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# General practitioners' perceptions on decision aids in healthcare: a qualitative study in Portugal

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## Abstract

**Background** Decision aids (DA) are evidence-based tools that support health-related decisions. Despite their recognised value, the use of DAs in primary care remains modest. In Portugal, clinical guidelines focus on clinical decision-making with minimal patient engagement. Adapting international DAs to the Portuguese context could be an efficient way to support the transition to shared decision-making. Understanding general practitioners' (GPs) awareness and perceptions of DAs is essential before evaluating their willingness to adopt these tools for specific clinical problems.

**Aim** To explore Portuguese GPs' perceptions of DAs and their implementation in primary care.

**Method** Qualitative study with GPs and GP trainees in Portugal. Seven online focus groups were conducted with 33 GPs and GP trainees selected through purposive sampling. Data were analysed using deductive content analysis.

**Results** Most participants initially confused DAs with clinical decision support tools; only one recognised them as aids for shared decision-making. After clarification, GPs expressed favourable attitudes and believed that patients were willing to use DAs. Key barriers to adoption included limited funding, time constraints, and the lack of Portuguese translations. Facilitators involved system integration and localisation. Priority topics centred on prevention (screening, statin use, vaccines, contraception, lifestyle changes) and specific medications (antibiotics, hormone replacement, psychotropics).

**Conclusion** Although unfamiliar to most participants, integrating DAs in primary care was well received, and these tools may provide added value in improving the quality of health decisions.

**Clinical trial number** Not applicable.

**Keywords** Decision aids, Focus groups, Primary healthcare, Shared decision-making, Qualitative study

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## Background

Decision aids (DAs) are tools, often in the form of written materials or videos, which support shared decision-making (SDM). They provide evidence-based information on clinical options, including their benefits, risks, and uncertainties. These aids help patients clarify their values and preferences [1], facilitating a patient-centred approach. Globally, DAs have been shown to enhance patients' knowledge, improve the accuracy of their risk perception, and reduce decisional conflict compared to usual care [2]. While DAs are typically developed with specific content tailored to the context in which they will be used, adapting and translating these tools for other countries can reduce the need to create numerous similar aids, making them more widely accessible [3, 4]. Initially developed in English-speaking countries, DAs are increasingly being applied and studied across Europe to assess their effects and cultural relevance [2].

Despite the available evidence supporting their value in the SDM process, the use of DAs in primary care remains modest [5–7], as several barriers impede their widespread adoption in routine clinical practice. The incentives commonly used in research settings to promote DA utilisation are often absent in everyday practice. Furthermore, the adoption of DAs can be hindered by factors such as time constraints, lack of training, and variability in SDM practices among providers. A 2018 study found significant variation in the use of SDM across countries, particularly in referral decisions, even among general practitioners (GPs) who recognised its importance. In many cases, referrals are made solely by the GP without patient involvement, underscoring the inconsistency in applying SDM [8].

Additionally, a recent systematic review highlighted the need for research exploring GPs' general awareness and openness to adopting DAs in clinical practice, before assessing their willingness to use DAs for specific clinical problems [9]. Understanding these broader perceptions is crucial, as they lay the foundation for successfully integrating DAs into routine care, moving beyond controlled research settings.

In Portugal, the implementation of DAs faces additional challenges, including a general lack of incorporation of patient values into clinical guidelines and limited availability of adapted tools [10]. Although the Portuguese National Health Service (SNS, in its Portuguese abbreviation) launched the "*SNS + Proximity*" project [11], which supports person-centred care and explicitly mentions the importance of DAs as tools for applying SDM, there remains a notable scarcity of DAs adapted and validated for the Portuguese context. A 2020 study demonstrated the feasibility of translating and culturally adapting a decision aid for prostate cancer screening in Portugal [12], suggesting the potential for broader application. However, the extent to which Portuguese GPs are aware of and willing to adopt DAs in their clinical practice has not been formally explored.

To address this gap, this study aims to explore Portuguese GPs' perceptions regarding DAs, identify barriers and facilitators to their implementation in primary healthcare (PHC), and determine which topics would benefit from the translation and cultural adaptation of existing international DAs.

