

# National Health Portal: What Wishes and Needs do Family Physicians have?

## Results of an Exploratory Study

## Nationales Gesundheitsportal: Welche Wünsche und Vorstellungen haben Hausärzt\*innen?

### Ergebnisse einer explorativen Studie

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#### Background

The Federal Ministry of Health (BMG) recently established a national health portal in Germany to provide evidence-based health information in an accessible manner. One of the aims of the portal is to provide support to doctors in patient education and consultation. Family physicians (FPs) deal with a wide range of symptoms, diseases, and patients, and could especially benefit from the new portal. A research project was initiated in collaboration with the health innovation hub (hih) of the German Federal Ministry of Health to determine FPs' positions, needs and requirements with regard to a national health portal.

#### Methods

A total of 3,585 FPs in the federal states of Hesse, Rhineland-Palatinate, Saarland, and Baden-Württemberg were surveyed by online questionnaire between March and July 2021; the study was based on two preliminary studies. Due to the exploratory approach, only a descriptive analysis was carried out.

#### Results

Over half at 55 % saw the establishment of a national health portal as positive while 52 % saw great potential for support in everyday practice. Respondents especially saw relief in giving medical advice (67 %), optimization of doctor-patient communications (59 %), stabilization of anxious patients (41 %) and improved awareness in dealing with the health system (40 %) as benefits. The system should also help towards longer-term stabilization in care settings (39 %). The respondents especially found prevention focus (91 %) and symptom-oriented presentation (63 %) important. Some saw a possibility of gathering information for their patients (44 %) and exchanging information with their specialist colleagues (45 %) using the platform.

#### Conclusions

FPs see clear opportunities in improved patient education and consultation using a national health portal. The portal should be designed to provide comprehensible information compliant with guidelines and conveyed in a symptom-oriented manner while also supporting the doctor-patient relationship and helping patients navigate through the healthcare system.

#### Keywords

health portal; health information; health communication; doctor-patient relationship; family physicians; primary care

#### Hintergrund

In Deutschland wurde vom Bundesministerium für Gesundheit (BMG) ein nationales Gesundheitsportal etabliert, das evidenzbasierte, leicht verständliche Informationen zur Verfügung stellen soll. Ärzt\*innen sollen bei ihrer beratenden Tätigkeit unterstützt werden. Insbesondere Hausärzt\*innen könnten einen Nutzen daraus ziehen. In Zusammenarbeit mit dem *health innovation hub* (hih) des BMG wurde ein Forschungsprojekt initiiert, bei dem hausärztliche Positionen, Bedürfnisse und Anforderungen mit Blick auf ein nationales Gesundheitsportal erfasst wurden.

#### Methoden

Auf Grundlage zweier Vorstudien wurden zwischen März und Juli 2021 3585 Hausärzt\*innen in Hessen, Rheinland-Pfalz, Saarland und Baden-Württemberg online befragt. Aufgrund des explorativen Ansatzes erfolgte ausschließlich eine deskriptive Analyse.

#### Ergebnisse

55 % sehen die Einrichtung des nationalen Gesundheitsportals positiv; 52 % sehen für ihren Praxisalltag große Unterstützungsmöglichkeiten. Artikuliert wird v.a. eine Entlastung bei ärztlicher Beratung (67 %), eine Optimierung der Arzt-Patienten-Kommunikation (59 %), eine Stabilisierung von ängstlichen Patienten (41 %) und eine bessere Aufklärung im Umgang mit dem Gesundheitssystem (40 %). Zudem sollen Versorgungssettings längerfristig stabilisiert werden (39 %). Wichtig ist den Befragten ein Präventionsschwerpunkt (91 %) und eine symptomorientierte Darstellung (63 %). Einige können sich vorstellen, über die Plattform Informationen für ihre Patienten zu organisieren (44 %) und den Austausch mit Fachkollegen zu suchen (45 %).

