

# The utilization of research evidence in Health Workforce Policies: the perspectives of Portuguese and Brazilian National Policy-Makers

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## ABSTRACT

**Background** The production of knowledge on Human Resources for Health (HRH) issues has increased exponentially since 2000 but integration of the research in the policy-making process is often lagging. We looked at how research on HRH contributes or not to inform policy decisions and interventions affecting the health workforce in Portugal and Brazil.

**Methods** We designed a comparative case study of semi-structured interviews with present and past national decision-makers, policy advisors and researchers. Issues explored included the existence of a national HRH policy and the use, or non-use, of research evidence by policy makers and reasons to do so. Interviews were audio recorded, transcribed, anonymized and analysed thematically.

**Results** Policy-makers in Brazil recognize a greater use of evidence in the process of defining HRH policy when compared to Portugal's. But the existence of formal instruments to support policy development is not sufficient to ensure that policies are informed by evidence.

**Conclusions** In both countries the importance of the use of evidence in the formulation of policies was recognized by policy-makers. However, the influence of other factors, such as political pressures from various lobby groups and from the media and the policy short timeframe which requires rapid responses, is predominant.

**Keywords** Brazil, Health Workforce Policies, Portugal, research utilization

## Background

Because research evidence does not always reach health sector policy-makers, opportunities to improve policy and management decisions may be lost.<sup>1</sup> Knowledge translation and transfer models propose strategies to connect evidence more effectively to decision-making and to action.<sup>2</sup> Deeper understanding of stakeholders' needs is critical to identifying barriers to and facilitators of the utilization of research evidence to inform policies, decisions and interventions.<sup>3–5</sup> In the health sector, there is broad recognition that the achievement of universal coverage depends on the availability, accessibility, acceptability and quality of a fit-for-purpose workforce, particularly at primary health care level where most health problems can be managed.<sup>6,7</sup> Research on Human Resources for Health (HRH) issues, such as on

recruitment, retention, skills-mix or distribution by geographical areas and by levels of services, has rapidly grown in volume and quality since the adoption of the Millennium Development Goals (MDGs) in 2000. It has shown that without a solid and sustainable workforce, the health related MDGs would not be achieved.<sup>8,9</sup> However, it is not clear whether the evidence derived from this research always informs policy development.

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We analyzed two recent health workforce interventions in Portugal and Brazil: (i) the HRH planning process under the European Joint Action on Health Workforce Planning and Forecasting initiative (<http://healthworkforce.eu>)—the Portuguese Pilot Project aimed at the development of a projection model of needs for doctors and nurses, until 2030 in Portugal. The project was considered an opportunity to improve the existing HRH planning system<sup>10</sup>; (ii) the training dimension of ‘Mais Médicos’ Program in Brazil, that was created by Law No. 12,871, dated 10/22/2013<sup>11</sup> and proposed three strategies: (a) the opening of more training slots and new medical studies programs based on revised curricular guidelines; (b) investments in the construction of Basic Health Units; and (c) the attraction of Brazilian and foreign physicians to municipalities with areas of vulnerability. The latter had a short-term objective of attending to the lack of doctors, while awaiting the effects of the more structuring measures.<sup>12</sup>

Both interventions were designed to improve access to primary care in areas where unmet needs existed. These two countries were selected on the basis of having strong cultural affinities and links, and similar commitments to universal access to health services through a public national health system. Both countries had a formal policy of comprehensive primary care services (PCS), including prevention, promotion, curative services and their integration with higher-level services. We aimed at identifying social, political and institutional factors that influence demand for, conditions of access to, and utilization of evidence to inform policy development. We interviewed political actors involved in the formulation of these two policies to assess their familiarity with available evidence and the reasons for using (or not using) it.

In parallel, we sought the views of researchers on the strategies of dissemination of evidence and on measures to overcome the gap between research and policy-decision.

The paper first presents the results of the interviews in both countries, focused on the perceptions about research evidence utilization in HRH national policies, as well as the main strategies to disseminate research results in order to maximize their utilization by health decision-makers; followed by a discussion of the main results vis-à-vis the actual state of the knowledge on how scientific evidence can inform policy and decision-making.

