

Healthcare Call Centers: A Technology Migration

by Howard Burnett

Today, healthcare consumers expect fast, accurate, and reliable information when they call their doctor, clinic, hospital, pharmacy, insurance company, or other healthcare provider. Suppliers of such services are constantly being challenged to provide solutions to serve this ever-increasing consumer demand. One solution that has proven to be very cost-effective is the use of call centers.



Howard Burnett
Senior Manager
Mitretek Systems
hburnett@mitretek.org

Howard Burnett has over 20 years of experience in the telecommunications and call center market. He has successfully managed the design and implementation of local, national, and global voice and data networks. He has consulted on the procurement and implementation of a wide range of call center operations, including for both private-sector and Federal healthcare organizations. Howard is also the lead researcher in IP-based call center technologies at Mitretek.

Expanding Role of Healthcare Call Centers

Traditionally, healthcare call centers have been centralized, single-purpose operations that only serviced incoming phone calls. However, consumer and corporate demands placed on these call centers have forced them to provide additional services. Today, healthcare call centers provide a wide variety of services, including clinical advice/triage, appointments scheduling, referral and claims processing, insurance benefits explanations, answering service/paging, and marketing support.

For example, more than 60 million people in the United States have access to a 24-hour nurse advice line—also known as a triage line—that provides health care assessment and advice service over the telephone. This type of call center is typically staffed by trained, experienced registered nurses who utilize protocols or guidelines to provide healthcare advice. Based on the nature and severity of the call, the nurses may also provide referrals and scheduling to other healthcare services, as well as to answering and paging services.

The cost-effectiveness of these call centers has been proven by studies that have shown that if given the option, 77 percent of people would avoid a doctor's visit if their health concern could be addressed over the phone. It is also estimated that up to 60 percent of calls made to physician's offices and emergency departments are by well patients with a concern or worry (S. Herzog, "Health Care Call Centers: A Rich Opportunity," *Los Angeles Business Journal*, 5 May 2003). These calls can be handled in a much more cost-effective manner by a triage call center than at a doctor's office or emergency room.

Maturity of Call Center Technology

Until the mid-1990s, the term "call center" typically meant a large number of people—called agents or Customer Service Representatives (CSRs)—answering telephone calls in one location. If an agent could not answer the caller's question, the agent transferred the caller to another department or call center. Call centers were typically implemented as part of a customer service cost-reduction strategy. Management's focus was on processing calls as quickly as possible and at the lowest cost. Performance metrics such as Average Talk Time and Average Speed of Answer reflected this "assembly line" philosophy. Technologies utilized in this first generation of call centers included Automatic Call Distributors (ACD), Interactive Voice Response Units (IVR), and workforce management software.

As telecommunications and information technologies became more sophisticated and costs for these technologies decreased, call centers began to leverage the power of their organization's information systems and communications infrastructure. The focus of call-center management changed from cost reduction to customer service improvement. The ability to provide a one-stop-shop and to solve caller's issues with a "first call resolution" capability became possible with the introduction of new technologies such as Computer Telephone Integration (CTI), virtual call centers, and Customer Relationship Management (CRM) software.

With the advent of the Internet and the World Wide Web, customers began contacting call centers because information could not be found on an organization's web site or because the caller wanted human support before performing a transaction. Because of these new types of calls, call-center managers began to request solutions for integrating their call centers directly with the organization's web sites. This request led to the development of Internet-enabled call-center technology, which includes

text chat, agent callback, web collaboration, and voice communications through the Internet, also referred to as Voice-over-IP (VoIP). These technologies are in the initial stages of market implementation, and issues related to functionality, scalability, and reliability are being addressed by product vendors.

A new advancement in technology is the all-IP call center. With this architecture, all of the call center's telephony and information technology resources are implemented on open-standards computers that are connected via IP communications links. Although this approach eliminates many of the impediments to integrating corporate telephony and computer resources, current products are aimed at the small to mid-size market due to performance and reliability constraints.

We have depicted the evolution of call-center technology in a "Call-Center Technology Maturity Model" as illustrated in Figure 1.