#### Schlussfolgerungen

Hausärzt\*innen erblicken in der Einrichtung eines nationalen Gesundheitsportals deutliche Chancen für eine bessere Information und Beratung von Patienten. Dabei sollte das Portal so gestaltet werden, dass zum einen leitlinienkonforme, verständliche Informationen symptomorientiert vermittelt werden, zum anderen das Arzt-Patienten-Verhältnis unterstützt und die Orientierung im Gesundheitswesen verbessert wird.

#### Schlüsselwörter

Gesundheitsportal; Gesundheitsinformation; Gesundheitskommunikation; Arzt-Patienten-Verhältnis; Hausarzt; Primärversorgung

## Introduction

Studies have shown that many platforms do not meet the requirements for trustworthy patient information despite the huge wealth of digital health information [1–4]. Another problem involves inability to find quality-assured health information, hampering awareness amongst patients and doctors [5]. Non-commercial evidence-based health portals from sources such as health insurance companies and healthcare self-management services have not achieved a high level of awareness over the last few years [6, 7].

Germany set up a professional and financially independent national health portal under the aegis of the Federal Ministry of Health (BMG) in the spring of 2021 [8, 9]. The stated aim of the national health portal ([www.gesund.bund.de](http://www.gesund.bund.de)) was to become Germany's central online information service covering every aspect of health.

The solution's proponents argue not only on the strength of the currently widespread need for patients to find out about symptoms, clinical pictures or therapies on the Internet [10, 11], but also for the German health portal to provide an alternative to using a search engine and the associated negative effects now widely discussed such as unnecessary health worries, hypochondriac disorders and the resulting challenges to the health system [7, 12, 13]. Importantly, the portal should also provide support for doctors in patient education and consultation [8]. As primary care providers, FPs see a wide range of symptoms, clinical conditions, and patients, and should be able to benefit by targeted use of the portal in patient care and doctor-patient relationships.

It seems sensible to gather medical opinions, perspectives and suggestions and integrate these into the development process while generating proactive interactions and synergies with the healthcare system in the initial phase of the national health portal. However, there has so far been a lack of usable research on this matter.

This study focuses on the question of how a national health portal might provide meaningful support to FPs in patient education and consultation as well as the long-term priorities or features that should be included in this por-

tal. The authors have been collaborating with the health innovation hub (hih) in the Federal Ministry of Health for this study. It was carried out parallel to the regular commissioning of the portal in order to outline prospects for further development with regard to primary care.

## Methods

### Study design and survey method

The exploratory internet-based survey was performed based on a focus group followed by a structured discussion with FPs and representatives of the health innovation hub in November 2019 [14]. Following the evaluation of the focus group results using qualitative content analysis, the actual construction of the questionnaire took place.

The questionnaire (see eTable 3) was developed in agreement between the project partners, taking the results of the focus group [14] and relevant preliminary studies related to the topic [7, 15–17] as well as desk research into account [e.g. 1, 2, 10, 13]. The larger item batteries (particularly questions 4, 5, 23) were derived using the focus group results. Question 20, which asks about focal points or components be in a national health portal, was derived from an internal discussion with the project partners, but also from the results of the qualitative study. Apart from the standardized questions, the survey intentionally included several open questions to reflect the exploratory nature of the study.

The questionnaire consisted of four blocks:

- Online research behavior of patients, and situations arising in everyday practice (Q1–5)
- Knowledge of and attitudes regarding existing health-related websites (Q6–10)
- Use of health-related websites for information and advice (Q11–13)
- Attitudes towards a national health portal, its potential for support and requirements placed on it (Q14–23)

As socio-demographic characteristics age, gender, further education background, practice environment, type of practice and patients per quarter were recorded. Before the field work, a pre-test was carried out with 25 FPs.

