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# RESEARCH REPORTS

## Health economic evaluation in Greece

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**Objectives:** There is a growing volume of literature on health economic evaluation, with this form of analysis becoming increasingly influential at the decision-making level worldwide. The purpose of this study was to review the current state of health economic evaluation in Greece, with a view to uncovering reasons why its use in this country is limited.
**Methods:** A search of the NHS Economic Evaluation Database was undertaken. The search included cost, cost-of-illness, cost-minimization, cost-effectiveness, cost-consequences, cost-utility, and cost-benefit analyses and was narrowed only to Greek authors undertaking solo or joint health economic evaluation in Greece.
**Results:** The search revealed that, in Greece, very little health economic evaluation has been undertaken. The main reason for the lack of interest is that the current chaotic healthcare system structure and financing does not provide the appropriate incentives to stimulate a powerful interest in this type of research. This condition is a result of the lack of a long-term national health policy and the hesitation of the present and past Greek governments to date to proceed to large-scale reforms because of political considerations. The Greek governments have also been content with the good health indicators being achieved.
**Conclusions:** Even if it is accepted that good health prevails in Greece, slower economic growth rates, an ageing population, and the continuous immigration will place increasing pressure on healthcare resources and will necessitate a more rational use of these resources. Health economic evaluation, by weighing benefits against costs, therefore, has an important role to play.

**Keywords:** Economic evaluation, Health technology assessment, Greece

One aspect of health technology assessment that is becoming increasingly important for healthcare decision making, both in Europe as well as worldwide, is health economic evaluation (3;4;8;12;13). Health economic evaluation informs the decision maker of the most efficient ways to use healthcare resources, by weighting benefits against costs. This approach is more useful than other aspects of health technology assessment that merely assess the effectiveness of healthcare interventions and that only offer information on whether an intervention is clinically beneficial without any reference to cost. Existing research in European countries suggests that economic evaluation is not being used much by healthcare decision makers, at least not to the extent that health economists believe that it should be (3;4;8). The purpose of this study is to review the current state of health economic evaluation in Greece, with a view to uncovering reasons why its use in this country is limited.



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## REVIEW OF GREEK HEALTH ECONOMIC EVALUATION

From a literature review, we can obtain an idea of the current state of health economic evaluation in Greece. A search of the NHS Economic Evaluation Database (NHS EED), which provides comprehensive coverage of key peer-reviewed medical journals mainly from 1995 onward was undertaken (10). The search included cost (CA), cost-of-illness (CIA), cost-minimization (CMA), cost-effectiveness (CEA), cost-consequences (CCA), cost-utility (CUA), and cost-benefit (CBA) analyses and was narrowed only to Greek authors undertaking solo or joint health economic evaluation in Greece. Unfortunately, the database does not cover the Greek language literature adequately, and the articles detected as relevant from the search of NHS EED were only written in English. However, it is assumed that the few Greek researchers active in health economic evaluation aspire to publish their work in English language peer-reviewed journals. It should also be noted that, although the search criteria used in this study do not provide an exhaustive search of post-1995 Greek economic evaluation, it is assumed that the results obtained constitute an adequate sample of published health economic evaluations to enable some conclusions to be made concerning the current state of health economic evaluation in Greece.

Twenty-eight articles that satisfied the search criteria were detected, and they are presented in Table 1 arranged by study type. This number of health economic evaluations published by Greek researchers over recent years undoubtedly is small by international comparison. For example, using identical search criteria, the number of health economic evaluations included on the NHS EED for other European Union (EU) countries was 80 for Belgium, 72 for Finland, 404 for France, 396 for Germany, 267 for Italy, 11 for Portugal, 295 for Spain, 213 for Sweden, 251 for the Netherlands, and 1,018 for the United Kingdom. However, there is an increasing trend in the number of Greek studies published over time, but many of these studies are cost studies or partial economic evaluations. No author dominates the health economic evaluation literature, and most authors seem to have received their formal training in medicine. In terms of medical intervention, there does not seem to be a main focus of interest, indicating in this way that the concept of health economic evaluation in Greece is rather undeveloped, and, as a consequence, all relevant activity lacks focus and direction. With reference to these results, an attempt to offer some explanation for the current state of economic evaluation in Greece is made below.

