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Overcoming Legal Impediments to Physician Orders for Life-Sustaining Treatment

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Abstract

The Physician Orders for Life-Sustaining Treatment (POLST), otherwise known as the POLST paradigm, represents the next generation in end-of-life (EOL) planning for certain patients who wish to exercise prospective control over their own medical treatment in their final days. As is true for any physician treatment orders, a POLST is written in consultation with the patient or patient's surrogate. There are a number of practical impediments to widespread adoption and implementation of the POLST paradigm in medical practice. One of these impediments has to do with some physicians' anxiety about potential negative legal repercussions they might suffer for writing or following a patient's POLST; this is the focus of the present article. After describing the POLST paradigm and physicians' anxieties about it, this article argues that the feared potential negative legal consequences of writing or following a patient's POLST are not well founded. Instead of succumbing to legal and ethical paralysis, resulting in the failure to integrate the POLST paradigm robustly into practice, physicians should feel comfortable under current and developing law to write and honor POLSTs for appropriate patients. This article explains the basis for such physician comfort.

Introduction

The topic of end-of-life (EOL) medical care arises more frequently today in discussions about clinical practice and health policy than it did in the past. Specifically, criticisms of the current state of aggressively overmedicalized dying in the United States are once again emerging from a variety of quarters, along with forceful calls for substantial improvements in the kind and quality of medical and supportive care provided to patients approaching or living through the final stages of life [1, 2].

At least since enactment of the federal Patient Self-Determination Act (PSDA) in 1990, health care professionals, patients and their advocates, family members, and public policy makers have looked hopefully to advance medical planning documents, particularly instruction (living will) and proxy (durable power of attorney) directives, as the primary mechanism for recording individual preferences and effectuating personal

autonomy in the EOL context [3]. In many cases, this strategy has worked well enough to ensure that medical care of dying patients comports closely with those patients' known or imputed values and wishes [4]. However, one study of 9,105 adult patients found that an intervention to improve EOL decision making improved neither care quality nor outcomes [5]. Even when a patient has created a legally authorized advance planning document in a timely manner, for a number of reasons the advance directive might not be honored by caregivers in precisely the circumstances envisioned by the patient [6]. Thus, there is a growing consensus that achieving progress in the experience of dying in America requires an evolution involving the development and implementation of a next generation of planning tools [7].

The POLST Paradigm
Fortunately, a next-generation EOL planning mechanism already has been invented, although it has not yet been fully implemented even for eligible patients. The Physician Orders for Life-Sustaining Treatment, or POLST (with terminology varying slightly among states) [8], unlike the traditional advance directive executed by a patient while still decisionally capable, entails a medical order written by a physician (with the concurrence of the patient or surrogate decision maker) instructing other health care professionals (such as emergency medical squads) about the treatment of a seriously ill or extremely frail patient. POLST originated in 1991, when a group of leading medical ethicists in Oregon, finding that patient preferences for EOL care were not consistently honored, convened a group of stakeholders who developed a new tool for honoring patients' EOL treatment wishes. In 2004, the National POLST Advisory Panel, later known as the National POLST Paradigm Task Force, convened to establish quality standards for POLST paradigm forms and programs to assist states in developing the POLST paradigm [8]. More than 16 states have formally implemented the POLST paradigm through legislation or regulation, but at least 45 states have some health care professionals and institutions that are using POLST for some patients [9].

Unlike advance directives, which are advisable for every adult who is decisionally capable of creating one, regardless of current physical health status, only a specific subset of the adult population is properly eligible for physicians' writing of a POLST, namely, for frail elderly patients or those with advanced chronic illness whose deaths within the next year or two would not surprise those persons' physicians. Thus, the POLST paradigm is not intended or proposed to replace advance directives for the large percentage of adults who do not meet eligibility criteria.

For those patients for whom a POLST is appropriate, it has demonstrated advantages as a supplement to traditional advance directives executed by the patient. For example, the POLST paradigm, through a structured discussion, combines the patient's deeply held values and the physician's expertise about medical means through which to achieve those values. The POLST allows for precision in EOL care instructions, which are recorded

on a POLST form to try to minimize need for interpretation in particular cares. The POLST form can also follow a person across different care settings. The most important advantage suggested by research is that health care professionals are more likely to honor POLSTs in practice than patient-written living wills or the expressed preferences of patient-appointed surrogates [10]. Therefore, although much more research needs to be conducted before firm conclusions can be drawn [11], it appears at this point that POLSTs are more likely than advance directives to influence EOL care in a direction consistent with a patient's autonomy [12]. Many more states, such as Florida [13], are in the process of developing and integrating into practice their own versions of POLST.

Impediments to POLST Adoption
If POLST is such a great idea, one might ask, why don't we just do it for appropriate patients? There are several impediments, including a resistance to change and ignorance on the part of key actors (including physicians, emergency medical personnel, hospital and nursing facility administrators, and other health care professionals) regarding the advantages of POLST for responding to patients at the EOL. There also is political and ideological resistance by a few groups that attempt to characterize POLST as a pretext for denying treatment to vulnerable persons or for actively hastening their deaths [14]. This misperception has been carefully rebutted by advocates of POLST who explain that POLST is, in fact, a tool for effectuating the autonomy of appropriate patients and thus protecting them from either unwanted medical interventions or the lack of desired interventions [9].

One additional barrier to broader adoption and implementation of the POLST paradigm, though, is physicians' anxiety about potential negative legal repercussions for purposely withholding or withdrawing any form of life-sustaining medical treatment in the absence, or sometimes even in the presence, of legislation or regulation in physicians' own jurisdiction that explicitly grants physicians immunity against criminal, civil, or disciplinary sanctions associated with a decision to withhold or withdraw life-sustaining medical intervention, including under POLST participation [15-17]. As one experienced professor of health law and medical ethics has observed,

> While unlikely to be a conscious factor, physicians also collude in the denial of death because they prefer not to be sued. To avoid litigation, they could justify performing unnecessary or futile care at the end of life out of an unjustified fear that a dissatisfied patient may file a medical malpractice claim…. A general fear of being sued might explain aggressive care at the end of life [18].

For example, studies have demonstrated that physicians are dissuaded from following the provisions in valid advance directives out of fear of possible litigation from family members [19]. As explained by one legal scholar:

Historically, physicians have been reluctant to be involved in medical interventions that hasten a patient's death. They are concerned that facilitating or failing to forestall death will get them into legal trouble. Yet, there is a strong public policy interest in honoring patient autonomy and permitting individuals to forgo life-sustaining treatment when they determine that the burdens outweigh the benefits. Accordingly, the healthcare decisions acts of most states grant physicians immunity for complying with advance directives. Similar immunity is provided to encourage compliance with the newer Physician Orders for Life-Sustaining Treatment ("POLST") [20].

Some states initially promoted POLST through a process called clinical consensus [21]. This approach entails obtaining explicit assurance from relevant state agencies that extant state statutes and regulations already permit physicians to write, patients and surrogates to agree to, and other health care professionals to implement POLSTs. In the clinical consensus model, POLST proponents concentrate on trying to change behavior by educating health professionals and the public about the virtues of the POLST tool for appropriate patients rather than on embarking on the potentially politically treacherous, unpredictable, and often uncontrollable course of trying to amend the law. However, following the establishment of clinical consensus among health care professionals, legislative and regulatory routes to POLST implementation eventually have been followed in almost all the states with mature POLST programs, largely to assuage physicians' and emergency responders' lingering legal anxieties [21]. Put differently, medical professionals have demanded explicit immunity provisions, preferably in statute [22]. In the author's experience over the past six years promoting implementation of the POLST paradigm in Florida, physicians and emergency medical personnel throughout the state have consistently indicated support for the idea but reluctance to embrace it in practice without the existence of express statutory immunity against civil, criminal, and disciplinary actions based on the physician's effectuating the patient's autonomous treatment choices. Additionally, the author has heard complaints from many patients (and their family members) about their personal physician's refusal to write requested POLSTs for them without the assurance of clear statutory immunity protecting the physician against malpractice actions, criminal prosecutions, and disciplinary sanctions.

Implementing POLST in the Absence of Explicit Legal Authority
Nevertheless, progress in states that have not yet enacted legislation or promulgated regulations explicitly authorizing POLST should not be delayed until the complexities and pitfalls of the political and administrative processes have been successfully navigated by a jurisdiction's POLST proponents, an endeavor that could take several more years. It is important for physicians in states developing or considering developing plans to implement POLST to understand that, contrary to their legal apprehensions—

apprehensions permeating the EOL atmosphere generally—knowledgeable commentators hold that there actually is no valid legal reason to refrain from writing and honoring POLSTs in appropriate circumstances and following conversation with, and agreement from, a patient or surrogate [21].

Constitutional [23] and common (judge-made) law [24], on both the federal and state levels, already protects the individual's liberty and privacy rights, which include rights of adult patients with decision-making capacity to make both contemporary and prospective medical decisions and to secure voluntary assistance from their physicians in effectuating those rights. These liberty and privacy rights extend to choices to withhold or withdraw different forms of life-sustaining medical treatments [25]. State statutes—even when advance directive legislation contains purportedly restrictive language concerning applicability—do not and cannot infringe upon a patient's constitutional right to be protected against insufficiently justified state interference with bodily integrity [26]. Legal research reveals no case in which any physician has been prosecuted, civilly sued, or professionally disciplined for writing a POLST; nor have any emergency medical personnel or other health care professionals been prosecuted, sued, or professionally disciplined for honoring a POLST. However, families increasingly are initiating legal action against physicians and other health care professionals for subjecting patients to unwanted medical interventions at the end of life, and courts are responding favorably to those legal actions [27, 28].

What is needed on a national scale is to reproduce the path followed by most of the states with presently endorsed or mature POLST programs, namely, the development of pilot or demonstration exercises leading to clinical consensus among a state's medical practitioners. Through such projects, the viability and benefit of POLST approaches to EOL care can be demonstrated and documented. In the presence of a broad clinical consensus among practicing medical professionals, a state's legislature or relevant administrative agencies consequently would be asked merely to codify prevailing clinical practices.

Admittedly, this strategy of reproducing established and successful POLST programs requires the mustering and exhibition of moral courage by clinicians—but with the understanding that legal risks really range somewhere between nonexistent and extremely minimal. Clinicians' moral courage can be supplemented or enhanced by a recent change in Medicare regulations that provide a mechanism for paying physicians to counsel patients about EOL planning [29]. Although the actual impact of this change in payment policy on physician behavior remains to be seen [30], given what I've argued here, this new incentive under the Healthcare Common Procedure Coding System (HCPCS) can be seen as national policy-level support for more robust integration of POLST-inspired care management.

Such moral courage, in the sense of physicians being willing to effectuate patient wishes by writing a POLST and other health professionals' being willing to honor and implement the POLST, should be encouraged by medical and other health care professional organizations. What these organizations need to do is not only endorse immunity-specifying legislation and regulation (although that is an important component of the overall strategy) but also create, disseminate, and educate people—fellow clinicians, administrative colleagues, patients, and patients' loved ones—about clinical practice guidelines pertaining to the writing and honoring of patients' POLSTs. Until this happens, unfortunately, physicians might not be able to rely on the many other health care professionals who work together when caring for patients to honor a POLST for a particular patient.

Conclusion

In sum, physicians who care for patients approaching the end of life have a valuable—but thus far seriously underutilized—tool available in the POLST paradigm to help them express respect for a patient's autonomy. They should not hide behind exaggerated or inaccurate anxieties about supposed legal risk as an excuse for not doing more to enhance the quality of the dying experience for patients who depend so much upon them for a humane death that accords with their wishes for EOL care.

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PEER-REVIEWED CME ARTICLE

The Limits of Informed Consent for an Overwhelmed Patient: Clinicians' Role in Protecting Patients and Preventing Overwhelm

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Abstract

In this paper, we examine the limits of informed consent with particular focus on ways in which various factors can overwhelm decision-making capacity. We introduce *overwhelm* as a phenomenon commonly experienced by patients in clinical settings and distinguish between emotional overwhelm and informational overload. We argue that in these situations, a clinician's primary duty is prevention of harm and suggest ways in which clinicians can discharge this obligation. To illustrate our argument, we consider the clinical application of genetic sequencing testing, which involves scientific and technical information that can compromise the understanding and decisional capacity of most patients. Finally, we consider and rebut objections that this could lead to paternalism.

Introduction

As clinical medicine and translational science have evolved over the past several decades, medical ethics has faced the challenge of keeping pace with the development and clinical application of new therapies and technologies. In this paper, we propose a categorical rethinking of the doctrine of informed consent in specific clinical contexts. In a sense, informed consent is the victim of its own success: we suggest that informed consent has become so central and important to the way clinicians practice that they may fail to recognize situations in which patients' ability to provide informed consent may be compromised. We introduce the concept of the overwhelmed patient, reflecting on different ways in which patients' ability to provide informed consent may be compromised, and invoke the need to protect patients as a countervailing ethical obligation. We then provide suggestions for how clinicians can prevent patients from becoming overwhelmed, either emotionally or cognitively: emotionally overwhelmed

patients need support, and informationally overwhelmed patients need alternate models of medical decision making. No doubt, informed consent is a valuable way in which clinicians attempt to discharge their obligation to respect patient autonomy. But clinicians also have other ethical obligations, including beneficence and nonmaleficence; we argue that informed consent is not the appropriate way to discharge all of a clinician's ethical obligations in all clinical situations. Specifically, we will argue that in situations in which patients potentially can be overwhelmed, clinicians have the obligation to take steps to prevent them from becoming overwhelmed, or at the very least to prevent harm that may result from emotional overwhelm or informational overload.

Informed Consent and Autonomy
When talking about informed consent, one should distinguish between research and clinical care. There is a difference between the role of investigator and the role of clinician, and between physician-patient and investigator-participant relationships [1, 2]. Although the ideas we explore in this essay could be relevant to either research or clinical contexts, we will focus on clinical contexts—specifically, the implications of our ideas for informed consent for clinical care in situations in which informed consent may not be an appropriate approach to decision making.

A recent essay brought this set of concerns to the fore. Reflecting on informed consent in the case of whole genome sequencing, Parens argues that "informed consent is meant to protect people from being coerced into decisions that someone else thought were in their—or the state's—best interest" [3]. Nevertheless, Parens observes a "drifting away" from informed consent in genetic sequencing testing, which he views as unfortunate if we consider what is at stake in informed consent: respect for persons. Parens does acknowledge that we shouldn't just remain committed to informed consent because it is traditional but argues that if we move away from informed consent, we should have good reasons to do so. A mere "drifting away" would be ethically troubling, as it would put respect for persons at risk.

We agree with Parens's sentiments. Respect for persons and the accompanying doctrine of informed consent are cornerstones in bioethics. But are there perhaps good reasons to move away from informed consent in the field of whole genome sequencing tests and, as we are suggesting, instead focus on protecting patients? We contend that there may be: in the context of whole genome sequencing, informed consent may be impossible, and a clinician needs to shift towards preventing harm.

Our thinking informed by Parens's essay prompts us to make a suggestion some might find unsettling. In their fervor to respect the autonomy of patients, some clinicians approach every biomedical intervention and test without questioning the doctrine of informed consent. This means that clinicians engage patients in discussions of the benefits and risks of interventions and tests and expect an informed decision from the

patient. In the right contexts this is appropriate. The problem is that informed consent is not always possible. There are some contexts in which the nature of the information is such that the patient's understanding and capacity for decision making are overwhelmed, making informed consent impossible. Besides the duty to respect a patient's autonomy, a clinician has a host of other ethical obligations to her patient. Notably, these include the duty of preventing harm. For example, a patient whose decision-making capacity is compromised or who is overwhelmed may be at risk of making decisions harmful to him- or herself without even realizing it. Such a patient is also at risk of the harm of having her values compromised, as a patient with compromised decisional capacity may make a choice that is actually not in keeping with her values.

If patient autonomy is not feasible, the clinician's other ethical commitments remain in place and should still be discharged. Given the primacy of the ethical injunction to avoid patient harm, we therefore argue that in situations in which informed consent is not feasible because a patient's decision-making capacity is overwhelmed, a clinician should consider shifting from prioritizing informed consent to protecting her patient.

Overwhelm and Information Overload
The claim we defend is a simple one: there are medical situations in which the information involved in making a decision is of such a nature that the decision-making capacity of a patient is overwhelmed by the sheer complexity or volume of information at hand. In such cases a patient cannot attain the understanding necessary for informed decision making, and informed consent is therefore not possible. We will support our thesis regarding informational overload by focusing specifically on the area of clinical whole genome sequencing—i.e., identification of an individual's entire genome, enabling the identification and interaction of multiple genetic variants—as distinct from genetic testing, which tests for specific genetic variants.

We will first present ethical considerations regarding informed consent. Next, we will present three sets of factors that can burden the capacity of a patient to provide informed consent for a specific decision—patient, communication, and information factors—and argue that these factors may in some circumstances make it impossible for a patient to provide informed consent. We will then discuss emotional overwhelm and informational overload and consider how being overwhelmed affects informed consent. Our interest in this essay is mainly in informational overload; we will therefore consider whole genome sequencing as an example in which informational factors overwhelm a patient's decision-making capacity. Finally, we will offer suggestions as to how the duty to protect patients from harm can be discharged when informed consent is not possible because of emotional overwhelm or informational overload.

Informed Consent and Capacity

Informed consent happens when a patient authorizes a medical procedure or intervention based on understanding of the risks, benefits, and alternatives [4, 5]. This process assures respect for the free decisions of autonomous individuals, a duty that derives from the moral principle of respect for persons. A valid process of informed consent requires four things: voluntariness (the decision is free from coercion or undue influences), disclosure (the clinician's sharing of information relevant to the patient's decision), understanding (appreciating the risks, benefits, and nature of the procedure), and capacity (the ability to engage in reasoned deliberation, comparing the risks and benefits of the procedure with personal life goals) [4, 5].

Informed consent can be compromised when any of these elements is lacking. For example, if a decision is not voluntary but is instead made under duress from a clinician, family member, or other third party, it is not informed consent. Similarly, if a patient lacks capacity to engage in reasoned decision making, informed consent is not possible. In other words, for informed consent to achieve the goal of respecting persons, each of these components needs to be present.

Capacity can be thought of as a sliding scale, rather than an all-or-nothing phenomenon [4]. A patient may have the capacity to make some decisions but not others. On a sliding scale, the higher the stakes of the decision and the more nuanced the information involved in making the decision, the higher the threshold for considering a patient to have capacity. For high-stakes, life-or-death decisions with complex medical information, a high threshold for capacity would be required. This means that a patient would be required to demonstrate a greater ability to process and reason about the complex information involved than is needed for less demanding or lower-stakes decisions. For example, if a person refused a life-saving surgical procedure for which the risks are negligible and refusal would result in certain death, the threshold for accepting a refusal of surgery as an informed and autonomous refusal is quite high. A surgeon faced with such a patient would want to go to great lengths to ensure that the patient truly understands the choice and its implications, and that these match the patient's life goals and values, to ensure that the patient's refusal is an autonomous choice. If the patient was a 15-year-old who said that she didn't want a surgical scar and therefore refused surgery, the threshold for capacity has likely not been met.

