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Meaningful Use of Electronic Health Records for Quality Assessment and Review of Clinical Ethics Consultation

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ABSTRACT

Evolving practice requires peer review of clinical ethics (CE) consultation for quality assessment and improvement. Many institutions have identified the chart note as the basis for this process, but to our knowledge, electronic health record (EHR) systems are not necessarily designed to easily include CE consultation notes. This article provides a framework for the inclusion of CE consultation notes into the formal EHR, describing a developed system in the Epic EHR that allows for the elaborated electronic notation of the CE chart note. The implementation of the "meaningful use" criteria for EHR, mandated by the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, requires that health professionals meet certain standards for quality, efficiency, and safety, all of which overlap with the goals of standardization, peer review, and quality improvement within CE consultation.

INTRODUCTION

Clinical ethics (CE) consultation is increasingly available in academic medical centers and community hospitals as a support for difficult and conflicted decisions in healthcare. There is a growing consensus that CE consultation demands peer review and quality improvement. One process commonly utilized to assess a CE consultation's effectiveness and outcomes is a review of the chart note. The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 set the electronic health (EHR) record as one of the required benchmarks for excellence, mandating that eligible healthcare professionals and hospitals demonstrate "meaningful use" of EHR systems by meeting certain objectives.[1] To our knowledge, most EHR systems do

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not contain a template for CE consultation chart notes; in order to incorporate CE consultation notes into the EHR, CE consultants must consider how to incorporate valuable consultation information and analysis into an EHR system. Thus, if CE consultation charting is to be integrated into the EHR, CE consultants must create a platform to allow electronic recordkeeping.

Different medical facilities have contracted with various software companies to provide templates and systems for an electronic patient record and its subsequent review. One such company is Epic, an EHR software purveyor that purportedly manages 54 percent of patient medical records in the United States.[2] New York City Health and Hospitals Corporation (NYC H+H) is one entity that uses Epic and does not have a proprietary interest in the company. Other frequently used EHRs in the U.S. include Cerner PowerChart, AllScripts Professional, NextGen, and athenaClinicals.

The authors constructed a CE consultation electronic charting system using the EHR platform that was available to them. The goal was to incorporate available Epic functionalities to support, enhance, and provide for peer review for the work of CE consultants within the NYC H+H system. Documentation of an individual patient's CE consultation in the formal health record is one standard for medical centers to meet that is recommended by the American Society for Bioethics and the Humanities.[3] The template and materials created for the NYC H+H system could easily be applied to other medical centers around the country, regardless of whether they use Epic as their EHR platform. This platform can be used to standardize CE consultation recordkeeping nationally, as various hospitals have different CE consultation policies.

This article, using a de-identified case example, shows how the CE consultation chart note may be constructed in an EHR system to provide in-depth knowledge about the case, evaluation of the case's ethical issues, peer review as the basis for quality improvement, and an effective platform for statistical analysis. Interwoven into the article is a description of the growth of EHR and how meaningful use criteria dovetail with the goals of CE consultation.

A MODEL FOR THE CE CONSULTATION NOTE IN THE EHR

NYC H+H developed a robust system for requesting and documenting the CE consultation process in Epic. When an ethical issue arises with a patient's care, the treating physician can order a CE consultation as for any other medical specialty. The CE consultant will then see the request and can respond to it in a timely fashion. As one of HITECH's goals of "meaningful use" of EHR systems is the facilitated sharing of health information, this system allows CE consultants to access patients' information quickly and efficiently, facilitating more immediate meeting between the CE consultant and the patient.

Unlike other specialties, a CE consultant records notes after a meeting, not during a patient visit. The purpose of this method of note taking is to ensure the consultant's focus is on the patient, family members, and careproviders at all times. The CE consultant provides a listening ear and gathers the ethically relevant medical information and ethically relevant social history, which will be crucial for considerations of ethical issues and subsequent analyses. After a visit, and at any subsequent meetings with the patient's healthcare team, the consultant records the visit and the resulting conclusion of the consultation. Prior to the introduction of EHR, recording a single patient's visit might take hours, often resulting in illegible handwritten notes. Handwritten notes proved problematic during chart reviews, as the reviewing consultants spent valuable time deciphering handwriting. More importantly, long, discursive, and analytic written notes are likely to be unread by staff who were not involved in the consultation.