Today, phone calls are the predominant method used

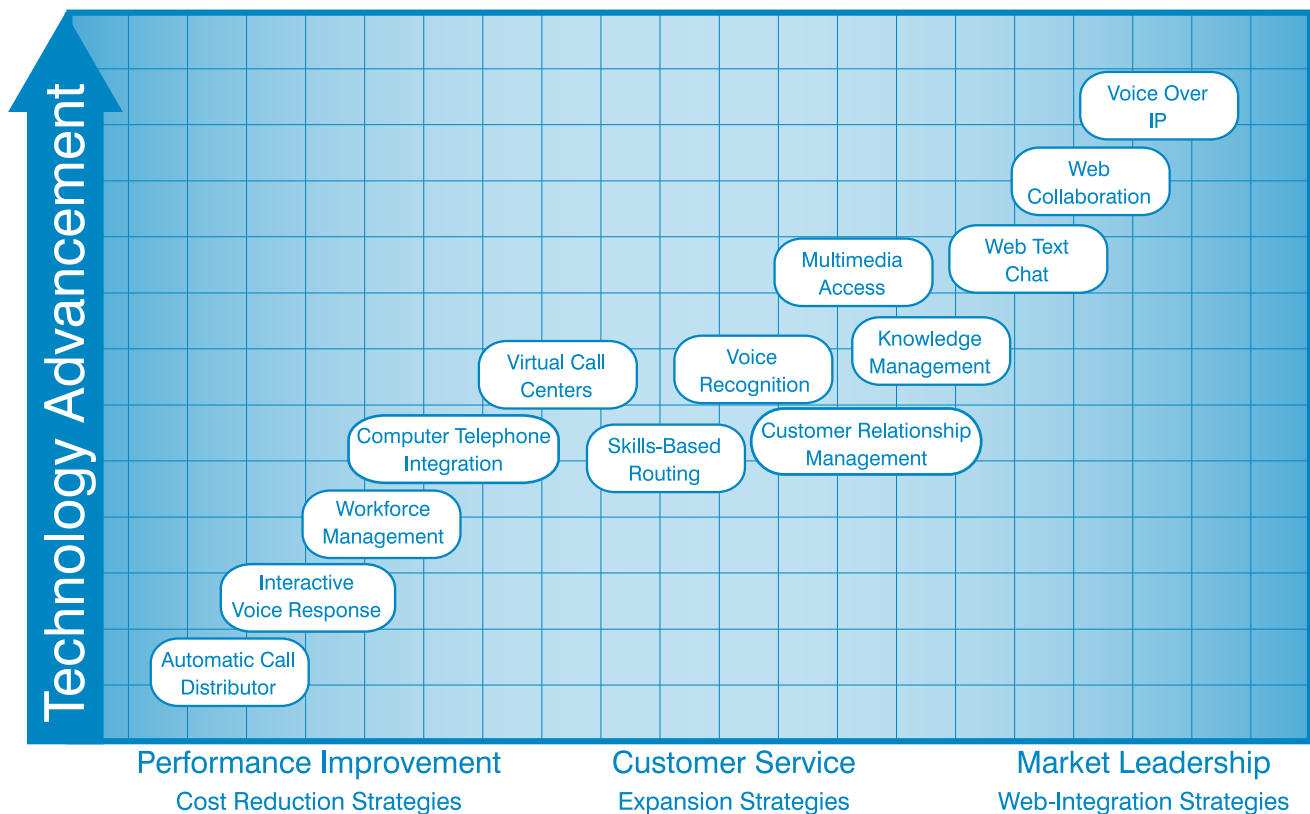


Figure 1. Call-Center Technology Maturity Model

to request customer service. However, changing demographics, longer working hours, increased expectations, and competitive markets mean that customers are now less tolerant of inconvenience than at any time previously. A study released in 2003 showed that in the private sector, voice-based interactions account for 61 percent of customer interactions, e-mail interactions accounted for 19 percent of the volume, web chat amounted to 3 percent, with the remaining interactions being other types (*Aberdeen Group, "The Customer Contact Center-Technology, Trends, and Investment Plans for the Customer Contact Center: 2003-2004," April 2003*). In the long term, the use of the Internet, email, and alternative communications channels will rise to a level where a significant proportion of customers will demand access to non-telephony technology.

In response to these changes, emerging call-center technology now enables call-center agents to handle multiple incoming and outgoing media types, including phone calls, email, fax, pagers, and PDAs. A call center that can service such multimedia communications is often called a "contact center."

Two surveys published in 2002 reflect the implementation of the technologies described at the start and at the current end of the technology maturity model. These surveys indicate that 90 percent of government call centers utilize an ACD system (John Anton, "Government Call Centers: Performance Benchmark Report," Purdue Research Foundation, April 2002), while less than 4 percent of all call centers in North America are IP-based (Keith Dawson, "Call Center IP: Slow on the Uptake," Commweb, April 28, 2003).

A third survey published in 2002, issued by the Disease Management Association (DMAA) of America, indicated that call centers providing disease management services lagged in technology maturity when compared to the call centers assessed in the first two surveys (Bernett, H., R. Fiddleman, G. Montrose, "A Survey of Patient Call Centers and Communications Strategies: Enhancing Disease Management Service Delivery," Disease Management Association of America, October 2002). The DMAA survey indicated that approximately 63 percent of the call centers surveyed utilized ACD equipment, and none had implemented an IP infrastructure.

A Modern Healthcare Call Center

A major healthcare provider in the mid-Atlantic region has implemented a good example of a modern high-volume healthcare call center. The "call center" is actually

comprised of two separate call centers located in different states along with home agents; all of the agents operate as a single virtual call center. This virtual call center utilizes a suite of technologies, including ACD, IVR, workforce management, CTI, and CRM.

