

KNOWING *you*



COMMUNITY HEALTH NETWORK

HAND IN HAND FOR YOUR HEALTH

Leading Edge Technology *Means Better Care at CHN*



Computer technology advances in healthcare have generated medical breakthroughs, improved quality and speed of care and driven increased patient expectations and satisfaction.

At CHN, new medical information technologies are enabling care providers, and patients, to rapidly access an array of critical medical data. In the future, these applied technologies will render most forms of paper and film obsolete. Paper and film based medical records are evolving into robust, indelible, computerized counterparts which can contain the equivalent of an entire filing cabinet of medical information -

X-Rays, Lab results, EKGs, MRIs, CT, patient care instructions, allergies and medication history to name but a few – in a single electronic file.

Whether it is leading edge computerized medical equipment, or evolving electronic patient medical records, computer advancements in medical technology have improved the care of patients by providing CHN staff with time sensitive medical information in a matter of seconds. These advancements are making a positive impact on the quality, cost and timeliness of care delivery to our community.

CHN is committed to staying on the leading edge of advancing medical technologies.

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Community Health Network

Faster, More Secure Access to Medical Information

The recent explosive growth of information technology in hospitals promises to improve hospital and patient outcomes. According to the American Hospital Association (AHA), more and more hospitals across America are embracing health care information systems (HCIS) – more than 92% of hospitals in America are at some stage of planning, deploying, and/or using healthcare information systems (HCIS).

At CHN, patients can take comfort knowing that their hospital uses the industry leading Meditech HCIS, a well-crafted suite medical information systems carefully designed to support the delivery of safe, timely, and cost-effective patient care. Meditech allows CHN staff to efficiently provide and document medical care from the time they enter the hospital to the moment they are discharged. Accurate, up-to-the-minute information is available where and when hospital staff needs it, resulting in more informed and effective treatment and decision-making.

“Over the last 4 years CHN has taken broad strides in evolving to an **electronic medical record** (EMR) which spans the continuum of care,” said Greg Beltran, CHN’s Director of Information Technology and Telecommunications. “We have developed a powerful datacenter which supports multiple hospitals and clinics spanning three counties and it is utilized by more than 1000 staff members and consultants. The focused growth and expansion of our Meditech system has been essential to our EMR advancement providing our

staff with rapid access to time-sensitive medical information, via private and secure portals, which ultimately leads to improved care, shorter lengths of stay, and improved patient outcomes.”

Meditech is arguably the largest HCIS vendor in North America as evidenced by its

“Pushing the technology envelope has been a familiar theme at CHN, where many of the readily available computer technologies rival those of much larger organizations.”

*Greg Beltran
Director of IT*

installed base of more than 1600 hospitals. In Wisconsin, 16 healthcare organizations presently use Meditech to meet their electronic medical record needs. Almost three years ago, CHN was the first Meditech based organization in Wisconsin to computerize their Surgical Care Center. Beltran adds that “This ‘pushing of the technology envelope’, and ‘fast-track’ path to an electronic medical record, has been a familiar theme at CHN where many of the readily available computer technologies rival those of much larger organizations.”

The benefits of a Meditech based EMR at CHN can be seen in:

- Improved Patient Care**
 With an EMR, there is less potential for medical errors as well as improved quality and safety in patient care. There is no substitute for having accurate information about a patient’s condition and medical history immediately accessible in the office, the clinic, at the patient’s bedside, and even instantly in the operating room.
- Accessible Patient Data— Anywhere**
 Critical patient information becomes as mobile as our patients are with EMRs. Up-to-date medical information is accessible even when people move to a new town, travel for work or vacation, or seek medical treatment from specialists in another corner of the country.
- More Time With Patients**
 Physicians and nurses have more time to spend with patients. EMRs create more time for the work medical staff are trained to do. Many healthcare professionals spend as much time performing administrative tasks as they do caring for their patients – a common symptom of a paper-based system. At CHN, the focus is on advancing EMR technologies so that our staff can spend more time with you, the patient.

Have You Seen the COWS?