NYC H+H's system is a streamlined method of recording CE consultation notes that has the potential to save the consultant time and more clearly communicate to the patient's healthcare team the ethical issues at stake. Chart notes require the following fields:

1. Ethically relevant medical information
2. Ethically relevant social history
3. The ethical issues identified and analyzed
4. A recommendation and a beginning notation of whether the patient was engaged in the discussion, with a reason if the patient was not engaged in the discussion.

We will present a complex case and how to chart it using the NYC H+H chart note template.

THE MANDATE FOR EHR ADOPTION AND "MEANINGFUL USE" CRITERIA

Before we present a case demonstrating how the CE consultation note can be implemented into the EHR, we would like to discuss the important "meaningful use" criteria that guide work on the EHR.

The central purpose of CE consultation in healthcare is "to improve the process and outcomes of

patient care by helping to identify, analyze, and resolve ethical problems."[4] CE consultation constitutes a maturing intervention, and provides a vital service to patients, their family members, and the healthcare team when difficult, emergent, and often conflicted decisions regarding a patient's course of treatment must be resolved. Although there are stipulated competencies that CE consultants must meet, there is currently no agreement in CE consultation scholarship on standards of practice, acceptable or ideal qualifications for practitioners, or valid and reliable measures to rate the quality and effectiveness of CE consultation.[5] While this discussion about CE consultation is focusing, a new factor—the adoption, implementation, and expansion of EHRs—will further illuminate the issues. Thus, it is necessary to evaluate existing EHR systems that incorporate CE consultation notes and evaluate how meaningful use criteria can align with the goals of CE consultation.

In the past decade, EHR systems have begun to transform clinical care, as healthcare practitioners shift their recordkeeping from paper to electronic systems. There have been noted improvements in patient care as EHR becomes the standard, including improved quality of care, reduction in medical and prescription error, enhanced operational performance, increased regulatory compliance, reduction in medical costs, and improved population health outcomes.[6] The HITECH Act, signed into law by President Obama as part of the American Recovery and Reinvestment Act of 2009 (ARRA), is the largest U.S. initiative to date designed to encourage the widespread usage of EHR. It encourages careproviders to implement EHR in a "meaningful" way.[7] The Office of the National Coordinator for Health Information Technology has established criteria for what is considered "meaningful use" of EHR: improve quality, safety, and efficiency; reduce health disparities; engage patients and families in patient care; improve care coordination among careproviders; and ensure the privacy and security of protected health information.[8] All of these elements are relevant to the work of CE consultation.

CASE EXAMPLE: AN EPIC CHART NOTE

Consider the following CE consultation chart note provided in the Epic system of a large metropolitan hospital. Or, as Rita Charon might assert, consider this story of this patient, family, and the healthcare team as told in the CE consultation note in the medical chart.[9] (The following chart note has been anonymized, and all relevant social and demographic data have been altered. The original composers of the chart note, who agree that the patient is not identifiable, have revised it.)

Reason for Consultation

The patient is 68-year-old Hispanic female with dementia and multiple medical problems who was transferred from a nursing home with dry gangrene of right foot, for evaluation for possible amputation. The patient consistently refused amputation and this consultation was called to evaluate that refusal.

Ethically Relevant Medical Facts

The patient has multiple medical problems: diabetes mellitus, hypertension, a past cerebrovascular accident, hypercholesterolemia, sinus node dysfunction, left hemiplegia, dementia, dysphagia, peripheral artery disease, bilateral leg ulcers, pneumonia, cataract, hepatitis, pressure ulcer. Her medications include: nifedipine, metoprolol, hydralazine, divalproex, citalopram, omeprazole, insulin detemir, insulin aspart, and aspirin.

Ethically Relevant Social Facts and Decision History

Patient lives in nursing home, was born in Colombia, reports finishing high school. Never married, has no children. Has 2 sisters (both live in Georgia) who come to visit her once in a while.

I spoke with her brother Robert yesterday, who lives in New Jersey. He stated that he is not her closest sibling, but still he participated and said that he would talk to the sisters in Georgia. He would not give consent for the patient, since he felt he was not called with details pertaining to the surgery by the surgical doctors. He clearly stated that his sister's—the patient's—decision has to be taken in the contexts of her "limited ability in mental function."