## DISINCENTIVES FOR UNDERTAKING HEALTH ECONOMIC EVALUATION

The main disincentives for the government, purchasers, providers, manufacturers, and universities to undertake/commission health economic evaluation in Greece, arise from the chaotic way in which the healthcare system is financed and structured. Detailed description of the Greek healthcare system can be found elsewhere (1;14;15).

### Government and Purchasers

Universal insurance coverage entitles everybody to the same healthcare treatments, which in principle provide access to the latest, and, assumed, highest quality interventions. The perceived equity of access, however, which is seen as the main goal of the Greek healthcare system, prevents the government and insurers from actively pursuing evidence of cost-effectiveness for the purpose of prioritizing health care. Because insurance enrolment is based on occupation and not choice, there is no competition between insurance plans, and there is an extensive system of insurer subsidization by the government. In addition, the numerous insurance funds have their own administrative, organizational, financial, and control structures and are headed by political appointees usually with no training in healthcare management. As a result, there are considerable delays in the reimbursement of patients, providers, and suppliers; considerable duplication of effort; and serious overlaps in functions by the various funds involved (7). The above issues evidently weaken the incentives for the insurers to weigh the benefits of medical interventions against costs.

The Greek healthcare system is a highly centralized and fragmented system in which even minor decisions are still made centrally and local authorities have little control over resources and local health services. The lack of an integrated healthcare system has not permitted until today the establishment of an independent organization responsible for providing national health economic guidance such as the National Institute for Health and Clinical Excellence (NICE) in the United Kingdom. There is also a lack of reliable statistics to conduct health economic evaluation studies. The statistics provided by the National Statistical Service of Greece (ESYE) are often missing or inappropriate, as they are based usually only on the very little electronic claims processing that concerns reimbursement (7).

### Providers and Manufacturers

According to Abel-Smith (1), Greek public providers are characterized by excessive use of drugs and diagnostic tests, and high administrative costs due to multiple sources of financing. There is also an absence of efficient information systems and medical records, both of which subsequently render the economic evaluation of health interventions virtually impossible. In addition, the fragmentation of the healthcare system, the absence of gate keeping, together with the fee-for-service nature of the system in some cases (private physicians contract with government and social security and are reimbursed on a fee-for-service basis) allow the healthcare providers to be reimbursed for their activity without direct reference to a budget and remove any incentive for



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**Table 1.** Studies Detected and Reviewed Using NHS EED

