Telemedicine from the point of view of students from Romania and Italy

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(3) - University of Bologna, Italy

Aims of the study

1. Systematic analysis of telemedicine issue using EMBASE data base

2. Questionnaire - information about telemedicine issues

3. To contribute to the development of a **educational program for human resources** for telediagnosis-telemedicine

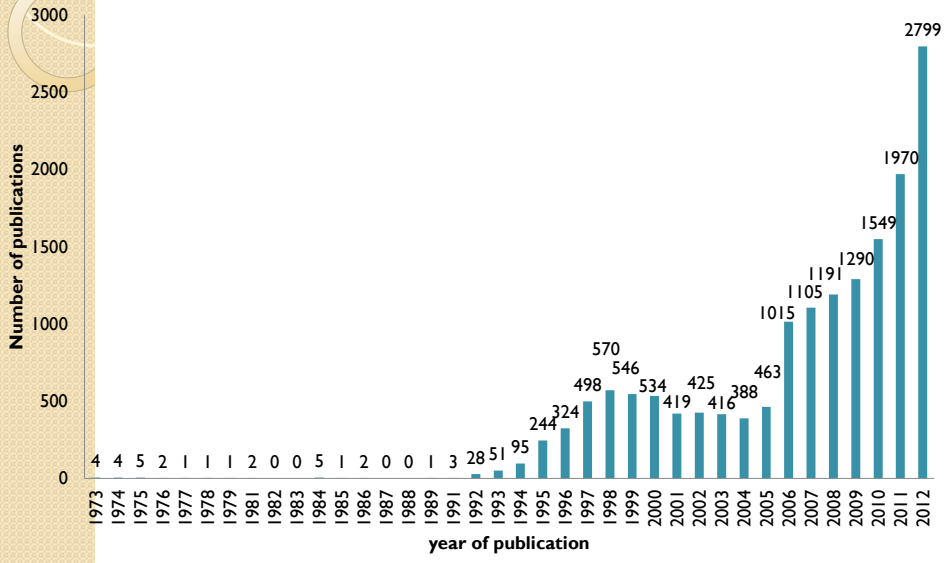
1. Systematic analysis of telemedicine issue through EMBASE data base

- Past and future in telemedicine publications

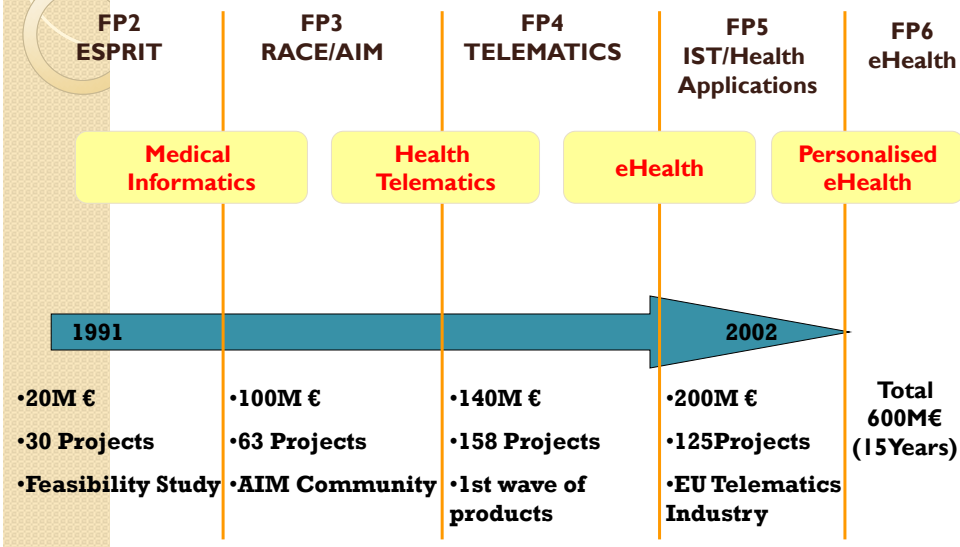
Material and methods

- **Type of study** – Systematic analysis
- **Study details** – article published between 1973-2012 from EMBASE data base