Paper charts hanging at the end of patients’ hospital beds are history. If you’ve been to CHN lately, you may have noticed computer carts on wheels being used by the nursing staff. Called **COWs**, short for **computers on wheels**, this new technology has made its way to inpatient areas where physicians and nurses use the wireless mobile carts as their primary computer source for accessing the patient’s Electronic Medical Record.

Presently, more than 20 COWs are available for use throughout Berlin Memorial Hospital. COWs allow CHN personnel to immediately access, and record, every pertinent detail concerning the patient’s medical care. From vital signs to what the patient ate for lunch, every surgery, hospitalization and prescription is digitally

documented and available via these mobile computer workstations which can follow the patient throughout the hospital.

“Online data entry is much more

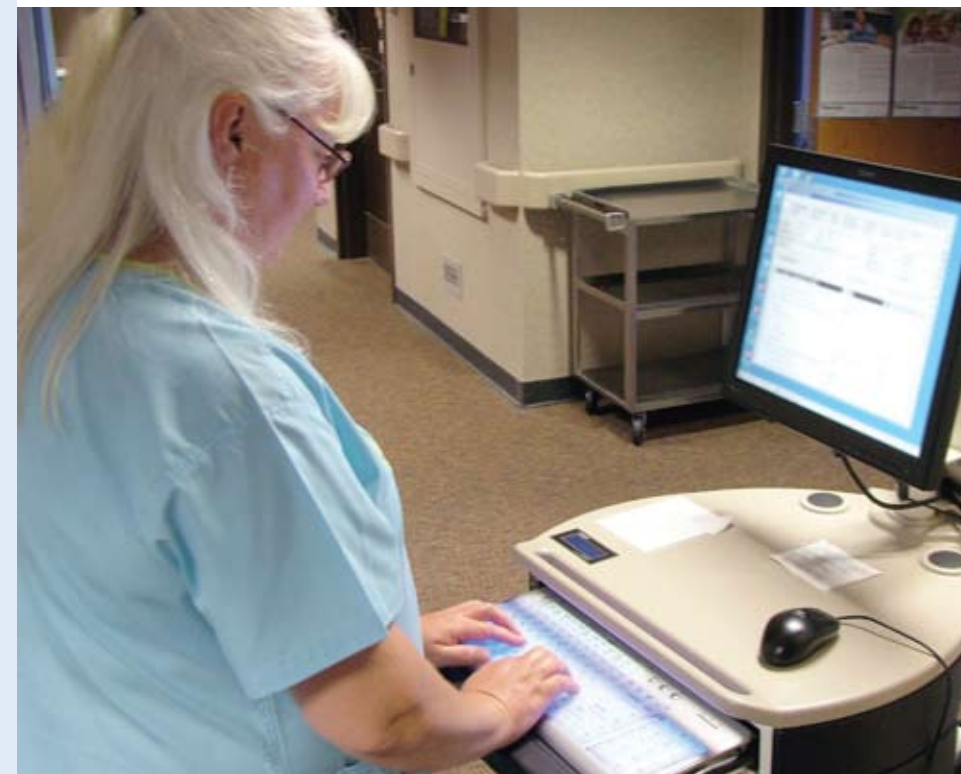


Information at your fingertips!

The Computers on Wheels utilize wireless technology and can be transported to the location needed to access patient information.

efficient and mistake proof compared to the paper patient charts,” said Greg Beltran, CHN’s Director of Information Technology. “By using COWs and accessing the CHN electronic records, our staff is able to document and/or retrieve patient information without having to search for a paper file or film.”

The ability to retrieve, and input, key patient information via our wireless COWs translates into better patient care. COWs have found safe pasture at CHN.



FOCUSING ON THE FUTURE

HOW TECHNOLOGY CAN HELP SAVE LIVES

Digital Mammograms

Detecting Cancers at an Earlier Stage

April Quarne, Radiology Manager at Berlin Memorial Hospital, has seen the positive effects of digital mammography on patients. Both traditional and digital mammography use X-rays to produce an image of the breast, but their differences lie in the process. Traditional mammography is created directly on a film, whereas digital mammography takes an electronic image and stores it in a computer. Digital mammograms are more transmittable, accessible, retrievable, storable and use less radiation than film mammography.

