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Hospital-Territorial Information Systems: Call Center
and Healthcare On-line: Data for research and
epidemiology.

Serio, A.; Giannone, A.

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April 6-8, 2005 - Luxembourg

***HOSPITAL-TERRITORIAL INFORMATION SYSTEMS
CALL CENTER AND HEALTHCARE ON-LINE
DATA FOR RESEARCH AND EPIDEMIOLOGY***

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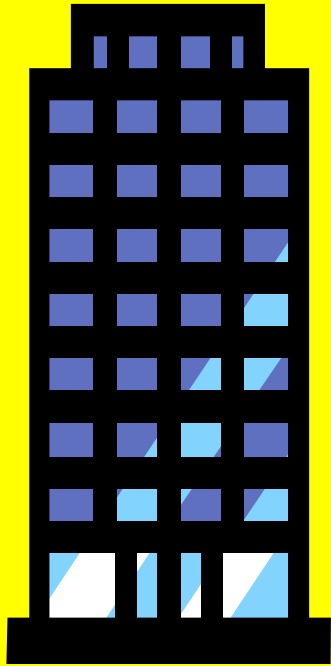
IN ITALY AND IN EVERY COUNTRY, IN THE WESTERN WORLD

Relevant problems in the Health System:

**THE TERRITORIAL
MANAGEMENT OF AGEING**

**BALANCING OF ASSISTANCE
HOSPITAL AND TERRITORY.**

NEW MODEL MANAGING PATIENT



***THE HOSPITAL ONLY
IS NOT ABLE TO ASSURE
A “CONTINUUM CARE”***

“The Hospitals in Italy are in majority very old and it needs a program of reengineering: new structures and models of management healthcare ¹.”

¹ Veronesi U., Italian Minister of Health: “Relation on the health care situation of Italy in 1999”

HOSPITALS NETWORK: THE NEW HEALTHCARE NEED

***“Unfortunately many hospitals
and medical equipments
are out-of-date.***

***Italy is changed, our network of hospitals
is designed over people living 50 years ago,
Today with ederly people and increase cronic diseases
the need in healthcare are changed” (1)***

(1) G. Sirchia- Italian Minister of Health: –4th Hospitals European Conference - Roma Nov 03

NEW MODEL MANAGING PATIENT

**ORGANIZING PROCESS IN HEALTH EVOLVE
TO INTEGRATION WITH NEW HEALTHCARE
PROCESS**

Basis Healthcare

Rehabilitation

Prevention

ITALY:
is the oldest country in the world;
over 60 years is 24,5%.

Different ways for assistance:

- ***Telemedicine,***
- ***Teleassistance***
- ***Telediagnosis at home.***

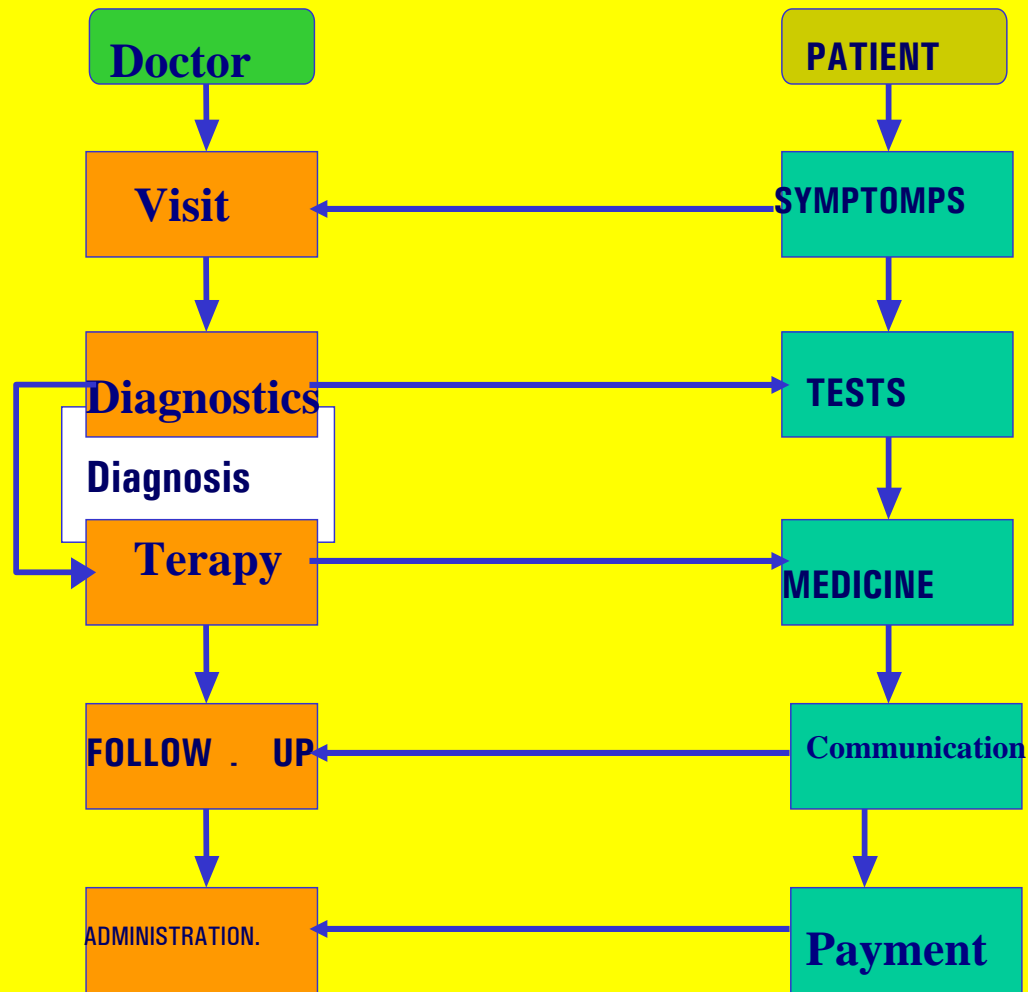
EACH DISTRICT OF TERRITORY

**Requires many more healthcare information
and interventions**

PLANNED HOME ASSISTANCE

INTEGRATED HOME ASSISTANCE

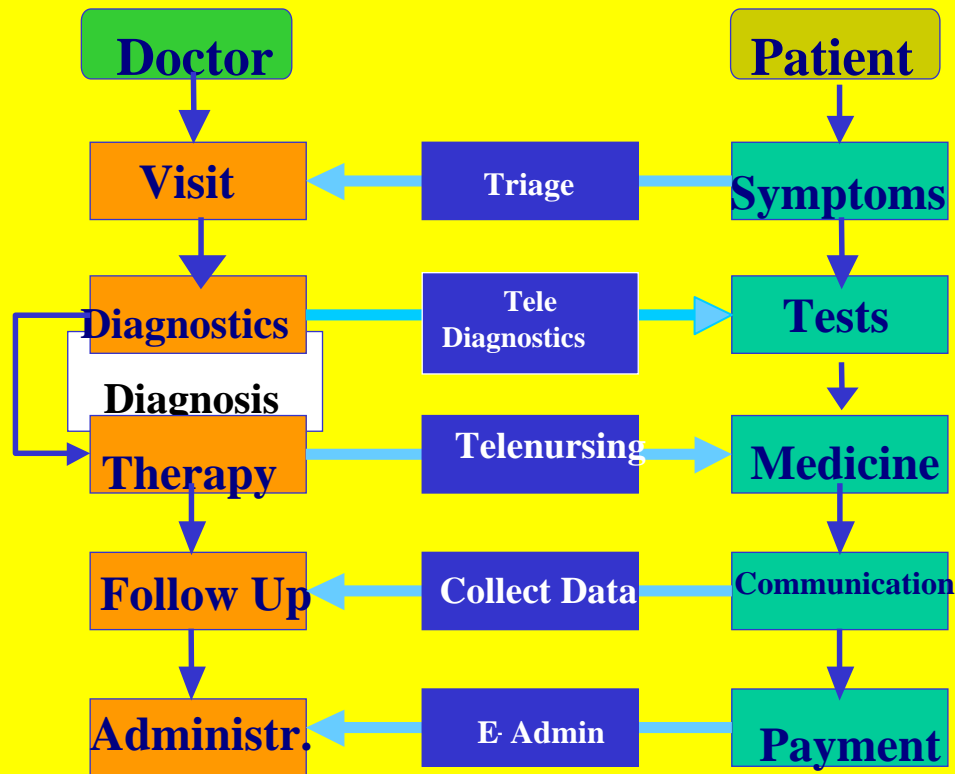
THE TRADITIONAL PROCESS HEALTHCARE ASSISTANCE



