

AHEAD



**ACTION FOR HEALTH AND EQUITY
ADDRESSING MEDICAL DESERTS**

Guideline on research methodology & tools

October 2022

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Basic principles

This document summarises the research tool methodology developed and implemented in the AHEAD project: i.e. the research protocols for data collection, classifying medical deserts as deserts, selecting case studies, stakeholder mapping, analysis of interviews and survey, and results validation. The outcomes of the AHEAD project consist of the classifications of medical desertification (Medical Desert Diagnostic Tool (MDDT) for Italy, Moldova, the Netherlands, Romania and Serbia and the (related) country reports, including the contextualisation of tools and processes leading to the results (MDDT and descriptions of the state of medical desertification in the abovementioned countries). You can read more about these on [the AHEAD website](#).

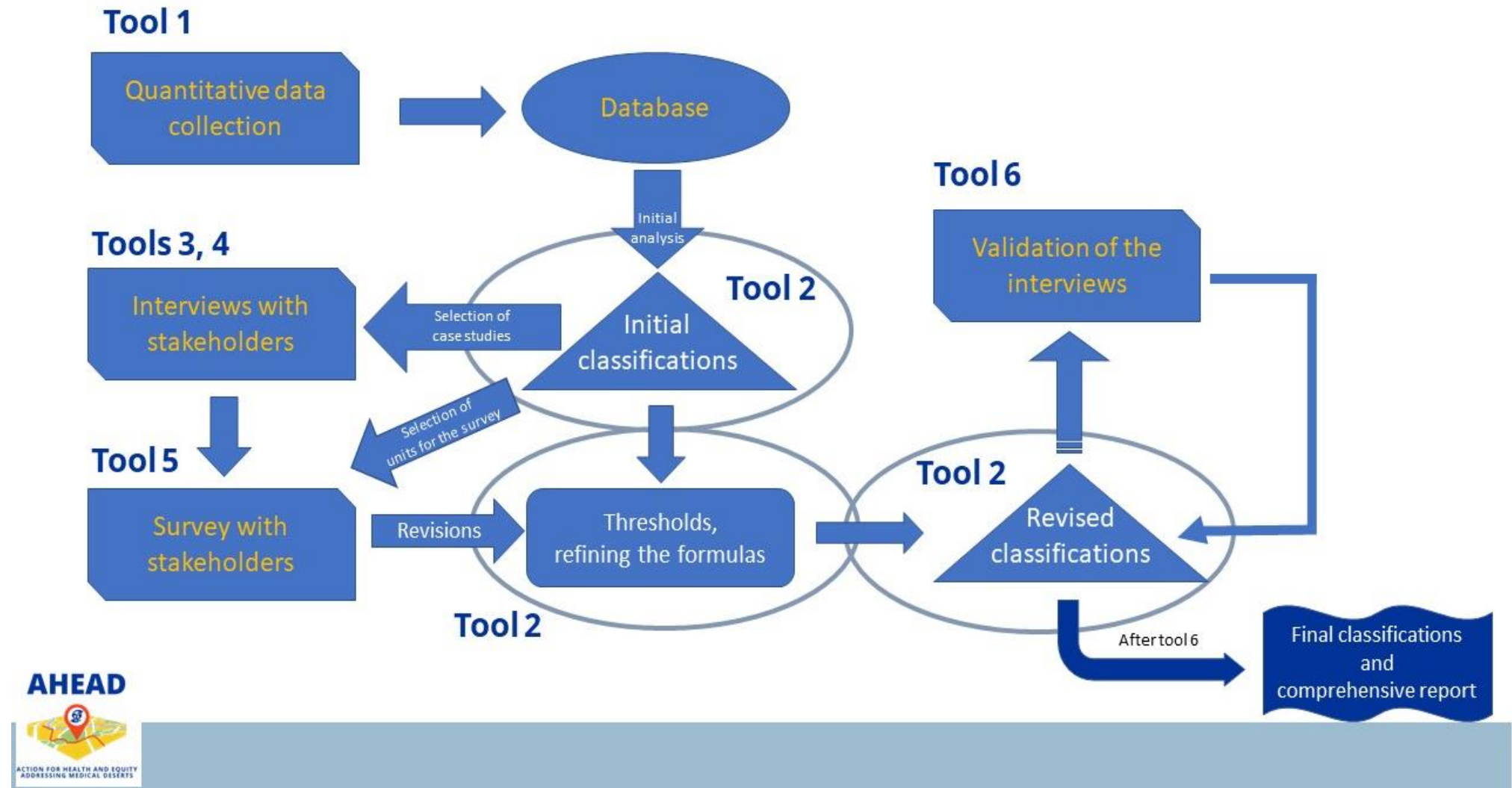
The list of tools includes:

1. The draft research protocol for **collecting and analysing existing and available statistical data at country level relevant to medical deserts**
2. Sampling criteria for the case studies used to **select medical deserts or areas that can be classified as risk areas, based on the definition and operationalisation of ‘medical desertification’**
3. Draft guidelines **for stakeholder mapping and analysis, to identify the most relevant respondents for each case study, as well as criteria for selecting and procedures for recruiting stakeholders**
4. Interviews questions **to collect perceptions and experiences regarding medical deserts from the relevant stakeholders**
5. A brief questionnaire to **collect perceptions and experiences regarding medical deserts from stakeholders that are not available for the interviews**
6. The consensus-building methodology/sessions **with the main themes for the validation of the findings from the abovementioned research (concentrated on solutions validation)**. See [this page on the AHEAD website](#), about our consensus-building methodology (including a link to our presentation at the bottom).

The logic of the activities includes interdependencies that are illustrated in Figure 1 (see next page).

Starting from the medical desert definition, quantitative data is first collected, leading to initial classifications as deserts. These classifications can support in selecting a first round of interviewees and conducting a survey. Based on the results, the initial classifications are revised, leading to refined measurement and more precise identification of areas at risk of desertification. A validation round allows a new refinement of the process and leads to a final comprehensive report that includes data provided by all other steps that were undertaken. The tools described in this summary are a step-based approach for identifying classifications of medical desertification. More details are provided in the next sections, that include specifications for each tool.

Figure 1. Interdependencies between the tools considered for setting up the country reports



The definition of medical desertification

In the initial stages of the AHEAD project, we carried out a literature review to better define the concept of 'medical desertification'. Based on a thorough review of scientific studies, we have concluded that the complex concept requires a set of definitions to understand its multidimensional perspective. From the literature review, we derived a working definition to inform the development of research tools and validated this definition through the results of these tools.

Below is the final version of the medical desertification definition, from AHEAD consortium:

Definition

Short definition

A medical desert is the end point of a complex process called 'medical desertification', that implies continuous and increasing inability of a given population to access health services in a timely and contextually relevant manner.

Further explanation

The regions likely at risk of becoming a medical desert can be identified and based on the factors commonly used for describing the three dimensions of access to health care, and could be categorized as barriers.

Specific definitions of the terms used:

Context: the context entails the local, regional and national levels, which should be investigated based on the available standards and (social) norms.

Given population: a population in a specific area (e.g. municipality; region) or isolated area (e.g. hard to reach, rural locations) or population groups with specific needs and/or vulnerabilities (e.g. Roma, migrants, the elderly).

Dimensions: the physical access, social and policy dimensions are interrelated and dependent on each other in varying degrees and modalities.

Factors: each dimension can be investigated by a range of factors, such as (see below - not an exhaustive list):

Physical access factors

- Availability of (1) general-practitioner, (2) community health centers, (3) emergency services, (4) hospitals, (5) pharmacists

- Distance to primary healthcare facilities
- Average time to reach the health facility or the patient, using the emergency services.

Social factors

- Cultural sensitivity and context-appropriateness of the care that is being offered
- Expectations of the population (e.g. supply vs. demand, met vs. unmet needs, and expectation of the population on isolation based on location, are among the factors to be considered during investigation).

Policy factors

- Regional and rural development strategies
- Human resources for health strategies – policy decisions on the availability and distribution of primary health care personnel; remuneration methods; regulation, including strategies for licensing and continuous professional development
- Strategies for primary health care facilities and their management
- Strategies for specialist services (such as distribution of specialised hospitals, services provided, etc.).
- Cost of services to the patient and financing the health system.

The factors can be identified using qualitative and quantitative research tools, which are described below. These tools are a guideline of the approach and should be contextualised to each research objective.

The quantitative factors should result in a database that can be used to compute a medical desertification index (see below), which provides an insight into whether this area is at risk of becoming a medical desert.

The qualitative factors should be used to further understand the realities of potential medical deserts.

