

UPCARE Technology, Inc. *White Paper*

**DEVELOPING LAB  
OUTREACH CAPABILITIES:  
A Real-World Example**

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If you've been asked to increase the revenue generated by your lab, you may want to consider adding lab outreach capabilities to your menu of hospital laboratory offerings.

### **Marquette General Health System Reference Lab Outreach**

Marquette General Health System (MGHS), a regional medical center located in rural Marquette (population 22,000) in Michigan's Upper Peninsula (UP), did just that. MGHS is at the forefront of exciting laboratory processing and business opportunities not often associated with small-town America.

This paper's objective is to provide the MGHS story in order to point out some of the critical issues you may be faced with in the development of lab outreach operations, and how MGHS overcame them.

### **MGHS Lab History and Growth**

The reference lab program actually began in 1994 at Marquette General, and in its early stages, served only two client hospitals. In 1995, the Upper Peninsula Health Care Network — a consortium of Upper Peninsula hospitals that came together to maximize purchasing power, share information technology, improve operational efficiencies and help alleviate expenses incurred by member hospitals — was formed. At that time, Marquette General, the Upper Peninsula's largest healthcare provider treating more than 11,000 inpatients and 420,000 outpatients annually, began to actively market its reference lab services. A federally designated Rural Referral Center, MGHS is a 352-bed specialty care hospital that offers 54 specialties and sub-specialties under the care of more than 200 physicians. The volume and depth of specimens processed by the laboratory positioned MGHS well to provide reference lab services to other facilities.

"We went after the reference lab business as a way to improve our revenue stream, and counter what we perceived as a threat from national labs that would result in lab carve outs," said John Rhoades, Laboratory Director at Marquette General. "We became pro-active and developed an entrepreneurial attitude to create some business of our own by courting new clients. We've been extremely successful."

### **MGHS Lab: Critical Issues**

However, this growth did not come without growing pains. The supply and demand for MGHS lab services stimulated the need for an information technology, Web-based solution for managing the unprecedented growth. Billing issues and specimen tracking abilities were unique challenges MGHS had to conquer in order to be recognized as a reference lab leader on a national level. MGHS started by utilizing early lab outreach software for its order-entry system over its private, high-speed and secure hospital Intranet. Even though the MGHS Intranet is one of the few successful regional health information organizations (RHIO's) in the nation, the resulting registration process was cumbersome and

time-consuming. “Quite honestly,” Rhoades said, “it literally took five or six minutes to register a patient. We struggled with a system that no one liked.”

Lab outreach client site users were resistant to use the IT system, which involved accessing multiple MGHS IT systems to place orders, leading to increased turnaround time (as MGHS Lab staff had to register the patients and place test orders upon receipt of the specimens). In fact, only one of the outreach lab clients actually used the system regularly to register patients and order tests, and even then the current system was not assisting the client site users in registering the correct patient and completing all necessary information. The remainder of the client sites reverted to a manual system, and sometimes sent paperwork with incomplete or illegible patient/order information. There were problems with increased client order errors, billing problems, and missing order information. Calls to the client sites to clarify information were using precious MGHS Lab staff time. And, specimen tracking was non-existent. The client sites had no way of knowing what specimens were sent, and MGHS Lab staff didn’t know what specimens to expect.

Rhoades knew that in order to continue, he needed a fast, easy, reliable, Web-based lab outreach application that could be easily rolled out to clients throughout the UP and the U.S. This application would allow MGHS to compete with the capabilities offered by the competition and would lead to increased revenue generation for MGHS. Rhoades needed a system that allowed client sites to register patients, place orders, process specimens, print bar code labels, view results, and support applicable standards, such as medical necessity checking, very quickly and with minimal screen manipulations. He needed a system that would assist the client site users in registering the correct patients and assure that all required information was provided by the client site. When requisition forms were required, Rhoades needed a system that would generate those forms. He needed a system that could provide specimen tracking for both the client site and MGHS lab. But, he did not want to replace his LIS in order to gain this functionality.