ITC APPLICATIONS GOES
TRANSFORMING IN A NEW
"SYSTEM OF VIRTUAL
HEALTH ASSISTANCE"

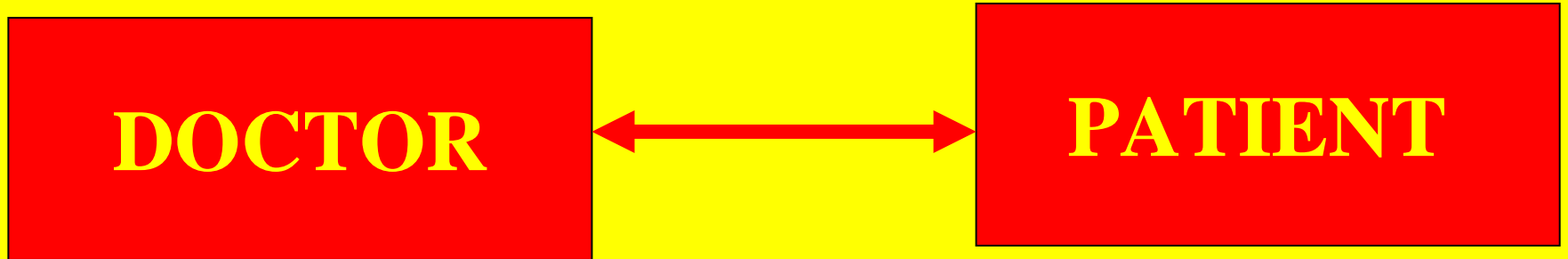
" VIRTUAL HEALTH ASSISTANCE" ITC IN HEALTHCARE PROCESS

IN EVERY PHASE, TELEMATICS APPLICATIONS AND
PARTICULARLY TELEMEDICINE



THE NEW VIRTUAL SYSTEM

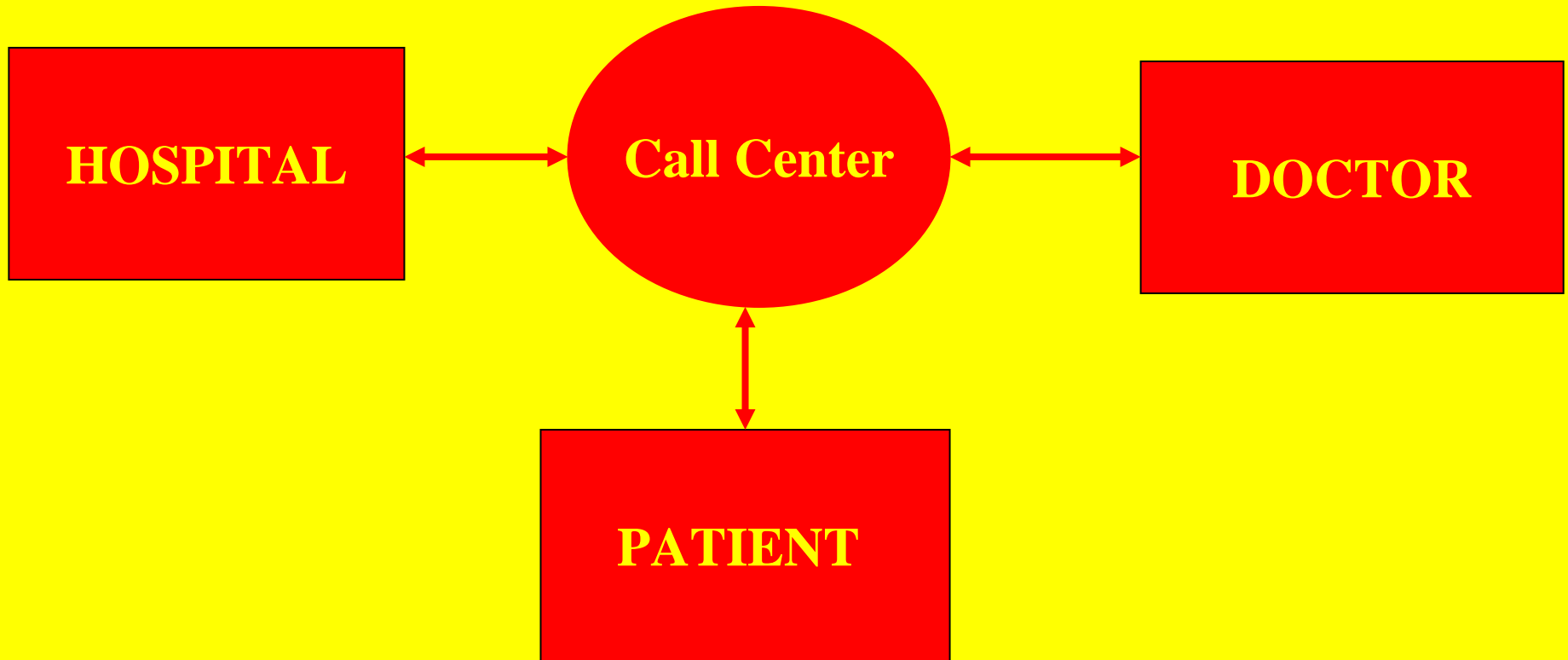
Many ways communications



**Many subjects involved
and above all it makes easier
the contacts between the different component
of the virtual system.**

