



# **Help-Desk Overview and Case Study**

***The IT Help-Desk: A Key Player in the  
Healthcare Service Culture***

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## Introduction:

The face of the IT department to most end-users is the help-desk. The IT department, and especially the help-desk, must concentrate the same effort on managing end-user relationships that they devote to managing technology. The intent of this paper is to demonstrate that a help-desk is more than just a place to log incident and dispatch help; the help-desk is really the principal interface between IT and their users.

## Overview

Your investment in technology and in the professional support staff are both critical to the success of your organization. The methodologies necessary to support technology can be defined objectively, however the methodology to support technology as an extension of a person's ability to function can be summarized in one subjective concept – *expectation*.

The notion of an interface between a person and technology is simple to define but relatively difficult to achieve. An IT department must have team members with the appropriate experience and technical skill-sets to provide both depth and expertise in the design, development and support of the infrastructure and installed applications across the enterprise. However, the face of the IT department to most end-users is the help-desk.

Improving customer service and defining *expectation* should begin internally with the hospital's primary customer base – hospital employees and physicians. The hospital staff has a right to expect the same level of customer service from the internal help-desk support that they expect from their retail experiences. Communication and consistency are the two of the major keys to developing *expectation*. Help-desk staff members must become chameleons. They must understand the business environment and culture of the organization and they must also have an excellent grasp of the underlying technology used by their customer base.

The impact and effectiveness of a hospital-based IT help-desk starts with IT management. A help-desk should be more than just a place to receive calls and send help; it is really the principal communication interface between IT and their users. The help-desk is usually considered an entry level area where newly hired staff gain experience and then move to more substantial positions. Most users develop an impression of the overall functionality of the entire IT department from their experience with the help-desk. IT leadership should consider elevating the competence level of the staff that communicates directly with its users.

There are no guarantees to a problem-free environment, problems are inevitable. It's not the problem that is important – it's how the IT department responds to the problem that matters. Customers (end-users) want to know what to expect each and every time they use the system. The IT department, especially the help-desk, must concentrate the same effort on managing relationships that they devote to managing technology. Everyone in IT should be involved in the help-desk support at some point. The help-desk staff is responsible for the initial support. If an incident cannot be resolved at the first call level, quick escalation to a higher level of support is required.

The IT infrastructure consists of hardware, software, networks, documentation and people. The traditional approach to IT support has always focused more on technology and less on people. At Infohealth Management Corp. we believe that people are at the center of all processes and that technology should be an extension of the person. For technology to effectively extend a person's ability to work, it must be functional, flexible, seamless and transparent.

Technology will continually evolve, constant improvement in service and support is required for an organization to maintain its present position. Infohealth consultants have worked with clients to transition help-desk coverage to meet evolving enterprise-wide needs. The following case study demonstrates that the “people side” of support is as important as the technology.

### **Background:**

This help-desk case study involves a large medical center located in a Midwestern State. The medical center has grown significantly in recent years and evolved into a multi-entity system with approximately 1,000 beds and extensive ambulatory programs. The Information Technology (IT) department has also expanded, both in complexity and staff.

Based on user satisfaction survey scores, the IT department’s help desk ratings were significantly below that of other IT services evaluated. The increased demand for Level 1 and 2 help-desk support and the disappointing survey results has led IT management to reconsider its current strategy of using a combination of help desk personnel and computer operations staff for its 24/7 help-desk coverage. Infohealth Management Corp. was retained in January of 2007 to do a full assessment of the existing help-desk function including its management, structure, staff and the help-desk’s overall role in the IT department’s service delivery process.

The medical center’s IT management believed that automation would continue to expand in all facets of their healthcare delivery processes and that the demand on the IT department would only continue to increase. It was assumed that the pressure would come from both internal medical center requirements related to new and expanding technology as well as from the government, external regulators, and evolving payer rules.

The medical center’s IT leadership wanted to “hit the ground running” and focus on both metrics and on key issues necessary to improve the image of the help-desk service. To accomplish this in an appropriate timeframe, Infohealth’s approach centered on an on-site review and used its proprietary INFOMAP process and toolkit to perform a full assessment of the help-desk function.

### **Key questions posed by the medical center’s IT management:**

In addition to the help-desk assessment, IT management asked Infohealth to focus on five key questions:

- Does the current staff (help-desk and operations) have the right skill sets?
- Is it feasible to move the day shift help-desk from the IT building to the data center in the main hospital?
- Can the help-desk and operations staff be combined into a single work group?
- Are the right processes, workflows, and audits in place to foster accountability?
- Is the current help-desk software being used effectively and appropriately?

### **Highlights of Infohealth’s review of the help-desk environment:**

Help-desk support had evolved over the years to meet the increasing demands. The call volume had roughly doubled in the past seven years; however, the staffing had remained constant. In the year 2000, help-desk calls averaged 1,700 calls per month and by 2007, help-desk calls had increased to 3,800. Although help-desk calls averaged a 60% resolution rate on first call, there was a 20% call abandonment rate.

