



### D8.1: Workshop report

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## 1. Abstract

The ROUTE-HWF consortium organized a two-day workshop in Zagreb on November 30 and December 1, 2023. In total 96 health policy researchers, policy makers and health practitioners participated in the workshop, 64 on site and 32 online. The participants were coming from 20 different countries. The workshop consisted of short introductory presentations by the ROUTE-HWF project team, followed by interactive subgroup discussions and plenary discussions. The ROUTE-HWF project team members acted as rapporteurs during group discussions, producing summaries of each of the discussions, and ensured that conclusions are drawn from the discussions related to WP7 deliverables and the overall work of the ROUTE-HWF project. Overall, the participants evaluated the workshop as very well organized, inspiring and interesting. The aim was achieved to exchange experiences from the 20 different countries in (1) how to identify different types of medical desert areas, (2) how these areas evolved as a process of desertification, and (3) what policy actions are possible for mitigating the decline of health service levels in medical desert areas. The positive feedback from the panel of six distinguished participants from different countries, confirmed the added value of the conceptual base of the ROUTE-HWF project, its measurement tools and policy roadmap as presented and practically applied during the workshop.

## 2. Introduction

The ROUTE-HWF workshop titled "A Roadmap OUT of mEdical deserts into supportive Health WorkForce initiatives and policies" was held at the Hotel Dubrovnik in Zagreb, Croatia. The event took place over two days: November 30 and December 1, 2023. It included a range of sessions, networking opportunities, and a guided tour of Zagreb for attendees at the venue. The workshop is the key activity of Work Package (WP) 8 of the ROUTE-HWF project, and so this report is the key deliverable D8.1 of this WP.

The workshop aimed to present the main outputs and outcomes of the ROUTE-HWF project (i.e. the taxonomy, case studies and roadmap), and particularly to verify these with a broad and expert audience. There were 96 participants participating, 64 on site (see the picture in Figure 1) and 32 participated online<sup>1</sup>. The participants were coming from 20 different countries, achieving the important goal to reach out to a broad coverage of EU countries. The program of the workshop is depicted below:

<b>Day 1: November 30, 2023</b>
<ul style="list-style-type: none"><li>▶ 1:00 PM - 2:00 PM: Registration and Welcome Coffee</li><li>▶ 2:00 PM - 2:15 PM: Welcome Address</li><li>▶ 2:15 PM - 3:00 PM: Croatia: its medical deserts and the new generation of health workers</li><li>▶ 3:00 PM - 3:45 PM: Three deliverables of the ROUTE project</li><li>▶ 3:45 PM - 4:15 PM: Coffee Break and Networking</li><li>▶ 4:15 PM – 5:00 PM: Reaction on the 3 deliverable presentations, in 5 interactive parallel sub-sessions</li><li>▶ 5:00 PM - 5:15 PM: Short wrap-up, closing of the first day</li><li>▶ 6:00 PM - 7:00 PM: Guided sightseeing tour of Zagreb (optional participation)</li><li>▶ 7:00 PM - 10:00 PM: Joint dinner (optional participation)</li></ul>
<b>Day 2: December 1, 2023</b>
<ul style="list-style-type: none"><li>▶ 8:00 AM - 9:00 AM: Breakfast and Networking</li><li>▶ 9:00 AM - 9:15 AM: Introduction and explanation of the World Café/Workshop</li><li>▶ 9:15 AM - 10:00 AM: First round of the World Café/Workshop</li><li>▶ 10:00 AM – 10:30 AM: Second round of the World Café/Workshop</li><li>▶ 10:30 AM - 11:00 AM: Coffee Break and Networking</li><li>▶ 11:00 AM - 11:45 PM: Presentation of the World Café tables, by the sub-group moderators</li><li>▶ 11:45 PM - 12:00 PM: Closing Ceremony</li><li>▶ 12:00 PM: Lunch and Farewell</li></ul>

<sup>1</sup> The list of participants is (for reasons of privacy) available upon request.

The participants were participating on behalf of Croatia, the Netherlands, Estonia, Poland, Spain, Ireland, Finland, Slovenia, Slovakia, Austria, Serbia, Luxembourg, Italia, Bulgaria, Portugal, Sweden, Macedonia, Romania, Cypres and Hungary.