CALL CENTER

“New protagonist” between principal subjects



CALL CENTER

Definition

THE TECHNICAL POINT OF VIEW

A TOOL

AN OPERATING SYSTEM

CALL CENTER "Market" in Italy

IS AT THE BEGINNING

**IT DOESN'T APPEAR AS
A HOMOGENEOUS SECTOR**

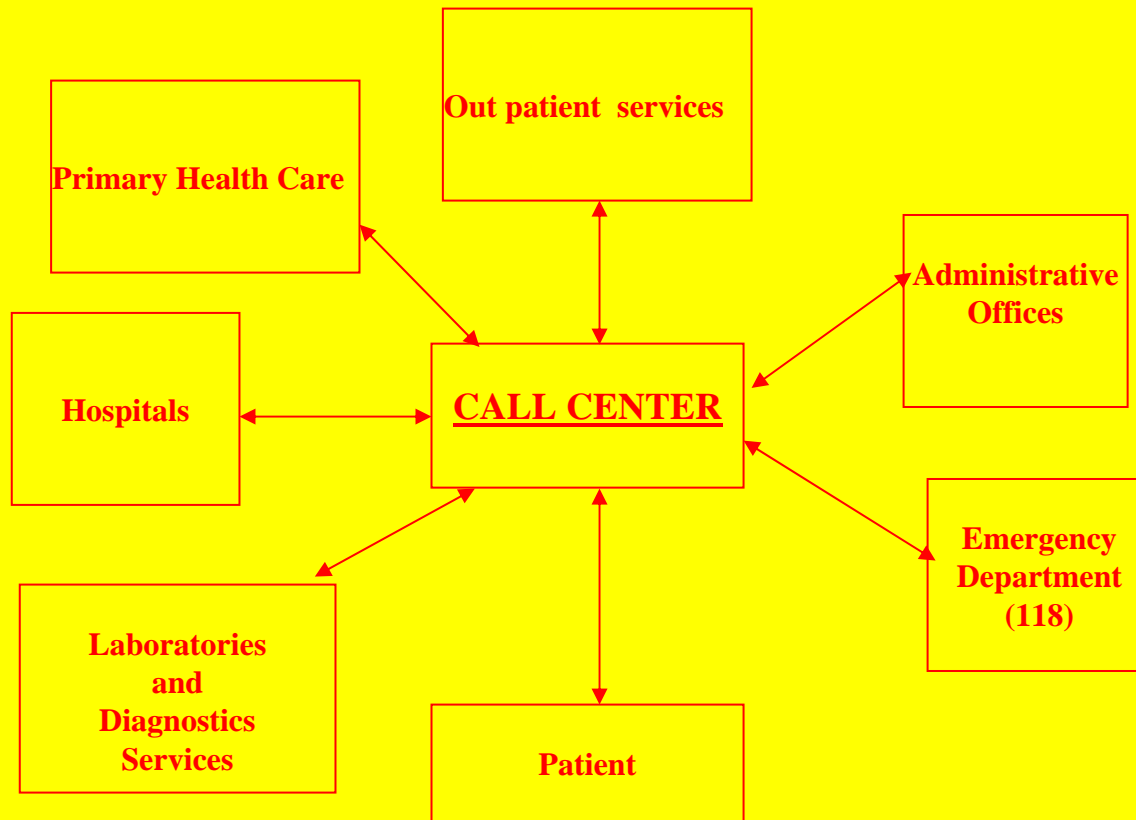
CALL CENTER Development

Family Doctor

BRIDGE

Patient

CALL CENTER Rules



OBJECTIVES PROGRAMS

ON-LINE CONSULTATION

DIAGNOSTICS TESTS

**MANAGEMENT
CHRONIC DISEASE**

OBJECTIVES PROGRAMS

**POST-OSPITALIZATION
CONTROLS POST-OPERATING**

EMERGENCY OPERATIONS

**VIRTUAL MEDICAL
EXAMINATION**

➤ **ON LINE HEALTHCARE INFORMATION**

About:

- **HEALTHCARE STRUCTURES IN THE TERRITORY OF THE COUNTRY ON DIFFERENT LEVELS OF ASSISTANCE**
- **SERVICES AND PERFORMANCES IN HEALTHCARE ASSISTANCE**
- **WAITING LIST**
- **SIGNAL COMPLAINTS**
- **CHOICE AND REVOCATION OF THE FAMILY DOCTOR**
