

Εδνικόν και Καποδιστριακόν Πανεπιστήμιον Αδηνών ΠΔΡΥΘΕΝ ΤΟ 1837School of Health Sciences CENTER FOR HEALTH SERVICES MANAGEMENT AND EVALUATION -CHESME



## **CHESME'S PROFILE**

## **National & Kapodistrian University of Athens**

### **Contact Details**

CHESME - Center for Health Services Management and Evaluation Department of Nursing School of Public Health National and Kapodistrian University of Athens <u>Address:</u> 123 Papadiamantopoulou Str., 115 27 Athens Greece <u>Tel:</u> 0030 210 746 14 70-1 CHESME SITE: <u>http://chesme2.nurs.uoa.gr/</u>

**Director Daphne Kaitelidou**, Professor, NKUA (<u>dkaitelid@nurs.uoa.gr</u>) *Health Management, Human Resources in Health National Representative to OECD Health Committee* 

#### CHESME Research team

#### **Coordinator of Research Projects**

Dr. Olga Siskou (<u>olsiskou@nurs.uoa.qr</u>) Assistant Professor in Health Economics - University of Piraeus Deputy National Representative to OECD Health Committee

#### **Senior Researcher**

Olympia Konstantakopoulou (<u>olykonstant@nurs.uoa.gr</u>) Research and Teaching Staff (Economist, MSc, PhD) in Health Quality Assurance and Improvement, Health Management, and Health Economics

#### Study design and data analysis expert:

Dr. Petros Galanis (<u>pegalan@nurs.uoa.qr</u>) Assistant Professor in Research Methodology and Evidence-based Decision Making in Nursing, Statistics, Epidemiology, Public Health Member of the Health Technology Assessment Committee

#### **AREAS OF ACTIVITIES**

The **Center for Health Services Management and Evaluation (CHESME)** (Department of Nursing, National and Kapodistrian University of Athens) was founded in August 1996 by an academic team from the Department of Nursing.

CHESME (certified with EN ISO 9001:2008) specializes in the areas of Health Economics, Health Services Research and Health Care Management. Its main research team and external associates consists of academics, experts and researchers from the fields of Health Management and Economics, Research Methodology, Evidence-based Decision Making in Nursing, Nursing, Health Informatics, Medicine, Sociology and Psychology.

The main areas of activities include:

- Collaborations with international organizations and research institutes (e.g. <u>OECD</u>, <u>EUROSTAT</u>, <u>WHO</u>, <u>LSE</u>, <u>BASYS</u> etc) by providing research and field scientific data, policy analysis and consulting services on EU countries' health systems, health institutions and the relevant national context and in assisting the harmonization of national and EU health policy and practice with the international experience.
- Participation in National and International research projects regarding:
  - <u>Socio-economic evaluation and performance measurement in health</u>
  - <u>Measurement of quality, productivity, and efficiency indicators</u> for health systems, services, and institutions
  - <u>Patient Reported Indicators PREMs and PROMS</u>
  - <u>Pharmacoeconomic Research</u>, Pharmaceutical Policy, Methods of Pharmacoeconomic <u>Evaluation</u> (Cost Minimization Analysis, Cost Benefit Analysis, Cost Effectiveness Analysis, Cost Utility Analysis)
- <u>Consulting services</u> on strategic planning, restructuring, management and sustainable financing and operation of health systems, services and organizations
- Training of PhD, postgraduate and undergraduate students on the areas of CHESME'S activity and encouragement of their participation in research.
- Development and provision of training, seminars and symposiums

**CHESME**, along with its Academic and Research Staff, has participated in National and International Research Projects relevant to the extended spectrum of its scientific interests and fields of research activity. *A selected number of projects are presented below*:

# PROJECTS FUNDED BY INTERNATIONAL AND/OR EU & NATIONAL CO-FUNDING SOURCES (indicative list)

- 2024-2025 Human resources for Health (HRH) as a major Quality-of-Care (QoC) component: Implementing an HRH and QoC indicators measurement and reporting system for effective HRH governance and planning, and quality assurance and improvement decision and policy making. Funding: WHO Regional Quality Office. CHESME staff is participating in the project as Local experts/WHO consultants.
- **2023-2026 HEalth woRkfOrce to meet healht challEngeS.** Funding: EU. CHESME staff is participating in the project as an Affiliate Entity of ODIPY (Competent Authority).
- 2020-2023 Patient-Reported Indicator Surveys (PaRIS). Funding: OECD. An international survey on outcomes and experiences of people living with chronic conditions.
  CHESME staff is participating in the PaRIS project as the National Project Manager team and Working Party Delegacy.
- 2018-2019: "Support to the Ministry of Health of Greece in conducting user experience/satisfaction surveys in the local health units (TOMYs)". Local Expert Group. Funded by World Health Organization (WHO)

