

Introduction

Growing attention by payers to “pay-for-performance” suggests the need not only for efficient and safe clinical practices, but also for the efficient incorporation of consensus measures of quality and the use of best practice tools. Increasingly, practicing oncologists, policymakers, researchers, and payers have called for the implementation of electronic health records (EHRs) to improve the safety, quality, and efficiency of office practice. A true EHR, irrespective of specialty, will capture patient data, integrate with other data sources, and assist the provider with clinical decision support.

Although practice size and financial resources generally dominate the decision to implement an EHR, the type of specialty may dictate what specific functionality must be included and whether or not a particular vendor can meet those expectations. Many broad-based EHRs may not accommodate the special requirements of an oncology practice. Functional elements that are important in an oncology-specific EHR include:

- Tumor staging — Tumor-Node-Metastases (TNM) nomenclature and others
- Multidisciplinary and data-intensive workflow — pathology, lab, imaging
- Chemotherapy dosing and administration
- Toxicity assessment and management
- Clinical trial and protocol management
- Drug inventory management
- Survivorship care

Requirements even within oncology subspecialties may determine the level of functionality necessary in an EHR. For example, surgeons may have less need for an EHR with a prescription writing function since they typically prescribe a narrow range of formulary medications on a short-term basis in contrast to medical oncologists who treat chronically ill patients taking multiple medications.

In addition, many EHRs incorporate patient portals into their applications in order to gather medical history information from patients prior to their first visit. The portal allows patient information to directly upload into the EHR and to become a part of the permanent record. With some systems, patients can also create and maintain a separate personal health record (PHR) either as part of the EHR or as a separate web-based tool. PHRs can store treatment history for portability to other medical facilities.

With all of these considerations, the decision to purchase and implement an EHR can be a daunting undertaking. As with any major practice change, the transition to an EHR requires careful and consistent planning and execution. Planning is the most critical phase of the process and should not be taken lightly. Without proper planning and the appropriate allocation of resources, implementation can be difficult. Take your time, be persistent and remember that an EHR is a long-term investment in your practice.

CHAPTER 1

The Core Functions of an Oncology EHR

- Why an EHR for oncology?
- How an EHR will help your organization:
The value proposition
- How to identify your EHR wish list

Why an EHR for Oncology?

The transition to an electronic environment can be both exciting and challenging. Fortunately, the process has been tested, evaluated, and retested since the 1970s when the Institute of Medicine (IOM) first called for the automation of some clinical and functional processes. In the early 1990s, the IOM defined clinical and functional elements needed in a “computerized patient record,” the precursor to today’s “electronic health record.”

The outcome of the IOM’s work, along with the efforts of the American Society of Clinical Oncology (ASCO), the Physicians Electronic Health Record Coalition (PEHRC), and dozens of demonstration projects funded by the Agency for Healthcare Research and Quality (AHRQ), makes the selection and implementation of electronic health records a much more viable investment today. Your Electronic Health Record (EHR) should not only reduce paper work, it should also support the delivery of standardized care; improve patient safety, especially by means of embedded clinical decision support; and ensure that clinical and demographic information is available when, where, and how you want it. This

chapter is designed to help you make a case for an oncology specific EHR and to create a wish list of components that are most important to you and your practice.

Standardized Care

Standardization increases the clarity, familiarity, and safety of orders. Furthermore, a reduction in variability usually results in more cost-efficient and evidence-based care. Built into any oncology EHR should be:

- Access to standardized classification systems such as ICD-9 for diseases and CPT for procedures
- Standardized nomenclature or controlled clinical vocabulary for procedures
- Medication alerts for adverse or allergic reactions, including drug-drug and drug-disease interactions
- Computerized assessments of toxicity based on standardized nomenclatures, for example, Common Terminology Criteria for Adverse Events (CTCAE)
- Chemotherapy regimens based on evidence-based guidelines, published trials, and/or expert consensus
- Automated suggestions for supportive therapies, for example, antiemetics, hydration, etc., derived from published guidelines.