



THE COMPUTERWORLD HONORS PROGRAM

CASE STUDY

LOCATION:
*Cincinnati, Ohio,
United States*

YEAR:
2006

STATUS:
Laureate

CATEGORY:
Medicine

NOMINATING COMPANY:
Cincom

ORGANIZATION:

TriHealth Inc.

PROJECT NAME:

Intelligent Guided Registration

Summary

Intelligent Guided Registration (IGR), from Cincom Systems, Inc. in Cincinnati, Ohio, is a flexible, “rules-based” software application that can enhance any healthcare provider’s registration system. By providing prompts to assist registrars in selecting from valid options, IGR populates the patient’s record with the correct insurance data, resulting in enhanced accuracy, efficiency, and employee/patient satisfaction, with the added benefit of reducing, even eliminating, the potential for delayed and/or denied payment.

Introductory Overview

Registration involves the creation of the patient’s medical record for healthcare facilities, and must be accurate in order to provide appropriate treatment and care. Unfortunately, accuracy is becoming a greater challenge as the payer market gets more complex and riddled with compliance and regulatory/contractual rules too numerous for the registrars to commit to memory. In the healthcare access industry, auditing tools are beginning to assist in scrubbing for these errors, but only after information have been entered into the registration system. While this is helpful and the claim is more accurate for submission, follow-up is still often required – identifying and correcting claims errors and working on re-billings, credit balances and other incorrect submissions. The IGR solution helps to avoid the need for the intense auditing and resubmissions, since it promotes more accurate data entry at the time of registration before the errors occur, and as such, is preventative in nature, rather than reactionary.

Today’s healthcare registration systems cannot accommodate all the individual market or contractual rules that change frequently. It is also obvious that registrars cannot memorize all the rapid changes occurring with all the contractual requirements that affect accurate registrations. However, these problems are alleviated with the IGR solution. With IGR, the registrars are automatically guided through a series of relevant questions to be asked of the patient about insurance coverage. Questions can be formulated that will relate directly to a specific insurance or code and allow choices to be filtered out until only a valid option can be chosen. When appropriate, registrars are guided through Medicare, Medicaid, and other compliance-related questions to ensure the correct coordination of benefits. As the registrars interface with the



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patient and enter information into our existing registration system, IGR provides real-time decision support and ensures the adherence to appropriate rules by leading the registrar through the selection and ordering of the insurance plans, thereby improving the overall registration accuracy. IGR enhances our current registration system by empowering the registrars to gather and process the correct patient and insurance information without relying on memory for specific rules attributed to different payers.

With the newly implemented automated solution, our complex registration process has been streamlined and automated with critical information completed accurately because of easy-to-build prompts that are customized specific to our organization. IGR is a platform that can be used as the foundation to improve operational efficiencies within registration, which ultimately affects the entire billing process. Capable of being easily integrated with our, or any healthcare provider's, existing registration system, IGR is only one part of an overall registration process, and has an added advantage in that it can be enhanced and customized even more to address unanticipated changes as well as our anticipated needs.

Having such an automated tool that is locally managed and designed to prompt decision making will not only eliminate errors and reduce manual efforts, but will ease employee frustration as well. And since it allows for less administrative burdens, it allows for more human resources to be focused on the clinical dimension of care, "at the bedside."

Benefits

IGR has successfully simplified the registration process in a complex, dynamic payer environment. The registrars no longer need to rely on multiple resources to remember all of the details and special variations they routinely encounter. With the IGR solution, registrars can consistently gather accurate, quality information, resulting in many major benefits including:

Reduced registration errors

IGR simplifies the process and improves the accuracy of our patient registration and reduces insurance and patient data errors by ensuring that the answers provided are accurate, complete, sensible, and correctly entered.

Decreased training time for registrars

Much less training is required to keep the registrars up-to-date and productive. In addition, IGR is capable of collecting and applying the knowledge stored in the minds of the hospital's best registration experts, and making that knowledge immediately available to the lesser-experienced registration personnel in an automated, guided manner. This also means that little to no learning curve is required for the staff since all the rules, policies and procedures are integrated in the system.

Keeping up with the "speed of change"

Our registration experts can quickly modify and add new rules easily and graphically, with little to no assistance required from the IT department, and eliminates the need to outsource the work. This eliminates time-consuming delays associated with application re-programming and re-certification, thus allowing us to implement new or changed processes, policies, rules, regulations, and procedures in minutes rather than days or weeks.



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Reduced cost of rework

There is a reduction in the cost of rework and work caused by redundant procedures. This places more money and time back into providing care for the patient and/or potentially curtailing the rising costs of premiums since bills are also accurately submitted. The more “clean” claims that can be transferred electronically, the less expensive it is from both the payer’s and healthcare provider’s point of view.

