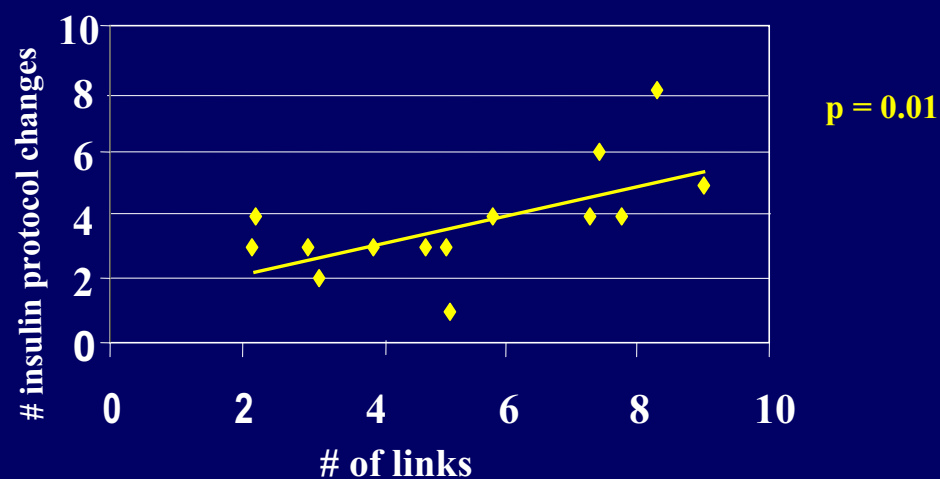


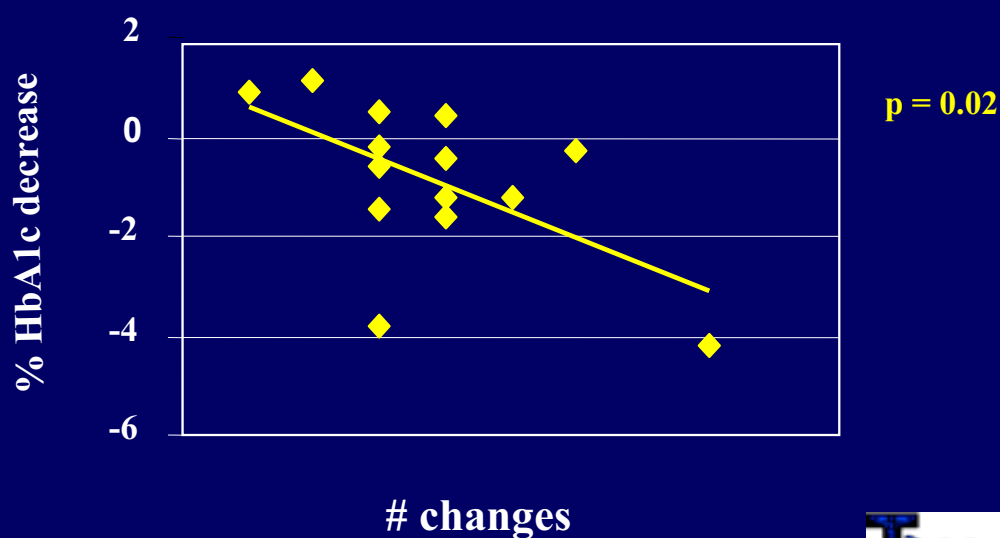
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WORKSHOP VIII

RESULTS: CORRELATIONS 1



RESULTS: CORRELATIONS 2



RESULTS: SUMMARY

- **Therapeutic protocol variations: 4-7/pt**
- **N° access PU-MU: 35-63/pt**
- **N° BGM PU-MU: 323-733/pt =1.4-3 BGM/pt**
- **N° electronic messages from:**
 - PU-MU 28-44
 - MU-PU 23-39**(weekly exchange)**



PHISICIANS' COMMENTS

- ***Greater continuity of care***
 - **useful for patients living far from the hospital**
 - **save of school and job days**
- ***Renewal of the patient-physician interaction***
 - **empowered by information technology**
 - **maintained with outpatient check-ups**



