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RESEARCH REPORT

# Healthcare challenges and risks in remote Greek islands: perceptions of the local population of Folegandros

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**Abstract:** *Background:* In many remote and hard-to-reach islands – commonly referred to as "geographically isolated and disadvantaged areas" (GIDAs) – hospitals and healthcare clinics face significant constraints in delivering quality services due to inadequate infrastructure, limited investment, insufficient supplies, and shortages in personnel. Greece, a country comprising a vast number of islands that collectively represent approximately 20% of its territory, frequently encounters this phenomenon. *Aim:* This study sought to map the perceptions and attitudes of the local community on the island of Folegandros regarding healthcare service provision. *Methodology:* The study has employed both qualitative and quantitative methods. Quantitative data were obtained *via* a structured electronic questionnaire, randomly distributed to 150 of the island's 600 permanent residents. Qualitative data were collected from the local medical unit and the municipal administration. *Results:* Only 25.4% of the respondents considered the public healthcare services available on Folegandros to be adequate. Confidence in the quality of the medical procedures was assessed as moderate. While 73.8% of the study's participants expressed satisfaction with the competence of the medical personnel, 75.4% reported dissatisfaction with the quality of the available medical equipment. Key issues identified through the survey include deficient infrastructure, a shortage of general practitioners and specialists, limited local laboratory capabilities, the absence of telemedicine services, and significant challenges in patient transport. *Conclusion:* The effective functioning of healthcare services on Folegandros requires a comprehensive revision of the current provision structure. Recommended improvements include the optimal use of existing infrastructure, the reinforcement of ongoing incentive policies for healthcare professionals, and the modernization of the available patient transport systems. These measures are essential for the enhancement of accessibility and, consequently, for the bolstering of public trust in the quality of healthcare services in Greek GIDAs such as the island of Folegandros.

**Keywords:** challenges; Greece; healthcare; infrastructure; islands

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Greece is characterized by pronounced insularity, comprising more than 2,500 islands and islets, of which approximately 165 are inhabited. According to the 2011 census, the population of the islands stands at around 1,753,348, representing 16% of the country's total population. By definition, islands constitute geographically isolated areas due to their surrounding aquatic environment and the limitations they often exhibit in terms of population density, natural resources, and transport infrastructure; these factors critically shape their developmental capacity, resource needs, and degree of isolation (Bourke *et al.*, 2012).

Most of the Greek islands, particularly the smaller

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ones, are classified as "geographically isolated and disadvantaged areas" (GIDAs). Their remoteness, adverse weather conditions, and constrained developmental capacity create substantial barriers to mobility and reinforce isolation. Interestingly, smaller islands have garnered international interest for the heightened expression of insularity they embody, while their rural character gives rise to significant challenges concerning their long-term developmental sustainability (Binns *et al.*, 2010).

The isolation that characterizes most islands, coupled with the dubious quality of the local healthcare services provided, is a major cause of protest for the islanders. The problem is intensified in smaller islands, where the primary healthcare sector is particularly weakened and accessibility to secondary healthcare services can be extremely difficult (Wakerman, 2004). The islands around the world, despite their heterogeneity, present some common geographic, environmental, social, and developmental characteristics. These characteristics also determine the special identity of the islands and are as follows (Cross and Nutley, 1999; Moraitaki-Tsami and Vasilakis, 2007): (i) they often have a small and clearly defined size, a small population, and a limited quantity and variety of natural resources (as a result, they are characterized by limited development capacity), (ii) they are by definition geographically isolated areas (they are usually located at a distance from large urban centers, which significantly affects their degree of isolation, combined with the transport capabilities of each island), (iii) the seasonal population fluctuations that characterize most of these islands also determine their economic and social activity (and, therefore, change their needs and identities during the summer and winter periods), (iv) islands are vulnerable because they are particularly exposed to natural phenomena and uncontrolled environmental conditions, and, (v) islands have specific cultural characteristics, lifestyle, and identity, stemming from the perception of the islanders and the visitors about the island's character.

These characteristics are attributed to the term "insularity" (Moraitaki-Tsami and Vasilakis, 2007), which stems from the constant territorial discontinuity of the island regions and varies according to the distance of each island from the mainland and its size. Insularity can be seen as a disadvantage or as an exploitable specificity, depending on whether the characteristics of the islands are treated as "special needs" or "special abilities". The phenomenon of "double insularity" refers to small islands of island complexes that develop relationships of dependency on a neighbouring larger island, with the latter functioning as a local administrative and logistical center.