### Recruitment and participants

The anonymized survey was performed between March and July 2021. All 13,820 FPs in Hesse, Rhineland-Palatinate, Saarland and Baden-Württemberg were posted written invitations to participate. The address registers were primarily based on the doctor finder from the Kassenärztlichen Vereinigung (KV-Arztfinder) for the respective federal states. The invitation letter consisted of a once-only cover letter giving the doctors to be interviewed password-protected access to the online survey, amongst other things. The FPs that responded did not receive any financial rewards or incentives for participation.

A total of 3,585 completed questionnaires of the 3,603 questionnaires processed were included in evaluation (26 % response rate). ‚Completed‘ means that the online questionnaire has been answered to the end and that answer categories have been selected for at least all standardized questions.

### Data analysis

We analyzed the data using SPSS 23.0 for Windows. Due to the exploratory approach, only a descriptive analysis was carried out.

The evaluation of the open questions is based on a qualitative content analysis according to Mayring [14]. In this way, a category system was created, which was repeatedly checked and, if necessary, modified as the evaluation progressed. In this way it was possible to condense and systematize differences and similarities in the data in the form of logical categories as well as argumentation and problematization patterns. The following presentation of results concentrates on the central findings.

## Results

### Sample

A total of 3,585 completed questionnaires of the 3,603 questionnaires processed were included in evaluation (26 % response rate). The heterogeneous sociodemographic sample obtained corresponded to the cross-section of primary care:

- Gender: 61 % male, 39 % female
- Mean age: 56 (median: 57, SD: 8.64)
- Office setting: 38 % town and city, 62 % rural/small town

- Type of office: 57 % individual practices, 43 % group practices

### Online research by patients and situations in everyday practice

According to respondents' own estimates, 47 % of their own patients occasionally or more frequently went online to research health and disease issues for information on symptoms, clinical conditions, therapies and similar (SD: 21.5; Q1). Of the respondents, 52 % generally saw it as somewhat positive when patients researched symptoms, clinical conditions, and therapies online in preparation for medical consultation (Q2). Patients often researched online specifically for preparation (43 %) for a doctor's appointment (6 % follow-up, 51 % preparation and follow-up) according to the respondents' own observations and interpretations (Q3).

One battery of questions showed how online research currently affects day-to-day healthcare (see eTable 1; Q5). This revealed that FPs were frequently confronted with online health information, but also that patients also asked questions and expressed wishes and expectations on specific diagnostic methods or treatments.

### Awareness of existing health-related websites and use for research and advice purposes

Despite the importance of online research for everyday practice, only a minority of respondents claimed to have a good overview of existing health pages (26 % very or somewhat good, 58 % somewhat poor, 26 % no response; Q6). Non-commercial evidence-based portals were largely unknown (Q7).

55 % of doctors stated that they do not feel competent enough to assess the quality and reliability of health-related websites (36 % very or rather competent; Q8). FPs of below the average age saw themselves as significantly more competent than older FPs (46 % vs. 30 %). Almost three quarters at 74 % saw it is very or somewhat difficult to gauge neutrality and independence in health-related websites (20 % very or rather easy; Q13). Most respondents (80 %) considered the non-commercial nature of portals as an important factor in online health information (Q12).

Only a smaller proportion (28 %) reported knowing individual health portals they considered trustworthy enough to suggest on a regular basis to patients for preparation or follow-up (Q9). FPs that frequently or occasionally recommended specific websites were significantly more often below rather than above the average age (49 % vs. 28 %; Q11).

### Support potential from a national portal

Most respondents were open to the concept of a national health portal providing evidence-based health information in an accessible fashion to the public. Over half at 55 % saw setting up this type of service as a good thing, whereas 30 % were skeptical and 15 % undecided (Q14). FPs below the average age were more optimistic about the matter than older FPs (61 % vs. 46 %).

Just over half at 52 % expected a national health portal to support one's own information and advice activities very large (9 %) or rather large (43 %). 36 % only saw minor or no support potential; 12 % did not know (Q16).