During business hours, the virtual call center operates as a three-tiered system. Incoming calls are first answered by an IVR unit. If required, the caller is serviced by an appointment representative and transferred to a triage nurse if advice is necessary. After the appointments service closes for the day, calls go directly from the IVR to the advice group. The call-center nurse staff is organized in the following manner: if a nurse in the advice specialty group of choice is not available, the call is then simultaneously queued to all three main groups:

- Three main groups provide the advice function
 - Internal Medicine
 - Pediatrics
 - Obstetrics and Gynecology
- A fourth group services emergency calls
- A fifth group services TDD calls
- A separate group (non-RN) is set up to receive requests from the advice nurses to page doctors and personnel

Figure 2, on the next page, illustrates the services and call flow of this call center.

All incoming calls from members are answered by an IVR unit where callers are asked to input their Medical Record Number (MRN) and then given the following choices:

1. Use the automated system to confirm and cancel appointments
2. Talk to a representative

Callers who choose to speak to a representative are transferred to an appointment agent. Using a CTI capability, the caller's member file—based on the MRN entered by the caller in the IVR—is displayed on the agent's screen simultaneously with the transferred call. The appointment agent will verify the caller's information (name, MRN, etc.) and then service the incoming call.

At the caller's request or if deemed necessary by the appointment representative, calls will be transferred to the advice group. This transfer rate is approximately 35–40 percent. Using the CTI capability, the caller's data is transferred so that information gathered by the

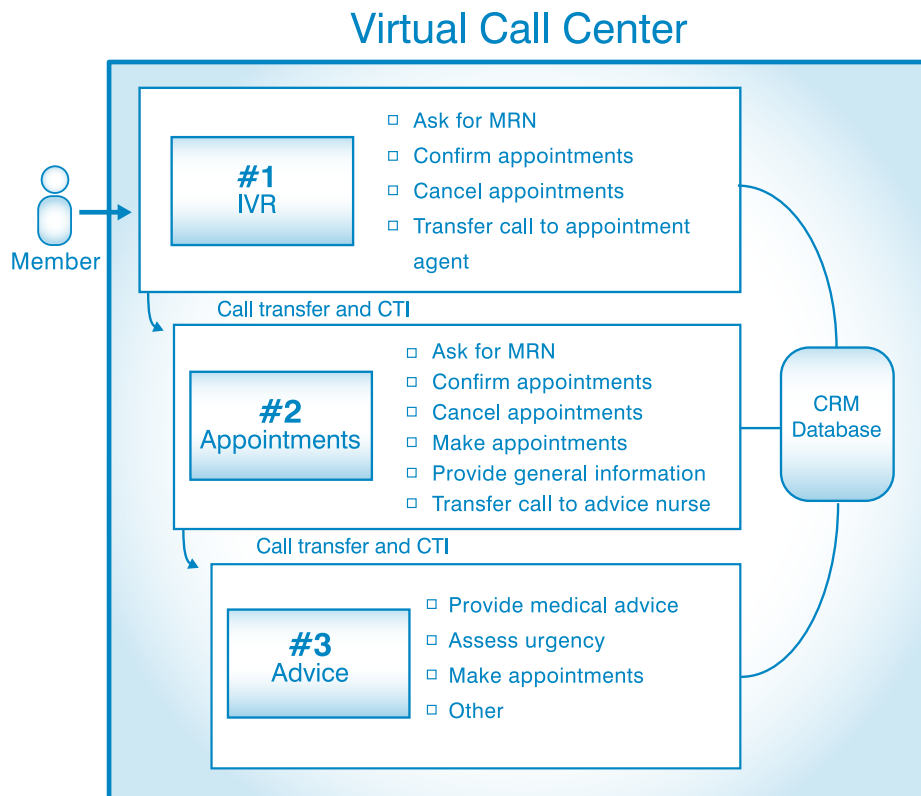


Figure 2. Services and Call Flow

appointment agent is simultaneously displayed on the nurse's screen when the nurse answers the call. The nurse then follows a set of protocols to determine the recommendation to be given to the caller.

A CRM-enabled database maintains all of the member files in an accessible format. In order to better service the caller, the advice nurse can pull up past office visit notes, lab test results, correspondence, and other relevant information concerning the member.

In 2003, the technology suite in the two call centers was enhanced to enable servicing of multimedia contacts, including email and web chat. These capabilities will be transitioned into service over the next two years.

Summary

Today, medical call centers are being asked to support a broad portfolio of customer services. The increasing demand for patient services and emerging programs such as Disease Management, which requires proactive communications between the healthcare provider

and patients, are challenging call center managers to implement new technologies and to open multiple communications channels with their customers.

The medical call center of the new decade will also have to evaluate its operations and processes. With the advent of multi-channel communications, call center staff will have to expand their skill sets and knowledge base. The integration of telephony, the Internet, and IT systems in the call center will create complex operational issues for call center managers to resolve.

Because of the dynamic nature of the call center industry and the emergence of web-enabled and all-IP technology, it is critical to have a comprehensive migration plan for assessing and implementing a technical and operational solution that meets the organization's requirements. An independently developed plan incorporating all of the issues discussed in this paper—and not based on a single product vendor's recommendation—is essential for assuring that the most cost-effective solution is selected.