

Italian experience on rare diseases and orphan drugs: legislation and organization

Domenica Taruscio

taruscio@iss.it

National Centre Rare Diseases
Istituto Superiore di Sanità
Italy

<http://www.cnmr.iss.it>



Characteristics of rare diseases

Clinical aspects

**chronically debilitating
conditions**

~ 6000

Social-economic aspects

RARE DISEASES AND DIAGNOSIS

A) lack of timely and appropriate diagnosis

B) Migration of patients from one Regione to another,
or from one Country to another

Ex: Approximately 40% of patients with Rare Metabolic
diseases move through Italian Regions



RARE DISEASES AND THERAPY

- A) Insufficient specific treatments
- B) Effective therapies are not always available
- C) Treatments are often very expensive



PERSONS WITH RARE DISEASES

A) individual, familiar and social burden

B) Patient's isolation

"my disease is unknown"

"physician is unable to identify my disease"



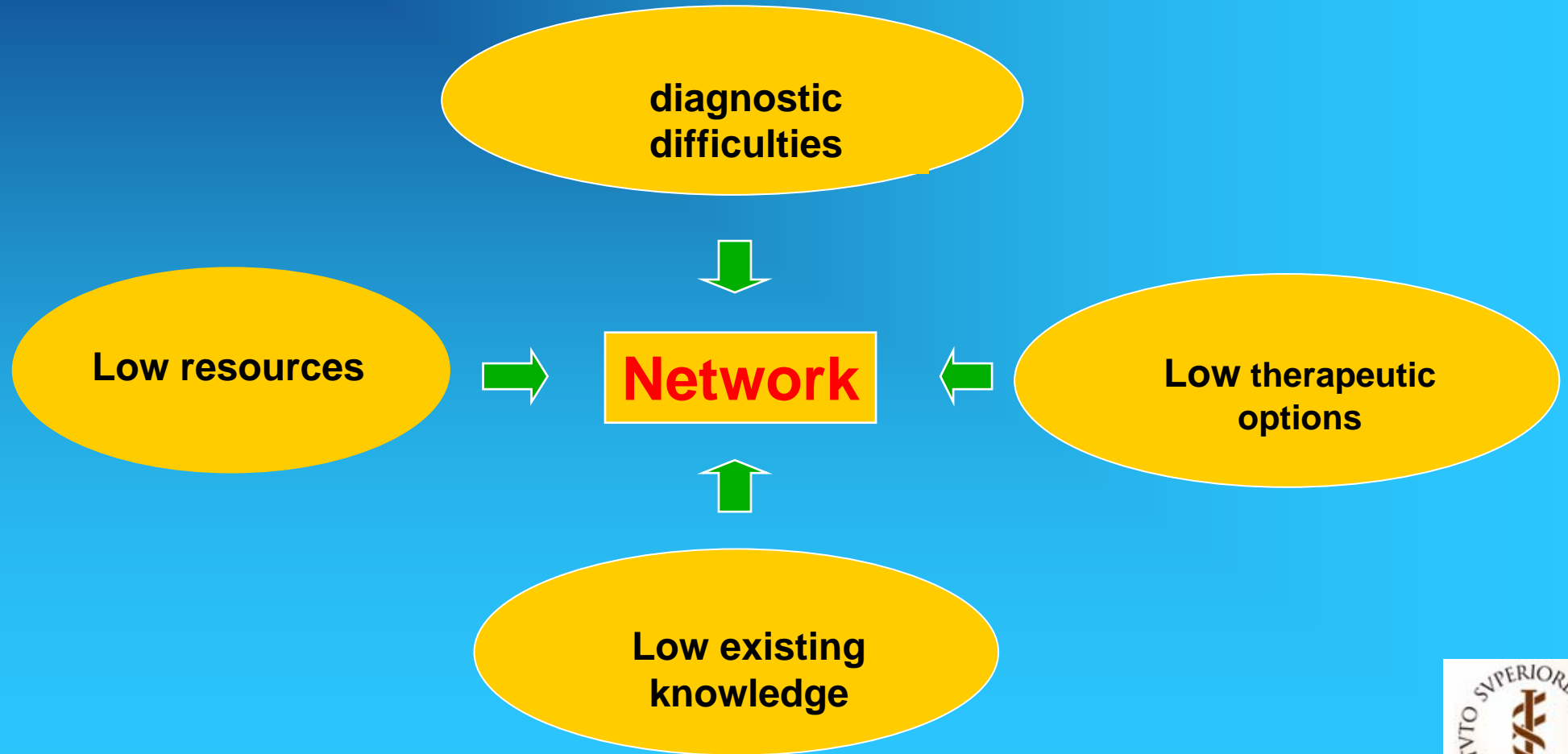
RARE DISEASES AND RESEARCH

- A) Lack of resources (few patients, few funds)
- B) Insufficient number of patients to conduct clinical studies