Specific tasks in the Assessment included a review of workflow, calls recorded, and the hand-off procedures for tickets escalated to a higher level of support. The consultants on-site also administered Infohealth's Employee Skills Assessment to the help-desk and operations personnel.

Help-desk and computer operations were entry-level positions and employee turnover was an issue. Although there were numerous components linked together to provide 24/7 help-desk coverage, the primary support components included three groups located in three separate areas:

- Level-1 – Day shift help-desk (4 FTEs plus a manager)
- Level-1 – Three shifts of computer operations (10 FTEs plus a manager)
- Level-2 – Technical (desktop) support (8 FTEs plus a manager)

The primary support components described above involved essentially one process with three managers. It was also noted that the business and clinical applications staff and the network engineering group also provided Level 2 support.

Based on the findings of the Employee Skills Survey, the general skill set of help-desk and operations staff was adequate. However, there was little consistency in call handling between staff members – each individual answered calls differently. Some staff members interacted personally with the caller while others provided brusque responses. The communication skills varied significantly between help-desk staff, some spoke clearly and others were hard to understand.

There appeared to be a lack of a standard approach to problem solving. The help-desk tracking system had a knowledge base but it was not updated on a regular basis. It was also noted that help-desk calls were recorded but rarely monitored or audited; help-desk calls were often too long. Help-desk calls were all logged as a single type. It was impossible to separate “problem calls,” “work orders,” and “projects” and it was hard to track open tickets for productivity and quality. This process made it impossible for management to extract meaningful information. Guidelines for assigning priority to help-desk tickets were vague; the current categories were “Emergency,” “High,” “Today,” or “Normal.”

There were 1,238 open tickets in the system, the oldest open ticket was approximately fourteen months old. Ticket notes contained good problem definition, but vague problem resolution. Under the current system it was impossible to determine if the help-desk requests logged were problem tickets, routine support, or projects. The two most frequent help-desk requests were the Clinical Nurse Charting Module and the Password Reset function. Although these two applications generated the most frequent help-desk requests, they were two of the most stable applications installed.

The call demand on day shift exceeded the capacity of the current amount of staff, yet the second and third shift staff in the computer operations area had free time because the data center was highly automated. The day shift help-desk space was small, crowded, noisy, and too warm. There was limited physical contact between the day shift help-desk and the second and third shift in operations. The off-hours and weekend shifts were located in the main data center across the street from the day shift location, and thus had excess capacity. It was also noted that each of the off-hour and the weekend shifts had at least 2 FTEs assigned.

The help-desk software was one of the more popular products in the industry but it was poorly installed. Many of the software modules had been purchased but not installed. Some of the modules that were installed were not updated regularly. The entire software package should have been reinstalled and the staff should have been trained in its use.

No SLAs had been developed to establish help-desk performance targets. There was no auditing between the help-desk software and the call center call logs. The help-desk system logs and call center logs should match.

### **Recommendations:**

It's not the problem that is important; it's how the IT department responds to resolve the problem that's really matters. End-users want to know what to expect each and every time they use the system.

In order to implement a more effective help-desk, changes to be considered included:

- Changing the management structure for the IT service support areas. Appoint one overall manager for the help-desk, computer operations, and technical support. Designate a supervisor for the help-desk/operations group, and a second supervisor for the technical support group.
- Moving day shift help-desk staff to the data center in main hospital.
- Combining help-desk and computer operations positions into one job and cross-training all 14 FTEs. Upgrade skill level of this group and make them a vital IT resource.
- Providing customer service training for all IT staff on an ongoing basis.
- Training all staff members in telephone etiquette, customer interaction skills, and target the call abandonment rate at less than 5%.
- Providing ongoing training on current systems and installed applications.
- Reinstalling the help-desk software and activating all modules.
- Establishing a formal communication structure between the help-desk and the technical support staff and instituting a staff briefing at the change of each shift.
- Using the call center's telephone monitoring system to display help-desk calls waiting in the queue. The help-desk coordinator should track the queues with the intent to reduce the length of calls, staff the demand, and do root cause analysis to eliminate recurring problems.
- Defining three major categories in the help-desk software tracking system for all IT service and support requests - Problem Ticket, Work Order, and Project. All tickets should be assigned one of three priorities – "Critical", "Today", or "Routine."
- Developing SLAs for help-desk performance targets. The current help-desk software is capable of providing status tracking based on requirements. The tickets will escalate accordingly and send appropriate emails or pages.
- Auditing and comparing the data in help-desk and the call center call monitoring systems; the two systems should match.
- Tracking and managing tickets by category (Problem, Work Order, and Project). These categories are different processes; they must be managed separately
- Developing standard reports from the help-desk and call center systems: average speed to answer; call abandoned; average talk time; etc.

## Other considerations:

Everyone in IT will be involved in help-desk support at some point. The help-desk staff is responsible for the initial support. If an incident cannot be resolved at the first call level, escalation is required quickly.

Formalize “hand off” procedures and practices between Level 1 and the technical desktop support group and set standard guidelines for responding to pages and emails. Define documentation standards for notations in the help-desk system. Technicians that note “problem resolved” as an entry provides no help resolving similar incidents.