- **REFUND OF EXPENSES AND EXEMPTIONS**

➤ **ON-LINE CLINICAL DATA**

**▪ *STORE AND FORWARD*
ASYNCRONOUS TELEMEDICINE,
NOT INTERACTIVE.
PATIENT AND DOCTOR
AREN'T IN SAME PLACE AND TIME;
DATA STORE
LATER ON INTERPRETATION
BY SPECIALIST.**

➤ **SELF-MONITORING**

- **CHRONIC DISEASE,**
- **PATIENT INABLE TO MOVE**
- **POST ACUTE CRISIS**

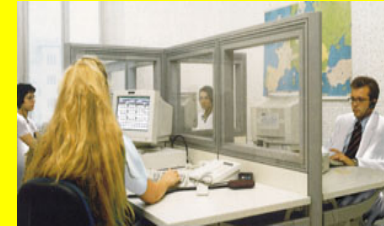
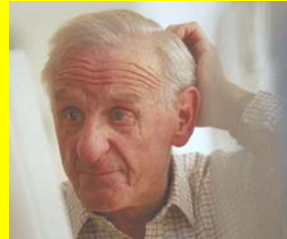
**HANDY TOOLS TO STORE
BIOMEDICAL DATA
OF THE PATIENT**

➤ **WEB VISIT**

**INTERACTIVE MEETING
BETWEEN
PATIENT AND DOCTOR**

**IT'S APPRECIATED ESPECIALLY
FOR EMERGENCY AND
CARDIOLOGY PURPOSES.
IT CAN REDUCE COSTS
AND DIFFUSE CHECKUP**

E-Health e Call Center



**Patient/ Doctor.
Transmission and
registration data
and biomedical
signals**

**The operators receive the
data, assume the priority
and give the assistance at
the Patient on line**

A.S.L.