Respondents named specific areas where a national portal might generate benefits or advantages in primary care in an open question (Q17):

- Improved patient education (76 %)
- Relief in medical consultation times (67 %)
- Effectiveness of consultations for well-informed patients (59 %)
- Avoidance of unnecessary visits to the doctor (43 %)
- Reassurance for worried or hypochondriac patients (41 %), possibly aided by referrals to support services such as from health insurance companies
- Education on the structures and functions of the healthcare system, promotion of realistic ideas on treatment options such as treatment types and prescriptions, appropriate use of healthcare services (40 %)
- Support and long-term stabilization for family caregivers, overview of support services as well as sociomedical and legal information on organizing care (39 %)
- Reinforcement of prevention (38 %) such as portal focus on healthy nutrition, exercise, and lifestyle

FPs from more rural areas expressed a desire for relief in medical consultation times and educating patients on appropriate use of the healthcare system.

Results from a battery of questions based on statements made by FPs from the previous focus group study underpinned these findings later in the questionnaire (see eTable 2; Q23).

### Requirements on a national portal

Another open question asked participants what they thought a national portal should mainly provide from their point of view (Q18). Apart from ensuring independence, respondents expressed the following requirements:

- Strictly evidence or guideline-based information (70 %)
- Symptom-oriented structure to keep patients from searching specific clinical conditions possibly leading to unfounded anxiety (63 %)
- Clear overall structure, accessible and descriptive design (60 %); liberal use of aids such as visualizations (esp. explanatory videos)
- Portal must neither compete with doctors nor represent a substitute for medical consultation, must constantly advise patients to seek medical diagnosis, treatment and/or support (59 %)
- Wide range of real-life tips, exercises, recommendations, and instructions (57 %); especially exercise, convalescence, and fitness as well as advice on diet, stress reduction and increased resilience using printable fact sheets and compact, digestible video clips
- Large numbers of references and links to other health pages (such as on special topics) rated as serious in a continuous review process (33 %)

### Orientation and focus of a national portal

The results showed that the respondents favored a portal that would provide scientifically and empirically reliable, quality-assured information presented in a contemporary communication style aimed at a wide variety of population groups (see Table 1; Q20).

This again revealed a preference for health promotion amongst FPs. The same applies to the educational character that a national portal should support

**Question: From your perspective as a general practitioner, how important would the following focal points or components be in a national health portal? (N=3,585)**

	<b>Very important</b>	<b>Somewhat important</b>	<b>Somewhat unimportant</b>	<b>Not important at all</b>	<b>Missing response</b>
Evidence-based health information based on existing guidelines (empirically sound information on diseases, diagnoses, therapies and quality of life despite illness)	59 %	27 %	7 %	6 %	1 %
Focus on primary prevention, precaution and early detection (information and advice on a healthy lifestyle such as diet/exercise, overview of prevention offers, information on early detection and preventive examinations, etc.)	57 %	34 %	3 %	5 %	1 %
Navigator to advice and support offers, (special) clinics, doctors and care facilities (telephone, personal and online advice offers, help in finding suitable hospitals, etc.)	35 %	40 %	14 %	9 %	2 %
Navigator to ongoing clinical studies on various clinical pictures	9 %	13 %	49 %	25 %	4 %
Education about the structures and requirements of the health system for the most appropriate use (information on the structure of the German health system, correct behavior in emergencies, explanations as to why not all therapies/drugs can be prescribed, etc.)	48 %	37 %	9 %	3 %	3 %
Dealing with current media coverage (reports on current health topics as well as evaluation and comments)	30 %	46 %	15 %	7 %	2 %
Doctors can create a personalized area on the portal in which they put together specific information packages that they can pass on to patients for targeted advice	18 %	26 %	39 %	16 %	1 %
Possibility of direct exchange between doctors via a separate area of the portal (e.g. to exchange experiences or pass on best practices)	15 %	30 %	38 %	16 %	1 %
Conveying information with the help of explanatory videos and visual aids such as diagrams	36 %	45 %	10 %	8 %	1 %

**Table 1** Preferred components in a national health portal

towards an appropriate response to health issues. The respondents also saw a benefit in having the new service focus more on current reporting, such as news on epidemics.

