

CASE STUDY



# X-HIS™

## Golder Cat-Scan & MRI Center Automates Imaging Center Workflows

*"any" health information system  
any application, for any specialty, anywhere—endless possibilities*





## QUICK FACTS

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### Golder Cat-Scan & MRI Center

#### Locations:

613 Golder Avenue  
Odessa, TX 79761

5001 Andrews Highway  
Midland, TX 79703

**Odessa Population:** 141,325

**Midland Population:** 151,662

#### Number of Physicians:

1 Primary Radiologist supported  
by 5 Radiology Groups

#### Imaging Modalities Onsite:

- MRI
- PET-CT
- Ultrasound
- Nuclear Medicine
- X-ray

#### Imaging Volumes:

400 exams monthly

## GOLDER CAT-SCAN & MRI CENTER

Golder Cat-Scan and MRI Center (GMC) has 15 employees across two locations in the rapidly growing cities of Odessa and Midland, Texas. The staff proudly serves 400 patients each month with diagnostic imaging services, including MRI, PET-CT, X-ray, ultrasound, and nuclear medicine.

## BEFORE 7 MEDICAL

Prior to implementing X-HIS™, GMC had a separate scheduling and picture archiving and communications system (PACS)—but they were not linked. The front desk entered patient information at check in. The order was printed and given to the technologist, who manually reentered the order into the PACS. After the exam, the technologist delivered the printed order to the radiologist while the imaging exam (study) was stored in the PACS system.

Printed orders were faxed between sites, depending on the radiologist's location. Using the hard-copy order and viewing the study in the PACS, the radiologist would interpret the study and dictate. The transcriptionist then typed the radiology report and routed it back to the radiologist for review and approval. Reports were faxed to referring physicians.

GMC had to manually deliver order and billing information to its outsourced billing company. Billers had to wade through documents, abstract and reenter billing data into the billing system and submit claims for reimbursement.

Because their systems were not integrated, processes were manual, time consuming, and duplicative. The workflow required data entry and reentry of the same patient data and order information, such as inconsistent ID and accession numbers, which increased processing time and risk of errors.

## ONE INTEGRATED SOLUTION

GMC is one of the first to implement X-HIS, providing all-in-one, integrated RIS and PACS functionality. Plus, the system streamlines the data provided to the billing company for claims processing.

An efficient cloud-based solution, X-HIS automates and optimizes the imaging center workflow. The system also delivers real-time data dashboards and tools to maximize productivity for each key role in the workflow.

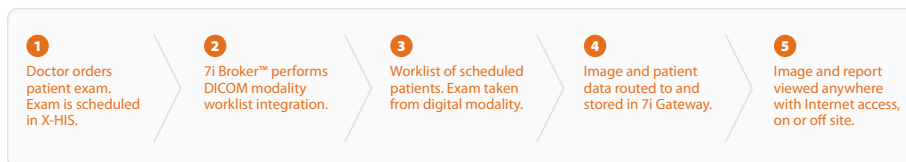
## Data Migration—All Patient Data and Files in One Repository

To ensure a seamless transition, the 7 Medical team converted GMC's patient demographic data and insurance information from its previous system to X-HIS. Prior studies from the PACS were also migrated so that providers can view current and prior studies in one spot, leading to smoother access, fewer logins, no lost data, and a full picture of the patient's history.

## Automated Digital Workflow

With the installation of an optical character recognition (OCR) card scanner at each location, patient driver's license and insurance information is now electronically scanned as structured data into the correct fields in the system.

GMC uses the 7i Connect™ interface and the 7i Broker™ with DICOM Modality Worklist (DMWL) integration. The front desk enters the orders into X-HIS. The software takes the HL7 ORM (order) messages, translates them into DICOM so the modalities can read them, and electronically sends them to the PACS worklist. This integration was key in realizing significant productivity gains by eliminating multiple data entry points, saving significant time, and reducing errors.



*X-HIS all-in-one integrated system automates and optimizes the entire imaging center workflow.*

## Access and Advanced Viewing Capabilities

X-HIS is a cloud-based system accessible anywhere, anytime through the Web, including a mobile app for tablets and smartphones. Access rights and security roles grant access to users based on rules set by the imaging center. All users access one centralized system that enables data sharing and collaboration for improved productivity and outcomes.

