OASES

Promoting evidence-based reforms on medical deserts

D2.6

End of project booklet for the public

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Co-funded by
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Introduction

OASES project was brought to life with the aim to strengthen the capacity of public health authorities to reform their health systems and address all the key issues to successfully deal with the challenges posed by medical deserts.

The project has adopted a broad definition of “medical desert”: it encompasses any situation in which critical issues arise in the meeting of health needs, demand and supply of health care, i.e. not only the simple shortage of health professionals and services, but also poor quality and low accessibility of health care.

In the OASES project, we created a report on the state of medical desertification in Europe, its determinants and the ways to mitigate it. Additionally, we developed a package of tools to measure spatial access, conducted a scenario building exercise based on data from our consortium members’ countries, and created a framework for conducting pilot studies in seven selected sites. These findings served as the foundation for the pilot studies.

OASES pilot studies were launched, with the aim to:

- provide an overview of medical deserts in the countries involved (Cyprus, Finland, France, Hungary, Italy, Republic of Moldova and Romania);
- assess and characterise medical deserts at national and/or regional level, and the mitigation strategies in place and/or planned;
- facilitate consensus on medical deserts mitigation strategies among national/local stakeholders;
- provide evidence-based recommendations to mitigate medical deserts in the seven countries in the consortium.

Through these studies, we identified causes and discussed potential solutions for medical deserts in these sites. These accomplishments contributed to our goal of providing valuable insights and methodologies, particularly beneficial for health authorities, to analyze the issues causing medical deserts and implement possible solutions. Furthermore, the findings of our project serve as a solid base for future initiatives aimed at understanding and addressing medical desertification, offering methodologies and experiences that can be applied in other regions as well. The results of the project support policy actions and solutions against medical desertification in all EU Member States.

The project

The OASES consortium has involved 6 partners and one affiliated entity, that have answered the call for proposals for project grants entitled "Support to reforms in health workforce field - Initiatives on medical deserts", launched in March 2020 by the European Commission executive agency CHAFEA (now HaDEA). OASES is an acronym which stands for “prOmoting evidence-bASed rEformS on medical deserts”. The approved action started in March 2021 and ended in February 2024, duration was 36 months.

The OASES project leverages on the main evidence and results of the previous EU projects and initiatives on the health workforce field (mainly the EU Joint Action on Health Workforce Planning and Forecasting and the EU Joint Tender SEPEN).

Project partners

The OASES Consortium is composed by the following members:

• Agenzia Nazionale per i Servizi Sanitari Regionali - **AGE.NA.S.** - (Italy), project coordinator and WP1 (Coordination of the project) leader;
• Semmelweis Egyetem – **SU** - (Hungary), WP2 (Dissemination of the project) leader;
• International Network for Health Workforce Education – **INHWE** - (Cyprus), WP3 (Evaluation of the project) leader;
• École des Hautes Etudes en Sante Publique – **EHESP** - (France), and its affiliated entity - Institut de Recherche et Documentation en Economie de Ia Sante – **IRDES** - (France), WP4 (Methodology) leader;
• Terveyden ja Hyvinvoinnin Laitos – **THL** - (Finland), WP5 (Analysis and sustainability) leader;
• Universitatea Babeș-Bolyai – **UBB** - (Romania), WP6 (Development and implementation of pilot studies to mitigate medical deserts) leader.

The countries covered by the project (Cyprus, Finland, France, Hungary, Italy, Republic of Moldova and Romania) are highlighted in the map above.

Background

A lack of specialist doctors in a municipality, difficulties in retaining general practitioners in remote areas, barriers to attracting midwives to rural communities, challenges in recruiting young nurses in poorer cities, scarce staffing to replace retiring health workers, and lengthy waiting times or long distances when accessing primary healthcare services all contribute to the issue of 'medical deserts'. These challenges are linked to variables affecting both the demand and supply sides of health care, such as depopulation linked to aging, skill mismatches, changing expectations of citizens, and so on.

Many people in Europe experience these challenges and their consequences on a daily basis. There are territories in Europe where inhabitants lack proper access to healthcare.
While the term "medical desert" may sound straightforward, it actually refers to a complex phenomenon, that has yet to be fully investigated and addressed.
The mission of the OASES project was to serve as a source of knowledge on European medical deserts through an analysis of medical desertification in Europe, implementing pilot studies, and identifying mitigating measures to help health authorities tackle these issues.

