

## A Review of Long-Term ROI From Using Voice Technology in Payer Communications Management

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### Benefits... Both Expected and Unexpected

Erlanger Health System, based in Chattanooga, Tennessee, is a five-campus system licensed for 818 acute-care beds and 50 long-term care beds, with a 321-bed average daily census.<sup>1</sup> In January of 2001, Erlanger implemented VoiCert as a tool to improve efficiency and productivity for nursing, admissions, and concurrent review personnel by reducing the time these staff members spent securing authorizations and precertifications from managed care providers.<sup>2</sup>

In the four years since implementation of the system, Erlanger has achieved its goal of improving staff productivity, measured in terms of the amount of time required to secure information from payers, especially precertifications and authorizations.

However, Erlanger has realized four additional, unanticipated benefits as well. First, the system had a measurable and sustained impact on the hospital's denial management efforts, as measured by the percentage of admission-days denied per 1,000 patient days. Second, Erlanger has realized improved relationships with its major payers, resulting from the system's ability to accurately track authorization and precertification information on which both the hospital and its payers can rely. Third, Erlanger has seen a reduction in the number of denials it receives, which it believes is attributable to improved recordkeeping and reduced clerical errors made possible by VoiCert. Finally, efficiencies in the payer communications process driven by VoiCert led Erlanger to reassign three full-time equivalent employees to other departments, reducing payroll dedicated to payer communications.

This case examines Erlanger's experiences in the four years since it first adopted use of the VoiCert system. Historical data are presented on the time savings and denial management benefits mentioned above, and anecdotal observations are presented with regard to improved payer relationships.

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<sup>1</sup> Erlanger Health System serves patients living within a 150-mile radius of Chattanooga, primarily in Tennessee, Georgia and Alabama. In fiscal year 2003-2004, Erlanger had 28,312 inpatient admissions, 354,023 outpatient visits and treated more than 25,000 surgical patients.

<sup>2</sup> VoiCert provides this benefit by eliminating the time hospital personnel currently spend on hold with payer call centers. Voice-based technology is used, managed by a central server located on-site in the hospital. The server accepts information from the hospital personnel, then dials the proper payer call center, where it waits in the hold queue. When the phone is answered, VoiCert relays required information through a series of voice prompts. Once the needed information is secured from the payer call center, the server relays the information to the proper hospital personnel, thus eliminating the need for hospital personnel to wait on hold. Call data is digitally archived and indexed for later search and retrieval, providing a management tool for denial management and other revenue cycle improvement initiatives.

### Erlanger History

The Baroness Erlanger Hospital was founded in 1891 through a grant from French nobleman and railroad tycoon, Baron Frederic Emile d'Erlanger. The hospital opened in 1899 with 72 beds. By 1940, the hospital had doubled in size and had opened the area's first cancer treatment center.

The region's first open-heart surgery was performed at Erlanger in 1960, and the area's first kidney transplant in the 1980s. T.C. Thompson Children's Hospital, founded as a separate facility, became part of Erlanger in 1975 and is now a Comprehensive Regional Pediatric Center, one of four in the state, offering the highest level of care for neonates through young adults. Today, the Erlanger Baroness Campus, on the site of the original hospital, is the system's hub and the region's only Level One Trauma Center. The hospital is a teaching facility with an affiliation with the University of Tennessee College of Medicine, Chattanooga Unit.

### Managing Communications with Payers at Erlanger

Rita Bowen, Director of HIM and Resource & Reimbursement Management, along with Pamela Bassler, Manager of Resource and Reimbursement at Erlanger, led the hospital's selection and implementation of VoiCert. This included staff training and system administration.



Pamela Bassler,  
Manager of Resource &  
Reimbursement Management



Rita Bowen,  
Director of HIM and Resource &  
Reimbursement Management

Because of their role at the hospital, Bowen and Bassler witnessed firsthand the time wasted when hospital personnel waited on hold with managed care payer call centers. This unproductive situation led them in the early 2000s to begin evaluating process alternatives that might reduce time spent on hold by the staff.

Payers engaged in managed care contracts with Erlanger offered Bassler several Web-based solutions to this problem. While technically sound, these solutions would have involved Erlanger installing Web-capable PCs at key points throughout the hospital and on each patient floor. Then, staff would have had to be trained to use different systems offered by each payer. Staff would then be responsible for keying in data for electronic transmission to payers, who would then respond electronically. Bassler and her team judged these solutions as unworkable for several reasons.