## Methods

We performed a comparative case study on the use of scientific evidence (i.e. knowledge produced through a research process) to inform the HRH policy-making process and strategies in Portugal—the participation of the Central

Administration of the Health System (Administração Central dos Sistemas de Saúde—ACSS) in the EU Joint Action Health Workforce; and in Brazil—the expansion and reform of the medical courses and residencies under—the ‘Mais Médicos’ Program. These interventions had a similar objective of addressing imbalances in access to health professionals in the country.

We performed semi-structured in-depth interviews between April 2016 and February 2017; respondents were selected and recruited through a purposive/snowball technique, starting with a list of policy-makers and researchers known to have been involved in the two interventions, and adding others by asking interviewees if they were aware of other potential key-actors involved in the policy and not previously identified.

A flexible interview schedule was used to ensure that key issues were covered, while leaving space for participants to introduce other issues (Supplementary material, Appendix 1). The interviews focused primarily on the use of research evidence in relation at the two interventions; the general topic of the relationship between research and policy was also discussed. Interviews were audio recorded and transcribed verbatim in Microsoft Word, imported into NVivo11 and analysed using a thematic analysis, a process which interprets qualitative data through coding it into themes.<sup>13</sup>

## Ethics approval

The Ethics Committee of the Instituto de Higiene e Medicina Tropical (Protocol No. 15-2016), in Portugal approved the protocol.

## Results

### Sample characteristics

A total of 20 informants, belonging to three groups of stakeholders participated in the study: policy-makers (11), policy advisors (6) and researchers (3) (Table 1). The thematic analysis identified four key themes: the existence of a national HRH policy; perceptions of the use, or non-use, of scientific evidence by policy makers and their awareness of the existing evidence; reasons for using (or not using) scientific evidence; strategies to enhance the dissemination and utilization of scientific evidence to inform policy-making. Responses are reported below, with an indication of which were the respondents and their country, e.g. policy-maker (PM\_PT1); advisor (A\_PT1); researcher (R\_BR1). The whole set of relevant verbatim quotes can be obtained from the corresponding author.

**Table 1** Groups of actors interviewed in Portugal and Brazil

Groups of actors	Portugal	Brazil
Policy-makers (PM) at the central level (including ex-Ministers, General Directors). The literature suggests that research evidence is more influential at central policy level than at local level (Black, 2001; Browson <i>et al.</i> , 2009), which is why we focused on the views of decision-makers, e.g. individuals who have 'the decision-making authority to sign policy documents or allocate funds at the national level' (Hyder <i>et al.</i> , 2011).	8 PM_PT	3 PM_BR
Policy advisors (A): policy-makers close advisors who collect and 'filter' the information.	4 A_PT	2 A_BR
Researchers (R): from universities and research centres who published works on availability and geographic accessibility of physicians/HRH.	2 R_PT	1 R_BR

### Is there a national HRH policy?

In Portugal, all interviewees admitted that there was no national HRH policy. A policy-maker (PM\_PT8) interpreted that fact by a lack of political will over the years to address HRH issues, in spite of the recommendations of numerous analysts.<sup>14,15</sup>

In Brazil, respondents stated that there is a HRH policy, but that it is not formally linked to the national health policy, and that it was implemented in a 'fragmented' manner (PM\_BR1).

### Perceptions of the utilization (or non) of evidence by policy makers versus knowledge of the existing evidence

In Portugal, only one researcher (R\_PT2) reported that a decision on establishing a quota of 30% of residency places for general practitioners/family physicians was based on a study commissioned by the Ministry of Health (MoH) (Table 2).

In Brazil, two respondents (PM\_BR1 and PM\_BR2) stated that the implementation of 'Mais Médicos' Program was based on the general diagnosis produced by researchers of insufficient medical posts and of an overconcentration of medical schools in some parts of the country, but that it was implemented without further studies. Another interviewee (A\_BR3) added that the Family Health Strategy (FHS) was a follow-up process of planning and organizing the Community Agents and Primary Care Program, and that it took into account the evidence accumulated during the process of its implementation (Table 2).

In Portugal, some policy-makers and advisors stated that decision-makers know what evidence is available, even though it is not used as a main input in decision-making. One disagreed and said that 'they do not know the evidence' (PM\_PT3). Researchers generally recognise that research on the subject is limited, though one (R\_PT2) reported that her work was used by the MoH to implement the 'Mobile Units'

policy. This researcher stated that the visibility and recognition of research results are fundamental to their potential use, a view supported by a policy-maker (PM\_PT4) who adds the importance of the research team being known (Table 2).