The aim of this project is to provide support to the Ministry of Health of Greece in conducting a user experience survey within the local health units (TOMYs) by revising the existing questionnaires on patient experience/user satisfaction and provision of inputs to an adapted tool for the, leading the field work, providing with guidance/instructions for managers of health care facilities and reflecting the peculiarities of surveys in the TOMYs.

2017-2018: "Support to the Ministry of Health of Greece in developing a National Strategy/Strategic Plan on Human Resources for Health". Local Expert Group. Funded by World Health Organization (WHO) The focus of this activity was to provide support to the Ministry of Health of Greece in developing a Strategic Plan on human resources for health. This activity is under the SCUC2 in supporting MoH to formulate a comprehensive strategic plan on Human Resources for Health (HRH) and short- and medium-term HRH policies and interventions, taking into consideration the main health policy goals set by MoH towards universal health coverage, and the on-going country-wide roll-out of the primary health care network and the reorganization of Public Health Services. The action was implemented through a team of international and local experts. The project was conducted with close collaboration between members of the Center for Health Services Management and Evaluation (CHESME), Panteion University of Athens, WHO and KIT Royal Tropical Institute.

2017-2018: "Support to the Ministry of Health of Greece in developing the tools for conducting periodic user satisfaction surveys in public health care facilities". Local Expert Group. Funded by World Health Organization (WHO)

The focus of the activity was twofold. Firstly, it was meant to provide support to the Ministry of Health in Greece in developing the questionnaires and, secondly, managers and service providers were provided with guidance in using them. The project was conducted with close collaboration between members of the Center for Health Services Management and Evaluation (CHESME), University of Athens and NIVEL (National Institute for Health Services Research, <u>https://www.nivel.nl/en/about-nivel</u>) which is the national institute for health services research in the Netherlands. The questionnaires were developed to measure patient preferences and experiences with health care services. This study aimed in developing, validating and implementing - in three pilot locations - tailor-made questionnaires to assess the experiences and preferences of Greek people related to primary care, ambulatory specialist and outpatient hospital services.

**2013-2016 HEDIC:** "Health Expenditure by Disease and Conditions". Funded by EUROSTAT. It is a Eurostat project with nine participating countries (Austria, Bulgaria, Czech, Finland, Germany, Greece, Hungary, Latvia, Lithuanian, Netherlands, and Sweden) with Inspection Generale de la Securite Sociale- IGSS of Luxembourg as Coordinator.

The scope of this project was to provide information on the burden of broad disease categories (based on ICD-10 e.g. Neoplasms, Cardiovascular diseases etc) by linking health expenditure data with patient characteristics (gender and age groups). It was in the frame of the new Eurostat concept "Public health statistics for monitoring EU health" which aimed to increase the use of official public health data at European Union level.

2013-2014 'Impacts of the Crisis on access to health care services: country reports on Greece, Hungary, Ireland, Latvia and Luxembourg'. Funding: European Foundation for the Improvement of Living and Working Conditions (2013/0488/2993)

The aim of this project was to identify population groups that have experienced reduced access as a consequence of the crisis. It further aimed to describe the measures that selected health care providers have taken to maintain access to healthcare. The added value lies mainly in up-to-date case studies of how healthcare providers have responded to the crisis. In order to investigate the providers best practices, face to face interviews (with a semi structured questionnaire) were taken place and content analysis was implemented

4 2011-2015 "THALIS-EKPA 'The detection, transcription, and analysis of inequalities to healthcare access for immigrants living in Greece". Co-financed by the European Union (European Social Fund-ESF) and Greek national funds through the Operational Program "Education and Lifelong Learning". (Project Co-ordinator, Total budget of the project: €473.550)

The objectives of the project included:

a) Identification, record and analysis of any restrictions on the access and quality of health services for immigrants in Greece (*demand side*). For the purposes of the study a structured questionnaire was developed and tested in a pilot phase.

b) Review of the relevant EU policies and to present good practices of other EU Member States regarding the combat of health disparities.

c) Submission of proposals towards improvement, adapted to the peculiarities of the Greek health system and to the actual health needs of the immigrants.

d) Empowerment and facilitation of the health care access and provision for migrants in Greece (*supply side*).

