim, one would have to extend the reasonable person standard to incorporate information concerning moral, political or social values beyond the patient's wellbeing. This is made more controversial by the fact that the values in question may not be commonly viewed as having high priority, at least when they conflict with individual wellbeing. Indeed, a survey of 1,858 UK adults found that while most respondents supported policies aimed at reducing the environmental impacts of the NHS, only 9.4% considered mitigating climate change to be a top priority for the NHS and only 30% felt that NHS should consider environmental impact when making decisions about treatment coverage.[41]

However, one might object that that the interpretation of the reasonable person standard that we invoke here is unduly narrow. For instance, it is standard practice in medicine to refuse to prescribe antibiotics when they are not needed to treat or prevent a disease and to inform patients about the public health (and personal) risks of overuse and misuse of antibiotics. Moreover, physicians may counsel their patients about the risks that certain individually beneficial interventions may pose to third parties. For example, it is standard practice for providers to inform patients who are receiving radioactive iodine treatment that this form of therapy can expose other people to radiation and that they should take appropriate steps to

protect other from this risk.¹ If providers are justified in talking to their patients about risks to others from treatments, then it appears that the ‘well-being interpretation’ of the reasonable person standards is unduly narrow.

We appreciate the intuitive force of this objection and suggest that the wellbeing interpretation of the reasonable person standard should thus be supplemented as follows: information ought to be disclosed either if it is (a) relevant to individual wellbeing or (b) relevant to the prevention of reasonably foreseeable direct harm to others. Does this modification entail that we should also support disclosure of information of environmental impact? We believe not, because most the third-party harms associated with the use of interventions with environmental impacts are not sufficiently direct to satisfy condition (b). On this point, environmental impacts can be contrasted with the direct third-party risks that some medical interventions pose (such as radioactive iodine treatment).

Moreover, although the harms associated with antibiotic overuse are similarly not sufficiently direct to satisfy condition (b), the disclosure of these harms can typically be justified by (a). Indeed, antibiotics counseling usually addresses problems with using antibiotics when they are not medically indicated; for example, to treat a viral infection.[47] A potentially problematic cases arises in which an antibiotic is medically indicated, and the physician can prescribe the antibiotic or another (possibly inferior) alternative treatment for the patient’s infection, such as an herbal remedy like garlic or echinacea. Should the physician inform the patient about the public health risks of overprescribing antibiotics in such a case? We suggest that this permutation of the objection loses much of its original intuitive force. Notably, in such a case the physician may be deviating from the standard of care and could face liability for negligence if they are not acting in the patient’s best interests. Finally, it is also important to mention that antibiotic resistance, unlike climate change and other environmental issues, is not yet highly politicized. Therefore, talking to patients about antibiotic resistance is less likely to raise concerns about manipulation by making patients feel like they are being judged for making certain choices.

The suggestion of a duty of to disclose environmental impacts also raises important questions about the nature of the patient-provider relationship. These are important ethical issues to which we now turn.

4. Green Consent and the Patient-provider Relationship

Revisionism can be a good thing if it enables a practice to better serve one of its intended goals, in this case, promoting of autonomy. Indeed, Thiel and Richie have claimed (see their quote above) that disclosure of environmental impacts of treatment options helps to promote patient autonomy.[8] Thiel and Richie appear to assume that disclosure of environmental impacts of treatment promotes the autonomy of patients who care about these impacts and poses no threat to the autonomy of those who do not, perhaps because these patients can discount or ignore this information.

¹ We are grateful to an anonymous reviewer for suggesting this example.

However, this viewpoint takes an overly simplistic view of the patient-provider relationship and the impact of disclosure by assuming that decision-making during consent consists solely of dispassionate information processing.[25] Patients can, according to this view, use information that is relevant to the decision and disregard the rest. However, it is not always easy for patients to discount or ignore information that providers disclose because disclosure of information may have normative implications.[25] For example, if a physician informs a patient that a medication has higher carbon footprint than another medication that could be prescribed, this disclosure may plausibly be taken to imply that the patient ought to consider this information in decision-making and ought to choose the medication with the lower carbon footprint. Information is not a value-neutral, especially when disclosed by someone regarded as having expertise or authority. Choosing to disclose (or not disclose) something is a way influencing a decision.