| Author(s) | Title | Study type | Journal/Publication Year |
|---|---|---|---|
| Athyros V G et al. | Early benefit from structured care with atorvastatin in patients with coronary heart disease and diabetes mellitus: a subgroup analysis of the Greek Atorvastatin and Coronary Heart Disease Evaluation (GREACE) Study | CEA | Angiology 2003;54(6): 679-690 |
| Bouros D et al. | Intrapleural streptokinase versus urokinase in the treatment of complicated parapneumonic effusions: a prospective, double-blind study | CEA | American Journal of Respiratory & Critical Care Medicine 1997; 155(1):291-295 |
| Kedikoglou S et al. | A maternity hospital-based infant car-restraint loan scheme: public health and economic evaluation of an intervention for the reduction of road traffic injuries | CEA | Scandinavian Journal of Public Health 2005; 33(1): 42-49 |
| Linos DA et al. | Anterior, posterior, or laparoscopic approach for the management of adrenal diseases? | CEA | American Journal of Surgery 1997; 173(2): 120-5 |
| Liaropoulos L et al. | Economic evaluation of a recombinant follicle-stimulating hormone (follitropin beta, Puregon (R)) in infertile women undergoing in vitro fertilization in Greece | CEA | Clinical Drug Investigation 2000; 19(3) :201-211 |
| Papachristou EA et al. | Surgical outcome and hospital cost analyses of laparoscopic and open tension-free hernia repair | CEA | Hernia 2002;6(2): 68-72 |
| Rigopoulos D et al | A randomized trial of amorolfine 5% solution nail lacquer in association with itraconazole pulse therapy compared with itraconazole alone in the treatment of Candida fingernail onychomycosis | CEA | British Journal of Dermatology 2003;149(1): 151-156 |
| Xinopoulos D et al. | Natural course of inoperable esophageal cancer treated with metallic expandable stents: quality of life and cost-effectiveness analysis | CEA | Journal of Gastroenterology and Hepatology 2004;19(12): :1397-1402 |
| Dimitroulopoulos D et al. | Scintigraphic detection of carcinoid tumors with a cost-effectiveness analysis | CCA | World Journal of Gastroenterology 2004; 10(24):3628-3633 |
| Kosmidis P et al. | Paclitaxel plus carboplatin versus gemcitabine plus paclitaxel in advanced non-small-cell lung cancer: a phase III randomized trial | CCA | Journal of Clinical Oncology 2002; 20(17): 3578-3585 |
| Kouris N Th et al. | Cost-effectiveness of second-generation contrast agents in stress echocardiography: data from Greek clinical practice | CCA | Journal of Cardiology 2004;45(4): 246-249 |
| Kyriopoulos J et al. | The impact of new antiretroic therapeutic schemes on the cost for AIDS treatment in Greece | CCA | Journal of Medical Systems 2001;25(1):73-80 |
| Pikoulis E et al. | Laparoscopic preperitoneal mesh repair or tension-free mesh plug technique: a prospective study of 471 patients with 543 inguinal hernias | CCA | European Journal of Surgery 2002; 168(11): 587-591 |
| Syriopoulou V et al. | Two doses of a lipid formulation of amphotericin B for the treatment of Mediterranean visceral leishmaniasis | CCA | Clinical Infectious Diseases 2003;36(5):560-566 |
| Tsavaris N et al. | Combined treatment with low-dose interferon plus vinblastine is associated with less toxicity than conventional interferon monotherapy in patients with metastatic renal cell carcinoma | CCA | Journal of Interferon and Cytokine Research 2000;20(8):685-690 |
| Varkarakis J et al. | Comparison of success rates and financial cost of extracorporeal shock-wave lithotripsy in situ and after manipulation for proximal ureteral stones | CCA | Urological Research 2003;31(4):286-290 |
| Xinopoulos D et al. | Stenting or stoma creation for patients with inoperable malignant colonic obstructions: results of a study and cost-effectiveness analysis | CCA | Surgical Endoscopy & Other Interventional Techniques 2004;18(3): 421-426 |
| Fountzilas G et al. | Paclitaxel and epirubicin versus paclitaxel and carboplatin as first-line chemotherapy in patients with advanced breast cancer: a phase III study conducted by the Hellenic Cooperative Oncology Group | CMA | Annals of Oncology 2004; 15(10):1517-1526 |
| Athyros V G et al. | Treatment with atorvastatin to the National Cholesterol Educational Program goal versus 'usual' care in secondary coronary heart disease prevention: the GREek Atorvastatin and Coronary-heart-disease Evaluation (GREACE) Study | PEE | Current Medical Research and Opinion 2002;18(4): 220-228 |
| Kiriakopoulos A et al. | Use of a diathermy system in thyroid surgery | PEE | Archives of Surgery 2004;139(9):997-1000 |