Medical desertification index: [click to open document](#)

A research team can decide to adapt the research and index calculation methodology to the specific objective and context.

The index provides a snapshot of the situation, and thus must be investigated further and analysed over time to definitively conclude whether the area is indeed going through desertification or has reached the end of the process.

Once the key factors are investigated, understood (and compared to national standards) and

where possible, computed into a set of indexes, one can make a conclusion on the stage of the process of medical desertification.

Research protocols for each tool

Tool 1. Research protocol for collecting and analysing existing/available statistical data at country level on medical deserts

Principles

The goal is to depict medical desertification based on the agreed definition of the concept.

There are two basic principles to be considered:

1. the indicators that are used are relevant for country-level situations
2. the indicators allow for the potential to compare across countries

In addition, one should aim for using the most relevant available data. This implies that, when no (standard) comparable indicators are available, one should not stop, but should collect indicators that reflect the same reality, despite not being identical (for instance, one can consider the number of GPs in the countries where such information is retrievable, and distance to GPs, when the actual number of GPs cannot be retrieved).

Protocol for selecting indicators

Based on the definition, one should consider at least three types of basic information that allows combining it into relevant indicators. All should be collected at least at locality level; localities being defined by current administrative units in each country.

1. population data:
 - a. total number of inhabitants
 - b. number of inhabitants by age groups, e.g. 0-5, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85-89, 90+ (years).
2. data on geography:
 - a. geolocation (XY codes) and/or latitude and longitude for each locality
 - b. a matrix of distances on road between localities
 - c. a matrix of distance on rail between localities
 - d. a matrix of average time for travelling on roads between localities
 - e. a matrix of minimum travel time by public transportation between localities
3. data on provision of basic health care:
 - a. data on GPs: number of GPs and/or GPs practices by locality, average work time by GPs by locality, average distance to GPs by locality
 - b. presence of emergency services and/or number of staff in emergency wards
 - c. number of intensive care beds and/or number of staff in IC wards
 - d. number of pharmacies and/or number of staff in the pharmacies

4. data on provision of “Advanced health care”:
 - i. each country decides what is important in its context (for instance gynaecologists, oncologists, cardiologists etc.)
 - ii. Data is collected for each indicator similar to “basic health care”

Data sources

To collect the relevant information, it is advised to access the data of several providers such as the national statistics office, the health insurance providers, ministry of health, NGOs active in the area, academic publications and Eurostat data.

Resulting database

The resulting database can be structured as a double entry table, with localities on the rows, and traits for each locality on the columns. We advise that the columns will include, at minimum, the variables: statistical code of the geographical unit, name of the locality, district/county, geographical coordinates (lat/long and/or XY coordinates), population divided by the above-mentioned categories and data on provision of basic and “advanced” health care as described by the above-mentioned indicators. In the end, the outcome is a database that includes both the initial (raw) indicators (described above) and the resulting indicators for desertification (these indicators are based on the [index calculation developed within the AHEAD project](#)).

Tool 2. Sampling criteria to select the medical deserts or areas at risk for case study

Analysis and final outputs

Formulas depicted in the report on the [index calculation](#) should be used to combine the raw data into indicators of access to health care. Each indicator is depicted graphically into a map, and categorized into “medical desert”, “close to desertification”, “no sign of desertification”. The thresholds for considering an area as a desert include usage of empirical and theoretical knowledge as explained in the [index calculation](#) and according to national standards / normative. The resulting indicators for desertification are considered for selecting case studies for the interviews and the survey. After the interviews and the survey, the thresholds for computing indicators will be revisited and a revised database will be used for the validation in tool 6.

Sampling criteria for case studies

To select the case studies and identify the stakeholders, one needs the initial classifications. The bottom 10% of cases in terms of access to health care (that is the localities that are at the top of desertification index for the respective country) are selected to identify stakeholders for interviews and survey.

The top 3 localities are focused on for the conduct of tool 3 and 4. Firstly, during recruitment,

representatives from the most deserted locality are considered. If all three interviews planned for local level (recommended for conduct of tool 3) can be carried out, they should be carried out and the selection procedure stops here. If this (3 interviews with case study representatives) is not possible, the next locality on the list is considered. One should continue the selection procedure until the criteria that all three local representatives are from the same area is fulfilled in order to have a comprehensive view over the respective case study. For the survey (tool 4), the top 10% of deserted localities in each country should be selected for stakeholder analysis.