### **MGHS IT Department: Critical Issues**

Meanwhile, the MGHS Information Technology department was spending many hours installing and supporting that lab outreach system, which consisted of multiple macros written in an attempt to facilitate patient registration by the client sites into the MGHS hospital system. Supporting this type of configuration required travel by the IT staff to each client site for installation and continued support. In order to defray the associated costs in time and travel, the IT Director at MGHS stated he needed a system that would require “zero support” at the desktop for installation and continued maintenance.

### **MGHS Lab Clients: Critical Issues**

Out in the field, clinic staff at client physician offices and hospital labs sometimes missed getting ABN’s signed by Medicare patients before sending specimens for

testing to the MGHS lab, leading to decreased revenue generation. A manual system was used to determine whether a test ordered was classified as an LCP, requiring a manual check against the ICD-9 code to determine whether Medicare would pay for the test or an ABN was required. In addition, if not using the cumbersome IT system, the client lab staff was spending an inordinate amount of time completing manual lab requisitions for tests. Specimens were sometimes missed, and misinterpretation of the form sometimes occurred upon receipt at the MGHS Lab. Manual forms completion was error-prone and time-consuming.

Staff at the client sites desired a system with rules in place to assist with medical necessity checking and determining whether an ABN was necessary. In addition, they wanted a system that would track the response of the patient to the ABN presented, for future reference. They needed a system that would assist the techs in completing all required information for a test request, reduce paperwork in the lab, and provide a tracking mechanism for the specimens sent to MGHS and the tests ordered. They also needed a way to easily order supplies from the MGHS Lab.

### **The IT Solution**

The dissatisfaction with the current system led Rhoades to turn to the highly trained IT department at Marquette General, who in turn sought the expertise of UPCARE Technology, Inc., a privately held company with clinical system and development expertise. Together, they co-developed an application to effectively manage outreach laboratory processes. The implementation of the new Web-based application, UPCARE® eLAB from UPCARE Technology, has allowed MGHS Lab to pursue a number of exciting new lab business opportunities for Marquette General, both in the Upper Peninsula and across the United States.

### **The Results**

MGHS' laboratory outreach program has now grown to support over 130 clients, including 14 UP hospitals, various physician offices, nursing homes, and other reference labs, with the majority of them using UPCARE eLAB. The total number of billable tests attributed to outpatient/client business has increased over 40 percent from the year 2000, with an associated increase in revenue generation. The national labs are no longer even competing for the UP business.

On any given day, 900-1200 patients are being registered at the client sites. There is a noticeable decrease in registration and order errors. Electronic orders and requisition forms generated through UPCARE eLAB are complete and readable. Incoming client calls have decreased by 50%, and outgoing client calls to clarify information are down by at least 60%. The system is saving 3-4 hours per night in registration time.

As for IT staff involvement, when a new client site is added to the lab outreach program, or maintenance is needed at a current client site, the MGHS IT staff is

able to direct the client site staff via a simple phone call through the setup of the PC workstation and label printers.

And, at the client sites themselves? The time to log on, select the correct patient, place an order, and print a specimen label has been reduced to approximately 45 seconds. There is also a much lowered incidence of missed ABN's. So, tests not covered by Medicare can be appropriately billed to the patient. "We're required to notify a patient whether or not Medicare will cover the test," Rhoades explained. "If the diagnosis is not covered by Medicare, we let them know so they have the option to refuse the test, or they will be responsible for payment. The ABN software allows us to track the record and the patient's response electronically." There is a noticeable reduction in the paperwork generated and stored at the client sites, more accurate order information, and faster turnaround time for supplies received. Test results can be accessed online and as soon as they are verified in the MGHS Lab Information System.