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**Table 1.** Continued

| Author(s) | Title | Study type | Journal/Publication Year |
|---|---|---|---|
| Leandros E et al. | Somatostatin versus octreotide in the treatment of patients with gastrointestinal and pancreatic fistulas | PEE | Canadian Journal of Gastroenterology 2004;18(5):303-306 |
| Liaropoulos L | Economic comparison of nimesulide and diclofenac, and the incidence of adverse events in the treatment of rheumatic disease in Greece | CA | Rheumatology 1999; 38(Supplement 1):39-46 |
| Kafetzis DA et al. | Epidemiology, clinical course and impact on hospitalization costs of acute diarrhea among hospitalized children in Athens, Greece | CA | Scandinavian Journal of Infectious Diseases 2001;33(9):681-685 |
| Bastounis E et al. | Routine use of shunting in carotid endarterectomy: cost reduction and surgical training | CA | International Angiology 2001;20(3):218-224 |
| Zavras A et al. | Oral cancer treatment costs in Greece and the effect of advanced disease: art. no. 12 | CA | BMC Public Health 2002;2:12 |
| Geitona M at al. | Cost analysis and estimation of thoracic surgical patients with lung cancer in Greece: the case of Sotiria ICU | CA | Intensive and Critical Care Nursing 2001;17(6):322-330 |
| Tsavaris N et al. | G-CSF in solid tumor chemotherapy: a tailored regimen reduces febrile neutropenia, treatment delays & direct costs | CA | Medical Science Monitor 2004;10(2):PI24-8 |
| Kaitelidou D et al. | Economic evaluation of hemodialysis: implications for technology assessment in Greece | CA | International Journal of Technology Assessment in Health Care 2005;21(1):40-46 |

CA, cost analysis; CCA, cost-consequences analysis; CEA, cost-effectiveness analysis; CMA, cost minimization analysis; PEE, partial economic evaluation; G-CSF, granulocyte colony-stimulating factor.

them to balance outcomes against costs. Because the fee-for-service is negotiated for the actual volume of services offered, providers can encourage supplier-induced demand (for instance, for doctors' services, pharmaceuticals, and diagnostic procedures) possibly to a level where the marginal benefit falls below zero.

Doctors' dominance in the Greek health policy arena is unchallenged and the doctrine of clinical autonomy, that is the assumption that only doctors can decide who should be treated, and how, tends to be generally accepted. It is worth mentioning that the majority of Greek Ministers of Health until today have been university doctors. Evidently, doctors in Greece can shape the agenda of public policy, resist changes in the healthcare system that threaten their interests, and can also assert the doctrine of professional autonomy to resist attempts to influence the use of the public resources that they control. In addition, most doctors in Greece are not aware of the existence of health economic evaluation, and the few that are familiar with the term have expressed a negative attitude toward it as they perceive themselves to become increasingly under challenge in the future, forced to practice what some of them term "cookbook medicine", that is, following guidelines produced by bodies outside their direct influence (such as NICE in the United Kingdom). The above ideology impacts on public procurement policies (mainly in hospitals) for supplies and equipment, where there is no actual assessment of needs and procurement is usually based on doctors' opinion. Providers in an attempt to secure uniform quality and lower bulk prices do not pay attention to any cost-effectiveness indicators. Doctors often have financial interests in promoting expensive medical technology or have the perception that the latest or apparently more high-tech equipment is necessarily highly effective. This perception is particularly evident in the university hospitals, the administrators of which (usually doctors with no training in health economics or management) invest in high-tech health care that may not be necessarily more effective or cost-effective.

The lack of consideration of an intervention's efficacy, effectiveness, and/or cost-effectiveness weakens the incentives for the manufacturers of healthcare interventions to demonstrate the usefulness of their products. This statement is particularly true for the pharmaceutical industry. As Drummond et al. (2) point out, health economic evaluation can play a key role in the pricing and reimbursement of medicines because it offers a way of estimating the additional value to society of a new medicine relative to current therapy. Health economic evaluations in Greece are being considered as one of the factors in eligibility for reimbursement, but the country has not taken any actions to implement it. Essentially, pharmaceutical reimbursement until today is implemented using a positive list where, for a drug to be included, there is the requirement that this drug is included in reimbursement lists of three of the following countries: France, Germany, Switzerland, United Kingdom, United States, Sweden (5). As a result, almost every drug in circulation is included and pharmaceutical companies have no incentive to provide evidence of cost-effectiveness because the product will eventually be included in the list based solely on efficacy, tolerance, and safety criteria. In addition, in contrast to what happens in most EU countries, physician prescribing practices in Greece