## Methods

### Study design and setting

In Portugal, primary care is mostly provided by publicly funded practices, each serving a patient list of 7,000 to 19,000 patients. These practices typically have four to ten GPs, a similar number of primary care nurses, one administrative staff member for every two GPs, and a variable number of GP trainees. At the time this study was conducted, primary care practices were geographically organised within primary care trusts under the Regional Health Authorities each serving around 250,000-350,000 patients. There are two healthcare functional units, Family Health Units (FHU) and Personalised Health Care Unit (PHCU). FHU are characterised by multidisciplinary teams (including GPs, nurses, and clinical secretaries) and, in addition, to a base salary, they have financial incentives based on a fixed set of healthcare quality indicators (accessibility, care performance, user satisfaction, and efficiency). The PHCU are less autonomous, and professionals are salaried without access to pay-for-performance.

Results from the OECD's Patient-Reported Indicator Surveys show that Portuguese patients value greater participation in clinical decisions and more personalised communication in primary care. However, only 54% of people with chronic conditions in Portugal report trust in the healthcare system, below the OECD average of 62% [13]. Around 1.5 million people — out of a population of 10.6 million — do not have a named primary care team, highlighting persistent access barriers [14]. Patient satisfaction tends to decrease as the size of healthcare units increases, with rural areas reporting higher satisfaction than urban ones. Satisfaction is also higher in the North and Central regions than in Lisbon and surrounding areas [15]. These findings underscore the need for improved care coordination, patient engagement, and more equitable access to primary care services in Portugal.

A qualitative phenomenological approach was taken, to explore the extent and nature of DAs use by GPs from primary care trusts within the Regional Health Administration of Lisbon and Tagus Valley (ARSLVT). Standards for Reporting Qualitative Research guidelines were followed in the reporting of this study [16].

### Participant recruitment

A purposive sampling strategy was initially used to recruit a heterogeneous sample of GPs and GP trainees with at least six months of residency, as this timeframe is associated with higher level of clinical autonomy among trainees in Portugal. Additionally, the Chief Medical Officers at each primary care trust within the ARSLVT were asked to send an email invitation to GPs within their contact networks. The groups were formed as the participants accepted and were organised according to their availability. Recruitment continued until data saturation was achieved, meaning no new themes, comments, or recommendations emerged [17]. There was no incentive-reward for participation in this study.

Written information regarding the study's purpose and procedures was provided to each participant, and written informed consent was obtained prior to their participation.

### Data collection

Seven focus groups, with a total of 33 participants, were conducted online, using the MS Teams® video-conferencing platform between February and May of 2023. The use of online focus group was selected to accommodate participants' access to digital resources and to facilitate recruitment across a broader geographic area by offering greater convenience and scheduling flexibility [18, 19]. After obtaining informed consent, each session was audio-recorded to optimise data collection and facilitate transcription. All focus groups were led and facilitated by MPP, a GP trainee, in consultation with qualitative research advisers (AG, SD).

The focus groups began with a discussion of ground rules, such as respecting anonymity, maintaining data confidentiality, and valuing diverse perspectives. The facilitator (MPP) used a semi-structured interview guide (available in the Supplementary file) to conduct the focus groups. The guide was developed based on the literature and with input from the project team, covering the following dimensions: knowledge of GPs about the concept of DAs, GPs' experiences, and perceptions regarding the use of DAs in clinical practice, and identification of clinical areas where a DA might be of value. Focus groups were transcribed and anonymised by MPP.

Participants were also asked to fill out a questionnaire with basic demographic data, including sex, age, years of experience, practice location, and professional background, at the beginning of each focus group session.

**Table 1** Social demographics characteristics of participants and focus groups

| Characteristic | *N* = 33 |
|---|---|
| Sex, n | |
| Female | 29 |
| Male | 4 |
| Age (years) $\bar{x} \pm$ sd, (min, max) | 34 ± 7.95 (25.61) |
| Experience (years) $\bar{x} \pm$ sd, (min, max) | 7 ± 8.05 (1.35) |
| Focus groups length (min) $\bar{x} \pm$ sd, (min, max) | 50 ± 24.71 (31.89) |
| Practice location, n | |
| Family Health Unit (FHU) | 30 |
| Personalised Health Care Unit (PHCU) | 3 |
| Professional career, n | |
| General Practitioner trainee | 22 |
| General Practitioner | 11 |
| Prior training in SDM or use of DAs, n | |
| Yes | 3 |
| No | 30 |

