

RES-National Workshop

Brasilia, 08 a May 10, 2012

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Conclusions

The working group met during the days 08, 09 and May 10, 2012, in Brasilia, presents the following conclusions about the definition and implementation of **Electronic Health Record National**(RES-National):

1. **Elements of the RES SUS National Guiding**

1. **Principles for the general architecture of SUS National RES**

is proposed the following set of general principles for **the RES SUS National** Architecture:

- I. Alignment of RES deployment strategy with national policies health pointing out the actions defined as priorities;
- II. Adherence to the principles of the NHS, with emphasis on decentralization and regionalization,
- III. Optimization of existing knowledge and technology resources to foster the development of innovations and technology transfer;
- IV. Establishment of promotion for the use / development architecture by States / Municipalities considering their advance on the incorporation of ICT in order to adjust the model structure and management,
- V. should be in accordance with existing law,
- VI. should adopt the national standards defined in Ordinance 2073/2011;
- VII. Use of information legacy of the SUS;
- VIII. The data collected should focus on continuity of care and knowledge management,
- IX. modeling of the services oriented architecture,
- X. security of health information: the data must be protected according to criteria pre-defined,
- XI. data are of SUS and must be shared to allow continuity of care with reliability;
- XII. The SUS users, health professionals and managers should have access to information according to predefined criteria;
- XIII. The architecture of the National RES-SUS should be independent of technology and following interoperability criteria defined in Executive Order 2073/2011;
- XIV. Changes in the architecture should be based on health policies defined by the SUS.

2. **General principles for the technological architecture of SUS National RES**

is proposed the following set of general principles for the **Technology Architecture of the RES - National Architecture**

- I. technology structured in the following levels:
 - Primary Level: Central System
Interfaces available:
 - Portal / Web Applications,
 - Bus Services (Web services)
 - interface for replication batch (ETL)
 - Secondary Level: States and Municipalities
 - Tertiary Level: Health Units (public and private), Operators (health supplement), other members of the SUS (eg ANS, ANVISA etc..).
- II. Architecture technology's primary structured *data centers* deployed in setting resilient.
- III. Architecture technology of secondary and tertiary levels of a structured following types of configuration:
 - Use of dedicated device for self-configuring service in contingency and in places without connectivity.
 - Use of local infrastructure using software provided by DATASUS.
 - Sites autonomous interoperable
- IV. bus-Need to define how they will be the rules of procedure for exchanging information among autonomous sites and the central system.
- V. Principles Availability
 - Guarantee Contingency
 - Plan business continuity
 - element of cross-setting
 - software architecture scalable
 - Testing
 - Functional
 - Load
 - Performance
- VI. Guidelines of usability
 - define the usability criteria along with the system operators of all levels and users
 - have relevance to the various public
 - consider health professionals
 - consider the citizen
- VII. principles of support to the diversity of access devices
 - to consider the current reality of users who use multiple devices to access information
 - Use the potential of mobile devices for information collection
- VIII. principles of interoperability:
 - In systems via bus integration:
 - From data via the use of primary sources updated

- from protocols: via use of the criteria defined in the ordinance standards
- IX. Principles of data communication
- solutions have to be able to cover the wide range of communication possibilities, the operating offline until the 4G
 - Consider integration with existing local communication networks (federal, state and municipal)
- X. Principles of information security
- aspects of administrative controls
 - to ensure legal and regulatory compliance
 - Citizen: Implement measures to ensure safe access. The side of the body must be digitally certified.
 - Entities: With digital certificate in accordance with current legislation
 - Pro: With digital certificate in accordance with the law
 - of rating information
 - needed to ensure the confidentiality of information
 - access control policy
 - exception Establish policies ("Breaking Glass") to
 - establish policy-based access profiles and roles ("Who can see what - Detailed level of access")
 - aspects of physical controls
 - access to physical equipment by authorized personnel only and should be monitored
 - Risk of theft equipment containing sensitive information
 - disaster protection
 - treatment for proper disposal of equipment technological
 - aspects of technological controls
 - Support administrative matters
 - to ensure versioning information
 - to ensure traceability of access
 - Perform vulnerability testing application security by third company specializing in security and
 - vulnerability testing Log security of your computing environment by the third company specializing in security and
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3. **Scope of Program Implementation of National RES SUS**

is proposed that the National Programme RES SUS is developed in phases, namely versions, with the following scopes:

I. Version 1: Structuring Services

Deadline: SETEMBRO/2012

- identification services (individual, professional and property / location / organization);
- terminologies in health services (SIASIH, RENASES, SIGTAP, among others);
- Develop access for users in the RES in the National Citizen's Portal,

II. Version 2: repository of information based on the National RES structure archetypes
Deadline: DEZEMBRO/2012

- Archetypes Services - development of the repository of archetypes to represent the data structure of the main legacy of the SUS, to transform the information received to this format;
- Extraction a set of data from legacy systems to SUS priority of information related to basic care, to feed continuously the National Repository of the RES,
- the RES Information Repository National - storage of data received from legacy systems into SUS repository developed based on archetypes created.

III. Version 3: Knowledge Management of the RES SUS National
Deadline: DEZEMBRO/2013

- Develop strategy for Knowledge Management through Data Warehouse, etc. for the production of indicators.;
- Develop access by users, health professionals and managers the National SUS SUS RES;
- make effective a process of governance archetypes for the country;
- Develop service to capture and retrieve clinical data, based on archetypes developed from the legacy systems in cities and states.