"Floor and desk space is at a premium in most hospitals, and we are no exception," said Bassler. "So, installing potentially dozens of new PCs and tying them into the Internet was no simple task." Plus, noted Bassler, "Payers essentially were shifting the data entry responsibility to us. The time needed to key all that data would have eaten up much of the time savings from getting our nurses out of the hold queue with the payer call centers."

In mid-2000, Erlanger began to consider VoiCert as an alternative. Because the system was phone-based, it avoided many of the problems associated with Internet-based solutions. "Phones are everywhere in the hospital. They're common, and no one is going to say, 'I don't know how to use a phone.' Phones are simple, and there is no technology fear factor in using them," said Bassler. "Because it uses the phone and not a PC, the VoiCert solution involved minimal installation and training, yet it offered the benefits of eliminating hold times while digitally recording and indexing all the calls for later retrieval."

Bassler noted that VoiCert held the additional advantage of not requiring hospital personnel to change established procedures for communicating with payers. The telephone interface and voice-based technology meant that nurses, concurrent review personnel and patient financial services staff could all access the system and communicate with payers in much the same way as before, only without waiting on hold to do it.

Erlanger made the decision in late 2000 to purchase VoiCert. Installation, implementation, and training took place in February of 2001.

### Implementation and Early Results

Time savings data were tracked for VoiCert at Erlanger beginning in May of 2001. Erlanger reports that the time spent by their personnel to complete selected payer communications (chiefly precertifications and authorizations) dropped from an estimated average of 20 minutes per transaction to less than three minutes per call.

During the first year with VoiCert, these time savings allowed Bassler to restructure her department and reduce the full-time-equivalent staff responsible for payer communications. Three FTEs were reassigned in early 2002 to other responsibilities in the hospital, representing payroll and benefits savings totaling \$533,370.<sup>3</sup>

This restructuring also included a corresponding increase in department responsibilities, with Observation management/compliance added to the duties in Pamela Bassler's group.

With the time-savings benefit of the VoiCert system in place, Bassler had essentially regarded the implementation as a success. "What we wanted – and what we expected – was that VoiCert would cut the amount of time we spent on the phone, so that our people could be more productive. Within six months of implementing the system, we saw phone transaction times drop by more than 50 percent. With the main motivation for buying the system achieved, we shifted this decision into the win column and moved on."

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<sup>3</sup> Data provided by Erlanger: Salaries and benefits for three nurses covering a three year period: 2002 - \$173,670. 2003 - \$177,180. 2004 --- \$182,520.

By October of 2001, however, another trend had begun to emerge, one that neither Bassler nor her staff had anticipated when Erlanger bought the system.

One of the metrics Erlanger tracks as part of its denial management program is number of days denied. This is used to calculate the percentage of denial days per 1,000 patient days each month. These metrics help the hospital track patterns that might help its revenue recovery efforts for legitimate claims filed with its contract payers.

"Between May and October of 2001, we saw the percentage of days denied fall from 1.47% to 0.57%," said Bassler. "And the system's ability to archive and index each call for later retrieval was a major reason."

Bassler explains: "The system's digital archive simplified the process of resolving billing disputes that stemmed from mistakes, misunderstanding and other administrative or technical problems in the authorization and precertification process. When we received a denial, quick access to these digital voice files allowed us to favorably resolve many of these problems before the contractual appeal time window closed." Bassler specifically cites the use of a product feature called VoiCert Tracker as key in successful denial appeals. VoiCert Tracker allows users to search and access the digital voice and fax files through a computer interface. User notes and index numbers can be added to the transaction records.

Prior to installing VoiCert, Bassler notes that billing disputes stemming from the precertification or authorization process often came down to an "our-word-versus-theirs situation. Now, we have an objective and accurate source that both sides in the dispute can accept as accurate."

Armed with these unexpected findings, Erlanger began to systematize the regular use of VoiCert as a denial-management tool. Modest declines in the number of days denied soon accelerated, and by July 2002, the number of days denied reached a record low of 0.39 percent. By mid-2003, average monthly figures for percentage of days denied had settled into a band of between 4.0 and 5.0 days per month, less than half the average of 10 days that the metric had been only a year before.

"We absolutely were not expecting this," said Bassler. "But by making VoiCert an integral part of the denial management process, we were able to leverage the system's digital voice files and search capability and pick up another measurable form of value from the system."