### Data analysis

Participant demographic data were analysed using Microsoft Excel 2023®. Each participant was assigned a unique alphanumeric code to reference specific fragments of the discussion cited (A1-A4, B1-B6, C1-C3, D1-D5, E1-E4, F1-F6, G1-G5). Transcripts were analysed through a deductive content analysis approach. The main categories were deductively developed based on the topics explored in the focus groups, reflecting the overall themes covered by the discussions. Transcripts were then coded, and codes were grouped under the defined categories and subcategories. Data were coded independently by two researchers. To strengthen trustworthiness, data were discussed during the analysis process among all qualitative research advisers. Divergences were resolved by consensus. The recordings were destroyed three months after the analysis was completed.

## Results

### Participants

A total of 33 participants from 26 different healthcare functional units participated in the focus groups, including 22 trainees. The majority were female ($n = 29$), and participants' ages ranged between 25 and 61 years, with a mean age of 34 years. Notably, 90.9% of participants had no prior training in SDM or the use of DAs. A brief description of the participants is provided in Table 1. The focus groups consisted of four to five participants each and lasted an average of 50 min.

### Themes

Four main themes emerged: knowledge of DA definition, experience with using DAs, GPs' perceptions regarding the implementation of DAs in clinical practice, and priority clinical topics for DAs use. The main findings are summarised in Box 1.

#### *Theme 1: Knowledge of DA*

Most participants misidentified DAs as clinical decision support systems. They commonly described DAs as tools that include clinical decision algorithms, questionnaires, calculators, personal databases, synthesised summaries for clinical reference, books, and other colleagues:

> *A tool that I can use during the consultation or for study that allows me to decide and make a decision on how to guide a patient in a consultation.* |*A2*|

> *[DAs] are based on the most current evidence, which helps us in therapeutic or diagnostic decisions. It is not something that interferes with our choice process, but that we can follow depending on clinical doubts.* |*B2*|

> *Flowcharts that help us when we have any clinical doubts, allowing us to carry out more evidence-based medicine, such as UpToDate and Dynamed.* |*G2*|

Only one participant mentioned the potential use of DAs to support the SDM process: *"It is important to clarify what decision is being made. Whether it is a decision made by the doctor or whether it is a decision shared with the patient. There are decision aids that we use to help the patient decide, for the patient, freely in light of their beliefs, to decide."* |*E2*|.

#### *Theme 2: Experience with using DAs*

This theme describes participants' experiences in applying DAs in their practice, highlighting their usage patterns.

After clarifying the formal definition of decision aids, most participants noted that they use medical education tools during appointments and adapted some of their features as decision aids. Two participants mentioned providing these tools for patients to review at home and then discussing them in subsequent appointments:

> *For contraceptive methods, I ask the patient to review the application and use it at home. Then we schedule an appointment.* |*F4*|

Most participants adapted documents written in English, and some in Portuguese (e.g., clinical guidelines), to serve as DAs. These adaptations often aimed to present different options, improve patient understanding, and facilitate shared decision-making. Some participants highlighted using these instruments to improve communication and the transmission of information to patients:

> *The patient always comes in with their characteristics, even if I search for UpToDate content.* |*F1*|

> *I had a patient for whom I calculated cardiovascular risk to determine if it was appropriate to medicate for LDL cholesterol. [By showing different options], I was able to involve the patient in deciding on therapeutic strategies, such as smoking cessation.* |*G3*|

DAs were mostly used for decisions about contraception, women's health (e.g., breastfeeding, postpartum depression), managing non-communicable and chronic conditions (e.g., cardiovascular risk, diabetes, cancer), and screening.

#### *Theme 3: Perceptions regarding the implementation of DAs*

This theme explores GPs' attitudes toward DAs, including the advantages and disadvantages of using DAs in their practices, their views on patients' preferences for using DAs to support decisions, and the perceived factors influencing the use of DAs.