Most of the Greek islands are sparsely populated. Their recorded population, of course, is a rather theoretical size, as in the summer months their population is much larger, while in the winter it is much lower than the recorded one, due to the seasonal movement of permanent residents into urban centers of the mainland (Moraitaki-Tsami and Vasilakis, 2007). The Cyclades consist of 39 islands, of which 24 are inhabited and 15 are uninhabited. The capital of Cyclades is Ermoupoli on the island of Syros. The Cyclades have a temperate climate with mild winters and cool summers, but they are the windiest areas in Greece; a characteristic that affects sea and air transport. According to the 2011 census, the population of the Cyclades is 122,613 inhabitants and constitutes about 1.15% of the total population of Greece. About 86% of the total population of the Cyclades is concentrated in eight islands (namely, Syros, Naxos, Thira, Paros, Andros, Mykonos, Tinos, and Milos), while only five of them have a population of more than 10,000 people. The spatial isolation of the Cyclades from major urban centres on the Greek mainland plays a critical role in shaping the islands' degree of accessibility. While the Cyclades are connected to the port of Piraeus (the primary maritime gateway) *via* scheduled ferry routes, the extent of their remoteness is determined by two distinct measures of distance. The first, the geographic distance, refers to the Euclidean measurement between two fixed points (namely, the port of each island and the port of Piraeus). The second, the actual distance, is shaped by transport conditions and reflects the duration of the fastest available journey by conventional ferry. This second measure accounts for not only sailing time, but also the frequency of itineraries and any waiting periods at departure and arrival terminals. The geographic distance is clearly defined and unchanged, as opposed to the actual one that depends heavily on the conditions affecting the coastal transport, which exhibit impressive seasonal changes. The actual distances are greatly reduced during the summer months, while in the winter months, due to the dramatic decrease in the frequency of the ferry trips from Piraeus to the small islands of the Cyclades, the actual distance "flings" many small islands outside of the Greek territory. It is worth noting that the actual distance can be reduced by the presence of speedboats and airports; these capacities, however, are generally available in larger islands and not in the smaller ones. Moreover, the coastal connection of the islands with Syros, where the capital is located, is not satisfactory at all, especially for the small islands, as there are only specific and sparse routes available during the week (Moraitaki-Tsami and Vasilakis, 2007). In conclusion, due to these characteristics, the Cyclades are an island region with a particularly intense expression of insularity and, therefore, an appropriate field for the study of its effects on healthcare services and rural health practice (Bourke *et al.*, 2004).

**Table 1.** Overview of the demographic characteristics of the study's population.

| Demographic parameters | Categorization | Percentage |
|---|---|---|
| sex | female | 55.7% |
| | male | 44.3% |
| age | 18–28 years | 27.9% |
| | 29–38 years | 29.5% |
| | 39–48 years | 25.4% |
| | 49–58 years | 9.8% |
| | 59 years and over | 7.4% |
| education | primary education | 13.1% |
| | secondary education | 40.2% |
| | technical education | 19.7% |
| | university degree holders | 24.5% |
| | master's and / or doctoral degree holders | 2.5% |
| marital status | single | 44.3% |
| | married | 40.2% |
| | other (divorced, *etc.*) | 15.5% |
| household annual income | <10,000 euros | 37.7% |
| | 10,000–19,999 euros | 38.5% |
| | 20,000–29,999 euros | 13.1% |
| | 30,000 euros and over | 10.7% |

Greece has large geographic disparities in terms of the distribution of physicians. The density of physicians in 2014 ranged from 2.9 per 1,000 inhabitants in Western Macedonia and Central Greece to 8.6 per 1,000 inhabitants in Attica (OECD / European Observatory on Health Systems and Policies, 2017). Although some financial incentives have been provided to physicians working in GIDAs of Greece, these have not proved to be sufficient for the recruitment and retention of medical staff in these areas (Efendi, 2012). The isolation of the islands has an impact on the attraction of health professionals. Geographic and transport isolation coupled with the lack of social structures in areas (such as education and recreation) make the islands unpopular and, as a result, they do not attract the right human resources. Health professionals working in isolated healthcare settings are confronted with occupational isolation and the lack of professional support due to the distance from secondary healthcare structures (Humphreys *et al.*, 2002). Moreover, geographic isolation, coupled with the often understaffed local healthcare units and the consequent inability of absence, significantly reduces the training opportunities for physicians (Humphreys *et al.*, 2002). Therefore, geographic isolation is transformed into scientific isolation and deterioration in the quality and quantity of the medical staff. Moreover, because of the limited population density, islands are a limited economic market that does not favour the development of a private health sector. This is why the islands are the foremost areas when planning social health policies, where the presence and development of the public healthcare sector is absolutely crucial (Moraitaki-Tsami and Vasilakis, 2007). However, the frequent lack of epidemiological data and the lack of analysis of local healthcare needs hinder the design of appropriate policies. The lack of reliable data along with the need for immediate interventions leads to short-term political practices that only aim at temporarily solving any arising problems (Godden, 2005).