The ROUTE-HWF Workshop Evaluation Results revealed very positive feedback from participants (See Appendix A). The overall quality of the workshop was highly rated, with the majority finding the content extremely relevant. Participants also appreciated the organization of the workshop, highlighting its well-executed planning and nice atmosphere. Additionally, the venue and catering received suggestions for more diverse menu options during breaks and the provision of more detailed participant information on badges, see the workshop’s supporting materials online repository.

In sum, the workshop can be deemed as successful, informative, and well-received by attendees. Most importantly, the goals of the workshop were achieved, feeding the final Deliverables of the ROUTE-HWF project. In the next chapters the design, execution and results of the two workshop days are described in more detail.



*Figure 1. Group photo of the participants at end of the ROUTE-HWF workshop (December 1, 2023)*

### 3. Summary of the first day of the workshop

**ROUTE-HWF project leader Ronald Batenburg's welcoming address** set the stage for the workshop, emphasizing the importance of understanding and addressing the challenges posed by medical deserts. He encouraged active participation and collaboration among attendees, highlighting the workshop as a platform for sharing knowledge and solutions to diverse challenges of medical deserts areas everywhere in Europe.

Next, **WP8 leader Robert Likic delivered a comprehensive keynote presentation focusing on the medical deserts in Croatia**. He began by providing an overview of Croatia's geographical and demographic landscape, emphasizing its unique position as a Central European and Mediterranean country. Likic highlighted Croatia's diverse terrain, which includes hilly northern regions, the Pannonian Plains, and a long coastline with numerous islands, which, while scenic, present significant challenges in healthcare delivery.

After this, he delved into the specifics of Croatia's healthcare system, discussing the nation's healthcare infrastructure, including the distribution of hospitals and healthcare providers. He pointed out the disparities in healthcare access between urban and rural areas, underlining the challenges in delivering healthcare services on the islands and remote areas. These regions, he noted, often suffer from a lack of immediate access to healthcare facilities, making them prime examples of medical deserts.

Robert Likic also discussed the demographics of Croatia, noting the aging population and the varying population densities across regions. These demographic factors significantly impact healthcare needs and services. He particularly stressed the issue of healthcare accessibility in rural areas, where there is a pronounced shortage of healthcare professionals, a situation exacerbated by the emigration of healthcare workers to other European countries.

The presentation then focused on the specifics of Croatia's healthcare financing, highlighting the mandatory health insurance system that covers all citizens, including tourists. Likic provided insights into the allocation of healthcare funding, with a significant portion directed towards hospital care.

One of the critical points of Likic's presentation was the discussion on the unmet health needs in Croatia, especially in rural areas. He presented data showing that Croatia's unmet healthcare needs are higher than the EU average, a disparity more pronounced in rural regions. The challenges of providing timely and effective healthcare in these areas were attributed to both geographical factors and the tendency of medical professionals to prefer urban settings with better facilities and opportunities.

In conclusion, Robert Likic's keynote address effectively shed light on the healthcare challenges faced by Croatia, particularly in terms of medical deserts. He underscored the need for strategic planning and innovative solutions to address these challenges, highlighting the importance of understanding the unique geographical and demographic context of each region. His insights provided a valuable perspective on the complexities involved in ensuring equitable healthcare access across diverse landscapes.

Next, the **three main outputs of the ROUTE-HWF project** so far, were presented by different speakers.

First, ROUTE-HWF project leader **Ronald Batenburg** presented on the **ROUTE-HWF taxonomy of medical deserts**, a pivotal element of the ROUTE-HWF project. He detailed the development of a classification system designed to identify and characterize areas lacking adequate healthcare resources, known as medical deserts. The taxonomy, based on a blend of healthcare demand and supply factors, includes critical elements like the aging population, poverty rates, healthcare provider density, and accessibility to medical facilities. Batenburg emphasized the significance of these factors in understanding the healthcare landscape across different regions. By comparing them to national averages, the taxonomy provides a relative perspective, allowing for a nuanced understanding of medical deserts within each country's unique

context. This innovative approach facilitates the identification of different types of medical deserts, each requiring context-specific solutions and strategies.

