

Critis Synergy+[©]

Electronic Health Record for Intensive Care Units

Critis Synergy+ is an electronic health record, managing the complexity of the information produced in an intensive care unit environment. It is software developed by an ICU for ICUs

Critis Synergy+ collects, stores, groups, and presents large amounts of data generated per patient inside the ICU. It creates an integrated electronic record covering the entire stay of a patient in the ICU and beyond. Moreover, it includes advanced features to help clinicians with their decisions, provides presentation-quality clinical data reports, tools tracking a patient's progress while has the ability to exchange information with other hospital medical care systems.

It enhances the workflow in the unit from the moment a patient is admitted until the discharge. It assists the clinical assessments and care planning by providing tools to monitor, order and applies treatments, while at the same time creates a rich pool of data for clinical trials.

Being convinced about the benefits of such information system, the ICU of University Hospital of Heraklion, proceeded with the implementation of its own intensive care unit patient information system (CRITIS[©]). The system was implemented as a tool to boost ICU workflow and help clinicians respond more quickly to patient's medical events at any time and from any physical location.

Basic features

- Single point management of medical information.
- Flowsheets that easily capture and present patient data.
- Automatic refresh of flowsheet data
- Advanced management of fluid balance.
- Graphs easily monitoring patient's progress.
- Ability for automatic data collection from medical equipment.
- Ability to exchange information with other hospital information systems (HL7 support)
- Offers access to medical data from anywhere.
- Designed to support touch screens.
- Full configurable to support the needs of an intensive care unit or any other hospital clinic.

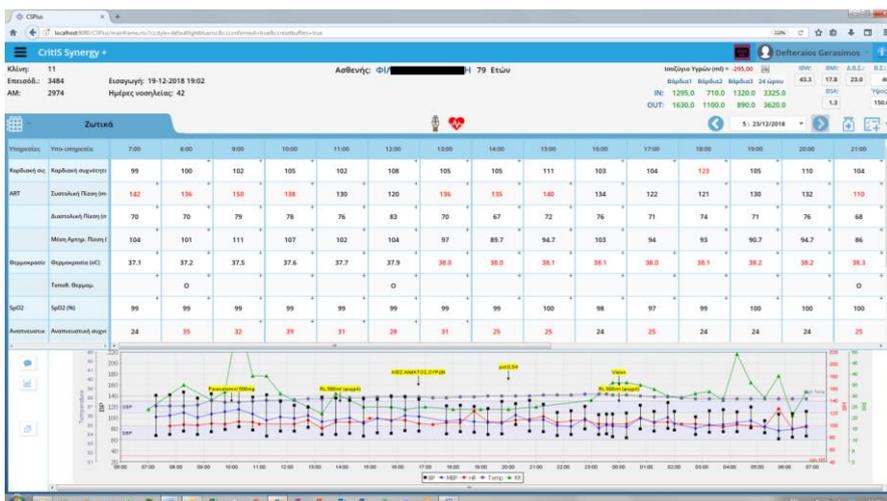


Figure 1. Vital signs flowsheet

Admissions

Demographics, allergies, etc. are inserted automatically by establishing communication with the Hospital Information System, resulting in saving time, reducing errors and freeing staff to focus on direct patient care.

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Technical features

- Cross-browser compatibility.
- Open architecture.
- Integration with other hospital information system through Mirth Connect and HL7
- Windows or Linux platform.
- Multilingual user interface.

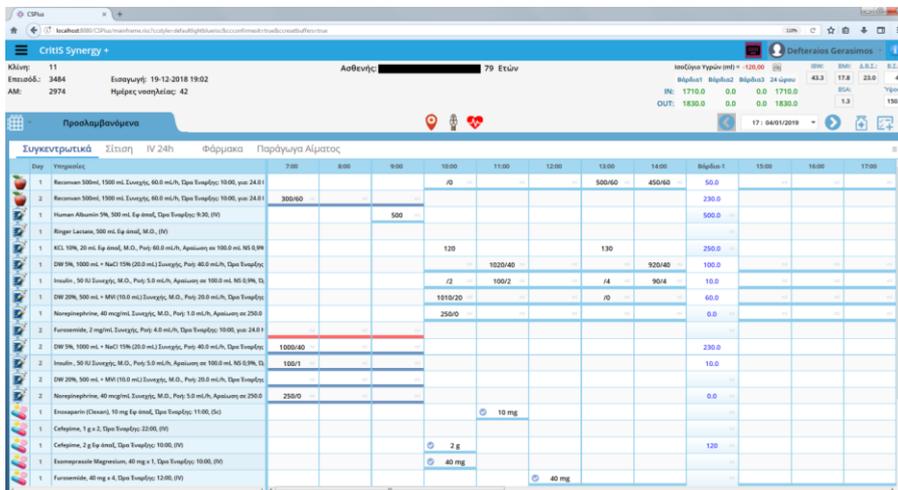
Medical monitoring - assessment

Through flexible displays enables the presentation of numerous medical data in a way that is easily accessible and understandable. Vital signs, managing catheters, fluid intake, lab results, special tests, scores, respiratory profile parameters, nursing observations, medical instructions and other critical information are readily available with a click.

Automatic calculation of scores (Apache II, GCS, CPIS, MODS, SAPS II, DIS, RASS, CPOT, NCIS, PRE-DELIRIC, CAM-ICU, SOFA, qSOFA, MRC, Mini-Cog, etc.), as well as a range of intuitive graphical tools such as the infection monitoring chart contribute to the patient's evaluation progress and decision taking.