4. Governance Structure of the National RES SUS

proposed following the creation of governance mechanisms RES SUS National Program:

- I. Positioning **DATASUS** in the role of the Executive Coordinator of the Program of Implementation of National RES SUS, being responsible for the implementation of the governance program, including defining the role of each sphere management to avoid duplication of efforts.
- II. **Strategic Working Group** (EWG) in CIINFO to be approved by CIT, with responsibility for developing and agreeing on the definitions and components of the RES-National, with the following structure:
 - GET composed of the entities : MS areas, SLTI / MPOG, ANS, ANVISA, CONASS, CONASEMS, DATAPREV, FIOCRUZ, universities (UFMG, UNB, UERJ, UFSC), ABNT, SBIS, Boards Health Practitioners (CFM, CFO, COFEN), supplementary health , ABRASCO.
 - structuring in thematic subgroups:
 - Subgroup 1 - Technical Secretariat of the National SUS RES
 - Subgroup 2 - Artifacts Knowledge Management (archetypes and templates)
 - Subgroup 3 - Terminology Health
 - Subgroup 4 - Technology and Communication
 - Subgroup 5 - Privacy and Information Security
- III. permanent communication channels with the deliberative and consultative MS / SUS, considering the existing structures and their agents (CIINFO, GT Management of the Technical Chamber of CIT, CIT, CIT RES (RIPSA) and CNS).
- IV. Plan the program and its portfolio of projects for the deployment of RES SUS Services, management structure with goals, deadlines and budgets, following the guidelines outlined in the scoping presented.

2. Actions and Decisions Workshop

I. Establish working group to define the initial proposal of the information model, models of access to information and process of governance archetypes.

- Guidelines:
 - i. Compliance with Executive Order 2073/2011 (interoperability standards),
 - ii. Basic Care Requirements,
 - iii. Use of the archetypes of the SES / MG as a starting point,
 - iv. use of existing databases in DATASUS as initial mapping conducted by the Workshop (Annex I).
 - Composition:
 - Moacyr (DATASUS) - Coordinator
 - Marcelo Santos (consultant)
 - Celina Maria (ANS)
 - Jussara Macedo (consultant / openEHR / SBIS)
 - Rodrigo Queiroga (SES / MG and CONASS)
 - Ricardo Puttini (UNB)
 - Claudio Amantino (CONASEMS)
 - Eduardo Mugnai (ABNT)
 - Rodrigo Gaete (DAB / MS)
 - representatives of the technical areas of the MS (DRAC, and DEVEP DASIS)
 - Deadline for completion of the initial proposal document: July 31, 2012
 - 1 No Meeting in person May 25, 2012 - Brasilia - DF.
- II. Forward to CIINFO proposal to establish the **Strategic Working** Group. The proposal will contain a DATASUS initial Terms of Reference detailing the objectives of each subgroup and the minimum conditions of operation.
- Responsible for action: DATASUS (Dr. Moacyr)
 - Deadline: June 1, 2012
- III. to prepare the plan of the program and its project portfolio to implement the National SUS RES.
- Responsible for action: DATASUS (Dr. Moacyr)
 - Deadline: July 10, 2012

3. Participants

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4. **Annex I - Mapping Information System SUS**

National Base Systems: systems that provide information to list for the composition of the RES.

1. SCNs - Card System National Health
2. CNES - National Registry of Health
3. SISRCA (SIH and SIA)
4. SIAB (Individualized)
5. SISCOLO
6. SISPRENATAL
7. HIPERDIA
8. SINAN
9. SISVAN - Food and Nutrition
10. SIM
11. SINASC
12. HORUS
13. People's Pharmacy
14. SISPNI

Information entry: SIA, SIH, SIAB, SISCOLO, SISPRENATAL, SINAN SISVAN, People's Pharmacy, HORUS.

Entry - Data set identification, observation, evaluation, education and action in service to users of SUS.

RES

Analysis Background RES Information for managers.

Identifiable Information

Observation Entry

RES Information for Professionals Health

Evaluation Entry

Instruction Entry

Information for Users RES (Citizen's Portal).

Action Entry

1. **Information Identification** - identifying individual user, and the establishment of the health care professional for the RES.

2. **Observation entry** - measures are observed by health professionals eg clinical history, physical examination at the start of a service.
3. **Evaluation Entry** - Interpretation of the professional examination of the patient. Diagnosis.
4. **Instruction Entry** - Referrals (procedures or specialists), requests exams, prescription guidelines.
5. **Action Entry** - Implementation of Instruction. Table 1 below shows the relationship between information systems existing in the SUS with the classification of input information, in order to identify which of these systems is possible to obtain information relevant to the RES.

Table 1 - Relationship SIS versus existing classification of information input to the RES

SIS Existing	Identification	Observation	Evaluation	Instruction	Action
CNS	X				
CNES	X				
SISRCA(SIH, SIA and CIHA)	X	X	X	X	X
SIAB ¹	-----				
SISCOLO / SISCAM	X	x	x		X
SISPRENATAL	X	X	X	X	X
HIPERDIA	X X	X		X	X
SINAN ²	X	X	X	X	X
SISVAN - Food and Nutrition	X X	X			
YES	X		X		
SINASC	X	X	X		X
HORUS ³	-----				
PharmacyPeople ⁴	-----				
SISPNI	X				X

¹ is not SIAB has individualized information today, but there is a system development project SIAB to a new individual. At this time will not be considered as a source of information for the composition of RES from existing systems.

² SINAN - Injuries and Notifications. The CNS is not required in the current version of the system.

³ HORUS - Has no obligation to send information to national databases.

⁴ People's Pharmacy - Ranked program. It is used by accession. There is no requirement to send information to national databases.

Use of RES (Information Outlet)

- Manager
- Health Professional
- User