In more detail, in order to facilitate the access of immigrants to health services a web-page has been developed with all the necessary information material (health services, legal advice, financial issues etc) and a data base for info kiosks that are accessed by the migrants were posted in central, open accessed but protected places (e.g railway and metro stations) of Athens and Thessaloniki in a pilot base. Both web page and infokiosk data base provide in various languages all necessary information: <u>http://www.healthgate4all.gr/</u>

2011-2013 "Study for the implementation of the OECD SHA 2010-1 and proposal for the regulation concerning the adoption and the implementation". Co-financed by the European Union (European Social Fund-ESF) and Greek National Funds. (Project Co-ordinator)

The System of Health Accounts (SHA) is the system that defines the direction of the health expenditures by health provider and by health care activities relying on the following three axes:

- ✓ The financing of health services by financing agency (demand)
- ✓ The direction of the funding on health expenditure by health provider and by health care activity (supply)
- ✓ The financing of health providers by financing agency (consumption)

According to Eurostat Regulation, member countries are obliged to provide health expenditure data based on SHA system

The project was conducted in the frame of a Memorandum of Cooperation that was signed between the National and Kapodistrian University of Athens (Nursing Department), ELSTAT and the Ministry of Health. The first data series (2003-2011) and a Greek analytic methodological guidance produced by UoA, were published in April 2013.

The project is continued by ELSTAT: <u>http://www.statistics.gr/en/statistics/-</u>/publication/SHE35/-

2015-2017 I-CARE (2015-1-EL01-KA202-014051). It was an international project with four participating countries (Greece via National and Kapodistrian University of Athens as Coordinator, France, Italy and Cyprus), funded by EU (Erasmus + Strategic Partnerships program)

The aims of the project were:

- ✓ to improve the knowledge and skills of informal carers regarding patient care (basic skills)
- to improve the health and safety of their own self (care for the caregivers) and, as a result to increase the quality of the services provided to the patients
- ✓ to improve the soft and ICT skills of formal and informal carers
- **2013-2015 AKESO II**: "Procedures for the development, organization and evaluation of home care Nurses' training nurses on home care and palliative care in the community". Co-financed by the European Union (European Social Fund-ESF) and Greek National funds

Among the main aims of the project was to develop educational material and organize training packages of formal carers for the provision of Home Health Care Services. It was partly web-based distance learning program in which blended methods were used (180 hours).

- 2011 "Health, access to health care and recession" DG Employment, Social Affairs and Equal Opportunities on Health Status, Health Care and Longterm care in the EU, Funded by European Commission Contract No. C/2008/932 Coordinator: London School of Economics
- **2012 "Informal care in Europe: a review of the evidence on policies and best practices"** DG Employment, Social Affairs and Equal Opportunities on Health Status, Health Care and Longterm care in the EU, Funded by European Commission Contract No. C/2008/932 Coordinator: London School of Economics
- **2011 "Screening for the elderly"** DG Employment, Social Affairs and Equal Opportunities on Health Status, Health Care and Longterm care in the EU, Funded by European Commission Contract No. C/2008/932 Coordinator: London School of Economics
- 2011 "The state of dementia services in Europe" DG Employment, Social Affairs and Equal Opportunities on Health Status, Health Care and Longterm care in the EU, Funded by European Commission Contract No. C/2008/932 Coordinator: London School of Economics
- 2010 "Specialist human resources for health in Europe" DG Employment, Social Affairs and Equal Opportunities on Health Status, Health Care and Longterm care in the EU, Funded by European Commission Contract No. C/2008/932 Coordinator: London School of Economics
- 2007-2008 Hospital Data Project. Funded by European Union. Coordination: PRISMANT Netherlands
- 2006-2009 EUGLOREH- European Global Report on Health, European Union. Coordination: Ministry of Health-Italy. Funded by European Union