**GPs' attitudes toward DAs** Almost all GPs reported a positive attitude toward DAs, citing patient empowerment and support in the decision-making process as key benefits. They noted that DAs facilitated communication of evidence-based medical information.

> *It empowers patients to engage in health literacy. It is a means to convey health information to patients and households.* |*C3*|

> *There are personal beliefs and decisions that a person makes in an informed way. This is where, from my perspective, decision aids come in: they will address a consequence of the evidence that is produced in large quantities and will do the work of synthesizing and presenting data, which is a right of people, in a free world with access to information.* |*E2*|

Furthermore, GPs frequently reported that DAs improve the safety and effectiveness of decisions, reducing medical errors, as *"they support the decision and allow security in reasoning."* |*B5*|.

Other perceived benefits included improved time management, standardisation of clinical practice, and increased adherence to decisions made.

> *It is important that the patient understands the tool itself, as this will allow them to better negotiate the therapeutic plan and will encourage the patient to*

**Box 1** Social demographics characteristics of participants and focus groups

| Themes | Subthemes | Main findings |
|---|---|---|
| Knowledge of DA definition | Perceived concept | • DAs as clinical decision support systems<br>• DAs as evidence-based tools<br>• DAs to support shared decision-making process |
| Experience of GPs with using DA | Type of support | • Adaptation of medical education tools as decision aids during appointments |
| | Language | • Mainly in English |
| | Main topics | • Contraception<br>• Women's health<br>• Managing non-communicable and chronic conditions<br>• Screening |

**Table 2** (continued)

| Themes | Subthemes | Main findings |
|---|---|---|
| Perceptions of GPs regarding the use of DA | GP's attitudes toward DA | • Advantages for using DAs<br>Empower the patient<br>Decision safety/effectiveness<br>Better time management<br>Shared decision support<br>Better support of the information transmitted<br>Reduction of medical error<br>Promote adherence to therapy<br>Cost reduction<br>Improve relationship with patients<br>Standardization of decisions<br>• Disadvantages for using DAs<br>Not applicable to all patients<br>Loss of the patients' holistic vision<br>Existence of several decision aids<br>Sign of lack of confidence of the doctor<br>Lack of literacy of patients<br>Time consumption |
| | Views on patients' preferences for using DAs | • DAs better accepted by younger and more educated patients<br>• Acceptability of DAs is influenced by the doctor-patient relationship and cultural background of patients |
| | Factors influencing the use of DA | • Barriers<br>Time constraints<br>Internet connectivity problems<br>Difficulties integrating DAs into electronic health records<br>Lack of Portuguese translations<br>Low health literacy and numeracy of patients<br>Need for training and time<br>• Facilitators<br>Tools adapted to the Portuguese reality<br>Integration into computer systems<br>Standardization of decision aids<br>Training of health professionals<br>Provision of decision aids before appointments<br>Teamwork |

**Table 2** (continued)

| Themes | Subthemes | Main findings |
|---|---|---|
| Priority clinical topics for DA | Clinical topics addressed in DA that should be adapted to the Portuguese population | • Screening programs (n = 7)<br>• Primary prevention with statins based on cardiovascular risk (n = 6)<br>• Antibiotic treatment for common infections (n = 5)<br>• Vaccines (n = 3)<br>• Psychotropic drugs (n = 3)<br>• Contraceptive methods (n = 2)<br>• Hormone replacement therapy (n = 2)<br>• Lifestyle changes (n = 2)<br>• Diabetes treatment (n = 1)<br>• Musculoskeletal exams (n = 1)<br>• Thyroid (dys)function (n = 1)<br>• Arterial hypertension (n = 1)<br>• Sexually transmitted diseases (n = 1)<br>• Innovative medicine (n = 1)<br>• Medication side effects (n = 1)<br>• Baby weaning (n = 1)<br>• Psychosomatization (n = 1)<br>• Routine check-ups (n = 1) |

*adhere to the decision as they are included in the negotiation process.* |*D1*|

A few GPs also believed that DAs could strengthen the professional relationship with patients, be cost-effective, and help optimise resource use.

The most frequently reported drawbacks were that DAs do not apply to all patients and may lead to a loss of the patient's holistic view, as each patient has their specific needs that may not be considered in these tools.

