CGM ENDORAAD

Integrated Endoscopy Clinical Information System

Endoscopy Clinical Information System

Synchronizing Healthcare

CompuGroup Medical


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D
F
U
L
R

TABLE OF CONTENTS

01

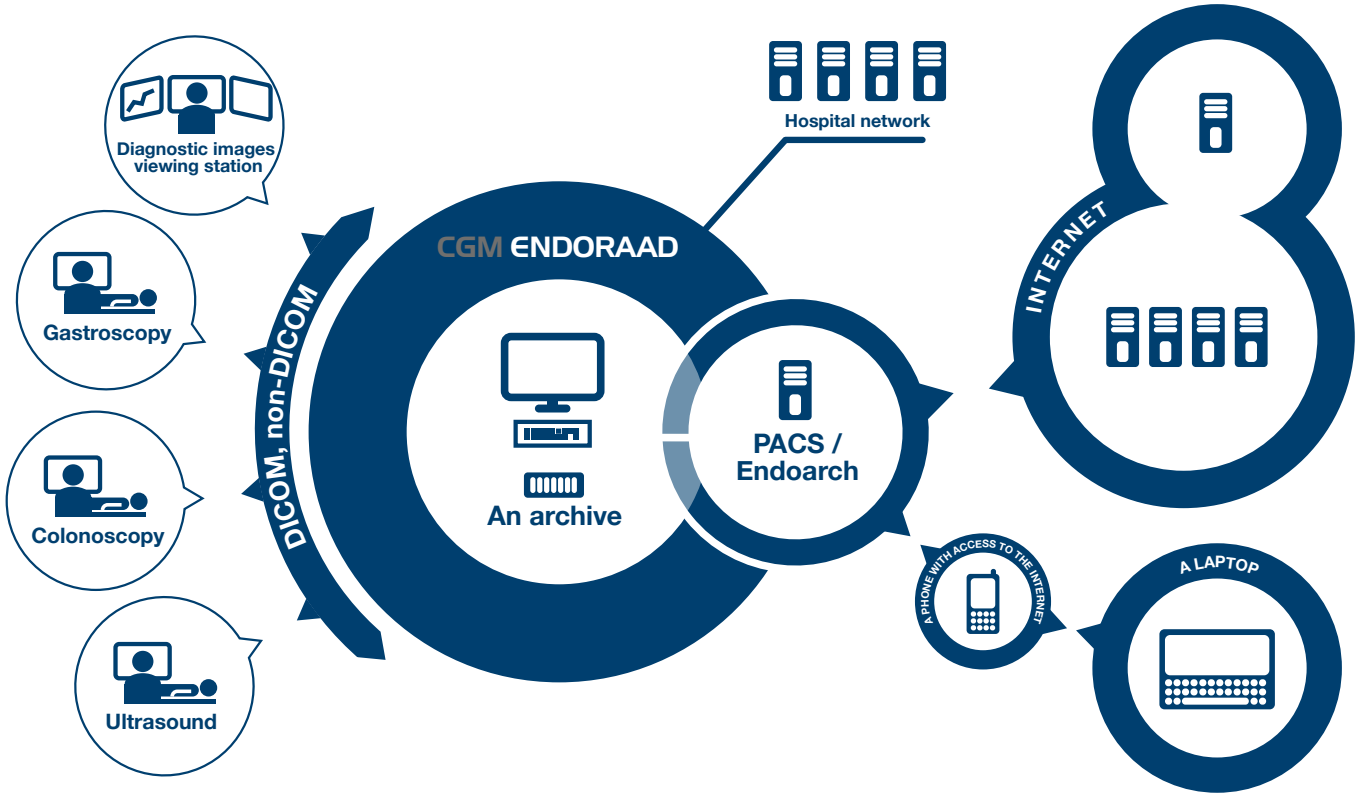
CGM ENDORAAD
– system characteristics

With the implementation of an endoscopy clinical information system, CGM ENDORAAD, endoscopic examinations can be much easier. These days, proven and safe systems facilitating the working process in procedure rooms are the basis for the functioning of modern diagnostic facilities.