Dynamics of publications concerning telemedicine - 1973-2012



EC funding grants



2. QUESTIONNAIRES CONCERNING TELEMEDICINE

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Aim

- **identifying information of students from two EU countries – Romania and Italy on the issue of telemedicine and telediagnosis**

➔ **Questionnaires** (single or multiple answers)

Material and method

- **Data collection** - questionnaires Nov 2011-May 2012 (21 questions)
- **Groups** – students from Romania (Brasov) and Italy (Milano, Bologna)

Questionnaires - participants

➔ 443 in statistical analysis

- **Romania –Brasov UTBv (N= 246)**
- **Italy – N=197**
  - **Milano (51)**
  - **Bologna (146)**

Universita Degli Studi Di Milano (Facultaty of Pharmacy)

Universita Degli Studi Di Bologna (Faculty of Pharmacy)

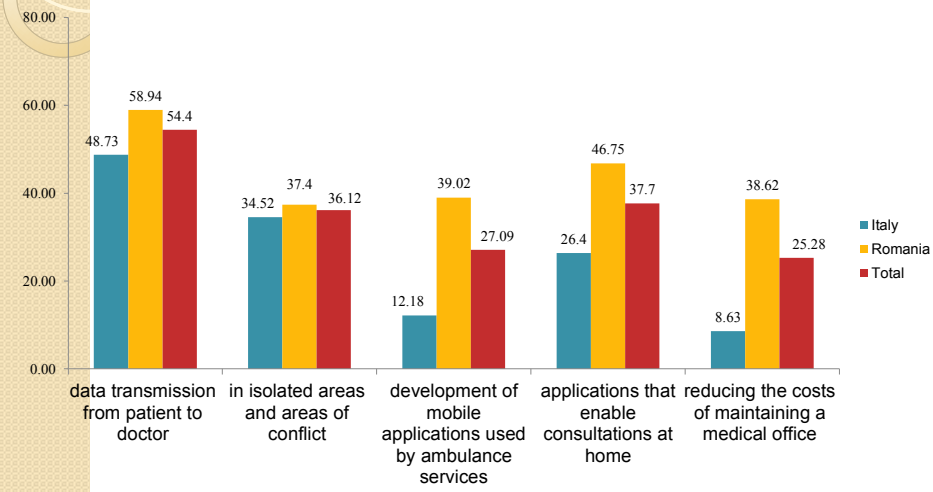
Universitatea Transilvania din Brasov

→ Faculty of Wood Industry, Faculty of Mechanical Engineering, Faculty of Food and Tourism, Faculty of Law, Faculty of Economical sciences, Faculty of Electrical Engineering and Computer Sciences

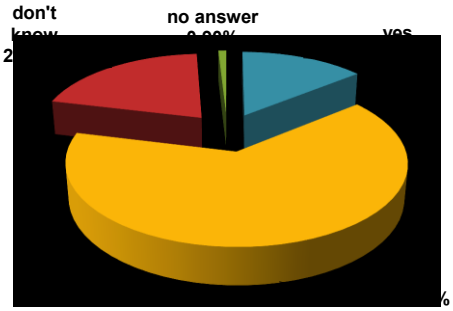
Characteristics - Gender

City -Country	Total number	Women (%)	Men (%)
Bologna	146	82,88	17,12
Milano	51	90,20	9,80
Romania	**246**	**53,25**	**46,75**
Italy	**197**	**84,77**	**15,23**
Total	443	67,27	32,73