In Brazil, policy-makers considered that there is not always an alignment between their needs and the interests of researchers'; an advisor argued that existing evidence is not 'reliable' (A\_BR3) and a policy-maker considered that research is not valued: 'So you have a whole system of incentives for research that does not value the use of research in concrete reality' (PM\_BR1).

### Reasons for using (or not using) scientific evidence

A set of reasons for the use or not of the evidence were identified by interviewees: the existence of intervening factors; the characteristics of the decision-making process; and lack of technical–scientific support for the decision.

The decision-making process, even when informed by evidence, is not isolated from the social, economic and political context. A political decision-maker (PM\_PT1) and a researcher (R\_PT1) in Portugal mentioned that, from 2009 onwards, decision-making in relation to HRH was primarily influenced by the economic crisis context, during which the health sector experienced budget cuts and reduction of personnel, as part of a structural adjustment program negotiated with the International Monetary Fund, The European Central Bank and the European Commission, in exchange of loans of up to 78 billion euros.

In both countries, political interests were said to play a major role in the definition of policies such as the National Health Plan (NHP) in Portugal (R\_PT1; PM\_PT4) or the FHS in Brazil (A\_BR3).

'One of the difficulties in using the evidence is the fact that the studies have more relation with the inductive policies than with the more regulatory ones' (PM\_BR2).

**Table 2** Selection of citations about perceptions on the use (or not) of evidence and knowledge (or not) of evidence in Portugal and Brazil

Type of actors	Perceptions on use (non-use) of evidence		Perceptions about knowledge (or not) of existing evidence	
	Portugal	Brazil	Portugal	Brazil
Policy makers	<p>'I would say that it is of no use [knowledge produced]. Why not? Is it due to ignorance? I can admit it.</p> <p>Is it because it is still not part of the country's way of doing politics, that there is evidence that exists and that it is necessary to seek it out and then design policies?</p> <p>Is it because we are talking about an area where everything is time consuming and this discourages a more sustainable approach? Because in other areas it is easier to obtain results in the short-term, and this is also a negative stimulus for the political decision maker to look at these matters with this perspective of using evidence' (PM_PT3)</p> <p>'The political decision maker's perception of the quality of the team, its individual path, it is important' (PM_PT6)</p>	<p>'In the scope of Brazilian public health this diagnosis was consolidated, we knew about the access inequality, the lack of doctors, and we quickly assigned criteria for the places where doctors would be located, taking into account the gaps in care, where there were more problems of care Primary health care' (PM_BR1)</p> <p>'the Brazilian history have difficulty in ordering HR training, still having a lot of corporatist influence in these guidelines led us to use the evidence for diagnosis but not so much to think about the strategies' (PM_BR2)</p>	<p>'No, no, they know. But in HRH mostly, if not always, the decision is made on a basis that it is nothing to do with evidence' (PM_PT5)</p> <p>'There is very little knowledge about most of the evidence in these areas (...) in my workplace I have never seen anyone use Human Resources for Health, for example, or in the HR department someone actually reads what is Published in other countries. We know each other in Portugal and this shows how much we are behind schedule. Those who work in HR look a lot for salary processing and legal aspects of recruitment' (PM_PT3)</p> <p>'It had some elements, but no... the scientific basis and the technical basis need to be much larger, but for this you need to be aware. And in most of the consultants, what one notices is political bias' (PM_PT1)</p>	<p>'The weight of the supply and interest of the scientific community continued to prevail in the face of the weight of the demand and the needs of the health system, even though there were, and always were, many points of intersection where the interests of researchers matched the demands of society' (PM_BR1)</p>
Advisors	<p>'But there is academic knowledge that exists and nothing happens.' (A_PT1)</p> <p>'[Evidence] exists and is not ignored...' (A_PT1)</p>	<p>'In general, Brazil lacks information, databases that support the formulation of policies, specifically the human resources policy of the Unified Health System' (A_BR1)</p>	<p>'(...) It may or may not be the influence of the evidence in the decision making in RHR planning and I think that in a way the academic knowledge tries to influence but does not influence' (A_PT1)</p>	<p>'The evidence was poor, unreliable. What happened was a strategic alignment of the health secretaries with the federal manager' (A_BR3)</p>
Researchers	<p>'The biggest problem was family physicians and I remember that the Minister immediately opened the number of vacancies, the percentage of vacancies at the boarding-house to 30%, and this was a brutal shock because they did not want to go to this specialty, they wanted specialties More technical and was a difficult period' (R_PT2)</p> <p>'There was a massive debate about the results and articles in the media. But it all made sense. It seemed to them a serious job and I think that's why [they used the evidence]' (R_PT2)</p>	<p>'The Internet has an important space, I do not believe there is a lack of dissemination, there is no willingness of the politicians to read on any platform of evidence dissemination' (R_BR1)</p>	<p>'I think that the research in Portugal on HRH was very limited... none of the agendas is a systematized agenda, with continuity to have an understanding of the global situation' (R_PT2)</p> <p>'They (Ministry of Health) even implemented some policies following my thesis and found that there was potential within my area to develop other types of work' (R_PT1)</p>	<p>'We are going to value the evidence that is not determined by knowledge, will be evidence determined by more general conjunctures' (R_BR1)</p>

