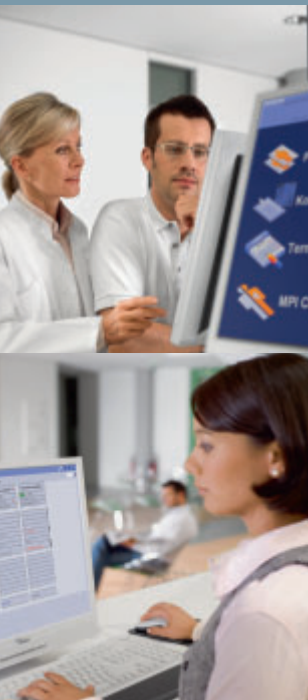


Master Patient Index

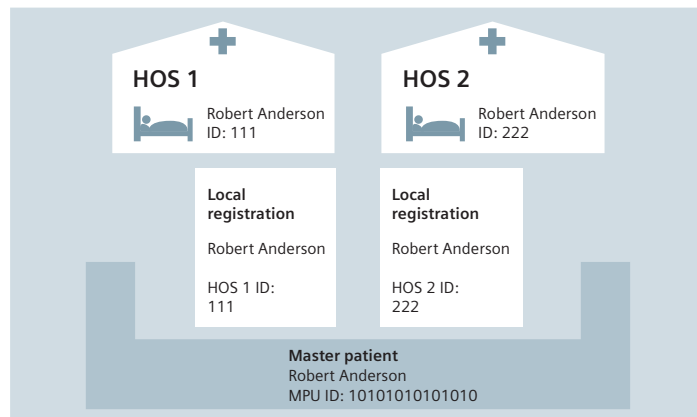


Soarian® Integrated Care (Soarian IC) is a web-based eHealth solution for the communication of patient-specific data, forms, and documents among connected partners using a secure connection.

The connected partners may be hospitals, physicians in private practice, or other health care facilities.

Patient data and documents from a variety of systems are accessible via Soarian IC as an electronic health record. This requires unique identification of each patient throughout the entire process. Normally however, a patient is registered in each system using an ID that is unique to that system only. The various registrations then have to be combined under a single ID. This task is performed by the Master Patient Index (MPI). It manages patient registrations for the various systems, and recognizes which ID is used to register a patient in the various primary systems.

When using an MPI, the original patient registrations are assigned to a master patient data set. In Soarian IC, all diagnostic reports, images, lab results, etc., are combined by case in the reference patient record. As a result, within Soarian IC medical staff work with the reference patients, using unique IDs throughout the entire system/process.



MPI Clearing supports the assignment of patient registrations to master patients, enabling complete, consistent health records. MPI Clearing utilizes a combination of procedures for attribute storage, duplicate recognition, and similarity measurement.

During **automatic clearing**, Soarian IC performs non-ambiguous clearing tasks on its own. For those that cannot be completed automatically, clearing tasks are generated to be processed by the clearing staff.

The most important clearing tasks are: preventing duplicate registrations and applying master data changes for domain patients in the corresponding master patient data set.

Soarian Integrated Care

For patient-centered cooperation

Performance characteristics

Principles of MPI

The prerequisite for high-performance, effective work with MPI is **intelligent attribute storage** based primarily on standardization of names, addresses, and telephone numbers. The most important function of MPI is **duplicate recognition** based on a "multipass sorted neighborhood" procedure which also utilizes phonetic algorithms.

The similarity test evaluates the potentially best candidates representing a patient. Various **procedures for similarity measurement** tailored to the respective characteristic are used, such as the established Levenshtein Algorithm or the Date-Distance Algorithm developed by Siemens.

Working with MPI Clearing

The most important clearing tasks are: preventing duplicate registrations and applying master data changes from external systems in the corresponding master patient data set. Clearing tasks may be performed by **authorized users**

only. Predefined **clearing roles** enable the **clearing work to be shared** among the connected institutions. As a result, both **centralized and decentralized clearing** is possible.

Clearing tasks are organized in work lists to enable efficient processing. The lists offer various functions based on the different modes of operation:

- Various views of the orders using predefined filters and various sorting capabilities
- Batch processing (FIFO) or selective processing of orders
- Status tracking

The following **clearing tasks** are supported by the MPI within Soarian IC:

- **Assignment of newly-registered patients** to existing master patients: tasks for new assignments display possible candidates if the patient assignment is ambiguous. Soarian IC supports manual assignment through:
 - Display of the similarity value calculated by the algorithm
 - Visual highlighting of differences
 - Ability to selectively apply differing master data

- **Applying master data changes** from external systems to the master patient data set: differing and updated master data are visually highlighted
- **Combining master patient data sets** in case of unintended multiple registrations
- **Locking and unlocking** of patient records
- **Highlighting assignment** of an external patient registration to a master patient so it can be reassigned or locked
- Elimination of inconsistencies or incomplete clearing tasks and patient records from the clearing workflow by assigning **observation status**; subsequent intensive review and processing possible

Status codes inform the user of the electronic health record whether a patient data set is in clearing or whether the patient record is being monitored. This information helps the user to better evaluate the record content.

Not approved for the U.S. market.

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Soarian® Integrated Care is CE-compliant in accordance with Regulation 93/42/EEC Appendix VII of June 14, 1993. Whenever the hardware is supplied by us and is labeled accordingly, then this is also CE-compliant in accordance with EMCD 89/336/EEC and, if applicable, in accordance with LVD 73/23/EEC.

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