Second, **WP7 leader Alicja Domagala's** presentation focused on **case studies from the ROUTE-HWF project**, analyzing the factors contributing to medical deserts across six European countries. She provided a comprehensive overview of the diverse healthcare challenges faced by these nations, highlighting issues like aging populations, uneven distribution of healthcare workers, and the emigration of medical professionals. Domagala discussed various healthcare workforce characteristics and the impact of work-related factors, such as unattractive working conditions in rural areas. She also touched upon geographical challenges that affect healthcare accessibility. Importantly, the presentation shed light on innovative local and national solutions implemented to mitigate these challenges, ranging from policy interventions and education reforms to infrastructural improvements and financial incentives. These case studies offered valuable insights into the multifaceted nature of medical deserts and the range of approaches required to address them effectively.

And third, **WP3 and 6 leader Ana Isabel González** presented **the draft roadmap of the ROUTE-HWF project**, aimed at supporting health workforce policies in medical deserts. The roadmap, designed as a practical tool for policymakers, outlines a series of steps to analyze, address, and adapt strategies for improving healthcare access in underserved areas. González detailed each stage of the roadmap, starting from the initial assessment of healthcare needs and identifying types of medical deserts based on the project's taxonomy. She highlighted the importance of tailoring policy interventions to the specific characteristics of each medical desert. The roadmap emphasizes continuous evaluation and adaptation of strategies, encouraging cross-border collaboration and public engagement. Dr. González underscored the dynamic nature of the roadmap, advocating for its flexible use in various contexts to ensure long-term sustainability and effective policy adaptation in addressing healthcare challenges in diverse regions.

For the next part of the workshop at Day 1, the participants were divided in **different subgroups to interactively discuss the subjects of the three ROUTE-HWF presentations** (see above). The participants present in Zagreb were divided in three subgroups, each discussing one of the three ROUTE-HWF presentations. The online participants were invited to jointly discuss the subjects of all three ROUTE-HWF presentations. All subgroup discussions were moderated by the ROUTE-HWF Consortium members.

1. **The subgroup discussing the ROUTE-HWF taxonomy of Medical Deserts (moderated by Ronald Batenburg).** Each participant was invited to show and draw on a geographical map of their country, the areas that can be identified as medical deserts. The prepared maps (printed on paper) showed the areas in each country by of the key elements of the ROUTE-HWF taxonomy, the population-to-provide ratio. The taxonomy appeared to be useful in identifying and categorizing medical deserts in the different countries, but country-specific factors elements for desertification also came to table and were shared. Participants appreciated the clarity of the taxonomy as it brought to understanding healthcare challenges in diverse regions. However, there were insightful discussions about the taxonomy's adaptability to different national contexts, especially in smaller countries with unique geographical features like islands. The conversation highlighted the need for flexibility in the taxonomy to accommodate various demographic and geographical nuances.
2. **The subgroup discussing the ROUTE-HWF case Studies on Medical Deserts (moderated by Alicja Domagala and Robert Likic).** Alicja Domagala's presentation on case studies sparked interest among the attendees. The comparative analysis across six European countries was enlightening, revealing commonalities and differences in healthcare challenges. Participants discussed the relevance of the identified factors, such as healthcare workforce distribution and aging populations, to their respective countries. The solutions proposed in the case studies, including policy



interventions and educational reforms, were seen as valuable, but there was a consensus on the necessity for context-specific strategies tailored to the unique needs of each region.

3. **The subgroup discussing the ROUTE-HWF roadmap for Addressing Medical Deserts (moderated by Ana Isabel González and Linda Flinterman (WP1 co-leader)).** Ana González's roadmap presentation was met with enthusiasm for its practicality and potential as a tool for policymakers. The step-by-step approach was praised for its clarity and comprehensiveness. Participants noted the roadmap's dynamic nature, emphasizing the importance of continuous evaluation and adaptation in policy-making. There were suggestions for including more robust mechanisms for cross-border collaboration and public engagement in the roadmap
4. **The online subgroup (moderated by Sorin Dan (WP2 leader))** with participants from the Netherlands, Luxembourg, Lithuania, and Malta provided similar feedback on solutions for four drivers for desertification. They critically discussed the taxonomy's applicability, highlighting the need to consider the small size of countries like Luxembourg and Malta, especially in terms of distance. The online participants noted the key factors affecting medical deserts and raised concerns about the status of nurses. The roadmap was well-received, with suggestions for flexibility, iterations, and explanatory notes for better understanding and use.

