Tips for Success: Defining EHR System Requirements

The purpose of this document is to help an organization consider and prioritize needs and expectations for an EHR system and choose the best option.

1. Know What the Organization Wants and Needs

While it is fun to window shop at trade shows and conference vendor exhibits, these environments should be used as opportunities to "get ideas" for the organization and learn about new technology options rather than make a system choice. When vendors highlight the many "bells and whistles" of their systems it can quickly overwhelm individuals seeking an EHR system.

Before beginning to evaluate the system options available, develop a clear idea of the most critical aspects and features needed by the organization and prepare a well-defined checklist to stay focused on priorities and to narrow down viable products for consideration.

2. Clearly Establish the Goals the System is Expected to Support

Know what the organization is specifically hoping to gain from implementing an EHR system. Practices seek to purchase and implement EHR systems to address several key clinical and operational needs and goals, including improved efficiency, reduced medical errors, improved patient care, increased reimbursement, etc. Individuals within the practice have varying perspectives on which goals are most critical. Because these perspectives drive each individual's EHR system preferences, it is important to establish a common vision before moving forward with system evaluation. Facilitating open discussions and establishing consensus among all areas within the practice as to specific gains the practice plans to achieve from use of an EHR system set the foundation for defining the specific functions and features needed to support the envisioned gains.

3. Plan New Workflows and Clinical Processes

Using overall goals as a guideline, it is valuable for the organization to spend adequate time envisioning how the practice could meet these goals through use of the EHR. Imagine absence of paper charts, forms, and manual processes. Walk through the many clinical and operational tasks that make up the day-to-day activities of the practice, taking careful note of critical information, triggers, flags, etc. that are included in paper documents. The specific requirements for a new EHR system need to address automated solutions for capturing and communicating this information.

When envisioning EHR system use and redesigning work processes, address all tasks where paper charts are currently referenced or updated. These activities and tasks commonly include:

- Routine and acute visits (from the point of check-in to completion of the visit)
- History and physicals
- Routine and urgent/emergent patient telephone calls
- Medication orders
- Prescription renewal requests

- Test orders – lab, imaging and other – and tracking through to clinician acknowledgement
- Referral requests and tracking through to clinician acknowledgement
- Documentation requiring clinician sign-off
- Nurse-only visits
- Patient broken appointments (aka no-shows)
- Results reporting and patient follow-up – noncritical and critical
- Preventive and chronic care gaps and recall

Carefully thinking through and planning the process for each of these tasks as workflows shift with implementation of an EHR helps identify optimal organization and flow of screens, needed template content, output formats, interfaces, alerts, external access requirements and more.

4. Document EHR System Functional & Integration Requirements

Based on goals for the system, some features and functions of EHR systems are more important to the organization than others. As examples:

If focused on…	Emphasize these EHR capabilities
Improved Clinical & Operations Efficiency	• Strong integration with practice management data and processes • Flexible electronic interfacing for outside entities • Efficient on-line charting features and tools • Custom templates & flows • "Smart" clinician preference lists that evolve through system use • Flexible input methods (e.g., voice recognition, touch screen, handwriting recognition, etc.) • Organized clinician "in-boxes" with priorities and reminders • Direct integration with diagnostic & other clinical equipment (e.g., electrocardiogram, pulse oximetry, etc.) • On-line, direct access to web-based reference data • Intra-office messaging • Custom and ad hoc reports
Reduction in Medical Errors	• Clinical rules databases with alerts • E-prescribing with full interaction checks and alerts • Dosing algorithm support • Order/testing integration with clinical rules, treatment history and directives • Direct access to medical reference data and protocols
Improved Patient Care	• Preventive and chronic care alerts/reminders • Clinical rules and alerts (see Reduction in Medical Errors above) • Disease registry capabilities and/or integration • Missing results reminders • Direct access to medical reference data and protocols • Patient correspondence reminders & education materials (email, paper) • Population health analyses • Documentation of social determinants of health

	• Care management support and risk stratification
Increased Revenue	• Intelligent coding assistance based on charted care • Patient population service analysis to target preventive and chronic care reminders • Direct billing interface • Efficiency features (see above) that reduce paperwork and improve access • Insurer rule integration (e.g., benefit limitations, authorization requirements, delivery networks) • Required functionality to meet state and/or federal programs
Improved Access to Information	• Remote access to full medical records • Wireless tools for greater mobility • On-line, direct access to web-based reference data • Integration with hospital and other affiliate systems • Full email integration • Scanning integration
Reduced Costs	• Full medical record support (total elimination of paper chart) • Simplified charting tools for elimination of transcription • Full integration with practice management system to avoid duplicate entry of data • Evidence-based appropriateness criteria
Competitive Advantage	• Flexible integration with a wide range of external entities (e.g., hospitals, labs, pharmacies, etc.) • Easy data extraction and electronic submission (e.g., disease collaboratives, Medicare studies, etc.) • Value-based reimbursement benchmark analyses • Patient data access features/patient portal • Patient education and secure email communication abilities • Effective recall/reminder capabilities

Many EHR feature checklists are available via medical association, healthcare industry, and vendor websites to help clarify the specific capabilities expected from the system.

Data integration with practice management system and electronic interfaces with other internal systems and external vendors/organizations need to be carefully considered. These integration/interface capabilities are mandatory to obtain efficiency gains within the practice.

5. Define the Technical Needs to Support the EHR System

Numerous EHR technology and device options are available on the market; organizations and clinicians have varying preferences and priorities. A detailed analysis is needed to determine which options are required and desired to meet the practice needs and EHR goals. Technical requirements should include the following areas:

- Operating systems and databases (e.g., Windows, UNIX, SQL, Oracle, Sybase, etc.)
- Display and capture devices (e.g., laptops, pen tablets, PDAs, wall mounted screens, etc.)

- Charting support (e.g., voice recognition, handwriting recognition, keyboards, etc.)
- Networking (e.g., cabling, wireless, Web-based, remote access capabilities, etc.)
- Reporting tools
- Security controls

6. Define Vendor Support and Performance Expectations

Regardless of robust system functionality and state-of-the-art technical tools, an EHR system is only viable if the vendor supporting the system is equally viable and willing to provide quality support to the practice. Defining expectations for a viable vendor in terms of size (both financially and organizationally), breadth of client base, depth of experienced resources, etc., will helps narrow system options to vendors that are likely to provide support for many years.

Also, clearly defining expectations for implementation support, on-going customer support, system enhancements, and overall vendor and system performance helps set a standard against which potential vendors can be measured. Vendors unwilling to commit to implementation timelines and other specific support performance standards should quickly be dropped from consideration.

7. Set Priorities

After all requirements are fully defined, it is important to go back and purposefully evaluate which capabilities are most critical to the practice and which are “nice to have” or needed sometime in the future. While it is important to evaluate vendors according to a full list of requirements, consider not ruling out a strong vendor who may not fully meet some of the lower priority needs. The requirements list developed from planning and definition activities should become the standard against which all vendors and systems are carefully and consistently measured. The criteria defined can be compared to any number of unbiased published industry evaluations of EHR systems/vendors to help narrow evaluation efforts to only the most likely contenders.