*It can be reductive; it is not possible to take into account all the patients' comorbidities.* |*D3*|

*It can be source of conflict because the evidence does not consider all types of patients.* |*C3*|

*The use of another digital tool may not help as much in the doctor-patient relationship.* |*F1*|

Some participants noted that DAs could be disruptive if inconsistent with the doctor's opinion, and the existence of several DAs *"can lead to the dispersion of information,"*|*B4*| and *"it is not easy to interpret these tools to communicate risk,"*|*E1*| so *"the patient might not understand."* |*E3*|.

Two GPs mentioned that using DAs could be interpreted as the doctor lacking confidence in the decision to be made.

**Patients' preferences regarding the use of DAs** GPs generally believed that patients are willing to use DAs because they provide security and involve them in the decision-making process. Most participants noted that DAs may be better accepted by younger, more educated patients.

*They tend to be younger, more educated, and more interested in their own health.* |*G1*|

*Greater health literacy makes it easier to understand the aim and results of these instruments. It is important to always have some degree of literacy, as those with less literacy always leave the decision to our side.* |*C1*|

Some participants believed that, although older and less-educated patients may need more effort to understand a DA, they tend to welcome the use of DAs.

*Usually, younger patients with a higher level of education find it easier to apply DAs, but older patients may be more willing to receive information and to be educated on health literacy.* |*C2*|

Many GPs highlighted that the acceptability of DAs in clinical practice is influenced by factors such as the doctor-patient relationship and cultural background.

**Barriers and facilitators for the use of DAs** GPs commonly cited a lack of funding and time constraints as the main barriers to using DAs. Other challenges included organisational issues, such as internet connectivity problems and difficulties integrating DAs into electronic health records, as well as the lack of Portuguese translations. Patient factors, such as low health literacy and numeracy, along with GP-related factors like a lack of awareness and familiarity training, were also thought to hinder DA use. Conversely, facilitators for DA adoption included their integration into computer systems, standardisation, adaptation for the Portuguese context and training of health professionals. Additionally, some participants suggested providing DAs before appointments and teamwork to allow for more effective use.

#### *Theme 4: Priority clinical topics*

Participants identified several clinical topics that could benefit from Portuguese-adapted DAs. The most frequently mentioned topics were screening programs ($n=7$), primary prevention with statins based on cardiovascular risk ($n=6$), and antibiotic treatment for common infections ($n=5$). Other priorities included vaccines, contraceptive methods, hormone replacement therapy, psychotropic drugs, and lifestyle changes (each $n=3$). Participants also suggested the broad applicability of DAs in areas such as diabetes treatment, musculoskeletal exams, thyroid (dys)function, arterial hypertension, sexually transmitted diseases, innovative medicine, medication side effects, baby weaning, psychosomatisation, and routine check-ups.

## Discussion

### Summary

This study evaluated GPs' perceptions of DAs in PHC in Portugal, revealing a mix of confusion about what DAs are and recognition of their value. Initially, most GPs mistook DAs for clinical decision support tools like UpToDate® and Dynamed®, with only one participant identifying their role in SDM with patients. Despite these initial misconceptions, after clarification of the DAs' definition, participants expressed positive attitudes towards their use, particularly for empowering patients and facilitating evidence-based communication. Challenges in using DAs included a lack of funding, the need for longer consultation times, organisational constraints, and the absence of Portuguese-translated tools. Identified facilitators for DA use included integration into computer systems, adaptation to the Portuguese context, and training for GPs. Younger, more literate patients were seen as most receptive to DAs, although communication style, the doctor-patient relationship, and cultural context were also perceived to influence DA acceptance. Priority topics for DAs include screening programs, other preventive interventions (e.g., statin use, vaccines, contraception, or lifestyle changes) and specific medications (e.g., antibiotics, hormone replacement therapy, or psychotropic drugs).

### Strengths and limitations

The qualitative study design enabled an in-depth exploration of GPs' perceptions of the role of DAs in supporting health decision-making and patient engagement. This approach provided valuable insights that could inform efforts to promote DA use in clinical practice. The qualitative approach also allowed for rich exploration of GPs' knowledge and attitudes toward DAs, leading to unexpected findings, such as the confusion between DAs and clinical decision support systems.