Media content analysis

Recent (last 3 years) media reports about medical situations in the respective locality should be collected. Local media is particularly relevant. The goal of this analysis is to get an idea of whether and how medical desertification is perceived by stakeholders. Based on the newspaper's articles a first attempt of stakeholder identification and mapping can be elaborated. The content of the articles can also provide information/insight on the local manifestations of medical desertification to complement the interview guide. A national database including articles of both national and local newspaper outlets should be used as a data source and search terms should include words covering the dimensions and indicators (and the synonyms) of medical desertification in combination with the case locality's name.

Tool 3. Draft guidelines for stakeholder mapping and analysis, to identify the most relevant respondents for each case study, as well as criteria for selecting and procedures for recruiting stakeholders

Strategic options

After computing indicators of health care provision, one should decide from which threshold one can consider a locality as subject to desertification. Thereby one can collect data and calculate indicators of desertification more precisely as described in the previous section. Then, one should decide the value below (or above) which a place is considered as desert.

Two strategies for deciding the threshold value could be employed:

1. Statistical:
 - a. One can consider statistical thresholds, relative to the mean in each country.
 - b. Instead of mean, in case of skewed or non-normal distributions one can use the median.
2. Based on existing standards/judgements:
 - a. This implies asking key stakeholders on thresholds and deriving thresholds based on such interviews.
 - b. Also, one can consider the national legislative provision for a basis to derive thresholds.

In any case, these decisions need legitimacy. The best provision of legitimacy is consultation with key stakeholders through interviews, that can be done not only while considering the second

strategy, but also in the first one. Even more, the two strategies (and their sub-strategies) could be considered complementary. Furthermore, apart from defining an area as medical desert for the respective indicators, one can be interested in an overall desertification measure. Then it should be decided how to combine several indicators in a single indicator and on the minimum number of (type of) indicators.

Resuming the above considerations, it is important to observe that the aim of the entire exercise is to document quality of classification and to refine it (changing thresholds and ways to combine indicators), and to increase legitimacy by making the tool for desertification known to stakeholders.

Protocol for selecting stakeholders

(1) type of interviewees

Considering the need for information and the need for relevance, one needs to consider discussing with local and central-level stakeholders, with service providers (hospitals, GPS, etc.), receivers of health care (patients), regulators (public authorities), independent stakeholders (NGOs).

This simply means that two basic criteria need to be combined: the type of stakeholder (regulator, service providers, patients, NGOs) and the localization (central vs. local/regional).

(2) number of cases to be selected

There are two perspectives to be considered:

- On one hand, the aim of the exercise is to document with potential inputs the classification, and to increase legitimacy of the endeavor. Both indicate that one needs relevant cases, not representativeness (as this component is to retrieve ideas and feedback on the existing tool and to increase legitimacy), and in-depth interviews are the most suitable tool in this respect.
- On the other hand, one needs to consider the available resources, in terms of time and human resources.

Considering both perspectives, one case study per country, and six interviews per case study should suffice to provide the necessary information.

(3) selection of interviewees

The interviews are to be carried out with:

- 1 representative of patient associations, **central level**
- 1 representative of public authorities at **central level**
- 1 representative of public authorities (e.g. public clerk in charge with health issues, the mayor/vice mayor or a local counselor) in the locality/district potentially affected by desertification (that have at least one dimension on which could be considered as medical desert)

- 1 representative of health insurance agencies (person with decision-makers role preferably from local branch, otherwise district/county/regional level in the area of potential desertification)
- 1 representative of physicians (regional/local – in the area of potential desertification)
- 1 representative of NGOs active in the area of health policy [central level]

Outputs for step 3

The list of localities proposed for case studies.

Tool 4. Interview Protocol to collect perceptions and experiences regarding medical deserts from the relevant stakeholders

Principles

Interviewees should be announced that they are invited for a discussion about “access to medical services”, in order to avoid inducing them answers.

During the in-depth interviews, the most efficient strategy in terms of gain knowledge is to bring the interviewee in a familiar situation, and to let the interviewee to have the apparent control over the discussion, simply guiding the interviewee towards the themes relevant for the interests of the study.

The structure of the interview is in a conversational style: the succession of themes is not standardized, but it follows the normal logic of the conversation. The interviewer intervenes rarely, simply to influence the interviewee to lead the conversation in the desired directions, and does not express judgements of value, or personal/professional opinions.