The aim of this study was to present the existing healthcare services on a small island of the Cyclades (i.e., Folegandros) and to communicate the evaluation of these services by the island's permanent residents. Folegandros was chosen not only because I had worked there myself, but also because it is a very popular destination with a population that ranks approximately in the middle of the list of the 16 small islands of the Cyclades. Folegandros has a population of 765 permanent residents, whereas Sifnos (the largest of the 16 small islands) has 2,625 and Irakleia (the smallest island) has 141 permanent residents, according to 2011 census.

## Methodology

The presentation of the existing healthcare services is mainly based on my personal work experience at the

**Table 2.** The responses of the permanent residents of Folegandros to some of the questionnaire's questions.

| Questions | Not at all | Little | Moderately | Enough | A lot / very |
|---|---|---|---|---|---|
| [1]: Is the building of the medical office adequately preserved given its age? | <10% | 19.7% | 34.4% | 36.9% | <10% |
| [2]: Are the office rooms adequate for the treatment of the population and the management of the incidents? | 34.4% | 37.7% | 19.7% | <10% | <10% |
| [3]: Are the office premises operational and functional? | 34.4% | 36.9% | 20.5% | <10% | <10% |
| [4]: Are the lighting, air conditioning, and heating of the clinic sufficient? | <10% | 10.7% | 27% | 45.1% | 13.9% |
| [5]: How suitable is the building overall? | <10% | 24.6% | 52.5% | 17.2% | <10% |
| [6]: How satisfied are you regarding the accessibility of the clinic for the population of the island? | <10% | <10% | <10% | 56.6% | 31.1% |
| [7]: Is the location of the clinic appropriate? | <10% | <10% | <10% | 48.4% | 42.6% |
| [8]: Are you satisfied with the number of doctors? | 52.5% | 29.5% | 12.3% | <10% | <10% |
| [9]: Are you satisfied with the doctors' knowledge / experience / skills in the treatment / management of a problem / illness? | <10% | 22.1% | 34.4% | 32% | <10% |
| [10]: How satisfied are you with the management of emergencies? | 13.1% | 23% | 25.4% | 28.7% | <10% |
| [11]: How important is the availability of nursing staff in the medical unit? | <10% | <10% | <10% | 31.1% | 63.9% |
| [12]: How important is the recruitment of more staff during the summer / tourist period? | <10% | <10% | <10% | 21.3% | 77% |
| [13]: Is the medical equipment adequate for the needs of the population? | 43.4% | 32% | 17.2% | <10% | <10% |
| [14]: How satisfied are you regarding the operation / maintenance / renewal of the medical equipment? | 23.8% | 29.5% | 32.8% | 12.3% | <10% |
| [15]: How satisfied are you with regard to the non-medical equipment of the practice (computer, fax, internet connection) and its operation? | 13.1% | 21.3% | 29.5% | 31.1% | <10% |
| [16]: How important is the existence and implementation of telemedicine infrastructure in the medical practice when dealing with emergency incidents and regular visits? | <10% | <10% | 11.5% | 45.1% | 32.8% |

*(continued on the next page)*

health unit, as well as on data derived from the current medical staff and the staff of the Municipality of Folegandros. Moreover, a questionnaire of 35 questions (i.e., five questions of demographic nature and 30 questions regarding the healthcare services) was designed in order to carry out the residents' evaluation. Its content was largely based on other surveys conducted on islands in the past and on my personal work experience on the island, in order to appropriately serve the objectives of the study (Moraitaki-Tsami and Vasilakis, 2007). The 30 questions covered the following issues: (i) the accessibility and suitability of the building and of the infrastructure of the medical unit, (ii) the adequacy of its personnel and equipment, (iii) the infrastructure for the evacuation and transport of routine and emergency incidents, (iv) other healthcare services on the island (pharmacy, *etc.*), and (v) general questions about the satisfaction and the feeling of security of the inhabitants in relation to the healthcare services provided on the island. The questionnaire was completed by sending it *via* electronic means (i.e., e-mail and social media) to a sample of the island's population (150 permanent residents). For the uninterrupted circulation of the questionnaire to the inhabitants of the island and the need to carry out the primary research, approvals were requested from the 2nd Regional Healthcare System Authority of Piraeus and Aegean Islands (to which the unit belongs), and from the Municipality of Folegandros (47 / 15-Jan-2018). Participation in the survey was voluntary for the residents of the island and the questionnaire was completed anonymously. The survey was conducted between January and April 2018. The questionnaire administration and the collected data analysis were carried out through Google Forms.