However, several limitations must be acknowledged. Firstly, social desirability bias may have influenced GPs' responses. Most participants worked in urban areas and in primary care trusts within a single health region — the ARSLVT — which may not reflect the diversity of healthcare settings across Portugal. As such, the findings may not be transferable to rural contexts, to other regions with different healthcare organisation or resources, or to the broader population of Portuguese GPs. Additionally, most participants worked in FHUs, where patients' involvement in SDM tends to be greater [20].

By focusing exclusively on GPs, the study may have missed broader insights from nurses and patients. Despite clarification of the DA definition during focus group discussions, some GPs continued to reference examples more characteristic of clinical decision support systems, suggesting persistent ambiguity in their understanding. This ambiguity may have influenced their responses.

Another potential limitation is that two-thirds of the sample consisted of GP trainees, who may have less experience using DAs. However, this could also be seen as a strength, as it provides perspectives from younger professionals.

Finally, a potential limitation relates to the impact of the group size on group dynamics. However, this is balanced by the depth and richness of the data obtained.

### Comparison with existing literature

The results of this study align with previous research on GPs' perceptions of SDM and their intention to use DAs. Most GPs initially lacked awareness of DAs and their role in clinical practice, often confusing them with medical education tools used for clinical decision support. Interestingly, the latest update of the Cochrane systematic

review on DAs refers to the term "patient decision aids" to differentiate DAs from decision support interventions used solely by clinicians [9], which underscores the relevance of our findings.

After clarification of the DA definition, GPs mentioned using digital medical education tools, suggesting a predisposition towards using or recommending online DAs to patients. This aligns with the International Patient Decision Aid Standards (IPDAS), which highlights internet accessibility as a key characteristic of effective DAs [21]. When older, less literate, or financially disadvantaged patients face challenges accessing new technologies [22], our data suggest that GPs are willing to act as mediators between patients and technology.

Cultural variations influence engagement in SDM. Previous studies suggest that Portuguese patients often lean towards a paternalistic approach to decision-making [23]. Nonetheless, in our study, GPs observe a readiness among patients to engage in SDM, particularly in areas highlighted in systematic reviews of DAs, like cancer screening and chronic disease management [24]. GPs in our study believed that DAs might be particularly welcomed by younger and more educated patients. Indeed, GPs' views on sociodemographic factors influencing perceptions of patients regarding DAs could shape the depth of SDM discussions, potentially limiting them for patients with lower education levels [25, 26]. However, DAs can improve equity in information access and help mitigate inequalities among different patient groups [27, 28]. Therefore, DAs hold significant potential to aid older or less-educated patients, challenging initial biases. Our participants also recognise that the quality of the doctor-patient relationship [29], as well as past experiences with illness and medical care [24], influence patients' preferences regarding SDM.

GPs' positive attitudes towards incorporating DAs into their practice are consistent with findings from other countries [2, 30, 31]. To our participants, DAs enhance counselling quality, patient satisfaction, healthcare decision quality, and may reduce decision conflict while aligning clinical attitudes across primary and hospital care settings. A novel finding in our study is that in the absence of DAs in Portuguese, participants either used English-language DAs or adapted Portuguese materials to fill DA roles. These adaptations primarily served to present options, improving knowledge and facilitating SDM, rather than clarifying personal values or reducing decisional conflict.

Despite these benefits, concerns were expressed about DAs potentially distancing the doctor-patient relationship. For example, a study in California found low DA implementation, attributed to fears of replacing direct communication, compounded by challenges in patient comprehension and the impact of low literacy and numeracy [32]. Time constraints were also noted by GPs as barriers to DA use, despite evidence suggesting DAs minimally extend consultation length by an average of 1.5 min, and that pre-appointment distribution does not significantly impact patient knowledge or risk perception compared to in-appointment distribution [2, 33].

Regarding clinical topics for translation and cultural adaptation to use in DAs, GPs identified a broad range of areas, reflecting the wide applicability of these tools. They specifically highlighted the need for DAs in mental health and reproductive health, which is consistent with findings from the literature [2, 9].