Data on the percentage of days denied at Erlanger are presented in Table 2, from May 2001 through March of 2005. Data are shown graphically in Chart 1, accompanied by a nine-month rolling average. This trend line highlights the dramatic decrease in patient days denied, which corresponded with the implementation of VoiCert as a denial-management tool.

In addition to this metric, Erlanger tracks specific instances where the system was instrumental in successfully overturning denials. Table 2 lists a series of specific examples. In each case, lack of precertification or timely precertification/authorization were cited by the MCO as reasons for the initial denial.

### Return on Investment

During the period from May 2001 to April 2005, Erlanger has identified 20 overturned denials that it attributes to the use of VoiCert, totaling \$386,831.59 in retrievable charges. Adding this to the labor savings noted above, the total payback attributable directly to VoiCert is \$920,201.59. This is, of course, in addition to savings that cannot be directly linked to the system, as well as the overall reduction in denials received.

### Improved Relationships With Payers

One final benefit experienced by Erlanger was unexpected. Since the VoiCert system was implemented, the quality of day-to-day working relationships with its MCOs have improved markedly.

"More than 80% of our payers are on the VoiCert system," said Bassler. "Our biggest payers are the Blue Cross / Blue Shield programs in Tennessee, North Carolina and Michigan, Cigna, John Deere, UHC, Cariten, and all of the TennCare payers."<sup>4</sup>

Prior to implementing VoiCert, notes Bassler, "relationships with payers could easily become adversarial over the issue of denials. If a payer said 'you did not get a precert in time,' it was essentially our case to prove that we did."

Bassler reports that, because VoiCert provides an objective, accurate voice record of transactions between payers and providers, denial issues are resolved more quickly. In fact, she notes that Erlanger's payers seem to rely as much on the data as does the hospital. "VoiCert gives us and our payers credible information that helps both of us do our jobs. It's helped improve our relationship enormously, as much more of our communications are based upon facts archived in the VoiCert system."

### Summary

VoiCert has helped Erlanger reduce staff time spent securing and managing communications with payers. It has demonstrated a measurable return on investment in terms of overturned denials and savings from staff reductions. Additionally, it has helped the hospital reduce denials and improve its revenue cycle management process while improving relationships with payers.

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<sup>4</sup> TennCare is the state-sponsored indigent care program sponsored by the State of Tennessee.

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### **About VoiCert**

VoiCert is used by hospitals to document voice and fax transactions with any managed care organization. Examples of these transactions include authorizations, precertifications, verification of benefits, and eligibility. Benefits to hospitals using the system include an indexed, searchable, digital archive of all voice and fax communications with payers, offering rapid access to accurate information for use in resolving denied claims. VoiCert systems are now licensed for use in nearly 300 hospitals in the United States.

### **About The White Stone Group**

Founded in 1991, The White Stone Group, Inc. is a software development company focused on the delivery of voice-based solutions to complex communications and data management problems in healthcare.

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**Table 1**

**Percentage of Days Denied**  
**May 2001 Through March 2005**

| Date | Relevant Patient Days | Days Denied | Percentage Days Denied | Denial Days per 1000 Patient Days |
|------|-----------------------|-------------|------------------------|-----------------------------------|
| M-01 | 5453                  | 80          | 1.47%                  | 14.7                              |
| J-01 | 4641                  | 49          | 1.06%                  | 10.6                              |
| J-01 | 4819                  | 46          | 0.95%                  | 9.5                               |
| A-01 | 5603                  | 63          | 1.12%                  | 11.2                              |
| S-01 | 5590                  | 59          | 1.06%                  | 10.6                              |
| O-01 | 6164                  | 35          | 0.57%                  | 5.7                               |
| N-01 | 4844                  | 67          | 1.38%                  | 13.8                              |
| D-01 | 4758                  | 40          | 0.84%                  | 8.4                               |
| J-02 | 5120                  | 46          | 0.90%                  | 9.0                               |
| F-02 | 4993                  | 64          | 1.28%                  | 12.8                              |
| M-02 | 5051                  | 49          | 0.97%                  | 9.7                               |
| A-02 | 5746                  | 60          | 1.04%                  | 10.4                              |
| M-02 | 5629                  | 69          | 1.23%                  | 12.3                              |
| J-02 | 5345                  | 48          | 0.90%                  | 9.0                               |
| J-02 | 5376                  | 21          | 0.39%                  | 3.9                               |
| A-02 | 6148                  | 43          | 0.70%                  | 7.0                               |
| S-02 | 5907                  | 46          | 0.78%                  | 7.8                               |
| O-02 | 5967                  | 19          | 0.32%                  | 3.2                               |
| N-02 | 6206                  | 21          | 0.34%                  | 3.4                               |
| D-02 | 5350                  | 22          | 0.41%                  | 4.1                               |
| J-03 | 5886                  | 19          | 0.32%                  | 3.2                               |
| F-03 | 5716                  | 16          | 0.28%                  | 2.8                               |
| M-03 | 5885                  | 22          | 0.37%                  | 3.7                               |
| A-03 | 5746                  | 27          | 0.47%                  | 4.7                               |
| M-03 | 6291                  | 31          | 0.49%                  | 4.9                               |
| J-03 | 6057                  | 11          | 0.18%                  | 1.8                               |
| J-03 | 6627                  | 51          | 0.77%                  | 7.7                               |
| A-03 | 6641                  | 19          | 0.29%                  | 2.9                               |
| S-03 | 6486                  | 37          | 0.57%                  | 5.7                               |