- 2003-2008 European Community Health Indicators Monitoring, ECHIM. Funding: European Union. Coordination: SANCO (Ref. number: 2004118)
- 2005 "The Health Care Cost and the Social Burden of Psoriasis in Greece". Multicenter study funded by SERONO S.p.A Rome, Italy. Coordinator: Dermatological Department of University of L' Aquila, Itay
- **2004 "Regional Innovation Strategy and Entrepreneurial Spin-offs (RIS)".** Funded by European Union. Co-ordinator: BIC OF ATTIKA
- 2003 "Cost sharing in EU health care systems". Funded by European Commission (Grant Agreement VS/2002/0342). Coordinator: London School of Economics Health and Social Care and European Observatory on Health Care Systems
- 2002-2004 "Human Resources for Health Care Project: Geographic Imbalances, migration and remuneration of Human Resources for Health Care". Coordinator: Organization of Economic Coordination and Development (OECD)
- 2001-2000 "Study of Cross-National Differences in the Treatment, Costs and Outcomes of Stroke". Funded: US National Institute on Aging and Japanese Ministry of Health and Welfare. Coordinator: Organization for Economic Coordination and Development (OECD)
- 1998-2001 "Change of Work and Development of Key Qualifications". Leonardo da Vinci Project "Health and Care". Χρηματοδότηση: European Commission (Contract N. DK/98/2/05128/PI/II.1.1.b/CONT). Coordinator: Danish Confederation of Municipal Employees (DKK)
- 1999-2000 "Study of Cross-National Differences in the Treatment, Costs and Outcomes of Ischemic Heart Disease". Funded: US National Institute on Aging and Japanese Ministry of Health and Welfare. Coordinator: Organization for Economic Coordination and Development (OECD)

- 1997 "Health Technology Assessment in Europe (HTA-EUROPE)" Collaborator in the country report for Greece: "GREECE: COUNTRY REPORT". European Commission - DG V.
- 4 1996 "Home Rehabilitation Treatment-Dialysis (HOMER-D)"-Conducting a costminimization analysis between In-Center and Home (HOMER-D) dialysis European Commission - DG XIII.
- 1996 E.U., BIOMED-1, Concerted Action Program on the "Co-ordination and Development of Health Care Technology Assessment in Europe" (EUR-ASSESS) - Collaboration in report: Technology Assessment and Coverage Policy: The Case of Invasive Cardiology Therapy in five European Countries. EU
- 1996 "EUR-ASSESS Coordination and Development of Health Care Technology Assessment in Europe". Funded by: European Commission (DG XIII)

#### **PROJECTS FUNDED BY NATIONAL SOURCES (indicative list)**

- 2024-2026 Διοργάνωση συμβουλευτικής επιτροπής εμπειρογνωμόνων (advisory board) για την υλοποίηση policy dialogue σχετικά με τον αναγκαίο προϋπολογισμό του ΕΟΠΥΥ για τα ιατροτεχνολογικά προϊόντα και τις νέες τεχνολογίες για τον αυτό-έλεγχο και τη ρύθμιση του ΣΔ.
- 2024-2025 Ενημέρωση του Value Dossier για την έγκριση αποζημίωσης του προϊόντος Freestyle Libre για ασθενείς με Σακχαρώδη Διαβήτη Τύπου ΙΙ.
- 2023-2024 RCC patient's journey mapping. Χαρτογράφηση Διαδικασιών και Ανάλυση της πορείας των ασθενών με καρκίνωμα νεφρικών κυττάρων (RCC) στα Ελληνικά Δημόσια Νοσοκομεία
- 2022-2024 HealthGate4All Developing emerging tools to enhance migrants' access to health services, to reduce socio-economic inequalities and to improve healthcare professionals' cultural competence
- 2022-2025: VIP-Cardio: A prospective cohort multicenter study of patients with acute myocardial ischemia infarction due to partial or complete occlusion of a coronary artery admitted to three public hospitals in the country will be conducted. About 1,500 patients

will be recruited from two urban areas – representing the most populated regions in Greece (Attica and Central Macedonia) - with more than 5 mil people (more than 50% of Greek population). All patients will be followed for 12 months. Patient enrolment and follow up is estimated to last 14 months.