1.1. Description of the system

CGM ENDORAAD is a clinical information system for procedures involving endoscopy and ultrasound examinations. The system allows capturing individual images or video sequences and creating reports on medical procedures. CGM ENDORAAD stores complete records of examinations performed in a long-term archive, so that they can be made available to defined users in the form of a complete electronic patient record (EPR).

Advanced technology and continuous development of the CGM ENDORAAD system guarantee a timeless solution facilitating the management of clinical information in various endoscopy and ultrasound procedure rooms.



1.2. System architecture

The system has been developed based on multi-modular architecture, the shape of which can be tailored as required by a specific facility. Its scalability allows adding new functionalities and connecting other diagnostic procedure rooms, so that the system is extended in sync with the development of the facility.

1.3. System installation

The main module of the system is installed on a standard PC in a procedure room. Other functional modules are available in a client-server model, so the installation on selected workstations is not necessary. In the layer of the server's operating system, CGM ENDORAAD uses UNIX (Red Hat Linux) class software. The system can be accessed through a standard Web browser.

1.4. Database technologies

As for data architecture, CGM ENDORAAD utilizes technologies by global manufacturers. The use of such solutions enables support of multiple users simultaneously, ensuring adequate performance and stability in the most demanding medical environments.

1.5. Security

CGM ENDORAAD guarantees the highest security of collected and processed medical data. The encryption technology used prevents intercepting and altering the transmitted data. The system allows defining access to medical data based on user authorization.

1.6. Integration with devices

CGM ENDORAAD integrates with medical devices (regardless of the manufacturer) that generate endoscopic and ultrasound images in different data formats. The system captures images from medical devices and stores them in a central archive. This solution allows utilizing all advantages of digitization in a diagnostic procedure room and ensures efficient information flow, lowers the costs by doing away with analog records and reduces the time needed to search for patient information.

1.7. CGM ENDORAAD in the SaaS model

The CGM ENDORAAD system in the SaaS (Software as a Service) model is offered as e-service software.

This model allows access to selected system modules located in a dedicated data center via an Internet browser.

Reports on endoscopic examinations with medical images are thus made available to all defined system users. The solution minimizes the costs associated with the purchase of the server infrastructure and dramatically reduces the time of implementing the system in the facility.

1.8. Why CGM ENDORAAD?

CGM ENDORAAD enables comprehensive management of endoscopy and ultrasound procedure rooms. In addition to basic functions such as capturing medical images and enabling the interpretation of examinations it offers many other functionalities that significantly improve medical staff experience and streamline patient service.

CGM ENDORAAD allows for electronic transmission of medical records and archiving of medical data in the form of a comprehensive patient record.

The system fully integrates with other software, making it possible to transfer medical data between CGM ENDORAAD and third-party systems.

02

CGM ENDORAAD
– standard server system

Modules included in the standard CGM ENDORAAD package enable recording and archiving examinations performed, generating reports and creating an electronic patient record. Implementation of the standard system modules is a significant step towards digitization of procedure rooms.

2.1. Procedure room

The Procedure room is a basic module of the CGM ENDORAAD system installed on a workstation connected to the device generating medical images. The system captures images and video sequences in the course of a medical procedure and enables adding voice comments. Examinations along with their interpretations are automatically stored in a central archive and made available to other system users.

A worklist which presents a queue of patients for whom examinations were ordered is an integral component of the module. The option to integrate the worklist with the HIS/RIS enables ordering examinations from third-party systems.

2.2. Endoarch Server

Endoarch Server is a long-term archive of imaging examinations performed in endoscopy and ultrasound procedure rooms. The system automatically archives the images and video sequences with the completed reports and stores them on a secure hospital data server. A user can select the series and single images to be archived as required.

The module allows transferring examinations to the archive as per specific preferences of the administrator (regarding the date and time) in order to minimize network traffic during peak times. Access to the archive from a web browser allows a quick review of both new and historical examinations at any time and in any place in the hospital.

The archive is compatible with PACS technology so that all medical images and reports from other diagnostic procedure rooms can be integrated in the facility's central archive.

2.2.1. Multimedia patient record

Archived medical records are made available as part of an electronic patient record. Each examination performed can incorporate different data formats – text, medical images, video sequences, audio files or scanned documents. The electronic patient record is available to all authorized system users from any computer in the hospital via a standard web browser.