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**Table 1**

**Percentage of Days Denied (Continued)**

May 2001 Through March 2005

| Date | Relevant Patient Days | Days Denied | Percentage Days Denied | Denial Days per 1000 Patient Days |
|------|-----------------------|-------------|------------------------|-----------------------------------|
| O-03 | 6893                  | 34          | 0.49%                  | 4.9                               |
| N-03 | 6550                  | 94          | 1.44%                  | 14.4                              |
| D-03 | 6376                  | 38          | 0.60%                  | 6.0                               |
| J-04 | 5887                  | 27          | 0.46%                  | 4.6                               |
| F-04 | 5656                  | 43          | 0.76%                  | 7.6                               |
| M-04 | 6204                  | 19          | 0.31%                  | 3.1                               |
| A-04 | 6382                  | 26          | 0.41%                  | 4.1                               |
| M-04 | 6071                  | 13          | 0.21%                  | 2.1                               |
| J-04 | 6353                  | 13          | 0.20%                  | 2.0                               |
| J-04 | 6749                  | 14          | 0.21%                  | 2.1                               |
| A-04 | 5754                  | 29          | 0.50%                  | 5.0                               |
| S-04 | 6075                  | 44          | 0.72%                  | 7.2                               |
| O-04 | 5904                  | 20          | 0.34%                  | 3.4                               |
| N-04 | 5544                  | 35          | 0.65%                  | 6.5                               |
| D-04 | 5528                  | 16          | 0.29%                  | 2.9                               |
| J-05 | 5755                  | 17          | 0.30%                  | 3.0                               |
| F-05 | 6277                  | 19          | 0.30%                  | 3.0                               |
| M-05 | 6764                  | 30          | 0.44%                  | 4.4                               |

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**Table 2**

**Erlanger Denied Claims Recovered  
Attributed to VoiCert System**

| Date               | VoiCert Tracking Number | Amount      | System Role in Recovery   |
|--------------------|-------------------------|-------------|---|
| May 10, 2001       | 2101                    | \$5,664.00  | digital voice file time stamp verified that precert request had been made in time   |
| May 10, 2001       | 1776                    | \$5,906.59  | digital voice file time stamp verified that precert request had been made in time   |
| May 24, 2001       | 1798                    | \$9,420.00  | digital voice file time stamp verified that precert request had been made in time   |
| August 24, 2001    | 4446                    | \$8,356.00  | retrieval of digital voice file data proved that precertification had been given by the MCO   |
| September 27, 2001 | 5397                    | \$3,449.00  | first precert request was lost by the MCO; second request was late, but VoiCert data proved that an initial attempt had been made within the proper time frame  |
| August 2, 2002     | 13896                   | \$5,465.00  | initial precert request denied because MCO claimed patient was not eligible; subsequent verification that the patient was in fact eligible occurred after the precert window had closed; VoiCert archived voice files proved that first attempt was made within the proper time frame         |
| August 2, 2002     | 11916                   | \$56,444.00 | transition from 23-hour observation to inpatient; MCO stated that the same auth number for the observation was adequate for the inpatient stay; inpatient claim was denied for lack of precert; Erlanger played back the VoiCert data file for the MCO, resulting in the MCO paying the claim |
| January 2, 2003    | 17481                   | \$5,651.00  | retrieval of digital voice file data proved that precertification had been given by the MCO   |
| January 14, 2003   | 17788                   | \$1,550.00  | retrieval of digital voice file data proved that precertification had been given by the MCO   |
| January 14, 2003   | 17789                   | \$5,432.00  | retrieval of digital voice file data proved that precertification had been given by the MCO   |
| April 14, 2003     | 19823                   | \$7,691.00  | retrieval of digital voice file data proved that precertification had been given by the MCO   |