PATIENTS' COMMENTS

- ***Intensified self-monitoring:***
 - potentially successful
 - useful to improve metabolic control
 - sometimes cumbersome
- ***New relationship with the physician:***
 - increased frequency of contacts
 - human link is mandatory



FUTURE DEVELOPMENTS

- **Implementation in other Hospitals**
- **Recruitment of a larger group of patients**
- **Clarification of the legal aspect**
- **Acknowledgement from the Institutions**



A CAREFUL BALANCE BETWEEN:

*Who does not employ new
remedies must be ready for
new misfortunes,
because time is
the greatest innovator.*

F. Bacone

*When the technology is the
master, the disaster will
come faster.*

Zvi Laron



Telemedicine Networks for Research and Assistance in remote areas: 70 years of experience

E8

WORKSHOP VIII

*Prof. Sergio Pillon,
Telemedicine, San Camillo-Forlanini, Hospital, Rome*

Background

Italy starts “public” telemedicine activities on the oceans and in Mediterranean Area since 1935. The purpose was “ (...) *to give medical indications and suggestion. It could be requested in case of accidents or diseases occurred to people on board of ships. The service is instituted as integration and not as substitution of the job done, with very good results, from doctors involved as consultant since today (...)*” (signed, 1935). The president was Guglielmo Marconi and the age the Information and communications technology was just started with Marconi’s radio. The International Radio Medical Center (CIRM) was born

Italy starts in 1995 two large research programs outside of Italy, the National Antarctic Research Program (PNRA), with the realization of Italian Antarctic Station Terra Nova Bay and now the Italian-French and European Space Agency (ESA) station, Concordia, and the program Everest K2 CNR, building with National Research Council (CNR) the highest medical laboratory in the world, the Pyramid, at the bottom of Mount Everest. Italy is also involved in ESA space mission to Mars, (2 years long) where Telemedicine plays a key role.

Telemedicine activities are done on the seas, in Antarctica and at the bottom of Mount Everest, with or without remote doctors, since last 70 years on the sea and since last 15 years in Antarctica.

Italy represents today an excellence in Antarctic Telemedicine, and has the role of Chairman of the Telemedicine subgroup in the Scientific Committee for Antarctic Research (SCAR), the International Scientific organization supporting Antarctic Treaty for regulations and “governance” of Antarctica.

Objectives and Methods

The remote Assistance complexity is much more than technology. The technology itself today is just a minor problem; videoconference is not enough to have telemedicine services, like knife and emergency room are not enough to perform surgery. Years of experience are needed, many patients treated, doctors, technicians and nurses trained (and people who trained them), clear cost/benefit analysis, not more than fifteen minutes to perform a routine teleconsultation, protocols and procedures, reimbursements and so on. We have now a vast experience in these fields, all done with public funds and in large public healthcare system, to share for starting services. We are at the end of experimental phase, ready for implementation in healthcare services.

Results and conclusions

More than 1200 patients/year treated with telemedicine from CIRM, a medical assistance in Antarctica reliable and complex, from echographic telediagnosis, Tele ENT, Tele eye, tele radiology, ... between doctor and specialists, using Internet. We have many experiments also from Mount Everest, with portable devices for pulmonary and transcranial flow remote tele monitoring, all from a large public hospital, all low cost, state-of-the-art technology

San Camillo-Forlanini hospital is starting the Telemedicine operative Unit, one of the first large public hospitals in Italy starting Telemedicine services. Cooperation with ESA in telemedicine has start-

ed. The results and lesson learned of one of the largest experience in Europe will be presented. The experiences done permit to propose a roadmap to join patients needs (quick appointments, close to the house, cheap, specialists) doctors (don't need more work, neither becoming computers geek) and politicians (reduce cost, reduce number of hospital beds, better healthcare)

Brief resume of Professor Sergio Pillon,

46 years, married, 2 sons, degree in medicine and surgery, specialization in Medical Angiology, Fellow in Vascular Medicine
email pillon@com-e.com

