EndoRAAD – Integrated Endoscopy Clinical Information System

Features and Benefits

The following summarise the Features and Benefits of the EndoRAAD Solution by module:

1. EndoRAAD - Clinical Reporting

Features
• Easy to use software guides the Doctor rapidly through the generation of the patient's report. The software is intuitive and helpful to end-users.
• The Report 'wizard' allows the generation of the report via clinically structured and designed forms for each procedure e.g. Colonoscopy, Gastroscopy, Sigmoidoscopy, ERCP, Bronchoscopy, EUS, Proctoscopy, Enteroscopy, Cystosopy.
• The Doctor has several options for inputting text into the patient's report i.e. comment fields, standard text editing, templates which contain commonly used phrases defined by the doctors.
• Doctors can capture single images (frame grabbing) and video sequence in 'real time' using simple to operate foot pedals.
• Doctors can easily review images and video sequences immediately and chose those required for long-term storage.
• Doctors can easily select the images required for inclusion in the patient's report.
• Scope Identification details are captured, which can be by bar code reader.
• Electronic signature can be requested for the clinician printing the report. Reports can also be printed easily for manual signature if required.
• Reports can be reviewed on screen and changed as required before printing.
• Examination details and images can be burnt to a CD or DVD where the necessary drive is installed in the PC. The CD or DVD can contain self-running software for reviewing the data and images.
• Browser based review of the report and associated images on any PC in the dept.
• The system is highly flexible and can be easily customised by the users themselves.

Benefits
• Reports are generated in 'real time' by doctors as part of their normal working process, manually produced doctors' reports are no longer required.
• Users (i.e. doctors & nurses) require no special technical skills and can be easily instructed 'on the job' how to use the system.
• The Report 'wizard' guides the doctor to ensure all the necessary information required for each procedure is captured, and text entry allows easy tailoring of the final report.
• Images are integrated with the patient report as part of the Electronic Patient Record.
• The final report is therefore clinically informative, accurate and easy to understand.
• Scope Identification is recorded accurately against the patient for tracking and statistical analysis.
• Reports are authorised before printing and release, which can be controlled by electronic or manual signature.
• Endoscopic Patient Records are integrated with the Hospital Information System, hence clinicians can view the overall Electronic Patient Record e.g. Radiology, Laboratory, Episode History, Other Procedures.
• The overall quality and accuracy of the patient records are improved for the benefit of Endoscopic Reporting, General Practitioners, other Clinicians and information for Management and Research purposes.
• The patient's report can be distributed or viewed in completely electronic form via Browser or CD/DVD.
• The system can be easily tailored to local working practices and requirements by the end users, and is therefore less costly to implement and support.

2.   EndoRAAD - Worklists and Integration with Hospital Information System

Features
• A Doctors' Worklist is available for easy selection of patients which includes an automatic download of patient demographics, episode and test request info.
• The Worklist can be rapidly searched for the correct patient e.g. Name, MRN.
• Option to use bar code selection of patients by their MRN.
• Several Industry Standard HL-7 interface options available for linking to the Hospital Information System, so information can be automatically extracted and not re-entered into EndoRAAD.
• Option to enter patient demographics, episode and test request info if the Hospital System is not available.

Benefits
• Avoid duplicate data entry of patient demographic & episode information i.e. it only has to be entered into the Hospital System.
• Avoid possibility of incorrect patient data e.g. patient's name, MRN, procedure.
• More rapid generation of the patient's report and overall patient turnaround.
• Provide synchronisation of patient records in EndoRAAD with the Hospital Information System.

3.   EndoARCH – Long term storage of Historical Records

Features
• Signed-off reports are transferred automatically to secure long-term electronic storage centrally in the Hospital.
• Transfer of images and video files to the server can optionally take place automatically at day-end to minimise any affect on Network traffic during peak times.
• Users can send individual images and video files to the server if required e.g. urgent procedure, remote consultation, etc.
• Server software is based on modern readily available technologies e.g. Linux, SQL database, DICOM standards.
• The server can store the complete 'multi-media' content of the electronic patient record e.g. text, images, video, voice, scanned files, etc. into a single integrated patient record.

Benefits
• Once signed-off the patient's results can be available Hospital wide so associated clinicians do not have to wait for manual records to be delivered.
• Electronic patient records are available at all times and cannot be lost or misplaced as with manual files.
• Long-term data storage and retrieval is possible allowing easy access to a patient's historic records, therefore assisting future patient assessment & treatment.
• Accurate historic patient records are available widely for the benefit of Endoscopic Doctors, General Practitioners, other Clinician and other Health agencies.
• High quality information is available long term for Management and Research purposes e.g. statistics, service planning, trend analysis, disease analysis, etc.
• Storage, security and backup of electronic patient records is therefore managed by the Hospitals IT department, not by the Endoscopy Department.
• All server hardware and system software can be obtained cost effectively by the Hospital, as its industry standard and readily available.
• The server can be easily expanded to incorporate other clinical reports and images e.g. Ultrasound, Laboratory, Radiology, etc.
• The server is compatible with PACS technology so that all medical images and reports can be integrated for the Hospital's benefit.

