Self-Assessment

Organizational Responsibilities

General Instructions for the SAFER Self-Assessment Guides

The SAFER Guides are designed to help healthcare organizations conduct self-assessments to optimize the safety and safe use of electronic health records (EHRs) in the following areas.

- High Priority Practices
- Organizational Responsibilities
- Contingency Planning
- System Configuration
- System Interfaces
- Patient Identification
- Computerized Provider Order Entry with Decision Support
- Test Results Reporting and Follow-up
- Clinician Communication

Each of the nine SAFER Guides begins with a Checklist of recommended practices. The downloadable SAFER Guides provide fillable circles that can be used to indicate the extent to which each recommended practice has been implemented. Following the Checklist, a Practice Worksheet gives a rationale for and examples of how to implement each recommended practice, as well as likely sources of input into assessment of each practice, and fillable fields to record team members and follow-up action. In addition to the downloadable version, the content of each SAFER Guide, with interactive references and supporting materials, can also be viewed on ONC's website at www.healthit.gov/SAFERGuides.

The SAFER Guides are based on the best evidence available at this time (2016), including a literature review, expert opinion, and field testing at a wide range of healthcare organizations, from small ambulatory practices to large health systems. The recommended practices in the SAFER Guides are intended to be useful for all EHR users. However, every organization faces unique circumstances and will implement a particular practice differently. As a result, some of the specific examples in the SAFER Guides for recommended practices may not be applicable to every organization.

The SAFER Guides are designed in part to help deal with safety concerns created by the continuously changing landscape that healthcare organizations face. Therefore, changes in technology, practice standards, regulations and policy should be taken into account when using the SAFER Guides. Periodic self-assessments using the SAFER Guides may also help organizations identify areas in which it is particularly important to address the implications of change for the safety and safe use of EHRs. Ultimately, the goal is to improve the overall safety of our health care system.

The SAFER Guides are not intended to be used for legal compliance purposes, and implementation of a recommended practice does not guarantee compliance with HIPAA, the HIPAA Security Rule, Medicare or Medicaid Conditions of Participation, or any other laws or regulations. The SAFER Guides are for informational purposes only and are not intended to be an exhaustive or definitive source. They do not constitute legal advice. Users of the SAFER Guides are encouraged to consult with their own legal counsel regarding compliance with Medicare or Medicaid program requirements, HIPAA, and any other laws.

For additional, general information on Medicare and Medicaid program requirements, please visit the Centers for Medicare & Medicaid Services website at www.cms.gov. For more information on HIPAA, please visit the HHS Office for Civil Rights website at www.hhs.gov/ocr.

Self-Assessment

Organizational Responsibilities

Introduction

The *Organizational Responsibilities SAFER Guide* identifies individual and organizational responsibilities (activities, processes, and tasks) intended to optimize the safety and safe use of EHRs. A safe EHR implementation is critically dependent on the people involved. This guide, compared to all of the other SAFER Guides, focuses chiefly on human behavior and relationships, and it is organized differently than the other guides. In particular, it includes principles that apply to the people who have responsibility for patient safety in EHR-enabled healthcare organizations.

Safe EHR implementations require attention to social as well as technical matters. This guide is designed to help safely manage the individual and organizational responsibilities in a complex "sociotechnical" healthcare organization. Responsibilities can be shifted, forgotten, or newly created when EHRs are implemented. Careful attention to the details of those responsibilities is a critical factor in system safety and in realizing the potential benefits of EHRs.

Completing the self-assessment in the Organizational Responsibilities SAFER Guide requires the engagement of a wide variety of people within the organization. Because this guide is designed to help organizations prioritize EHR-related safety concerns, clinician leadership in the organization should be engaged in assessing whether and how any particular recommended practice affects the organization's ability to deliver safe, high quality care. The collaboration between clinicians and staff members in completing the self-assessment in this guide will enable an accurate snapshot of the organization's EHR responsibility status, in terms of safety. Even more importantly, collaboration should lead to a consensus about the organization's future path to optimize EHR-related safety and quality: setting priorities among the recommended practices not yet addressed, ensuring a plan is in place to maintain recommended practices already in place, dedicating the required resources to make necessary improvements, and working together to mitigate the highest priority responsibility-related safety risks introduced by the EHR.

Self-Assessment

Organizational Responsibilities

Table of Contents

The SAFER Self-Assessment Guides were developed by health IT safety researchers and informatics experts:

Joan Ash, *PhD, MLS, MS, MBA, Professor and Vice Chair, Department of Medical Informatics and Clinical Epidemiology, School of Medicine, Oregon Health & Science University*;

Hardeep Singh, *MD, MPH, Associate Professor of Medicine at the Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine and Chief of the Health Policy, Quality and Informatics Program at the Houston VA HSR&D Center of Excellence, and Director of the Houston VA Patient Safety Center of Inquiry; and*

Dean Sittig, *PhD, University of Texas School of Biomedical Informatics at Houston, UT–Memorial Hermann Center for Healthcare Quality & Safety.*