- **First level Director**, responsible of Telemedicine Services of San Camillo-Forlanini Hospital, Rome, one of the largest Hospital in Italy.
- **Member of the executive board** of the CIRM (International Radio Medical Centre, Foundation for the Telemedicine, founded from the H.M. King of Italy Vittorio Emanuele III and Guglielmo Marconi in 1935, currently supported from the Ministry of Health, Ministry of Navy, and Ministry of the transports) one of the ancient institutions of telemedicine of the world, 1200 patients/year
- **Professor of First University** of Rome, "La Sapienza", the School of specialization in vascular surgery, assignment of instruction of Semeiotic of the Venous Diseases
- **Teacher in the course** for the European Fellowship in Vascular Medicines
- **In charge of research** of the CNR (Italian National Research Council), for telemedicine and the vascular adaptations to the extreme conditions
- **Responsible of operative unit of Telemedicine** in the National Research Program in Antarctica (PNRA) since 1989
- **Responsible of operative unit of Telemedicine** in the research Project "Everest K2 CNR" (Pyramid on the bottom of the mount Everest Khumbu valley, 5050 mt, Nepal,) since 1990
- **Italian Medical Coordinator** in the E.C.Telemedicine Project ARGONAUTA, (Dg XIII)
- **Chairman of telemedicine activities** of Expert Group of Medicine in the Scientific Committee for Antarctic Research SCAR,.
- **Member of the board** of the Italian Society of Extreme Environment Medicines (ISEEM)
- **Courses**
- **Sanitary Management Course** in the Master in Sanitary Economy, University of Rome, "Tor Vergata", Faculty of Economy in 2000
- **Management Course** SDA Bocconi, 1999

Other important realizations

- Telemedicine System and assistance of Terra Nova Bay, Italian Station in Antarctica (Italian National Research Program in Antarctica)
- AMEN, Antarctic Manager Electronic Network
- Healthcare project for the 2000 Giubilee
- Collaboration to the volumes "the continuous wave doppler" "the pletismografia", "the Transcranial Doppler" and "Critical Limbs Ischemia"

Telemedicine Services for Paediatric Excellence

Paolo Tomà

G. Gaslini Institute
Genoa - Italy

paolotoma@ospedale-gaslini.ge.it



Paediatric Radiology

- Area of Paediatrics that passes a period of crisis (like the majority of the Paediatric sub-specialities)
- Imaging: area of choice for Telemedicine





GENERAL TRUTHS FOR POLITICIANS

- Children are small adults
- Children do not vote and win elections
- What is right for adults must also be right for children
- Money is limited. Spend it on the majority of the population
- “Adult” doctors do not contradict these views
- Today’s children are tomorrow’s voters