In situations in which patients clearly do not have the capacity to make informed decisions, clinicians do not continue to seek informed consent from their patients. In an emergency, when someone is unconscious, a clinician might presume consent and administer emergency treatment. In some other cases, a surrogate decision maker is sought to decide on behalf of the patient. For minors, who have not yet developed the cognitive skills required for understanding and deliberation, parents make decisions on behalf of their children, according to the perceived best interests of their children. One

could argue that in these situations clinicians are making protection of the patient the primary ethical consideration. In an emergency involving an unconscious patient, protecting the patient against harm supersedes the obligation to obtain informed consent for procedures that would otherwise require informed consent. If a patient lacks capacity, a surrogate decision maker provides physician oversight and thereby potentially diminishes harm from physician biases. Typically, surrogates are also asked to verbalize the values of the incapacitated patient to the best of their abilities, ensuring that a patient is protected from the harm of having his or her values overlooked in the provision of care.

These arguments are based on considerations of patient protection and do not accord with the model of informed consent, which is justified by respect for autonomy. More obviously, in surrogate decision making for children, autonomy is less important than doing what is best for the child. The driving force for decision making is not an informed consent process but a decision-making process that seeks the best outcome for the child [6]. When it comes to adults, the ethical values underlying surrogate decision making are respect for self-determination and concern for the patient's well-being [7]. The ideal is a [substituted judgment process](#) in which the surrogate illuminates the prior wishes of the incapacitated patient [7]. However, this is not always possible, and, even when it is possible, it can be an imperfect process [7]. Ideal substituted judgment obviates the need for including other measures, such as weighing the welfare of the patient. For example, if the patient's prior wishes are not known, the surrogate is encouraged to resort to the best interest standard, which is purely based on considerations of patient welfare [7]. Our point is that surrogate decision making is not purely based in autonomy, as is the case with a dyadic informed consent process (the traditional informed consent process between two parties, clinician and patient); other ethical values such as the welfare of the patient are also relevant in the process of surrogate decision making. Surrogate decision making moves away from the ideal of informed consent towards valorizing protection of the patient. This is appropriate; in these situations informed consent is not feasible, and given the primacy of the ethical obligation to do no harm, a clinician should focus on her obligation to protect her patient rather than fixating on informed consent.

Three Variables Influencing Capacity: The Sliding Scale of Capacity and Its Consequences
There are three broad sets of variables that influence capacity.

Patient-related factors. One set of variables is patient related. In the most obvious case, a patient who is unconscious lacks capacity to make even the most basic decisions. A patient who is under the influence of alcohol or hallucinogenic drugs may lack capacity for most decisions. Very young children lack the capacity to make medical decisions. But there are also more subtle cases in which it is unclear to what extent capacity is

influenced by patient-related factors. Some patients may not have the educational attainment or intellectual ability to understand the choices before them if the choices are scientifically complex. Language and cultural barriers may also impose limits on capacity. In some medical situations, it could be that such patients have a significant enough challenge in understanding that it should alert a physician to potentially diminished capacity.

To make this even more complex, let us imagine these factors as a sliding scale. On the one end, there are patient factors that completely preclude capacity and, on the other, patient factors that burden capacity but do not make it impossible. So, on one end of the sliding scale we have unconscious patients that can make no decisions and, on the other, patients with no clinically relevant limit to their cognitive ability to understand. In between we have persons with varying degrees of patient-related factors influencing their capacity.

The emotional burden of the illness experience and consequent cognitive overload, which may affect the patient's decisional capacity, is a patient-related factor that is alluded to in the bioethics literature, but is nowhere fully explored. For example, Appelbaum writes, "When fear or anxiety appears to be interfering with a patient's ability to attend to and process information, introducing a known and trusted confidant or adviser to the consent process may permit the patient to make competent judgments" [8]. If additional relational support does not solve the problem, Appelbaum argues that a surrogate decision maker should be sought [4]. It goes without saying that the use of a surrogate decision maker should be reserved for instances in which a patient's decision-making capacity is compromised to the point she cannot engage in medical decision making regarding the issue at hand. Surrogates are not the same as supportive confidants, and clinicians should distinguish between these. A confidant aids in decision making and shores the patient up against overwhelm, while the patient retains authority to authorize medical treatments. A surrogate makes decisions on behalf of the patient, and the surrogate authorizes medical treatments. Surrogates are only used when the patient cannot make decisions for herself.

Information-related factors. If decisional capacity is on a sliding scale, the more complex, scientifically advanced, and intellectually demanding information becomes, the higher the threshold for capacity of patients to provide consent. Some types of medical information (e.g., risk) contain probability estimates that require training to understand fully and tax the ability of patients to understand and deliberate.

We would argue that if the sliding scale of decisional capacity holds for patient factors, it also holds for information factors. On one end of the scale is comprehensible, straightforward information on a procedure and its risks and benefits that is clear and easily understandable. As we move up the sliding scale, the information becomes more

voluminous and more complex; the burden on capacity becomes higher. If we keep going up the scale, at some point we encounter information that people who ordinarily have capacity to make their own decisions find impossible to fully understand. Of course, we may still find exceptions here: a medical expert or molecular geneticist may still have the cognitive ability to understand and engage information at these very high levels. But for most patients, full understanding—and truly informed consent—will be impossible.

Communication-related factors. Clinicians' skill and method in communicating complex medical information to patients has been shown to influence the understanding that patients attain [9, 10]. For example, making use of decision aids, extending the decisional timeframe, and communicating complex concepts in digestible chunks can aid patient understanding [9, 10]. Alternatively, it is not hard to see that dumping an indigestible barrage of complex information on a patient would challenge her understanding. The clinician's capacity to communicate complex information is therefore an important variable that impinges on decisional capacity. It is thus important that clinicians have skill and expertise related to communicating information, facilitating understanding, and reducing the effects of emotional overload. We recommend that the learning of such skills be routinely incorporated in clinical training across all medical disciplines and that these skills be reinforced by specialized communications training for practicing clinicians.

Of course, combinations of patient and information factors may interact and influence capacity synergistically—think of a patient with a language barrier and low level of education who is faced with risk and benefit information that includes complex scientific concepts and probability estimates.

Our argument is therefore a simple one. Informed consent depends on capacity. Capacity can be influenced by patient factors, information factors, and communication factors. Upon reflection, it seems possible that certain types of information overwhelm the decisional capacity of patients who have no patient factors impacting their capacity. That is, it may be possible that some types of information render a competent patient unable to provide truly informed consent. In such situations, patients are in effect incapacitated for that decision.

Introducing the Concepts of *Overwhelm* and *Informational Overload*
We suggest that there are at least two ways in which a patient can be overwhelmed so that obtaining informed consent is not feasible.

Emotional overwhelm. First, a patient may be emotionally overwhelmed by the illness experience and by the implications and complexity of decisions she is now faced with. We will refer to this idea as *emotional overwhelm*. Being emotionally overwhelmed may make informed consent more difficult and would require the clinician to take extra steps to ensure that an autonomous choice has been reached through an informed consent

process. Informed consent may still be possible in this case but is more difficult to attain as the patient's ability to make decisions is taxed. In such cases, the clinician must make an extra effort to ensure the integrity of the informed consent process by taking steps that may protect patients against the effects of emotional overwhelm. Consider the following:

- Enabling the patient to be supported by family or loved ones.
- Using a multidisciplinary approach, enabling the patient to be supported by various members of the care team.
- Extending the decisional timeframe, delivering news in a skillful and incremental way, and using decision aids [9].

Such steps may assist an informed consent process and ultimately allow true informed consent in the case of the emotionally overwhelmed patient.

Information overload. A patient's ability to provide informed consent may also be overwhelmed by the complexity, uncertainty, or volume of information involved in the decision, as may occur with the emergence of newer technologies such as whole genome sequencing [10]. Informational overload is present when the information required to provide informed consent is of such complexity, volume, or uncertainty that it makes it impossible for a patient to make an informed choice because the decision-making capacity of the patient is overwhelmed; the patient is in effect incapacitated for the decision in question.

We suggest that in these circumstances a clinician focus on the countervailing ethical obligation of protecting her patient against harm. There are cases in which informed consent is from the outset not possible because of informational overload, in which no amount of bulwarking against being informationally or emotionally overwhelmed can facilitate reaching true informed consent. What incapacitates the patient is the information itself. There may not necessarily be any patient- or communication-related factors that impinge on decision making. We are not advocating that clinicians evaluate patients for informational overload in the provision of general clinical care; informational overload is situational, related to the information itself, and not patient-specific. Instead, we recommend that clinicians be aware of certain clinical situations in which informational overload is unavoidable, and that specific steps be put in place to protect patients in such situations.

Possible Alternate Approaches to Attain Informed Decision Making
How should clinicians respond to such situations?

Surrogate decision making. One possible solution to the problem of informed consent when decisional capacity is compromised is to seek a surrogate decision maker. However, in situations of informational overload, this may not solve the problem. If the information has inherent qualities that would overwhelm a reasonable patient, it is likely

to also overwhelm a surrogate. Unless the surrogate decision maker is a content expert who also understands the values of the patient, a surrogate decision maker will not solve the problem of informed consent. Surrogate decision making may, however, be useful for the emotionally overwhelmed patient who remains unable to provide informed consent despite additional support [4].

Shared decision making. Another possible solution is to make use of shared decision making (SDM) [11, 12]. This approach relies on deliberation between clinician and patient regarding available health care choices, taking the best evidence into account [11]. The clinician actively involves the patient and elicits patient values [11]. The goal of SDM is often stated as helping patients arrive at informed decisions that respect what matters most to them [11].

It is not clear, however, that SDM will be successful in facilitating informed decisions when an informed consent process has failed. SDM as a tool for informed decision making is at its core dependent on the patient understanding the options presented and being able to describe the preferred option. Understanding and deliberating about what is at stake for each option is a key component of this use of SDM. Therefore, if the medical information is so complex that it overloads the patient's decision-making capacity, SDM is unlikely to achieve informed decision making. But if a patient is emotionally overwhelmed by the illness experience and all that accompanies it, a process of SDM and support for the patient may eventually facilitate informed decision making.

We believe that SDM cannot in fact facilitate obtaining informed consent in medical situations in which informational overload is present and that the primary goal of SDM in these situations is not informed decision making. Instead, we believe that SDM represents a move away from an informed consent process towards protecting patients. We submit that the true primary goal of SDM is not informed consent but to make treatment decisions that are in keeping with medical evidence and standards and also consistent with a patient's values [12]. In SDM, the clinician advances recommendations based on her understanding of the patient's expressed values, incorporating the clinician's obligations of avoiding harm and providing benefit to her patient [11, 12]. SDM protects the patient in two ways. The clinician respects the patient's personhood by eliciting and taking into account the patient's values during care planning but also protects the patient against harm by advancing recommendations in keeping with the best evidence. Resorting to SDM, in our view, acknowledges that informed consent is not the correct tool for certain complex medical situations and that considerations of patient protection are paramount.

Thus, if SDM is used as a tool to facilitate informed decision making, we suggest that it will not reach its stated goal when informational overload is present. If, however, SDM is seen as a patient protection tool with the goal of eliciting and taking into account patient

values during care planning, we fully support its use. We maintain that in circumstances in which patients' capacity is overwhelmed, clinicians should shift their focus from obtaining informed consent to protecting the interests of the patient. It is important to note that the patient only lacks capacity for this decision and not for others. Capacity is decision-specific. Therefore, it is only in terms of a particular decision for which informational overload makes informed consent impossible that the clinician should focus on protecting the patient. This conclusion has far-reaching implications for decision making about genetic sequencing tests.

Whole Genome Sequencing: Revisiting and Building on Parens's Argument
Whole genome sequencing is entering the field of precision medicine [13]. It is generally accepted that the routine incorporation of whole genome sequencing in clinical care is inevitable and a positive development in health care in the near future [13, 14], one that will lead to exciting new diagnostic and therapeutic options [13, 14].

The problem with whole genome sequencing is that these tests return mountains of information, including a multitude of incidental findings [14]. Such findings may include higher risk for certain diseases and early diagnosis of a presently asymptomatic disorder [14]. Interpreting the implications of these incidental findings is quite complex, and it is recommended that medical decision making be done in conjunction with a clinical geneticist [14]. Such incidental findings can lead to harm, which has implications for the use of whole genome sequencing tests [14, 15].

The incidental findings may trigger additional tests, each of which carries its own risks of harm [16]. In particular, some of the incidental findings will be false positives—incorrectly indicating that a patient has a given condition—triggering unnecessary testing, cost, and anxiety [16]. Genome sequencing tests may also return results that have implications for close family members, triggering testing for these family members, which may cause distress to the patient and family [17]. Another potential harm is that the Genetic Information Nondiscrimination Act of 2008 does not prevent insurance providers from obtaining and using the results of a genetic test in calculating payments to insured persons for claims, although it does not allow them to require genetic tests prior to issuing insurance [18]. It cannot be predicted prior to the test whether a genome sequencing test will reveal the kind of information that may put a patient at risk of receiving lower insurance pay-outs. It is true that all medical information can be used by insurance companies in this way, so in a sense whole genome sequence testing is not distinct from other medical testing. However, given the sheer amount and complexity of information returned by genome sequencing and the vast potential for returning medically relevant incidental findings, the possible implications for insurance pay-outs from having a whole genome test are a valid concern.

The potential harms of a whole genome sequencing test are therefore substantial, leading some to suggest that an informed consent process should accompany genomic testing [14, 15]. Considering the challenges posed to informed consent by incidental findings that arise in the course of genome sequencing tests [19], Appelbaum and colleagues argue that the magnitude and implications of the potential incidental findings are sufficiently great to preclude a traditional informed consent discussion. Accordingly, Appelbaum et al. suggest that alternate models of informed consent be used for these tests [19]. These options all aim to address the inherent difficulty in different ways, but each has problems. One model is telling a patient that there may be incidental findings and then obtaining consent for the release of specific actionable incidental findings if they occur. Another is making the return of certain categories of incidental findings a condition of testing. These two options impinge on the very autonomous choice they seek to protect; limiting autonomy to ensure respect for autonomy is a strange way of ensuring respect for persons. Lastly, consent could be outsourced to a third party—send a patient to an expert who will deal with the consent process and the return of incidental findings, but this is not really a solution. Although it is highly advisable and good practice to involve genetic experts in decision making and in discussions with patients, the risk of informational overload still remains. Thus, even if a third party has superior content knowledge, the information itself may still overwhelm a patient's ability to provide consent according to the traditional informed consent model.

The challenges posed to informed consent are an ongoing focus of study of the National Institutes of Health (NIH) National Human Genome Research Institute. One of the institute's working groups is tasked with developing new and creative approaches to informed consent in clinical genetic sequencing and with developing standardized consent language [20]. But given the inherently complex informational factors that may overwhelm patient capacity, we argue that informed consent is inherently not possible and that an alternative model be invoked in dealing with clinical genetic sequencing. Is it not better simply to admit that informed consent is not possible, given the type and scope of the information pertinent to the test?

Koenig offers a solution that we find much more appealing [21]. In responding to Appelbaum et al.'s article [19], she argues that informed consent has become the equivalent of a fetish in biomedical research. When an issue arises in protecting research subjects, the answer is always "more consent." This, Koenig argues, is strange because there are definite limits to informed consent, particularly in the area of genetic testing, and because a growing body of research shows that there is a large disparity between the ideal of informed consent and what happens in practice in "informed consent" discussions [21-23]. Although Koenig's comments are focused on research, they are just as applicable to clinical care contexts. Koenig's proposed solution for the genetic sequencing challenge is intriguing: governance of consent. In this model, a patient consents to a decision-making process involving others. The return of actionable

incidental findings is discussed by a group of persons, including experts and community members; this group debates how the information should be handled and returned. The patient provides informed consent to have a group of this sort deliberate on her behalf about whether and how incidental findings would be returned. Koenig argues that this procedure respects patient values and autonomy, while also protecting patients from harms that might result from the volume of unexpected incidental findings associated with whole genome screening tests [21].

A number of things are attractive about Koenig's proposed solution, which could help us think more critically about how physicians can help patients with information overload. One is that it still draws on the decision-making capacity of the patient. Even though the patient may lack capacity to provide informed consent, she may have the capacity to consent to an alternate decision-making process. In clinical practice, this solution translates to offering a patient a number of different ways in which decisions can be made with regard to return of actionable findings. This process respects the personhood of patients in that they provide consent to the extent they are able and express their values in doing so.

At the same time, this process removes any fears that clinicians are "hiding something" or acting in ways that are unjustifiably paternalistic. It provides oversight of clinicians: a clinician has to verbalize his or her recommendation and plan to the community of peers or other deliberative community identified by the patient. But, most importantly, this solution also takes seriously the problem posed by the nature of the information and protects patients, in a morally responsible way, from being overwhelmed. Recognizing that the patient is incapacitated due to information factors, the clinician invokes an alternative to informed consent that protects the patient's interests while respecting her autonomy as far as possible. We would argue that Koenig's model of "consent to be governed" is quite consistent with the ethical goal of protecting patients.

Protecting Patients
We have argued that the complex nature of the information involved in whole genome sequencing can overwhelm the decision-making capacity of patients, making informed consent impossible. Given the impossibility of informed consent and the potential harms associated with genomic testing, we have argued that clinicians should focus on protecting patients from harm. Here we offer some suggestions on how this could be done. These suggestions would be of benefit in cases of informational and emotional overload. Suggestions 1-3 apply specifically to the context of whole genome sequencing, the quintessential example of a clinical situation in which informational overload may occur, and suggestions 4-7 should be considered in all cases of overwhelmed decisional capacity.
   1. If there are no clear benefits to a genetic test, it should not be offered to patients. There should be a clear indication as to why a test is necessary and a clear

benefit that outweighs potential harm before a test is done. If patients request a genetic test for a reason that does not meet these criteria, clinicians should discourage them from pursuing testing. This is not a new idea, but we emphasize it as important in contexts in which patients may become overwhelmed.

2. Extend the decisional timeframe. If a test is indicated and the patient needs to make a decision as to whether to undergo the test, clinicians should encourage the patient to take time to deliberate over the decision. Given the complexity of the information, we suggest that a decision should not be made within the confines of a 15-minute doctor's appointment. Rather, as much time as is needed to arrive at a good decision should be taken. We recognize that this recommendation is also not new; current genome testing practice standards recommend the involvement of a genetic expert and taking sufficient time in deliberation [14, 15]. We emphasize that this recommendation is an important one and that primary care clinicians should not engage in genomic testing without appropriate support and without taking an appropriate decisional timeframe into account.