Patient was admitted for above problem in September and refused surgery. She was seen by Psychiatry service shortly after admission. Initially not cooperating, but with second visit the consulting Psychiatrist documented her saying that: "she is in the hospital because she needs help because there is something wrong with her feet and doctors know best." She reported being "scared" because "they are going to do surgery." She also said—as documented, that she "will support the doctors in whatever treatment they think is better" because she wishes to get better and live.

Eventually did agree to have the surgery. After w/up was completed she was taken to holding area on Sept 10 but then she refused the surgery. Since she was stable medically, she was sent back to the nursing facility.

On November 10 was readmitted. Examination determined that the gangrene seemed worse. But also patient "confused and obtunded" as noted by Psych consultant who was recalled to assess patient's decisional capacity. She was deemed not to have capacity. Ethics was called yesterday to help create best care plan.

When approached at first, patient did not want to talk. She covered her head and said she wants to sleep. We came back about 1 hour later and found her in holding area just about to go to OR for the amputation. Patient now was willing to talk and said that she is being forced to get the surgery. That the doctors want to

cut her leg and she will not let them. She said that to do the operation the doctors need to get her permission and she is not going to give it. She volunteered also that she would rather die than let the leg be cut.

The Surgery attending was present and we have talked to the patient together. We advised on postponing the surgery and contacting the family. Patient had fever last night and the surgery soon may turn to be emergent and possibly lifesaving if she gets septic. She seemed quite understanding of what is proposed and clear in her decision today but considering her prior and quoted above words, more discussion has to take place. It is possible that she has limited trust with the team and being left alone to make this decision, withdraws. She may have limitations in decisional capacity due to her underlying dementia.

The Attending was planning to contact family. We'll try to arrange a meeting with the local brother and conference call to the sisters in Georgia.

Discussion Next Day

I met with the patient today and talked again about patient's wishes regarding the surgery. She did not change her mind. She said that she wants to go back to nursing home. She talked to me about her strong spiritual beliefs, she wanted to be taken to church. We spoke a bit about interpreting beliefs. "God will save me," said the patient. I have tried to point that this may happen by having the surgery so the infection will not spread, but patient said, "I know about the gangrene" and kept to her decision not to allow for the leg to be cut. I asked hospital priest to arrange for spiritual support. She also said, "You are trying to help me."

Ethical Analysis: Decision-Making Capacity

Determining whether a patient has the capacity to make medical decisions is often a key in a CE consultation. Decisional capacity is not a legal determination, but a clinical one that should be made by the attending physician who has the primary responsibility for treatment and care of the patient. Best practice would have that physician confer with the healthcare team who have interacted with the patient over time. **Capacity refers to the patient's ability to perform a set of cognitive tasks, including:**

- **Understanding and processing information about diagnosis, prognosis, and treatment options**
- **Weighing the relative benefits, burdens, and risks of the therapeutic options**
- **Applying a set of values to the analysis**
- **Arriving at a decision that is consistent over time**
- **Communicating the decision** [Bolded text is prewritten text provided in the chart note program—see figure 3.]

In this case the patient was first held to be without decisional capacity. However, on subsequent admissions, she was consistent in her refusal of care when not pushed to agree. Her position was also supported by her family, who were contacted by the care team and were aware of her medical situation and its possible consequences.

In CE consultation, consistency over time can sometimes be as powerful as demonstrated capacity. This is such a case. In addition, the family is supporting the patient and does not want to go against her "spoken choice," that is, against the values being articulated even if by a decisionally compromised patient.

Then there is the matter of supporting refusal until the case develops into an "emergent" intervention, which, for some care-providers, permits an end to respecting the refusal. Ethically, depending on evolution to "emergent" does not negate prior accepted refusal.

Finally, in this analysis, the opposing position would be one that argued that the action taken should be one in the "best interest" of the patient and might push her to agree to surgery. However, **this standard is employed when there is no knowledge of a particular patient's prior wishes or inferred wishes, it is primarily an impersonal standard. In the absence of such particularized knowledge, the best interest standard considers what would be most likely to benefit or promote the well-being of a hypothetical reasonable patient in the same circumstances as those of the patient.** [Bolded text is prewritten text provided in the chart note program—see figure 3.]

But this is NOT a patient whose values and positions are unknown. What is not known is whether these spoken choices actually reflect the adequate evaluation and assimilation of the serious medical facts that predict a likely negative outcome for the patient.

Finally, even though her family is in agreement with the patient's decision, it would have been prudent to involve them more quickly in the discussions.