2.2.2. User groups

Group and individual user accounts are managed and defined by system administrators. Each user has a unique name and individually defined password. They are used to log on to the system, electronically sign the report of the examination performed and to log on to the server.

The system allows creating user groups depending on the granted level of access to medical data and patient personal information. Apart from the daily operation, such a solution proves effective as regards training organized for students, for whom selected medical data is made available for educational purposes.

2.3. Patient record browser

Medical data can be accessed using a patient record browser. This data is structured chronologically in the form of an electronic patient record. The browser presents medical data generated in the endoscopy and ultrasound procedure rooms, as well as data collected in the entire hospitalization process as a result of integration with the HIS/RIS.

A signed-off examination report automatically appears in the browser and is available to other authorized users hospital wide. With the electronic circulation of medical records, the process of patient service is significantly reduced. With the aid of this solution, doctors do not have to use paper documentation and wait for manual records to be delivered. The system's technology is based on a standard web browser, advanced data protection and authorized access to the system. This allows for extended access to electronic patient records, also outside the hospital. Full interpretations of examinations may be widely available for the benefit of not only endoscopic doctors but also general practitioners, clinicians and other health agencies.

Browsing a patient's historic records is very quick and simple. An intuitive and clear user interface allows searching through the archive using different criteria – in addition to the patient's personal data the criteria may include the date of referral, date of examination, the requesting doctor, the ordering department or the examination's status.

2.4. Registration module

The module allows registering patients for examinations in individual procedure rooms. Scheduled examinations are automatically sent to procedure room worklists. If the module is integrated with the HIS/RIS, examinations ordered within the facility do not require additional registration as they are automatically sent to worklists.

2.5. Report generator

The report generator streamlines the generation of examination reports. The module guides the doctor step by step through the generation of the post-examination report.

The reporting doctor may use:

- the report wizard – clinically structured and designed forms for a selected medical procedure
- library of standard reports - templates which contain commonly used medical phrases defined by the users,
- editing fields – for inputting any text.

An important functionality of the module involves the prevention of conflicting diagnoses. A clear user interface makes creating reports very simple and intuitive. The flexibility of the module allows users to make changes and enter additional information as required by doctor's offices.

The system offers the following report wizards:

- colonoscopy,
- gastroscopy,
- sigmoidoscopy,
- ERCP
- bronchoscopy,
- EUS/Ultrasound,
- proctoscopy,
- enteroscopy,
- cystoscopy,
- EBUS,
- laparoscopy.

2.6. Report printing

All examinations collected in the system are stored in an electronic version and ready to be printed as clear reports intended for patients and ordering doctors. The report contains medical images selected by the doctor along with their interpretations, information such as the date the procedure was performed and the persons involved, as well as the diagnosis and recommendations for the patient.

The report template and the information contained therein depend on individual user preferences. The report can be customized and adjusted as required by a medical unit.

03

CGM ENDORAAD
– additional functionalities

Additional CGM ENDORAAD modules allow managing and scheduling work in procedure rooms even more effectively. Utilizing the modules on a daily basis is another step towards comprehensive digitization of the facility's diagnostic departments.

3.1. Doctor's office

The Doctor's office module allows the doctor performing a diagnostic procedure to prepare a medical report outside the procedure room. The module is installed on workstations in doctor's offices, so that doctors can continue with their work in their own offices. The solution can be a great convenience in the normal working process and significantly improve it.

The Doctor's office module allows generating a report on a previously performed and uninterpreted endoscopy procedure and fully editing existing records.

3.2. Endoschedule

Endoschedule enables the management of procedure room resources. System users can easily create electronic schedules of individual procedure rooms and define the availability of doctors and diagnostic devices.

A clear user interface provides a procedure room schedule for any selected period of time.

Patients are registered using an electronic diary, so that appointments can be easily scheduled. By using the „ drag and drop „ option users can also reschedule appointments by introducing changes to reflect doctor availability, equipment service, unplanned events or leaves of absence and holidays.

Endoschedule is fully integrated with procedure room worklists. Patients scheduled for an appointments automatically appear on the worklist in the procedure room on the appointed days.

