Installation and Maintenance of Health IT Systems

Unit 8a
Troubleshooting; Maintenance and Upgrades; and Interaction with Vendors, Developers, and Users

What We'll Cover…

- Identifying and implementing an effective troubleshooting procedure for reporting, evaluating, fixing, and following up on errors, problems, and system limitations
  - Creating a helpdesk
  - Triage and prioritization
  - The "tiered" support strategy

What We'll Cover…

- The importance of developing a process for communicating requirements and supplying updates between vendors, developers, and users

- The importance of creating a baseline for measuring system performance
  - What is a baseline?
  - What to measure?

Creating Effective Troubleshooting and Maintenance Strategies

- EHR systems in larger environments require dedicated staff to perform maintenance and troubleshooting.

- Smaller environments need a "go-to" person assigned both to administer the system and to interface directly with IT consultants and the vendor.

Creating Effective Troubleshooting and Maintenance Strategies

- Larger institutions will find it more cost-effective to provide on-site staffing for most maintenance and troubleshooting tasks associated with the EHR.

- Creating a dedicated production support team is recommended for larger healthcare environments to focus on customer support issues.

Creating Effective Troubleshooting and Maintenance Strategies

- The Production Support Team should focus on:
  - Being highly available and usable.
  - Providing rapid response to service issues.
  - Handling customer problems.
  - Managing user access requests to the EHR.
  - Reviewing daily interface error logs.
 - Doing other day-to-day duties as needed.

Creating Effective Troubleshooting and Maintenance Strategies

- The team should:
  - Be customer-focused.
  - Consist of staff with a high degree of application and business process knowledge.
  - Be staffed with specialists capable of providing helpdesk, OS and application-level, hardware, and network support.

Creating Effective Troubleshooting and Maintenance Strategies

- The helpdesk:
  - Becomes the first point of contact for most troubleshooting incidents.
  - Assists with answering user inquiries and troubleshooting more common issues.
  - Is responsible for "triaging" issues beyond their resolution scope to the appropriate group.
  - Is responsible for assigning priority, e.g. Routine, Important, Urgent, Critical.

EHR Troubleshooting Workflow
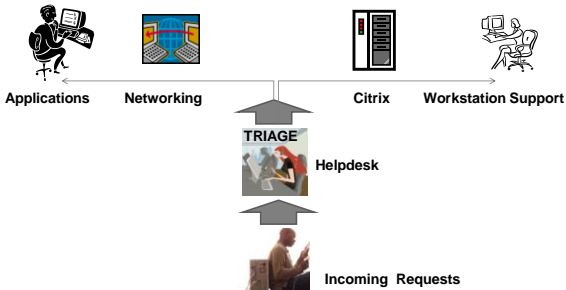
Applications   Networking   Citrix   Workstation Support

TRIAGE

Helpdesk

Incoming Requests

Creating Effective Troubleshooting and Maintenance Strategies

- Prioritizing troubleshooting requests:
  - Routine (Low)
    - An intermittent problem that needs to be addressed but is having little to no impact on workflow or patient health.
  - Important (Medium)
    - A device is nonfunctional but not impacting patient care.

Creating Effective Troubleshooting and Maintenance Strategies

- Prioritizing troubleshooting requests:
  - Urgent (High)
    - Issues that are severely impacting an individual's or department's workflow.
  - Critical
    - Issues where a critical device is affected with no other alternative for the user and the issue is directly affecting patient care.

Creating Effective Troubleshooting and Maintenance Strategies

- The tiered approach:
  - First Tier
    - Super users
    - Helpdesk
  - Second Tier
    - Network and workstation specialists
    - Technical analysts
  - Third Tier
    - Application support specialists
    - Support consultants

Creating Effective Troubleshooting and Maintenance Strategies

- "Super users":
  - Are usually members of clinical teams well trained in EHR usage and workflow strategies.
  - Are located at practice sites or departments to provide front-line user support for commonly asked questions.
  - Promote proper security and confidentiality policies.
  - Need excellent teaching and communication skills.
  - Act as liaison between EHR support team and clinic.

Creating Effective Troubleshooting and Maintenance Strategies

- Helpdesk analysts:
  - Provide phone and email support.
  - Are proficient at workstation and application troubleshooting.
  - Provide documentation of issues along with their resolution for further analysis.
  - Need excellent customer relation skills.

Creating Effective Troubleshooting and Maintenance Strategies

- Network Specialists and Workstation Analysts:
  - Are dispersed throughout the system to provide level two support.
  - Are capable of troubleshooting intermediate to advanced network and application issues.
  - Interface with various team members to expedite requests.

Creating Effective Troubleshooting and Maintenance Strategies

- Application Support Analysts:
  - Are experts in EHR applications.
  - Troubleshoot difficult issues.
  - Research specific problems with vendor.
- Production Support Consultants:
  - Work effectively with clinicians and stakeholders.
  - Recommend and implement EHR upgrades.

Creating Effective Troubleshooting and Maintenance Strategies

- Communication is key…
  - Having separate teams means a vital need for written documentation.
  - Lines of communication must exist connecting all facets of the support infrastructure.
  - Routine training can be a tool for communication enhancements, known issues, and soliciting feedback.
  - Communication and good listening skills are essential for supporting users.