Recommendation

This is a troubling case, as the patient is refusing surgery for increasingly serious gangrene of the right leg. However, she has been consistent in refusing the surgery, and, at times, seems to indicate some understanding or insight. However, it is by no means certain that she truly understands. In addition, her siblings, who are moderately involved, support her decision. We are faced with suggesting the "least/worst" solution, which is to respect the "spoken choice" of the patient, despite our uncertainty of the level of understanding that undergirds that statement. That is ethically problematic, but less so than imposing surgery over her consistent refusal and the refusal of her family.

Follow Up

Today patient told me she was going to nursing home; she was content. I called her brother Robert again. He explained Attending Dr. X called him and his sister Cecilia in Georgia. They all agreed patient seems to have consistent, clear wish to not have the amputation. She seems to well understand the consequences, including dying from infection, she repeated to me—"I am ready to die." They agreed doing the surgery would go against patient's will. Robert appreciated our concern and effort in this complicated situation. The patient will be transferred today back to nursing home. I reassured him and his sister Cecilia we will support them.

MEANINGFUL USE CRITERIA AND CE CONSULTATION

Each criterion for meaningful use listed in the section, "The Mandate for EHR Adoption and 'Meaningful Use' Criteria," above, has the potential to support and expand the CE consultation field. The first criterion aims to improve healthcare quality, safety, and efficiency. Those three characteristics are infrequently applied to CE consultation, but are key to successful consultation. If CE consultations are conducted poorly, the recommendations of a CE consultant can advance her or his philosophical and preordained positions and defeat the interests, values, and moral perspectives of the patient and family. CE consultation, if done well, can enhance the ability of patients, careproviders, and family members to arrive at ethically compatible, medically effective care planning that addresses the idiosyncratic values of the participants.

Consider the case presented above. The options, in the abstract, would be:

1. To determine that the patient did not have the decisional capacity to understand that the surgery would be lifesaving, which would allow a court to override her "spoken choice" and order amputation of her leg.
2. To deem the patient decisionally capable and thus to respect her refusal, leaving her careproviders in fear of "abandoning" the patient to her dementia as the toxicity of the gangrene overwhelmed her.

However, in this case, the CE consultant was able to solicit family members' confirmation for the position of the patient and enable collective support for her refusal of care. The interaction of a CE consultation is generally a series of discussions; thus, a most effective way to review the quality of a CE consultant's intervention is to review the chart note that documents the discussions and actions. The notes documented in the EHR that are legible and consistent can be assessed in a peer-review system that will facilitate quality improvement.

The intervention in this case was to provide facts and analysis that supported the rather controversial decision of a decisionally compromised patient to refuse what would likely be considered lifesaving care by medical professionals. Without that consultation and analysis, it would likely (even though prediction in clinical ethics cases is always uncertain) be the case that action would have been taken legally and medically to undercut the patient's decision.

The CE consultation notes also address safety concerns. Most often, the literature on EHR implementation describes safety as the avoidance of medical errors, particularly with prescriptions. CE consultations can avoid ethical errors that are quite as serious. When there is miscommunication among healthcare providers relating to a complex case, there is a risk of imposing medical solutions that are not in accord with the moral choices and health preferences of the patient and the patient's family. Electronic notation requires an articulation and analysis of the values and preferences of the patient and family members in the real time of the consultation. In the NYC H+H schema, it also requires the description of ethically relevant medical and social facts on which to base the ethical analysis. EHR demands prevent the CE consultant from making an ethical mistake by imposing an unwanted or undesirable intervention on the patient or family.

The third and final concept addressed in the first meaningful use criterion is efficiency. In complex healthcare situations, efficiency means using time and effort in the most expeditiously way to solve a problem. CE consultation can be used to clarify the values and preferences of the patient and family, to identify hospital rules and policies that would be relevant to the case, and to use collected data to resolve conflicts about patient care. Using a standard Epic form for each CE consultation permits all members of the patient's healthcare team to access these data and circumvents the inefficient re-examination of issues in any case.

The second meaningful use criterion aims to reduce health disparities, which can be the result of the insidious operation of bias and prejudice among careproviders in any healthcare system. The CE consultation forms in the EHR require that the logic of the CE consultant's analysis be explained and documented. This explicit documentation works to combat the implicit bias that often leads to health disparities, particularly with patients in minority groups and those who are disabled. Engaging with individual patients and families is a core aim of CE consultation. This requirement supports the importance of documenting encounters in the CE chart, addressing ethical issues, and providing education about difference for the staff who read the note. Open discussion and analysis is the enemy of prejudice and disregard. CE consultations that are documented in the chart serve ti contest prejudiced notions about persons of color and those with disabilities by identifying the unique factors in each case.