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are not monitored, and incentives (in the form of physician prescribing budgets for instance) are not given. This practice leads to overprescribing of drugs and/or the prescribing of other new more expensive drugs. Physicians are eager to prescribe expensive new drugs for reasons of profit due to relatively high margins between the reimbursement and market prices, and because of the secret deals between them and the pharmaceutical companies, which use financial incentives to promote the prescribing of their products. This problem seems to be particularly intense with IKA (Social Insurances Fund) doctors, the salaries of which are low and often seek alternative ways to supplement their income (6). The above issues combined with the absence of a developed information system for the monitoring and control of prescribing patterns render the positive list highly ineffective.

With respect to the pricing of the pharmaceuticals, in short, Greece maintains a regimen of price fixing for imported medicines at the lowest EU price for the same molecule, and a cost-based system for locally produced pharmaceuticals, where elements of cost are scrutinized and specific percentages are allocated to different activities (5). The price-setting system clearly favors imported products rather than promoting local production. The lowest European price is applied de facto to imported products, whereas this price is the upper limit for the locally manufactured medicines. As a result, cheap, established, and cost-effective medicines produced by the local pharmaceutical industry are withdrawn from the market because their production is deemed to be unprofitable. Most Greek pharmaceutical manufacturers, hence, forgo the risk and expense of attempting to develop innovative products and restrict themselves to producing generic drugs. These products differ very little in their chemical mix from existing drugs and offer only limited (if any) improvements in therapeutic benefit. In this environment, there is little incentive for the manufacturers to undertake health economic evaluation to prove a product's worth.

### Universities

Of the twenty-eight studies detected from the search of the NHS EED, twenty-three gave author contact details. Twenty corresponding authors were doctors: sixteen of them based in university medical departments and four in a national hospital. Notably, only three (of twenty-three) authors were health economists. It appears that those in Greece who undertake studies of health interventions that contain some consideration of costs are predominantly university hospital-based physicians. A possible reason why those with medical backgrounds tend to dominate health economic evaluation is because the medical profession in Greece as mentioned earlier is very powerful, and doctors are resistant to what they may consider to be outside influences over their decisions. In addition, there is a complete lack of serious formal training in health economics. A review of the curriculum of all the related departments in Greek universities reveals that only the Department of Nursing of the University of Athens, and the Department of International and European Economic Studies of the Athens University of Economics and Business offer introductory courses in health economics. In addition, the National School of Public Health offers some introductory training in health economics through its postgraduate courses in Public Health and in the Management of Health Services.

Oliver (12) indicates two important implications of the fact that medical doctors undertake the few economic evaluations that are published. First, the extent to which many doctors fully understand the principles of health economic evaluation is unclear. For example, cost data are usually included as an extra rather than as an integral part of the analysis. This finding may be because doctors by nature tend to indicate the clinical consequences of medical interventions. In addition, they usually lack the appropriate training in health economics, which is crucial for conducting good quality health economic evaluations. Second, these health economic evaluations may reflect their own medical research interests rather than any fundamental drive to estimate the most rational use of resources across the entire healthcare system. These research interests are also likely to be determined by the (limited) health data that are available by ESYE.

## RATIONALE FOR MORE HEALTH ECONOMIC EVALUATION

The incentives for the government, purchasers, providers, manufacturers, and universities to involve themselves in health economic evaluation are currently very weak. Below, the rationale for more health economic evaluation is discussed.

### Health Care Expenditure and Cost Containment

Healthcare expenditure as a percentage of gross domestic product (GDP) is high by international comparison. According to Organisation for Economic Cooperation and Development (OECD) (11), total health expenditure in Greece in 2002 was 9.5 percent. This rate is the third highest figure in the pre-enlarged EU, and it is above the average of the fifteen EU countries. It should also be noted that, given the extended size of the underground economic activity and tax evasion in Greece, the above figure is potentially underestimated. It can be stated, therefore, that Greece has not been successful in containing costs.