In general, the interactive discussions were characterized by a focus on the practical application of these deliverables in various European contexts. Participants engaged actively sharing multiple experiences from their countries and contributing to a better understanding of the different challenges in addressing medical deserts. More specifically, they well reflected on the applicability and usefulness of the ROUTE-HWF taxonomy, case study results and roadmap. In a wrap-up round by the four subgroup moderators, it was concluded that there is a high need for adaptable and flexible solutions for medical desert challenges (as well as the process of desertification). Another recurring theme across the sessions, was the need of collective commitment at all political levels for finding effective strategies to improve healthcare accessibility in underserved areas.



*Figure 2. Participants actively engaged in discussions during interactive sessions of the Workshop (November 30, 2023)*



## 4. Summary of the second day of the workshop

The second day of the workshop on December 1 2023, was based on two World Café-designed sessions. Both were structured to facilitate interactive discussions and idea-sharing on addressing **potential solutions to mitigate the negative effects and disparities of medical desert areas**.

There was first an introduction and explanation of the World Café/Workshop format, emphasizing the focus on four types of (policy) solutions for the four main drivers of medical deserts: aging, poverty, travel distances and provider-to-population-ratio (i.e. the four dimensions of the ROUTE-HWF taxonomy). Participants present in Zagreb were then assigned to four different subgroups (i.e. different subgroups as in Day 1). Each of the four subgroups rotated along four different tables in the workshop room, where on each table solutions for one of the four different drivers for desertification were discussed. As on Day 1, each table was moderated by a ROUTE-HWF consortium member. The online participants were invited to jointly discuss all four types of solutions for desertification.

The content of the **World Café Rounds**, by table on potential solutions for the four types of drivers for desertification, are summarized below.

1. **The table on solutions for an aging population in medical desert areas.** Discussions revolved around how aging drives medical deserts, particularly in areas with depopulation. Solutions from various countries, including Malta and the Netherlands, were shared, focusing on active aging strategies, healthcare service expansion, and community-based initiatives.
2. **The table on solutions for an poor or socio-economically deprived population in medical desert areas.** This table delved into how socio-economic status, including income and health literacy, impacts medical deserts. Discussions highlighted different national approaches, with emphasis on transportation provisions and digitalization to improve healthcare access.
3. **The table on solutions for travel distances and healthcare accessibility in medical desert areas.** Here, the focus was on the geographical challenges of medical deserts, such as remote areas or islands. Solutions such as telemedicine, mobile healthcare services, and improved transportation were discussed.
4. **The table on solutions for an lower or declining provider-to-population ratios in medical desert areas.** This table tackled the challenge of ensuring sufficient healthcare workforce in medical deserts. Various strategies, including incentivization, training, and task shifting, were discussed to address workforce shortages.

The World Café Table discussions highlighted (likewise as on Day 1) the challenges of finding feasible, effective, and innovative solutions proposed given the diversity of different countries and regions. A **panel of six distinguished participants from different countries** were invited to reflect on the World Café and workshop discussions, and to present their recommendations for the ROUTE-HWF project. The panel offered a comprehensive overview of the ROUTE project and its findings on medical deserts. Panellists appreciated the project's thorough approach, emphasizing the importance of a strong conceptual foundation for understanding and addressing medical desert challenges. They noted the similarity of core issues across different countries, such as aging populations, healthcare workforce shortages, and geographical barriers to access. A key recommendation from the panel was the early involvement of stakeholders in such projects to integrate diverse perspectives effectively. The discussion also highlighted the emerging challenge of urban medical deserts and the potential of digitalization and telemedicine as innovative solutions. Panellists underscored the need for better data and indicators for more accurate assessments of healthcare needs and resources. Challenges such as reliance on foreign healthcare workers and the necessity of significant investments in healthcare systems, particularly in worker training and

retention, were also addressed as attention points for the ROUTE-HWF project. The panel finally underscored the importance of learning from each other's experiences in addressing medical deserts and emphasized the potential for collaborative efforts to influence policy at the European level.

