

Ensuring a functioning health care system in regions with declining and ageing populations in Greece

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A brief background

Greece is a country of around 11,000,000 inhabitants, covers an area of 131,957 km² and has a population density of 84 persons/ km². Moreover, Greek geography is rather special, while most of the Greek terrain is either mountainous, with the 70% of it presumed as mountainous or semi-mountainous, or small islands, with almost 1,000 islands. According to the national census of 2001, the 75% of the population were living and occupying the 15% of the Greek area in urban settings. The rest 25% of the population lives in rural settings (85% of the area), with an average density of 25 persons/ km².

Furthermore, in 2007 the median age of Greek population was 41,63 years and the 18,6% of the population were belonging in 65+ age groups. The ageing rate of the Greek population in the 1990s was the fastest compared to all other European Union countries and the 0– 14 years old age group represents less than 16%. In 1997 Greece was the country with the highest proportion of older people among EU countries. At the same time and according to projections, the age structure of the population is expected to change more dramatically between now and 2050. Increasing life expectancy will tend to raise the elderly population (ages 65+) by 80% in Greece, while at the same time, the low fertility rates will contribute to a decline in the working age population (ages 15-64) by 21%. Furthermore, the Greek population is projected to decline in 2050 by 3% despite the continued net inward migration.

According to above characteristics and to the fact that rural Greece had already experienced similar demographic trends during last decades, it is clear that declining and ageing populations cannot be considered as a new trend in Greece. Indeed, mass movements of productive populations from rural areas to big cities or to other countries that took place during 50s or 60s, had been crucial. Since then it has been a continuous challenge for the Greek health care system to deal with problems concerning ageing and declining populations in rural areas. Nowadays, health policy makers in Greece have an almost four decade experience from the past, while there is a considerable concern in ensuring a functioning system in the future.

Health care provision in rural areas and elderly in Greece

In early 80s policy makers in Greece had tried to overcome deficiencies in health care provision by introducing a system that could operate in rural setting. It was that time that primary health care centres started to function in rural areas in Greece (PHCC), with the introduction of the Law for Greek NHS system. By the late 80s Greek health system had achieved –at least theoretically– high coverage rates among Greek population. Today there are around 230 PHCC in rural Greece and about 2000 peripheral medical offices in small municipalities and villages. More than 80% of these medical offices cover areas with less than 1000 people.

Similarly, in the early 1980s, the first "Open Care Centres for the Elderly" (KAPI) begun originally as pilot centres run by volunteer groups using public finance, with the objective to provide social support and preventive medical services to the elderly. In 1982 local authorities throughout rural and urban Greece assumed responsibility for the KAPI, while the state remained the main financial contributor. KAPI mainly offer: (i) preventive services, (ii) health education programmes and (iii) rehabilitation services, namely physiotherapy and ergotherapy. All the KAPI have developed recreational activities, which operate at an exceptional level and attract the majority of members, while some of them have developed the programme "Home Help". Today there are around 370 KAPI in all over the country in both urban and rural settings.

Although high amount of improvement had achieved with the introduction of PHCC and KAPI, gaps in care provision on elderly and isolated people continued to persist. In 1992 a pilot project called "Help at Home" was introduced under the auspices of the Ministry of Health, run by municipalities in close collaboration with KAPI. The "Help at Home" Program was mainly aimed to provide aid to people in their own home with counselling and psychological services, aid to everyday tasks to old people unable to perform them on their own are provided. The programme started to become very popular during the mid-1990s, however the success of such programs relied strongly to the economic robustness and size of Municipalities.

During last years, it could be noticed that additional to traditional schemes for care provision there is a shift to "targeted" policies and schemes. Such shift aims to ageing populations and other vulnerable groups. For instance, there is close collaboration between Ministry of Health and a Network of Municipalities (the "Local Authorities Social Solidarity Network") that is targeting to local populations. In same direction, a "Network of Social Support Services" is functioning with almost 160 centres and is responsible to spot isolated persons and provide them adequate care and support. In general, "targeted" programs have been considered as adequate alternatives to the present NHS, especially for regions with declining and ageing population. However, there are vital issues concerning problems such as the lack of systematic funding from central government, the need for inclusion to or control by a centralised scheme/ authority and for effective legal framework, which will cooperation with buyers and providers of care (i.e. social and insurance funds and local health centres).

Incentives for Human capital in rural areas in Greece

The lack of GPs and other health professionals and their reluctance to work in rural areas has been appointed as one of the major problems of the Greek NHS. In order to overcome the problem, the government had introduced significant advantages to GPs and other servants who will agree to offer services in remote areas, as special bonus supplement to salaries or special leaves from the duty. Moreover, the state also introduced a mandatory medical service for a time period for every junior doctor. It is only after this service that a junior doctor can be eligible to apply for a residency post afterwards. In addition, in order to overcome the problem, some Local Health Authorities have also introduced a system of rotating service between physicians in areas with special needs, especially in tourist areas during the summer.

However, there is limited research on the cost- effectiveness on such schemes and the introduction of them is not clear-cut. For instance, the scheme of mandatory medical service in rural areas by junior doctors has been a controversial issue. While it is considered as an adequate policy tool that supports the NHS, according to another point of view, suggests that it actually

contributes to the downgrading of public health. However, the fact that many of these schemes operate for many years, it could be relatively easy for Greek policy makers to move along an evidence based policy. Overall, despite the introduction of material or not incentives, shortages in medical staff in rural areas and small islands are still persisting, making clear that there is a need for action.