Digital images from the modalities are electronically routed to the onsite gateway server in the Odessa location and to the 7 Medical data center, which serves as the long-term (deep) archive for all imaging studies.

## 7 MEDICAL SOLUTION

### X-HIS FOR IMAGING CENTERS

#### X-HIS

- Integrated RIS/PACS
- 7i Web Viewer™ Advanced

#### DICOM Modality Worklist

Conversion of patient demographics and insurance information to X-HIS

Migration of prior studies to new PACS

#### OCR Card Scanners (2)



Orders are populated in the worklist on the radiologist dashboard, where the radiologist manages and tracks the status of all orders. A simple click automatically launches the advanced visualization viewer for image processing and interpretation. After narrative dictation is recorded, the audio file and order are pushed to the transcription queue.

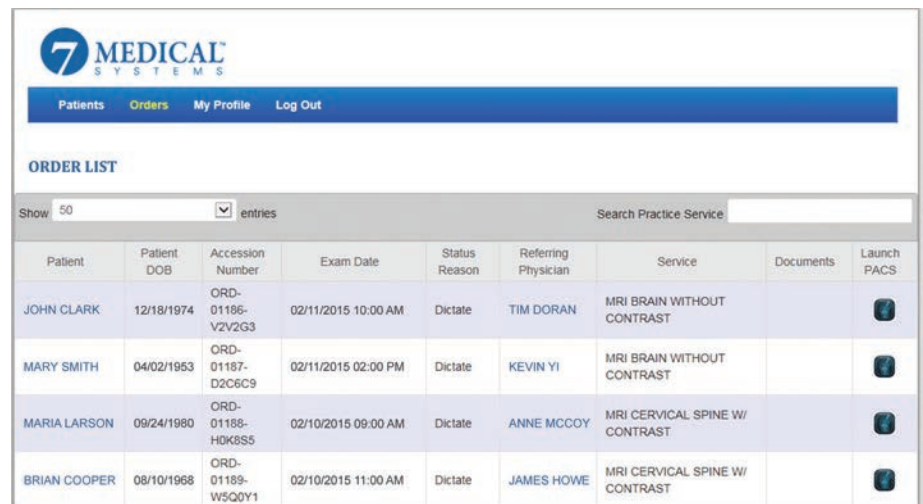
## THE ADVANTAGES





- Personalize dashboards, order forms, fonts/sizes, toolbars and tool palettes
- DMWL eliminates manual reentry of data and reduces medical errors
- Short-term onsite and long-term offsite storage of imaging studies with backup
- Delivers real-time clinical and financial data analytics
- Technology updates and upgrades are included at no additional cost
- Built-in backup, redundancy and disaster recovery
- HIPAA compliant and Type II SSAE 16 audited
- 24/7 system availability and support
- Cloud model provides affordable monthly service fee vs. large upfront capital costs
- Advanced viewer with streaming technology for fast viewing

The transcriptionist dashboard shows all orders in the queue that are ready to be typed. The audio recording is launched directly from X-HIS. Reports are typed and electronically routed back to the radiologist for review and approval. Frequently used reports can be saved as templates for future use.

## Patient & Referring Physician Portals

Before X-HIS, completed orders and radiologist reports were faxed to referrers. Now, referring physicians access an online portal to track order status and view images alongside the radiologist report. Alerts can be set up to notify referrers when reports are ready for viewing and reports may be sent via secure email or fax. They can also create appointment requests, review historic appointments and scanned documents, and set up new patients.