Greece's current economic performance is poor and as a result, the growth in GDP is slowing down. The lower levels of economic growth necessitate a more careful utilization of healthcare resources. Poor economic performance, however, is not the only factor that is contributing to the increasing pressure for a more rational use of healthcare resources.



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Greece has an elderly population that is growing more rapidly than that of most other countries. This growth may place an increasing strain on the healthcare budget due to the possible higher prevalence of age-related diseases. The higher ratio of retired to working age people within the population will also diminish the insurance contributions and the tax base. In addition, during recent years, the country has experienced substantial immigration from neighboring countries, most immigrants coming from Albania. The immigration wave, which is expected to continue, will constitute a major burden to the healthcare system. Lastly, during recent years, the socialist governments have built and/or modernized several hospitals. The recruitment of medical personnel, together with the procurement of the necessary medical equipment, will place more financial strain on certain public providers, specifically those where the investment in the latest technology is deemed necessary due to the perception that high-tech equipment is more effective.

### Current Macro Indicators

Greece manages to keep a very good position with respect to basic health indicators such as infant mortality rates and life expectancy. More specifically, with regard to the infant mortality rate, there are 4.8 deaths per 1,000 births, a figure which is below the OECD average. In addition, with 80.7 years for women and 75.4 years for men, life expectancy in Greece is one of the highest worldwide (11). One may conclude, therefore, that the Greeks are a relatively healthy population.

The first point to note regarding this conclusion is that the healthcare system is not the sole, or even the main, contributor to these good macro indicators. Public health policy has recognized the growing importance of the wider determinants of health, such as income, education, employment, housing, and the environment, which consequently influence macro indicators. Additionally, there is also the question regarding the extent to which the macro indicators accurately reflect the health status of the population. It may well be that the members of a society, on average, live a long time, but their quality of life is low. The second point concerns the low fertility and increasing longevity of the Greek population. This combination eventually leads to a large aged population, which seems to already have an impact on the macro indicators. According to the World Health Organization (15), the relative deterioration observed during recent years in life expectancy in Greece is due to health problems in older age. Despite an expected increase in fertility over the coming years, by 2015, the proportion of people 65 years of age and older is projected to reach 18 percent and those 85 years of age and older, 2 percent. From this expectation, it can be said that current favorable international comparisons should not give grounds for satisfaction and inaction, as there is always room for improvements within any country.

## INTRODUCING INCENTIVES FOR HEALTH ECONOMIC EVALUATION

An environment ought to be created where there are incentives to measure the value for money of new and existing healthcare interventions; the decision maker will then be in a better position to prioritize them. Below, some important steps toward the establishment of this environment are discussed.

### Introduction of a Purchaser–Provider Contracting Budget-Based System

The Greek healthcare system is open-ended and demand-led, containing no incentives whatsoever to encourage cost-containment or cost-effective practices. For example, the state subsidy of hospitals, in principle, is based on a prospective budget for salaries and investment. However, in practice, the state budget pays retrospectively for all hospital expenses incurred, excluding sickness fund reimbursement (14). Also, the fee-for-service nature of the system in the case of the private physicians contracting with government and social security, allows the healthcare providers to be reimbursed for their activity without direct reference to a budget and removes the incentive for them to balance outcomes against costs.

A budget-based system with purchaser–provider contracting needs to be introduced. This system will take away the revenue-based incentives for the providers to undertake and administer unnecessary procedures and services. More specifically, in such a system, the insurance funders will negotiate contracts with clinics and hospitals to provide appropriate care for their insured populations over a fixed period. The government and insurers will have the incentive to commission health economic evaluation on new and existing interventions and disseminate the results to the healthcare providers in an attempt to encourage the use of the most cost-effective interventions. The providers will then have an incentive to commission health economic evaluation to be guided in the provision of the maximum health care possible, given their budget constraint. This achievement may also place them in a strong negotiating position regarding future healthcare contracts. The manufacturers of healthcare interventions subsequently will be faced with more appropriate incentives to commission and undertake health economic evaluation precisely because they would want to demonstrate that their products represent the best value for money. This process will become of vital importance if the Greek government introduces a price recommendation system where health economic evaluations will be binding in deciding the pricing recommendations (as is already the case with NICE in the United Kingdom). Of course the introduction of a purchaser–provider contracting budget-based system will have some important implications. Currently in Greece, there are several insurance funds and this scheme will require many of them to merge. Also, contracting with specific providers



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may involve political cost, as people currently enjoy the freedom to attend any hospital they wish.