Possible applications of telemedicine

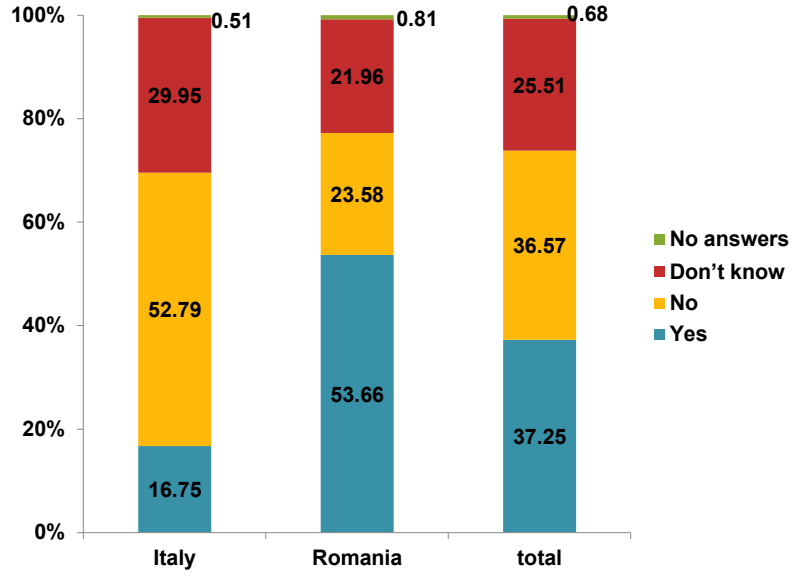


Do you think that the diagnostic obtained using telemedicine (and high level technology) has **higher credibility** than the one where the patient also undergoes a physical exam?

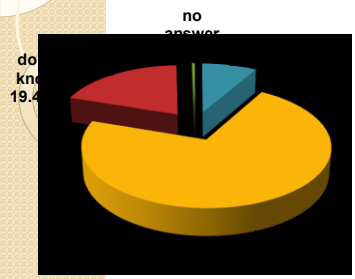


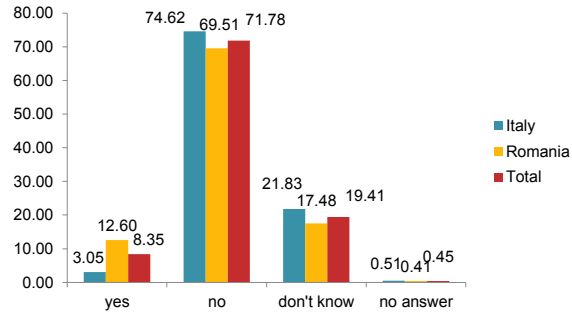
Country	Yes (%)	No (%)	Don't know (%)	No answers (%)
Italy	10,15	67,01	21,83	1,02
Romania	**17,48**	62,60	19,11	0,81
Total	14,22	64,56	20,32	0,90

The trust on telemedicine, knowing that the relation doctor-patient is not a direct relationship

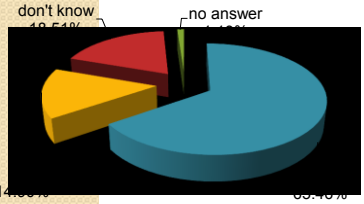


Could telediagnosis totally replace traditional diagnosis?



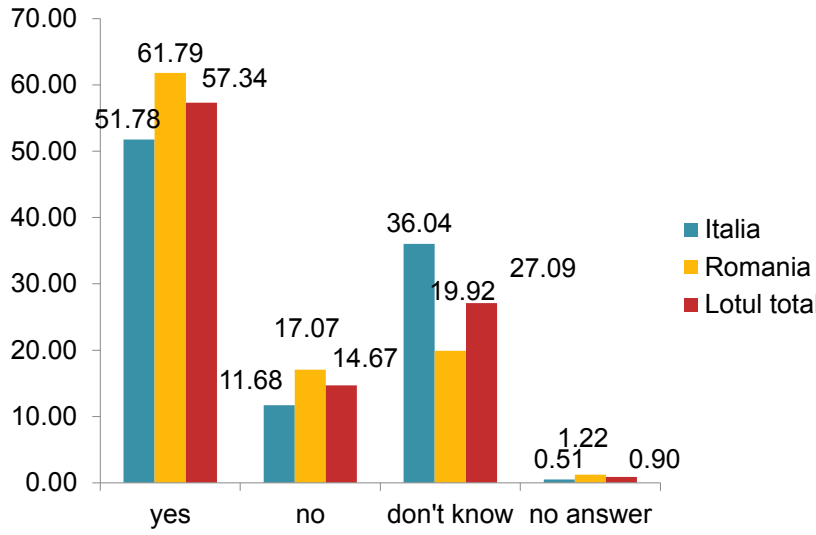


Can telediagnosis be used as a complementary tool of traditional diagnosis?