In Portugal, policy-makers (PM\_PT1; PM\_PT5) and an advisor (A\_PT1) considered that even when there is scientific evidence and knowledge, this is weighted against ‘other factors’, such as the lobbying of professionals associations and organizations and the pressures from civil society and the media. Similar constraints are reported by Brazilian interviewees.

### Characteristics of the decision-making process

Political decision-makers (PM\_PT1; PM\_PT2) explained that their decisions are based on political criteria and not on information or evidence, though it is used at the preparation of policies stage. They added that ‘last minute pressures’ are felt at central level of the decision process and play a significant role: ‘the pressures on the last day are very huge!’ (PM\_PT2).

A Brazilian respondent stated that the decision-making process was influenced by a mix of evidence and of political factors (PM\_BR1).

Respondents suggested that the use of evidence also depended on the decision-maker’s experience of contacts with researchers and personal interests (PM\_PT4; PM\_BR1).

‘We are far from saying that our management is evidence-based.’ (A\_BR3).

An additional factor of influence is the timely availability of information and research evidence. Policy-makers at the highest level cannot wait for results to be published in academic journals as the time horizon for policy-making is typically short. Respondents also note that time pressures leave little space for giving serious attention to available evidence (PM\_PT3; PM\_BR1).

‘When they talk about research projects, if it has been for three or four years, when they publish the results they are already “outdated”. Timing is important.’ (PM\_PT2).

In Portugal, some respondents mentioned the lack of technical support to ‘filter’ knowledge, e.g. to collect and analyse the evidence with the potential to support policy decisions (A\_PT2; A\_PT4).

‘But there is no technical–scientific consultant, I think it should be a multidisciplinary group, but it does not exist’ (PM\_PT1).

In both countries, a minister (PM\_PT1; PM\_BR1) said that support from evidence producers was particularly needed at two levels: expertise and advice from someone who understand the rules of public administration; and

advice on negotiation with unions and other interests groups.

### Strategies to enhance the dissemination and the utilization of scientific evidence to inform policy-making

Several information sources beyond scientific evidence are used in the policy-making process. It is important to identify them, to understand when and for what purpose they are used. As to evidence from research, it is equally important to identify the strategies used to promote its utilization.<sup>2,16–19</sup>

In Portugal, all interviewees recognized the importance of using different strategies to promote the use of scientific evidence to inform the policy process. Policy-makers and advisors stressed the importance of bringing scientific evidence in a ‘clear, short and concise manner’ by using not just traditional communication mechanisms (e.g. articles, systematic reviews, research reports), but also innovative ones (e.g. article abstracts, summary of project reports, executive summaries, policy briefs, newsletters) better adapted to the needs of decision and policy-makers.

‘Researchers tend to be satisfied with publications, but if they want to be truly useful and have a positive impact on people’s lives, they need to talk more to the media and get out of the claustrophobia of academic circles, holding conferences or seminars to attract a wider audience so that policy-makers can participate’ (PM\_PT4).

One of the researchers said something similar:

‘We could try to do more things like policy-briefs; policy-dialogues could also be another strategy’ (R\_PT1).

An advisor suggested that protocols between academic institutions and the MoH could be a mechanism to put research ‘in the context’ (A\_PT2).

In general, Brazilian interviewees agreed, though one researcher (R\_BR1) was critical of policy-makers and advisors’ lack of willingness or commitment to search for evidence.