**Results**

Of the 150 questionnaires sent to a random sample of the permanent population of Folegandros, a total of 122 responses were collected. Of the responders, 55.7% were female and 44.3% were male (Table 1). As far as the age distribution of the participants is concerned,

**Table 2.** (continued)

| Questions | Not at all | Little | Moderately | Enough | A lot / very |
|---|---|---|---|---|---|
| [17]: How suitable is the available ambulance for the transport of patients? | 28.7% | 25.4% | 18% | 21.3% | <10% |
| [18]: Is the location of the heliport appropriate? | <10% | <10% | 17.2% | 52.5% | 20.5% |
| [19]: How easy is the accessibility of the heliport? | 10.7% | 17.2% | 24.6% | 36.1% | 11.5% |
| [20]: How suitable is the heliport for transports even at nighttime? | 32.8% | 16.4% | 19.7% | 25.4% | <10% |
| [21]: How important is the existence of a permanent floating vehicle on the island? | <10% | <10% | <10% | 29.5% | 53.3% |
| [22]: Does the unique pharmacy on the island cover the needs of the permanent and seasonal population? | 29.5% | 24.6% | 19.7% | 21.3% | <10% |
| [23]: Does the monthly operation of the dental clinic cover the needs of the population? | <10% | 27.9% | 14.8% | 37.7% | 11.5% |
| [24]: How satisfied are you with the public health system on your island? | 26.2% | 37.7% | 27% | <10% | <10% |
| [25]: Does the public health system on your island create a sense of security and trust? | 41% | 33.6% | 19.7% | <10% | <10% |
| [26]: Did the recent economic crisis have a negative impact on the work and progress made in relation to healthcare issues? | <10% | <10% | 34.4% | 32% | 23.8% |

57.4% of the responses came from participants with ages 18–38 years, while 42.6% came from participants aged 39 years and above (Table 1). It is worth mentioning that only 7.4% of the participants were 59 years old or older, which indicates an underrepresentation of this age group in this study (Table 1). The majority of the study's participants have completed secondary education, while 40.2% of them were married at the time of the survey (Table 1). Finally, 37.7% of the study's participants have declared an annual household income that was below 10,000 euros, 38.5% of the study's participants have declared an annual household income that was between 10,000 and 20,000 euros, and the remaining 23.8% of the study's participants have declared an annual household income that was above 20,000 euros (Table 1). Given that the number of the residents who stay on the island for the entire year do not exceed 600, one can claim that about 20.3% of the population was surveyed.

In this study, only 25.4% of the respondents considered public healthcare services to be adequate (Table 2). Confidence in the quality of the medical procedures was assessed as moderate. While 73.8% of the study's participants expressed satisfaction with the competence of the medical personnel, 75.4% reported dissatisfaction with the quality of the available medical equipment (Table 2). Key issues identified through the survey include deficient infrastructure, a shortage of general practitioners and specialists, limited local laboratory capabilities, the absence of telemedicine services, and significant challenges in patient transport.

When residents were asked which medical specialties they considered essential to be permanently available on the island (given the complete absence of specialists), the most frequently mentioned were internal medicine, paediatrics, and cardiology. Less often, the specialties of the gynaecologist, general practitioner, orthopaedic surgeon, microbiologist, and dentist were mentioned, despite the regular (monthly) visit of a dentist to the island. The extra equipment that residents considered as necessary for the practice to have, in a frequency range, included: an X-ray, a blood-testing, and an ultrasound machine. Less often, gynaecology- and ophthalmology-related equipment, as well as telemedicine equipment were also reported. Equipment that is already available in the clinic was quite often mentioned (e.g., a cardiograph and a defibrillator), which probably reflects the lack of familiarity with the health services provided on the island. Regarding the destination of regular and urgent cases, the most frequent destination of the regular incidents reported by the participants is Santorini, while Athens and Syros are for emergencies alone.