Define standard communication practices for interactions between the technical support staff and the customer. Support technician should brief the customer on the problem and its resolution. If the customer is not available, a note with a business card should be used. Periodically rotate Level 2 technical support staff through the help-desk and the help-desk staff through technical services; consider standard dress for technical support staff.

Move all security functions to the help-desk; however, maintain the Security Officer position as a separate function outside of the help-desk. Create a formal area or space in the help-desk area for hospital staff to be fingerprinted and interviewed.

Implement follow-up customer satisfaction surveys; communication is one of the major keys to success. Telephone follow-up with help-desk customers, routine rounds and one-on-one visits in customer’s area and enterprise-wide user satisfaction surveys conducted at least annually are best management practices.

IT leadership should meet more frequently with the entire IT staff since technology turns over rapidly. They should also put into practice formal IT employee satisfaction surveys; surveys are common in large departments. Service Level Agreements (SLAs) should be established for *all* areas; SLAs establish both focus for support teams and expectations for management and end-users. Support teams are easier to manage when everyone understands the guidelines and expectations.

## Responses to key questions of IT Management:

- **Staff Skill Sets:** The current staff has adequate skills to meet existing demand; demand will increase and become more complex as technology continues to dominate the clinical space; the staff must also expand and their skill level must increase
- **Day Shift Help-Desk:** Moving the day shift help-desk to the main hospital should be done as soon as possible. The move will solve numerous issues, balance the workload disparity, and delay the need for additional staff.
- **Combination of Help-Desk and Operations:** The help-desk and operations staff merger is an obvious move; the two groups share a single job description and pay grade. Cross-train the help-desk and operations staff and rotate them through technical services.
- **Processes, Workflows, and Audits:** Much work needs to be done in the area of process and workflow. Redefining process, workflow, and auditing must also be integrated with the revisions in help-desk software. However, changing the management structure is the first critical step.

- **Help-Desk Software:** The current configuration of the MAGIC system is generally correct. Minor adjustments to the software are necessary and the additional modules (purchased but not installed) described earlier in this report should be installed. New user guidelines must be developed and enforced.

## Summary:

The overall engagement took approximately four weeks to complete. Two Infohealth consultants were on-site for five days and the remaining time was spent developing the final report. During the visit, Infohealth consultants used a random selection method to interview twelve end-users. The comments of the group surveyed were interesting; they believed that the technical support was OK. However, many of the individuals surveyed, especially the clinical staff, thought that simple improvements in telephone etiquette would improve the overall perception of the help-desk. They indicated that it takes too long to get someone to answer the phone; nurses especially don't have time to be "on hold". And once a help-desk staffer does answer, they need to understand that "we are not computer experts; we take care of patients". These observations clearly supported the 60% first call resolution and the 20% call abandonment findings.

To ensure the accuracy of the report and that the focus was on the appropriate areas, Infohealth worked with the medical center's IT leadership to refine the recommendations in a format that would result in action plans. Once the final report was delivered, work began immediately on all priority items. The client has implemented many of the recommendations including a new management structure. They have also combined the help-desk and computer operations staff into a single work group; the new help-desk is now called the IT Service Center.

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There continues to be much discussion in the healthcare industry about aligning information technology (IT) with the business and showing the value that IT produces. That alignment is critical. Today's healthcare is driven by the need to exchange information and the reality is that it is impossible to separate Information Technology from Medical (device) Technology.

Infohealth Management Corp.'s three-phase *INFOMAP Assessment Survey* is scored against best practices and provides a proprietary methodology for developing an IT departmental profile and analyzing five IT management competencies: *Assess, Plan, Manage, Support, and Measure*. INFOMAP, originally developed as an internal tool to assist Infohealth consultants, measures IT functionality and captures the information necessary to track improvements over time. INFOMAP is the essential link between metrics and observations.

- The INFOMAP 250-question survey covers:
  - Governance and Management processes
  - IT planning and budget practices
  - IT Readiness and Operations effectiveness
  - Workflow and internal standards
  - End-user expectation and support

- The Employee Skills Assessment captures:
  - Education, certifications, and professional IT training
  - On-the-job training or cross-training
  - Work experience and history (healthcare/non-healthcare)
  - Vendor and product knowledge
  - Work team structures and dynamics
  - Language skills (verbal and written)
  
- The IT Department Profile captures
  - Installed applications by vendor and hardware
  - FTE complement that supports the applications (by application) and
  - Overall network infrastructure

*You can't fix it if you can't measure it!* Historically, the healthcare IT industry has done a poor job of measuring effectiveness; most measurement systems fail to consider:

- Complexity of the installed applications;
- Workflow process and redesign;
- Quality and value of the services provided;
- ROI on “soft” benefits as well as dollars;
- Security, disaster recovery, and business continuity;
- Technology life cycles; and
- Other key performance indicators.

The final INFOMAP report will identify service gaps and enhancement opportunities. The *Assessment Process* increases the value of your investments in IT support resources by appropriately identifying and analyzing the skills and ability levels of your current IT staff.