Finally, the meaningful use of EHR requires that the privacy and security of patients be maintained.

Ensuring patients' privacy is outside the realm of the specific goals of CE consultation, but, like all healthcare providers, CE consultants are bound to uphold the privacy and security of patients' records. However, there is a skill to writing a CE consultation chart note that shares sufficient information on which to base the ethical analysis and recommendations and yet respects the patient's privacy and dignity. Occasionally patients have "secrets" that should not be shared. More importantly, respect for patients, family members, and careproviders should undergird every chart note.

PROCESS AND PRODUCT

Depending on whether the treating physician filled out some information during the CE consultation request, some of the ethically relevant medical information may already be filled in for the CE consultant in the chart note. Figure 1 shows the structure of the CE consultation note in Epic, with the relevant drop-down menus for data entry. While some fields, like "Ethically relevant medical information" and "Ethically relevant social history," require text entry, many fields offer a menu of choices. If a choice does not suit the reality, the CE consultant may choose an "Other" choice when appropriate and inject text.

FIGURE 1. Structure of the CE consultation note and description of data entry. Each heading represents a different section in the chart note the consultant must fill out after the initial patient visit.

[Date and time of response]
Ethics consult (check one response)
- Indicated
- Not indicated

Have you communicated with the patient (or if communication not possible) viewed/visited? (check one response)
- Yes
- No

Consultant's determination of decisional capacity
- Yes
- No
- Uncertain
- Unknown

Ethically relevant medical information
- [text entry]

Ethically relevant social history
- [text entry]

Consultant's determination of category of referral
- [see figure 2 for drop-down menu]

Ethical analysis
- [see figure 2 for drop-down menu]

Recommendation(s) in terms of ethics
- [text entry]

Number of meetings
- [see figure 4]

Nature of consult (choose one or several)
- Mediation
- Teaching
- Informational
- Policy interpretation
- Other [text entry]

In the line, "Consultant's determination of category of referral," NYC H+H's Epic system allows the CE consultant to first choose from a list of potential ethical issues, aimed at helping the consultant and medical team to quickly identify the issues at hand (see figure 2). In the next section of the chart note, the CE consultant can insert one or more prewritten analyses designed by the clinical ethics team at NYC H+H in a drop-down menu (see figure 3). Each paragraph in the prewritten analyses corresponds to a topic from the category of referral list shown in figure 2; these analyses were written to generally explain the nature of common ethical issues that arise in patient care.[10] The CE consultant can choose to edit or excerpt the analysis as he or she sees fit; the CE consultant is not locked into the text of the analysis. The goals of the analyses are to serve as guidelines and reference points for the CE consultants as they act to implement a consultation, and as text to be edited for the chart note. As part of the chart note, these texts act as teaching tools for healthcare providers so they can better understand how ethical issues apply in a particular patient's case.

In the chart note for the case we presented above, the consultant chose "Decision-making capacity" as the primary ethical issue rather than "Consent to and refusal of treatment." Consider whether this was the correct focus by comparing the text on capacity, set in bolded text in the "Ethical Analysis" section of the case, with another of the prewritten analyses designed by the CE team, "Refusal of treatment":

> Refusal of recommended treatment should initiate a discussion about the reasons for the refusal. The patient might not understand the nature of the treatment that is being proposed and its potential risks and benefits may have certain fears relating to the treatment that can be addressed, or may have a treatable depression. Because of their profound implications, refusals of life-sustaining treatment in particular should receive heightened scrutiny as should decisions to accept high-risk life-sustaining

> treatment. In general, in the case of treatment refusal, special attention should be given to the adequacy of the information presented and the quality of the explanation, possible language or cultural barriers to understanding, and the patient's capacity and appreciation of the consequences of forgoing treatment.

Because each CE case is unique, there is a risk that the EHR could become depersonalized and homogenized as a "copy and paste" exercise that appears virtually the same from one patient to another.[11] To ensure that the CE consultant is able to construct a narrative as he or she sees fit for an individual patient, the prewritten ethical analysis paragraphs can be inserted into the chart note, either verbatim or as altered text. This compromise between adoption and free-form creation allows the CE consultant to create efficiently while personalizing the chart note.