IMPROVE COLLABORATION

FOR RARE DISEASES...



RARE DISEASE AND ORPHAN DRUGS: PUBLIC HEALTH INITIATIVES

Europe

Italy

Regions



REGULATION ON RARE DISEASES IN ITALY

National Health Plans 1998-00; 2003-05

Regional Health Plans

National Network for Rare Diseases

Agreement between the Ministry of Health
and Regions



NATIONAL NETWORK FOR RARE DISEASES **(Governmental Decree 279/2001)**

for

Prevention
Surveillance
Diagnosis
Therapy

National Registry Rare Diseases
(Istituto Superiore di Sanità)

Free of charge for about 500 rare diseases



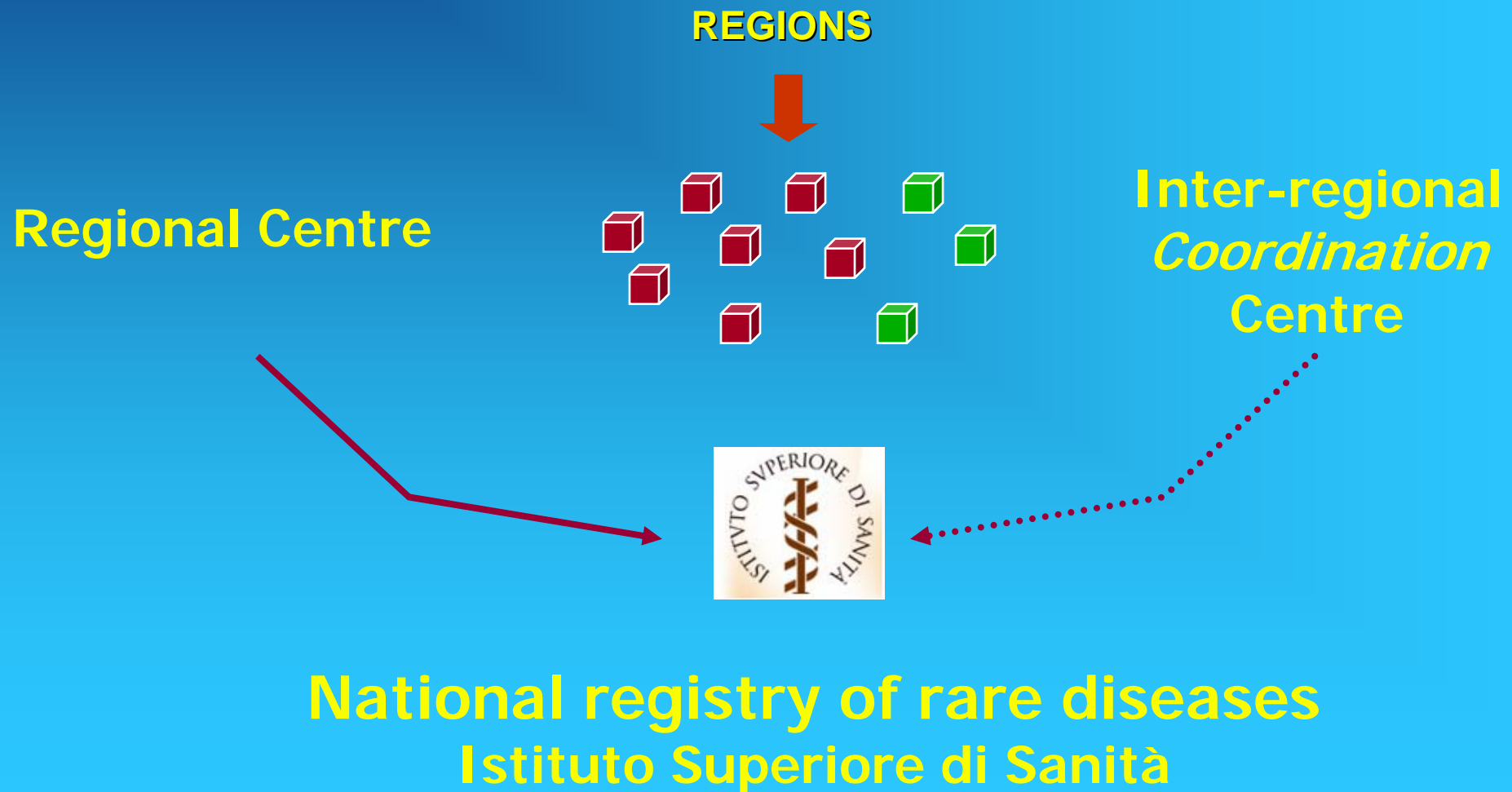
NATIONAL NETWORK FOR RARE DISEASES

set up in order to

- **Implement prevention activities**
- **Develop epidemiological surveillance**
- **Implement both diagnosis and care intervention**
- **Promote citizens information and physicians training (improve physicians awareness)**



Network for health services and epidemiological flow



Regions which have identified Centres for rare diseases

Presidi individuati da Delibera di Giunta Regionale, ufficialmente comunicati dalle Regioni al Ministero della Salute e all'Istituto Superiore di Sanità (D.M.18 maggio 2001 n. 279)



REGIONAL NETWORK FOR RARE DISEASES

Structures are selected according to their competence in

- ❖ Both Health care and Diagnostic services
- ❖ Health care services mainly
- ❖ Exclusively diagnostic services
- ❖ Every single RD or groups of RDs
- ❖ All RDs or great categories



NATIONAL NETWORK FOR RARE DISEASES



National Registry of rare diseases

General objectives

- A) National and regional health planning**
- B) Surveillance of rare diseases**



NATIONAL REGISTRY OF RARE DISEASES

Specific objectives

To estimate incidence or/and prevalence

To define standartized diagnostic and therapeutic protocols

To improve collaboration among health care operators