The module's functionality also allows generating letters to patients and GP's. General Practitioners are thus informed of the examination results and further recommendations. Patients receive information about the appointment, a cancellation as well as recommendations prior to the planned procedure by mail.

3.3. Endonurse

Endonurse provides a range of information about patients for nursing services. Users gain access to medical information about a patient's treatment history, current health status and other information determining treatment. The module allows recording all relevant clinical information concerning hospitalization and patient care in the system. It contains information on preparation, place of procedure, recovery and discharge.

A complete nursing record is available to all medical personnel in the facility. This facilitates the exchange of patient information and enhances the quality and safety of procedures.

The Endonurse module can be accessed hospital wide using standard workstations and wireless devices with touch screen and biometric digital signature capabilities. The solution's web-based technology improves the mobility of staff and fits naturally into the nurses' workflow.

3.4. Endodiver

Endodiver provides data for reporting. The module allows collecting statistics, generating reports, ad hoc analysis of procedure rooms and provides information about clinical audits for research purposes.

The ability to generate financial statements and cost analyses, as well as reports on the number and types of services provided affords an easy way to collect information on the operation of medical units.

Data generated by the module is exported to most popular formats, such as DOC, XLS or PPT, which allows for their further use in other IT environments. This solution enables combining data with clinical information from other departments. On this basis comprehensive reports incorporating laboratory and diagnostic test results can be generated and procedures coded as per ICD-9.

3.5. CD/DVD burning

An examination report containing a detailed description and medical images can be easily exported to a CD/DVD. As a result, patients may receive a complete record of the procedure in an electronic version. The CD or DVD containing self-running software enables reviewing the data and images on any computer.

The burning process is as simple as sending a document to the printer. The device allows creating CDs/DVDs with individual patient data as well as multiple patient archives. All data can also be copied to a USB drive.

„…CGM ENDORAAD allows us to input data on all endoscopic procedures using a simple and user friendly interface in addition to storing and printing endoscopic pictures and captured video. The system is reliable and we have not had an interruption in service over the past 3 years… Overall, an excellent system that is more efficient and user friendly than any system that I have used either in Europe or the USA".

Doctor

„CGM ENDORAAD has facilitated the development of a comprehensive, integrated and user friendly reporting system… The detailed database facilitates individual procedure recall, audit and clinical research".

Doctor

04

CGM ENDORAAD – interoperability

Comprehensive integration entails not only a combination of IT systems, but also the integration of all the doctors involved in hospitalization, thus allowing the provision of medical services of the 21st century.

4.1. CGM ENDORAAD Interfaces

CGM ENDORAAD technology complies with the requirements for the exchange of information and diagnostic images based on HL7 and DICOM standard, enabling full integration with other systems in the facility.

The solution ensures the appropriate flow of medical data between systems, regardless of the manufacturer and technology used.

The electronic patient record can be synchronized across the entire facility and reports of diagnostic examinations made available to all defined system users hospital wide. This allows the inclusion of many professionals into patient treatment at the same time, so that hospitalization becomes a multi-dimensional process.

CGM ENDORAAD **<->** HIS **->** examination orders/electronic patient record

CGM ENDORAAD **<->** RIS **->** access to examination results and endoscopic imaging

CGM ENDORAAD **<->** LIS **->** downloading results of histopathological examinations

4.2. Endotrace

The Endotrace module is dedicated to monitoring and controlling the throughput of endoscopic equipment in a diagnostic facility.

The system integrates diagnostic devices with a disinfecting apparatus and provides information about their readiness for further use.

Full control of the process of handling and disinfecting endoscopes ensures the highest level of safety when performing diagnostic examinations and prevents infections.







CGM ENDORAAD

Integrated Endoscopy Clinical Information System

We help to heal.
Every day.

CompuGroup Medical is one of the leading companies of the eHealth sector in the world. We provide cutting-edge solutions to more than 385 000 customers from 35 countries. Every day, nearly 4000 CGM employees worldwide are daily confronted with new challenges to support healthcare and allow for a better organization of medical personnel's workflow. All this so that our customers can provide the highest quality healthcare services and devote their valuable time to Patients.

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