

The conceptual model of a web portal to unite national registries of implantable medical devices at the platform of the Italian Ministry of Health

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Introduction

To date, the official information on Implantable Medical Devices (IMD) in Italy is scattered. Two most complete registries - that of arthroplasty (Italian Arthroplasty Registry, RIAP) and that of breast implants (RNPM) - are currently hosted on different platforms. The concept of a comprehensive institutional web portal of IMD is presented. It should unite under one roof the RNPM and the registries of the Italian Implantable Protheses Registry (RIPI): RIAP, RIDIS (Italian Spinal Implants Registry), RIDEP (Italian Implantable Cardioverter-defibrillator and Pacemaker Registry), RIVAC (Italian Heart Valves Registry), the newly introduced RIDIU (Italian Implantable Hearing Device Registry) and the others to come.

Materials and methods

The architecture and content structure of the portal are developed by a multidisciplinary team in collaboration with national and regional public health authorities. The audiences and key communication functions of the portal are defined following the models of institutional and health communication. The module-based architecture follows the logic of progressive growth: new modules can be added using the same pattern.

The RIAP website (riap.iss.it) serves as a basic pattern for the web portal sections dedicated to other IMD (spinal, cardiovascular, breast implants and others). Using its software and data flow schemes, the portal allows for the data input to feed the registries.

Operated by the Italian Ministry of Health

RNPM
National Breast Implants Registry

Operated by the Italian National Institute of Health

RIPI
Italian Implantable Protheses Registry

riap
Italian arthroplasty registry

ridis
Italian spinal implants registry

ridep
Italian implantable cardioverter-defibrillator and pacemaker registry

rivac
Italian heart valves registry

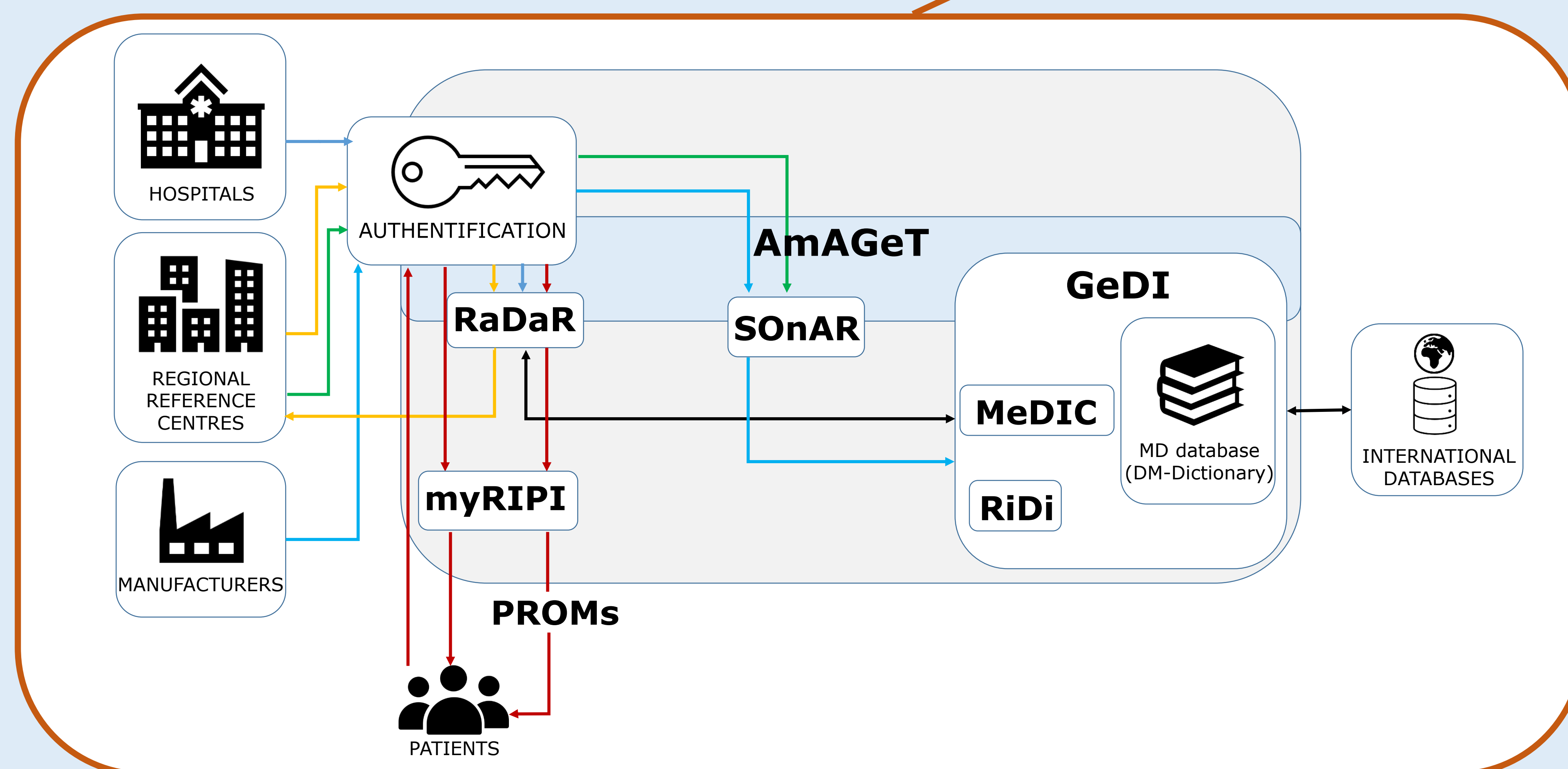
ridiu
Italian implantable hearing device registry

Stakeholders and audiences

- Ministry of Health
- Italian National Institute of Health
- Regional healthcare authorities
- Hospitals
- Surgeons and medical students
- Manufacturers
- Patients and patient associations
- General public

Objectives and functions

- Effective communication**
 - Information about the registries in one place
 - General info
 - Documentation and reports
 - News
 - Scientific publications
 - Patient safety info (legal, clinical)
 - Contact and request options for users
- Resource network**
 - **Redirecting to utility sites***
 - Links to the international analogue registries
- Data collection and sharing**
 - **From hospitals and regional centers of reference**
 - **From/to surgeons**
 - **From/to patients**
 - **From/to IMD manufacturers**



Software components:

AmAGeT, for managing authorisation of operations
RaDaR, for collecting data of implant and explant surgeries from authorized surgeons and operators
SONAR, for allowing the clinical data transmission from Regional Reference Centres
GeDI, for managing the Medical Devices database (DM-Dictionary) and enabling the interoperability with international registries
MeDIC and **RiDi** offer a web service-based interface for accessing the DM=Dictionary
myRIPI, application for patients' use

Figure: Objectives and audiences of the new portal, and its reserved area infrastructure. *Marked in bold type are functions available upon authorization in reserved area

Results

The new institutional web portal will for the first time bring together the national registries of all types of IMD, meeting the needs of various stakeholders, from patients to surgeons to decision-makers.

Conclusion

The portal has a double role: it offers comprehensive information and in its reserved area allows for data input by Italian hospitals. To guarantee its efficacy, the developed structure will be tested for usability using digital marketing and sociological methods.