In their **closing remarks, the workshop organizers** expressed gratitude for the insights provided and reiterated the importance of collective action in tackling medical desert challenges. The workshop concluded with a commitment to apply the gathered knowledge in practical and policy contexts and an invitation for ongoing collaboration among participants and stakeholders.

*The ROUTE-HWF expert workshop received good **media attention** during and after the conference in Zagreb. Before the workshop, project leader **Ronald Batenburg** was interviewed by the **Zagreb Medical School Journal 'Mef.hr'**. On the ROUTE-HWF website, a copy of journal can be found containing the interview on page 56–60 (in Croatian): [https://route-hwf.eu/wp-content/uploads/2024/02/Mef\\_2-2023\\_web-2.pdf](https://route-hwf.eu/wp-content/uploads/2024/02/Mef_2-2023_web-2.pdf). After the workshop, on Saturday December 2, ROUTE-HWF consortium members **Robert Likic and Linda Flinterman** were interviewed in **the live TV show 'Good Morning, Croatia!'** on Croatian National TV HRT1 to talk about medical deserts: what they mean, their causes and possible solutions. A link to the recording of this broadcast (in Croatian) is also available on the ROUTE-HWF website: [Route-HWF Final Symposium – ROUTE-HWF](#).*

## 5. Conclusions and sustainability of the ROUTE-HWF expert workshop

### *How to identify and classify different types of medical deserts and desertification?*

The workshop delved into the multifaceted challenges and barriers in addressing medical deserts, with a particular focus on different types of rural and underserved areas as pre-defined by the ROUTE-HWF taxonomy and its elements. In principle, shortage of healthcare professionals can be seen as the main driver and origin of desertification, which is exacerbated by difficulties in recruitment and retention, leading to an accumulation of inadequate healthcare provision. The demographic shift towards an aging population adds to this strain, as older populations typically require more healthcare services. Economic and socioeconomic factors, such as poverty, cultural and social stigma associated with seeking certain types of healthcare, and lack of health education and awareness further contribute to the process of desertification and increasing healthcare challenges in these areas. Geographical barriers, shaped by physical distance and lack of transportation infrastructure, make access to healthcare facilities particularly challenging in remote areas. This issue is further aggravated in regions with difficult terrain or harsh weather conditions. Lastly, cultural differences and language barriers between healthcare providers and the community, along with the digital divide marked by a lack of reliable internet connectivity and digital literacy, can additionally hinder effective healthcare delivery.

Addressing all these different drivers of desertification requires a multifaceted approach. This involves policy changes, targeted investments, community engagement, and innovative healthcare delivery models. These measures are essential to cater to the unique needs of rural and underserved populations, as emphasized throughout the workshop discussions.

### *How to tailor solutions and policies to mitigate desertification and its effect on health service level in medical deserts?*

The two-day ROUTE-HWF workshop on addressing medical deserts yielded a range of valuable recommendations and strategies for tackling the different challenges in healthcare accessibility. Inspired by results of the case studies and the ROUTE-HWF roadmap, participants proposed a variety of solutions, emphasizing the need for innovative and region-specific strategies. Among these were the adoption of telemedicine and digital health solutions, particularly in remote areas, to bridge the gap caused by physical distances. There was also a strong emphasis on the development and implementation of mobile healthcare services, which could provide essential care directly in underserved communities.

Policy interventions were also discussed focusing on attracting, incentivizing and retaining healthcare professionals to work in underserved areas. This could be achieved through financial incentives, career development opportunities, and improved working conditions. Policies aimed at enhancing healthcare infrastructure in underserved areas, including investments in medical facilities and transportation networks, were also recommended. Strengthening local healthcare systems through community health workers and training programs was identified as a key strategy for recruiting and retaining a sustainable healthcare workforce.