### Establishment of Expertise in Health Economic Evaluation

Considerable reforms to the structure and financing of the Greek healthcare system are required to remove the disincentives to commission and undertake health economic evaluation, but the establishment of the necessary expertise is equally important. Because of the absence of health economics from the Greek higher education curriculum, there currently is an insufficient number of experts able to undertake high-quality health economic evaluations. The government should introduce courses on health economic evaluation and methodology both at undergraduate and graduate levels in all economic, nursing, and medical university departments. In addition, continuing education programs on health economics, health management, and health economic evaluation should also be developed for clinical managers, hospital managers, regional managers, and other laboratory staff. Oliver (12) points out that a large number of experts who would remain independent of government and/or industry influence should also be trained. In this way, it will be ensured that the influence of those with interest in the results of the analyses is kept to a minimum, and that "each interested party is as confident as possible in the validity of the results." The majority of the research, therefore, should be commissioned from and undertaken within an independent academic environment through specific centers of excellence established within the universities.

### Establishment of a Health Technology Agency

Currently, there is no agency providing analysis and economic evaluation of medical interventions and other health services. An independent organization such as NICE in the United Kingdom needs to be established. This independent organization should be responsible for providing national guidance, using health economic evaluation, on the use of health technologies such as new and existing medicines, treatments, and procedures. At the same time, the current pricing system as described earlier should be replaced with a price recommendation system that is consistent with each healthcare intervention's value for money (12). The new Conservative government has announced that a Health Technology Evaluation Agency will be set up. The new agency will undertake cost-effectiveness and cost-benefit analyses of health technologies and will also publish guidelines on the use of new and current medical interventions, which will be based both on clinical-effectiveness and cost-effectiveness criteria (9). Unfortunately, more detailed information regarding the implementation of the above announcements was not given. The absence of developed information systems and of reliable statistics, together with the lack of the necessary expertise, constitute a real challenge in establishing the above agency and cast serious doubts about the seriousness of the entire venture.

### Development of Complete Information Systems

For high-quality health economic evaluation to be undertaken/commissioned, dependable databases first need to be established on various health technologies. ESYE data are inadequate and frequently faulty. In addition, there is a need for critical review of the literature on major technologies to compare national results with international experience. Basic research into the extent and utilization of health technology is also needed. The new Conservative government has announced the establishment of a central control agency responsible for monitoring the prescribing of medicines and the publication of statistical data (9). In principle, this will constitute a positive step. However, given the extensive fragmentation of the Greek healthcare system, the above proposals are very difficult to be implemented, let alone the administrative costs involved. Unification of the insurance funds will significantly help the development of a single information system, which is essential for health economic evaluation research to be undertaken.

## CONCLUSIONS

Health economic evaluation is becoming an increasingly influential aspect of health technology assessment worldwide, but in Greece, relatively little health economic evaluation has been undertaken. The main reason is that the current chaotic healthcare system structure and financing does not provide the appropriate incentives to stimulate a powerful interest in this type of research. This condition has been a result of the lack of a long-term national health policy and the hesitation of the present and the past Greek governments, to date, to proceed to large-scale reforms due to political considerations. The Greek governments have also been content with the good health indicators being achieved. However, slower economic growth, a rapidly growing aged population, and increasing immigration call for a more rational use of healthcare resources to maintain and improve the health of the Greek people, and will at the same time contain the continuously increasing costs. Concerning these considerations, health economic evaluation, by weighing the benefits of medical interventions against their costs, has an important role to play.

## CONTACT INFORMATION

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