Agreement between the Ministry of Health and Regions (July 11, 2002)

- ✓ To co-ordinate the regional network activities
- ✓ To perform clinical protocols and guidelines
- ✓ To develop epidemiological surveillance
- ✓ To disseminate information on RD
- ✓ To collaborate with volunteers and non-government associations



**ACTIVITIES OF THE
ISTITUTO SUPERIORE DI SANITA'**

ON RARE DISEASES

NATIONAL CENTRE RARE DISEASES

<http://www.cnmr.iss.it>



RESEARCH

**NATIONAL
REGISTRY
RARE DIS.**

**NETWORK
PEDIATRICS**

**GENETIC
TESTS**

ASSOCIATIONS

NATIONAL CENTRE RARE DISEASES

<http://www..cnmr..iss.it>



ISTITUTO SUPERIORE DI SANITA'

INFORMATION

**ORPHAN
DRUGS-
EMEA**

**MEETINGS
COURSES**

NEPHIRD

NATIONAL NETWORK FOR RARE DISEASES

The National Registry is collecting epidemiological data on **547** different rare diseases.

Analysis have been performed for specific diseases on collected data to elaborate *ad hoc* studies, regarding for example:

a) **diagnostic delay**: in Prader Willi syndrome the delay has been calculated about 14 months.

b) **patients' migration**:

we analysed 207 patients affected by rare metabolic diseases and we found that approximately 40% of them migrate through Italian Regions to the aim to obtain obtain the diagnosis.

NEPHIRD

Network of Public Health Institutions on Rare Diseases

<http://www.nep hird.iss.it>



NEPHIRD

- **Project funded by the EU Commission (DG-SANCO)**
- **Coordinated by the Italian National Center for Rare Diseases (Istituto Superiore di Sanità, Rome, Italy)**
- **18 EU and associated Countries participate**
- **Duration: 2001-2002**
- **2003- 2005**



Countries involved in NEPHIRD:

18 EU and associated Countries

Armenia, Belgium, Croatia, Denmark, Finland, France, Germany, Ireland, Italy, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Portugal, Spain, Sweden, UK,