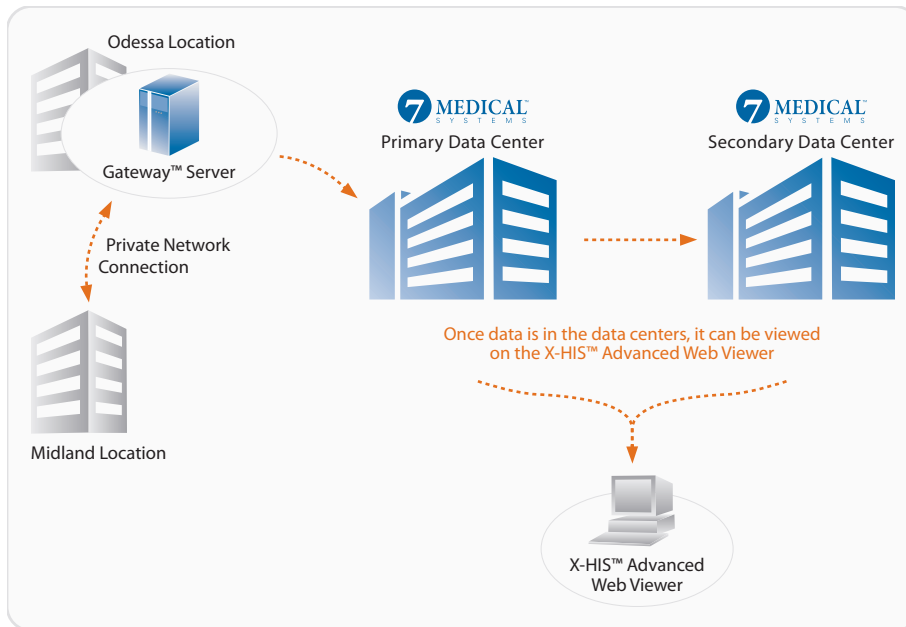
Patient	Patient DOB	Accession Number	Exam Date	Status Reason	Referring Physician	Service	Documents	Launch PACS
JOHN CLARK	12/18/1974	ORD-01186-V2V2G3	02/11/2015 10:00 AM	Dictate	TIM DORAN	MRI BRAIN WITHOUT CONTRAST		
MARY SMITH	04/02/1953	ORD-01187-D2C6C9	02/11/2015 02:00 PM	Dictate	KEVIN YI	MRI BRAIN WITHOUT CONTRAST		
MARIA LARSON	09/24/1980	ORD-01188-H0K8S5	02/10/2015 09:00 AM	Dictate	ANNE MCCOY	MRI CERVICAL SPINE W/ CONTRAST		
BRIAN COOPER	08/10/1968	ORD-01189-W5Q0Y1	02/10/2015 11:00 AM	Dictate	JAMES HOWE	MRI CERVICAL SPINE W/ CONTRAST		

*Referrers can create appointment requests, view historic appointments and scanned documents, track orders and view reports via an online portal.*

A self-service online portal gives patients access to schedule appointments, online forms, exchange secure emails, and useful information and instructions. The patient portal facilitates patient communications and engagement and improves patient satisfaction.

## Storage & Disaster Recovery/Redundancy

Imaging studies are stored in 7 Medical's primary data center and backed up to a secondary data center, providing redundancy and disaster recovery protection. The data centers are equipped with state-of-the-art cooling, backup power generators, and redundant Internet connectivity. In the event of an outage, emergency or natural disaster, GMC's data is protected and can be easily restored.



*All studies are routed to 7 Medical's Type II SSAE 16 audited data center for long-term storage with secondary backup and disaster recovery.*

## Business Intelligence

X-HIS provides GMC with powerful business intelligence capabilities. As the staff enters structured data into the system, the raw data is immediately available in customizable dashboards and reports can be configured on the fly. As a result, X-HIS enables GMC to view real-time financial and clinical data for decision making.

Useful information about top referrers, study volumes, turnaround times, workflow and worker productivity, supplies inventories, expenses and other key performance indicators (KPIs) can be gleaned from the system. GMC is able to easily manage revenue and costs by using historical data, which facilitates planning and forecasting for future growth.

## SUCCESS STORY

GMC successfully implemented X-HIS, a highly customizable health information system delivering improved functionality and more efficient workflows.

*"The PACS is a very time efficient solution for our referring physicians. The high-quality Web viewer allows me to customize tool bars and hanging protocols within minutes, and I can save as templates for future use."*

