

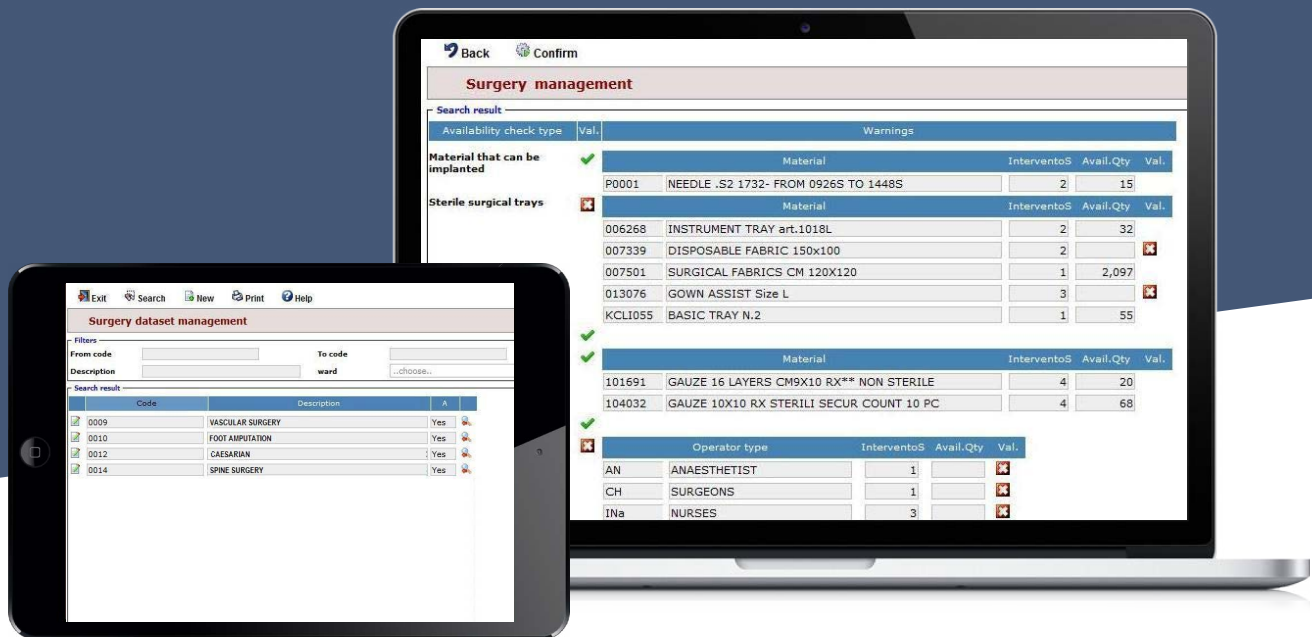


**A LEADING-EDGE
SOFTWARE
APPLICATION FOR
A SAFE OPERATING
ROOM.**

SI.SOS™ SOFTWARE SYSTEM

A LEADING EDGE SOFTWARE APPLICATION FOR A SAFE OPERATING ROOM.

The operating room is one of the most sensitive hospital environments since all performed activities impact patients, their safety and medical staff as well. In cooperation with different hospitals and with the loan granted by Regione Emilia Romagna in Italy, ICT-GROUP designed SI.SOSTM operating room management system.



BENEFITS OFFERED BY THE SYSTEM



MODULAR AND PARAMETRIC

Hospitals can start using the basic version of the system and then add specific modules in time according to their needs.



USER FRIENDLY

Guided procedures and simple user interface (touchscreen monitors)



INTERFACEABLE

with any device in operating rooms to collect and record information



WEB

Users can log into the system using a standard browser from any workstation within the corporate intranet or using the Internet if they are outside of the hospital. No client installation required.



SECURITY & PRIVACY

System administrators can apply different policies to let users access the system, displaying only information they need.



SAFETY ENSURED FOR PATIENTS AND SURGEONS.

**This software application takes care of
all issues connected to surgeries:**

HOSPITAL MANAGEMENT

- ✓ Medical staff schedules and availability of operating rooms
- ✓ Compliance with hospital policies

CHECKS AND SECURITY IN OPERATING ROOMS

- ✓ Creation of standard models for surgeries
- ✓ Respect of high quality standards both for medical procedures than for patients
- ✓ Management of clinical information for every surgery

MANAGEMENT CONTROL

- ✓ Summary of surgical materials and consumables that have been used
- ✓ Costs of medical staff and materials
- ✓ Management of warehouse stocks and automatic supply of requested materials

TRACEABILITY

- ✓ Complete traceability of surgical operations
- ✓ Check of incoming and outgoing instrument trays to/from operating rooms

SOFTWARE INTEGRATIONS

- ✓ The use of HL7 standard makes si.SOSTM completely interfaceable with any software application used in hospitals

MEDICAL DEVICE CERTIFICATION

- ✓ SI.SOSTM is a class I medical device compliant with 93/42/EEC directive and 2007/47/EC amendments.