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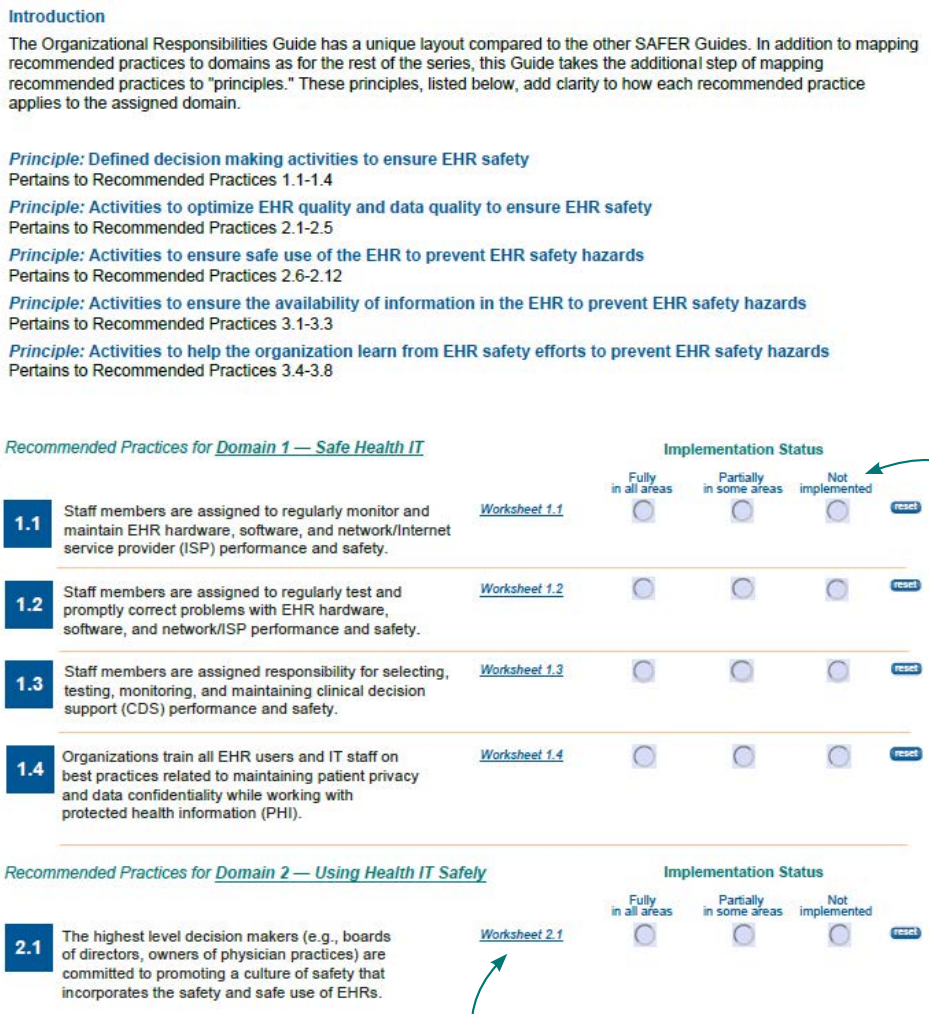
The *Checklist* is structured as a quick way to enter and print your self-assessment. The checklist is based on a core set of underlying principles and specific recommended practices. Your selection on the checklist will automatically update the related section of the corresponding recommended practice worksheet.



Introduction

The Organizational Responsibilities Guide has a unique layout compared to the other SAFER Guides. In addition to mapping recommended practices to domains as for the rest of the series, this Guide takes the additional step of mapping recommended practices to "principles." These principles, listed below, add clarity to how each recommended practice applies to the assigned domain.

***Principle:* Defined decision making activities to ensure EHR safety**
Pertains to Recommended Practices 1.1-1.4

***Principle:* Activities to optimize EHR quality and data quality to ensure EHR safety**
Pertains to Recommended Practices 2.1-2.5

***Principle:* Activities to ensure safe use of the EHR to prevent EHR safety hazards**
Pertains to Recommended Practices 2.6-2.12

***Principle:* Activities to ensure the availability of information in the EHR to prevent EHR safety hazards**
Pertains to Recommended Practices 3.1-3.3

***Principle:* Activities to help the organization learn from EHR safety efforts to prevent EHR safety hazards**
Pertains to Recommended Practices 3.4-3.8

Recommended Practices for Domain 1 — Safe Health IT

			Implementation Status			
			Fully in all areas	Partially in some areas	Not implemented	
1.1	Staff members are assigned to regularly monitor and maintain EHR hardware, software, and network/Internet service provider (ISP) performance and safety.	Worksheet 1.1	○	○	○	reset
1.2	Staff members are assigned to regularly test and promptly correct problems with EHR hardware, software, and network/ISP performance and safety.	Worksheet 1.2	○	○	○	reset
1.3	Staff members are assigned responsibility for selecting, testing, monitoring, and maintaining clinical decision support (CDS) performance and safety.	Worksheet 1.3	○	○	○	reset
1.4	Organizations train all EHR users and IT staff on best practices related to maintaining patient privacy and data confidentiality while working with protected health information (PHI).	Worksheet 1.4	○	○	○	reset

Recommended Practices for Domain 2 — Using Health IT Safely

			Implementation Status			
			Fully in all areas	Partially in some areas	Not implemented	
2.1	The highest level decision makers (e.g., boards of directors, owners of physician practices) are committed to promoting a culture of safety that incorporates the safety and safe use of EHRs.	Worksheet 2.1	○	○	○	reset

The *Domain* associated with the *Recommended Practice(s)* appears at the top of the column.

The *Recommended Practice(s)* for the topic appear below the associated *Domain*.

Select the level of implementation achieved by your organization for each *Recommended Practice*.

Your *Implementation Status* will be reflected on the *Recommended Practice Worksheet* in this PDF.

To the right of each *Recommended Practice* is a link to the *Recommended Practice Worksheet* in this PDF.