The workshop highlighted the importance of future research, particularly in understanding the unique challenges and needs of different medical desert regions. There was a call for collaborative research efforts to develop tailored solutions that particularly consider the socio-economic and cultural context of each area. From this, collaboration emerged as a central theme, with recommendations for cross-sector and cross-border partnerships involving government, healthcare providers, academic institutions, and community organizations. Such collaborations are seen as essential for sharing knowledge, resources, and best practices. Developing cross-regional networks for continuous learning and exchange of ideas was suggested as a way to foster innovation and effective responses to the evolving challenges in healthcare accessibility.

### *How to integrate policies into a final Roadmap 'out of medical deserts'?*

The workshop concluded with several key outcomes, marking a next step towards addressing healthcare accessibility challenges across the European Union. The gathering of experts, policymakers, and practitioners provided a comprehensive overview of the current state of medical deserts, highlighting the urgent need for concerted efforts to bridge healthcare gaps in rural and underserved areas.

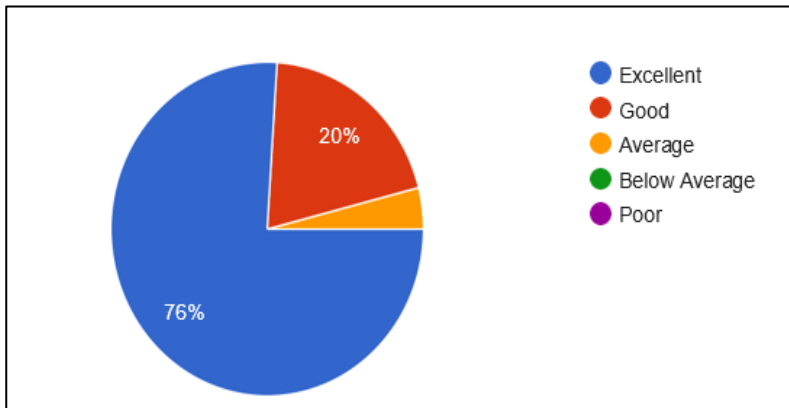
The workshop outcomes also gave important input for finalizing the ROUTE-HWF end-products, being its taxonomy, measurement and monitoring tools, and the final Roadmap. The Roadmap is specifically important for future EU policies and initiatives. There is an evident need for comprehensive and coordinated policies at the EU level that focus on improving healthcare accessibility in underserved regions. The emphasis on collaboration and multi-sector partnerships requires a shift towards more integrated and cooperative approaches in healthcare policy-making. This approach can lead to more effective and sustainable solutions, but only if it allows for the pooling of resources, expertise, and experiences from various stakeholders.

Another critical implication is the role of data and research in shaping future policies. The workshop highlighted the importance of data-driven decision-making and the need for ongoing research to monitor the effectiveness of interventions and adapt strategies as needed. This approach can ensure that policies are responsive to the evolving needs of medical deserts and are grounded in empirical evidence.

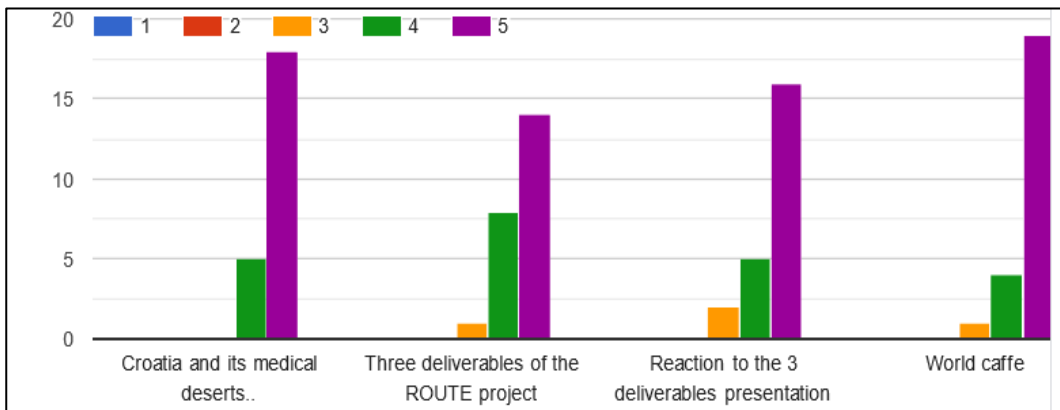
In conclusion, the workshop served as a catalyst for future action and policy development in the EU. It provided a platform for exchanging ideas, fostering partnerships, and setting the agenda for tackling the challenges of medical deserts. The insights gained from this event will contribute to shaping more inclusive, equitable, and effective healthcare policies in the European Union, ultimately enhancing healthcare accessibility for all citizens, regardless of their location.

