The hospital-based ICT system in the evolution of socio-sanitary integration with the territory.

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Federico II Hospital is oriented on the centrality of the individual, defined as:
- Patient / user
- Professionals
- Students.

Towards the patient/user, Federico II Hospital aims to provide services not only to meet his health needs, but also the emotional, socio-cultural and psychological ones.

Care Buildings : 21
Surface Mq: 440.000
Beds: 1000
Employes: 2000
Budged: 210 ML euro

European Transparency Register N° 686681213892-44
Organization Deed FOUND Decree N° 198, May 20, 2013

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The current state of ICT development in Campania

- The use of ICT to support health care services and health prevention/promotion activities is fragmented
- Most large hospitals have been digitalized (Anagraphics, RIS, PACS, CUP, order entry), although the use of the clinical record is still limited
- Digitalization of health data at territorial health agency is still largely missing
Research and development office coordinates Campania Reference Site on Active and Healthy Ageing

ACTION PLAN B3 on
‘Replicating and tutoring integrated care for chronic diseases, including remote monitoring at regional levels’
European Project

PERSSILAA:
(PERsonalised ICT Supported Service for Independent by Living and Active Ageing)

Design and Activities

ICT – FP7-610 359 research project
PERSSILAA CORE STRUCTURE

- **AIM:** screening & prevention of frailty and pre-frailty

- **Shift** from a reactive management of diseases to a proactive approach focused on prevention, health promotion and personalized intervention

**PERSSILAA** aims to develop and validate a new service model to screen for, and prevent FRAILTY and FUNCTIONAL DECLINE in community dwelling adults. We will focus on the

- cognitive,
- nutritional
- physical domain.

**PERSSILAA** service model uses INTERNET TECHNOLOGY whenever possible during the screening and prevention of frailty and functional decline.
PERSSILAA PARTNERS from 5 different countries

1. University of Twente: 
   *coordinator, gamification*
2. Roessingh Research and Development: 
   *physical activity training module, monitoring, validation site*
3. Azienda Ospedaliera Universitaria Federico II: 
   *validation site*
4. Fundacao da Faculdade de Ciencias da Universidade de Lisboa: 
   *nutrition coaching module*
5. University College Cork, National University of Ireland: 
   *screening on general frailty and cognitive functioning*
6. Universidad Politecnica de Madrid: 
   *interoperable ICT platform*
7. Fundacio Privada Institut de Neurorehabilitacio Guttmann: 
   *cognitive coaching module*
8. Nexera SCPA Società Consortile per Azioni: 
   *ICT platform*

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INFRASTRUCTURE COMPONENTS

- Creation of the **Personal Dossier** of the seniors
- Data Acquisition by **questionnaires** via portal
- Integration of Personal Dossier with **ICT systems** to acquire information from sensors
- **Clinical data acquisition** (including integration with FOUND ICT system)

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DATA FLOW

EndoCare

Integration Framework

PERSSILAA

Data Base

ACCESS INTERFACES

TRANSCODING TABLES
to obtain
homogeneous data

Query and reports should be read in ENGLISH
ENDOCARE portal is fully integrated with an electronic Patient Dossier, developed with j2ee technologies and suitable to be integrated with other web applications, sensors, etc. according to the service oriented architecture (SOA).
THE TECHNO-CLOUD

SOCIETAL CHALLENGES = HEALTH PROMOTION & DISEASE PREVENTION = HETEROGENEOUS DATA

DIMENSIONS:
SOCIAL SYSTEM & COMMUNITY
- well being
- socio-cultural
- safety
- research
- environment

THE ISSUE
Codified /non-codified DATASETS

A POSSIBLE APPROACH

INTER-DISCIPLINARY
STAKEHOLDERS INVOLVEMENT IN EARLY PHASES OF SERVICE DESIGN

THE HEALTH SYSTEM

where data come from?

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TRIAL DESIGN

ASSESSMENT WITH VALIDATED TOOLS

QUESTIONNAIRES

- Groninger Fraility Indicator (GFI)
- Intermed Elderly Self-Assessment (IM-E-SA)
- SF-12
- RAND-36 fysiek functioneren
- Short-Form Mini Nutritional Assessment (MNA-SF)

OUR SOLUTION:

- WE MERGED ALL QUESTIONNAIRES
- ELIMINATED DUPLICATED QUESTIONS
- ICT ALLOWED TO GROUP THE QUESTIONS DURING THE ANALYSIS TO ALLOW THE SCORING ACCORDING TO THE ORIGINAL, VALIDATED QUESTIONNAIRES

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Thank You

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