The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

COMMITTEE OPINION

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Committee on Patient Safety and Quality Improvement
Committee on Practice Management

This document reflects emerging concepts on patient safety and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed.

Patient Safety and Health Information Technology

ABSTRACT: The advantages of health information technology (IT) include facilitating communication between health care providers; improving medication safety, tracking, and reporting; and promoting quality of care through optimized access to and adherence to guidelines. Health IT systems permit the collection of data for use for quality management, outcome reporting, and public health disease surveillance and reporting. However, improvement is needed with all health IT, especially regarding design, implementation, and integration between platforms within the work environment. Robust interoperability is critical for safe care, but this goal has proved elusive. Significant patient safety concerns already have been recognized; it is important to keep patient safety and quality as the primary focus.

Benefits of Health Information Technology

Most obstetrician–gynecologists are now using electronic health records. They have rapidly moved into use because of the recognition of their potential benefits and government programs that incentivize their use. The benefits of health information technology (IT) include its ability to store and retrieve data; the ability to rapidly communicate patient information in a legible format; improved medication safety through increased legibility, which potentially decreases the risk of medication errors; and the ease of retrieval of patient information.

The potential to improve patient safety exists through the use of medication alerts, clinical flags and reminders, better tracking and reporting of consultations and diagnostic testing, clinical decision support, and the availability of complete patient data. Data gathered through the use of health IT can be used to evaluate the efficacy of therapeutic interventions and have been demonstrated to lead to improvements in the practice of medicine (1). Alerts can optimize adherence to guidelines and evidence-based care (2). Record uniformity can be designed to reduce practice variations, conduct systematic audits for quality assurance, and optimize evidenced-based care for common conditions (3).

Health IT is increasing patient engagement as consumers of health care. It allows patients access to their medical records, which helps them to feel more knowledgeable about their conditions and encourages them to actively participate in shared decision making.

Outside the patient encounter, it can improve follow-up for missed appointments, consultations, and diagnostic testing. A health care provider can search for specific cohorts of patients within a practice to monitor and improve adherence to indicated health care such as mammograms, Pap tests, or measurement of hemoglobin A_{1C} levels.

Patient Safety Concerns With Health Information Technology

In the 2013 list of hazards by ECRI Institute, four of the top ten hazards were directly related to health IT. "Technology-related adverse events can be associated with all components of a comprehensive technology system and may involve errors of either commission or omission. These unintended adverse events typically stem from human-machine interfaces or organization/system design" (4).

The use of alerts to warn health care providers of potential problems is a powerful tool. However, alerts

top the list of 2013 health IT hazards because the sheer volume of them is causing alert fatigue. This issue is complex and requires individualization within each facility. Developing systems to manage alerts, establish levels of importance, and make them unambiguous is a critical patient safety priority.

Computerized Physician Order Entry has improved legibility and order processing times, and lowered the risk of medical errors; however, safety concerns have been raised. The time needed to place an order has increased, the ordering process may disrupt the work flow of the health care provider, and some formatting can create new opportunities for errors. These errors may be caused by fragmented displays, inflexible ordering formats, incompatible orders, and separations in functions that prevent full comprehension of a patient's health care needs (1).

Patient engagement tools, while improving patient involvement, also introduce reliability concerns regarding data. Use of portable devices that are not password protected makes the patient record vulnerable to invasion of privacy (5).

Patient data mismatch or inserting data into the wrong patient's chart or documenting patient information under the wrong visit may be increased with electronic charting. Mismatches can also occur with paper charting. However, as the amount of data being transferred between different systems increases, the potential for mass mismatch exists and must be evaluated.

Although robust interoperability would allow the exchange of patient information and availability of a complete picture of the patient's care, achieving such a goal has remained elusive. The exchange of data across all health care settings and health care providers would reduce errors and improve patient safety. However, the marketplace continues to sell products that use proprietary code and, thus, are not easily integrated with other systems for the exchange of data.

Automated and self-populating templates designed to save time can inadvertently cause inaccuracy in the medical record. Health care providers must review and edit these templates to ensure that they accurately reflect the encounter. Copying and pasting patient notes from prior visits also can compromise a patient's record if not appropriately reviewed and edited.

There are many barriers to addressing patient safety concerns within health IT systems. There is an absence of mandatory reporting for medical errors related to health IT systems. The nature of competing health IT vendors is such that health care providers may fear sharing errors directly related to the IT system because of concern of violating nondisclosure clauses and vendors' intellectual property rights signed by users (1).

Conclusion

Health IT has become an integral part of the practice of medicine. As with any new technology, health IT brings many potential benefits and as well as potential concerns. The current literature to date, reflects outcomes at single sites or institutions. National estimates are extrapolations from these single-site studies. As the implementation and use of health IT systems increase, it is important to keep patient safety and quality as a major focus (6).

Resource

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The Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule. http://www.hhs.gov/ocr/privacy/.

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