Finally, the majority of this survey's respondents (53.3%) was moderately optimistic and believed that some things were improving on the healthcare-related issues' front, but important steps still had to be taken. Nevertheless, an equally important percentage (41%) was pessimistic and believed that the problems associated with the healthcare services on the island will never be solved. The difference between the two independent proportions (53.3% *vs.* 41%) was not statistically significant. The responses to the remaining questions of the survey are presented in Table 2.

## Discussion

Folegandros has a regional health unit with two posi-

tions for rural doctors, one position for a specialized doctor (general practitioner or internist), and one position for a nurse. The positions of specialized doctor and nurse remain vacant in recent years, and quite often one of the two rural doctors' positions is also vacant. In rare cases, both places remain vacant, requiring physicians to be dispatched from the medical structures of other islands.

The unit is housed in a building that is part of the castle of Chora. It consists of two ground-floor structures, 9×3 m each, jointed together with a small opening in the part wall of less than 180 cm in height. Each structure has two entrances, one from the outside and one from the inside of the castle. The medical office is located in Chora, specifically in the first square encountered by those arriving from the island's port, Punta. The square is accessible by both foot and vehicle.

As far as the staff of the clinic is concerned, as already mentioned, there are usually one or two rural doctors on the island, who are mostly recent graduates of the medical schools of the country; a reality that is quite common in GIDAs (Rogers *et al.*, 2011). There are no specialized or private doctors on the island and there is no provision for an increase of the staff during summer, when the demand for healthcare services is tenfold due to the tourists' flow.

As far as the equipment is concerned, the office has an electrocardiography (ECG) monitor, a portable vital sign monitor, and an automatic external defibrillator. In terms of haematology testing equipment, there is only a blood glucose monitor, an international normalized ratio (INR) monitor, and a corresponding device for measuring cholesterol and triglycerides. It does not have medical imaging equipment or telemedicine service infrastructure for emergencies. The only systematically applicable telemedicine service is remote ECG screening, where the ECG is being sent to a more centralized health unit or the national emergency service in order to receive therapeutic suggestions (Nielsen *et al.*, 2017). It is worth noting that for the proper use of telemedicine services a reliable internet connection is required, which is often problematic in Folegandros. Finally, the supply of the office with consumables and medicines is made by the Ios Health Center.

The island has a non-equipped ambulance for patient transport and a heliport for emergency evacuations. The heliport is in short distance from the village of Chora, easily accessible for the ambulance, and has functional night lighting. Folegandros has one pharmacy that serves the entire permanent and seasonal population and, according to the season, adjusts its working hours. Additionally, there are visits of a private dentist who uses the dental office of the island on a monthly basis. Finally, a mobile unit is active on the island in order to cover the needs of mental health patients; apart from providing regular mental health services, there is also the possibility of teleconferences with a psychiatrist (Southwest Cyclades Mobile Mental Health Unit).

According to the study's findings, public health services were considered adequate only by 25.4% of the respondents. The citizens' confidence in medical operations was also found to be moderate, as 73.8% were quite satisfied with the knowledge and skills of the available medical staff, but 75.4% of them were unsatisfied with the available equipment. The most important problems in the provision of healthcare services reported by the inhabitants were: (i) the sufficiency and functionality of the unit's infrastructure, (ii) the understaffing of the health unit, (iii) the lack of laboratory and imaging equipment, and (iv) emergency evacuations. The absence of permanent, specialized doctors, in addition to the limited laboratory tests that can be provided, leads to the discontinuity of the monitoring of the population's health. Patients with chronic health problems are forced to look for a permanent physician outside the island, usually in large urban centers, which is an inhibiting factor in pursuing regular medical follow-ups. The absence of permanent medical staff, in addition to the discontinuous monitoring of the population, also results in a poor and fragmented implementation of preventive interventions in the population (Smith *et al.*, 2008).

The sporadic visits of groups of non-governmental organizations is a decent move to fill gaps in local health services, but due to its fragmented nature it cannot substitute the need for regular monitoring of the population (Hussain *et al.*, 2015). The residents' lack of familiarity with the available health services and their lack of confidence in them often results in a delayed search for medical assistance. Combining these factors with the small number of medical examinations that can be performed on the island, the chances of successfully managing a critical incident are greatly reduced.