Denials and write-offs are avoided

Instead of waiting for claims to be delayed or denied, we can now avoid one of the major causes of third-party denials – inaccurate data. As a result, the benefits of revenue improvement are many, including faster claims payments, fewer write-offs and less time in accounts receivable.

The Importance of Technology

Intelligent Guided Registration is a rules-based application – an application built with expert system technology. This type of application is particularly valuable in environments with many complex and dynamic business rules. Provider/payer contractual relationships have made healthcare registration into the type of environment where no registrar can memorize or keep up with all the confusing, ever changing rules that affect registration. The IGR application will radically change the need for memos, staff meetings, or sticky notes plastered on the computer/desk since updates can be immediately placed into a decision guide tool that prompts with questions and leads the registrar to the correct entry of data. Smart cards may be used by patients to assist in accurate patient data collection, but are frequently forgotten or the information requires updates. For example, insurances, addresses, etc., routinely change for a large number of our population.

In today’s dynamic insurance environment, registration managers can’t afford to wait for programming changes from IT. They need to be able to make rule changes themselves to respond to the changing needs of their business. Rules-base applications such as IGR are architected to put the flexibility and the power of rapid change into the hands of the business people who are closest to the issues. As such, IGR enables the registration staff to focus on the business issues, while IT personnel can focus on IT issues.

Originality

Major, complex problems like registration accuracy are rarely solved without thinking, “outside-the-box.” Historically, hospital administrators put all their efforts into fixing registration data errors after they had occurred. Their solution was to dedicate costly resources to examine records trying to find the cause of the errors, and then correct them before the errors caused the hospital to lose revenue. After-the-fact remedies tend to be very expensive, are hit-or-miss, and only eliminate a small portion of the errors.

Once access managers adopted this outside-the-box view of the registration accuracy problem, they concluded, “Why fix errors after the fact? Why not prevent errors in the first place?” This original perspective led to an original solution – Intelligent Guided Registration. While the concept of IGR is not unique, its application in healthcare and patient registration is new. The application prompts and guides registrars while they are interacting with patients and doesn’t



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allow them to input data errors. The flexibility of being able to alter questions required to ask the patients allows for accurate data collection, and can be extended beyond registration, even beyond administrative duties into the clinical arena that affects clinical decision-making.

Just as “Turbo Tax” software leads a user to produce a 100% correct tax return, IGR, through questions and corresponding prompts, insures that a registrar produces a registration record without errors.

Success

There was instantaneous success among our staff. Since implementation, the accuracy has greatly improved and auditing requirements have diminished. More accounts have had timely payments and days in Accounts Receivable have decreased. More importantly, the time it takes to register a patient has been reduced, greatly impacting the timeliness for delivery of care in our Emergency Departments.

Staff requires less training, they are more productive and have fewer errors as compared to before the implementation of IGR, leading to increased employee satisfaction. Anyone who has worked in a hospital or healthcare facility knows how employee satisfaction impacts patient satisfaction. Every aspect of a patient’s care – from admission to medical procedure and recovery to discharge – is delivered or supervised by hospital employees. And now, our engaged, satisfied employees create a positive patient experience, both through greater effort and a more knowledgeable, improved attitude. As a result, the patients benefit from this improved patient flow, not only at initial registration time, but also by experiencing less hassle with their bills due to the accuracy of registration.

Currently, statistics are being gathered to measure the overall success. It is clear from the feedback that the implementation of IGR has increased insurance accuracy, diminished waste, enhanced efficiency and increased timely payments. And already, multiple departments such as scheduling, insurance verification and care management are finding applications for this rules-based type application. There are unlimited opportunities to extend this product to many facets of healthcare provider operations. Just a few of potential applications include:

- Payer site verification (web services) - The ability to integrate web services from payers to validate patient coverage at the time of registration.
- Web-based registration – Deploying guided registration to the web or kiosks for certain patient pathways.
- Notice of non-coverage verification – The ability to print, send and verify the delivery of non-coverage notices when appropriate.
- Physician selection verification (dictionary) – Ensure that the proper physician is selected and entered into the registration system.
- Effective dates of insurance plans – An insurance code can be selected and questions can be triggered based on the date of treatment.
- Integration of scheduling module – Building a bridge to other applications in TriHealth.



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Difficulty

Convincing leadership that there are numerous complexities that plague the registration staff when attempting to complete an accurate registration can be challenging. Often, patients are not clear about their health benefits and front-end employees have minimal knowledge outside of on-the-job training. How then can all the detailed plan level specifics be understood early in the billing cycle?

Original, out-of-the-box changes almost always meet resistance, especially when transforming our business model in a significant way. Convincing others we can develop a way to move from the paradigm of fixing registration errors after the fact to preventing and avoiding them in the first place, before they occur, is a better way to meet the organization's goals.

Developing a strong business case that demonstrated the increased revenue, decreased costs, and increased patient satisfaction benefits assisted in convincing leadership to implement Intelligent Guided Registration.