4. EndoDiver - Reporting and Management Information Tools

Features
• Library of standard Endoscopy reports
• Industry strength management information toolset.
• The Diver tools provide easy to use access into all Endoscopic data for Reporting, statistical analysis and extract for use in other environments e.g. Word, Excel, PPT, etc.
• The tools are intuitive and easy to learn by non-technical staff.
• EndoDiver allows distributed access to the information Hospital wide and optionally a Web based interface is also available for access via the Hospital Intranet.
• The Diver tools access the data via industry standard mechanisms.
• These tools are currently being used by many Hospitals and Companies in Ireland to support their Management Information requirements.

Benefits
• High quality information is available long term for Management and Research purposes e.g. statistics, service planning, trend analysis, disease analysis, etc.
• Ad hoc reports, statistical analysis, data extracts, etc. will be available for Endoscopy in a familiar easy to use manner.
• All authorised users around the Hospital view endoscopy information consistently and accurately.
• The tools can be used by staff with a minimal amount of training.
• Information can be accessed independent of location via the Web interface.
• It is possible to combine Endoscopy data with other clinical information for 'combined' analysis and reporting e.g. Lab Results, Radiology Results, demographics, ICD-9 coding, etc.

5. EndoARCH - Hospital wide Browser based review of Patient Records

Features
• Browser based access to Endoscopy electronic patient records via a common server, which is integrated with the Hospital's Information System.
• No special application software has to be installed on the PC's around the Hospital, only a Browser is required and plug-ins to allow image and video viewing.
• The system provides multilevel protection of patient, procedure and image data using its password and access rights system.
• User accounts and user groups are defined and maintained by the Hospital's system administrator.
• The server provides a special educational (student) user group, which allows access to medical information for instructional purposes, but restricts access to patient's personal information.

Benefits
• Authorised users can access the relevant information consistently and accurately around the Hospital independent of location and time.
• Once signed-off the patient's results can be available Hospital wide so associated clinicians do not have to wait for manual records to be delivered.
• Associated clinicians can have a consultation rapidly and easily.
• Because of the Web based function and imbedded authorisation/ security, access to the electronic patient records can be extended to the Internet.
• Accurate historic patient records are available widely for the benefit of Endoscopic Doctors, General Practitioners, other Clinician and other Health agencies.
• Minimal system administration for the Hospitals IT department.
• Transparently supports the requirements for medical education and teaching.

EndoRAAD is a product of CompuGROUP and Manitex

6. EndoSCHEDULE - Appointment & Resources Scheduling

Features
• Appointments and Resources for Endoscopy procedures can be easily scheduled. • Schedules can be easily changed when required. • Schedule can be configured to reflect doctor availability, equipment service, unplanned events, extra resources, holidays, etc. • Automatic generation of letters for patients, GP's, etc.
Benefits
• Better management of available resources. • Fewer cancelled appointments for Hospital reasons. • Patients and GP's are better informed. • Better information on the use of resources, waiting times, did not attends, etc. so that services can be adjusted to meet changing circumstances. • Less time spent on administration tasks e.g. writing letters, searching diaries, etc.

7. EndoNURSE – Computerised Nursing Records

Features
• Complete Nursing record can be captured, viewed and printed. • Mobile devices, touch screen and biometric identification are possible. • Patient throughput is tracked through preparation, recovery and discharge. • Important information captured on infection risks, surveillance and special categories
Benefits
• More accurate, legible and widely available clinical information benefits all staff. • Touch screen, biometrics and mobile devices fit naturally into the Nurse workflow. • Better information on the throughput of patients in the department. • Information easily available for the patients' next visit. • Better quality information available for identification of possible improvements in services.

8. Technical Platform/ Equipment

Features
• The system allows the real time capture, storage and retrieval of the 'multi-media' electronic patient record e.g. text, single images, video, voice, etc. • Standard PC's are required with integrated image capture cards. • Connection to clinical devices via standard S-Video cable (i.e. Super VHS). • Standard SQL database for easy and flexible access for reports and statistics. • Videos are captured and compressed to industry standard DIVX format. • Examination details and images can be burnt to a CD or DVD. The CD or DVD can contain self-running software for reviewing the data and images.
Benefits
• The system integrates all the possible medias into a single viewable source. Clinicians do not have to search through multiple files to get the complete patient summary. • Readily available modern technologies = lower overall cost of ownership and support. • If required the Hospital can purchase all equipment themselves through existing supplier relationships, and avail of associated cost advantages. • Images and Videos are stored in industry standard formats are therefore available for use with 3rd party manipulation and editing tools. • Patient Records can be easily provided to appropriate agencies on CD/ DVD for easy viewing without any special software e.g. GP's, other Clinician, other Health agencies.

EndoRAAD is a product of CompuGROUP and Manitex