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**Table 2**

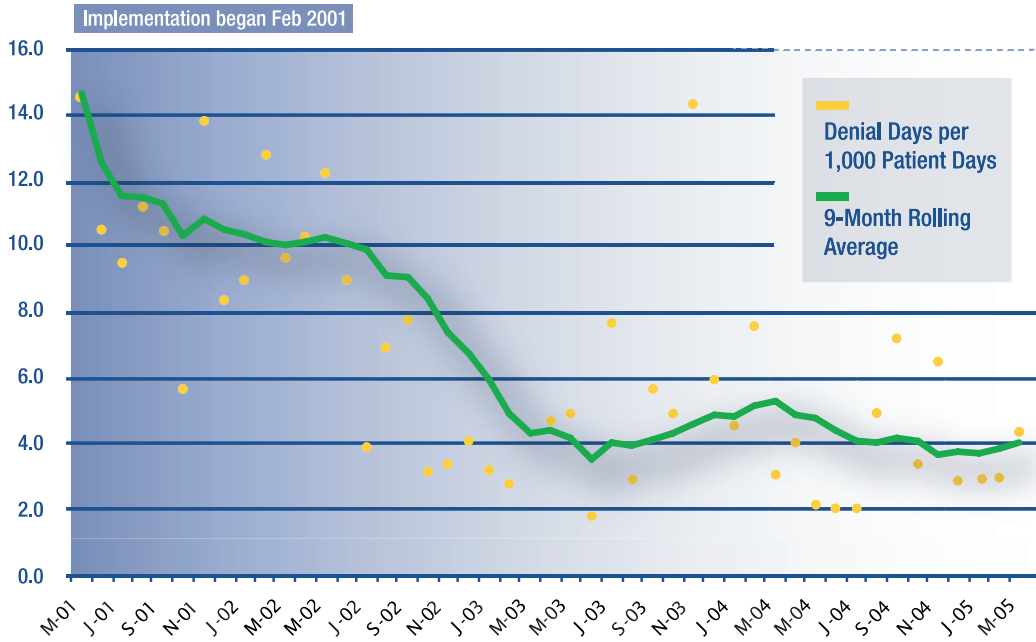
**Erlanger Denied Claims Recovered (Continued)**  
 Attributed to VoiCert System

| Date              | VoiCert Tracking Number | Amount       | System Role in Recovery  |
|-------------------|-------------------------|--------------|--|
| June 9, 2003      | 21063                   | \$138,216.00 | MCO responded to precertification request by saying that precert was not needed until June 30; when claim was denied for lack of precert, hospital played back the digital voice file and the MCO accepted the reprocessed claim for payment |
| June 13, 2003     | 21144                   | \$2,822.00   | retrieval of digital voice file data proved that precertification had been given by the MCO  |
| December 15, 2003 | 25200                   | \$8,929.00   | retrieval of digital voice file data proved that precertification had been given by the MCO  |
| April 22, 2004    |                         | \$15,118.00  | payer gave incorrect precert number, which was discovered by retrieving the VoiCert  |
| November 11, 2004 | 42110                   | \$20,157.00  | payer did not accurately record dual coverage  |
| November 11, 2004 | 42724                   | \$64,172.00  | payer incorrectly loaded the precert as per diem   |
| March 11, 2005    | 41481                   | \$17,981.00  | retrieval of digital voice file data proved that precertification had been given by the MCO  |
| April 18, 2005    |                         | \$4,387.00   | digital voice file time stamp verified that precert request had been made in time  |

A Review of Long-Term ROI From Using Voice Technology in Payer Communications Management

Chart 1

**Percentage of Days Denied**  
 May 2001 Through March 2005  
 With Nine-Month Rolling Average Trend Line<sup>5</sup>



<sup>5</sup> Data point from November 2003 is considered by the hospital as an outlier and is confirmed statistically as such. The November 2003 data point used in calculating the nine-month trend line is an average of the data points for October and December 2003.