To view the themes to be addressed in the interview access annex 1.

Further specifications

GDPR agreements should be signed prior to interviewing. The signed protocol should include obligation of the research team that no personal information will be offered to other persons than the research team, and any citing/verbatim will be anonymized prior to be included in any report. All interviews should be recorded and later transcribed and translated into English. No other person should be present during the interview, except for the interviewer and the interviewee.

Data analysis

Each interview should be coded through short conclusions written by the interviewer for each of the themes considered in the interview guide. A list of additional codes can be developed as well for a more in-depth analysis of the interviews after having all indicators collected in Step 1. Furthermore, the interviews are analyzed with the aim to see whether changes should be implemented in the thresholds.

Outputs for step 4

The set of recorded interviews.

The set of written descriptions of the interviews.

The set of short conclusions per theme.

Optionally a set of additional codes.

Tool 5. A brief questionnaire to collect perceptions and experiences regarding medical deserts from stakeholders that are not available for the interviews

Interviewees & protocol

The questionnaire-based interviewees should be administered to the same types of stakeholders as those that were invited for the interviews. In addition, academics known to be concerned with health policy are to be considered. All respondents will be approached via a web survey (such as LimeSurvey, Survey Monkey, Question Pro, etc.).

A seven-step approach is therefore needed:

1. A list of interviewees is set up
 - a. Localities in top 10% desertification are considered
 - i. GPs in these localities are listed, and their email addresses/mobile phones/addresses are identified.
 - ii. Medical practices in these localities are also identified
 - iii. Pharmacists in the selected areas are identified
 - iv. Contacts of townhalls are identified
 - b. At central level:
 - i. List of academics preoccupied with health policies
 - ii. List of agencies responsible for health provision
 - iii. Lists of NGOs active in health policy
 - iv. Contacts in health insurance agencies
 - v. Contacts in patient associations
2. The questionnaire is uploaded in a form dedicated to web survey. The form is set up for guaranteeing anonymity of answers, but also allowing reminders in case of no answer.
3. A personalized link to the questionnaire is sent to the potential respondents for which individual contacts are available.
4. A personalized link is also sent to those that are contact points (such as the common email account of a public authority or of a patient association), with the request to disseminate to the relevant employees or members.
5. For those at point 3 that did not answer after 4 days, a reminder is sent.
6. For those at point 4 for which no answer was received in 4 days, a reminder is sent.
7. After 4 more days, points 5 and 6 are repeated.

The questions should be designed after the qualitative studies are completed (interviews) and resulting data is analysed. However, as tentative guidelines, several questions that could be used can be found in this annex 2.

Tool 6. Validation of the results through consensus-building sessions

After all indicators are collected and decisions on thresholds are made, and assessment of medical desertification is applied to each locality, a validation stage is necessary.

The best validation is to carry out consensus-building sessions with three different types of stakeholders:

- Community: people in one or two area considered as medical deserts (one FGD per area, middle class interviewees, 35-45 years old)
- Health facility level: medical personnel in one or two area considered as medical deserts. (one session per area, including pharmacists, GPs, nurses, physicians, either from the locality or from neighboring localities with the condition that they provide care to local people)
- Local policy level: policy decision-makers in one or two area considered as medical deserts (one session per area, including public administration and NGOs from the area)

Each consensus-building session should include 6-8 participants if face-to-face, respectively 4-6 if online. The interview protocol should include:

- Recruitment should be done announcing that they will be shown desertification indicators for [the respective country], which are provided in graphic form (interactive maps), along with a table of numeric indicators, and the corresponding methodology.
- The above-mentioned information is sent in advance to the interviewees.

The themes to be discussed in the consensus-building sessions can be accessed in Annex 3.

Annexes

Annex 1. Tentative guidelines for questionnaire development

- For each of the following criteria, please indicate to which extent do you consider it appropriate to define access to medical services:

	Very little	little	much	Very much	DK	NA
Distance to GP	1	2	3	4	98	99
Number of GPs in locality per 1000 inhabitants						
Time for travelling to GPs						
Waiting times at GPs						
Number of GPs in nearby localities						
Population (size) of nearby localities						
Distance to Emergency services						
Number of Emergency health services in locality per 1000 inhabitants						
Time for travelling to Emergency services						
Waiting times at Emergency services						
Number of Emergency health services in nearby localities						
Distance to Pharmacies						
Number of Pharmacies in locality per 1000 inhabitants						
Time for travelling to Pharmacies						
Waiting times at Pharmacies						
Number of Pharmacies in nearby localities						

DK=do not know, NA=not answering

Similar questions should be added after the indicators at TOOL 1 are completed.