## Discussion

### Main findings of this study

This study presents results consistent with what is already known on the utilization of research evidence to inform policies and interventions.<sup>20–24</sup>

Strategies to help bridge the research–policy gap are well known. The onus is principally on researchers as producers and communicators of evidence. Building a direct link with

potential users early in the research process, ensuring that they understand well their own needs, and responding to them in a timely and easily accessible manner, researchers can better contribute to the policy process and thereby ensure that decisions take into account relevant evidence.<sup>20,25</sup> Policy-makers in Brazil were more inclined than their Portuguese counterparts to recognize the value of evidence in the process of defining HRH policy. Although Brazil has formal instruments to support evidence-informed policy-making, like the Evidence-informed Policy Network (EVIPnet—<http://brasil.evipnet.org/>), many decisions are still not based on its contribution, which suggests that the existence of this type of formal structure is not sufficient to ensure that policies are informed by evidence.

### What is already known on this topic

We observed variations between Portugal and Brazil that help identify social, political and institutional factors which might determine how research knowledge is more or less effectively mobilized.<sup>6</sup> In this study, we identified barriers to the utilization of research knowledge by policy-makers and their advisors that have also been mentioned by other researchers. These include a difficult access to research outputs, insufficient time to go through voluminous reports and a lack of skills to critically review their contents.<sup>20,25,26</sup>

There is more than one approach to better link research to decision and action (push efforts, user pull, exchange efforts and integrated efforts) and not all approaches will work in all circumstances.<sup>20</sup> Exchange efforts refer to the establishment of a meaningful partnership between producers of evidence and users, such as policy-makers, to agree on relevant topics for investigation.<sup>19</sup> There was a consensus among interviewees regarding the importance of such ‘exchange efforts’ to promote the use of evidence to inform the policy process. Researchers suggested that a greater interaction with policy-makers could be promoted through joint workshops and policy dialogues, to improve their own understanding of the interests of policy-makers and at the same time to raise their awareness of the importance of HRH issues. Advisors stressed the importance of involving different actors (e.g. professional associations, policy-makers, academics, technicians) from the beginning of the process of ‘building the evidence’. Also, researchers should act as knowledge translators and identify the key messages in a language adapted to different target audiences.<sup>26</sup>

### What this study adds

There are few studies which explore the views of higher-level decision-makers such as ministers as this study has

done. The views of these actors are fairly similar to those of other categories of potential users of research evidence and were consistent in the two countries under study.

Our study adds to the understanding of the relative importance<sup>23</sup> policy-makers and their advisors give to research results compared to other factors, namely the lobbying of professionals associations and organizations and the pressures from civil society and the media.

In the context of the pursuit of universal health coverage, improving access to quality PCS is key. In Portugal and Brazil, access for all is formally guaranteed but not achieved everywhere. Gaps remain in terms of availability, adequately trained primary care personnel and in geographical accessibility. The intervention which we studied in Portugal aimed at improving HRH planning with a view to addressing these two issues and more generally that of aligning the development of the health workforce with the objectives of the NHP. Our observations show that the contribution of research has been minimal and that there is not yet a demand for it by policy-makers. The challenge in this case is that of raising the awareness of policy-makers of the potential contribution of research to the strengthening of PCS, for example by understanding better how to attract young students to primary care, how to recruit and retain professionals in underserved areas. In the case of Brazil, where needs are much greater and possibly more difficult to meet in view of the difficult economic conditions and the low attractiveness of areas where PCS are not available, there is also much that research can contribute, along the same lines suggested for Portugal. For instance, packages of incentives designed on the basis of valid knowledge of the needs and expectations of health workers would likely be more effective.<sup>27</sup>

### Limitations

In this study, we wanted to get the views of actors closest to decision-making, e.g. ministers and their main advisors, which obviously limits the pool of potential respondents. The small size of this population is a limitation, but the consistency of our observations with those available in the relevant literature is an interesting conclusion.

### Conclusions

In Portugal and Brazil there is a gap between what high-level decision and policy-makers say about the usefulness of evidence from research and the extent to which they use it. Various factors explain this gap, such as the prominence of other sources of information, the difficulty of access to evidence, or even the perception that it is little relevant. Much

remains to be done to bring the worlds of academic research and of policy making closer to each other. But at least, thanks to researchers who explored the issue of knowledge transfer, we now have a clearer idea of what needs to be done.

## Supplementary data

Supplementary data are available at the *Journal of Public Health* online.

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