3. If a test is clinically indicated, consider using an alternate model of decision making and consent. One such example is governance of consent as presented by Koenig [21]. Another possibility is to involve patients in a deliberative democracy process, such as a "community jury" [24]. In prostate-specific antigen (PSA) screening, it has been shown that involving patients in a community jury deliberative process increases understanding and retention of information and perhaps makes individual decision making easier [24]. This is a process in which patients deliberate with peers who face the same decisions regarding choices, with the support of content experts [24]. Perhaps some version of such a group deliberative process among peers can be helpful for some patients faced with possible whole genome testing. In clinical practice, this would amount to a clinician being transparent about the fact that informed consent is not possible in this complex situation and offering her patient different ways to make genomic testing decisions. Options offered could include assistance from the hospital ethics committee, a community jury process, or the patient deferring to the clinician. The patient therefore consents to a way in which decisions will be made while at the same time avoiding informational overload. Not only does this process respect and protect the patient, but it also facilitates realization of other values inherent to the practice of medicine, such as transparency, building of trust, and relationship-centered care.

4. Encourage relational support from family or friends when complex decisions are at stake. When patients face complex information, sharing decision making with family or friends can help them process it [25].

5. In clinical situations in which patients may be at risk of overwhelm, consider using an SDM approach instead of a traditional informed consent approach. Indeed, for decisions such as prostate cancer screening with PSA, many experts

recommend the use of an SDM approach [26, 27]. The SDM approach we advocate has the goal of making medical decisions that are in keeping with medical evidence and standards and are also consistent with a patient's values. The clinician advances recommendations based on the best medical evidence and on her understanding of the patient's values. This decision-making process requires open communication, establishment of a relationship, and exploring the patient's values. It is vital that clinicians develop the necessary skills to employ such an approach, and we suggest that clinicians receive training in SDM approaches both during their education years and while in practice.

6. Consider sharing information in digestible, progressive chunks, and on a need-to-know basis. This means only sharing what is necessary for prevention of serious harms and tailoring information in a way that protects a patient from being overwhelmed and from a potentially harmful choice. If complex information is presented all at once, it may increase the risk of informational overload and thus increase the risk of a harmful choice [25].

7. Because sharing information in chunks risks leaving clinician bias unchecked, we recommend that clinicians work with a support mechanism in place, such as consulting with an ethics committee. The clinician would voice her reasoning to the committee, which would provide assistance in guiding decisions on what information to share with the patient—including which options to strongly recommend and prioritize—and also compensate for inherent clinician biases. This is an important step in protecting a patient against harm when a high-stakes medical decision involves substantial informational complexity.

8. We recommend that all clinicians undergo communications training aimed at developing skills related to facilitating understanding, communicating information, and providing support to patients. Such types of training for clinicians have been shown to improve patient satisfaction, improve physician empathy, facilitate the formation of meaningful patient-clinician relationships, and decrease clinician burnout [28, 29]. Indeed, these outcomes show the importance of communications training in equipping clinicians with skills necessary to support patient decision making and prevent or respond to informational overload or emotional overwhelm. We recommend that communications training be included in clinical education programs across the board and be reinforced when clinicians are in practice. Since clinicians' ability to communicate may impinge on a patient's capacity to make a decision, clinicians' communication skills should be optimal.

The Charge of Paternalism
Some may object that we are arguing for a form of paternalism, contending that we think doctors know what is best for patients better than patients themselves do. Some may even accuse us of arguing for a return to the old days of "doctor knows best": the poor patients don't know what they need or want, so it is the job of the clinician to protect

them from themselves. In this way, the objector would argue, we are advancing an argument for the kind of paternalism that modern medicine has rightfully repudiated.

Our response is twofold. Firstly, these arguments should not be construed as an argument for paternalism because paternalism happens when a clinician overrides the autonomy of a patient, claiming that this is done in the patient's best interests [30]. We are arguing for no such thing. Our argument is that there are some situations in which autonomous decision making is not possible—for example, when the patient is overwhelmed. In these situations, there is no autonomous choice and no autonomy to override. Thus, our argument is not an argument for paternalism but instead an argument for an ethical safety net in cases in which autonomy is limited.

Secondly, the arguments we presented are meant to highlight some of the limitations of informed consent and not to justify paternalistic actions. It is simply the case that informed consent does not work in all medical situations and can in fact subvert the very ethical principles it is meant to protect. In such situations clinicians need other tools to ensure that their ethical obligations are fulfilled. The arguments we have offered are meant to move us along towards the development of such tools.

Conclusion
We have argued that threats to patient capacity are found in informational factors, patient factors, and communication factors. These place limits on the attainment and use of informed consent. We have argued that these limitations apply in the case of genetic sequencing, making informed consent impossible, and have suggested ways of protecting patients from harm when using these tests.

Continued insistence on using an informed consent process when it is not appropriate deflects from other important ethical obligations, such as avoidance of harm. We urge clinicians to be aware of the two different senses in which a patient can be overwhelmed and to protect overwhelmed patients from harm. There should not be a continued insistence on obtaining informed consent from the overwhelmed patient and, instead, steps should be taken to provide the assistance that patients in these situations require.

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FROM THE EDITOR
The Ethics and Value of True Interprofessionalism

During an intensive care rotation as a third-year medical student, I asked the physician supervising me if I could break off from the team of physicians for the morning, and instead spend the time with a nurse as she cared for patients. I had heard from classmates that the ICU nurses spent more time at the bedside than the physicians and that they were often fantastic teachers. The physician, however, was unenthusiastic about my idea. He replied that I wouldn't learn very much spending my time with a nurse. Not only was this a missed opportunity for me to learn about patient care, it sent a message that the work of nurses is less important, and less interesting, than the work of physicians.

A few months later, during my family medicine rotation, my faculty preceptor set aside time for me to learn about the work of the receptionist, nurse, and medical assistant in the clinic. From my interactions with each of these team members, I developed a more comprehensive understanding of patient care. By asking each team member to share her expertise with me, I transitioned from being simply a medical student working with one physician to an integrated member of the team. By understanding the multiple dimensions of care for a single patient visit, I was better able to care for my patients.

From my own experience as a medical student, I have had a glimpse into how critical interprofessionalism is for improving patient care and for providing health professions students with a more accurate and holistic understanding of health care delivery. My experience is not an isolated one; students, educators, and leaders in health care are increasingly recognizing the importance of interprofessionalism. In 2015 the Institute of Medicine (IOM) published a report on the impact of interprofessional education on health care delivery and patient outcomes [1], citing "widespread and growing belief that IPE [interprofessional education] may improve interprofessional collaboration, promote team-based health care delivery, and enhance personal and population health" [2]. The IOM report enumerated the negative consequences of inadequate interprofessional training.

> Inadequate preparation of health professionals for working together, especially in interprofessional teams, has been implicated in a range of adverse outcomes, including lower provider and patient satisfaction, greater numbers of medical errors and other patient safety issues, low

workforce retention, system inefficiencies resulting in higher costs, and suboptimal community engagement [3;citing 4-7].

Accordingly, the IOM's recommendations called for a "coordinated series of well-designed studies of the association between interprofessional education and collaborative behavior, including teamwork and performance in practice" [8] and for ongoing interprofessional education efforts. Encouragingly, leaders in health professions education have called for interprofessional education on a national scale [9]. In 2011, the Interprofessional Education Collaborative (IPEC) released a report titled "Core Competencies for Interprofessional Collaborative Practice," which called for interprofessional skills to be included as a core competency for health professions students [10]. The effort to create this report was itself interprofessional: IPEC was formed as a collaboration between the American Association of Colleges of Nursing, the American Association of Colleges of Osteopathic Medicine, the American Association of Colleges of Pharmacy, the American Dental Education Association, the Association of American Medical Colleges, and the Association of Schools and Programs of Public Health. Of four key recommendations of the IPEC report, one centered explicitly on the ethics and values that undergird interprofessional collaboration. The report delineated specific ethics-based interprofessional competencies, such as "place the interests of patients and populations at the center of interprofessional health care delivery" and "respect the unique cultures, values, roles/responsibilities, and expertise of other health professions" [11]. Yet it also acknowledged that interprofessional ethics is an emerging domain requiring further development [10].

What, exactly, are the ethics and values of interprofessional practice? How should these values be passed on to the next generations of health professions students? How should individuals, teams, and organizations respond when the environments in which they learn and work make it difficult to express these values? Drawing from recent research, innovative education models, policy analyses, and team-based clinical experience, this theme issue of the *AMA Journal of Ethics*® explores these questions.

Detrimental Effects of Hierarchy in Health Care

Medical students can find themselves in thorny situations when their clinical learning environments inadequately value the contributions of all team members. In her commentary on a case of a [medical student who is reluctant to communicate](#) with a nurse about a scheduling conflict, Aimee Milliken discusses how a medical student might respond when instructed by his superior to interrupt nursing care. The detrimental effects of medical hierarchy on teamwork are even more apparent in a case of potential conflict between a medical student and faculty member whose words and actions undermine interprofessional collaboration. In their commentary on this case, Angel Chen and Maureen Brodie examine how the student might approach the faculty member and [lead by example](#) through her interactions with her nurse colleagues.

Why Interprofessionalism Matters

Spanning discussions of medical education to legislation, several articles in this issue explore why an interprofessional culture that flattens hierarchies and values contributions across disciplines is critical for patient care. Paul Burcher argues for the importance of interprofessional education in his commentary on a case of a medical student on an obstetrics rotation who refuses to spend time with a nurse midwife, and, in the podcast, Lachlan Forrow discusses how medical education could be changed to improve interprofessional team-based care. From the perspective of a student rather than a teacher, Shara Yurkiewicz shares what she learned on her physical medicine and rehabilitation rotations from physical therapists, speech therapists, occupational therapists, and nurses about patient-centered care when she observed and listened to rather than questioned her patients. Two articles examine the implications of recent legislation. Meghan Rudder, Lulu Tsao, and Helen E. Jack broaden the conception of the health care team and physicians' role in evidenced-based policy by analyzing recent Massachusetts legislation that limits first-time opioid prescriptions to a seven-day supply. Providing a historical and legislative perspective on interprofessionalism, Lisa Simon examines the split between oral and general health care and the detrimental effects this split has on some of our health care system's most vulnerable patients.

Speaking Up, Making Change

Recognizing the potential of interprofessionalism for improving the experiences of patients, students, and clinicians, several contributors examine how interprofessional values can be instilled in clinical education and patient care. Melissa J. Kurtz and Laura E. Starbird review the literature on the benefits and effectiveness of interprofessional education interventions and discuss the promise of clinical ethics-focused, problem-based learning curricula. Kirsten Meisinger and Diana Wohler describe the Crimson Care Collaborative at Cambridge Health Alliance, a family medicine clinic in which students from different health professions programs are integrated into team-based care. Focusing on a quality improvement measure—the checklist and, specifically, the surgical time-out—Nancy Berlinger and Elizabeth Dietz argue that without a culture of inclusion and the space for team members to speak up, a tool like a checklist will be insufficient for improving patient safety. Anna T. Mayo and Anita Williams Woolley apply lessons from organizational behavior research to clinical teams, identifying communicative processes that can turn a group of capable individuals into a collaborative, high-functioning team.

True interprofessionalism is much more than putting nurses and physicians in the same workspace or educating dental students and medical students in the same classroom. True interprofessionalism must have a foundation of shared ethics and values. The diverse voices of this theme issue—from bioethics, dentistry, mediation, medicine, and organizational behavior—illuminate the social and cultural underpinnings, teaching, and

application of interprofessional ethics and values. In so doing, they collectively create a vision for a more collaborative, communicative, and inclusive clinical culture.

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ETHICS CASE

Prioritizing Cross-Disciplinary Teaching and Learning and Patient Safety in Hospital-Based Environments

Commentary by Aimee Milliken, MSN, RN

Abstract

In this case scenario, Darvid is a medical student who perceives that practicing his physical examination of a patient at a specific time conflicts with nursing care. His predicament highlights the importance of interprofessional communication. Darvid is hesitant to communicate with the nurse, and his fear is exacerbated by the hierarchical structure of the academic health care setting, exemplified by the senior resident's dismissive response to his concerns. This paper argues that every opportunity should be made to prioritize students' learning but that the patient's needs must come first. The nurse in this case is in a position to help Darvid assess the priorities in this situation, but he must first feel comfortable discussing his concerns. Interprofessional education can serve a valuable role in facilitating open communication.

Case

Darvid is a third-year medical student starting his first inpatient hospital-based clerkship, in internal medicine. He is following Mr. S, an 81-year-old man with diabetes who was admitted to the hospital for pneumonia. Darvid is expected to visit Mr. S each morning before 8 a.m. rounds to see how he is feeling and to perform a physical exam, which gives him opportunities to practice his patient interview and exam skills and to learn more about pneumonia and diabetes. He is expected to report his findings to the team during morning rounds. The internal medicine first-year resident physician, Dr. Alexa, also visits Mr. S each morning and is responsible for prescribing his medications and ordering tests.

One morning when Darvid arrives at Mr. S's room, a nurse, Jemma, is at the bedside, getting ready to measure Mr. S's morning glucose after a finger stick and then to help him to the bathroom. Darvid doesn't want to interrupt her work, but there are only a few minutes before morning rounds. He decides to wait outside the room until Jemma is finished with her tasks but has to leave for rounds before getting to see Mr. S. As he's waiting outside the room in the hallway, Dr. Alexa asks him what he's doing. He explains that Jemma was in the room and he didn't want to interrupt. She responds that he's here

to learn how to be a physician and needs be more assertive so that he can see the patient before rounds; she adds that Jemma can come back to Mr. S later.

The next day, Darvid finds himself in the same situation. He needs to be prepared for rounds shortly and wants to respect Dr. Alexa's instructions, but he also thinks the care Jemma provides is more important to Mr. S's health than being seen by a medical student seeking practice opportunities. He's not sure whether he should interrupt Jemma's work or come back later and risk being underprepared for rounds again and receiving a poor evaluation from Dr. Alexa. Darvid wonders whether a practical scheduling solution could be found; he also wonders whether he should talk with Jemma, but he's not quite sure what to say.

Commentary

In this case, Darvid experienced what he perceived as a conflict between accomplishing the task assigned to him (practicing his patient exam) and not interfering with nursing care. His predicament highlights the importance of interprofessional communication. Had Darvid felt comfortable talking through his quandary with Jemma, the problematic situation would most likely have been avoided. Ultimately, the patient's needs must be foremost in guiding decision making, and team members' willingness to communicate effectively and discuss their needs and concerns is central to accomplishing this goal.

Interprofessional Communication: Setting Priorities

Mr. S's medical situation is not emergent; neither is this an isolated encounter in which Darvid loses a learning opportunity. Mr. S's need to use the bathroom in private and have his blood glucose measured take precedence over training, particularly since Mr. S has diabetes, and Jemma might need to intervene if his blood sugar is above or below the desired range. Ideally, Darvid should feel comfortable discussing his concerns with Jemma, who could have helped him assess whether it was an appropriate time for him to examine the patient. For example, could Mr. S wait to use the bathroom or was his need urgent? Could Darvid talk to Mr. S while Jemma checked his blood glucose? If these options were not feasible, Darvid and Jemma could have decided upon a mutually agreeable time for him to return to perform his assessment within the morning routine (barring an emergency). Darvid could then report his conversation with Jemma to the team, explaining his plan to return. As Darvid recognized, Dr. Alexa is the first-year resident directing Mr. S's clinical care, so the patient was not put at risk by Darvid's returning at a later time.

Hierarchical Health Care Settings

The hierarchical structures of academic medical centers can create a dynamic in which junior professionals or trainees feel too intimidated to talk to senior professionals [1]. This dynamic is compounded by a hospital cultural tendency to view nurses as physicians' subordinates who have less (rather than different) knowledge and narrower

scopes of practice. Poor communication related to power dynamics can result in fragmented care and risk for patient harm [1], and it can interfere with learning, as this vignette demonstrates. Dr. Alexa's response to Darvid's predicament is problematic on several levels. Telling Darvid to "be more assertive" and that a nurse can "come back" to the patient later pits the professions against each other, devalues nursing care, and expresses a fundamental misunderstanding of nurses' work hour-to-hour at patients' bedsides. This perspective fails to recognize the potential clinical implications of interfering with necessary nursing care and the clinical and ethical implications of fostering animosity between members of the team.

The situation presented an opportunity for Dr. Alexa to teach Darvid about the importance of cross-disciplinary communication with colleagues and about the contributions each discipline makes to the care of the patient. She could have made him feel more comfortable by encouraging him to discuss his problem with Jemma, thereby giving him permission to talk through his concerns with his colleague. Because this is Darvid's first inpatient rotation, he is likely unfamiliar with some clinical norms (for better or worse) and the dynamics of interprofessional hospital relationships. He thus would have benefitted greatly from encouragement to ask Jemma about the situation rather than being censured for not expressing more dominance or "standing his ground." Darvid's timidity might have been a function of his newness and student status, but it resulted in a lost learning opportunity for him. Creating a culture in which learners are afraid to speak up is detrimental to them as learners and can put patients at risk for harm.

Prioritizing Learning
Neither nursing nor medicine can operate alone, particularly in inpatient settings. Both professions' clinical and ethical goals rest on the common ground of achieving that which promotes patients' health and wellness. Toward this end, professions must educate and train high-quality, competent professionals, which necessarily requires time and space for learning and practice. Every opportunity should be taken to prioritize all health professions students' learning, as long as patients are safe. Hospitalized patients are vulnerable and in need of care, and their receipt of appropriate and timely clinical care should not be compromised by the learning needs of any health care trainee. Often certain interventions can wait a finite period of time, but if patients are not receiving necessary or appropriate nursing care, as determined by the nurse, then their care is being compromised. Indeed, a strong nursing presence, reflected by lower nurse-to-patient ratios, has been linked to lower hospital-related mortality and adverse events [2]. The opposite has been demonstrated as well; a higher nurse-to-patient ratio has been linked to increased rates of mortality and deaths following serious complications among surgical patients [3]. Thus, timely nursing care is inextricably linked to patient safety.

Jemma's role as Mr. S's nurse is instrumental in carrying out the plan of care hour-to-hour, assessing Mr. S's response to this plan, and noticing and intervening when something has changed or gone wrong. For example, given an acute clinical change such as a sudden drop in blood sugar, Jemma has an obligation to intervene immediately, document the change, and notify the medical team. Because Jemma (as the nurse) is at the bedside more consistently than most other team members, she is likely to notice subtle changes quickly. Jemma's responsibilities as a nurse are not expendable or tangential to the clinical plan of care; indeed, without nursing expertise, the plan of care could not be executed.

The perceived priorities of one discipline—either medicine or nursing—cannot take precedence over the perceived priorities of the other in all circumstances, which is why members of the health care team need to communicate about the patient's immediate needs and arrive at a shared plan of action. In a situation in which nursing care and medical education appear to be in conflict, it is necessary to prioritize the patient's needs, goals, and values. Both nurse and physician team members should consider the clinical and ethical implications of the range of possible care decisions. Could this patient be at risk for harm (including feeling like his or her dignity or privacy has been undermined) if nursing care is delayed? Will the clinical team lose potentially valuable information to guide future care if a student does not have access to the patient at this moment? Darvid and Jemma could have worked through these considerations and arrived at a decision that was optimal for the patient and acceptable to all.