The Worksheet provides guidance on implementing the Practice.

Introduction

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***Principle:* Defined decision making activities to ensure EHR safety**
Pertains to Recommended Practices 1.1-1.4

***Principle:* Activities to optimize EHR quality and data quality to ensure EHR safety**
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Pertains to Recommended Practices 3.4-3.8

*Recommended Practices for **Domain 1 — Safe Health IT***

			Implementation Status			
			Fully in all areas	Partially in some areas	Not implemented	
1.1	Staff members are assigned to regularly monitor and maintain EHR hardware, software, and network/Internet service provider (ISP) performance and safety.	*Worksheet 1.1*	○	○	○	reset
1.2	Staff members are assigned to regularly test and promptly correct problems with EHR hardware, software, and network/ISP performance and safety.	*Worksheet 1.2*	○	○	○	reset
1.3	Staff members are assigned responsibility for selecting, testing, monitoring, and maintaining clinical decision support (CDS) performance and safety.	*Worksheet 1.3*	○	○	○	reset
1.4	Organizations train all EHR users and IT staff on best practices related to maintaining patient privacy and data confidentiality while working with protected health information (PHI).	*Worksheet 1.4*	○	○	○	reset

*Recommended Practices for **Domain 2 — Using Health IT Safely***

			Implementation Status			
			Fully in all areas	Partially in some areas	Not implemented	
2.1	The highest level decision makers (e.g., boards of directors, owners of physician practices) are committed to promoting a culture of safety that incorporates the safety and safe use of EHRs.	*Worksheet 2.1*	○	○	○	reset

*Recommended Practices for **Domain 2 — Using Health IT Safely***

			Implementation Status			
			Fully in all areas	Partially in some areas	Not implemented	
2.2	An effective decision making structure exists for managing and optimizing the safety and safe use of the EHR.	Worksheet 2.2	○	○	○	
2.3	Staff members are assigned responsibility for the management of CDS content.	Worksheet 2.3	○	○	○	
2.4	Practicing clinicians are involved in all levels of EHR safety-related decision making that impact clinical use.	Worksheet 2.4	○	○	○	reset
2.5	Clear clinician oversight is maintained when clinicians delegate aspects of order entry, medication reconciliation, or documentation tasks.	Worksheet 2.5	○	○	○	reset
2.6	EHR training and support are sufficient for the needs of EHR users and readily available.	Worksheet 2.6	○	○	○	reset
2.7	EHR training and support are high quality, provided by qualified trainers, and appropriately tailored to specific types of users' needs.	Worksheet 2.7	○	○	○	reset
2.8	Content and delivery of EHR training and support are assessed regularly to optimize complete and safe use of the EHR.	Worksheet 2.8	○	○	○	reset
2.9	Workflow analysis is used to map clinical work and to ensure that the EHR is used safely for delivering care.	Worksheet 2.9	○	○	○	reset
2.10	Clinical staff is assigned responsibility for ensuring that CDS content, such as alerts and protocols, supports effective clinical workflow in all practice settings.	Worksheet 2.10	○	○	○	reset
2.11	Organizational policy facilitates reporting of EHR-related hazards and errors and ensures that reports are promptly investigated and addressed.	Worksheet 2.11	○	○	○	reset
2.12	Records of reported and addressed EHR-related hazards and errors are maintained.	Worksheet 2.12	○	○	○	reset

*Recommended Practices for **Domain 3 — Monitoring Safety***

			Implementation Status			
			Fully in all areas	Partially in some areas	Not implemented	
3.1	Staff members are assigned responsibility, adequately funded, and given appropriate oversight for the maintenance of the EHR-related hardware, software, CDS, and network/ISP performance.	Worksheet 3.1	○	○	○	reset
3.2	Staff members regularly monitor maintenance of the EHR-related hardware, software, CDS, and network/ISP performance and safety.	Worksheet 3.2	○	○	○	reset
3.3	Organizational procedures ensure that EHR users are able to get timely help when there are EHR-related hardware, software, CDS, or network/ISP problems.	Worksheet 3.3	○	○	○	reset
3.4	Communication mechanisms ensure that EHR users learn of EHR changes before they are put in place, and users are able to give feedback on related safety concerns before and after they are implemented.	Worksheet 3.4	○	○	○	reset
3.5	Staff members with job responsibilities for EHR safety are encouraged to participate in relevant professional activities and communicate with others in similar positions.	Worksheet 3.5	○	○	○	reset
3.6	Self-assessments, including use of the SAFER Guides, are conducted routinely by a team, and the risks of foregoing or delaying any recommended practices are assessed.	Worksheet 3.6	○	○	○	reset
3.7	Organizations develop a strategy for measurement of high priority EHR safety hazards.	Worksheet 3.7	○	○	○	reset
3.8	Healthcare organizations and EHR developers share responsibility for identifying and addressing EHR safety concerns.	Worksheet 3.8	○	○	○	reset

A multi-disciplinary team should complete this self-assessment and evaluate potential health IT-related patient safety risks addressed by this specific SAFER Guide within the context of your particular healthcare organization

This Team Worksheet is intended to help organizations document the names and roles of the self-assessment team, as well as individual team members' activities. Typically, team members will be drawn from a number of different areas within your organization, and in some instances, from external sources. The suggested Sources of Input section in each Recommended Practice Worksheet identifies the types of expertise or services to consider engaging. It may be particularly useful to engage specific clinician and other leaders with accountability for safety practices identified in this guide.