In this story, as told in the chart note, a psychiatrist initially judged the patient not to have decisional capacity, causing the primary care physician to request a CE consultation. The psychiatrist saw a patient refusing amputation for her gangrenous right leg, which a surgeon had deemed medically necessary to save her life. The first ethical issue, therefore, was whether the patient possessed decision-making capacity as described in the paragraph on that subject.

The CE consultant was clearly concerned about the patient's decisional capacity, given her dementia and the quality of her initial decision. However, because the patient was able to exhibit consistency over time regarding her desire not to have the surgery, the CE consultant offered an alternative analysis to the discussion of capacity, with which the chart note begins, "In CE consultation, consistency over time can sometimes be as powerful as demonstrated capacity. This is such a case. In addition, the family is supporting the patient and does not want to go against her 'spoken choice,' that is, against the values being articulated, even by a decisionally compromised patient."

This case demonstrates that judging decisional capacity is a complex matter. From a psychiatric standpoint, it appears irrational that one would refuse surgery to treat an infection that could cause death. Thus, the patient's initial assent to surgery, followed by a refusal and admission that she would "rather die" than undergo an amputation, appears to violate the assumed decisional norm. Complicating the matter is the finding that the patient has dementia, usually deemed capable of destroying decisional capacity. But further interaction by the CE consultant with the patient and family revealed that

FIGURE 2. Categories of referral and headings for ethical paragraphs. This is a complete list of categories in a drop-down menu from which a consultant can choose. In the subsequent section in the chart note, each category has a pre-written paragraph summarizing the nature of the ethical problem.

Advance directives
Allocation of scarce resources
Assent and consent
Best interest standard
Brain death and reasonable accommodations
Challenging families
Challenging goals of care
Communication
Confidentiality
Conscientious objection
Consent to and refusal of treatment
Cultural/religious issues
Cultural values and treatment
Dealing with the adolescent patient
Decision about artificial hydration and nutrition
Decision-making capacity
Decision maker identification
Decision making in the neonatal intensive care unit
Disagreements between patients and family
Disagreement between staff and patient/family
DNR orders
Doctrine of double-effect
End-of-life balance of acute and palliative interventions
Failure of the medical team to assume responsibility for difficult choices
False choices
Informed consent
Informed consent as a number of requirements
Mediation
Medical futility
Moral distress
Organization ethics
Palliative care
Patient autonomy
Quality of life
Religious values and treatment
Shared decision making
Sharing the burden of responsibility
Substitute judgment
Therapeutic exception
Truth telling
Withdrawing and withholding treatment
Other(s)

the patient's preference to refuse surgery was consistent over time and was supported by her family.

Thus, the chart note analyzes the concept of decisional capacity in two parts: (1) by introducing the

FIGURE 3. Full texts of paragraphs on decision-making capacity and best interest standard from the NYC H+H EHR chart note program

16. Decision-making capacity. Determining whether a patient has the capacity to make medical decisions is often a key ingredient of a clinical ethics consultation. Decisional capacity is not a legal determination but a clinical one that should be made by the attending physician who has the primary responsibility for the treatment and care of the patient. Best practice would have that physician confer with members of the healthcare team who have interacted with the patient over time. Capacity refers to the patient's ability to perform a set of cognitive tasks, including:

- Understanding and processing information about diagnosis, prognosis, and treatment options
- Weighing the relative benefits, burdens, and risks of the therapeutic options
- Applying a set of values to the analysis
- Arriving at a decision that is consistent over time
- Communicating the decision

Having capacity enables an individual to make decisions; it does not obligate him or her to do so, and in fact a person with decisional capacity may waive the right to make decisions or confer this right on others.

It is an established principle of law and ethics that adults who have the capacity to make their own medical decisions should be permitted to do so. Not to give them the opportunity to make their own decisions is a violation of their right to autonomy.