Country	Yes (%)	No (%)	Don't know(%)	No answer (%)
Italy	**60,91**	17,26	20,30	1,52
Romania	**69,11**	13,01	17,07	0,81
Total	65,46	14,90	18,51	1,13

•Telediagnosis is a highly proficient method that allows you **access to specialty consultations in clinics around the world**



Diagnostic errors are reduced using telediagnosis

Country	Yes (%)	No (%)	Don't know (%)	No answer (%)
Italy	18,27	**53,81**	**26,90**	1,02
Romania	**38,21**	41,87	19,11	0,81
Total	29,35	47,18	22,57	0,90

Telemedicine of is not widely used because

Country	Techniqual problems (%)	No specialists in the field (%)	There is no Ministry of Health program for implementing such an approach (%)	The population rejects the idea of telediagnosis (%)
Italy	29,95	13,71	21,32	41,12
Romania	**46,75**	**45,93**	**57,32**	56,10
Total	39,28	31,60	41,31	49,44

Ethical issues in telediagnosis are related to

Country	The need for insuring confidentiality (%)	How informed consent is obtained (%)	There are no ethical issues, since the data systems involved are very safe (%)
Italy	**37,06**	21,83	36,55
Romania	31,30	23,98	**45,12**
Total	33,86	23,02	41,31

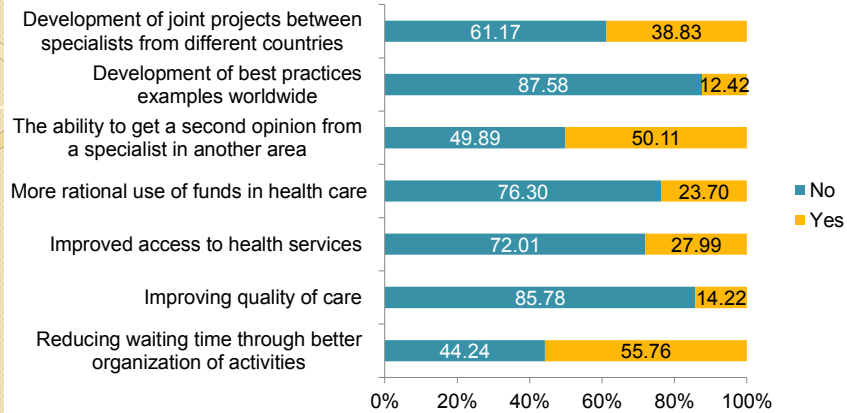
Telemedicine can be used in the following areas

Country	Application of telemedicine						
	Emergency medical care (%)	Laboratory tests (%)	Cardiology (%)	Surgery (%)	Home care (%)	Ophtal mology (%)	Derma tology (%)
Italy	30,96	**45,18**	12,18	**14,72**	30,96	8,63	**10,15**
Romania	**47,97**	23,58	12,20	8,13	34,15	6,10	6,50
Total	40,41	33,18	12,19	11,06	32,73	7,22	8,13

Advantages of the telemedicine for health care providers

Country	Freedom to choose their own schedule (%)	Increasing accessibility to consultation, the patient can be continuously connected to a GP (%)	Decreased costs by decreasing transport costs (%)	Access to a specialist located far away in relation to the patient (%)
Italy	10,66	33,50	36,55	51,27
Romania	**46,34**	**67,07**	**51,22**	50,81

Telemedicine ➔ Benefits of patients



Country	Reducing waiting time through better organization of activities (%)	Improving quality of care (%)	Improved access to health services (%)	More rational use of funds in health care (%)	The ability to get a second opinion from a specialist in another area (%)	Development of best practices examples worldwide (%)	Development o joint projects between specialists fron different countries (%)
Italy	53,30	13,20	**31,98**	6,09	50,76	4,57	30,96
Romania	57,72	15,04	24,80	**37,80**	49,59	**18,70**	**45,12**

Conclusions

- **Exploratory study** – to gain insights on general perception about telemedicine
- The results were used **to develop a program for education of master and PhD students in the field of telemonitoring and telediagnosis for life sciences**