The Worksheet includes fillable boxes that allow you to document relevant information. The Assessment Team Leader box allows documentation of the person or persons responsible for ensuring that the self-assessment is completed. The section labeled Assessment Team Members enables you to record the names of individuals, departments, or other organizations that contributed to the self-assessment. The date that the self-assessment is completed can be recorded in the Assessment Completion Date section and can also serve as a reminder for periodic reassessments. The section labeled Assessment Team Notes is intended to be used, as needed, to record important considerations or conclusions arrived at through the assessment process. This section can also be used to track important factors such as pending software updates, vacant key leadership positions, resource needs, and challenges and barriers to completing the self-assessment or implementing the Recommended Practices in this SAFER Guide.

Assessment Team Leader

Assessment Completion Date

Assessment Team Members

Assessment Team Notes

reset page

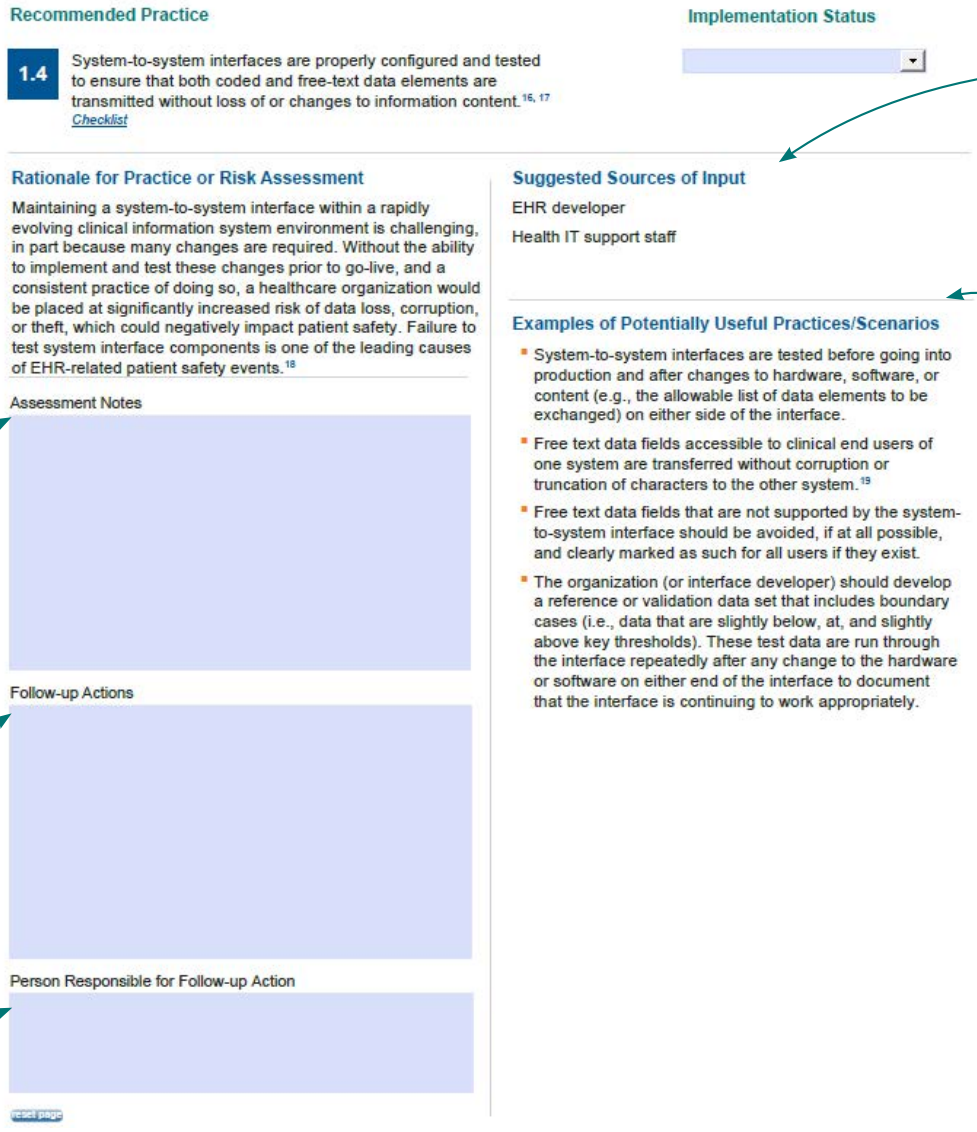
Each *Worksheet* provides guidance on implementing a specific *Recommended Practice,* and allows you to enter and print information about your self-assessment.

The *Rationale* section provides guidance about "why" the safety activities are needed.

Enter any notes about your self-assessment.

Enter any follow-up activities required.

Enter the name of the person responsible for the follow-up activities.



The *Suggested Sources of Input* section indicates categories of personnel who can provide information to help evaluate your level of implementation.

The *Examples* section lists potentially useful practices or scenarios to inform your assessment and implementation of the specific *Recommended Practice*.

Recommended Practice

1.1 Staff members are assigned to regularly monitor and maintain EHR hardware, software, and network/internet service provider (ISP) performance and safety.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Problems can be caught before harm is done.
- Providers and others can learn from their mistakes.
- The impact of changes to the EHR or clinical decision support (CDS) is transparent.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Safety officer, informatics-type department, health IT

Small organization:
Office management, health IT staff/contractor, providers

Suggested Sources of Input

Leadership team
Health informatics team
Clinicians, support staff, and/or clinical administration
Multi-professional team
Health IT support staff

Examples of Potentially Useful Practices/Scenarios

- A plan outlining responsibility for EHR safety monitoring is in place.[1,2,3]
- Errors involving system-to-system interfaces are routinely monitored.
- Providers and others (including leadership in large organizations) are encouraged to use tools to monitor EHR safety and care quality.
- A plan exists for learning from incidents to improve EHR safety.
- The review and communication of lab results are monitored.
- The test results reporting loop is closed.
- Selected post-implementation care outcomes are monitored.
- Alert and reminder responses are monitored.
- Alert and reminder specificity and sensitivity are appropriately managed.