The project's ambitions were to:

- Enhance and share knowledge on medical deserts;
- Identify and analyze aspects relevant to reforms addressing medical deserts;
- Organize dialogues and events to present lessons learned;
- Provide materials useful for health authorities and providers.

The aim of the pilot studies

The aim of the pilot studies was to create an overview of medical deserts and gather the applied and possible mitigation strategies in the seven countries (Cyprus, Finland, France, Hungary, Italy, Republic of Moldova, Romania) involved in the project, in order to find existing practices and provide evidence-based recommendations to the policy makers.

Most of the countries implemented their pilot study at national level, except France and Romania (France implemented it in Bourgogne-Franche-Comté region and Romania in the North-West region of the country).

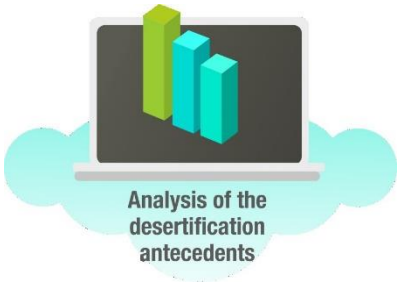
In the pilot studies, measurements were carried out of medical deserts through different quantitative approaches and a consensus building process among the key stakeholders was implemented in every country. The consensus-building exercise was carried out through the modified Delphi method. By this, the countries had to gather information in different (in general at least two) rounds of surveys from selected stakeholders, and after reaching a (quantitative) consensus of 80% in the main topics, a (qualitative) consensus meeting had to be organised between the stakeholders (online or in person). In the pilot studies, some of the countries created maps to identify and illustrate the deserted areas as well. In France, a different type of pilot study was implemented, as several measures to deal with medical deserts have been put in place in the country over the last few years. At the national level, French partners reviewed existing experiments with policy monitoring and compiled an evaluation of

the measures in place in France. At the local level, they identified some promising actions being implemented in one region - Bourgogne Franche-Comté (BFC) - and they analysed them through semi-structured interviews and a collection of documents from the different actors involved in the local experiments under study and through a qualitative analysis of interviews and documents.

OASES activities

The OASES project has aimed to strengthen the capacity of health authorities to reform their health systems and address the important aspects to successfully face the challenges posed by medical deserts, through a set of activities:

Step 1. Measurement. Methodology provided by **WP4**, articulated in three different maturity levels (elementary, intermediate and advanced) for measuring medical deserts. Based on the datasets available in the pilot sites identified in the 7 participating countries, different parameters and measurements have been implemented.
→ D4.1 A potential spatial access measure tool package



Step 2. Analysis of medical desertification. WP5 has performed a literature review at EU level, analysing the possible antecedents, causes, factors driving desertification. An inventory of potential solutions has been analysed and proposed to the executors of the pilot studies to support their consensus building exercise.
→ D5.3 Report of the state of art of desertification in Europe and ways to mitigate desertification

Step 3. Consensus building exercise. In the pilot sites, **WP6** coordinated a consensus-building exercise. This exercise consisted of several rounds of online disseminated questionnaires and virtual or in-person meeting(s) per country with the relevant stakeholders identified in each country. The goal of this activity was to reach consensus on: a definition of medical desert, the dimensions of medical deserts, the areas considered to be medical deserts, the causes of medical desertification and existing policies to address medical deserts and possible mitigating actions. This, along with measurement, enabled to develop a better understanding of the situation in each participating country. In France, a different type of pilot study was implemented, that involved an in-depth policy analysis and a qualitative study in the Bourgogne Franche-Comté region. Detailed results of the pilot studies are included in the OASES deliverable: → D6.3 - Reports on pilot studies

Step 4. Scale-up of policy actions. Policy actions and solutions identified in the OASES project were presented in an online EU wide conference, along with those identified by the other projects participating in the cluster of health workforce projects of the EU Health Policy Platform. The results of the discussion contributed to informing a sustainability report of initiatives to mitigate medical desert at EU level delivered by WP5: → D5.4 Report of the sustainability of ways to mitigate desertification. Sustainability was analysed based on the 'Framework for Action on the Health and Care Workforce 2023-2030' developed by WHO.

After 3 years of activity, the project has completed its goals. In particular, seven pilot studies have been carried out in 7 countries: Cyprus, Finland, France, Hungary, Italy, Moldova and Romania, and the sustainability of the identified initiatives to mitigate medical deserts has been thoroughly analysed.

For more detailed information visit our website: https://oasesproject.eu/results/.