Nurse- physician substitution in Greece

Generally speaking, the debate in recruiting rural PHCC has focused mainly on junior doctors and providing incentives to GPs. The substitution of physicians and the use of rural nurses instead have been proposed only lately by some researchers, as an effective way for covering health needs in remote areas in cases of GP shortage. It has been proposed that a model based on the replacement of junior doctors with nurses, would be equally effective and less costly. However, at present time such intervention does not seem a priority, while it has been strongly questioned by health professionals.

On one point of view, as more than 65% of health needs require nursing and not medical care, it seems important to reconsider primary health care practices in rural Greece. An effective replacement upgrades the role of community nurses and would finally improve the whole primary health care sector. Indeed, it is estimated the majority of visits in PHCC were either for prescriptions or administrative work and tasks that can be easily performed by nurses, such as taking blood pressure, injections, minor wounds care and others. According to same estimations, only one-third of patient visits were due to medical reasons. Furthermore, it is documented that junior doctors in rural areas spend most of their time performing tasks that could be performed by nurses or even the patients themselves if they were adequately trained, as in the case of glucose counting.

On the contrary, substitution of doctors by nurses in Greece has been strongly questioned. Firstly, it has been mentioned that education of nurses in Greece is mostly clinically orientated. Furthermore, terms like family nurse practitioners, community nurses and rural nurses are not used in official Greek state papers as distinct terms with different meanings. Moreover, due to cultural and traditional reasons many Greeks prefer to seek assistance from a doctor rather than from a nurse. Finally, it has to be taken in mind that while doctors are usually major contributors in decision making procedure, future policy interventions in Greece should at least not affect present status.

Overall, the applicability of this kind of policy tool in the Greek context is not a clear cut, while there is no official work conducted in order to be a basis for a future dialogue. In fact, it seems that cost containment and capital substitution in primary health care provision has not been considered as a need and therefore has not been a priority for the Greek NHS. It is, indeed, strong evidence and cost- effectiveness analysis needed, in order to overcome scepticism, opposition and possible political cost.

Telemedicine in Greece

Telemedicine has been proposed as an alternative method to overcome difficulties of the Greek health care provision system in rural areas and especially in small islands. Indeed, since 1989 the Medical Physics Laboratory of the University of Athens started a new era in the provision of the Telemedicine Services, by demonstrating convincingly the advantage for the primary healthcare units the capture and transmission of X-ray pictures of relatively high resolution to a supporting hospital.

In 1992 the Greek Ministry of Health financed the installation of Telemedicine terminals in 12 Healthcare Centres through the country. The "Sismanoglion" General Hospital in Athens was the support centre, where all requests for support were directed. Nowadays almost 40 centres are operating through this system. In 1995 Medical Physics Laboratory has implemented the Telecardiology Network TALOS to support primary healthcare units in the Aegean area. Nowadays, there are currently operating 3 telemedicine centres, in Athens, in Thessaloniki and in Crete, while new programs have been introduced by the Ministry of Health (SYZEFKSIS, LEKSIS) in order to digitally link all health units.

However, there is not a clear picture of the effectiveness of such programs. Telemedicine operates in supplement to the NHS practices and there is no a clear and unique legislative context. Furthermore, there are cases that telemedicine programs occasionally face troubles with technical support, while there are still difficulties with shortages in specialised staff. On the other hand, the "Strategic Action Plan of Public Health 2008-2012" that has recently been published from Ministry of Health and Social Solidarity, gives special priority to digital convergence in Greek system and will deal with it in the near future.

Conclusions

Greece is a country that traditionally had been facing challenges in areas with declining and ageing population, especially in relation to health care. It is more than forty years that Greek Health Care System is experiencing such difficulties and that policy makers are trying to overcome them. In that way, Greek experience could be useful in proposing policy tools in order to provide adequate care in the context of new trends.

In general, Greek system has been organised in such way in order to provide access and adequate care mainly in rural areas with PHCC. Furthermore, schemes as KAPI and "Help at Home" that aim to elderly people have been functioning for almost 2 decades. In recent years there is a shift to "targeted" schemes that aim to local authorities and community participation and focus mainly to vulnerable population groups. However, such schemes are closely related to the economic robustness and size of Municipalities, while lack of GPs and other medical staff has been a major problem for the system. Overall, "targeted" programs supplement to NHS, could be the basis of future reconstruction of care provision.

Moreover, in order to retain professionals to the regions, the state has introduced strategies and incentives, such as mandatory service for junior doctors or supplements to salaries. Although the adoption of such intervention has not been clear cut, after two decades of their operation shortages in medical staff in rural areas or small islands are still persisting. Furthermore, it has proposed a substitution scheme between junior doctors and nurses, although has been

questioned. It is, indeed, strong evidence and cost- effectiveness analysis needed, in order to overcome scepticism, opposition and possible political cost.

On the other hand, telemedicine has been proposed as an alternative intervention and a solution that will fit in Greek context with a special geography and of almost one thousand islands. Indeed, it was since the late 80s that telemedicine programs had introduced and tried to link island PHCC with big hospitals in mainland. Although, there is not a clear picture of the effectiveness of such programs and while some practical problems have been occurred, telemedicine could be a convenient tool in addition to other policies. Policy makers in higher level are aware of this and telemedicine has been included to the "Strategic Action Plan of Public Health 2008-2012".

Overall, policy makers have many challenges in order to achieve an adequate level of health care provision, especially in rural areas with declining and ageing population. The adoption of more "targeted" policies which will include "best practises", specialised work force, unique telemedicine scheme and local participation could be an option for future.