Recommended Practice

1.2 Staff members are assigned to regularly test for and promptly correct problems with EHR hardware, software, and network/ISP performance and safety.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Customization of either the EHR or content must be skillfully done or upgrades to the EHR can produce unique hazards.
- Inadequate or unprepared staff members are more likely to permit problems to remain unaddressed.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Safety officer, informatics-type department, health IT

Small organization:
Office management, health IT staff/contractor, providers

Suggested Sources of Input

Leadership team
Health informatics team
Clinicians, support staff, and/or clinical administration
Health IT support staff
EHR developer

Examples of Potentially Useful Practices/Scenarios

- The organization has adequate numbers of trained staff members available either on site or elsewhere to modify software.
- Adequate technical staff members are available to fix hardware problems during operating hours.
- Staff members are available to catch and promptly correct errors in areas such as registration, order entry, or test results communication.
- When errors occur, a multi-disciplinary review and discussion takes place.
- The organization has a rigorous process in place for testing new software.[4]
- The organization has a rigorous process in place for testing new hardware.
- Workflow analysis that shows the way work is actually done is conducted prior to any system upgrade.
- Risk assessments are conducted prior to go-live.
- The potential impact of any EHR upgrade is carefully assessed.[5]

Recommended Practice

1.3 Staff members are assigned responsibility for selecting, testing, monitoring, and maintaining clinical decision support (CDS) performance and safety.[6]

Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Untested CDS can lead to patient care errors.
- Lessons from testing can prevent implementation of error prone CDS.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Safety officer, informatics-type department, health IT

Small organization:
Office management, health IT staff/contractor, providers

Suggested Sources of Input

Leadership team	Health IT support staff
Health informatics team	EHR developer
Clinicians, support staff, and/or clinical administration	

Examples of Potentially Useful Practices/Scenarios

- The organization has a rigorous process in place for testing new CDS.[4]
- Risk assessments are conducted prior to go-live with new CDS.
- Clinical content is developed or modified by a multi-disciplinary group, including clinical specialists when appropriate.

Recommended Practice

1.4 Organizations train all EHR users and IT staff on best practices related to maintaining patient privacy and data confidentiality while working with protected health information (PHI).[7]

Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- A rapid increase in computerization of health care organizations (HCOs) has raised their profile as lucrative targets for cyber-criminals.

Responsibility

Large organization:
Patient safety officer, compliance officer, chief information security officer

Small organization:
Owners

Suggested Sources of Input

Clinical, administrative and IT leadership team

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Examples of Potentially Useful Practices/Scenarios

- All employees should be required to take, and pass, a course (either on-line or in-person) that focuses on best practices for handling protected health information (PHI).[8]
- All employees are trained on ransomeware prevention strategies, including how to identify malicious e-mails (i.e., spam, phishing, and spear-phishing messages), and to avoid clicking on potentially weaponized attachments (e.g., *.exe, *.zip, *.rar, *.7z, *.js, *.wsf, *.docm, *.xlsm, *.pptm, *.rtf, *.msi, *.bat, *.com, *.cmd, *.hta, .*scr, *.pif, *.reg, *.vbs, *.cpl, *.jar files). Safe file attachment formats include *.jpg, *.png, *.pdf, *.docx, *.xlsx, and *.pptx.[7]
- Organizations train all employees not to use USB flash drives unless the drives are obtained from a trusted source.[7,9]

Recommended Practice

2.1 The highest level decision makers (e.g. boards of directors, owners of physician practices) are committed to promoting a culture of safety that incorporates the safety and safe use of EHRs.[10]

Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Leadership can provide motivation for all staff to pay attention to EHR safety.
- Those in authority can provide resources for ensuring EHR safety.
- Without leadership involvement, EHR safety efforts will likely fail.

Responsibility

Large organization:
Board of directors, parent organization, CEO

Small organization:
Owners

Suggested Sources of Input

Leadership team

Multi-professional team

Examples of Potentially Useful Practices/Scenarios

- Highest level decision makers recognize that EHR safety is integral to patient safety.[11] They ensure that EHR safety is integrated into organizational policies and procedures and risk management practices.[12]
- Highest level decision makers ensure that adequate staffing and resources exist so that safety issues associated with adoption and use of EHRs can be addressed in a timely fashion.
- Highest level decision makers review the results of assessments of EHR safety, such as those from SAFER Guide use.[13]
- Highest level decision makers identify EHR-related patient safety goals, assess whether those goals are being reached, and address any shortcomings.
- Highest level decision makers identify and support staff members so that they can provide well thought out, coordinated feedback to the EHR developers regarding the perceived shortcomings of their EHRs.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

2.2 An effective decision making structure exists for managing and optimizing the safety and safe use of the EHR.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Clarifies responsibility.
- Maximizes involvement of disciplines.
- Ensures that important EHR safety issues are addressed.

