



How to Achieve a **RAPID RESPONSE HELP DESK**  
and **IMPROVED USER COMMUNICATION** in Healthcare



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## How to Achieve a Rapid Response Help Desk and Improved User Communication in Healthcare

Propelled by recent government incentives, hospitals are implementing Electronic Medical Records (EMRs), also called Electronic Health Records (EHRs). According to a recent survey of healthcare CIOs published in the May 6, 2010 issue of Information Week, 58% cited “EHR projects” as their top priority over the next two years. Other top priorities included 56% citing “computerized physician order entry,” while 36% said “bar-coded medication administration.” With the obvious increase in computer-based solutions, Help Desks face increasing challenges to maintain systems, networks and applications in peak operating health.

The principal difficulty lies in the disparate yet crucial roles medical staff and Help Desk staff fulfill. Patients with sudden-onset acute medical conditions enter the hospital as an emergency room case. By contrast, the healthcare IT department treats an acute, sudden-onset condition (in the network, a computer station, and/or a program) from the Help Desk. The most obvious question is: How does the help ticket generation process impact patient safety and quality of care? Faster and more effective Help Desk response times are certain to have a positive impact.

All of the currently available information about Help Desk services for a distributed knowledge-based workforce such as healthcare focuses on efficient remote support. However, before an IT tech can “ride to the rescue” via efficient remote support, a user must generate a help ticket. Then, by whatever means, IT must route the ticket to the appropriate tech. The initial IT staff respondent often has to first perform IT triage. This means contacting the initial user who filed the help ticket to gather additional information, complete with the almost certain phone tag and delays. **The result:** IT crucial-response and resolution times may lag as long as 24 hours.

Unfortunately, the healthcare environment tends to impede users from actually generating help tickets. The fact is, in most hospitals and other healthcare facilities, time-stressed nurses and physicians may not report software, hardware, and/or network problems. As one Help Desk technician termed it, “There’s a psychological cost for a user to report an issue.”

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In most facilities, the medical staff generates help tickets in the usual way via a phone call or email to the Help Desk. The user filing the ticket often experiences frustration because they lack significant computer literacy. Yet the Help Desk typically asks questions that, to IT personnel, are routine. As one staff nurse reported, asking her to identify the network server was “like talking to someone in Greek.” Plus it often takes five minutes or more of a user’s time to create a **help ticket**.

The process thus proves frustrating for both the Help Desk and the user community. The Help Desk asks for data that is not necessarily readily available, while the user is frustrated because of the time required. Worst of all, a critical system or computer station may be unusable because staff has found an inefficient manual workaround more acceptable than the psychological, time consuming cost of filling out a help ticket.

## Ending The Vicious Cycle

As Stephanie Altavilla, MSMI, RN Clinical Informatics and staff nurse at Children's Hospital Boston, reports, *"It's a vicious cycle. Before (installing STAT Ticket), when a floor nurse confronted a computer issue, such as the EMR program failing to boot, generating a help ticket required a phone call to the Help Desk. This seemingly sensible approach actually caused significant frustration for both Help Desk technicians and the nurses."*

As often as not, the reporting nurse or physician would be put on hold for several minutes until a Help Desk person was available. Of course the Help Desk person naturally wanted to gather as complete an explanation of the problem as possible. Information gathering might include location of the computer, login information, server name, etc. Gathering the help ticket information typically takes 5-7 minutes or more. As Altavilla notes, the reporting process was so cumbersome for time-stressed nurses that they just didn't call the Help Desk unless the issue was dire.

This situation defines a vicious circle: The nurse or physician doesn't report a problem when the computer and/or program doesn't work, but the Help Desk can't resolve the issue because the problem has not been reported!

## Help Desk Scenarios – Impact on Quality of Care

**Help Desk scenarios fall into one of four categories where the user:**

1. Requires immediate assistance and contacts the Help Desk by phone.
2. Opens a Help Desk ticket when they have time and Help Desk or other IT staff subsequently contacts the user, often to gather more information and resolve the issue or failing that, triage the issue.
3. Forgot the reporting process or they plan to report the issue later, but never do.
4. Ignores the issue due to the perceived psychological cost and finds another computer to use and the issue is never reported.

However, a seasoned healthcare IT development team has developed an almost instantaneous user reporting solution. The result makes it easy for healthcare users to generate a Help Desk ticket in just a few clicks.

## A Picture Is Still Worth 1,000 Words – STAT Ticket

STAT Ticket was developed to solve the reporting gap between users and the Help Desk. The solution appears to hospital staff as an Orange Button onscreen. Users simply click the button to view the STAT Ticket screen (Fig. 1), add any comments in the text box if needed and click "SEND." STAT Ticket automatically captures and reports all information as a Help Desk ticket. See Fig. 2 for a list of information reported to the Help Desk.