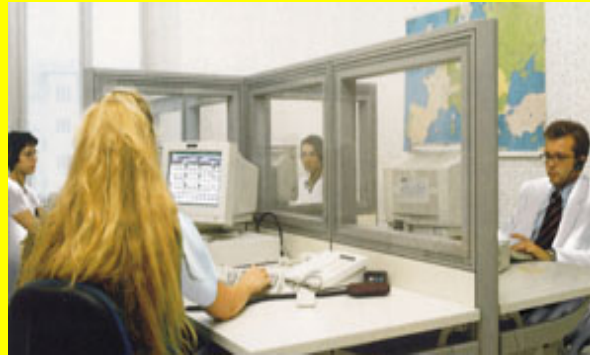
**Doctor of Family or
Specialist can read the file
clinic data**

**Internet by
security
(SSL 128 Bit)**

CLINIC CENTER

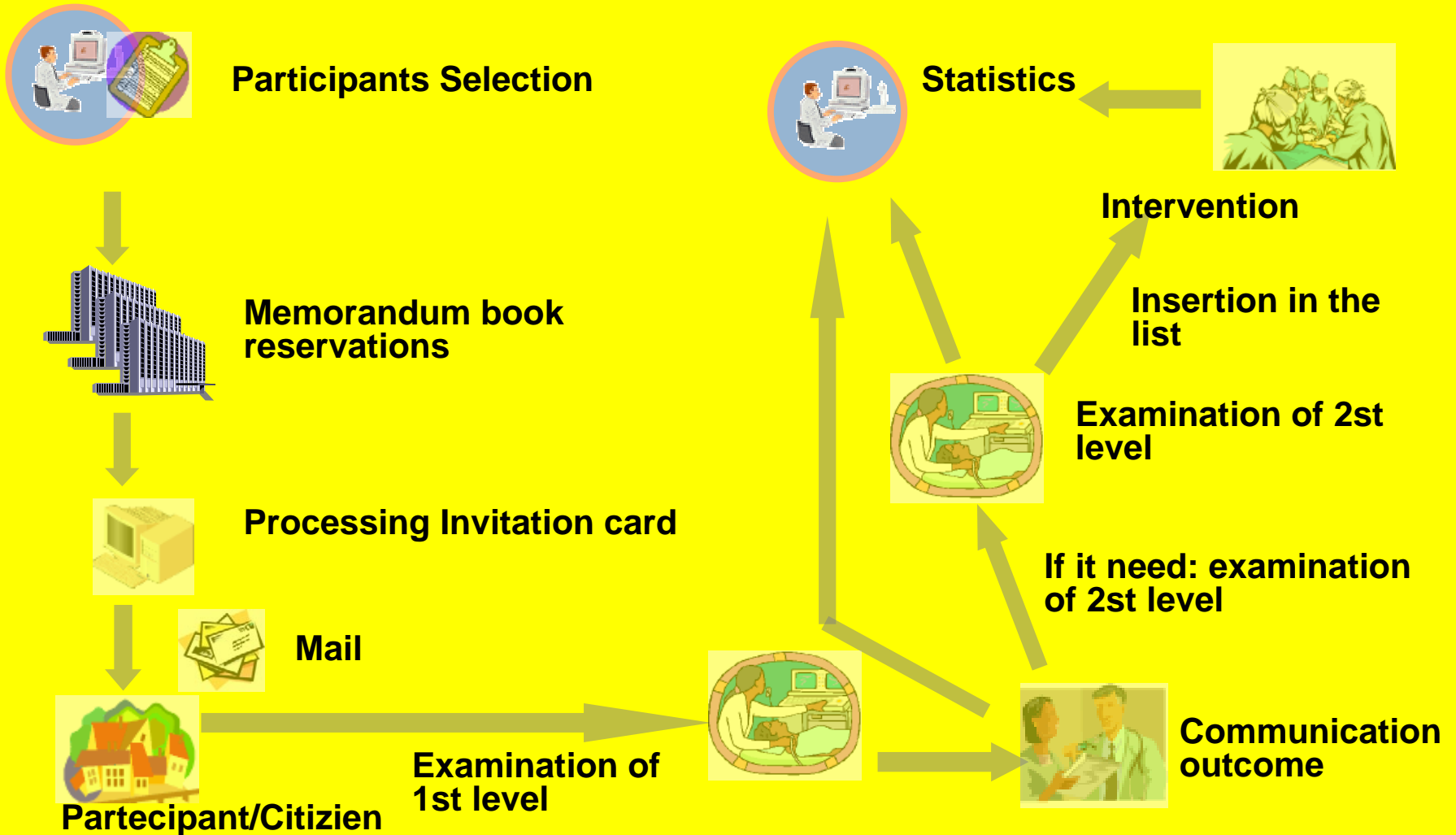
**The data of personal
file in Central Server**