Responsibility

Large organization:
Board of directors

Small organization:
Owners

Suggested Sources of Input

Leadership team

Multi-professional team

Examples of Potentially Useful Practices/Scenarios

- For larger organizations, all of the following are represented in decision making about EHR safety: clinicians, administrators, patients, health IT/informatics, board of directors and CEOs, and quality and legal staff.
- For smaller ambulatory practices and small hospitals, both clinical and administrative staff members are represented in decision making about EHR safety, with assistance from outside experts as needed.
- An EHR safety officer, or someone assigned that responsibility part time in a small organization, plays a key role in assuring safety.
- EHR safety is appropriately included in job performance appraisals.
- For a larger organization, an EHR safety oversight committee is in place,[14,15] or these functions are assumed by an EHR or safety and quality oversight committee.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

2.3 Staff members are assigned responsibility for the management of CDS content.[6]
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Facilitates decision making about CDS and other content.
- Provides accountability for decisions.
- Avoids hazardous, wrong, or outdated content in the EHR.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Informatics-type department

Small organization:
Providers

Suggested Sources of Input

Health informatics team
Clinicians, support staff, and/or clinical administration
Multi-professional team
EHR developer
Pharmacy

Examples of Potentially Useful Practices/Scenarios

- A decision making structure exists for making decisions about clinical content.[16,17,18,19]
- Responsibility for management of content, from selection to maintenance, is clear.
- Committees or other collaboration mechanisms are in place to approve order sets and documentation templates.[20]
- The healthcare organization routinely reviews the CDS content embedded in their EHR and provides feedback to their EHR developer about local standards of care.
- There is clear responsibility for the review of new CDS that becomes available from developers and other sources (e.g., professional organizations).
- Developers provide clear documentation of CDS content and the evidence-base to support that content.
- Developers routinely review and update CDS content they provide.
- Personnel are available, either internally or externally, to ensure that CDS is tailored to the workflows of professional roles and specialties.[21,22,23,24,25]

Recommended Practice

2.4 Practicing clinicians are involved in all levels of EHR safety-related decision making that impact clinical use.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Facilitates informed decision making about clinically relevant issues.
- Assures focus on patient care.
- Increases acceptance of decisions.

Responsibility

Large organization:
Administration

Small organization:
Providers

Suggested Sources of Input

Clinicians, support staff, and/or clinical administration

Multi-professional team

Examples of Potentially Useful Practices/Scenarios

- Clinicians (including physicians, nurses, pharmacists, and others) are included on the EHR safety oversight committee of a large organization.[26]
- Clinicians are involved in decision making about proposed changes to the EHR that affect clinical care (e.g., changes to screen design, content of order sets, charting templates, clinical alerts, role-based access to system resources, placement of workstations).

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

2.5 Clear clinician oversight is maintained when clinicians delegate aspects of order entry, medication reconciliation, or documentation tasks.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Assures that the safety risks of assigning these tasks to medical assistants or scribes are carefully weighed.
- Assures that responsible providers take the time to review delegated work.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Hospital departments

Small organization:
Providers

Suggested Sources of Input

Clinicians, support staff, and/or clinical administration

Multi-professional team

Examples of Potentially Useful Practices/Scenarios

- The organization has a written policy and procedure in place regarding delegation of order entry, medication reconciliation, and clinical documentation tasks.
- There is a process in place to ensure competency (i.e., administrative, clinical, and EHR knowledge) of those with delegated EHR data entry authority that includes regular evaluation of their work and written documentation of the results of that evaluation.[27]
- For teaching hospitals and clinics, attending physicians are diligent about reviewing the work of trainees.[28,29]
- In community non-teaching settings, responsible providers oversee and are diligent about reviewing the delegated work.

Recommended Practice

2.6 EHR training and support are sufficient for the needs of EHR users are readily available.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- If the EHR is not used or is poorly used, patient harm can result.
- Training and support staff must be well trained to maximize effectiveness.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Informatics-type department, health IT, developer

Small organization:
Office management, developer

Suggested Sources of Input

Leadership team
Health informatics team
Clinicians, support staff, and/or clinical administration
Health IT support staff
EHR developer

Examples of Potentially Useful Practices/Scenarios

- All users are trained prior to their using the system, supported while they are first using the system, and trained again before each change to the system.[1]
- Different modalities for training are offered to accommodate user schedules and learning styles.
- EHR safety is covered in EHR training.
- Users are trained on how to proceed during system unavailability (i.e., downtimes).
- Providers must demonstrate competency in using the system before using order entry.
- In larger organizations, health IT and informatics staff receive training from the developer and are certified as appropriate.
- A process is in place so that users can get help immediately whenever and wherever they need it.[22]

Recommended Practice

2.7 EHR training and support are high quality, provided by qualified trainers, and appropriately tailored to specific types of user needs.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Suboptimal training and support lead to wasted time for users.
- Lack of diligence can cause EHR safety hazards.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Informatics-type department, health IT, developer

Small organization:
Office management, developer

Suggested Sources of Input

Leadership team
Health informatics team
Clinicians, support staff, and/or clinical administration
Health IT support staff
EHR developer

Examples of Potentially Useful Practices/Scenarios

- Whether done by dedicated internal trainers or others hired from outside, pre-implementation training prepares users for go-live.
- Training and support are provided by individuals who can fill the gap between the clinical and health IT languages and understand clinical workflow.[21]
- Support provided is appropriate to the level of clinical training and EHR competency. Support should be available on-site at least during the first week or so after EHR go-live and might be in the form of expert EHR users.
- A written policy and procedure exists so that all users know how to get technical, software, and connectivity support.
- Initial training includes running through scenarios that simulate the tasks users will need to accomplish.[30]
- Training stresses the need to be diligent about entering accurate data.[1,31,32,33,34]
- User skills are monitored and upgraded when needed.