Communication Problems and Overcoming Communication Barriers
Poor communication among members of the health care team is a significant source of potential patient harm [4]. A retrospective review of 16,000 in-hospital deaths found that communication errors were the leading cause of death and occurred twice as frequently as errors due to deficits in clinical skill [4]. Unlike this vignette, in which Darvid (a physician-in-training) was hesitant to talk to Jemma (a nurse), nurses often are hesitant to challenge decisions made by physician members of the health care team. One survey found that 58 percent of nurses had been in situations in which they felt that it was "unsafe" to speak up to colleagues or that nobody listened [5]. New graduate nurses, in particular, have been found to acquiesce to decisions made by senior members of the team, often at the cost of doing what they perceive to be the "right thing" [6].

The fear of speaking up is a multifactorial problem within the health care work and training culture and environment [7]. Hierarchies and perceptions of "groupiness" among professions within those hierarchies perpetuate this problem [7]. Less senior staff can feel hesitant to challenge decisions made by more senior staff, and perceived "out-group" members (such as trainees or nurses) can feel too intimidated to speak up to an "in-group" member (such as an attending physician) for fear of being ignored or censured [7]. Thus, interventions aimed at improving communication among team members must

address communication problems at multiple levels—individual, group, and organizational. Weller and colleagues [7] recommend seven actions to overcome communication barriers: teaching effective communication strategies, training teams together, training teams using simulation, defining inclusive teams, creating democratic teams, supporting teamwork with protocols and procedures, and developing organizational cultures that support cross-disciplinary equality among health care team members.

Improving communication between team members and creating a culture in which speaking up is expected can improve patient outcomes. For example, Pronovost and colleagues' [8] seminal checklist project decreased catheter-related bloodstream infections in an intensive care unit. The intervention involved clinician education about central-line infections, a central line cart that facilitated easy access to all necessary supplies, and a checklist to help ensure adherence to sterile technique and infection control practices [8]. A critical element in the success of the intervention was that it authorized all team members to stop the procedure if a deviation from the checklist was noted. In other words, the intervention provided each and every team member with permission to speak up, regardless of his or her perceived rank or seniority in the hierarchy.

Interprofessional Education
Interprofessional education (IPE) can also serve a valuable role in facilitating communication among members of the health care team. IPE is defined as "an intervention where the members of more than one health or social care profession, or both, learn interactively together, for the explicit purpose of improving interprofessional collaboration or the health/well-being of patients/clients, or both" [9]. IPE emphasizes communication, mutual respect, and shared planning or decision making [10].

IPE can be helpful in teaching clinicians from different professions to value the unique role that each professional can contribute to a patient's care. The opportunity to put oneself in the shoes of the "other" can help members of one profession understand tensions and stressors faced by members of a different profession [11] and has been shown to improve team communication among medical, nursing, and pharmacy students [12]. A recent review of 15 studies reported that 7 studies demonstrated improved collaborative team behavior as a result of IPE in operating rooms and emergency departments; due to the diversity of interventions and outcome measures, however, generalizable inferences were not possible [9]. Thus, IPE holds promise for improving interprofessional communication, and more work should be done to explore expansion of its effectiveness. In this situation, IPE experience could have bolstered Darvid's confidence about speaking up and Dr. Alexa's appreciation for Jemma's work.

Conclusion

All health professionals are in the business of taking care of people's health care needs. Each health care profession possesses a unique knowledge base and its professionals possess skill sets that are invaluable in providing competent, comprehensive, safe, and ethical patient care. Fostering collaboration and communication among professionals from different disciplines, and creating systems in which this is the norm and expected, can help prepare health care team members to best meet the patient's needs.

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ETHICS CASE

Interprofessional Training: Not Optional in Good Medical Education
Commentary by Paul Burcher, MD, PhD

Abstract

Interprofessional education is a vital part of medical education, and students should not be permitted to exempt themselves from it. Physicians are part of a team, and the importance of teamwork will only increase as physician shortages continue and medical care becomes more complex. To learn to be good physicians in this emerging environment, students must appreciate the skills, strengths, and vocabularies of other professions. It is shortsighted to think that the best educators of future physicians can only be other physicians.

Case

As director of an obstetrics and gynecology rotation, one of Dr. Chan's goals is to emphasize interprofessional collaboration so that her students will be prepared for the cross-disciplinary practice environments into which they will be graduating. In particular, she wants students to learn from nurse midwives, whom she admires as experts in normal deliveries, as role models and leaders in patient-centered care, and as fellow professionals who offer safe labor and delivery options for women with low-risk pregnancies. To achieve these goals, Dr. Chan divides each student's time on this rotation into two parts, one with an ob-gyn physician and one with a nurse midwife.

After the student assignments have been distributed, Dr. Chan receives an email from a student that says, "I recognize that many women want midwives for their deliveries, but I came to medical school to learn what physicians do. I will soon have to make a decision about which residency to do, and I want as much time as possible to work with physicians. I would like my schedule to be changed so I can spend my time in medical school learning from physicians, not nurses or midwives."

Dr. Chan has received a few emails like this in the past. She is concerned that accommodating this student's request will send a message to other students that learning what nurse midwives do is optional and unimportant. How ought Dr. Chan to address students with the kinds of concerns raised in the email?

Commentary

Dr. Chan should refuse this student's request and use it as an opportunity to fulfill her obligation to educate this student about the value of interprofessional training. An expert panel on interprofessional education noted that "Being able to work effectively as members of clinical teams while students is a fundamental part of ... learning" [1]. The panel's conclusion is justified by the team-based nature of medical practice today and by the importance of respecting and understanding roles in clinical practice played by professionals other than physicians. Dr. Chan's refusal thus can be justified on multiple levels, but there are two reasons I would like to discuss in some depth. The first is the nature of medicine as a team-oriented profession and the need to train our physicians as team players. Obstetrics, like other medical specialties, faces physician shortages that will require interprofessional collaboration between obstetricians and midwives, and medical schools should introduce students to this model for present and future practice. Second, the pattern in all medical training is to begin with the normal and progress to the pathological, and, by beginning an obstetrics rotation by working with a midwife—a master of normal, uncomplicated pregnancy and labor—the student is receiving an ideal introduction to obstetrics and gynecology.

The student's enthusiasm for medical learning should be embraced, but it should be tempered with a caution about the pitfalls of thinking of medicine as exclusively best. This student seems to have a mistaken notion of medicine in general, and the role of physicians more specifically, which Dr. Chan has an obligation to address with this student. Physicians can do little without the contributions of other health professionals; we function as part of a team. There is no better way to express leadership than to demonstrate appreciation of the value of other team members' contributions; this requires spending time learning what they do and allowing them to teach us about the areas of expertise physicians don't have. Certified nurse midwives (CNM) have advanced degrees in nursing and are independently licensed for practice in many states. CNMs provide prenatal care, deliver babies, and offer routine well-woman gynecological care. CNMs are not obstetricians with less training—they are highly skilled professionals with skill sets that both overlap with, and differ from, those of an ob-gyn. Studies have shown higher levels of patient satisfaction and much lower rates of cesarean section among women with low-risk pregnancies who were attended in labor by CNMs [2, 3].

In my last practice, a group of six obstetricians worked with five CNMs to provide care for thousands of women. The patients could choose either a physician or a midwife. The midwives had physician back-up should complications arise, and the physicians were able to spend more time treating patients with medical complications and doing surgery, activities that align more closely with our specific clinical training and interest. This is more than just "triaging" medically complex patients to physicians; the patients who received midwife care arguably got better low-risk care than a physician could provide. For example, they were scheduled for longer visits focused on normal aspects of

pregnancy rather than shorter, problem-focused physician visits. Physicians appropriately spend more time with more medically complex patients, but this can lead to healthy women feeling "shortchanged" in terms of time spent during prenatal care. Everyone benefitted from the team approach, and we served far more patients than a physician group of six could have otherwise accommodated. This model is in no way unique to obstetrics—physicians working in teams with nurse practitioners, physician assistants, clinical pharmacists, physical therapists, and other allied health professionals is now the norm, not the exception.

A recent article in *Obstetrical & Gynecological Survey* by William F. Rayburn, chair of obstetrics and gynecology at University of New Mexico, and Erin E. Tracy underscores the implications of the looming [physician shortage](#) for collaborative practice: "Perhaps the most important means to address the increasing women's health care demand is to develop collaborative practice models. Reshaping delivery of care with nonphysician clinicians into more integrated office and hospital settings will … bring about more comprehensive, team-based quality of care" [4]. It is unrealistic to expect that physicians who trained only with other physicians and medical students can be competent team members in collaborative care once they are in practice. If medical education is to be "real world" and forward looking, then medical students need to both participate in team-based medical care and learn from each of the team members. There is no justification for having the clinical clerkship set apart from the rest of the health care delivery environment where many professions share patient responsibility and teaching.

Of course, it is somewhat presumptuous for this medical student to believe that she knows what the best curriculum is for her own education. I would remind her of a maxim repeated throughout medical school: the best person to teach an individual subject is the expert in that subject. In the basic sciences, many of the student's professors were not medical doctors; they were basic scientists and experts in the area in which they taught. My professors of anatomy were not physicians, and they knew anatomy better than any surgeon. Even physicians who are generalists, such as those in family medicine and pediatrics, still have a particular expertise in that specialty not matched by others. As I have stated above, midwives are masters of normal pregnancy and birth, with excellent results surpassing those of ob-gyn clinicians in some areas [3].

To place the third-year student with a midwife is not a compromise; it is the ideal setting for learning the specialty with a progression from the normal to the abnormal that is typical in medical education. In my experience, integration of basic science teaching with clinical teaching is a frequent topic of discussion in the halls of medical schools around the country. Starting an obstetrics rotation with an emphasis on the normal is an optimal way to achieve this integration without taking a physician away from her role treating medically complex patients. The student is learning from an expert and beginning with

the physiologically normal rather than the pathological, while also learning the skill set of another professional who might one day be her colleague.

But the knowledge and skills that the midwife can impart are only one aspect of what the student would gain from this experience. Imagine for a moment that the student got what she wished and all of her medical school training came solely from interacting with other physicians. She would graduate without learning the skills and vocabularies of other critical health professionals. As a resident she would not understand that it is other people who make her orders, prescriptions, and recommendations come to fruition. She would have an unrealistic view of medicine in which the physician decides and, somehow, the universe provides. Just as it is important to complete all the required rotations prior to graduation, so it is also critical that students experience how medicine is actually practiced today—interprofessionally, as a team, with each member understanding the roles of the other team members.

[Interprofessional communication](#) is also a learned skill. Midwives and obstetricians have different perspectives on childbirth and use different descriptors and vocabularies to describe the same phenomena. In my experience, this is true across other interprofessional exchanges as well, and the more familiar students become with the vocabularies and perspectives of other professionals on the care team, the more fluent they will become in interprofessional dialogues. I remember working one night with a CNM who wore a button that read, "Trust in Birth." That night we took care of several very sick obstetrics patients together, and at one point the nurse midwife attended a birth of one of my patients who was healthy so that I could continue to manage a patient of hers whose condition had become quite complicated. At the end of the night I pointed to her button and asked her what she thought. "Trust in birth," she said, smiling, "except when you should not." We were of the same mind at that moment, and moments like these only come when we do not isolate ourselves in our respective professions but take advantage of opportunities to see health care from the eyes of another. The student in our case scenario is being given an opportunity to expand her perspective and should be helped to understand that twenty-first century health care relies on multiskilled team players, not the solo practitioner of the past.

The student can and should work with the midwife.

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Resisting Outdated Models of Pedagogical Domination and Subordination in Health Professions Education

Commentary by Angel Chen, RN, MSN, CPNP, and Maureen Brodie, MA

Abstract

This case highlights a dilemma for interprofessional trainees facing a traditional health professions hierarchy rather than an interprofessional collaborative practice culture within the clinical setting. In the case, the trainee must determine the best way to confront the attending physician, if at all, as well as the best way to mediate the situation with fellow health professions trainees and team members. The commentary provides guidelines for interprofessional collaborative practice as outlined by the Interprofessional Education Collaborative competencies, including determining team members' roles and responsibilities, providing clear communication, adopting clinical huddles, and embracing a sense of inquiry during times of conflict. Role modeling of interprofessional collaborative practice by faculty is crucial in training a future generation of health care professionals who can continue to improve patient outcomes and quality of care.

Case

LaBecca is a fourth-year medical student working in a primary care clinic. Her medical school has recently changed its curriculum to provide medical students with opportunities to learn and work collaboratively with nursing students. LaBecca is paired with a nursing student, Brooke, in the office of Dr. Wilson, a senior internist on the faculty. Dr. Wilson has never before had a nursing student in the clinic. When LaBecca and Brooke arrive for the first day at the clinic, Dr. Wilson greets them warmly and then tells them, "As you both know, while nurses are a vital part of the team, physicians ultimately run the show. LaBecca, this is an opportunity for you to develop your leadership skills. Brooke, I'm going to have LaBecca delegate tasks to you; please follow her instructions."

Gemma, the nurse who typically works with Dr. Wilson, is busy with a patient and is not included in this orientation. Brooke is disappointed to hear Dr. Wilson's message, especially without Gemma present. LaBecca notices Brooke's disappointment; she feels awkward and isn't sure how to respond. She admires Dr. Wilson and wants to forge a good relationship with him, and it seems to her that questioning his ideas about team

members' roles might cause unnecessary conflict at the outset of the rotation. She's not sure how to work with Dr. Wilson and Brooke in the upcoming clinic sessions.

Commentary

Health professions education is moving to an [interprofessional training and care](#) delivery model that requires learners and their faculty to adopt new ways of collaborating with professionals outside their own discipline, with whose roles and responsibilities they might not be familiar. This means questioning traditional [professional hierarchical structures](#) and being open to shared leadership. In this case, a learner is put in the difficult position of contemplating whether to challenge the authority of an attending faculty physician, a scenario that is and will continue to be a common one as faculty and students learn to work collaboratively with colleagues outside their profession. Because LaBecca is a fourth-year student, let's suppose that she has clerkship experience with nurses in clinical settings, has learned how to collaborate in the workplace, and understands that physicians and nurses function best as a team without the hierarchy presumed by Dr. Wilson. She might not, however, have worked with nursing *students* in the past, and most likely has not supervised one.

Responding to Potential Conflict

LaBecca could respond in a number of different ways to the potential conflict set up by Dr. Wilson's orientation. There are the two obvious and opposite reactions: if she is guided by her growing belief in the value of collaborative, [team-based care](#), she can defy Dr. Wilson's instructions but might worry that doing so could affect his evaluation of her and, possibly, limit her future opportunities. If she compromises her values and goes along with Dr. Wilson's presumption of medical dominance in clinical settings, she puts her relationship with him above the team's goal, which is working together to provide patient-centered care. A range of possible actions, however, lies between these stark opposites, depending upon with whom LaBecca works to resolve the developing tension and when and how she does so.

Approaching the Team Leader

LaBecca likely cannot avoid talking with Dr. Wilson about his instructions. This conversation must be timely; otherwise, it would result in a missed opportunity. She might address him directly and with a sense of inquiry about the conflicting models of teamwork she is confronting. She should identify a place and time to talk with Dr. Wilson, without putting him on the spot publicly. LaBecca must be respectful, nonthreatening, and maintain a sense of inquiry that allows Dr. Wilson to [engage constructively](#) rather than default to defensive posturing. She might say, for example, "Dr. Wilson, what would you think if Brooke and I collaborated on the patient's care as interprofessional team members, rather than my taking the role as the leader and Brooke the role of the follower?" Her verbal and nonverbal communication should convey curiosity and interest. She should mention past experience working with nurses and how doing so without one

profession's subordination to another facilitated the team's functioning. She can mention her surprise at discovering the many aspects of patient care in which nurses take the lead, such as assessing and educating patients, providing continuity of care with their families, and understanding the psychosocial influences on care decisions [1]. LaBecca can add that the bedside nurses with whom she has worked had the opportunity to hear from all specialists and caregivers throughout the day and thus had more complete understandings of patients' treatment plans and responses to treatment than any of the individual physicians.

LaBecca should listen as much as she speaks, allowing Dr. Wilson to respond without interrupting him. She can demonstrate that she is actively listening by summarizing what he says. If he is firm in his position that she direct the nursing student, LaBecca can acknowledge his position and then mention Brooke's discomfort with the plan and her own desire to demonstrate respect for Brooke's role. She might ask whether they can try the more collegial relationship instead of a hierarchical one on a trial basis, by defining their responsibilities for the patient and communicating with each other about them. Throughout the conversation, LaBecca should be attentive to her nonverbal communication, maintaining good eye contact and nodding to indicate that she understands what Dr. Wilson is saying.

Approaching Other Team Members
At the same time, LaBecca might welcome the viewpoints of her nursing colleagues. She might follow up with Brooke, acknowledging her disappointment in the hierarchical approach, explaining her own preference for a collaborative plan, and possibly letting Brooke know that she spoke to Dr. Wilson about it. She might also raise the topic of collaboration with her nursing colleagues. Doing so could promote open dialogue, maintain focus on their shared common goal of good patient care, and establish respectful relationships. For example, LaBecca might ask Brooke about how she and her preceptor envision the team members' various roles, so that she can advocate for Brook and enable her to perform duties that fit her role and scope of practice. Although LaBecca is not the leader of this team, in promoting inclusiveness and team members' buy-in she would be assuming an informal leadership role. She might directly discuss with Gemma how she would like to collaborate and communicate in ways that would allow her to meet the needs of Brooke and their shared patients. In the end, LaBecca must decide how to respond. It will take a collective response on the part of health care professionals—the so-called "village"—to promote a cultural shift: to truly embrace and implement interprofessional approaches that realize the benefits of patient-centered outcomes.

Interprofessional Collaborative Practice
Interprofessional collaborative practice happens "when multiple health workers from different professional backgrounds work together with patients, families, carers and

communities to deliver the highest quality of care" [2] and is the current standard. However, barriers such as, differences in professional values, expectations, and roles; concerns about responsibility, and team conflicts could prevent the full implementation of interprofessional collaborative practice [3]. To deliver interprofessional collaborative care to patients, health care teams depend on having open communication and understandings of each professional's roles and responsibilities in accomplishing the shared goal of delivering good patient-centered care. The Interprofessional Education Collaborative has developed a set of core competencies for interprofessional collaborative practice with four main domains: values and ethics for interprofessional practice, roles and responsibilities of each profession, interprofessional communication, and teams and teamwork [4]. When learners are involved, team members also need an understanding of their specific learning goals, which, again, depends on understanding each profession's expertise, scope of practice, and roles.

Faculty preceptors have unique duties to teach interprofessional team care to learners and demonstrate collegiality and collaborative practice in clinical settings. A key responsibility of faculty preceptors is to provide professional role modeling. Learners look to faculty to demonstrate how to apply classroom-based learning to real life clinical situations. At the same time, learners observe (and perhaps begin to internalize as normal) unspoken social and cultural norms of behavior and clinical comportment—from the hidden curriculum [5]—during their clinical rotations. These norms might be positive and enhance collegiality or negative and endorse dysfunctional expectations about dominance and subordination. Thus, how an attending physician treats a nursing student in front of a medical student has perhaps greater impact on that medical student's future interactions with colleagues than all the classroom-based lessons about teamwork.