“Digital mammography lets radiologists read the mammogram on the computer,” Quarne said. “Then we can transmit the images through the computer to virtually anywhere, sending

it to referring physicians and specialists. Compared to traditional mammography, it also reduces the number of visits when the patient needs additional pictures taken.”

Digital mammograms have paved the way to detecting cancers in earlier stages. Radiologyinfo.org reports that one in five cancers are still either overlooked or undetected due to subtle mammographic changes.

“If we produce a digital mammogram in Berlin and need to send it to another facility, it can be sent much faster than a traditional mammogram,” Quarne explained.

Technology Saves Time

in an Emergency

During health emergencies, when time is of the essence, there is little tolerance for system errors. Working in the high-pressure, fast-paced world of emergency medicine requires a comprehensive set of tools to better manage the delivery of quality medical treatment.

Berlin Memorial Hospital’s Emergency Department relies on a computerized system to give patients the proper information when they are ready to be discharged. It’s called Logicare, a customized patient discharging system,

which provides the patient valuable medical information and instructions to aid in their recovery.

Logicare was first introduced to the emergency department more than three years ago.

While it is used throughout the hospital, ER physicians have found this system particularly beneficial in educating and reassuring patients with specific instructions on their medical condition and follow up care. Equally important, the medical staff now can provide medical information faster and more efficiently, which leads to a shorter overall visit in the Emergency Department.

Leading Edge Imaging Technology Offers Diagnostic Power

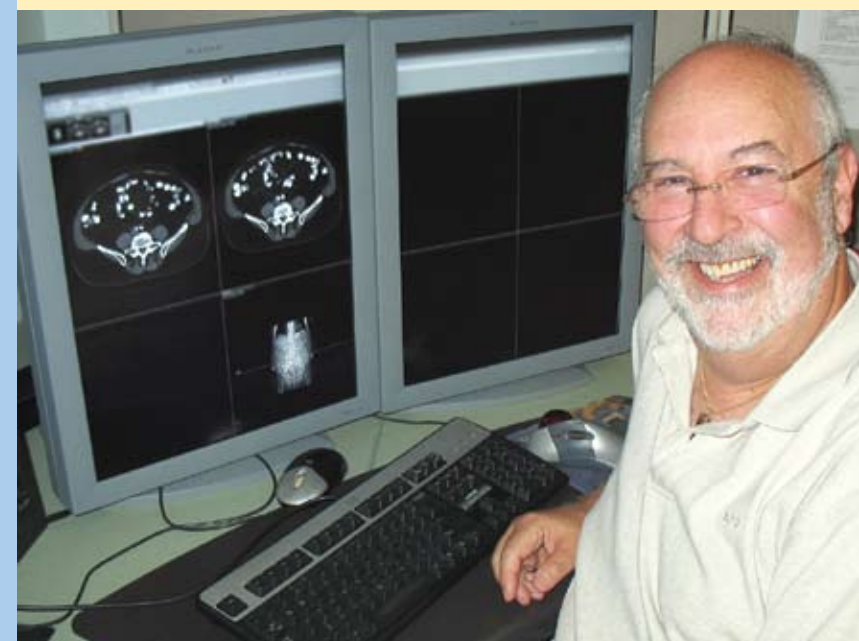
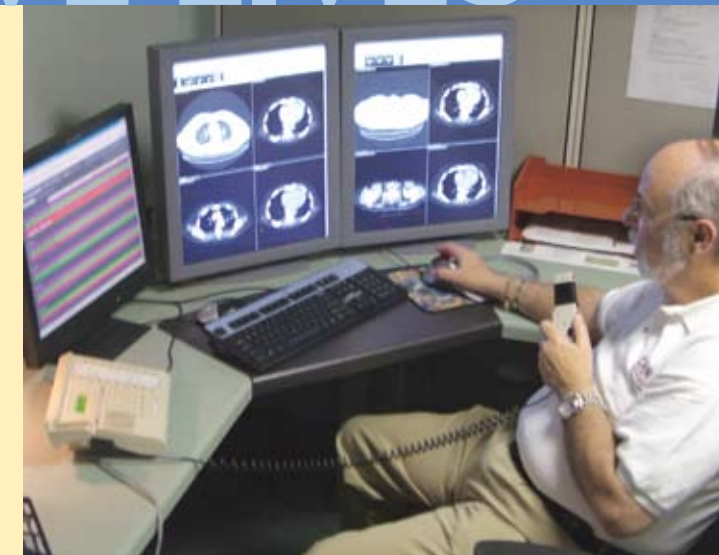
The radiology department has witnessed astonishing technological innovations in medical imaging which have translated into improved quality of care for our patients. Arguably, nowhere in the field of medical technology has the advancement of computers had greater positive influence than in diagnostic imaging.