### **UPCARE<sup>®</sup> eLAB: A Web-based Lab Outreach IT Solution**

All of this is possible because of the features provided by UPCARE Technology's UPCARE eLAB system, a fully functional, easy-to-use, computerized reference laboratory outreach system. The development of this Web-based system provided the portability and mobility the Lab sought, while allowing for expansion to accommodate a growing reference lab market. The application is 'thin,' requiring only an Internet browser to work. UPCARE eLAB has the look, feel and sophistication of a 'fat' application. However, it uses the latest Web services available. The system is fast, and just as important, provides real-time interaction.

Rhoades raves about the product. "When an order comes in with a bar code, we scan it and the specimen is then ready for processing," he explains. "Reports are 100 percent Web-based ... once we access the Internet, we're ready to go."

UPCARE eLAB comes with its own clinical data repository, master person index, interface engine and rules engine, with a fully functional user-interface that can be integrated into a health system's EMR, capturing a complete record of their clinical data. The system is not a Web-portal, in that it queries data from other systems. So, if a lab technician or provider has questions about a patient's test results, he/she can view results for a specific time period, with trending and graphing capabilities. Essentially, UPCARE eLAB not only allows clients to register and order from their facilities, but also extends to hospital and clinic systems a complete picture of information. In addition, UPCARE eLAB provides a link to the reference lab's test catalog, providing quick access for users to check the test/specimen requirements. "It also stores the billing information for the patient, and we can make sure the insurance information is valid," Rhoades states. "In addition, a packing list is provided for our lab people so we can accurately track the specimens and tests ordered."

UPCARE eLAB has helped to spawn new business opportunities for MGHS and has greatly enhanced its revenue stream. “With the UPCARE eLAB product, we have pursued business outside of our geographic area without the cost of hardware support,” Rhoades said.

Since implementing the new system, the amount of lab work has steadily increased. “We offer a good service, it’s accurate and it’s competitive (to national labs) in turnaround time and pricing,” Rhoades acknowledged. “Shipping companies can send specimens overnight. We have the quality, pricing and logistics covered. UPCARE eLAB allows us to efficiently transmit lab orders and subsequent test results. “By substituting UPCARE eLAB for paper requisitions, we’ve reduced error incidence, since our clients are actually ordering online and printing the test. And with UPCARE eLAB, an order can’t be submitted unless all the required information is entered into the database.”

UPCARE eLAB supports data in virtually any format and communicates with major LIS, HIS, EMR and billing systems, preserving and enhancing the investment of those legacy products. It works with all leading databases and runs on most operating systems. It can interface with other billing packages on the market while providing an electronic, online customized test directory. UPCARE eLAB takes the information and provides it to clients in a simple, easy-to-use, Web-based platform that fits on top of whatever LIS system is in place.

“We’ve been able to compete with national labs and keep business here in Marquette. That’s an outstanding benefit,” Rhoades said. “Because UPCARE eLAB works with any system, if we decide to change LIS vendors, we can do so without sacrificing outreach capabilities. It has allowed us to process more work with less people, while reducing the turnaround time. All the things we hoped to accomplish have come true.”

Jim Sundberg, UPCARE Technology’s CEO stated, “We’re establishing UPCARE Technology as an industry leader in outreach software. We continue to enhance and modify UPCARE eLAB to meet the growing needs of a reference lab market seeking to start outreach programs to expand and compete with bigger labs. We’re very pleased to work with our customers in the further development and enhancement of this application,” Sundberg concluded. “We want to help our clients make their operations easier and more efficient.”

For more information on the MGHS reference lab, contact John Rhoades at 800-562-9753, x7860, or go to the MGHS Web site at [www.MGH.org](http://www.MGH.org).

For more information on the UPCARE eLAB product, contact Roger Newbury, Senior Vice President at UPCARE Technology by calling 1-866-554-2870, x3437, or visit UPCARE Technology’s Web site at [www.upcaretech.com](http://www.upcaretech.com).

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