It is obvious that it is not possible to have a complete laboratory unit in Folegandros and other islands with such a small population. The need for permanent, specialized personnel combined with the very limited population mass of the island, especially in the winter months, explains why. Thus, the minimum required equipment is the presence of a complete blood count analyser and the ability to measure troponin levels. The absence of this minimal equipment eliminates the desirable autonomy of the island, thereby significantly reducing the possibilities of investigating incidents and increasing the need for patients to move to more central health units. It is worth noting that on islands of more than 1,000 inhabitants, it is necessary to have additional laboratory equipment such as a clinical chemistry analyser and an INR monitor (Thomas *et al.*, 2014).

In terms of the destination of regular and urgent cases reported by the residents, reality is quite differ-

ent, as non-urgent cases that do not require immediate transfer are referred for further investigation (mainly) to Athens, where there is a plethora of specialists available and all laboratory examinations can be carried out, and where the family doctors of the majority of the residents are located. In emergency situations, patients are transferred more often (and depending on their severity) to Santorini or Syros, which have secondary health establishments. Medical emergency cases are rarely transferred directly to Athens, which is the destination of the air transports only; the percentage of which is very low in the total number of evacuations performed through sea and air. The most frequent destination of regular incidents that need further investigation is Athens, while Syros is the rarest destination (Tountas, 2009). This leads to the conclusion that the Syros General Hospital fails to fulfil its central role for the Cyclades. The main factors in shaping this situation are the lack of regular transport connections with Syros (both in the winter and in the summer) and, thus, the reduced accessibility of the hospital, the lack of specialties that would make the hospital a suitable reception center (e.g. the lack of a paediatric surgeon or a neurosurgeon), and the reduced confidence of residents towards local health services, which is also confirmed by a relevant study by the (Greek) Institute of Social and Preventive Medicine (Moraitaki-Tsami and Vasilakis, 2007). Moreover, emergency transfers and, in particular, air transfers are generally considered to be unsafe. This is often not perceived by the population of the island, which treats them as the only way out for immediate access to more appropriate healthcare facilities. Finally, with a particular focus on reducing the transport of patients, it is necessary to recruit seasonal staff (as the demand for healthcare services during the summer months increases dramatically), and to also assess the upcoming benefit of the seasonal increase in medical staff.

Nevertheless, there is much room for realistic improvement. The full implementation of existing incentives (financial and professional) will certainly help attract specialized doctors to small islands such as Folegandros (Paliadelis *et al.*, 2012). The dramatic increase in demand for healthcare services during the summer months requires the recruitment of seasonal staff, especially in the most touristic islands. This will reduce the need for evacuating patients and minimize the insecurity, which is a barrier to permanent residence in these areas. Furthermore, it is important to enhance the complementarity between neighbouring health units. Regular short-term visits of experts from neighbouring larger islands can support the population's health monitoring and preventive medicine measures (including the vaccination of the paediatric population).

The full implementation of a telemedicine network in GIDAs (such as many islands of the Cyclades) is also an important priority (Smith, 2007). Its immediate exploitation combined with the appropriate training of the medical staff will result in gradual savings. Moreover, ensuring a regular coastal link between the islands of the Cyclades and the mainland might significantly reduce the need to mobilize emergency means for the transfer of patients to specialized health units. Finally, the hospitals of Syros and Naxos should be established as reference centers in the health sector of the Cyclades, thereby coordinating the provision of health services to the individual islands. In order to achieve this, a decentralized operation of the health system, which will provide self-reliance and freedom of resource management, is required in order to maximize the health autonomy of the whole island region (Humphreys *et al.*, 2008). The study of local needs is a prerequisite for the proper design of healthcare services, opening up a wide field of study for the islands of the country.

This study has some limitations associated with the small number of the study's sample; the latter limits the generalization of the results. Further studies are needed with a better representation of the older age groups, as such individuals are more disease-prone and, consequently, in greater need of effective healthcare services. Future research should consider longitudinal designs and larger, more representative samples in order to validate and extend the herein reported findings.

## Conclusion

The current study highlights the need for a revision of the existing healthcare provision structure on the island of Folegandros. The effective use of existing infrastructure, the enforcement of ongoing incentive policies for healthcare professionals, and the modernization of transport assets have been indicated as necessary changes for the improvement of accessibility and of the trust of the island's permanent inhabitants to quality healthcare services. A major challenge in Folegandros, as in most GIDAs, is the provision of healthcare services on an equitable, reliable, and uninterrupted basis.

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## Conflicts of interest statement

None to declare.

## Data availability statement

The data that support the findings of this study are

available from the corresponding author, upon reasonable request.

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