



## Gauging the ROI case for consolidated communications center technologies

The hospital communications center (sometimes known as the “call center” or “contact center”) is one of the last under-explored frontiers of healthcare information technology. Consider that for a moment: One of the last arenas in which hospitals have adopted digital technology’s efficiencies is within the communications center—the very public face of the institution.

Other businesses generally have taken a different approach. Many have implemented computerized communications center technologies in pursuit of business efficiencies like reduced answering times, reduced hold times and so forth. If a customer gets what he or she is looking for over the phone with the maximum ease and the minimum headache, that business likely will make a sale.

The dynamic is different in healthcare, of course. It is not really a matter of life and death when a customer becomes frustrated by a lack of timely assistance from a retailer’s call center. But when a hospital communications center drops a patient’s call, or fails to answer it quickly enough, or leaves a physician suspended in telephone limbo waiting to connect to the right medical department, a customer’s well being might very well be at stake.

Still, it is well for a hospital to consider the business case for making life easier for customers trying to connect by phone. Hospitals are looking to information technology to distinguish themselves, to come out in front of the competition. A patient is a customer, after all, and a hospital that places roadblocks before effective communications could well lose that customer to another institution down the road, one that understands this crucial dynamic.

This paper explores that business case. It identifies the best technologies to maximize communications center return on investment (ROI). It also examines some of the metrics that can be used to help gauge positive ROI.

### Recommended Technologies

Today, many available technologies can help hospitals increase communications center productivity and efficiency. To maximize ROI, we recommend integrating these three digital communications center technologies:

- **Speech recognition.** This technology can automatically place calls, retrieve data and perform paging tasks, independent of a live operator
- **PC-based attendant consoles.** These allow live operators to process calls quickly, with just a few computer keystrokes.
- **Web-enabled staff directories, on-call scheduling, paging and emergency notification.** These utilities bypass live operators altogether, freeing them to focus on emergency communications and perform their function as after-hours answering services to rural care centers, clinics and practicing physicians.

Each of these technologies creates process improvements that can contribute to positive ROI. As have a number of hospitals, Atlanta’s Emory Healthcare integrates them all around a unified technology platform and central database. The multi-facility care organization, which is affiliated with Emory University, fully automated and consolidated its five call centers in March 2002 in an effort to improve customer service and communications, maximize staffing efficiencies, and improve the accuracy and

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timeliness of message notifications. In January 2006, it upgraded to the latest modules.

Mollie A. Burrows, Emory's call center director, says the move to consolidate communications has paid off in many ways, although reducing full-time employee (FTE) costs was not one of them. The number of communication center employees did go down after consolidation—from 57 to 46—but salaries remained largely static. That was by choice. The improved technology allowed a major reallocation of staff resources in Burrows' department. Now, instead of 48 live operators, there are 37. Instead of one manager, there are two—one for operations, the other for quality and training.

Emory also created two key new positions. "We created an analyst position that does mainly our workforce management, the scheduling and forecasting," Burrows says. "The other one is a special projects coordinator. She works with the on-call calendar administrators and protocols, and she looks at our codes every month." The bottom line is that much more is getting done, more effectively, at the same price.

## ROI Metrics

There are two kinds of return on investment, "hard ROI" and "soft ROI." Hard ROI is about dollars and cents, returns that can be judged on the balance sheet. It is not unusual, for instance, to see small- and mid-sized regional health organizations report upwards of \$375,000 in annual savings after consolidating communications center services on a centralized database using an integrated, wireless-ready technology platform. Those savings might be realized through reduced staffing expenses, lower hardware and software costs, savings on paper and paper storage, even lower training costs—the entire system, after all, is based on the familiar Web browser.

Soft ROI is more difficult to gauge, but in healthcare it is just as critical. It includes

patient safety, customer satisfaction, process efficiencies, employee retention and the like.

What are the best metrics for determining if automating the communications center likely would result in positive ROI? We would point to several that might help your hospital assess the prospects of an automated communications center's success over its first 12 to 18 months.

- **FTEs.** The Emory example shows that it is possible to maintain salary levels while reducing operator FTEs and creating important new positions. Phoenix-based Banner Health System took a different approach. Vince Johns, technology coordinator for Banner's communication center, says that his department cut 18 full-time operators—fully half of its FTE agents—after consolidating its call centers at four area hospitals into one centralized communication center operation. Banner's communications center soon will serve one additional hospital, but Johns says he will need to add less than one-half of an FTE to shoulder the load.
- **Accessibility.** This metric refers to the average speed that operators answer incoming calls. In its first year after communications center consolidation, Emory Health reports it improved accessibility by 44 percent, reducing the average speed that calls got answered from 29 seconds down to 19 seconds. SwedishAmerican Health System, which serves 12 counties in southern Wisconsin and Northern Illinois, reports that answering speed at peak calling time is now 20 seconds, compared to 60 seconds before it installed speech recognition. The University of Alabama is now answering 95 percent of its calls in 12 seconds, exceeding its original objective.
- **Call lengths.** A hard metric to quantify—what is the exact right length of time to spend in contact with a patient or an employee? A better measure might be a call's

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impact. Burrows considers it a victory that Emory has doubled the average length of operator-assisted calls. “Instead of trying to get somebody off the phone to get to the next call, we’ve really increased not just our accuracy—because we listen a little better—but it’s a little more touchy-feely,” she says. “More what you would expect from a hospital.” Banner, on the other hand, drastically reduced the length of operator-assisted calls, from about 90 seconds on average to 27 seconds today. “People are not calling to speak to an operator,” Johns says. “They’re calling to find out where a family member is at, what their status is.”

- **Hold times.** The amount of time that a caller is left hanging on the phone listening to Muzak is a critical issue for a hospital communications center. After implementing its speech recognition software, SwedishAmerican now automatically routes 30,000 of its 60,000 monthly calls, without operator intervention. That cut hold times in half. The same is true at Banner Health, which reduced hold times from 120 seconds on average to under a minute.
- **Training.** Since converting its communications center from a paper-based system six years ago, Banner Health has seen training time for FTE communication center operators fall dramatically. “Everything is on one screen right in front of you,” says Johns.

“Tracking down information and training a new person to come in and start processing calls used to take two weeks. We just got a person trained in four days.”

- **Employee satisfaction.** One way to gauge job satisfaction is employee retention. Emory Health says that its integrated communications technologies have helped reduce staff turnover over that past three years—from 21 percent to 16 percent to—this year—just 7 percent.
- **Risk.** In days past, when an emergency was taking place on a Banner Health hospital floor, a nurse would typically call an operator to say a person was “coding,” meaning stricken and in danger. “Typically the person calling in a code, or trying to page out a code, was in a bit of a panic,” Johns says. “And so a lot of times instead of focusing on gathering precise information—where that person is at—now we can see on a screen where they are calling from and what section of the hospital they’re in.” Prior to digitizing its communications, he adds, code teams sometimes were dispatched to the wrong part of a building, or even the wrong facility entirely. “This has cut risk to a minimum,” Johns says.

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