Fig. 1:

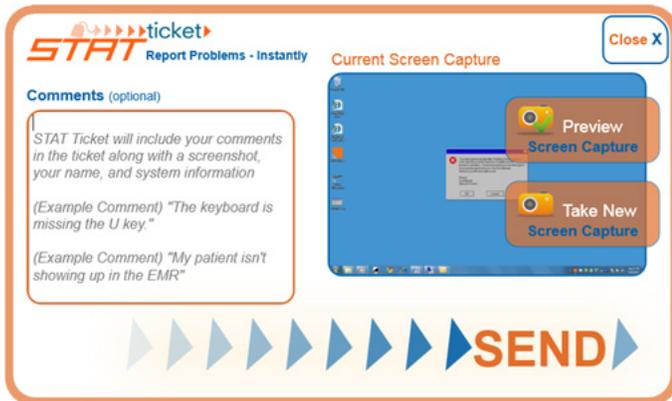


Fig. 2: What STAT Ticket Reports to the Help Desk:

- Running Application processes
- CPU, Memory, and Disk Status
- Desktop Recorder (Picture)
- Server ID(s)
- Current Citrix Server(s)
- Recent Windows Event Log
- PC Location
- CD/DVD Media List
- Printers installed for current user
- Patch Level



STAT Ticket directly addresses three of the four user reporting scenarios noted above. For category 2, it reduces the time to resolve the ticket and improves the quality of the result because the ticket automatically includes vital PC state information.

For category 3 scenarios, users find STAT Ticket so easy to use, they are much more likely to report problems that would otherwise never be reported. This also addresses, at least in part, category 4 scenarios, meaning users now report problems that previously went unreported.

## Example: Children's Hospital Boston

The IT Department at Children's Hospital Boston (CHB) has installed STAT Ticket on all of the 7,500 plus computers on the network, distributed over 20 locations. Stephanie Altavilla has a unique dual function at CHB, serving as both a Staff Nurse and a Clinical Informatics Specialist in the IT Department.

According to Altavilla, nurses use STAT Ticket the most. She notes that one of the mission-critical applications in the hospital is bar-coded medication administration. Before STAT Ticket was installed, if a scanner failed to read or function properly, the nurse immediately experienced anxiety because the meds couldn't be scanned. Due to the psychological cost of reporting compounded by the immediacy of tasks, the nurse didn't take the time to call the Help Desk. Even if called, response times to solve the problem might run up to 24 hours due to back and forth data gathering between the user and the Help Desk staff.

Now when a scanner fails, the nurse just hits the ST Orange Button— possibly enters a few keystrokes of text and hits "Send." In short, it's now easy for the nurse to create a Help Ticket and the Help Desk response time is much faster. (See Fig. 3) [Note: insert screen graphic with large arrow pointing to the orange icon/button] Nurses are now regularly surprised at the almost instantaneous response from the Help Desk.

## Pre-empting System Failures

Altavilla reports that STAT Ticket also serves as an early warning system, often allowing IT staff to preempt system-wide failures. For example, if the EMR nursing documentation and ordering application is running slowly, the nurse hits the "Orange Button", immediately alerting the Help Desk. In the past, nurses and physicians simply muddled through. Even though primary enterprise-wide applications typically include system monitoring, they do not always detect a problem. However, the users always know. Now, a spike in help tickets alerts IT to a potential system-wide issue. IT can respond quickly and can often prevent a system-wide failure.



## View from the Help Desk

Steve Cho, an End User Support Specialist at CHB who works on the Help Desk, says that the contrast before using STAT Ticket to now is dramatic. He notes that before installation, users reported issues to the Help Desk. In CHB's well-defined process, Help Desk personnel created and monitored tickets in their Help Desk software. Users reported the majority of issues by phone or email. This process resulted in high call volumes to the Help Desk that included both initial new reports and users returning Help Desk calls for additional information. Email reports almost never revealed the real story or necessary details, resulting in multiple exchanges between the user and the Help Desk.

Cho estimates that the Help Desk queue would regularly exceed 100 tickets. He also notes that harried Help Desk techs sometimes inadvertently overlooked telephone or email reports because they got lost in the shuffle.

Cho describes STAT Ticket as "a template for how to report a problem and formalizes the process. It (STAT Ticket) streamlines reporting problems because we receive the information we need to immediately address the problem. In addition, it has shortened the ticket queues from over 100 tickets to about 40."

He also reports that if one Help Desk person was out for a day, the remaining Help Desk staff experienced high levels of stress and were unable to keep up with the tickets. Now, if a Help Desk person is out for the day, the remaining staff can handle the volume of requests with ease. In fact, Help Desk staff now spends much more time out in the hospital troubleshooting in person, which builds clinical staff support for IT. Now, more problems are reported and quickly resolved, leaving users feeling really good about IT which was an unanticipated benefit. Cho says, "STAT Ticket reduces the psychological cost for clinicians and nurses to report an issue."