ERASMUS IP - 12-EIP-RO BRASOV01-BIS
TELEMONITORING AND TELEDIAGNOSTIC FOR LIFE SCIENCES
MAY 13-25, 2013 - Brasov

COORDINATOR –Universitatea Transilvania din Brasov – Assoc Prof. dr. Mihaela Badea

http://biofiz.unitbv.ro/telemed/index.html

R-D2

Partnership TTLS

- Universite de Perpignan Via Domitia (Franta)
- Universitatea Babes-Bolyai din Cluj Napoca si Universitatea Ovidius Constanta (Romania)
- University of Pecs (Ungaria)
- University of Pardubice (Republica Ceha)
- University of Ljublijana (Slovenia)

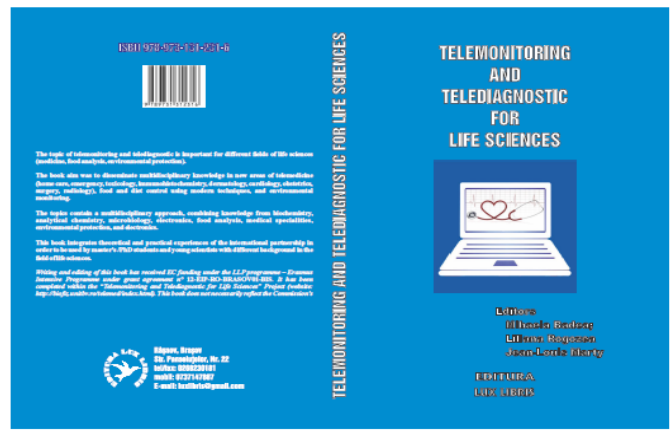
- **UniversitateaTransilvania din Brasov (UTBv)**

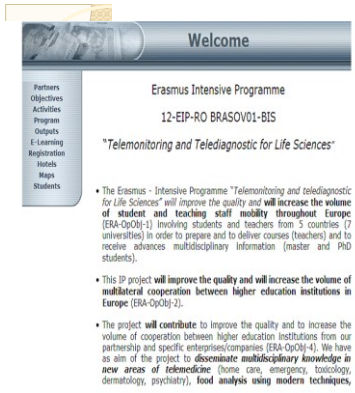
- Faculty of Medicine
- Faculty of Electrical Engineering and Computer Sciences

•Scientific visits

Collaboration ICCO Clinics Brasov – Telecardiology

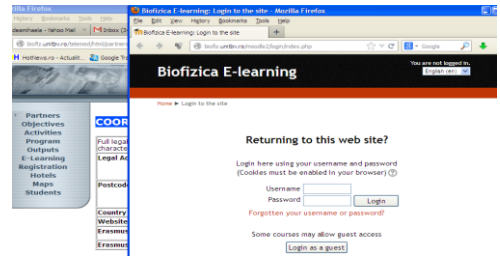
Research Institute PRO-DD of UTBv





Site TTLS

http://biofiz.unitbv.ro/moodle2/course/view.php?id=495



Online teaching materials – ppt, teste

Intensive courses TTLS – Brasov – certificate with ECTS credits for students

Students materials – report TTLS + scientific reports/ video presentations

Online evaluation of the students –Dropbox- **Transcript of records 6ECTS**

International Conference

New Trends on Sensing- Monitoring-Telediagnosis for Life Sciences

July 24-26, 2014, Brasov, Romania – smt.ls.2014@gmail.com

Telediagnosis for Medicine
- Analytical and bioanalytical methods for screening and diagnosis in medicine
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- Personalized medicine
- Improving health information, data exploitation and providing an evidence base for health policies and regulation
- Social innovations to improve the quality of life and well-being of older people
- Active ageing, independent and assisted living
- Improving health promotion & disease prevention
- Assessment of disease susceptibility and diagnosis

Integrative Environmental Sciences
- Environmental pollution and its effects on health
- Environmental pollution -sensing, telemonitoring and modeling of environmental factors
- Environmental toxicology
- Risk assessment of contaminated environments

New Trends in Biomedical Engineering Sciences
- Electronic medical devices
- Data and signal processing
- Medical image processing
- Biomedical computing and simulation
- Personalized electronic tools for effective virtual rehabilitation environment after a stroke.

Thank you for your attention!

For contact concerning the conference

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