Just as the rapidly vanishing 35mm cameras and film has given way to digital cameras intrinsically tied to computer technology, so is radiological equipment evolving from X-rays and video tapes to a digital based media. Today, a computer based *Picture Archiving and Communication System* (PACS)

is used for storage, retrieval, distribution and presentation of radiological images. CHN is on the leading edge of radiological innovation having deployed the Amicas PACS more than two years ago. Additionally, CHN has deployed digitized mammography to accompany their existing computer

based CT and MRI systems. But the drive to digitization doesn’t end there – echocardiography, fluoroscopy, and nuclear medicine are all slated for transition from film based storage to a completely digital media.

As with other Electronic Medical Record advancements at CHN, PACS provides immediate results at any computer workstation. Moreover, computer technology advancements are dramatically enhancing the quality of the radiological images and arming physicians with a new set of computer-based diagnostic tools. All of this adds to more efficient, and better, healthcare for our patients.



Uri Vaisman, MD, Radiologist with CHN, is pleased to be a part of the on-going progress and commitment to advancing technology.



This full body scan includes renal, carotids, aorta and peripheral vessels and was acquired in less than 20 seconds.

State-of-the-Art CT Scanner at Berlin Memorial Hospital

A quantum leap is taking place in CT, or computed tomography, scanning. Berlin Hospital is currently installing a 64-slice CT scanner, scheduled to begin operation in mid-September.

This scanner, which has 16 times as many detectors as the current CT scanner, combines unrivaled image quality with remarkable speed. It can produce detailed pictures of any organ in a few seconds and provide sharp, clear, three-dimensional images including 3-D views of the blood vessels.

Each detector picks up an X-ray beam as it spins around the body. It then computes the densities of the tissues the beam has passed through to produce a thin image of that narrow slice of the body. Finally, the computer collects the images, stacks up the slices like a loaf of bread (with each slice much thinner than a penny) and provides a three-dimensional picture of the body.

“With our current four-slice scanner, a complete chest scan, typically 100 to 200 slices, would take about 30 seconds,” said Uri Vaisman, MD, Radiologist with CHN. “With the 64-slice CT scan we will be able to obtain slices in a few seconds. The technology is astonishing.” This “speed-of-light” technology filters down to other time-saving benefits as well. “With our new CT scanner, it means the

physician interpretation time is faster, and the emergency diagnosis is quicker. It’s a positive advancement for numerous reasons.”

The 64-slice scanner can gather a high-resolution image of the heart, brain or a pair of lungs in about five seconds. A scan of the whole body takes about 30 seconds. The greater the resolution, the easier it is for radiologists to detect cancers, heart disease, neurological diseases and other conditions. “We will now have an even greater ability to assess emergency patients with a life-threatening condition such as a pulmonary embolism, aortic dissections, acute coronary artery blockage, and even potentially assess the location and size of a stroke. This equipment is truly state-of-the-art,” said Dr. Vaisman. In the future, a combination of new computer processing and the speed of the scanner will allow BMH to offer CT Virtual Colonoscopy. This procedure is currently available on a limited basis only.

“We are excited to offer this level of technology at Berlin Memorial Hospital,” says Dr. Vaisman.