SYSTEM FEATURES: OPERATIONAL STEPS

Users can log into the system according to the access policies defined by system administrators. Operational steps are basically the following ones:

BEFORE SURGERIES

- surgical operation requests
- reservation timetables and notices sent to medical staff involved
- resource planning and scheduling (equipments, medical staff, operating rooms and so on)
- material preparation (equipments, instruments and so on)
- check of surgical trays entering the operating room

DURING SURGERIES

- check of incoming/outgoing instruments OR medical staff coming in/out of the operating room
- real-time recording of material consumption
- components traceability (lots, deadlines, etc..)
- recording of all different surgical stages
- check-lists available in every surgical stage

AFTER SURGERIES

- check of materials coming out of the operating room and material counting
- material traceability
- recording of average surgical time
- warehouse management and material backorders (minimum stock, etc..)
- surgery reports management and printing
- checks, analysis and statistics about surgical procedures

ACCOUNTING AND MANAGEMENT CONTROL

- surgery costs monitoring
- difference between estimated costs for surgeries and the real ones
- stay-in-bed costs for every single patient
- automatic warehouse management (safety stocks, reservations and purchases) with potential integration with the corporate management software
- material orders management with potential integration with the corporate management software
- surgery requests management
- surgery schedules considering required materials
- full surgery reports
- effective check of activities in the operating room.

WORKFLOW

SI.SOS BACKOFFICE MODULE

- ✓ Management of surgical operation requests
- ✓ Surgical operation scheduling
- ✓ Check of available materials
- ✓ Reservation of required resources
- ✓ Material preparation

SI.SOS MONITOR IN THE O.R.

- ✓ Consumption recording
- ✓ Check of incoming materials
- ✓ Check of outgoing materials

WAREHOUSE

- ✓ Management of supplier orders
- ✓ Automatic backorders for materials that are out-of-stock
- ✓ Goods inward management

ADMINISTRATION

- ✓ Cost of surgical procedures
- ✓ Check of material consumptions
- ✓ Supplier invoices check

MANAGEMENT CONTROL

- ✓ Cost analysis
- ✓ Variance from estimated costs/budgets
- ✓ Check of medical staff costs



SYSTEM MODULES

si.SOS is composed by different modules and functions to manage surgical procedures, from activities before and after surgeries to the ones performed by the accounting and finance department to analyze costs.

BASIC MODULES

DATASETS

(surgeries, materials, devices, rooms, medical staff, etc.)

CHECK-LISTS AND CHECK-POINTS

Customized lists of activities, displayed by the system, that medical staff has to perform before, during and after surgeries in chronological order.

OPERATIONAL MODULES

BEFORE THE SURGERY

MANAGEMENT OF SURGERY REQUESTS

SURGERY SCHEDULE

Considering information added in surgery requests (urgency, date, priority, etc.), the system schedules surgeries.

DURING THE SURGERY

MATERIAL AND STAFF RESERVATION

Analysis of all standard materials and staff needed to perform the surgical procedure

AFTER THE SURGERY

WAREHOUSE MANAGEMENT AND MATERIAL STOCKS

MANAGEMENT OF CONSIGNMENT MATERIALS

IN OPERATING ROOMS DURING SURGERIES: TOUCHSCREEN MONITORS

Strict access policies allow operators to access the system. The touchscreen monitor used in the operating room is the core part of the system where material handling and surgery times are monitored.

The system can be interfaced with medical devices in the operating room to record their activities. Data are saved in the system and they can be analyzed later on by the medical staff and used for surgical reports.

Operators outside of the operating room can effectively monitor surgeries using the system's back-office interface: selecting a surgical block or an operating room, they can display an overview of surgeries performed in the selected surgical block/ operating room (progress, starting/ending time,...).

In this way operators, who are not involved in surgeries, can effectively monitor the progress and status of operating rooms.

THIS MODULE ALLOWS:

- ✔ custom user profiling so that users can display only information they need in function of their job/surgical block/operating room
- ✔ simple interface designed for touchscreen monitors
- ✔ pre-set answers that can be selected in lists or they can be manually inserted using virtual keyboards displayed on the screen
- ✔ timers and/or countdowns to monitor medicine administration
- ✔ selection, consultation and complete traceability of surgical operations
- ✔ fast access to surgeries reading barcode or RFID tags on patients' bracelets
- ✔ full traceability of surgical instruments (patients' nosological number, operating room code and surgery code) using DataMatrix™ codes that allow operators to get required information easily
- ✔ webcams in operating rooms to record surgeries and reproduce them



At the end of surgeries the system allows the medical staff to issue surgical records and print all the required documents:

- ✔ ANAESTHESIA RECORD
- ✔ NURSING RECORD

All information recorded before, during and after surgeries are here included and they are printed in patients' anaesthesia and nursing records.

- ✔ SURGICAL RECORD

The system offers a complete summary of surgeries in terms of checks performed on instruments and used materials, times of the different surgical phases and general information like wards, operating rooms, patients' records, medical staff.

Surgical records can be validated by digital signatures of surgeons, anesthetists and chief nurses: this finalizes surgical records so that they cannot be changed unless all people in the medical staff agree to do so. In this case changes can be made and saved in the system with the previous draft.



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