Applying Interprofessional Collaborative Practice to the Case
A more collaborative Dr. Wilson might use the opportunity of the preclinical "huddle" to express support for and understanding of interprofessional team functioning. The huddle is a "structured, brief (i.e., 5-15 minutes) routine (i.e., daily or multiple times a day) face-to-face communication of a team's full membership" [6] to facilitate care coordination. Accordingly, Dr. Wilson could initiate a huddle by having each member introduce him- or herself and his or her role in patient care, goals, and proposed care plan for particular patients. Any member of the team might end up leading the huddle, depending on the patient's care needs. The goal is for each member to have professional equality and a voice. In the present case, Brooke, the nursing student, could state her learning goals for the session. The huddle allows learners and team members in all professions to gain better understandings of each other's roles and goals as well as how to collaborate in delivering patient-centered care. It also helps them learn to communicate well with each other—for example, by discussing how to share overlapping roles and tasks and by clarifying possible miscommunications that might result from use of professional jargon before they engage in patient care. A collaborative Dr. Wilson can debrief following the

session, reviewing the cases and providing additional insight or reflection on how well the team worked together to promote good care for the patient. This review of what worked well and what could be improved upon would enable individual team members to continue to build their skill sets through working together. Ideally, Gemma and Dr. Wilson would have collaborative teaching approaches and a shared understanding of what all of their learners need. Dr. Wilson's inviting Gemma to the huddle could open up opportunities for learners from both professions to offer feedback and exchange ideas, adding to the value of interprofessional education.

The most ethically problematic aspect of Dr. Wilson's approach to health professions teaching is revealed when he says, "Physicians ultimately run the show." This statement is detrimental to the team, especially when it is communicated to the student, Brooke, in the absence of her preceptor, Gemma, and it is bound to have a long-lasting impact on Brooke. It's not clear whether Dr. Wilson intends to be domineering or intimidating, but if members of the team experience his statement this way, he has undermined the team's capacity for open, collegial communication. That is, his statement negates the value of interprofessional collaboration, including the fact that leadership can be shared across professions. By not inviting others—especially the nurse and nursing student—to the table, he undermines the value of their contributions to the health care team. This behavior from a senior physician and faculty member reinforces professional bias and historical conflict between professions and counteracts the benefits of interprofessional education and collaborative practice. In the long run, it jeopardizes the quality and safety of patient care [4].

Conclusion

Health professionals must embrace and transition to interprofessional collaborative practice, as well as model such behaviors for their trainees, in order to improve patient outcomes and safety. In so doing they contribute to breaking down the traditional hierarchy within health professions and leveling the playing field for collaboration. Eventually, in the aggregate, clinical preceptors will positively influence the next generation of health professional trainees' practice of interprofessional collaborative care delivery.

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MEDICAL EDUCATION

Walking the Walk in Team-Based Education: The Crimson Care Collaborative Clinic in Family Medicine

Kirsten Meisinger, MD, and Diana Wohler, MD

Abstract

Effective implementation of robust team-based care in the United States requires significant training for all team members. This education is integral to creating a culture of collaboration and respect among interprofessional members of the health care team. The lack of interprofessional clinical educational experiences contributes to a "hidden curriculum" that reinforces the problematic view that medicine is at the top of a hierarchy among health professions. However, learners themselves have started resisting this view by integrating cross-disciplinary team-based training into their own education. One example of learner-based leadership in interprofessional team care is the Crimson Care Collaborative at Cambridge Health Alliance, a student-faculty collaborative family medicine clinic. This successful clinic demonstrates that high-quality interprofessional clinical education can be accomplished through partnerships between educational institutions and existing patient-centered medical homes.

Introduction

The US medical system is undergoing a paradigm shift from traditional "one doctor, one patient" interactions, largely limited to addressing acute issues, to a chronic care model within patient-centered medical homes in order to more effectively address a spectrum of needs for each patient at each visit [1, 2]. Compared to intermittent, one-on-one interactions, interdisciplinary teams have demonstrated improved outcomes in patients with chronic disease [3-8] and effective population-based prevention strategies [9-12]. Yet there is still room for improvement.

Effective implementation of robust team-based care in the United States requires significant training for all members [13]. This education is integral to creating a culture of collaboration and respect among members of the health care team. Several studies have demonstrated that health care teams that score highly on "teamwork" measures deliver better patient outcomes [14, 15]. However, the traditional hierarchical, physician-centered culture of medicine is a barrier to the formation of highly effective teams in the primary care setting [16]. Without changing the culture of primary care to encourage

collaboration and interprofessional trust and respect among all care providers, the potential for high-quality, team-based health care will not be realized [17, 18].

The professional standards learned in medical schools and residencies have been shown to have long-standing effects on habits in clinical practice [19, 20]. The traditional culture of medicine promotes the view that the physician is the sole agent responsible for the health of her patients. On the wards, medical students are explicitly told to "trust no one" and to check and recheck all data and interactions in patient care. Medical students are insulated from the interactions among patients and nurses, physical therapists, pharmacists, and other care team members; this lack of exposure breeds misunderstanding of others' strengths. Interdisciplinary educational experiences, then, have the potential to instill in students a set of values for collaboration and interprofessionalism in the clinical setting. Although progress is being made and programs across the country are starting to provide interprofessional education [21, 22], there is still room for experimentation and innovation.

Thus far, however, there has not been a paradigm shift toward interprofessional medical education on a broad scale. The lack of interprofessional clinical educational experiences contributes to a "hidden curriculum" that reinforces the view of physicians atop a hierarchy among professions [23]. In this paper, we discuss a model interprofessional team-based clinical training program and outline the benefits of and obstacles to team-based care.

The Crimson Care Collaborative Clinic in Family Medicine
Learners in the health professions come to their professions with fewer preconceptions than those within it, and, in medical education, students have started to lead the way towards integrating team-based education into their training experience. One example of learner-based leadership is the Crimson Care Collaborative (CCC) clinic in family medicine, a student-faculty collaborative that teaches exclusively in multidisciplinary teams. The CCC is a volunteer, student-run clinic for health professions students designed to complement the traditional core curriculum of their training programs.

The clinic is housed within the Union Square Family Health Center (USFH), an award-winning patient-centered medical home at the Cambridge Health Alliance, an affiliate of Harvard Medical School. USFH was recognized by the Robert Wood Johnson Foundation as one of the top 30 primary care ambulatory sites in the US in 2012 [24]. It is known nationally and internationally for its model of team-based care and its long-standing excellence in providing clinical care for a challenging, multilingual safety net patient population. Interprofessional clinical teams are the lingua franca at USFH, so when the CCC approached the site to integrate health professions students, the shared vision became a reality. While we celebrate the national and international renown of USFH's achievements, it's important to note that it was not this renown that was key to the

success of clinical learners in the CCC. Rather, what was key was the collaborative spirit with which the fully integrated, high-functioning teams at USFH shared and extended their intellectual framework; this kind of collaborative spirit can and should be modeled widely.

Goals. From the outset, the CCC clinical experience was designed as an interprofessional student initiative. The founding team consisted of both medical and nurse practitioner (NP) students, establishing a norm of collaboration and mutual respect from the start. The participation of students from multiple professional schools also allowed the students to anticipate and problem-solve around logistical barriers to student coordination and participation. A core goal of the clinic is to provide actual patient care experiences for interprofessional teams, as opposed to using standardized patients in simulated clinical experiences or discussing hypothetical patients. By creating circumstances in which the care of an actual patient is at stake, students become much more invested in the work being addressed by the team. An additional core goal is to design teams with members of all disciplines in both learner and teacher roles, flattening the hierarchy between professions. Although there has been a move towards earlier clinical exposure for learners in many training programs [25, 26], the addition of a [curriculum](#) that explicitly addresses team training and skill acquisition would go a long way to preparing current learners for the health care environment within which they will eventually practice.

Team members and team dynamic. The basic structure of the clinic involves pairs of students, one "senior" (at the end of her training) and one "junior" (at the start of her training), interviewing patients together and then presenting the case to the faculty member. This arrangement allows students to share their profession-specific knowledge and skills with each other in the evaluation and management of patients, which greatly expands the learning opportunities for each student and builds trust in the clinical capabilities of other professions. The two CCC faculty leaders are a physician and a physician assistant. From an educational standpoint, however, the roles of learner and teacher are fluid among patients, staff, students, and faculty leaders. Medical students, nurse practitioner students, and physician assistant students at different stages in their training teach each other about physiology or physical exam tips. Patients are routinely asked to instruct the students in their perception of health and philosophy of care. Medical assistants, medical receptionists, and nurses have roles on the teams, and learners shadow them to glean their expertise and knowledge as part of the clinical experience. Team members have [diverse patient-based knowledge](#) that they share with students who shadow them. In our experience, nonclinician team members have a deep well of experience in guiding patients through care. Receptionists, for example, have extensive knowledge of family systems since they see who arrives with whom and when. Students benefit enormously from what they learn through these informal networks and will likely be well positioned to use them in practice eventually. At the end

of the clinic session, knowledge is drawn from all participants as the night's patients are reviewed in case-based format. This fully integrated, interprofessional team-based learning model has proven effective for patients and learners alike; student volunteer retention, student satisfaction scores, and patient satisfaction surveys have all ranked the experience highly.

Description of a CCC clinical encounter. Student teams begin their clinical experience by reviewing the patients to be seen. The clinic has a rotating "senior director" who assigns patients to each team and provides a brief written clinical summary of each patient. This process allows the students to review the cases in detail, read about any diagnoses or conditions with which they are less familiar, and learn how to integrate population health into the visit. Students' and medical assistants' previsit review of a patient's prevention needs is a standard part of the workflow at Union Square. Together, the students and medical assistant arrive at a plan to complete any prevention measures permitted by the patient during the visit. Students then interview and examine the patient in their "senior-junior" pairs and present the case to the faculty member. Union Square has over 90 percent clinical continuity of care within teams (excluding students), so faculty can frequently elaborate during the student presentation, providing details of the patient's life story, family, community, and culture. Faculty and students then complete the interview and exam of the patient together and make a shared plan with the patient and/or the family.

Innovative patient visit formats. Family visits are a frequent part of care at Union Square, and students have been enthusiastic participants in these experiences. A family visit occurs when multiple family members are seen during the same time slot on a schedule, often as a means to overcome access or scheduling issues for the family. Family medicine provides the flexibility to see patients of all ages within families, and immigrant families at Union Square embrace this model as a familiar mode of care. Union Square has also done group visits on weight loss and diabetes chronic care management as part of the CCC experience.

The Future of Interprofessional Team-Based Care
Innovative team-based ambulatory care models have been implemented across the United States and many involve learners from across the educational spectrum [1]. In our experience, students are eager to learn how to deliver real-time patient care within a team-based model that emphasizes mutual respect, collaboration, and empowerment. By infusing team-based care into the learning process, we create models of psychologically safe and clinically effective environments for teams in primary care. This fundamentally nonhierarchical structure allows all the team members to learn from each other. In this way, we create teams that are greater than the sum of their parts.

Moving to truly team-based interprofessional care on a large scale in the United States will require cultural shifts in how clinicians view themselves, their colleagues, and their work, as truly effective team-based care requires flattened hierarchies in which each team member is considered equally valuable, rather than physician-centered models with other staff playing supporting roles. Sustainable transformation and culture change will be nearly impossible without changing how we train new clinicians and providing learning environments where teams are the norm. Partnerships of teaching institutions with existing team-based practices and systems will strengthen this model of care and more rapidly move the dominant culture of medicine toward a more sustainable interprofessional framework.

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IN THE LITERATURE

Interprofessional Clinical Ethics Education: The Promise of Cross-Disciplinary Problem-Based Learning

Melissa J. Kurtz, MSN, MA, RN, and Laura E. Starbird, MS, RN

Lin YC, Chan TF, Lai CS, Chin CC, Chou FH, Lin HJ. The impact of an interprofessional problem-based learning curriculum of clinical ethics on medical and nursing students' attitudes and ability of interprofessional collaboration: a pilot study. *Kaohsiung J Med Sci*. 2013;29(9):505-511.

Abstract

A review of Lin et al.'s pilot study exploring the effects of an interprofessional, problem-based learning clinical ethics curriculum on Taiwanese medical and nursing students' attitudes towards interprofessional collaboration highlights the benefits of interprofessional collaboration and offers insight into how problem-based learning might be universally applied in ethics education. Interprofessional collaboration is an ideal approach for exploring ethical dilemmas because it involves all relevant professionals in discussions about ethical values that arise in patient care. Interprofessional ethics collaboration is challenging to implement, however, given time constraints and organizational and practice demands. Nevertheless, we suggest that when professionals collaborate, they can collectively express greater commitment to the patient. We also suggest future research avenues that can explore additional benefits of interprofessional collaboration in clinical ethics.

Introduction

Addressing ethical challenges in health care through interprofessional collaboration involves an active partnership among people from diverse training backgrounds who work together to identify, analyze, and resolve ethical questions or concerns in order to improve the quality of health care [1, 2]. Interprofessional collaboration is ideal for exploring ethical issues because it allows for inclusion of all relevant professional voices in discussions about ethical values in patient care. To identify and respond to ethical questions, an understanding of patients' and family members' values and preferences, as well as the values and preferences of the various professional stakeholders—such as chaplains, nurses, physicians, and therapists—is required. For example, decisions about

treatments near the end of life commonly lead to ethical dilemmas for the patient, family, and clinical team. In such cases, conflict can arise if the patient or family seeks to continue life-sustaining treatments for cultural, religious, or other reasons, while the clinical team recommends limiting life-sustaining treatments. Eliciting the perspectives of all persons involved in decision making—not only the patient and family but also all other relevant professional stakeholders—is paramount for ensuring the highest quality end-of-life care.

Current Challenges for Interprofessional Collaboration in Addressing Ethical Concerns

Although leading organizations, such as the World Health Organization, the Institute of Medicine, and the Robert Wood Johnson Foundation, have identified interprofessionalism as a key means of optimizing care delivery, particular challenges remain in utilizing interprofessional collaboration to respond to ethical questions [2-4]. Many clinical cases involve several health professionals from different specialties (chaplains, nurses, physicians, and therapists, for example), and when ethical discussions arise, each can offer a unique perspective shaped by personal and professional values, preferences, and culture [5]. While it is ideal to convene all involved health professionals to resolve ethical concerns, achieving interprofessional collaboration can be practically challenging as well as time consuming. Frequently, clinical case deliberation is time-sensitive, and ethically complex questions require action before an inclusive interprofessional collaborative discussion can be held. It's important to note that interprofessional collaboration can be compromised if and when some colleagues or stakeholders are left out of the ethics dialogue.

Commonly, ethical concerns are resolved through collaboration among nurses, physicians, and patients [6]. While this approach minimizes the challenges of coordinating multiple stakeholders' voices, it is not problem-free. The field of medicine continues to be predominantly male (66 percent men, 33 percent women) [7], while the field of nursing continues to be predominantly female (91 percent women, 9 percent men) [8]. Gender underrepresentation in medicine (for women) and nursing (for men) can be sources of ineffective or fragmented interprofessional patient care, perhaps due to power differentials rooted in each field's historically situated hierarchies and gender dynamics [9]. Adding to this, in the US health care system, physicians provide billable services, which create revenue, whereas nursing services—depending on the level of care—are not always billable [10, 11]. Differences in reimbursement policies can make power sharing between the two professions difficult and interprofessional collaboration challenging to achieve [12]. These systemic gender and occupational differences are part of the context in which ethics dialogues between nurses and physicians take place and can influence the outcomes of ethical deliberations.

Is There a Difference Between Medical Ethics and Nursing Ethics?
Some scholars have argued that nursing and medicine have fundamentally different ethical responsibilities. For instance, one difference between nursing and medicine has been characterized as caring for the health of persons (nursing) versus curing disease (medicine), with specific moral roles and responsibilities required to accomplish each of these goals [13]. Although nursing and medicine are distinct professions, each with its own code of ethics that guides practice, it is important to recognize the overlapping commitment of both professions to facilitating the best care for patients. According to the American Medical Association (AMA) *Code of Medical Ethics*, "the primary bond between the practices of medicine and nursing is mutual ethical concern for patients" [14]. Furthermore, the AMA *Code of Medical Ethics* and the American Nurses Association (ANA) Code of Ethics for Nurses share underlying ethical and justice-oriented principles—most notably, human dignity, access to health care, and commitment to the patient [14, 15]. These priorities highlight important sources of congruence between medical and nursing ethics [13].

Why Should Nursing and Medical Students Collaborate on Clinical Ethics Issues?
Interprofessional health care education has several benefits. Studies have found that groups of health care professionals who received interprofessional education interventions had better adherence to practice guidelines or standards and improved patient satisfaction and outcomes compared to control groups [16]. Moreover, students who participate in interprofessional collaborations bring different perspectives to ethical dialogues and learn from each other. For example, groups of medical, dental, and nursing students who received training fostering interprofessional collaboration demonstrated increased understanding of, and respect for, each other's roles and responsibilities in addressing ethical issues, while also showing the strengths of their own professional background [5, 17]. These studies, however, do not address how engagement in interprofessional education affects students' future participation in such collaborations.

Lin et al.'s Study of Interprofessional Clinical Ethics Education and its Implications
Lin et al. have studied variables that might affect interprofessional collaboration.

Purpose and methods. In 2013, Lin and colleagues piloted an interprofessional problem-based learning (PBL) curriculum in clinical ethics education to evaluate students' attitudes and confidence when performing collaborative teamwork [18]. Thirty-six nursing and medical students in Taiwan were recruited and randomly divided into three groups (nursing group, medical group, and cross-disciplinary group). Each group received the pilot PBL curriculum (one two-hour clinical ethics lecture, one PBL case study with two, two-hour tutorials, and one three-hour session of group discussion and feedback), which was implemented by a tutor. The PBL curriculum was carried out over 4 weeks, at the end of which students completed self-report evaluations assessing their attitudes and confidence related to interprofessional teamwork.

Results. The average self-evaluation score on interprofessional communication and collaboration was significantly higher for the cross-disciplinary group than the medicine group alone, which might indicate that interprofessional learning of clinical ethics content has benefits over profession-specific clinical ethics education. Because this was a small pilot study, these findings would need to be validated in future research using a larger sample and refined outcome measures.