## Performing Computer Health Checks

STAT Ticket also supports proactive computer health check verification by Help Desk personnel. Help desk staff generated literally thousands of proactive STAT Tickets in 2009. When any IT staff member walks through the hospital and finds a computer, they can perform an immediate "health checkup".

### Here's how it works:

- The IT staff person clicks the "Orange Button" and opens the Options Tab to report the status of the computer and then clicks SEND.
- The Help Desk Management software receives the STAT Ticket, which includes data about the state of the PC when the "health checkup" was conducted.
- If there's a problem with the PC, the ticket is routed to the proper IT resource. If not, the ticket is automatically closed and credited to the IT employee performing the health check.

## Other STAT Ticket Functions

In the event of a network disruption when a user's computer is unable to communicate with the STAT Ticket server, tickets are queued locally. As soon as the next user logs into the computer and the network is available, the queued tickets are sent seamlessly with no user involvement. Another feature, silent ticketing, allows the Help Desk to receive automatic rule-based alerts for specific applications. For example, one application at CHB runs on clinical workstations and sends a silent STAT Ticket to the Help Desk when an unrecognized CD/DVD is inserted into the computer.

When the STAT Ticket server receives and analyzes incoming tickets, it automatically determines the disposition based on data contained in the ticket. Ticket actions include "store and forward" to the Help Desk Management software and "update a report", monitoring the incidence of specific system-wide error messages. The application can also apply server-side rules based on PC state content and other info in the ticket and implement automated actions.

Possible actions include gathering troubleshooting data from systems related to the error, such as server data from affected applications. The STAT Ticket server can also trigger an immediate response back to the end user's computer via either popup message, web browser opening to a pre-defined page, or executing a local program. The immediate responses recommend an immediate corrective action or an instant solution without involving Help Desk personnel. For example, whenever the STAT Ticket information indicates that the user's password has expired, the server automatically opens the "Password Reset" page in the user's browser.

Similarly, STAT Ticket performs server-side actions triggered by either a single ticket or a group of tickets. Actions include generating alerts, trend analysis and notification, gathering additional information from application servers or the network, and custom tasks.

## Patient Data Security

HIPAA requires the confidentiality of all patient data. To maintain compliance with HIPAA, STAT Ticket, when used with the server, encrypts all data including screen shots on the local computer before transmitting. Only the STAT Ticket server can decrypt encrypted data. If the ticket cannot be sent immediately due to network issues, the ticket remains encrypted on the PC or laptop and cannot be decrypted by someone who gains access to the device.

## Conclusion

STAT Ticket provides healthcare systems with a closed loop feedback system for generating Help Desk tickets. When users hit the “Orange Button,” STAT Ticket provides them with instant email feedback from IT, acknowledging receipt of the ticket. After the issue is resolved, IT again sends an email notifying the user that the problem has been resolved.

At CHB, nurses and physicians experience more control of their technology because the Orange STAT Ticket Button removes the psychological cost of reporting an issue. For the IT Department, STAT Ticket has improved IT’s reputation with users because of the almost instantaneous response and faster time to resolution. As a result, CHB delivers improved patient care and safety because critical IT systems operate at optimum performance, and system-wide failures are often averted.

As Scott Ogawa, Chief Technology Officer for Children’s Hospital Boston points out, “We use STAT TICKET on over 7,500 workstations at Children’s Hospital Boston. Our initial deployment three years ago of approximately 1,200 clinical workstations in some of our most acute care areas was targeted for busy clinicians to have a quick and easy way to send comprehensive error or general application issue reports to the Help Desk and application support personnel. It was so successful in these areas that we have now deployed it hospital-wide. The clinician time that is saved is truly invaluable. Because the tickets contain screenshots and comprehensive technical data that could never be conveyed via a phone call, it’s often not necessary to play phone/pager tag with the clinician to gain further issue information. STAT TICKET even allows us to proactively fix potentially widespread problems long before they spread throughout the environment. I highly recommend this application to any hospital struggling with wasted time in multiple Help Desk calls...”

### ■ Scott Ogawa

*Chief Technology Officer*  
Children’s Hospital Boston

### ■ Children’s Hospital Boston

Boston, MA  
*Primary Pediatric Teaching*  
*Hospital of Harvard Medical School*

### ■ About Stephanie Altavilla, MSMI, R.N.

*Clinical Informatics Specialist*  
IT Department, Children’s Hospital Boston  
and Staff Nurse

### ■ About Steven Cho

*End User Support Specialist*  
Bug Unit – ISD Help Desk

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**Number of primary and satellite locations: 23**

**Number of PC’s: over 7,500**