Collaboration with other Networks: EUROCAT, International Centre Birth Defects



The main objectives of NEPHIRD

- a) to estimate epidemiological indices (prevalence, incidence) of selected RD at European level
- b) to assess the quality of life and quality of health care in RD management
- c) to develop indicators of public health for RD
- d) to develop guidelines for specific RD



NEPHIRD: WORK IN PROGRESS

Collecting epidemiological data at EU level

Indicators to assess quality of life

Guidelines

SELECTED RD

Cornelia de Lange syndrome, Limb reduction defects, Myasthenia gravis, NF-1, Prader-Willi syndrome, Propionic acidemia, Rett syndrome



ISS : CNMR : NEPHIRD

CNMR



Il Centro

Malattie rare

Registro Nazionale

Progetti

Collaborazioni



NEPHIRD

(NETwork of PUBLIC Health Institutions on RARE Diseases)

- Description
- Objectives
- Participating Countries and Organizations
- Legislation and Regulations
- Activities
- No profit Organizations
- Links
- Disclaimer

Il Centro | Malattie Rare | Registro Nazionale | Progetti | Collaborazioni
Farmaci Orfani | Test genetici | NEPHIRD | Formazione | Associazioni | Forum | Links

Research projects and publications

**Quality assessment in cytogenetic and molecular genetic testing:
the experience of the Italian Project on Standardisation and Quality Assurance.**

Taruscio et al., Clin Chem Lab Med., 2004

Tackling the problem of rare diseases in public health: the Italian approach.

**Taruscio D, Ido MS, Daina E, Schieppati A.
Community Genet. 6(2):123-4, 2003**

**A new polymorphism in the flanking region of human VAMP2 and
hPer1 genes.**

Falbo et al., Mol Cell Probes, 2002

**Chromosomal alterations detected by comparative genomic
hybridization**

in non-functioning endocrine pancreatic tumors

Floridia et al., Cancer Genet. Cytogenet., 2004

PROJECTS IN COLLABORATION WITH PATIENTS:

**ACCESSIBILITY AND QUALITY OF HEALTH SOCIAL
SERVICES FOR PATIENTS WITH RARE DISEASES:**

**OPINIONS OF PATIENTS' GROUPS
(in press Annali di Igiene)**

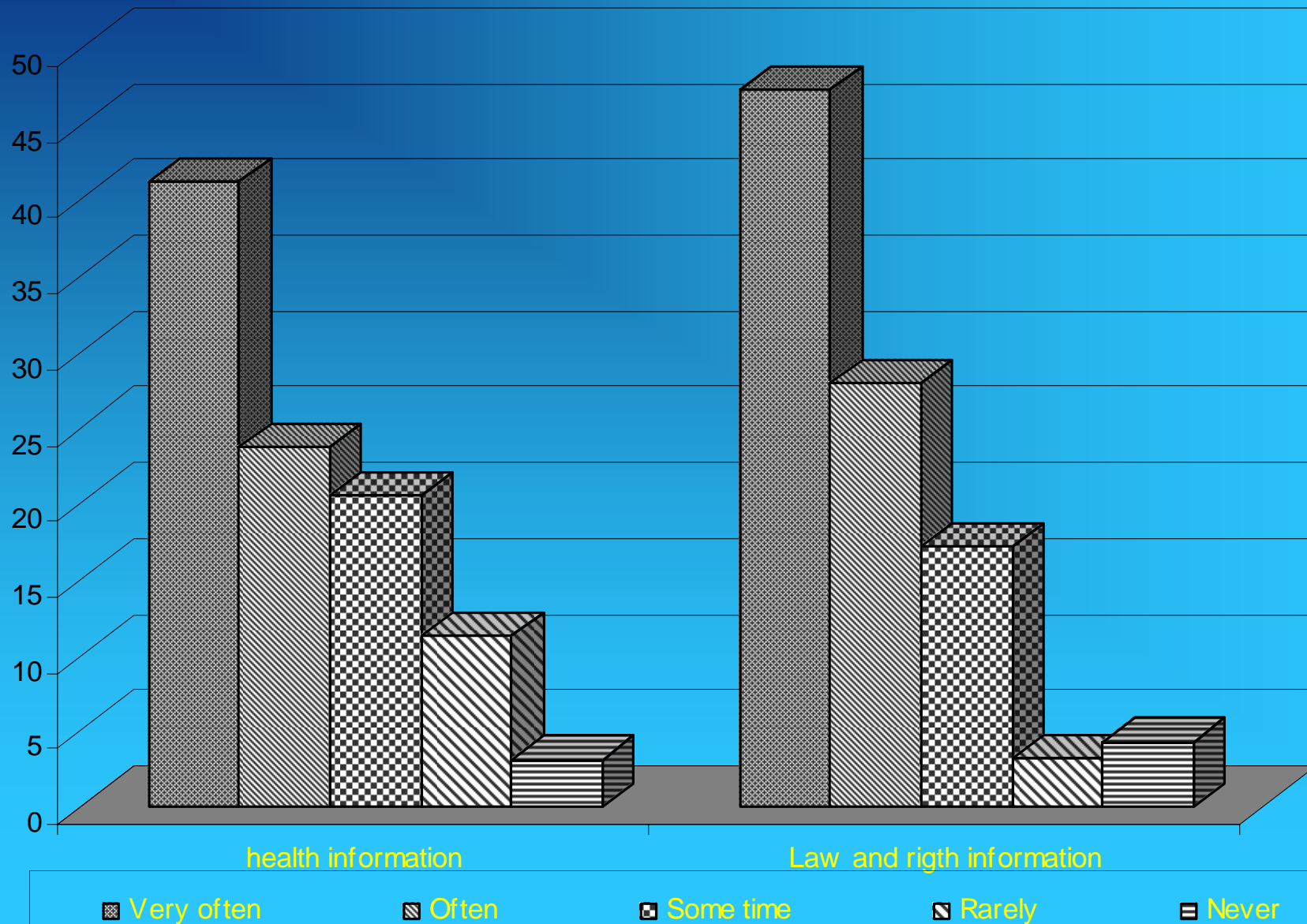
**E. Agazio, P. Morosini, P. Salerno, F. Mirabella, F.
Gnessi, N. Mancino, D. Taruscio and Patients
Groups**