Decisional capacity is decision specific, that is, it varies according to the complexity and seriousness of the decision at hand: more complex and more weighty decisions require a greater degree of decisional capacity than do less complex and less serious ones. The appointment of a healthcare agent, for example, requires only a fairly low level of decisional capacity, whereas deciding whether to have a complicated surgical procedure requires considerably more. In addition, decisional capacity is not always clear-cut or necessarily constant. In some cases, there may be no definite answer to whether the patient has the capacity to make a particular decision. And depending on their age, cognitive abilities, clinical condition, and treatment regimen, patients may exhibit fluctuating capacity. For example, elderly patients often exhibit greater alertness, clearer reasoning, and better communication earlier in the day. Drug interactions can also cause a temporary loss of capacity.

4. Best interest standard. Frequently treatment decisions must be made for patients who lack capacity and cannot decide for themselves. These may be persons who were formerly but are no longer capable of making decisions, or individuals, like newborns or severely developmentally disabled persons, who never had the opportunity to form values or preferences. The standards for healthcare decisions for patients who lack capacity give preference to the patient's voice as the central and most widely accepted source of authority. In some cases, the decision maker may rely on the prior stated wishes of the patient or, if these are not known or were never articulated, the inferred wishes of the patient. But when neither is possible, the decision maker must rely on a best interest standard. This standard requires an objective assessment of the relative burdens of benefits of available treatment options.

Because this standard is employed when there is no knowledge of a particular patient's prior wishes or inferred wishes, it is primarily an impersonal standard. In the absence of such particularized knowledge, the best interest standard considers what would be most likely to benefit or promote the well-being of a hypothetical reasonable patient in the same circumstances as those of the patient. Any additional information specific to the particular patient being treated might also contribute to an assessment of what is in his or her best interest.

In assessing best interest, both the outcome and the probability of achieving it for different treatment options should be considered. In the clinical setting, the best interest standard considers mitigating pain and suffering, prolonging life, restoring and enhancing comfort, and maximizing the potential for independent functioning. In all cases where this standard is invoked, best interest should be determined as far as possible from the perspective of the patient, not the decision maker. A life that may be unacceptable to the decision maker may be acceptable to the patient, and it is the latter standpoint that the decision maker should adopt.

The [New York State] Family Health Care Decision Act (FHCDA) provides for this as follows: The surrogate must make healthcare decisions in accordance with the patient's wishes, including the patient's religious and moral beliefs. If the patient's wishes are not reasonably known, and cannot with reasonable diligence be ascertained, the surrogate makes decisions in accordance with the patient's "best interests." An assessment of the patient's best interests shall include:

- Consideration of the dignity and uniqueness of every person
- The possibility and extent of preserving the patient's life
- The preservation, improvement, or restoration of the patient's health or functioning
- The relief of the patient's suffering
- Any medical condition and such other concerns and values as a reasonable person in the patient's circumstances would wish to consider.

In all cases, the surrogate's assessment of the patient's wishes and best interests must be patient-centered. Healthcare decisions must be made on an individualized basis for each patient and must be consistent with the values of the patient, including the patient's religious and moral beliefs, to the extent reasonably possible.

concept with a definition and analysis written by experts in the CE consultation field, followed by (2) a further explication of how this case demonstrates that consistency in spoken preferences, over time, with support from family members who know the patient's preferences intimately, are sufficient to allow the patient's preference to be respected. Note, however, that a CE consultation note is performed as a consultation to the attending physician, who must ultimately make the decision.

The prewritten ethical paragraphs (example are presented in figure 3) are valuable because they allow for consistent and precise definitions of terms like "decisional capacity" in the medical realm. Combined with the CE consultant's expertise and ability to read the notes before a consultation and to edit the text in the chart note, the EHR system in Epic allows for both consistency of terms and the construction of an individual patient narrative. However, if used without understanding, the "cut and paste" process could result in sloppy thinking, that could result in inappropriate recommendations.

Additionally, the CE consultation note in the EHR allows for the automation of valuable data that can be used for research. Figure 4 shows the type of data that can be entered for each individual CE consultation. Epic can automatically aggregate these data totals, which can help an organization to determine how many and what types of CE consultations take place in a given period of time. As CEC evaluation lacks quantitative data in many circumstances, this data entry and subsequent automated totals will help leaders in the CE consultation field make quantitative determinations regarding the use of CE consultation at a particular medical center.