Limitations. While the findings reported by Lin and colleagues [18] suggest that a problem-based interprofessional learning curriculum can positively impact nursing and medical students' attitudes toward and confidence in interprofessional collaboration, several limitations are noteworthy besides the small sample size. First, the authors fail to provide robust details of the PBL curriculum intervention, which limits the replication of findings. Furthermore, no baseline outcome data is provided; therefore, it is difficult to determine whether differences between the groups (i.e., nursing, medicine, cross-disciplinary) resulted from the PBL intervention or if group differences were present before the intervention was initiated. Also, outcomes were measured solely by students' self-report and thus it is difficult to determine whether the findings accurately represent the outcomes of interest. Relatedly, limited variability in the distribution of students' survey responses is apparent; a majority of students agreed or strongly agreed that their learning, critical thinking, and effective communication performance met PBL curriculum objectives. Additionally, the outcomes measured are affective, primarily students' perceptions (i.e., attitude, confidence), which can change over time and vary based on factors such as current mood, recent successes and failures, and desire to please the researcher or facilitator [19, 20]. Therefore, measuring these outcomes at one point in time is a limitation, albeit a common one among studies examining interprofessional education. Thus, the Lin et al. study, like other previous studies, does not provide evidence of the impact of interprofessional education on students' future interprofessional collaborations. Finally, the nursing and medicine groups each included both male and female students, while the cross-disciplinary group had only female nursing students and only male medical students. It could be beneficial to investigate whether and under which circumstances greater gender diversity—of both nursing and medical students—in the cross-disciplinary group would yield the same findings.

Future research. Subsequent studies should incorporate a broader range of health care professionals and measure affective outcomes, such as attitudes or perceptions, more than once over the course of a study. An interprofessional health care team includes not only nurses and physicians but also physician assistants, social workers, pharmacists, physical and occupational and speech therapists, optometrists, respiratory therapists, dietitians, counselors, spiritual care personnel, chiropractors, dentists, and others. Expanding interprofessional education to the entire health care team would give rise to

additional complexities, but a systems change is needed to motivate high quality and ethical care of patients.

One resource for this systems change is the Interprofessional Education Collaborative (IPEC), a group of national education associations of schools of health professions, which has created core competencies for interprofessional collaboration [21]. These competencies offer promising guidelines for instilling standardized ethical approaches in interprofessional and cross-disciplinary practice. Realizing these competencies would allow collaboration on ethical questions to expand beyond the clinical setting into the broader public health and policy arenas. Still unknown, however, are associations among interprofessional education, long-term interprofessional collaboration, and patient-specific outcomes [16].

Clinical Ethics Focused Problem-Based Learning Curricula in the US
Incorporating interprofessional, clinical ethics-focused PBL curricula in US health care education could be feasible, given that the majority of US medical schools already incorporate PBL in their curricula and some US nursing schools are beginning to explore what benefits PBL might afford over traditional learning methods [22, 23]. However, doing so could be more complex in the US than in other cultural contexts. In the US, there are various entry points (e.g., undergraduate, graduate) for those who wish to become nurses, and people with varying levels of experience can choose to enter medical school at any age. In the Lin et al. study, the PBL curriculum was piloted in Taiwan, where both medical and nursing education occurs at the undergraduate level [22]. One benefit of introducing an interprofessional clinical ethics curriculum to students who are at a similar point in their training is that the curriculum can target the specific learning needs of students based on their stage of educational development, which may result in more effective learning and greater impact on interprofessional-related outcomes.

One additional item to consider is the role of a facilitator in PBL clinical ethics education [24]. An effective PBL facilitator would guide students in exploring ethical challenges and help them identify the knowledge and strategies needed to address those ethical challenges. In the US, health professionals who would serve as clinical ethics PBL facilitators have varied levels of ethics experience and problem-based learning skills, and ensuring their effectiveness in implementing PBL methods as applied to ethics education would be important. At a minimum, guidelines should be introduced that include essential teaching and learning objectives and clear instructions for students that could also help facilitators engage students effectively in ethics-focused PBL [5].

Although not without challenges, interprofessional education using a problem-based format holds great promise for providing ethically inspired, quality care for patients, their families, and the broader health care community. Continued efforts to explore the effects of interdisciplinary, problem-based ethics education on the quality of patient care and on

clinician attitudes toward ongoing interprofessional collaboration would be fruitful for informing the implementation of interprofessional PBL ethics curricula in US health care education.

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Time-out: The Professional and Organizational Ethics of Speaking Up in the OR

Nancy Berlinger, PhD, and Elizabeth Dietz

Abstract

Participation in patient safety is one concrete expression of a foundational principle of medical ethics: do no harm. Being an ethical professional requires taking action to prevent harm to patients in health care environments. Checklists and time-outs have become common patient safety tools in the US and other nations. While their use can support ethical practice, recent research has revealed their limitations and has underscored the importance of interpersonal collaboration in developing and using these patient safety tools. This article summarizes key research and discusses the professional and organizational ethics of patient safety, using the surgical time-out as a case study.

Introduction

A decade ago, research by clinician-investigators such as intensivist Peter J. Pronovost and surgeons Atul Gawande and Martin A. Makary was instrumental in clarifying that communication problems within patient care teams were a major factor in surgical errors and in errors associated with the care of patients following common medical and surgical interventions, such as central venous catheter (central line) placements [1-4]. For example, miscommunication within surgical teams can lead to wrong-site surgery [2]. To prevent patient harms associated with miscommunication, shortcuts, or the lack of a defined opportunity to speak up to ask a question or draw colleagues' attention to a problem, innovations such as checklists and the surgical "time-out" were developed, evaluated, and promoted [3, 4]. Checklists are step-by-step protocols of evidence-based measures for team members to follow before a surgical procedure or during medical care, often including a built in time-out for a final review and for team members to speak up. Patient safety checklists are now familiar to medical students beginning their clinical training and are ubiquitous in clinical practice, with nurses bearing significant responsibility for ensuring checklist adherence. Similarly, surgical checklists are familiar to surgical and anesthesiology residents and fellows and to other operating room (OR) professionals. The idea that such checklists could save lives, prevent injuries, and reduce risk to institutions and costs to systems, professionals, and patients became so popular that it was even dramatized in an episode of the television medical drama *ER* [5]. In this article, we consider the limitations and ethical dimensions of this everyday but sometimes problematic aspect of contemporary health care work, giving special

attention to the surgical time-out as an intervention intended to support communication within an interdisciplinary team preparing for a patient's surgery.

Research on Checklists

Medical sociologists Charles L. Bosk and Mary Dixon-Woods have studied Pronovost's Michigan Keystone ICU Project [6], which successfully reduced central line infections in ICUs and made use of checklists developed by participating clinicians [1]. In 2008, they joined with Pronovost and his co-investigator Christine A. Goeschel to publish a "reality check for checklists" [6]. Although some commentators attributed the success of the project to a "simple" checklist [3], Bosk and colleagues cautioned against oversimplifying the challenges of encouraging professionals to recognize how their own behavior was contributing to iatrogenic harm, to make and sustain behavioral change, and to support each other in a social change process that also required organizational leaders' buy-in. A more extensive analysis of Pronovost's ICU study, led by Dixon-Woods and Bosk, described how checklists developed by participating clinicians were an outcome of a successful social change process in the interest of patient safety rather than the catalyst for that change [7]. This descriptive account (which is essential reading for anyone interested in how patient safety and quality improvement initiatives succeed or fail) identified "six reasons that explained why Michigan worked" [8]. These included the engagement of clinical and administrative leaders in participating institutions; opportunities for participating teams to meet and to share findings across institutions; careful redefinition of infection prevention as a fixable (rather than an intractable) problem and as a social problem that caused avoidable harm and whose solution depended on behavior change; changes in ICU layout and clinical roles (in particular, giving nurses the authority to halt unsafe procedures); and mandatory data reporting and data sharing [5, 7]. A continuing theme of this analysis is that having a stake in a checklist development process promotes professional, psychological, and social investment in the success of the process as measured in patient outcomes [9].

These observations are crucial to understanding a built-in challenge in efforts to reduce iatrogenic harm through checklist-type interventions: the experience of developing a checklist is different from the experience of following a checklist developed by someone else. On the one hand, patient safety interventions such as surgical time-outs and other features of surgical checklists have been widely endorsed [10, 11] as integral to good practice. Systematic reviews [12, 13] suggest that these interventions have an effect on measurable patient safety targets. On the other hand, studies conducted in the US [14] and other wealthy nations with comparable health care systems [15, 16] also describe the limitations of checklists [17]. Checklists, which are sets of memory prompts, do not, in themselves, help team members to [communicate more effectively](#) about matters not included in a checklist, nor do checklists alone change "culture" [7]. These studies also suggest that "checklist fatigue"—too many checklists or the introduction of checklists that do not seem to be the right tool for the task at hand—and resistance to using

potentially effective tools as designed are continuing roadblocks [9, 17], despite the early efforts of innovators to warn of these very problems [6]. Makary and Daniel estimate that medical errors, which can be caused by "communication breakdowns, diagnostic errors, poor judgment, and inadequate skill," now constitute the third leading cause of death in the United States [18]. It is reasonable to conclude that the problematic aspects of checklist implementation and use are a factor in this continuing problem.

Professional Ethics
Participation in patient safety is the most basic and concrete expression of a foundational principle of medical ethics: do no harm. It applies to all health care settings and all forms of care. Being an ethical professional requires taking action to prevent harm to patients in the "intrinsically hazardous" environment of a health care system [19]. This ethical obligation includes supporting the ability of others—colleagues, students, family caregivers, and patients themselves—to maintain safety and prevent harm. The process of becoming a surgeon or a medical specialist includes recognizing the specific harms associated with the delivery of health care in an area of clinical practice and participating in initiatives to improve safety through one's own specialty as well as in the workplace. It requires acknowledgment that "system" error always involves human error; the safety of systems is created, improved, or diminished by the judgments and actions of people, not by the mere existence or absence of safety policies and protocols such as checklists.

Medical training is an explicitly hierarchical system—interns are supervised by residents, residents by attending physicians, fellows by specialist attending physicians—and within health care organizations there are official and unofficial hierarchies. In the context of surgery, senior surgeons clearly hold high status relative to other OR professionals, and this status may extend to nonsurgical contexts. A surgeon who produces high revenues for an organization, for example, will hold high status in that organization. The pronounced hierarchy of the OR may also make preoperative communication by a nurse or surgical resident concerning a potential harm to a patient more challenging than in other clinical settings [20, 21].The surgical time-out is a strategy that, in part, is designed to support personnel often seen by some as subordinates—such as nurses, students, and resident physicians—in their roles in maintaining patient safety, as well as to prevent harm by compensating for difficulty of speaking up in hierarchical environments and challenging one's own supervisor or other superior in those environments. When time-outs and other features of potentially effective surgical checklists fail—resulting in preventable, often harmful errors—studies indicate that the behavior of senior surgeons is often a factor [9, 22]. When surgical leaders resist the efforts of other students or clinicians to use an appropriate checklist as designed, early-career clinicians observing this behavior receive a powerful negative message about professional conduct.

With time and experience, surgical residents become more confident in challenging superiors during life-threatening crises [23]. Resident physicians and nurses need training and consistent support from mentors, peers, and organizations to challenge potentially unsafe conditions prior to the start of a procedure; delaying speaking up until a crisis that may be caused or exacerbated by unsafe conditions is ethically insufficient.

Organizational Ethics
Health care organizations exist to do good: to care for the sick, to relieve suffering, to cure disease, to contribute to human flourishing. The policies and actions of health care organizations are not intrinsically good. Rather, they must be scrutinized to ensure that organizational priorities consistently reflect the interests of patients, both under normal conditions and during periods of change. Because patient safety is fundamental in health care and medical harm remains an ever-present risk to people in need of health care, leaders and managers in health care organizations must acknowledge how the health care work environment can undermine efforts to make this environment safer.

Health care organizations are "complex" systems by definition [5], and adaptation is a feature of work in complex systems: professionals must adjust their behaviors to respond to changing conditions, patient populations, or economic pressures. Pressure to be "efficient" is typical in health care organizations, as are pressures to reduce costs and maximize revenues. These pressures, on top of the need to adapt to changing conditions and the obligation to follow multiple sets of rules, can lead to professional uncertainty about how to reconcile competing organizational expectations.

Research on why checklists fail [9, 16, 24] suggests that when surgical leaders or team members perceive a checklist to be a waste of time or question the checklist's value in a particular situation, they will devise workarounds—skipping steps, for example—to get through the checklist requirement. If a checklist's design is perceived to be flawed, or if this patient safety tool does not appear to work in some other way under real clinical conditions of competing organizational expectations, clinical users need nonpunitive ways to discuss these barriers to patient safety with clinical leaders.

Speaking Up in the OR: Communication about Safety as an Ethically Significant Activity
Communication among the members of a surgical team, represented by the time-out feature of a checklist, is itself an ethically significant activity, encompassing both the obligation to "speak up" about a potential harm to a patient and the obligation to listen and respond appropriately to this concern. Research findings suggest that communication failures contribute to medical error [20, 21] and that interventions to improve interprofessional communication also improve patient outcomes [25].

One safety challenge in the OR concerns how different professions in this setting perceive the quality of communication and other aspects of teamwork. Research suggests that surgeons tend to perceive nurse-physician interactions as more positive than do nurses considering the same interactions [26, 27]. In other words, a relatively more powerful surgeon tends to perceive that things are going well while the nurse (or other subordinate) perceives a problem. If nurses or resident physicians express a concern during the time-out but do not perceive that their concerns are being taken seriously by senior surgeons, they may stop expressing these concerns [28]. Speech can be an ethical act aimed at preventing or mitigating harm [29], but its usefulness depends on the speaker being confident that she will be listened to and that action will be taken, if appropriate.

Conclusion

After a decade of development, use, and study of surgical and comparable procedural checklists in medicine, it is clear that the best outcomes are associated with a process of quality improvement that includes checklist creation or adaptation rather than simple adoption. By now, there are many checklist models available, and new checklists do not have to be developed from scratch for each procedure. However, as Pronovost's groundbreaking research demonstrated, the process of collaborating to adapt evidence-based guidance to a team's own setting strengthens buy-in and uptake [9]. Health care organizations should offer the whole surgical team, starting with senior surgeons, a stake in the creative process. Aligning team members with a shared goal of preventing harm should include consideration of the clinical and ethical value of a time-out in addition to memory prompt items on a checklist. When senior surgeons are seen to be willing to spend time on the "how" and "why" of the time-out, their actions can support and improve interprofessional communication and patient safety in the OR [30].

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STATE OF THE ART AND SCIENCE

Teamwork in Health Care: Maximizing Collective Intelligence via Inclusive Collaboration and Open Communication

Anna T. Mayo, MS, and Anita Williams Woolley, PhD

Abstract

Teams offer the potential to achieve more than any person could achieve working alone; yet, particularly in teams that span professional boundaries, it is critical to capitalize on the variety of knowledge, skills, and abilities available. This article reviews research from the field of organizational behavior to shed light on what makes for a collectively intelligent team. In doing so, we highlight the importance of moving beyond simply including smart people on a team to thinking about how those people can effectively coordinate and collaborate. In particular, we review the importance of two communication processes: ensuring that team members with relevant knowledge (1) speak up when one's expertise can be helpful and (2) influence the team's work so that the team does its collective best for the patient.

The Promise and Challenge of Team-Based Cross-Disciplinary Collaboration in Health Care

Across health care, there is an increasing reliance on teams from a variety of specialties (e.g., nursing, physician specialties, physical therapy, social work) to care for patients. At the same time, medical error is estimated to be "the third most common cause of death in the US" [1], and teamwork failures (e.g., failures in communication) account for up to 70-80 percent of serious medical errors [2-5]. The shift to providing care in teams is well founded given the potential for improved performance that comes with teamwork [6], but, as demonstrated by these grave statistics, teamwork does not come without challenges. Consequently, there is a critical need for health care professionals, particularly those in leadership roles, to consider strategies for improving team-based approaches to providing quality patient care.

Teams offer the promise to improve clinical care because they can aggregate, modify, combine, and apply a greater amount and variety of knowledge in order to make decisions, solve problems, generate ideas, and execute tasks more effectively and efficiently than any individual working alone [6]. Given this potential, a multidisciplinary team of health care professionals could ideally work together to determine diagnoses,

develop care plans, conduct procedures, provide appropriate follow up, and generally provide quality care for patients.

Yet we know that, overall, teams are fraught with failures to utilize their diverse set of knowledge, skills, and abilities and to perform as well as they could [6, 7]. The potentially harmful consequences for patients cannot be ignored: poor teamwork—such as incomplete communication and failing to use available expertise—increases the risk of medical error and decreases quality of care [2-5].

This article reviews research from the field of organizational behavior to shed light on group structures and processes that facilitate the use of available expertise for more effective decision making, negotiation, execution of tasks, creativity, and overall team performance. First, we highlight what it means to have a collectively intelligent team: one with the capability to perform well consistently across a range of tasks [8]. In doing so, we draw a distinction between having *smart people on a team* and having *smart teams*. We review the importance of laying the groundwork for creating smart teams, which enables two critical communication processes: ensuring that team members with relevant knowledge (1) speak up when their expertise can be helpful and (2) influence the team's work so that the team does its collective best for the patient.

Collective Intelligence
In research and practice, a common belief is that teamwork is best when the team has the best—that is, the smartest—people; yet recent research challenges this assumption. Following methods used in psychology to study individual intelligence, Woolley et al. [8] investigated the possibility of a collective intelligence factor: a latent factor describing a team's general ability to perform on a wide variety of tasks. They brought teams into the laboratory, had them perform a wide variety of tasks [6, 9], and found that a team's performance on one type of task was closely related to its performance on all types. When they calculated a collective intelligence score based on the team's performance on the set of tasks, they found that it was only moderately related to the individual members' intelligence scores and was more predictive of future team performance than was individual members' average intelligence score [8]. This evidence suggests an important question: *If smart teams are not simply teams of smart people, what leads to a collectively intelligent team?*

A series of studies have revealed factors related to collective intelligence, providing some insight into how to more reliably cultivate smart teams. First is the social perceptiveness of team members, or their ability to infer others' mental states, such as beliefs or feelings based on subtle cues [10]. The average social perceptiveness of the team members is predictive of collective intelligence [11]. Second, in both laboratory and field studies, researchers have found that greater amounts of participation and more equal participation are associated with higher collective intelligence [8, 11].

A common thread in this work is the idea that these group structures and processes associated with collective intelligence are enhancing the quality of information sharing in the team [12]. The speculation is that members who pick up on a wider variety of subtle cues, and teams that operate in a manner that incorporates multiple perspectives, will operate with more and better information than they would otherwise. These patterns of interaction among team members allow teams to make good use of members' expertise—a key reason teams could be effective in health care—but capitalizing on a team's collective expertise is surprisingly difficult.

Expertise Use
The process of expertise use in teams is multifaceted. Team members must first share relevant knowledge (i.e., knowledge about the task at hand) with others, and, second, that voiced knowledge must impact the team's work. The communication processes of speaking up and influencing others both come with challenges.

Speaking up. The challenge for effective information sharing begins with identifying who should be on the team, which can help to facilitate knowledge sharing. Members who know the team's boundaries—that is, who else is assigned to the team—also know to whom they can go for information and with whom they should share their information [13]. In this way, having a clear understanding of membership can increase the likelihood that people with relevant knowledge will be included in discussions, a necessary first step to ensuring that those people have opportunities to speak up. As an example, there is evidence from the study of pediatric care that including patients' families and nurses—who are often excluded from physicians' rounds—provides meaningful benefits in the form of better diagnoses and care plan development because these individuals can contribute information not possessed by other team members that can be used in making care decisions [14, 15].