Recommended Practice

2.8 Content and delivery of EHR training and support are assessed regularly to optimize complete and safe use of the EHR.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- To achieve full value from EHR implementation, continuous improvement of training and support is important.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Informatics-type department, health IT, developer

Small organization:
Office management, developer

Suggested Sources of Input

Leadership team
Health informatics team
Clinicians, support staff, and/or clinical administration
Health IT support staff
EHR developer

Examples of Potentially Useful Practices/Scenarios

- A training plan outlines regular, ongoing training opportunities so that users can optimize their use of the EHR.
- Training and support must be tailored to the needs of EHR users.
- A plan exists for ongoing assessment of training and support.
- Feedback about training and support is effectively addressed.

Recommended Practice

2.9 Workflow analysis is used to map clinical work and to ensure that the EHR is used safely for delivering care.[35]

Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Inattention to how the EHR fits workflow can result in wasted time and money.
- Workarounds that result from workflow-related problems can lead to errors that affect patients.

Responsibility

Large organization:
Informatics-type department, health IT, developer

Small organization:
Office management, developer or consultant

Suggested Sources of Input

Leadership team	EHR developer
Health informatics team	Multi-professional team

Examples of Potentially Useful Practices/Scenarios

- Workflow analysis is conducted prior to implementation of the EHR.[36]
- Workflow analysis is conducted prior to any major change to the EHR system.
- An effective change management approach (e.g., strategies for promoting the adoption and effective use of EHRs) guides any needed workflow changes based on the workflow analysis.[37]

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

2.10 Clinical staff is assigned responsibility for ensuring that CDS content, such as alerts and protocols, supports effective clinical workflow in all practice settings.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Without customization, generic CDS that is not useful to the recipient's role or specialty may create hazards.

Responsibility

Large organization:
Informatics-type department

Small organization:
Providers

Suggested Sources of Input

Clinicians, support staff, and/or clinical administration

Health IT support staff

Multi-professional team

Pharmacy

Examples of Potentially Useful Practices/Scenarios

- A process exists for the review and modification of any locally developed, commercial, or freely available CDS so that it is appropriate for a particular setting.[38]
- A clinical rules committee has a defined process for evaluating and overseeing the testing and monitoring of CDS.
- The unique needs of the pediatric population are taken into account when reviewing and modifying CDS.[39,40]

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

2.11 Organizational policy facilitates reporting of EHR-related hazards and errors and ensures that reports are promptly investigated and addressed.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- A culture of safety relies on reporting and follow-up.
- If hazards exist but remain unreported they could cause harm.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Safety officer, all those involved in safety initiatives, informatics-type department responsibility

Small organization:
Office management, providers

Suggested Sources of Input

Leadership team

Health informatics team

Clinicians, support staff, and/or clinical administration

Examples of Potentially Useful Practices/Scenarios

- The mechanism for anonymous, no-fault, internal reporting of EHR-related safety hazards is clear to all users.[41]
- Those who manage EHR and patient safety initiatives for the organization have a clear process for addressing identified problems and for reporting problems externally to the developer and/or a Patient Safety Organization (PSO) when appropriate.[4,33]

Recommended Practice

2.12 Record of reported and addressed EHR-related hazards and errors and maintained.[5,42]
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- If records of EHR-related hazards are not maintained, the same problems might arise at a future time without access to prior solutions and mitigation strategies.
- There could be liability risks if the history is undocumented.
- If users cannot learn the disposition of their reports, they may not bother submitting future reports.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

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Responsibility

Large organization:
Safety officer, Informatics-type department

Small organization:
Office management, providers

Suggested Sources of Input

Leadership team
Health informatics team
Clinicians, support staff, and/or clinical administration

Examples of Potentially Useful Practices/Scenarios

- Larger organizations often use help desk software to keep track of internal reports and their disposition.
- Smaller organizations develop databases of reports and assign responsibility for maintenance of the database, usually to a health IT person.
- The user who reported the issue should be notified of the outcome when appropriate.

Recommended Practice

3.1 Staff members are assigned responsibility, adequately funded, and given appropriate oversight for the maintenance of the EHR-related hardware, software, CDS, and network/ISP performance.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Without maintenance, components of the EHR may impede use.
- Inadequate maintenance could cause the EHR to be unavailable, creating safety risks.

Responsibility

Large organization: Health IT informatics-type departmentHI (for CDS)

Small organization:
Health IT contractor or internal health IT-oriented person

Suggested Sources of Input

Health IT support staff

Examples of Potentially Useful Practices/Scenarios

- Regular maintenance of hardware, software, CDS, and the network/ISP is organized and funded.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

3.2 Staff members regularly monitor maintenance of the EHR-related hardware, software, CDS, and network/ISP performance and safety.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Inadequate maintenance may result in increased and unplanned downtime.
- Inadequate maintenance may cause the EHR to be unavailable, causing safety risks.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Health IT, informatics-type department

Small organization:
Office management

Suggested Sources of Input

- Leadership team
- Clinicians, support staff, and/or clinical administration
- Health IT support staff
- Health informatics team

Examples of Potentially Useful Practices/Scenarios

- When maintenance for these components is provided from outside the organization, oversight is conducted by an internal staff member to assure the competence and performance of the contractors.
- When maintenance is provided internally, regular schedules exist for it.
- EHR developers provide recommendations and timelines for routine maintenance procedures to local healthcare staff members.
- Assessments, using EHR developer-supplied checklists based on the best available evidence, are conducted regularly to ensure adequate maintenance.