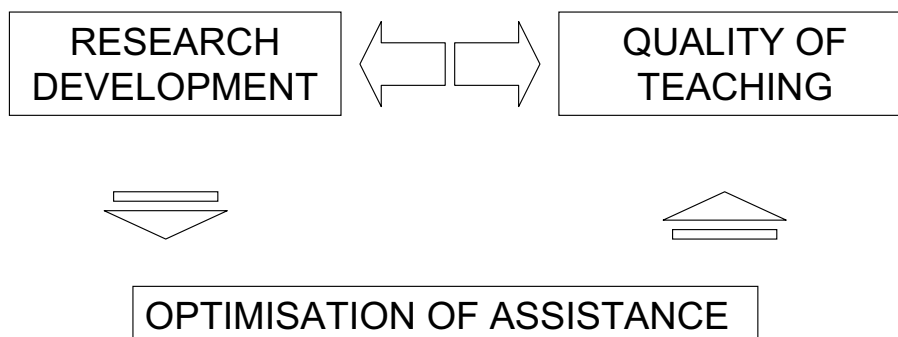


GENERAL TRUTHS FOR “ADULT” RADIOLOGISTS

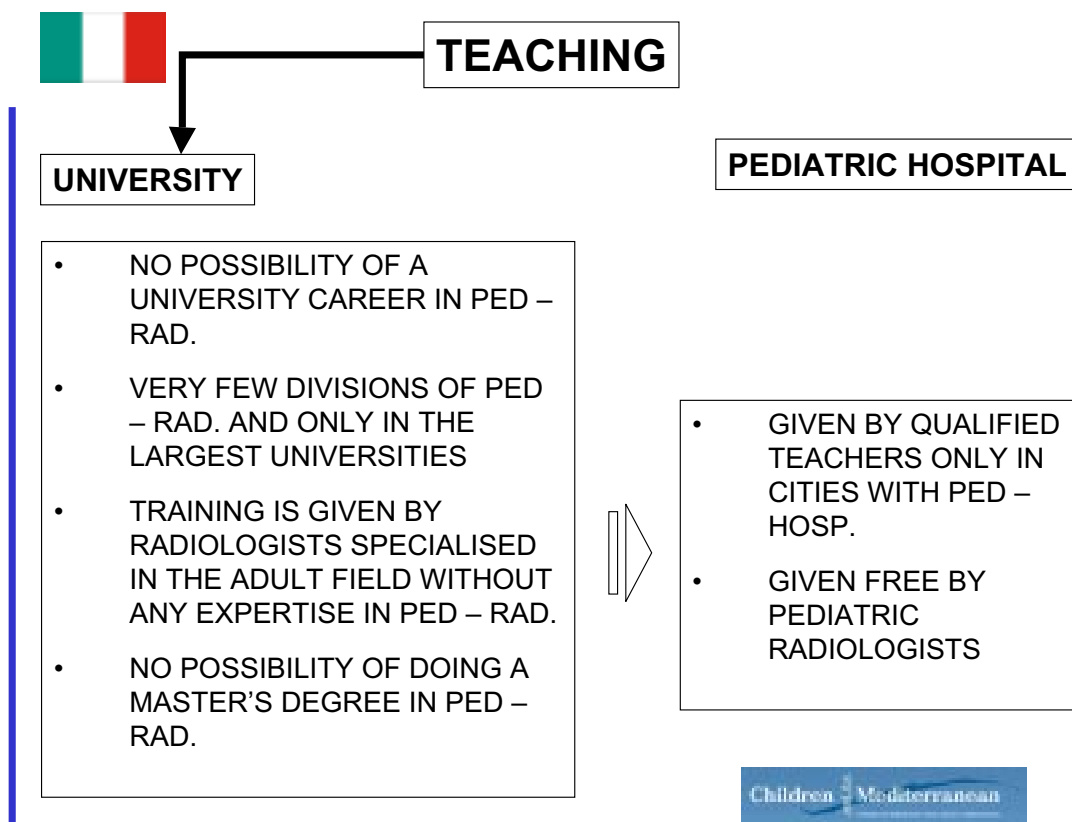
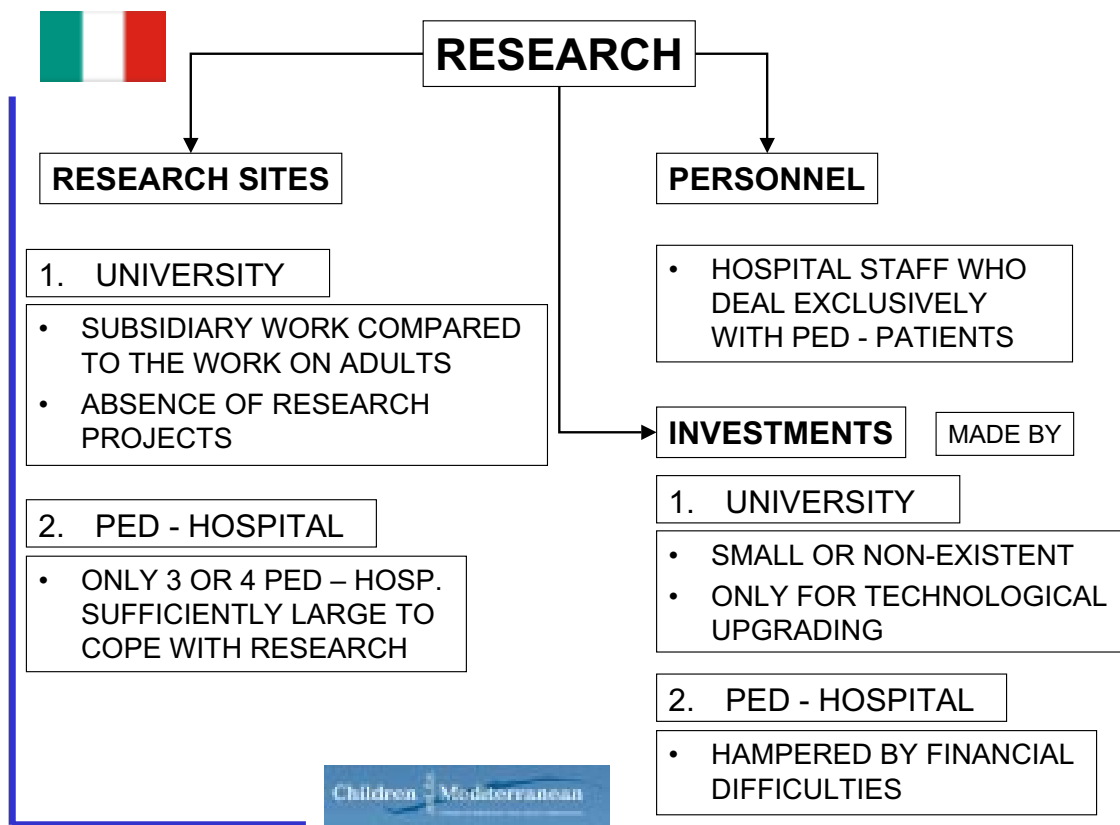
- Children are not small adults, yet are thus perceived.
- Adult radiologists do not know enough about children. ? Do they care
- Paediatricians are not vocal in demanding specialist services
- Adult radiologists are terrified of children
- Exposure to clinical paediatrics limited in medical schools - therefore lack of familiarity
- General radiology training gives little exposure to paediatrics
- Paediatricians not trained with specialist paediatric radiologists do not know what they are missing