In addition to gathering the right people on a team, those with relevant knowledge must speak up if their expertise is to be used effectively by the team. One obstacle is that members may not realize they have information worth sharing. For example, research on "the common knowledge effect" highlights the tendency for team members to focus on knowledge that is already commonly shared among group members. This is an effect based in simple probability: if all group members know a piece of information, for example an attribute of a job candidate, that information is more likely to be mentioned during a group discussion than information known by only one member [16]. As a result, uniquely held, important knowledge could go unspoken because members are less likely to think of it. Additionally, some evidence suggests that stereotypes about a social group's expertise can lead team members to incorrectly assess their own knowledge relative to that of others. For example, women who have deep knowledge about cars (reflecting a mismatch between the gender of the expert and the stereotype of that

gender's knowledge) may incorrectly assume they do not know as much about cars as a man, while a man may incorrectly assume he knows more about cars than the knowledgeable woman [17]. This can limit the likelihood that all relevant knowledge is voiced. For example, a nurse might believe physicians have more knowledge about a particular clinical treatment (because physicians typically are knowledgeable about treatments) and remain quiet, when in fact the nurse has important information about how the patient has been responding to that treatment. In this way, cognitive biases triggered by a group's composition as well as the common knowledge effect can lead people to withhold knowledge because they do not realize they have relevant and unique knowledge to contribute.

Psychological safety, which suggests "a sense of confidence that the team will not embarrass, reject, or punish someone for speaking up" [18], is another factor affecting the likelihood of speaking up. A lack of psychological safety, which often comes from being in lower status roles or professions, can lead team members to avoid speaking up even when they know they have something to contribute [18, 19].

Despite these challenges, there are some methods to facilitate effective information sharing. At the outset of a team's work, collaborative planning, in which members consider the knowledge of all team members, could facilitate team members' recognition of their own knowledge; it has been shown to enhance team ability to utilize knowledge [20]. Additionally, establishing group norms for critical thinking rather than norms for forging consensus leads teams to engage in more effective information sharing [21]. Once the work is under way, teams benefit from members, particularly high-status members, engaging in inclusive behaviors. Such behaviors include actively eliciting information from other team members—that is, asking questions explicitly and proactively about whether anyone has contradicting or as yet undiscussed information [19, 22, 23]. Inclusive behaviors also include showing appreciation for members' contributions, for example, by stressing the importance of using all information (including mistakes) as a means for enhancing the team's work and learning and by reacting to others' contributions with constructive responses [19]. In studies about interactions among nursing teams, cardiac surgery physician teams, and neonatal intensive care units, researchers have consistently found that when members engage in inclusive behavior, the other team members feel more psychologically safe and are more likely to speak up about information relevant to the team's work [19, 22, 23].

Influencing others. If team members' knowledge is to be used to enhance team performance, once that knowledge is voiced, it must be incorporated into the team's work and not ignored or dismissed. When information is overlooked, one culprit could be the common knowledge effect. Research shows that uncommon information, or information uniquely held by at most a few team members, is not only less likely to be voiced but also more likely to be ignored and less likely to be repeated [24]. One reason

group members are unlikely to consider uncommon information is that it cannot be confirmed by other team members and, as a result, tends to be viewed as less credible, accurate, or relevant [25]. This assessment of uncommon information is problematic because unique information, if pooled, can lead to better decisions because it is based on a broader index of expertise [24, 25]. Indeed, the ability to pool such unshared information is an important source of a health care team's potential to offer superior care to a patient than any individual working alone.

Additionally, individual team members' characteristics can determine their capacity to influence the team. Team members are likely to be more influential when they hold high status—even if that status comes from traits that are potentially unrelated to actual expertise, such as gender or age [26]. Team members' social or professional categories can also affect their influence. For example, research on group diversity suggests that looking different from others in a group might increase a member's influence. When a person is different from other teammates, he or she is expected to have different knowledge or perspectives to add to the group, and, if that person speaks up, others are more receptive than they would be to a similar group member [27, 28]. This biased attention to status and categorical cues that are unrelated to expertise and should be irrelevant can lead to undue influence for some members while leaving relevant knowledge of members with low status or from certain subgroups less likely to be considered and, therefore, less likely to influence the group's work.

To ensure that available expertise influences the team's work, team members, and especially team leaders, can implement certain strategies. First, striving to repeat and call attention to uniquely held information can give that information a better chance to be incorporated into the team's work, which ultimately should enhance the work itself. In a study of teams of physicians making diagnostic decisions, teams that repeatedly asked questions to surface unshared information (which only one person initially knew) as opposed to shared information (which all members knew) made more accurate diagnoses [29]. Additionally, to combat devaluation of knowledge based on differences in social or professional group, team members should promote a belief in the value of informational diversity, which can improve communication exchanges and the processing and integration of information [30]. Research shows that when teams have a greater expectation that they will encounter diverse opinions—and value diverse opinions—regardless of the source, they are less surprised by diverse opinions, consider them more frequently, and are overall better able to capitalize on the discussion of alternative ideas [31]. Valuing diverse opinions is helpful even if the idea being discussed is incorrect, as this can still lead team members to think more deeply about the issue, which improves creativity, decision making, and problem solving [32].

Conclusion

The need for all medical and health professions trainees to understand how to work across disciplinary boundaries is noteworthy, given that the stakes are high and that working together effectively requires more than simply ensuring that team members are smart people. Team members, especially those in leadership positions or with higher status, should actively invite input to ensure that team members voice all of their information. They should also be role models in expressing appreciation for diverse knowledge from all sources to ensure that team members' input—regardless of who the team member is—will be considered and used in the team's work. Such teams will be well suited to capitalize on their expertise, avoid errors, and provide effective patient care.

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POLICY FORUM

Overcoming Historical Separation between Oral and General Health Care: Interprofessional Collaboration for Promoting Health Equity

Lisa Simon, DMD

Abstract

Since the founding of dental schools as institutions distinct from medical schools, dentistry—its practice, service delivery, and insurance coverage, for example—and dental care have been kept separate from medical care in the United States. This separation is most detrimental to undeserved groups at highest risk for poor oral health. As awareness grows of the important links between oral and general health, physicians and dentists are collaborating to develop innovative service delivery and payment models that can reintegrate oral health care into medical care. Interprofessional education of medical and dental students can help produce clinicians who work together to the benefit of their patients.

Introduction

Oral health affects a person's overall health, income, and quality of life [1, 2]. Yet, the dental care delivery system remains divorced from the rest of the health care system. The notion of dentistry as a field separate from medicine is a historical phenomenon that has been reinforced through legislation, education, and service delivery. This division places an undue burden of dental disease on the most vulnerable Americans who face barriers to accessing dental care [3, 4].

The Roots of Historical Separation

In the early years of the United States, dentistry was an unregulated trade. It was the medical establishment that helped transform dentistry from a trade to a [profession](#) and brought scientific rigor to dental practice. The nation's earliest dental schools, founded in the mid-1800s, boasted physician leadership and financial and structural support from medical school faculty [5, 6]. In spite of these interdisciplinary underpinnings, however, the creation of a distinct path of education and training for dentists served to definitively sever oral health from the rest of medical education. For example, anatomy classes for medical students do not generally include examining the teeth even when craniofacial anatomy is covered.

The positioning of dentistry as a separate discipline was further strengthened by the development of [medical insurance](#) in the US. The foundations of medical insurance,

originating with a collective of Texan schoolteachers in 1929, lay in group-funded support of individuals in the event of excessive medical expenses rather than in coverage for routine preventive care [7]. As early as 1932, the federal Committee on the Costs of Medical Care, overseen by Secretary of the Interior Ray Lyman Wilbur, published a vision for public funding of comprehensive health services including dentistry. Opposition from organized medicine, however, led to the evolution of modern medical insurance as a private, predominantly employer-sponsored system [7]. Hospitals found that enrolling individuals in insurance plans produced a predictable income stream. Blue Cross Blue Shield plans sponsored by approved hospitals started in 1938 and served as the exemplar of modern indemnity medical plans [8-10].

The concept of insurance for dental expenses arose only decades later, as an appealing benefit for members of labor unions who found themselves in a position of strength following the passage of the Taft-Hartley labor law in 1947 [11]. For a set price, prepaid plans offered members comprehensive dental care for themselves and their families. From the 1950s, however, dental insurance structures were designed to limit the use of expensive services: a mandate required insurance companies to approve treatment plans before treatment commenced, and, when the cost of care exceeded subscription costs, it placed the burden of payment for nonpreventive care on the subscriber [12].

Although both medical and dental insurance in the United States are historically tied to employment, they traditionally served very different functions: medical insurance was designed specifically to cover large, unpredictable expenses, while dental insurance was and is intended to fund predictable and lower-cost preventive care. While protection from catastrophic medical costs was perceived as a necessity, coverage of dental services, from its origin, was conceived as a benefit.

The legacy of these attitudes is evident in the development of the major public payer systems in 1965: Medicare, which funds health insurance for older adults and people with disabilities, and Medicaid, which provides health insurance for low-income people. Just as they had done in 1932, professional organizations fought against government involvement in the funding of health care. Both the American Dental Association (ADA) and the American Medical Association (AMA) were founding members of the Joint Council to Improve the Health Care of the Aged, one of the most powerful voices of opposition to Medicare [13]. The AMA did not achieve its political goals in 1965, but the ADA did, and dental coverage was excluded from Medicare. The cost effectiveness of providing medically necessary dental treatment to certain at-risk groups of Medicare beneficiaries has been recognized today, and an extremely limited set of dental procedures, if provided in the inpatient setting, is funded by Medicare [14]. Still, Americans over 65 remain the age group with the lowest rates of dental insurance coverage [14].

Dental insurance under Medicaid is similarly, though less severely, limited. While dental care must be funded for low-income children as a component of Medicaid's Early and

Periodic Screening, Diagnostic and Treatment (EPSDT) benefit, dental care for adults is considered an optional service administered on a state-by-state basis [15]. Currently, 28 US states fund nonemergency dental treatment for low-income adults enrolled in Medicaid [16]. When states face financial difficulty, this funding is often cut, and emergency department (ED) expenditures for dental conditions rise proportionately [17]. Medicaid beneficiaries with dental benefits still struggle to receive care, as reimbursement rates are less than half that paid by private insurers, and so discourage many dentists from enrolling as Medicaid providers [18].

Need for Change
Recent developments have hastened shifts to reunite dentistry and medicine. Central to this movement is the acknowledgement that continued separation of these two fields disproportionately burdens vulnerable populations of patients. Low-income people, people of color, people with disabilities, rural-dwellers, and formerly incarcerated people are all more likely to suffer from dental disease and pain and to report difficulty gaining access to care [19-23]. In 2000, the Surgeon General of the United States released a report that shone a light on oral health disparities in the US and the importance of improved medical-dental integration to address this inequality [1]. Fifteen years later, the current Surgeon General, Dr. Vivek Murthy, reiterated the Department of Health and Human Service's commitment to integration of oral health into medicine as a primary strategy for reducing oral health disparities. His commitment included the adoption of an agency-wide Oral Health Strategic Framework, which will seek to integrate oral health across federal agencies in the form of funding priorities and workforce development [24]. The framework aims to reduce oral health disparities by integrating oral health into primary care and improving dissemination of oral health information and to increase oral health care services research [24]. Already, the framework has led to increased funding for oral health care delivery in community health centers and grants to support the integration of oral health into primary care training at the medical school, advanced graduate education, and practitioner levels [16].

A mounting body of evidence further suggests that improved funding for dental care could result in reduced overall health care costs [25-27]. Roughly $1 billion is spent annually palliating preventable dental pain in hospital EDs, yet in spite of these costs, patients do not receive dental treatment in this setting [25]. Patients unable to access dental care also seek assistance in primary care offices that are not equipped or staffed to respond to patients' dental needs; twenty percent of patients experiencing dental pain report seeking temporary relief within medical primary care settings [28]. Moreover, annual health care savings of more than $1,000 per capita have been realized when preventive dental treatment is provided to high-risk groups, such as people with diabetes, cardiovascular disease, or a history of stroke [26, 27]. As health insurance payment shifts towards value-based care, the impact of oral health integration into accountable care organizations (ACOs) and other bundled payment models is being

piloted and studied [29, 30]. These systems would encourage and reward preventive oral care and improved collaboration and role sharing among physicians, dentists, and auxiliaries, who would be paid based on health outcomes rather than services rendered.

The Role of Education
As the importance of oral health is increasingly recognized and practice patterns evolve to integrate oral health care into general health care, future generations of physicians and dentists can assume innovative oral health leadership roles. Medical and dental education will need to address the distinct needs of these future clinicians.

Models from outside the US present one possibility for integrated education. In some parts of Europe, dentists graduate from medical school prior to training in the specialty of dentistry [31]. One study suggests that these dual-degree graduates of the "stomatological model" perform better than single-degree colleagues, even after decades of dental practice [32]. In the US, students from several dental schools complete portions of medical school curricula, ranging from some portions of physiology or anatomy classes to one or more years of medical training. More medically knowledgeable dentists might be better able to manage the growing population of patients with multiple health conditions [33]. On some estimates, screening by dentists for chronic disease could save the health care system more than $20 per patient screened [34], with dental practice-based screening systems currently in place for conditions such as cardiovascular disease, eating disorders, HIV, diabetes mellitus, and alcoholism [34-41]. These efforts could be especially powerful for the estimated 23.1 percent of adults who do not visit a physician each year but who see a dentist [42]. Increased medical education can also encourage dentists to work in less conventional practice settings where their skills are most needed, such as within hospitals, where fewer than one percent of dentists currently work [43].

Academic medicine has also grown increasingly aware of the need to produce oral health-competent physicians, especially since patients at highest risk of poor oral health are more likely to visit a physician than a dentist annually [44]. Although 69.3 percent of surveyed medical schools provide fewer than five hours of oral health curricula to their graduates [45], the Association of American Medical Colleges has developed Oral Health in Medicine modules in partnership with the American Dental Education Association, and oral health content is present on Step 1 and Step 2 of the United States Medical Licensing Examinations and on board examinations in family medicine and pediatrics [45, 46]. Physicians can be trained to conduct oral examinations and oral cancer screenings, provide dental anesthesia to patients in acute pain, and apply fluoride varnish to patients' teeth [47-50]. Physicians could even be taught to extract teeth, a skill which the Society of Teachers of Family Medicine has determined to be within the scope of training for residents in family medicine [51]. Oral health electives and rotations exist at several medical schools; broader adoption of oral health training in medical education could dramatically improve oral health for the highest-risk groups [52, 53].

Interprofessional education—beyond providing future professionals with specific clinical skills—presents promising opportunities to re-envision oral and general health care. The importance of preparing for team-based practice is reflected in accreditation requirements for nursing, medical, and dental education, all of which mandate inclusion of interprofessional experiences during training [54]. Students can directly observe the value of their colleagues' skill sets and contributions to patient care, and peer teaching can improve both learners' and teachers' confidence and knowledge [55]. Future dentists and physicians trained in the importance of integrating oral health into our conceptions of overall health can be powerful advocates for eliminating barriers to such integration; some of the most important barriers to address include a lack of interoperable electronic health records, differing reimbursement structures, and persistent health disparities. Interprofessional education models lead to knowledge sharing, improved understanding and communication and, most importantly, better patient care [56].

Conclusion

As awareness of inequality in access to oral health and its importance in overall health grows, dentists, physicians, and other health professionals have begun to take up the mantle of oral health integration. Such efforts can take the form of novel insurance structures, practice models, or other innovations. Above all, both dental and medical education will play critical roles in preparing future practitioners for these changes. Working and training together, trainees in medicine and dentistry can unify oral and general health care.

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POLICY FORUM

Shared Responsibility: Massachusetts Legislators, Physicians, and An Act Relative to Substance Use Treatment, Education, and Prevention

Meghan Rudder, MD, Lulu Tsao, MD, and Helen E. Jack

Abstract

Recent passage of the Massachusetts law, An Act Relative to Substance Use, Treatment, Education, and Prevention, represents an admirable public health approach to substance use disorder (SUD), a stigmatized chronic disease that affects some of society's most vulnerable people. With its seven-day supply limit on first-time opioid prescriptions, this legislation takes an unusual approach to state government involvement in health care. By intervening in individual physicians' practices, state legislators have entered a space traditionally reserved for clinical teams. The seven-day supply limit and the process through which it was developed highlight competing priorities and dialogue between physicians and legislators, limits of physician self-regulation, and standards of evidence in policy making and health care. Addressing these issues requires both physicians and legislators to recognize and fulfill new responsibilities in order to better assist the populations they serve.

Shared Responsibility: Legislators, Physicians, and Massachusetts' An Act Relative to Substance Use, Treatment, Education, and Prevention

SUD is a stigmatized chronic disease that affected some 20.2 million adults in the United States during 2014 and carries with it a substantially increased risk of morbidity and death [1, 2]. In Massachusetts, opioid misuse, in particular, has been on the rise. In 2015, the estimated rate of unintentional opioid-related overdose deaths rose to 22.6 deaths per 100,000 residents, representing a more than 400 percent increase from the rate of 5.3 deaths per 100,000 residents in 2000 [3]. The rising death rate has captured the attention of many, including Governor Charlie Baker and the Massachusetts state legislature, which, in March 2016, passed An Act Relative to Substance Use, Treatment, Education, and Prevention in an effort to control the epidemic [4].

The causes of and potential policy responses to the opioid epidemic are myriad. A central part of the act—and this commentary—is the decision to limit opioid supply by regulating physician practice. It is noteworthy, however, that the act also allows patients to request smaller quantities of opioids than were prescribed, mandates substance use evaluations for patients who present to the emergency department after an overdose,

implements education and screening programs in public schools, and improves treatment conditions for women who are committed for substance use treatment [5].

A closer look at one of the more controversial elements of bill—a seven-day supply limit on first-time opioid prescriptions—highlights several challenges that arise with legislative involvement in health care. Because this policy focuses on physician prescribing behavior, rather than on the behavior of the public, it differs from most government-led, population-level chronic disease prevention efforts. With nutrition labels and higher cigarette taxes, for example, legislators become part of a broader public health care team; however, with limits on prescribing, they join the clinical care team.

The seven-day supply limit and the process through which it was developed highlight several issues: the competing priorities of and dialogue between physicians and legislators, limits of physician self-regulation, and standards of evidence and priorities in policy making and medicine. Ultimately, it illustrates the importance of legislators understanding clinical practice and physicians advocating for evidence-based policies that address patient needs.