- If you think about distance to doctors/practices/health care provision, is there a certain maximal distance that should be considered as minimal standard?

With respect to ...	Minimal distance to be considered as standard	DK	NA
Distance to GP		98	99
Distance to Pharmacies			
Distance to Emergency Health Services			

Similar questions should be added after the indicators at STEP 1 are completed.

➤ In your opinion...

	Very little	little	much	Very much	DK	NA
is the density of population related to accessing health care services	1	2	3	4	98	99
is your locality a medical desert?	1	2	3	4	98	99
are there medical deserts in [your country]?	1	2	3	4	98	99
is your locality disadvantaged from health care provision?	1	2	3	4	98	99
do people from other localities come to your locality for medical treatment?	1	2	3	4	98	99
do people from your locality go to other localities for medical treatment?	1	2	3	4	98	99

➤ If considering medical desertification, please indicate for each of the following criteria [###], which is the most important, which is the second in importance etc.

	Rank	DK	NA
Distance to health care		98	99
Time for travelling to health care			
Waiting times			
Number of inhabitants per doctor			

Similar questions should be added after the indicators at TOOL 1 are completed.

➤ If considering medical desertification, please indicate for each of the following criteria [###], which is the most important, which is the second in importance etc.

	Rank	DK	NA
Having GPs in the nearby		98	99
Having emergency services in the nearby			
Having pharmacies in the nearby			
Having a hospital in the nearby			

Similar questions should be added after the indicators at TOOL 1 are completed.

- Referring to the “nearby” in the previous question, please rate how important the following distances to medical practices are when being taken into consideration. For each distance, please provide a value of importance.

	Very little	little	much	Very much	DK	NA
GPs in an area of 1 km to the household	1	2	3	4	98	99
GPs in an area of 1-5 km to the household	1	2	3	4	98	99
GPs in an area of 5-10 km to the household	1	2	3	4	98	99
GPs in an area of 10-20 km to the household	1	2	3	4	98	99
GPs in an area of 20-30 km to the household	1	2	3	4	98	99

	Very little	little	much	Very much	DK	NA
Pharmacies in an area of 1 km to the household	1	2	3	4	98	99
Pharmacies in an area of 1-5 km to the household	1	2	3	4	98	99
Pharmacies in an area of 5-10 km to the household	1	2	3	4	98	99
Pharmacies in an area of 10-20 km to the household	1	2	3	4	98	99
Pharmacies in an area of 20-30 km to the household	1	2	3	4	98	99

	Very little	little	much	Very much	DK	NA
Emergency health services in an area of 1 km to the household	1	2	3	4	98	99
Emergency health services in an area of 1-5 km to the household	1	2	3	4	98	99
Emergency health services in an	1	2	3	4	98	99

area of 5-10 km to the household						
Emergency health services in an area of 10-20 km to the household	1	2	3	4	98	99
Emergency health services in an area of 20-30 km to the household	1	2	3	4	98	99

Similar questions should be added after the indicators at TOOL 1 are completed.

- Let suppose that we classify all localities in [your country] a desert on seven dimensions, including access to GPs, access to emergency services, access to Pharmacies ... (to be completed after completion of TOOL 1). On how many of these 7 dimensions (indicators) should a locality be a desert in order to be considered an actual desert?

7 (seven out of seven)

6 (six out of seven)

5 (five out of seven)

4 (four out of seven)

3 (three out of seven)

2 (two out of seven)

1 (one out of seven)

98. DK

99. NA

- If you think about specific localities in our country, can you name one or several which can be considered medical deserts?

(open end question)

- When deciding whether a locality is a medical desert, what should one compare its situation to?