2018-2021: "SUN 4 Patients (Stroke Units Necessity for Patients) - "Improving Stroke care in Greece in terms of management, costs and health outcomes". Funded by GSRT (General Secretariat for Research and Technology) – HFRI (Hellenic Foundation for Research and Innovation)

URL address: http://sun4patients.azurewebsites.net/portal/el/home.aspx

The vision of this project is to support the efforts of the various actors (e.g. professionals, policy makers, patients) to enhance clinical outcomes for stroke patients while improving sustainability of the system by minimizing waste of resources. This will actually be the first attempt to measure the value of currently provided stroke care in Greece. Measuring the value of stroke care in Greece, will enable improvements in effectiveness and efficiency, via reallocation of spending among types of services (e.g. rehabilitation instead of inpatient), establishment of specialized social support services, development of a national network of specialized stroke units all over the country, minimization of non-value adding practices (e.g. overuse of diagnostic imaging), adoption of evidence based practices, shortening of care cycle time etc. Specifically, the main objectives of the project are:

- to provide essential data on acute stroke management (quality indicators) incorporating hard clinical outcomes that will contribute to an ongoing process of quality improvement,
- to develop an interactive multichannel platform, for collecting high quality inhospital and follow up data, applying multidimensional quality assessment analysis, providing statistical and analytic reports, monitoring behavioral changes and supporting overall project's management,
- to evaluate patients' and physicians' experiences and their impact on stroke management,
- to assess severe negative impact of stroke on the life of survivors including quality of life and disability,
- to measure health related and non- health (loss of productivity, informal care) related national expenditure for stroke care using a bottom up approach and
- to evaluate the value of care focusing on health outcomes compared with total costs of achieving them.

- 2019 2020 Study for the worldwide implementation of DRGs. The objective of the study is to carry out a Systematic Literature Review with the aim of illustrating how DRGs are implemented in different countries (focusing on Europe), identifying common problems / malfunctions / reactions and in particular highlighting best practices and successful modernizing efforts. Funded by the Association of Insurance Companies of Greece
- 2019-2020 Investigating Experts' Opinions on the Need to Update the Guidelines for Diabetes Management and Control in Greece. The objective of the study is to investigate the views of specialist physicians on the need to update national guidelines on the diabetes management and control. Funded by ABBOTT LABORATORIES ΕΛΛΑΣ ΑΕΒΕ
- **4** 2018-2020 Development of an educational program on the role of health economics and health services management in the development of health policy. The program aims to develop an e-learning platform (online learning environment) and training material on the scientific areas of: a) Health Policy focusing on the financial aspects of the operation of health systems & Basic Health Services Management Principles focusing on the evaluation of health services, b) Economic Evaluation of Health Services – Pharmaeconomics, c) Basic Principles of Epidemiology and critical review of the scientific litareture and d) Research Methodology and the Evidence-based Decision Making in Health Sciences. Funded by MSD GREECE
- 2017-2018 "Introduction of Ixazomib for treating Multiple Myeloma Patients in Greece: Investigating Budget Impact on National Organization for Health Care Services Provision (EOPYY)". Funded by TAKEDA Hellas
- 2017-2018 "The management and costs of Hodgkin lymphoma in Greece: investigating physicians' value perception of innovation and mapping the local treatment pathway".
   Funded by TAKEDA Hellas
- 2017-2018 "Εκπόνηση μελέτης για την εκτίμηση των οικονομικών συνεπειών για τον ΕΟΠΥΥ από την αποζημίωση του architect HCV AG". Funded by ABBOT Hellas

- 2015 2016 "The management and costs of multiple myeloma in Greece: mapping the local treatment pathway and associated resource use". Funded by NOVARTIS HELLAS
- **4** 2012-2014 "Investigating the economic results of a cost-sharing mechanism implementation in public primary health care settings". Funding: Ministry of Health

The objective of this study was to identify the extent to which patients accept the measure of the cost sharing fee in primary care units (health centers and hospitals' outpatient departments) as well as to investigate whether patients perceive the potential benefits of the measure for the quality improvement of the provided health services. The study population consisted of 1,260 people who used public primary health units. An appropriate structured questionnaire was developed based on extended literature review and the suggestions of an expert panel.