Evolution of An Act Relative to Substance Use, Treatment, Education, and Prevention
An Act Relative to Substance Use, Treatment, Education, and Prevention was developed through a two-year dialogue among legislators, community members, and physicians. In February 2015, the governor appointed a working group, including three physicians and one nurse, to make policy recommendations to reduce opioid misuse. In June 2015, the group released recommendations on prevention, intervention, treatment, and recovery [6]. Four months later, the governor introduced his proposed bill, which limited first-time opioid prescriptions to a 72-hour supply. The focus on prescribing came in the wake of data revealing a strong correlation between opioid prescription sales and prescription opioid overdoses [7]. Nationally, both sales of opioid pain relievers and opioid overdose deaths nearly quadrupled between 1999 and 2008 [8], causing officials at the Centers for Disease Control and Prevention (CDC) to claim "we now know that overdoses from prescription opioid pain relievers are a driving factor in the 15-year increase in opioid overdose deaths" [9]. Coupled with evidence of prescriptions leading to addiction and illegal drug use, this data offered a compelling story illuminating the roles of physicians in the opioid epidemic [10, 11].

While sharing the legislature's concern about the growing opioid epidemic, physicians had a different risk-benefit analysis. Some felt the 72-hour supply limit would decrease access to opioids for patients with pain and harm patient-physician relationships [12]. In his testimony before the legislature, President Dennis Dimitri of the Massachusetts Medical Society (MMS) raised concerns about physicians' capacity under the proposed legislation to "address the individual needs of our patients" [12]. He also emphasized important practical implications: since opioid prescriptions cannot be phoned in, older,

poorer, or sicker patients' pain could be left untreated or undertreated. The MMS instead recommended a seven-day supply limit [12]. Citing lack of evidence that any supply limit would reduce substance use or improve health outcomes, the MMS also called for a "sunset provision" to re-evaluate the seven-day limit after a trial period [12].

The final version of An Act Relative to Substance Use, Treatment, Education, and Prevention was a compromise measure. It extended the supply limit to seven days on first-time opioid prescriptions for adults and on all opioid prescriptions for children, with exceptions for those with chronic pain or cancer and those receiving palliative care. The sunset provision—strongly opposed by Governor Baker—was not included.

This dialogue between the MMS and Massachusetts legislature, with compromises on both sides, mirrors the type of productive debate that occurs among members of a successful interdisciplinary health care team. While the medical community does not traditionally think of legislators as part of patient care teams, through this policy, legislators gain a voice in clinical decision making. By conceptualizing legislators' and clinicians' interactions—and their interchanges of ideas and disagreements—as exchanges within a care team, physicians and legislators may better care for the populations they serve.

Time for Legislative Involvement
Although the MMS was willing to compromise, some physicians in this debate oppose legislative involvement of prescribing practices and call for preservation of self-regulation in medicine, asserting that physicians are uniquely equipped to understand and respond to the needs of their patients and that legislative involvement would limit the breadth of their clinical decision making [13]. The discussion highlights long-standing tensions about the degree to which physicians ought to govern themselves and to which legislatures ought to govern professionals to protect the public health. These tensions are similarly present in conversations about the relationship between physicians and industry, the role of governments and lay people in medical practice, and strategies for managing disciplinary action against physicians [14]. Medicine is, largely, a self-regulating profession. Physicians are allowed autonomy in their practice, and in return are expected to use their knowledge and expertise to act in the best interest of patients and the public.

A complicating factor in professional self-regulation that needs to be acknowledged, however, is that incentives can make it difficult for physicians to self-regulate opioid prescribing. In the 1990s, patient and physician advocacy groups called for more aggressive treatment of pain with opioid analgesics [15]. The American Pain Society introduced a campaign for assessment of pain as a "fifth vital sign" [15], and bodies like the Joint Commission created new standards for pain control [16]. This led the pharmaceutical industry to develop and aggressively market new opioid formulations

like oxycodone, which then became widely available for non-cancer pain [17, 18]. Today, for example, a physician who prescribes an opioid to a postoperative patient is motivated to ensure that the patient has adequate pain relief and to build a trusting, therapeutic relationship with a patient who requests good pain control. But the physician might try to minimize additional appointments for medication refills not only because they can be inconvenient for people who have recently had surgery (and family members who typically accompany them), but also because there is monetary gain in reserving clinic time for new patients' appointments instead of follow-up appointments for existing patients. Physicians are also increasingly expected to obtain high patient satisfaction scores, which are used as quality-of-care metrics and, at times, attached to reimbursements. For example, as part of the Patient Protection and Affordable Care Act, the Centers for Medicare and Medicaid Services (CMS) allocates funds in Medicare payments based on hospitals' performance on patient satisfaction surveys, which include questions about pain control [19]. Finally, though the incidence of opioid dependence varies [20], the vast majority of patients given opioids for acute pain benefit from them and use them responsibly, despite the associated risks [21].

While physicians should ideally use their knowledge of population health to inform and regulate their practice, behavior change takes time, even with educational resources on opioid prescribing [22]. Government involvement—through policy changes implemented via regulation or legislation—can create or counter incentives, expedite or inhibit behavior change, and help catalyze physicians' responsiveness to public health issues that necessitate immediate attention. As MMS President Dimitri stated in his testimony, "In an ideal world we really think that physicians should be allowed to apply their clinical judgment, their expertise, their learning. But we realize there's also a very specific crisis situation that we're in right now so we are willing to be open-minded and somewhat compromising on this and put a number out there to make physicians stop and think" [23].

The Right Legislative Solution?
We must consider, however, whether proposed legislative solutions to reduce opioid misuse and mortality adhere to the values of the clinical community. Physicians are taught to practice evidence-based medicine. While responsible policy making in all areas should be evidence based, physicians—as clinicians, researchers, and patient advocates—can play special roles in ensuring that legislation governing clinical practice is grounded in data.

Unfortunately, the quality of evidence supporting state interventions to decrease opioid use and deaths from overdose is low [24]. For example, in Massachusetts, multiple interventions are being implemented simultaneously, making it difficult to assess causality. Researchers have studied prescription drug monitoring programs (PDMPs), insurer and pharmacy benefit manager strategies, state legislation, clinical guidelines,

naloxone distribution, safe storage and disposal, and provider and patient education [24]. PDMPs, which track a patient's prescriptions for controlled substances across multiple prescribers and pharmacies, are one of the more promising strategies for reducing prescription opioid misuse and diversion [25-27]. In 2012, Kentucky mandated PDMP use by prescribers and, in one year, saw an 8.6 percent decrease in opioid prescriptions and a 25 percent decrease in prescription opioid deaths [26, 28]. New York, Tennessee, and Ohio have all seen decreases in opioid prescriptions and rates of "doctor shopping," or use of multiple prescribers, with mandated PDMP use [28]. While the seven-day supply limit focuses on opioids prescribed for acute pain and applies to all patients, PDMPs aggregate data on opioid prescriptions, which can help clinicians identify patients who may be misusing prescription opioids.

Other promising examples of approaches for reducing opioid misuse include state legislation that regulates pain clinics and enforces clinical guidelines [26]. Starting in 2010, Florida enacted laws regulating pain clinics and mandating PDMP use, and it also conducted statewide raids of pain clinics known as "pill mills" for the large quantities of prescription pain medications prescribed. From 2010 to 2012, overdose deaths from prescription opioids declined by 27 percent [29-31]. In Washington, state agencies and pain clinicians collaborated on new guidelines for chronic pain. These included referral to a pain specialist for patients taking more than 120 morphine milligram equivalents (MME) per day without substantial improvement, based on evidence that the risk of overdose increases with higher doses [32]. After initial decreases in doses and overdose deaths among worker's compensation patients [33], legislators required medical boards to implement rules on dosing, referral, and clinical monitoring with similar statewide results [32]. In August 2015, the Massachusetts state medical board also approved guidelines that included a 100 MME dosing threshold [34]. These state experiences are highly context-specific; they add to our evidence base, but we sorely need more studies to identify the most effective interventions.

Data on the effects of supply-limited first-time opioid prescriptions on opioid misuse and other health outcomes are lacking. The absence of such data, however, does not necessarily mean limiting first-time supply is a poor policy option. Given the scanty evidence base for prevention of opioid use disorders, we must develop and test new strategies.

The seven-day supply limit, based on common sense and the correlation between prescription opioid sales and overdose deaths, appears to be a strategy that *could* work, but it must be accompanied by efforts to assess whether it *does* work. Researchers must examine not only effects on overdose deaths, but also pain control, substance use disorder diagnoses, and quality of life. If the seven-day supply limit is ineffective, the legislature should modify or repeal the law and try other solutions. Provisions for evaluation and iterative modification to improve outcomes—standards to which new

clinical interventions are held—are not part of the existing legislation. If legislators are to join the clinical care team, physicians should hold them to the same standard they would hold other colleagues.

Physicians should also ask why the legislature is choosing to limit first-time prescriptions (the supply side), rather than the demand side (those factors that make people want to continue taking their pain medications after their pain has ended or to continue using opioids once they have become addicted). Many factors beyond opioid prescriptions have been correlated with increased substance use, including mental health disorders, job availability, perceived minority discrimination, and level of education [35-38]. Targeting physician behavior is easier and less costly than creating programs that improve schools, create jobs, or provide evidence-based addiction treatment, such as buprenorphine and methadone. Physician behavior also fits within a neat, linear narrative: a physician prescribes 30 oxycodone pills for a patient with a broken arm who required, perhaps, 10 pills. The patient keeps taking the oxycodone after the pain from the fracture has ended. The patient becomes addicted and starts buying heroin on the street. In this story, the physician is a clear actor, introducing the patient to medications that carry risks of misuse, abuse, overdose, and death. The physical, social, economic, or mental health challenges in the patient's life, which caused her to continue taking the pills after acute pain has resolved, are less concrete, yet no less important.

Physicians should welcome legislators as colleagues in promoting public health. Legislators can help catalyze physician responsiveness to public health issues and are particularly important colleagues in addressing social determinants of health. While physicians can refer patients to social service programs, legislators can create and support social service infrastructure and provision. Physicians, therefore, should push policymakers to implement evidence-based policy and to see patients as individuals who exist within broader social contexts that help to determine their health and well-being. Just as legislators have looked to physicians as colleagues in enacting public health solutions to the opioid epidemic, so the clinical community should see legislators as allies in combating the poverty, inequality, and social exclusion that exacerbate public health threats. These groups must continue working together, each bringing ideas and suggestions to the table, to improve the lives of patients and communities affected by opioid use.

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MEDICAL NARRATIVE

Decentering the Doctor: The Critical Value of a Patient Care Collective

Shara Yurkiewicz, MD

Abstract

The rehabilitation environment is structured differently from the hospital-based environment in a way that lends itself to interdisciplinary care. Physicians work with other specialists on an interprofessional team while observing patients' participation in activities of daily living. This approach allows a patient to show rather than tell a physician what he or she can do, which helps the physician remove as many medical barriers to rehabilitation as possible. Another difference is the decentering of the physician on the health care team. Because a patient's functional status is beyond the scope of expertise of any individual health care team member, treatment plans are formed collaboratively, with input from every member of the team. The result is more comprehensive and holistic care for medically complex patients.

"No Docs" Nail Salon

My nails had not been painted in over a decade, and they were about to become hot pink. The manicurist was a nine-year-old girl with right-sided hemiplegia (paralysis affecting one side of the body). Before her stroke she had been right-handed. Now with "Righty" weak and clumsy, she chose to use her nondominant hand rather than fight with her impaired one.

"Try using Righty," I implored her as my entire distal interphalangeal joint soon matched the color of my nail. "Let's get that hand strong again."

There was one rule inside the children's playroom at Spaulding Rehabilitation Hospital in Boston: "No doctors allowed," but that did not mean it excluded trainees or physicians. An education specialist supervised the children, and anyone was welcome to join the nail salon. The rule did not mean that physicians threw away their knowledge base or stopped thinking about our patients' clinical problems. Rather, the purpose was to downplay the stereotypical role of "doctor." Asking about a child's symptoms directly or physically examining the child was strictly off-limits. We learned about our patients via the equality more typical of nonclinical encounters and everyday exchanges among people living their lives. Even when encouraged, my nine-year-old patient demurred from using her dominant (now weak) hand for a task she had previously loved. Knowing

this, the puzzle for a team of therapists, nurses, and physicians became how to get this young girl to try to use her right hand again.

Differences in the Patient-Physician Dynamic in Interprofessional and Inpatient Settings

My positive experiences in physical medicine and [rehabilitation](#) as a medical student led me to choose the field for my residency. The field values the contributions of all members of an [interprofessional team](#)—including nurses, therapists, and education specialists—but I noticed medical students' contributions were taken seriously as well. In return, I was more comfortable putting questions to the team and spending time with patients. Before entering the specialty, however, I had to complete a one-year internship in internal medicine (IM), primarily taking care of hospitalized patients. By the end of that year, I learned many ways in which the interprofessional rehabilitation environment differs from the more hierarchal [hospital-based environment](#), which tends to be physician-centered.

Expressions of physician centeredness in hospital-based practice. A major difference is the dynamic between physicians and patients. I've found that there's nothing that silences a hospital room more quickly than when a physician walks in. Any activities that a patient might be doing grind to a halt. "I have to go; the doctor's here," says one patient as she ends her phone call nearly mid-sentence and gives me her full attention. Another patient pauses while eating breakfast, his eggs getting cold as I listen to his lungs. If patients don't get the memo to stop whatever they're doing when I come in, I'm quick to remind them. One patient is about to get out of bed to amble to the bathroom when I walk in. "Hang on," I tell her as I lay my stethoscope on her chest. "This will only take a few minutes." Even when I know I'm inconveniencing patients for a few moments, there's a part of me that appreciates doctor-centered care. As an internal medicine intern, efficiency drove my actions when I had eight patients to evaluate in two hours before rounds. I could feel the seconds tick by as I waited for a nurse to complete a blood draw or for a patient to slowly rouse himself from sleep enough to give coherent answers to my questions.

Expressions of patient-centered care in rehabilitation-based practice. During my physical medicine and rehabilitation rotations, the physician team would make rounds in a patient's room to similar effect—but afterward, it was different because we were encouraged to observe our patients as they worked for three hours each day with their therapists, our colleagues. Physical therapists worked with patients on their gross motor skills and strengthening; occupational therapists worked with patients on fine motor skills and completing everyday tasks; and speech therapists worked with patients on speech and cognition. I sat quietly in a gym, therapy room, or the patient's hospital room, no longer the center of attention. I watched patients learn to transfer from wheelchair to bed, button a shirt one-handed, or swallow food without choking. The juxtaposition

between this kind of practice environment and the hospital-based practice environment was jarring. In the hospital, patients were kept "safe" mainly by monitoring them and confining them to bed, in rooms filled with alarms and guardrails, IV poles, and tangled telemetry wires. In rehabilitation, activities were designed to mimic the "real world" as closely as possible. Patients cooked food in a model apartment. They practiced steering a model car. They shaved in a model bathroom. I was able to get a glimpse into how patients lived and functioned in their daily lives. Understanding the challenges patients faced, which often slipped my notice, helped me at once to ground my expectations and to value the progress patients achieved.

Structure of clinician-patient relationships. The rehabilitation approach differs from the inpatient acute care model, which is fundamentally structured differently. A rehabilitation environment tends to be more physically active, with patients exercising and practicing activities of daily living. In contrast, an inpatient hospital stay focuses on getting a patient to improve medically in a more restricted space. In addition to being more physician-centered, the acute care model relies more upon a patient *telling* the doctor rather than *showing* the doctor. Part of the reason for this emphasis is that physicians spend so little time with a patient in hospitals. A 2013 study from Johns Hopkins found that interns spend just 12 percent of their time talking to and examining patients, or an average of 8 minutes per day per patient [1]. Part of the doctor-centeredness of hospitals is structural design and not just a medicine-centered hierarchy of professional status. A physician's time is often deemed more valuable than that of her colleagues and patients. When I'm in the room, my activities and words—rather than my colleagues' or a patient's—seem to predominate. This arrangement feels to me to be too neat, too convenient, and artificial. My own professional dominance undercuts my ability to see how my patients usually function, that is, with "no doctors allowed." It also had led me to undervalue the efforts of other members of the health care team, even though they were often spending more time directly with the patient.

Contextualizing physicians' capacities to help patients. In rehabilitation, I attended interdisciplinary rounds, which consisted of the entire medical team—physicians, nurses, and physical, occupational, and speech therapists. For every patient, each therapist would report on the patient's progress and suggest how the rest of the patient's rehabilitation stay could best be spent. Decisions about care plans seemed better informed and more integrated when our colleagues' observations accompanied our own direct observations. On an interdisciplinary model, physicians' roles of prescribing treatments to maximize a patient's rehabilitation potential were improved. Watching a spinal cord injury patient work with an occupational therapist who noted that his spasticity was causing him to struggle to use a fork once cemented my decision to try a muscle relaxant, for example. In another case, listening to a brain injury patient's difficulty following instructions from his speech therapist made me more confident in suggesting a low dose of stimulant. The patient did the work, therapists observed and

assessed that work, and I then did my best to remove as many physical or cognitive barriers to the patient's successful rehabilitation as possible.

Modeling the Value of Interprofessional Practice
The importance of unlearning physician-centric practice approaches was something I learned from one of my favorite physical medicine and rehabilitation mentors who specialized in pediatrics. In her clinic room were toys. When she introduced herself to parents, she kept one eye on the children while they played. While physical and speech therapists assessed the children, she stood by the door and quietly watched. Her goal was to observe as much as possible without interfering. She then spoke to and invited input from the therapists, parents, and children and considered a course of action that best incorporated these stakeholders' perspectives. This physician also modeled to students and residents the importance of spending time in the children's playroom. We colored, sang songs, and told corny jokes. But we didn't lose our focus in the fun. How were these children functioning, and how could we help them improve? After the children returned to their rooms, I would talk to the education specialist. How did she perceive their strengths and weaknesses? Often she would mention things that had escaped my notice.

During my physical medicine training, I had similar conversations with therapists outside of formal interdisciplinary rounds. In more casual settings, dialogue reigned over report. When I had to sit in front of a computer writing notes or analyzing lab values, I intentionally sat within earshot of therapists and nurses so that I could listen to their conversation and join in with questions or comments. Sometimes several of us would independently bring up a subtle observation about a patient that had not been discussed during rounds. Sometimes we would bring up conflicting observations, which required us to collaborate further and try to piece these observations together into a picture that we agreed was more accurate. These unstructured, informal, and off-the-cuff interprofessional interactions were critical, since they contributed not only to patients' care but also to a feeling of cohesiveness and common striving among team members.

Collective Patient Care
There is a cliché that what patients value most from a physician is "ability, affability, and availability." These same traits apply to other members of an interprofessional team. Medical students and residents get very little training on the roles of each member of the clinical team. I learned by listening, participating, and observing. I learned the importance of decentering my own opinions and trying to work with others—and, in doing so, fitting my opinions into a larger framework of team-based, patient-centered care. Helping patients at their most vulnerable is anything but a solitary endeavor. Understanding patients' complex, multidimensional functional capacities and understanding how to help is far beyond the scope of expertise of any single member of the team. We take better care of patients together.

Nails, Revisited

My final manicure by my young patient occurred several weeks after we met. Any color but black, I begged her. She was stubborn, and black it was. But it was that same stubbornness that led her to use Righty for the entire task. It was a first. Our patient—the center of all our efforts—made it happen.

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