CALL CENTER CONTACTS AND INFORMATIONS

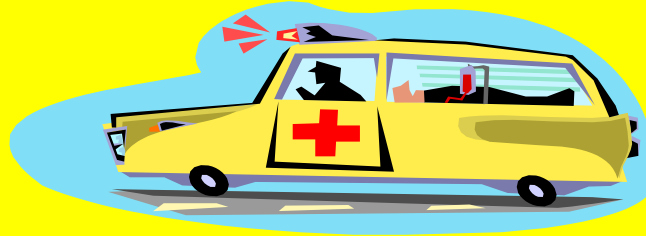


**IT WOULD HAVE TO ABSORB PARTLY
THE FUNCTIONS CURRENTLY DEVELOPED
FROM THE EXCHANGE
OF INFORMATION
BETWEEN PHYSICIAN AND PATIENT
THROUGH THE CLINIC CENTER.**

CALL CENTER AND SYSTEM OF SCREENING

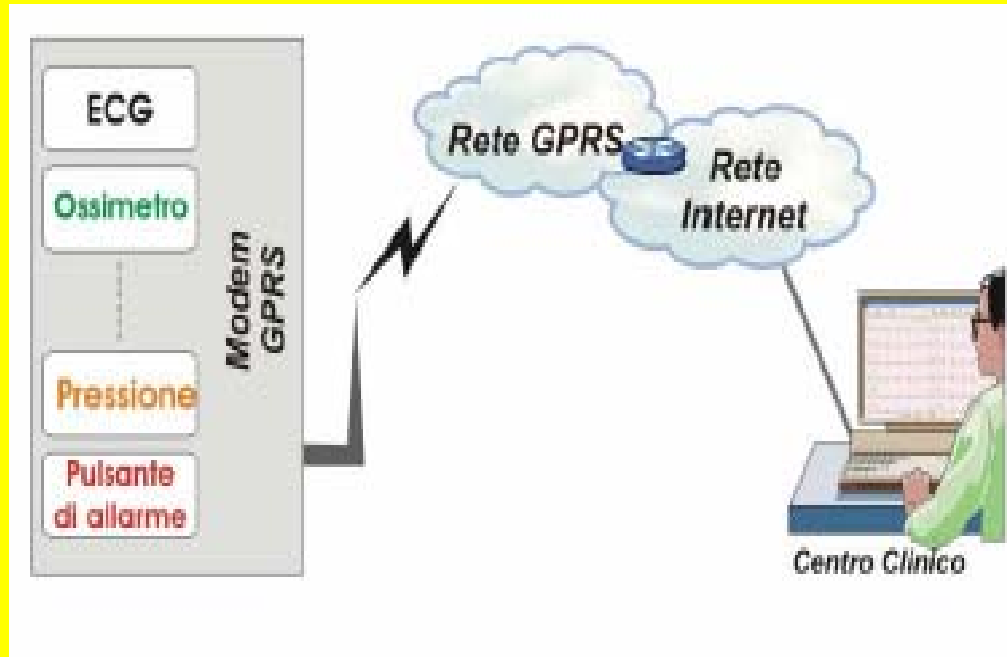


CALL CENTER AND THE EMERGENCY



**IT WOULD HAVE TO ABSORB PARTLY THE
FUNCTIONS CURRENTLY DEVELOPED BY
THE *CUP* (*UNIFIED CENTERS OF BOOKINGS*),
FROM THE SERVICES OF OPERATOR FOR
THE EMERGENCY (IN ITALY: 118)**

Network Telematic : Patient - Clinic Center- Doctor- Hospital



Clinic Center

- **Accepts informations/reservations**
 - **Files (clinical digital folder)**
 - **Informs the Doctor of family**
- **Puts in action emergency procedures**

In near future but also now...

**Monitoring multiparametric 24h
with automatic identification
of alarms and significant events
for patient assisted at home**

References and Keywords

References:

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2. Giannone A.: Healthcare and Telecommunication: expectations and models in the Call Center (Forum Health in the Future - Ministry of Health - Cernobbio, April 10th 2001).
3. Giannone A.: The policy “e-Europe 2005”and e-Health: aspects and problems in Italy and in South. Webbit- Information Systems and Platform ICT: training and network in Health- Padua, May 7th 2004
4. Serio A.: Telemedicine and Telehealth: technical, medical and ethical aspects. COM-PA - The communication and healthcare services on line for citizen. Bologna, November 5th 2004.

Keywords: Call Center, Bridge, Healthcare on-line, ICT

Thanks for your attention

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 - Degree in Engineering at Turin Polytechnic (1968), with specialisation in Management Techniques in Italy from the ISDA (Higher Institute of Company Management) and abroad from *Stanford Research Institute, Diebold / London, Metra / Paris, Scherwood / New York / San Francisco*. He gained a qualification in Advanced Management Training in Public Health, Health Services' Management and Administration at the Higher Institute of Health Studies, Collaboration Centre for the WHO (World Health Organisation).