Medical instruction and medication plan

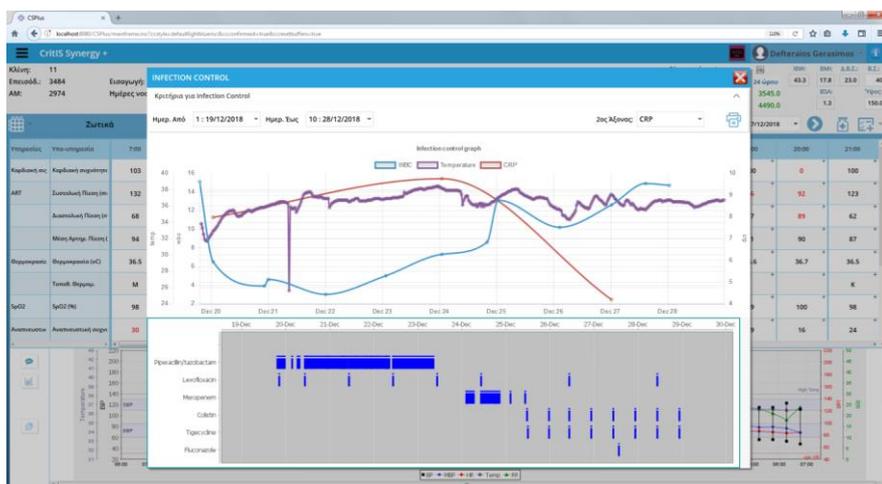
Medical instructions generate automatically flowsheets for nutrition dietary, 24-hour iv infusions and medication to be administered, while at the same time appropriate reminders are created informing the nursing staff for the timely administration of medication and intake fluids.



Medical instructions and medication flowsheets

Medical history

Diagnosis based on ICD10, medical history, medication, presence of disease, differential diagnosis and actions, observations of clinical examination, laboratory and imaging examinations results construct the medical history of each episode in the system accessible any time and from any point.



Smart graphs assisting the medical monitoring-assessment

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Additional features and benefits

The ICU is the most complex environment in the health sector - characterized by complex records and data representations, complex calculations, and interconnections with a large number of medical devices. CritIS Synergy+ brings all types of data together to form the backbone of a complete electronic medical record, and since it runs from a web browser it can be accessed from anywhere within or outside the hospital.

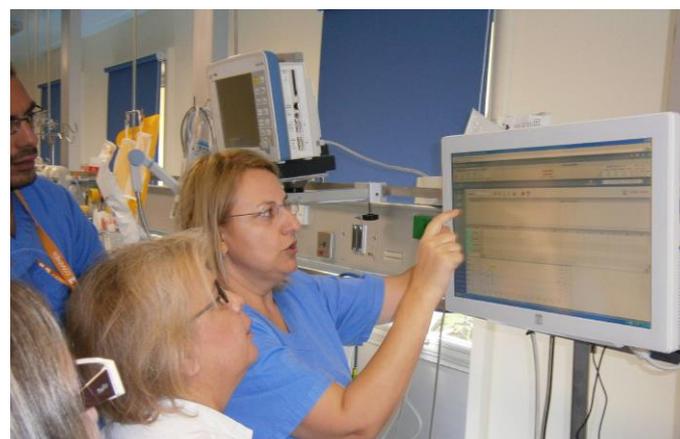
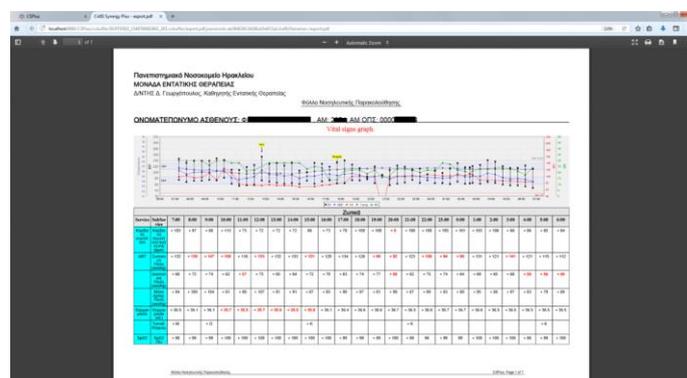
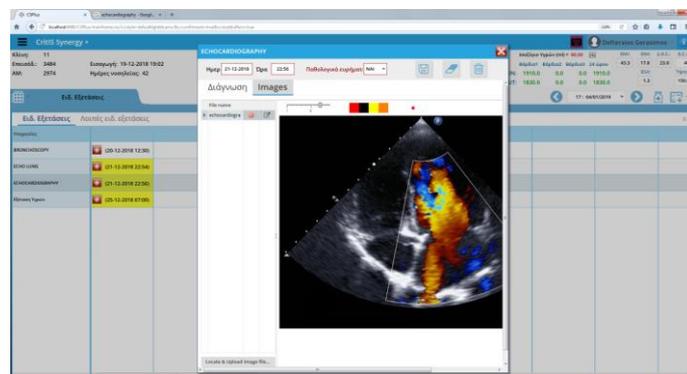
CritIS Synergy+ offers a highly configurable environment for monitoring the progress-assessment of patients and can be easily integrated with existing HIS, LIS, RIS or auxiliary hospital systems. At the same time since it is easily customizable could easily be adapted to support other units or clinics within the hospital.

The benefits of automating the ICU is expected to have a direct impact on the improvement of operating expenses. This can be achieved through:

- Reduction of disease complications and associated costs
- Reduction of paper related costs.
- Reduction in diversity of services offered and adopted procedures.
- Improve the recording of expenses.
- Decongestion of other hospital departments (eg Medical records department).

Finally, our close cooperation with the scientific team of the University of Crete guarantees and ensures the continuous development of the system.

Installations: University Hospital of Heraklion (ICU & PICU), Athens Naval Hospital (ICU & Cardio ICU), Larisa General Hospital (ICU & HDU), 251 Air Force Hospital (ICU).



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