Recommended Practice

3.3 Organizational procedures ensure that EHR users are able to get timely help when there are EHR-related hardware, software, CDS, or network/ISP problems.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Without knowing how to get help, users will develop workarounds, which can be dangerous.
- Time can be wasted when users and staff members have difficulty finding help.

Responsibility

Large organization:
Health IT, informatics-type department

Small organization:
Office management

Suggested Sources of Input

Leadership team
Clinicians, support staff, and/or clinical administration
Health IT support staff
Health informatics team

Examples of Potentially Useful Practices/Scenarios

- In small practices, guidelines exist for determining when to seek help outside the organization.
- In larger organizations, guidelines exist for users to know how to get help, and for health IT staff members to know when and how to get outside assistance.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

3.4 Communication mechanisms ensure that EHR users learn of EHR changes before they are put in place, and users are able to give feedback on related safety concerns before and after they are implemented.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- If observed errors are not reported, they will generally not be fixed.
- If the developer does not receive feedback, he or she will generally not address the issues.
- Patient harm can result if hazards are not addressed.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Health IT, informatics-type department, developer

Small organization:
Office management

Suggested Sources of Input

- Leadership team
- Clinicians, support staff, and/or clinical administration
- Health IT support staff
- Health informatics team
- EHR developer

Examples of Potentially Useful Practices/Scenarios

- Responsibility is clear for reporting EHR safety errors and getting feedback.
- Someone is responsible for serving as the liaison to the developer for reporting problems and getting feedback.
- Communication channels are in place for including health information management staff in patient registration error correction and feedback.
- Software errors or desired changes for safety reasons are routinely reported to the developer.
- Reports about EHR safety reach the highest level in the organization routinely, and feedback is given.
- Users know how to report potential and actual EHR safety problems, and to whom they should be reported.

Recommended Practice

3.5 Staff members with job responsibilities for EHR safety are encouraged to participate in relevant professional activities and communicate with others in similar positions.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- If key internal people do not network with outsiders, up-to-date knowledge may not reach them.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Health IT, informatics-type department, developer

Small organization:
Office management

Suggested Sources of Input

- Leadership team
- Clinicians, support staff, and/or clinical administration
- Health IT support staff
- Health informatics team
- EHR developer

Examples of Potentially Useful Practices/Scenarios

- Organizations support professional development of staff assigned responsibility for any aspect of EHR safety by budgeting for and encouraging training.
- Staff members with responsibility for EHR safety establish routine mechanisms for discussing problems they encounter as they optimize the safety and safe use of EHRs. This may include participation in specific EHR computer user groups or in professional association activity.
- Professional organizations, including those for clinicians and office administration, often provide information about issues that might affect EHR safety.

Recommended Practice

3.6 Self-assessments, including use of the SAFER Guides, are conducted routinely by a team, and the risks of foregoing or delaying any recommended practices are assessed.[43]
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Without learning through use of available self-assessment tools, organizations risk overlooking critical hazards.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Responsibility

Large organization:
Safety officer, those involved in safety initiatives, informatics-type department

Small organization:
Office management, providers

Suggested Sources of Input

Leadership team

Clinicians, support staff, and/or clinical administration

Health IT support staff

Health informatics team

EHR developer

Examples of Potentially Useful Practices/Scenarios

- Self-assessments related to EHRs and patient safety are done routinely.
- The self-assessment process includes setting targets for addressing items that the organizational team identifies.

Recommended Practice

3.7 Organizations develop a strategy for measurement of high priority EHR safety hazards.[44]
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- A comprehensive strategy is needed to capture and respond appropriately to the full scope of EHR safety hazards.

Responsibility

Large organization:
Board of directors

Small organization:
Owners

Suggested Sources of Input

Clinical and IT leadership team
Multi-professional team
EHR vendors

Examples of Potentially Useful Practices/Scenarios

- Key measurement areas for HIT safety identified by the National Quality Forum include:
  - Clinical Decision Support
  - System Interoperability
  - Patient Identification
  - User-Centered Design and Use of Testing, Evaluation, and Simulation to Promote Safety across the HIT Lifecycle
  - System Downtime (Data Availability)
  - Feedback and Information-Sharing
  - Use of HIT to Facilitate Timely and High-Quality Documentation
  - Patient Engagement
  - HIT-Focused Risk-Management Infrastructure
- Additional details on each measurement area are available in the NQF report.[44]

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

Recommended Practice

3.8 Healthcare organizations and EHR developers share responsibility for identifying and addressing EHR safety concerns.
Checklist

Implementation Status

Off

Rationale for Practice or Risk Assessment

- Healthcare organizations and their EHR developers must work together to identify and learn about EHR safety and thus share responsibility for improvement of existing EHRs.[26]

Responsibility

Large organization:
Board of directors, EHR developers

Small organization:
Owners, EHR developers

Suggested Sources of Input

Clinical and IT leadership team

Multi-professional team

EHR vendors

Examples of Potentially Useful Practices/Scenarios

- EHR developers should develop their own set of system-specific guidance to help their clients configure their EHRs to meet the SAFER Guide recommendations.
- Healthcare organizations should review the SAFER Guide recommendations annually.

Assessment Notes

Follow-up Actions

Person Responsible for Follow-up Action

reset page

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