*—Dr. Reddy, Radiologist*

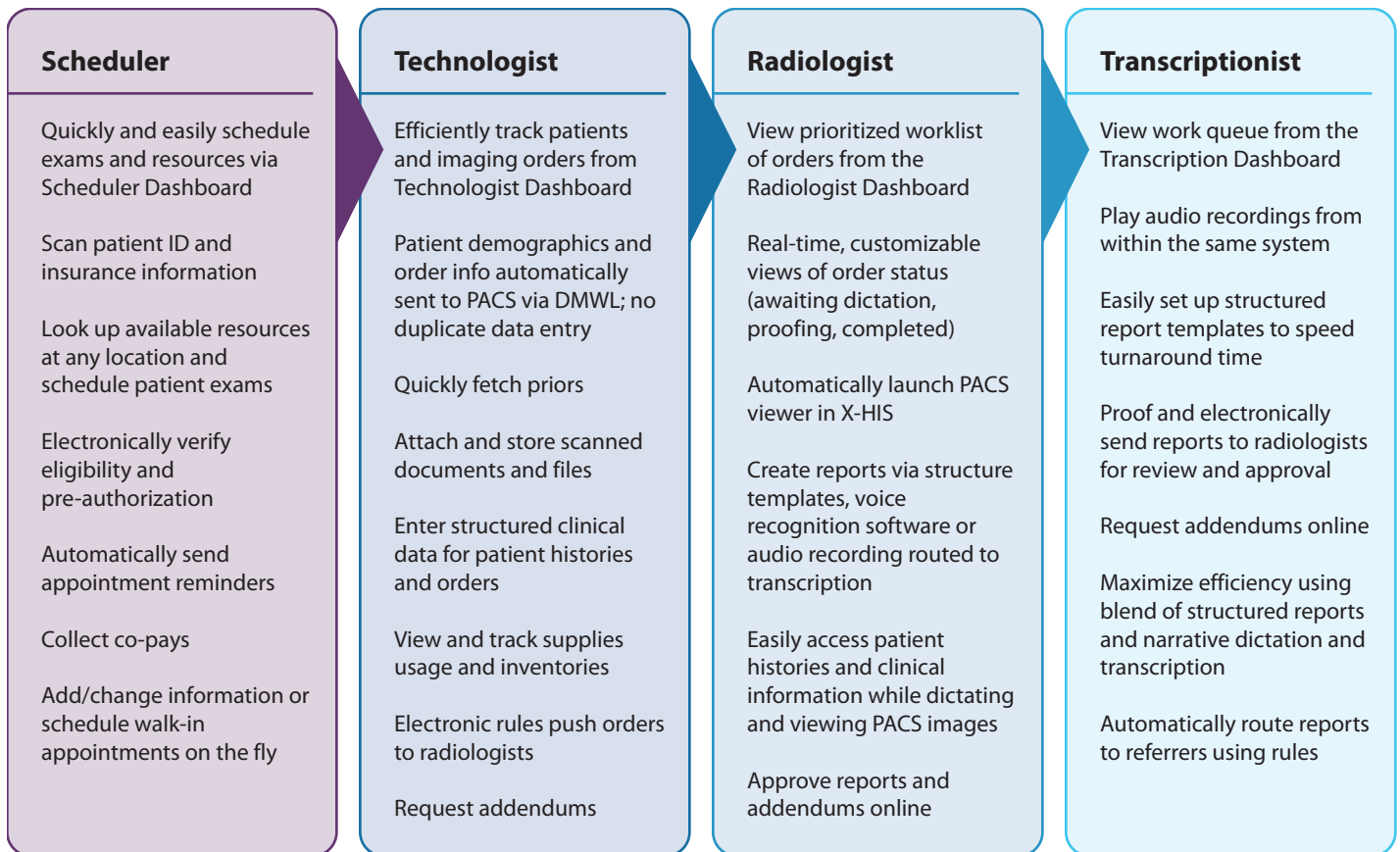
Day-to-day activities are simplified, automated and managed from easy-to-use dashboards by role.

Eliminated multiple, disparate systems with several logins and passwords—now everything is managed through one integrated technology platform, X-HIS.

## Results-driven

“Ultimately, X-HIS simplified day-to-day work because having one integrated system that automates our workflows has improved our business by orders of magnitude, not to mention customer service and quality of care for our patients,” said Dr. Reddy. “We’re sold on the all-in-one model because we gained workflow automation and efficiencies, faster turnaround times, and reduced data entry errors,” said Reddy. “Nothing speaks louder than results.”

## All-in-one system Automates Imaging Center Workflows



**Q:** Why go with an all-in-one system?

**A:** Business intelligence. X-HIS is a powerful software application enabling you to analyze raw data across key functional areas of your business to make informed decisions.

**Go all in now. Call us today to find out how.**

**800.440.7119 | info@7medical.com | www.7medical.com**