- 2014 2015 "Implementation and evaluation of administrative interventions in a Greek public hospital in order to improve the outpatient disease management of patients with acute asthma attacks". Funded by NOVARTIS HELLAS
- 2013-2014 "Mapping out the patient's journey using critical pathways: the case of cancer and thalassemia patients in Greek public hospitals". Funded by NOVARTIS HELLAS
- **2012** "The cost of dementia in Greece". Funded by NOVARTIS HELLAS
- 2012 "Assessing the efficiency from NHS Greek hospitals using DEA model". Funded by NOVARTIS HELLAS
- 2010-2011 "Restructuring the hospital sector in Greece in order to improve effectiveness and efficiency" Funded by KEELPNO

The aim of this study was the development of the operating framework for restructuring the Hellenic Hospital Sector. The respective proposals and recommendations for a new model for the organization of hospitals in groups was based on the reform of emergency care and the management of the five core chronic diseases (Myocardial Infarction, Stroke, Cancer, Diabetes Mellitus and Chronic Obstructive Pulmonary Disease). Within the context

of improving the efficiency and effectiveness of the hospital sector, proposals such as the cooperation of the private and public sector as well as cost containment measures were presented. The restructuring of the public hospital sector was based on six distinct criteria, which included the population criterion, population concentration, hospital size, infrastructure age, intensification of hospital infrastructure and hospital efficiency.

- 2010-2011 "The accessibility of vulnerable groups to health services in Greece". Funded by KEELPNO
- 2010 "The cost and effectiveness of enriched with Epa + Gla enteral nutrition". Funded by ABBOTT LABORATORIES
- 2009 "Economic evaluation of chain reaction technique of reverse transcriptasepolymerase (AAAM-P) for 21 genes in women with early stage breast cancer with positive hormone-receptors and negative axillary lymph nodes". Funded by GENEKOR
- **2009 "The development of private health insurance in Greece the last 20 years."** Funded by Research Committee Secretariat of University of Athens
- 2008 "Preliminary Feasibility and Viability study for the establishment of a surgical rehabilitation clinic in Attica". Private Funding
- 2007-2009 "Treatment of cardiovascular diseases, physicians' compliance with published European guidelines and factors influencing prescribing for cardiovascular in Cyprus." Funded by Open University of Cyprus
- 2007-2008 "Conflict management in nursing and medical staff in hospitals of Cyprus." Funded by Open University of Cyprus
- 2007 "Feasibility and viability study for the establishment of a private clinic for spine diseases". Private funding

- 4 2006 "Feasibility and viability study for the private maternal hospital Rea in Syngrou Avenue" Private funding
- 2005-2006 «Study for the performance measurement of the Greek health care system and the planning of the Greek Health Map». Funded by Ministry of Health
- 2005 "Hospital Efficiency Project- Performance Measurement of 11 hospitals of the 2nd Regional Health Care System of Attika". Funded by 2nd Regional Health System of Attika
- 2004 "Patient Satisfaction from the General Hospital of Nikaia "Agios Panteleimon". Funded by General Hospital of Nikaia
- **2004 "Study for the reform of the organizational structure of General Hospital of Samos".**Funded by General Hospital of Samos
- 2004 "Feasibility study for the development of a Hemodialysis Unit in Lamia-Fthiotida". Funded by private sources
- 2003-2004 "Cost effectiveness study of treatment strategies for patient suffering Acute Myocardial Infarction in Greece". Funded by Boehringer Ingelheim.
- 2003-2004 "Feasibility study for the development and viable operation of an Oncological Hospital in Attika". Funded by: ERASINIO ONCOLOGICAL HOSPITAL A.E.
- 2002 "The Cost Analysis for the introduction of CYPHER Sirolimus eluting stent in Clinical Practice". Funded by Johnson & Johnson Hellas AEBE
- 2001 "The pharmaceutical expenditure in Greece and the organizational structure of the operation of Greek pharmacies". Funded by: Hellenic Pharmacists Association

- 4 2001 "The economic burden of the Health Reform for the Primary Care in Greece". Funded by Ministry of Health
- **4 2000 "Economic evaluation of obesity: Greek and international data".** ROCHE HELLAS
- **1999 "Feasibility study for the development of a Rehabilitation Center in Greece".** FILOKTITKIS AE
- 1998 "Feasibility Study for the Development of a Hospice for End-Stage Cancer Patients in Greece". Coordinator of the First Part of the study. ARC Foundation, Geneva
- 1998 "Concerted Action Programme "DIAYLOS": Methodology of Development Research
  Programs of Health Technology". Coordinator for the Department of Nursing
  - **1996 "Pharmocoeconomic Evaluation of Cephalosporins".** ROCHE HELLAS.

4