#### Implications for research and practice

Through focus group discussions with GPs about their knowledge and experiences with DAs, we found that most GPs were unclear about the definition, role, and benefits of using DAs. To address this gap, increasing training and awareness of SDM and DAs among medical students and GPs could encourage greater engagement with SDM [34]. Additionally, given the confusion between DAs and clinical support decision tools, we suggest culturally adapting the term "*Patient DA*" to clearly differentiate it from decision support systems used by healthcare professionals.

Ensuring quick access to DAs is essential, countering the misconception that these tools significantly increase appointment times. It is also important to emphasise the idea that DAs are particularly useful for individuals with low literacy. Further research should focus on underserved groups to provide evidence on how DAs contribute to health equity, thereby supporting their broader use in clinical practice.

The role of teamwork in DAs implementation, especially the contribution of nursing staff in SDM, remains underexplored but is recognised as valuable [35, 36]. Future research should assess the perception of nursing teams regarding the use of DAs in their clinical practice and explore the use of DAs by multidisciplinary teams. Moreover, further studies should explore patients' willingness to participate in decision-making prior to the broader implementation of DAs in clinical practice, as patient acceptability is key to their effective use. We believe this addition reinforces the importance of including patient and nurse perspectives in future research on DAs and SDM. There is also potential for creating an international network among primary care professional organisations to share resources, reduce duplication of efforts, and promote standardisation in the development and implementation of Patient DAs.

Policy makers play a key role in supporting the use of DAs in clinical practice. This study identified barriers related to opportunity (e.g. time constraints, funding, and organisational factors) and capability, as most GPs

initially confused DAs with clinical decision support tools [37]. Addressing these barriers requires coordinated policy action across guidelines, service provision, and environmental/social planning. As Portugal adopts the GRADE framework [38], it is important that weak recommendations explicitly signal the need for SDM and link to relevant DAs. This should be reflected in implementation tools, such as clinical audit forms, to reinforce SDM as routine care. Existing infrastructure, such as the "*SNS + Proximity*" project, could support service provision by hosting DAs and integrating them into electronic health records to ensure equitable access. To strengthen capability, SDM and DAs training should be embedded in medical education and professional development. GPs in our study showed strong motivation to use DAs once the concept was clarified, suggesting that consistent terminology and targeted communication strategies could help normalise their use. Finally, healthcare commissioning offers another policy lever: expectations for SDM can be included in service contracts, and patient surveys used for performance evaluation could assess perceptions of SDM [39]. All implementation efforts should be accompanied by robust evaluation to ensure effectiveness, sustainability, and equity.

## Conclusions

Most GP confused DA with clinical decision support tools. Despite lack awareness of DA and their role in clinical practice to most participants, integrating DA in PHC was well received and these may provide a potential added value regarding the provision of healthcare to patients. Concerns surrounded the lack of funding, time constraints and the lack of translations and cultural adaptation of DAs to national and local contexts. Facilitators involved integrating these tools into computer systems and its uniformization. Clinical topics of interest included prevention and specific medications.

### Abbreviations

| | |
|---|---|
| AICIB | Agency for Clinical Research and Biomedical |
| APMGF | Portuguese Association of General Practice and Family Medicine |
| ARSLVT | Regional Health Administration of Lisbon and Tagus Valley |
| DA | Decision aids |
| FHU | Family Health Units |
| GPs | General practitioners |
| IPDAS | Patient Decision Aid Standards |
| PHC | Primary healthcare |
| PHCU | Personalised Health Care Unit |
| SDM | Shared decision-making |

## Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12911-025-03044-1.

Supplementary Material 1

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Not applicable.

### Author contributions

All authors contributed to the conceptualization and design of the study. MPP conducted the focus groups, with supervision of SD and AG. MPP and AG analysed and interpreted the resultant transcripts. MPP wrote the original draft. All authors reviewed and edited the manuscript and approved the final version.

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### Data availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Declarations

### Ethics approval and consent to participate

The study was carried out in compliance with relevant guidelines and regulations, including the Helsinki declaration and the Portuguese legislation on clinical research. Participation in the study was voluntary, anonymous, and confidential, with all participants providing written informed consent. Ethics approval was obtained from the ARSLVT Research Ethics Committee (6242/CES/2022).

### Consent for publication

Not applicable.

### Competing interests

The authors declare no competing interests.

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