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POLICY FORUM

Ethical Dimensions of Meaningful Use Requirements for Electronic Health Records

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The American Recovery and Reinvestment Act (ARRA) [1] will stimulate medicine to adopt and "meaningfully" use electronic health records (EHR) within and across health organizations [2] to improve patient outcomes and accountability, aid in coordination of care, promote effective health management across organizations, and align incentives with good patient and population outcomes—in short, for reasons that appear to be in line with ethical principles. But what does ethical "meaningful use" look like?

To qualify as a "meaningful user" of electronic health records and become eligible for incentive payments and continued Medicare and Medicaid reimbursements, physicians in private practice and hospitals must meet measures for each of three stages of EHR system implementation and process upgrades. These measures derive from projected quality and safety improvements that could result from widespread adoption of EHR, interorganization communication, clinical decision support, and analysis and reporting of patient care. The requirements for physician practices and larger health care organizations differ slightly, but in general, two-thirds of the Stage 1 criteria are mandatory, and the other one-third are to be chosen from a "menu" of 10 additional choices [3, 4].

Medical record keeping has a robust history of promoting patient care [5]. For adoption of EHRs to be an ethical act, patients' need for optimal health outcomes—not a fascination with technology or incentive-seeking—should be the driving force behind it [6].

The next step in meaningful use is the attestation of attainment of Stage 1 goals. At this juncture, electronic reporting will not yet be required, and attestation will occur in more difficult-to-verify written form. Though it would be possible to falsify or fudge paper reporting, health care personnel must avoid any inclination to game the rules or view attestation as a means to a financial end. Not only would such falsification violate the moral imperative against lying—not to mention opening the organization and its senior officers to audits, fraud charges, and reclamation of funds under the False Claims Act [7] and the Deficit Reduction Act [8]—the ethical principle of distributive justice requires that health care facilities support the greater good.

Now we turn to the ethical implications of specific criteria for meaningful use. We have sorted the rules into three categories based on purpose:

A. **electronic extensions** of basic clinical charting;
B. requirements promoting patient **safety**; and
C. **patient**-centered rules.

In category A, **electronic extensions** of basic charting, we place the rules that require:

1. recording of patient demographics;
2. recording vital signs (adding charting changes);
3. listing medication allergies;
4. maintaining problem lists;
5. maintaining medication lists;
6. recording smoking status for patients older than 13 years of age; and
7. incorporating laboratory results into the EHR (requiring structured data that can be analyzed).

The need to bring clinical charting traditions into the electronic format is obvious. Anyone who works in a clinical setting knows that retrieving information from an outdated or otherwise separate chart is burdensome and inefficient. Having that information in a structured, easily retrievable format is a great boon to both health care professionals and patients.

In category B, the **safety** category, we place the rules that require:

1. reminding patients of needed clinical services;
2. transmitting prescriptions to pharmacies electronically (this rule applies only to professionals, not hospitals);
3. checking medication allergies and drug-drug interactions;
4. implementing computerized physician order entry (CPOE) systems;
5. reconciling medication among different care settings;
6. implementing drug formulary checks;
7. exchanging key clinical information among care organizations electronically;
8. providing summaries of care records for patient care transitions;
9. implementing clinical decision rule support and tracking;
10. reporting clinical quality measures;
11. creating patient registries by condition;
12. creating immunization registries;
13. enabling public health syndromic surveillance for disease or condition spikes; and
14. submitting reportable laboratory results.

Although many of these safety rules have already been implemented in paper form, with varying levels of success, electronic recordkeeping will greatly increase the speed, accuracy, and ease of analysis of safety data. Adoption of EHR should improve patient safety by making patient information available across delivery sites, bringing clinical decision support to more points of care, and allowing easy and

detailed measurement of variations in care, leading to more standardization (generally considered to be an expression of justice and equal opportunity for patients).

Medical ethics has long understood the value of public-health-oriented surveillance [9], also expressed in modern notions about "the tragedy of the commons" [10]. Those who wish for complete independence in matters of health and safety can put others in danger—for example, those who refuse vaccination can lower herd immunity and put the community as a whole at risk, and though declining to wear a motorcycle helmet [11] can be justified as an expression of individual rights, recklessness with one's health or safety can incur costs which are partially borne by public dollars. There is a tension here between ethical imperatives—to uphold the respect for individual autonomy and protect the community as a whole.

In category C, the **patient**-centered rules category, we place:

1. providing patients with clinical summaries and instructions;
2. providing patients with an electronic copy of, or electronic access to, their health records;
3. implementing security and safety measures to ensure privacy;
4. identifying patient-specific educational resources; and
5. recording the advance directives of patients 65 years and older.

It is in category C that the ethical discussion gets interesting. In addition to the unsurprising emphasis on preserving patient confidentiality by ensuring data security, which dictates that institutions should deal severely with breaches to protect patients (and to ward off outcry from electronic medical records skeptics), there is a notable enhancement of patient empowerment and self-sufficiency: patients must now be given access to their electronic information.

It may seem peculiar to nonclinicians that patient care information has not traditionally been open-access. Banks, those other keepers of sensitive personal information, do not hide financial data, require the filing of release forms, or charge extra for access to information about one's own accounts. Although they own that information, they share it enthusiastically—and electronically. Many clinicians and health care staff, on the other hand, get nervous when patients want to see their medical records. Does the request indicate a lack of trust? Is a lawsuit soon to follow? Will patients misunderstand or misinterpret information if they read it without a medical professional to interpret it? Will the clinician be deluged with questions about why this laboratory test is one unit above the "laboratory normal" and why the radiologist did not dictate an unequivocal reading? Does the record contain unprofessional and inappropriate remarks?

But there is no turning back. It is time to reevaluate some long-held conventions in patient records, as enshrined, for example, in the American Medical Association's *Code of Medical Ethics*, which contains an opinion asserting that "notes made in treating a patient are primarily for the physician's own use and constitute his or her

personal property" [12]. Patients' access to their own health information is now not only possible [13], it will be a must, and recording habits will change accordingly.

Meaningful use will also necessitate changes in the ethics of EHR vendors. The Office of the National Coordinator for Health Information Technology's certification process for vendors' EHRs will not create a level playing field because vendors may not disclose all costs. Compared to acute care health organizations, many ambulatory health care groups are newcomers to EHR systems. Until the vendor community demonstrates the ethical backbone it takes to offer similar and readily comparable contracts (including details about interface costs, support services, and change management services) to different clients, both health organizations and ambulatory providers should avail themselves of independent third-party reports that use existing client feedback to assess EHRs and related services.

Conclusion

Free-market enthusiasts will point out that our category B, the administrative requirements for meaningful use, contains the largest number of objectives. Critics will ask, "Is meaningful use relevant to clinical practice, or is it an excessive bureaucratic requirement to spend public dollars on doctors' computer systems?" The answer to this question resides in the ethical principle of justice for all. If it is to be ethical, the expenditure of public funds for EHR systems must have a favorable outcome for the public as a whole. Safer prescribing, prevention of medication errors, disease tracking for public health, and public error reporting are goals that justify meaningful use rules.

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