Children & Mediterranean

GROWTH OF A DISCIPLINE

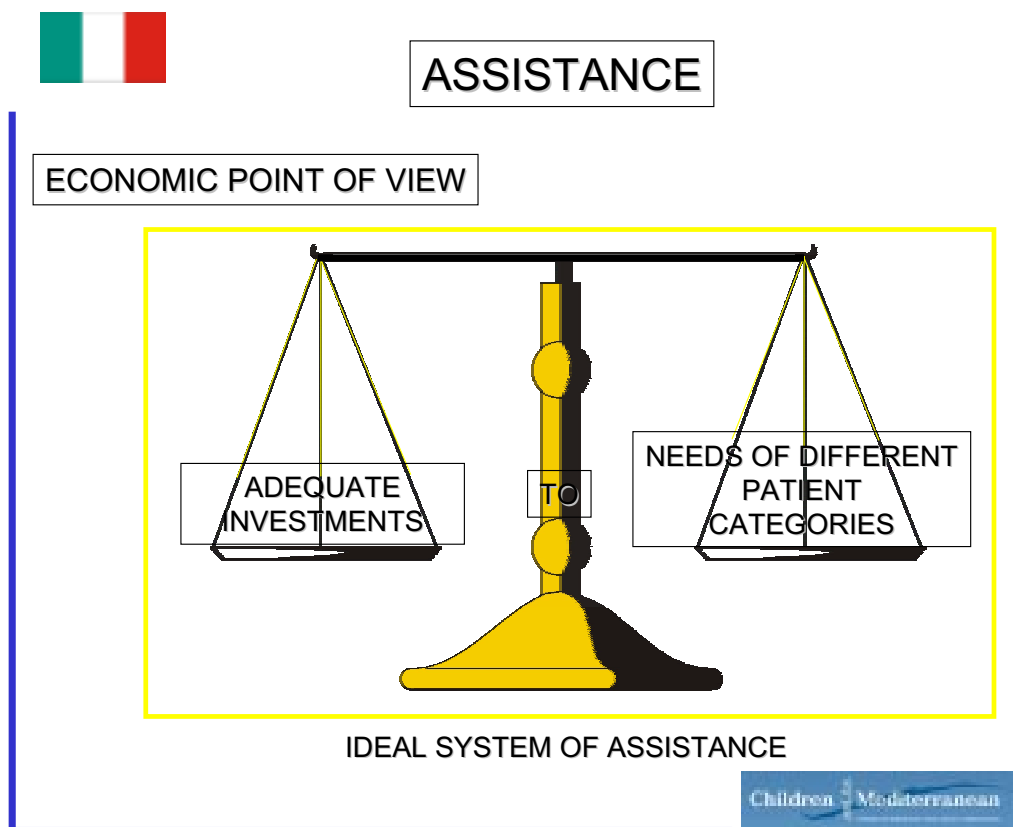
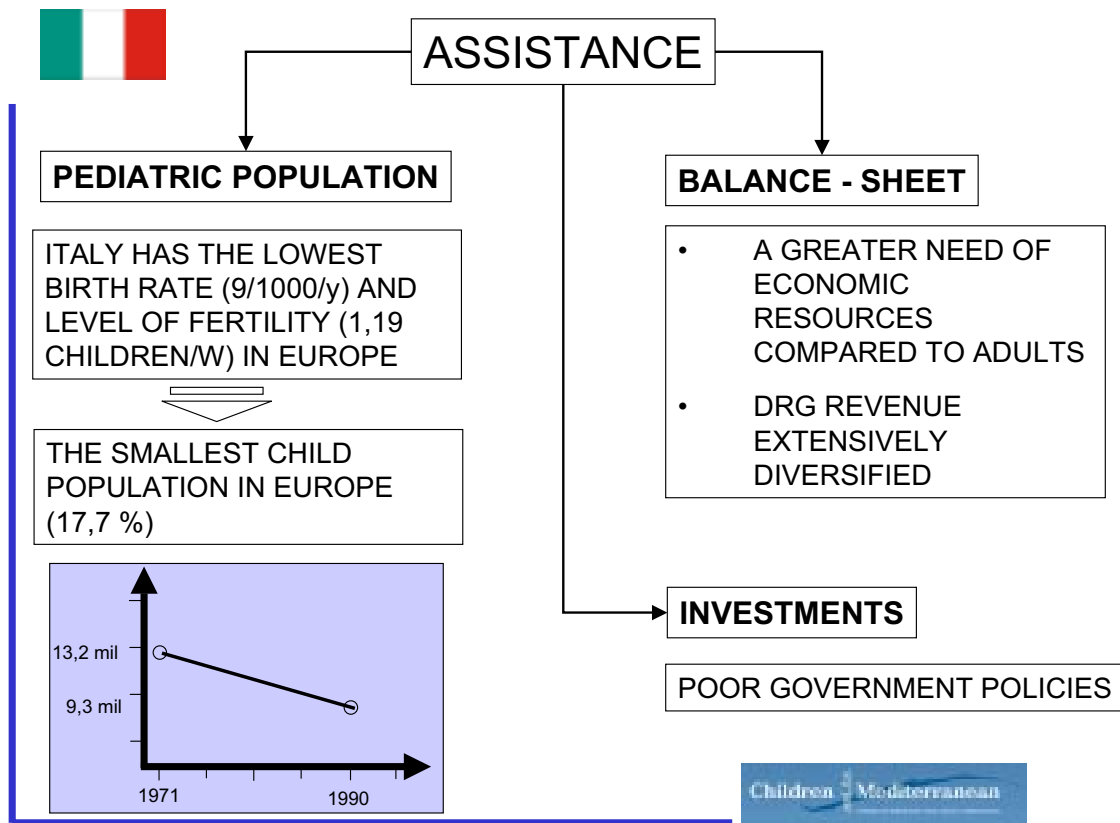


Children & Mediterranean



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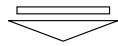




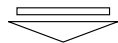
ASSISTANCE

PEDIATRIC POPULATION

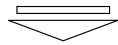
< N° OF PATIENTS ASSISTED



CLOSURES OF PED. UNITS AND
Rx – PED. DEPARTMENTS



CHANGE OF DUTY
PED. RAD. → AD. RAD.



PEDIATRIC Rx – DIAGNOSIS

IN ITALY = 20 %
→ 18 % AD. RAD.
→ 2 % PED. RAD.

QUALITY OF
DIAGNOSIS
SUFFERS

THE PEDIATRICIAN
LOSES A "CULTURAL"
POINT OF REFERENCE
FOR THE DIAGNOSIS

RISK OF POTENTIAL
MALPRACTICE

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WORKSHOP VIII



CONCLUSIONS: ITALIAN SITUATION

RESEARCH

TEACHING

ASSISTANCE



GENERALLY LOW STANDARD OF
PEDIATRIC RADIOLOGICAL
DIAGNOSIS

Children - Mediterranean