Around-the-Clock Prescription Service

It’s a unique prescription medication dispenser available to patients 24 hours a day, seven days a week – and Community Health Network in Berlin offers this to all patients. The automated dispensing machine allows patients to get common prescriptions filled immediately after a visit to the physician, Walk-In Clinic or Emergency Department.

“We installed the InstyMeds machine almost 3 years ago, as a way to accommodate customers locally, especially during the difficult times of the day or night when a prescription fill is needed,” says CHN’s Pharmacy Director Craig Griffis. “This system allows patients to get the medication they need when they need it, without a lengthy trip to another community to get it.”

When receiving a prescription from a physician, patients have the option of filling it through the InstyMeds machine located in the main lobby of Berlin Memorial Hospital. If choosing

to use InstyMeds, the physician enters the patient’s insurance and prescription information into the computer system linked to InstyMeds and receives a prescription order number. At the InstyMeds dispenser, the patient enters the prescription order number, along with other verifying data, using a simple touch screen.

Major credit cards, debit cards or cash can be used to cover the prescription co-pay. If insurance covers prescription costs, InstyMeds will automatically submit the claim just like a retail pharmacy. If insurance covers the entire prescription cost, no

payment is needed.

According to Griffis, before being dispensed in approximately five minutes, each order undergoes three separate quality checks to ensure the patient receives the correct medication. In addition, a telephone located near the dispenser provides a direct line to a pharmacist who can answer patient questions about their medications.

“It’s an extremely safe and convenient way to receive common prescription medications,” says Griffis. “It not only reduces the time patients spend filling prescriptions, but has shown to actually reduce common medication errors.”



Safer, More Efficient Prescriptions from Community Health Network

Patient safety—specifically, medication safety—has become a major issue for healthcare providers and patients. In the past, when physicians needed to prescribe medications, it had to be done by handwritten prescriptions, phone calls and fax machines.

Within the next year, CHN will introduce computer based electronic prescriptions more commonly known as ‘e-scribing’. E-scribing gives medical providers the use of real-time, patient-specific clinical and economic information (for consenting patients) to prescribe the

most medically appropriate prescription and transmit it electronically to the patient’s pharmacy of choice.

All or parts of a record can be instantly transported to a pharmacy or shared with any medical provider, making it easier for both physician

and patient. This means immediate access to a patient’s medical history, current and/or previous medications, allergies and other essential medical information. In addition to the quality of care enhancements and intrinsic safe guards derived from e-scribing, patients are able to have their prescription orders filled in advance which means minimal waiting at the Pharmacy.

The Future of Medical Technology at CHN

In the last six years CHN has made exponential leaps in applying computer technology. When Greg Beltran arrived at CHN, there were less than 300 computers in operation; today, more than 700 computers are used by CHN staff. A versatile wide area network and evolving Electronic Medical Record now stretches from Berlin to Wild Rose through Wautoma and Redgranite, and out to Ripon, Green Lake, Montello and Markesan.

As Beltran describes it, “Building a strong computer infrastructure, or network, capable of supporting the geographical expanse of the CHN service area was a focal point my first few years with the organization. Now we are able to build upon that foundation and extend a robust EMR not only throughout the Berlin campus but to all of our clinics and partner hospitals as well. Whatever medical information a CHN provider can access on the

Berlin campus, can also be attained at any clinic site on the CHN network. This translates into better care.”

“Several exciting computer projects are on the near horizon for CHN – computerization of our birthing center complete with state of the art fetal monitoring tools, on-going diagnostic imaging (PACS) advancements, a new computerized clinical review system for our physicians, and electronic scanning of paper documents for integration with our Meditech HCIS. Each of these will help evolve CHN to a paperless healthcare system. The variety, complexity, and challenge of these computer projects are examples of why I find healthcare information technology so interesting. The ability to work alongside such a hardworking and bright staff make it particularly rewarding.”



The Information Technology Department at CHN works at the speed of light to stay on top of technology. Left to Right, Front to Back: Andi Rogers, Carrie Gimenez, Judy Godson, Cathy Habener, Mike Frank, Kunle Obafemi, Greg Beltran.

Greg Beltran manages a team of seven, serving over 1000 CHN staff members and affiliates.

KNOWING you

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