 - Consultant in Management and in Telecommunications applications in Health structures. Industry Manager since 1977 and former General Manager of public and private health companies, since 1992 (turnover: 200 million Euros).
 - Member of the Council of AIIM (Italian Association for Medical Informatics) and Member of the Scientific Committee for Televitalia, Onlus in socio-medical assistance, founded by Father Alfredo Imperatori.
 - *Project Manager* in various experimental Tele-medicine Projects, and in particular, collaborated in carrying out one of the first trials of “Cardiology Surgery via Telecommunications” in a public health structure; in the Tele-video-Consultation programme in Paediatric Surgery for a hospital group linked with various health structures in some Mediterranean Countries; in applications by system of diagnosis ultrasonic digital system .
 - Teacher in “Management and Quality Systems in Companies” at the University of Bari and in “Telecommunications applications in Health structures” at the European Services Institute of Rome. He taught Training Courses to Doctors in General Medicine, to Cardiology Specialists and, in other disciplines, to Managers of various companies.
 - Scientific Manager (hi)Health&ICT of Ogs, italian company specialized in organization of events.
 - Author of numerous articles, published in specialist magazines for Company Management and Health Organisation systems, of various books and publications: “*Management in Hospital Businesses and in Local Health Businesses*” (ed. Cacucci); “*Organisational Changes in Companies, Health Structures and Management*” (ed. ISSS); “*Planning and Programming in Business Matters*” (ed. Pirola).
- Speaker and Chairman on subjects concerning: “Telecommunications applications in health organisation systems” and “The processes of organisational change introduced by technological innovations” at various Conventions and Seminars in Italy and abroad.

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- Member of the Italian High Council for Health (1982-87, 1991-93)
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- Member of the Advisory Editorial Board of “Medical Informatics. An International Journal of Information process in Health Care” – Taylor and Francis, Ltd, London)
- Member of the American Association for the Advancement of Science
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