## 6. Appendix A: Results of the ROUTE-HWF Workshop Evaluation Survey

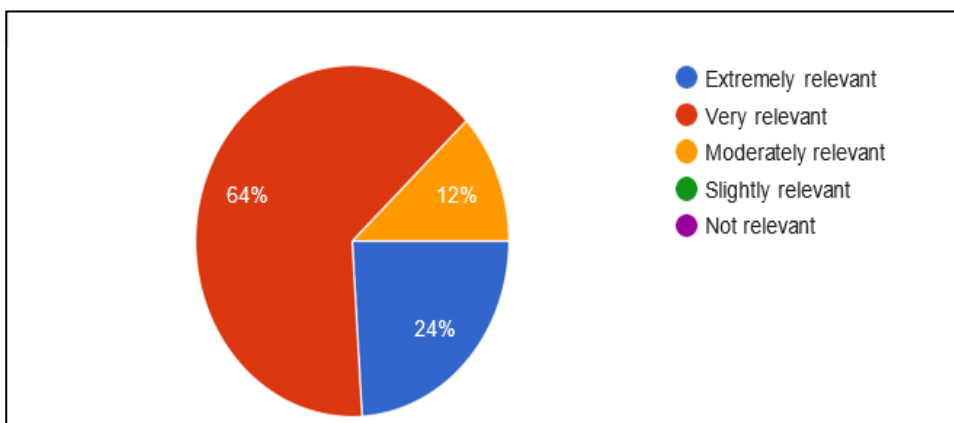
### 1. How would you rate the overall quality of the ROUTE HWF conference?



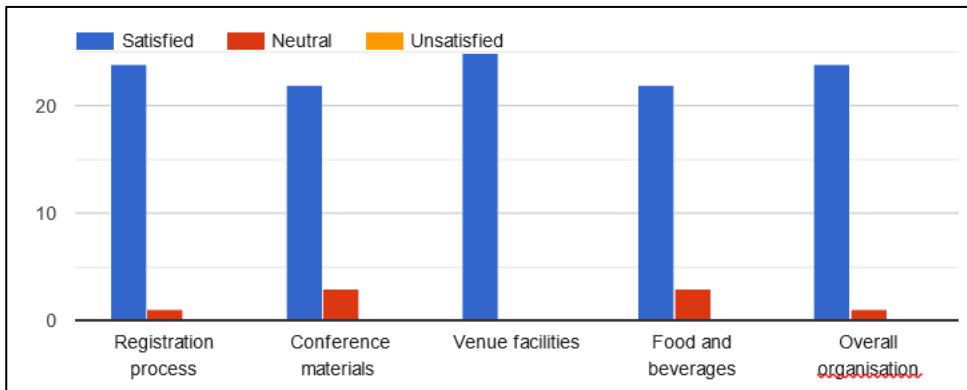
### 2. Grade the following aspects of the conference? (1=poor, 5=excellent)



### 3. How relevant was the content presented in the sessions?



#### 4. How satisfied were you with the following aspects?



#### 5. Additional remarks

- I enjoyed familiarize myself with the concept of medical deserts and finding potential solutions for that problem.
- A very well organized conference.
- The badge could have had information about the participant's country
- Provide materials after the conference so that we stay updated.
- Great food, excellent organization and atmosphere
- Some ideas from the World Caffe were great but they were lacking ideas on how to implement them.
- Excellent location thank you!
- The venue was beautiful and I liked that the conference was not too long.
- Modify the menu during breaks to include less pastries and cakes and more vegetables.