Physicians views on biomedical technology in Greece

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Introduction

The rapid growth and evolution of biomedical technology has contributed significantly to certain conditions' effective management and consequently to the improvement of patients’ quality of life. However, variations have been observed between countries and within a country on the use of biomedical technologies1 underlying the necessity of improving access on and diffusion of certain technologies. Given the above, the present study aims at identifying the accessibility to certain biomedical technologies and factors affecting its use and diffusion, in Greece.

Methods

A strictly structured questionnaire was designed and sent to a sample of 388 internists and GPs over 50 years old, stratified by geographical area and employment sector. Participants were asked a) to evaluate on a 1 to 10 point scale patient access to selected biomedical technologies and the degree to which selected factors affect their decision to use the above interventions and b) to rank certain factors effect on the diffusion of biomedical technologies.

Results

295 out of 388 participants answered the questionnaire reaching a response rate of 76%. The descriptive statistical analysis revealed that the most accessible biomedical technologies, taking into consideration the availability of the technology, the geographical distance and the owner of the technology (public or private sector), were ultrasonography (9.4), PSA (9.38), cardiac enzymes (8.99), MRI and CT (8.86), and mammography (8.83).

The most important factors affecting participants’ decision to use a technology were the treatment outcome (9.23), the disease severity (9.11) and the appropriateness of the technology for each condition (8.27) while factors such as cost of health system and patient cost were proved less influential with a total score of 6.93 and 7.45 respectively.

Regarding the diffusion of the new biomedical technology in Greece 68.1% of participants claimed that there are delays. Economic and specialized human resources deficiencies were identified as the major barriers in the diffusion of biomedical technology in Greece. Figure 1 shows who should decide for the diffusion of a technology in the health unit based on the results of the study.

Discussion

Based on our results, higher access was observed to technologies related to neoplasms and cardiovascular diseases, which represent the main causes of morbidity and mortality in Greece2,3. Furthermore, our findings support the view that when it comes to use a technology physicians are mostly concerned with the clinical effectiveness of an intervention and less with its impact on health care expenditures. Finally, the major diffusion barriers identified in this study show a suboptimal resource allocation practice, stressing the need for measures to be taken in this direction in order to enhance diffusion of biomedical technologies in Greece. Based on our knowledge this the first study that investigates the issues of use accessibility and diffusion of major biomedical technologies in Greece, indicating in parallel those areas where intervention are needed in order to resolve equity issues and to maximize the potential benefit these technologies can provide.

References


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