Now it may be objected that influencing a patient's decision is not unethical, especially when dealing with important issues, like climate change.[4,14] Parker argues that physicians should persuade asthma patients to use inhalers with lower carbon footprints, such as MDIs, when this does not negatively impact their health.[14] If patients do not see the wisdom of avoiding MDI use, Parker claims that "primary care practitioners might make efforts to explore the patient's preferences and attempt to persuade them." [14, p. 94] If persuasion doesn't work, providers can suggest ways for patients to minimize their production of greenhouse gases, such as making sure not to overuse the MDI.[14]

A key issue here is the appropriateness of different forms of persuasion for different purposes in the patient-provider relationship. According to the deliberative model of this relationship, providers are permitted (and perhaps should be required, according to Savulescu's Liberal Rationalism model [43]) to use rational persuasion to convince their patients to make choices that are in their best interests in light of their own values.[42, 43] For example, if a middle-aged patient with early-stage, treatable breast cancer decides to forego surgery and chemotherapy and pursue herbal medicine, their physician could (and perhaps should) try to persuade them to rethink their decision.

However, some forms of persuasion may subvert the kind of rational deliberation that is paradigmatic of self-governance or they may involve engagement with moral or other values that are beyond the scope of the patient-provider relationship.[26,42,44] For example, many would agree that a physician who is morally or politically opposed to beautifying cosmetic surgery should not try to dissuade a patient from undergoing surgery for non-medical reasons because this would be beyond the bounds of the relationship.[45] The physician could provide the patient with information about the procedure, including medical and psychological risks, but should not engage the patient in a debate about the morality of choosing the procedure.

It is worth noting that green bioethicists do not all agree on the appropriateness of using different kinds of influence during the consent process. While Parker clearly favors persuasion, Thiel and Richie write that:

Autonomy is compromised when clinicians respond to patients' refusal of high-carbon treatments with interrogation, belittlement, or demands for onerous justification for their environmental choice.[8, p. 13]

One issue here is how to draw the line between rational persuasion, which is arguably compatible with autonomy, and manipulation, which is widely regarded as an infringement on autonomy. This is a complex question that we cannot address here. However, two points are apposite. First, which forms of influence may legitimately subvert autonomous decision-making should not depend upon the content of individual decisions. Interrogation and demands for justification are either compatible or incompatible with autonomy *tout court*, regardless of what the individual decides to choose.

Second, wherever the line between rational persuasion and manipulation is drawn, it may be difficult for providers who practice green consent to avoid stepping over it, given the emotional and moral tenor of environmental issues. Parker [14] similarly recognizes the importance of avoiding the slide from rational persuasion to manipulation in safeguarding the patient-provider relationship, and claims that the reasons to maintain the patient's trust can outweigh the pro tanto reason to minimize environmental harms in medical care. Whilst Parker himself does not join other green advocates in explicitly advocating a generalizable duty for physicians to disclose information about the environmental impact of medical interventions to all patients, our own view is that this would plausibly serve to undermine trust in a considerable number of cases.

A provider with strongly held beliefs on the importance of mitigating climate change, like the physician who views beautifying cosmetic surgery as highly immoral, may find it difficult to disclose information about environmental impacts of treatment options in a dispassionate way. Even if the provider thinks they are disclosing information in a non-emotional, rational way, a patient who does not want to discuss environmental issues with their provider, like the patient who does not want to engage in a debate about cosmetic surgery, may view the provider's conduct as judgmental, self-righteous, or manipulative. Therefore, while green consent may strengthen relationships when patients and providers agree on environmental values, it can have the opposite effect when they do not.

6. Conclusion

Some bioethicists have argued that health care providers should routinely inform their patients about the environmental impacts of treatment options during the informed consent process. We have challenged this proposal by arguing that it may inappropriately infringe on autonomy and damage the patient-provider relationship in situations where patients are not interested in discussing environmental issues with their providers, because they might feel that they are being judged or manipulated. Nevertheless, it may be appropriate for providers to share environmental impact information with patients who have clearly expressed their interests in environmental issues, because this information would be relevant to them. Providers who want to engage with these patients could reach out to them by publicizing their environmental values,

policies, and practices on their websites or in their informational pamphlets and encouraging patients to inquire about them. Patients who want to learn more about the environmental impacts of their health care could do so, while those who do not would be free to act accordingly. This type of approach to interacting with patients on environmental issues would facilitate patient autonomy and informed decision-making without crossing over the line toward manipulation and politicization of the patient-provider relationship.

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