Results

Medical desertification is a complex and widespread phenomenon. Throughout the project, using the methodology mentioned above, we gathered knowledge and developed tools to address medical deserts. Based on the datasets available in the OASES participating countries, we developed specific approaches for measuring medical deserts. Measurements were taken, and maps were produced, allowing us to identify locations of medical deserts.

Based on public statistics, review of scientific literature and review of grey literature in OASES countries,, we created a report analysing the state of art of medical desertification in Europe, the determinants of medical desertification and the ways to mitigate medical desertification. This action establishes a common ground for further research and for policymakers to address the issue of medical deserts. We conducted a consensus-building exercise involving stakeholders from the countries involved to reach consensus on a definition of medical desert, the dimensions of medical deserts, the areas considered to be medical deserts, the causes of medical desertification, existing policies to address medical deserts, possible mitigating actions. Policy recommendations were formulated to strengthen the capacities of public health authorities to reform their health systems and successfully address the issues caused by medical desertification. The sustainability and transferability of mitigating actions that had been identified through the consensus building exercise have been thoroughly analysed in a dedicated report.

Results of the pilot studies

Cyprus

The pilot study consists of a consensus-building exercise conducted in Cyprus, employing the Delphi methodology. It consisted of two survey rounds and a stakeholder meeting. For Cyprus, medical deserts refer to areas with limited access to specialised medical care and emergency services. In its national context, stakeholders have identified the emergency department, particularly concerning accidents and trauma, as a crucial medical desert.

Possible ways forward: Among the potential solutions identified by the stakeholders to alleviate the strain on public emergency facilities and enhance patient care: including private clinics in the emergency treatment sector; distinguishing hospitals based on the severity of medical conditions they handle; implementing walk-in centres and doctor-on-call services; improving paediatric emergency services; establishing an independent body responsible for health data management.

Finland

A Finnish medical desert indicator, the first of its kind in the country, was developed in order to describe the accessibility and availability of Finnish primary health care. Among the parameters considered, there are aggregated municipality-level data on the number of ambulatory physician and nurse consultations, visits to occupational healthcare, and the average travel distance by car to the nearest primary health care centre. In addition, the data were adjusted for population care needs, and the potential effect of telehealth visits were examined.

The consensus building exercise consisted of three rounds of online surveys and one online meeting among key stakeholders. Among the findings, the stakeholders' consensus about the "geographic prevalence of medical deserts is twofold: medical deserts are prevalent both in the areas of large cities and in remote areas or areas with scattered population". Nonetheless, medical deserts in Finland seem to be concentrated in the rural north, eastern Finland, and the western coast. When including remote visits (telehealth), the situation improves noticeably in some areas (i.e. Kainuu).

Possible ways forward: Securing sufficient funding for the training of health and social care professionals; streamlining labour immigration and utilizing it more effectively; focusing the work of professionals on tasks that match their education and skills; enabling more flexible division of labour and getting the right professionals in the right place; promoting service availability with digital, take-home and mobile services, as well as in utilizing digitalization and increasing and developing the use of digital health and social services.

France

As a set of national and local measures are already being experimented to improve the situation of medically disadvantaged areas, France implemented a peculiar study, choosing to document already existing experiments, rather than setting up a pilot study. The study carried out in France involved an in-depth policy analysis at the national level, focusing on the measures deployed in the country to improve access to primary care providers, and a qualitative study on major local measures deployed in the Bourgogne Franche-Comté region. With reference to the latter, interviews were carried out

among key relevant stakeholders of the region, enabling to identify several dimensions of analysis relating to each category of measure implemented.

(i) Possible ways forward : Improving coherence and coordination between spatial planning and health human resources location policies ; (ii) Measures to be evaluated : zoning and financial incentives for GPs, E-health solutions, targeting areas for policy support and improve the geographical distribution of health workers; (iii) Measures to be strengthened : reform of initial education, increase the number of doctors or short-term caregivers by combining employment with retirement, improve working conditions; introducing inter-professional cooperation, skill-mix and task shifting between GPs and other health care workers.

Hungary

Hungary focused its pilot study on the investigation of medical deserts in primary care at the national level, specifically GPs, general paediatricians and mixed practices. GP practices were used as the units of analysis, and deserted areas at district level were explored by examining all the 174 districts of the country. Maps were created to show desertification results in the whole country. Accessibility of the practices by travel time, same for vacant practices, age and number of primary care doctors per 10,000 locally registered social security numbers of the patients, and GPs Clusters at district level were examined and mapped. Though the high average age and the high share of primary care doctors aged 65 and older can be detected as a risk for the availability of appropriate primary care services in the near future, only relative difficulties accessing primary care services can be analysed. Closely related deserted areas cannot be depicted in Hungarian primary care, neither by the travel time, nor by the distribution of primary care doctors.