	Very little	little	much	Very much	DK	NA
Compare to a standard of decency set up by experts.	1	2	3	4	98	99
Compare to district/county average.	1	2	3	4	98	99
Compare to national average.	1	2	3	4	98	99
Compare to the average of [European average] (e.g. Western Europe, Eastern Europe, etc.).	1	2	3	4	98	99
Compare to EU average.	1	2	3	4	98	99

Compare to OECD average.	1	2	3	4	98	99
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[A desertification map/classification that was created based on TOOL 1 is shown]

- This is a map of medical desertification in [your country] based on existing data. Please look at it carefully and answer to which extent you agree with the following affirmations

	Very little	little	much	Very much	DK	NA
the map/classification fits your knowledge about [your country]	1	2	3	4	98	99
There is no surprise for me seeing the map	1	2	3	4	98	99
There are localities misclassified as deserts	1	2	3	4	98	99
There are localities misclassified as not being deserts	1	2	3	4	98	99
The map fits my knowledge on difference within [our country]	1	2	3	4	98	99
The position of my locality is as I expected	1	2	3	4	98	99

Locality where the interviewee practices: (drop down list)

Sex:

1. M
2. F
3. other
4. Prefer not to say

Year of birth ____

Education:

- 0 . no education
1. primary
- 2, lower secondary
- 3 upper secondary
- 4 university – BA
- 5 university MA
- 6 PhD
- 99 NA

How many children do you have? _____ 99 NA

How many of you children are under 18? _____ 99 NA

Do you care for an elderly or disabled?

- 1. Yes
- 0. No
- 99. NA

Are you born in [the country of survey]?

- 1. Yes
- 0. No
- 98. DK
- 99. NA

You are:

- ☐ Public clerk
- ☐ GP
- ☐ Medical doctor
- ☐ Nurse
- ☐ Ong representative
- ☐ Academic
- ☐ Member in a patient organization
- ☐ Pharmacist

Annex 2. Themes to be addressed in the interviews

For both interviews at central and local level:

- Which are the criteria that you consider when you think about access to medical services?

[the aim is to see whether they spontaneously discuss about access to health care provision in terms of density of services, distance to practices, etc.]

- If you think about distance to doctors/practices/health care provision, is there a certain maximal distance that should be considered as minimal standard?
- Is density of population related in any way to accessing health care services?
- If considering medical desertification, on each of the following criteria [###], starting with which threshold would you say that a locality is a medical desert?

Criteria are mentioned based on the indicators available for each country.

The question is specifically asked for each indicator.

- On how many of these dimensions (indicators) should a locality be a desert in order to be considered an actual desert?
- If you think about specific localities in our country, can you name one or several? Which ones?
- When deciding whether a locality is a medical desert, should one compare its situation to other localities or standards? Which ones?
- Should one consider county-level standards, national standards, regional-standards (regions within Europe, such as Western Balkans or Western-Europe, or CEE]), European standards, world-wide standards?

Questions only to be posed during the interviews at local level:

- Is [your locality] a medical desert? Why? (Why not?)
- How did the locality become a medical desert in the first place?
- Do people here think at the locality as disadvantaged from health care provision? Why? (Why not?)
- Do people access only health care providers in the locality or also from neighboring areas?

Questions accompanied with the different desertification maps/classifications that were created based on tool 1 which are only to be posed during the interviews at local level:

- This is a map/classification that we have been created based on existing information. We are interested to know whether your professional opinion corresponds to these findings. Would you say that the map/classification fits what you know about [your country]?

Additional questions, which should be asked only if the interviewees do not address them spontaneously:

- Is anything that surprises you? Why?
- Would you say that you trust such results?

[If not – show them partial maps.]

- Do they correspond to what you expected?
- Is there a locality that could be considered desert and it is not? What makes THAT locality desert?
- Is there a locality that is not a desert in your opinion and in the map is desert or close to desertification? What are the particularities of that locality?

For each theme, the interviewee is expected to elaborate more than a yes/no answer. If not doing it, the interviewer can determine the interviewee to be more specific by asking one or several of the following questions:

- Can you elaborate, please?
- Which are the arguments for your opinion?
- Can you give an example?

Annex 3. Validation of the results through consensus building sessions (further details will be provided via consensus building methodology due April 2023)

- Do the results correspond to your view of health care provision in our country?
- Is there anything that surprises you? What? Why?
- Is the methodology adequate to the task it attempts to solve? What would you have changed?
- Are there aspects that should have been considered and were ignored in the study?
- Which policies could be carried out to alleviate desertification?
- How can it be prevented in other localities/in the future?



**Co-funded by the
Health Programme
of the Europe Union**

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