Opinions of Associations on health and social service (scaled from 1 to 10)

Macro-area	Statistics	accessibility and quality of diagnosis	accessibility and quality of treatments	accessibility and quality of social and psychological supports	Integration of social and health services	school and professional training
NORD	means	6,4	6,1	5,2	5,3	5,3
	median	7,0	7,0	6,0	6,0	6,0
	S.D.	2,5	2,2	2,4	2,3	2,4
CENTER	means	6,2	6,1	5,0	5,0	5,0
	median	7,0	6,0	6,0	5,0	6,0
	S.D.	2,3	1,8	2,0	2,1	2,2
SOUTH	means	4,8	4,9	4,1	4,0	4,5
	median	5,0	5,0	4,5	4,0	5,0
	S.D.	2,5	2,1	2,2	2,3	2,1
ISLANDS	means	4,6	4,8	4,0	3,9	4,3
	median	5,0	5,0	4,0	4,0	4,0
	S.D.	2,6	2,4	2,3	2,2	2,0
ITALY	means	5,7	5,6	4,8	4,7	4,9
	median	6,0	6,0	5,0	5,0	5,0
	S.D.	2,6	2,2	2,3	2,3	2,3

Opinions on quality and availability of information



Drug Therapy in **Rare Diseases**

Persons suffering from rare diseases

have the **same rights** as their fellow citizens

to **safe and effective therapies**



EU Orphan Regulations

- **Regulation (EC) No 141/2000** of the European Parliament and of the Council on Orphan Medicinal Products of 16 December 1999

- **Commission Regulation (EC) No 847/2000** of 27 April 2000



What is an Orphan Medicinal Product

Orphan Medicinal Products

- for **rare diseases** (EU 5: 10.000)
- **life-threatening** or very serious
- **development costs** > expected return on investment

Lack of sponsors developing orphan medicinal products



ITALY AND ORPHAN DRUGS

A) EU LEVEL: PARTICIPATION TO THE ACTIVITIES OF EMEA – COMP

B) ITALIAN DRUG AGENCY: policy on orphan drugs

C) PARTICIPATION TO EU PROJECTS:

- EuOrphan: Service for the support of the European Orphan medicine market
- TEDDY: Task Force in Europe for Drug Development for the Young - Network of Excellence

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