A consensus building exercise between the stakeholders of Hungarian primary care was also implemented, consisting of two rounds of online surveys and an online meeting.

Possible ways forward: creation and experience of GPs Clusters; collegial professional leader system at district level; the need for extension of competences for GP practices; the need of making primary care attractive to young professionals.

Italy

In order to analyse medical deserts, a matrix was developed in which three dimensions characterizing the provision of care (availability, quality, accessibility), identified on the basis of the WHO framework, are further declined according to two different perspectives: territory and population. Indicators were prepared basing on the six areas of the matrix (Presence, Coverage, Performance, Protection, Usability, Equity) and then measured in a simulation exercise. Measurement results were represented in maps.

The consensus building exercise consisted of three rounds of online surveys and one online meeting among Italian key stakeholders. Overall, the statement that was perceived as best describing medical deserts in Italy is “the perception of a lack of quality in the health care available in a given area, prompting people to seek it elsewhere”. The geographical areas that are mostly regarded to be the ones having medical deserts are the Southern part of Italy and peripheral and mountainous areas.

Possible ways forward: Different allocation of the national health fund among regions; strengthening healthcare networks and improving the organisation of healthcare services; further promotion of telemedicine.

Moldova

The consensus building exercise carried out in Moldova consisted of two rounds of online surveys and one online dialogue session among major national and local stakeholders. All participants agreed that there are medical deserts areas in the country, especially in rural areas, however a large majority of them also observed that statistical data and indicators currently in use are not sufficient to identify and designate a distinct geographical area as a medical desert. Overall, rural and remote areas were accepted as the most suitable candidates as medical deserts.

Possible ways forward: two major groups of actions were considered with sufficient potential effectiveness on mitigating the medical desertification process in the country: 1) introducing preferential contractual conditions for healthcare workers in a medical desert area (e.g. higher salaries, fixed-term contracts) and 2) offering annual additional financial incentives to any health and care workers who agrees to work in a medical desert area.

Romania

The Romanian pilot study particularly focused on geriatrics and gerontologists. The consensus building exercise consisted of two rounds of online surveys and one online meeting among Romanian key stakeholders. Exercise outcomes highlighted that: the rural areas represent the biggest medical desert, and this is mainly due to lack of medical personnel, low accessibility of medical services and high distance to the nearest medical unit.

Possible ways forward: various medical desert mitigation strategies were highlighted, including: incentives for the healthcare professionals who settle in rural areas, increase of the funding in the medical field, development of prevention strategies, especially for the disadvantaged population, digitalization.

European added value

The "European added value" of a health workforce project can be assessed in multiple ways. OASES generated possible solutions in tackling medical desert challenges in the involved countries and offers examples for countries facing similar issues. OASES work and outcomes can support EU Member States in mitigating medical desertification, and this can ultimately lead to better health outcomes for European citizens and more effectiveness and efficiency in healthcare systems.

Cooperation with other projects dealing with health workforce challenges was also an added value, as it supported outreach to the stakeholders and contributed to raising awareness of the crucial problems. Being involved with other projects in these challenges is a means to stimulate innovation, development and partnership in the healthcare sector.

Overall, EU-funded health projects play an important role in improving the health and well-being of European citizens. By promoting research, innovation, and cooperation, these projects can help to create a healthier and more prosperous Europe for everyone.

Dissemination

Conference participation

The visibility of the project was highly supported by the presence of OASES partners in national and international conferences – to name some:

- 2 June 2022 – The term "medical desert" was introduced to the Hungarian stakeholders in the annual conference of the Hungarian Hospital Association, by Eszter Kovács.
- 12-13 December 2022 - **Giovanni Baglio** (AGENAS), scientific coordinator, spoke about OASES at a meeting of the Steering Committee of the European Observatory on Health Systems and Policies, in Stockholm (Sweden).
- 25 January 2023 - OASES partners were present at the workshop of the **Health workforce Projects Cluster of the EU Health Policy Platform in Utrecht.** Members of the five projects discussed synergies, common goals and collaboration opportunities for the future.
- 2-6 May 2023 - **Monica-Georgiana Brinzac**, OASES WP6 leader (Babes-Bolyai University) presented OASES in the 17th World Congress on Public Health in Rome.
- 5-7 June 2023 - OASES WP4 partner **Véronique Lucas-Gabrielli** (IRDES) presented about OASES in the annual EHMA conference, in Rome, in the abstract session "Health systems' policies and regulations". The conference was a great opportunity to present the methods and indicators that were planned to be used to measure medical deserts in the OASES project.
- 13-14 July 2023 - **Federica Vitello** (AGENAS), former OASES project manager, presented the OASES project at the meeting of Chief Medical Officers, Chief Dental Officers and Chief Nursing Officers in Toledo, Spain.
- 30 November 2023 - **Giovanni Baglio** (AGENAS), scientific coordinator, presented about the OASES project at the "Good Practice webinar - Enhancing access to health services in rural areas". The focus of his presentation was: Mapping availability, quality and accessibility of health services for evidence-based solutions.
- 31 January 2024 - **Giovanni Baglio** (AGENAS), scientific coordinator, spoke about OASES at a meeting of the Commission for Combating Inequalities in Health and Care of the Rome Provincial Order of Surgeons and Dentists.
- 1-2 February 2024 - at the **JA HEROES** **"WP & Task leaders meeting**", the OASES project was presented by **Marcello Cuomo** (AGENAS) with the aim of channelling project outputs into the HEROES project, which started in 2023 and will end in 2026.

In addition to participation in international conferences, **online EU wide conferences** and **webinars** were also organised by the OASES consortium throughout the project lifetime.
OASES project organised its first online EU wide conference on the 10th December 2021, with the aim to describe medical desert phenomenon through the use of specific indicators. The second OASES EU wide event on 26 January 2024, focusing on: Health workforce challenges: possible ways forward was a joint final event for the Health workforce cluster projects, where relevant policy recommendations were discussed, developed on the basis of the results achieved within the cluster, and a call was launched to translate them into action. Before that, OASES had also contributed to other cluster

events, such as the webinar that took place on 29 March 2022, where first results of the cluster projects were presented.
During the project, 3 OASES own webinars were executed: the first one took place on the 1 March 2022, marking the first anniversary of the project. On 15 November 2022, OASES organised its secondwebinar, focusing on possible solutions to mitigate medical deserts. On 16 January 2024, the third OASES webinar was held introducing the preliminary results of the pilot studies. The recordings of our online events are available on the OASES website.

Short videos

Short information videos were produced, encompassing the core content related to OASES WP4, WP5 and WP6. Those are incredibly versatile tools for promotion of project activities, as they quickly grab viewers' interest and hold it longer than texts or static images. They are easily accessible on different platforms – over a YouTube link - and strongly support showcasing the essence of the project. WP2 created introductory and closing animated images for the short videos and recordings, as a brand mark of OASES. These intro and outro animations were used also in recordings of OASES webinars, thereby providing a frame and a brand look for the videos so strengthening the image of the project.

The first video involved WP1, namely Paolo Michelutti, former OASES project manager, who shared his vision about the OASES project.
Secondly, WP4 partner Véronique Lucas-Gabrielli, shared information about the challenges and measurement methodology of medical deserts.
The third short video was recorded with Moona Huhtakangas, WP5 leader, about the importance of primary care and organisational aspects of medical deserts.
Finally, WP6 leader, Monica-Georgiana Brinzac, explained the preliminary results of the OASES pilot studies.

Sustainability

There are different ways to keep project findings alive and make sure that those can serve as a basis for further reflection and work. A basis for dissemination is the OASES website, which will be maintained in the coming 5 years. All public deliverables of the OASES project are available on the website.

The intention is to sustain the OASES resulting policy dialogue processes and keep stakeholder networks involved in OASES-related activities. OASES partners will bring in lessons learned into upcoming health workforce projects, as the topic is a priority on the EU agenda.

OASES partners participate in online or on-site conferences regularly, and this will offer a possibility to talk about OASES outcomes and disseminate results in the future.

There is also a great opportunity to continue the elaboration of the pilot studies or find new ways for medical desert research to be fostered/carried out based on the OASES experiences. Using knowledge gained can be the basis for publications and expert discussions as well.

Acknowledgements

The successful finalisation of the OASES project would not have been possible without the generous support of the Policy Board members and of the stakeholders, who followed consortium activities throughout this journey.

Their support and contribution are deeply appreciated.

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