BENEFITS AND DRAWBACKS OF CEC IN EHR

Notably, the aims of CE consultation and the meaningful use of EHR overlap with the ultimate goal of improving patient-centered care. But CE consultation notes in the patient chart have not yet been implemented into most EHR systems, like Epic or APeX, which are in use in the majority of U.S. healthcare centers and hospitals that have EHR systems. The recommendations by the National Working Group for the Clinical Ethics Credentialing Project urge that a formal note, using a standard format, be included in the patient's medical record.[12] Complicating the picture further, most bioethics professionals in the U.S. hold positions in academia or in large university settings, and there is a lack of specialized CE consultation professionals in smaller community hospitals.[13] Thus, it is difficult to obtain the most up-to-date information on CE consultation practices because due to a lack of CE consultation notes in formal EHRs.

EHR systems provide a number of functionalities that could be used in the CE consultation field to enhance the "meaningful use" of EHRs. The software tools that EHR systems provide aim to avoid medical errors, streamline communication within medical services and between hospitals, aid care-providers' decision making, and ease patients' access to medical records.[14] Research indicates that implementation of multiple EHR functions increased adherence to evidence-based clinical guidelines, improved efficiency, eliminated redundant medical tests, improved patients' safety, and reduced prescription error.[15] Organizationally, EHR can increase regulatory compliance and improve research capacity by providing a database of patients' records.[16] Similar benefits are expected for the CE consultant.

The Epic system implemented at NYC H+H allows any healthcare provider to request an ethics consultation. The CE consultant receives the request in real time, as any other medical professional would. The system assures the accessibility of the patient's ethically relevant medical information and ethically relevant social history, which are necessary for the education of the CE consultant prior to visiting the patient. Just as the CE consultants are able to access medical notes, physicians, nurses, and

FIGURE 4. Tools for data collection, based on number of encounters with patient and/or family. Because this section allows only nominal or numerical entry of data, CE consultants within a hospital system can gather de-identified data on a variety of measures that allow for the analysis of the CE consultative service as a whole.

Number of meetings with one individual (e.g., surrogate, family member, hospital staff member)
[Numerical entry]
Number of family meetings
[Numerical entry]
Number of clinician team meetings
[Numerical entry]
Additional research
[YES or NO]
Consultation with other ethics service staff
[YES or NO]
Ad hoc consult service meeting
[YES or NO]
Medical board, medical director, risk management, legal, clergy, hospital administration involvement
[YES or NO]

other healthcare providers are able to gain access to clinical ethics notes, including analyses and recommendations. The CE consultant may receive information about the patient's situation that has not been revealed to the physician during a consultation. Allowing this information—the patient's ethically relevant medical and social history—to be organized and readily accessible within an electronic system may improve the individual patient's hospital experience by educating the medical team.

Having focused on benefits above, a focus on the potential drawbacks of an EHR system, although troubling, might not have the same implications for CE consultation as for other medical services. Many potential problems are not as relevant to CE consultation: adoption costs, temporary disruption in work flow during adoption, the risk of violating patients' privacy, a loss in physicians' autonomy, or disruption in careprovider-patient relationships.[17] EHR systems eliminate many of these drawbacks for the CE consultant. First, CE consultants may gain additional autonomy as their time spent recording meetings decreases, allowing them more time to spend with patients, family members, or members of the healthcare team. Second, because CE consultants record their notes after patient visits and subsequent meetings, concerns regarding eye contact and patient interaction are largely eliminated. Finally, disruptions in work flow are to be expected initially, but investments in the system will ultimately continue to save time and will gather data about the CE consultation system that is invaluable. CE consultants are in short supply, so streamlining the recordkeeping process will allow consultants to spend more time working on ethical issues rather than on paperwork.

CONCLUSION

If CE consultation is to take its place among the regular interventions available in hospitals and in outpatient facilities, it must adhere to modern standards of medical practice. One growing practice is the use of the EHR as the basis for communication among staff and as a locus of quality improvement efforts. In this case, the fit between patterns of chart note practice and the demands of electronic efforts provide an excellent example of a "yin-yang" relationship. Ethics notes that are handwritten are far less effective for communication—and for any other purpose. A well-crafted CE chart note, in contrast, can help support a growing consensus about care, unify staff in dealing with patients and family members, and offer important supports for controversial decisions that might otherwise be troubling to careproviders. The use of the EHR is, therefore, a win-win for CE consultation services.

DISCLAIMER

The views, opinions, and positions expressed in this article are those of the authors and do not necessarily reflect those of their institutional affiliations. Neither the authors nor the public hospital system have any proprietary interest in Epic, nor were the authors responsible for choosing the system on behalf of NYC H+H.

NOTES

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