Some of the respondents were in favor of a special area for physicians in addition to patient access in a national health portal. This would support compiling personal information packages for patients or sharing ideas with colleagues on current challenges, experiences, and best practices.

## Discussion

Our results have consistently confirmed the findings from the preliminary qualitative study [14] as well as earlier studies demonstrating that patients conducted online research on healthcare and disease topics, which has become part of everyday practice in primary ca-

re [7, 10, 18]. Even though there was no doubt as to the added value of reliable online health information, findings have shown that many FPs do not have a sound overview of existing health portals and are reluctant to consider including these websites in patient education and consultation [16, 19, 20]. As user surveys have shown, patients are also largely unaware of existing quality-assured health information services [21–23]. Regular visitors to healthcare websites have reported substantial long-term effects on doctor-patient relationships ranging from more thorough understanding of technical terms, diagnoses, and therapies to damaged doctor-patient relationships after researching health information for themselves [15, 23].

Those surveyed generally see positive potential in a national health portal.

Over half at 55 % saw such a platform as positive while 52 % saw great potential for support in everyday practice. Although these values are comparatively high at first glance, one should bear in mind that the FPs surveyed also stated that most of their patients regularly obtained information from the Internet. In this respect, it can also be concluded that the actual interest in such a health portal is comparatively moderate. This may relate to the fact that the two spheres 'FP consultation hours' and 'internet research by patients' are (still) separate to each other.

Nevertheless, many of the respondents named different added values that a national health portal can provide. The added value may affect participatory decision-making as well as compliance together with more consistent and rapid care, diagnostics, and

treatment as well as effective access to digital healthcare services [8]. Care providers and FPs may be able to use the trust vested in them by their longstanding patients and play an important supportive role in communicating and promoting reputable health-related websites specific to their patients' needs, thus playing a proactive role in improving patient education and consultation [19].

The survey has revealed specific support potentials for patient education and consultation that FPs recognize in this type of service. FPs have expressed a desire for sound patient education as well as an emphasis on aspects of orientation and prevention in a national health portal mirroring a FP's own role in guiding patients through the healthcare system. In addition, a large number of FPs saw the potential of this type of platform to compile individualized information for patients and consult with their specialist colleagues towards communicating examples of good practices, amongst other things.

Given that the portal is widely known and can be found easily, a national health portal can provide substantial opportunities for involving patients more closely in the healthcare process; this could help structure the process more efficiently, such as by securing a primary care-based approach while also boosting empowerment and participatory decision-making in the doctor-patient relationship [24, 25]. Even so, the health portal will have to comply with the specific conditions of the German healthcare system. This includes the consistent involvement of FPs in such a major project. By involving FPs in this way, it can be ensured that the views and working methods of primary care physicians are taken into account in the further development of such a portal. This can help to promote an effective interplay between patient information in the consultation hours on the one hand and independent internet research by the patients on the other.

### Limitations and directions for future research

The present study dealt with the development potential of the national health portal as well as with ideas and needs of FPs. Therefore, the study did not carry out a direct evaluation. As a

result, sensible benefits have been focused on and risks and problems have been neglected. The survey could have been carried out too late, since regular operation of the portal was imminent. However, the results can be used to further develop the portal.

The study cannot make any representative claims due to the limited number of cases and regional recruiting focus in four federal states in the Federal Republic of Germany. Apart from that, physicians more interested or skilled in the subject matter may have taken part in the survey to a greater extent, thus tainting the result. There is also the possibility of bias towards FPs with a personal interest in the subject or online technology taking part in the survey.

This study focused on the primary care perspective. The question arises as to how well the attitudes of FPs can be applied to others involved in the healthcare system. It should also be noted that the results cannot simply be generalized to the needs and interests of the public. This requires critical discourse on how far potential features such as communication with doctors and diagnostic tools using a national portal would align with the public interest. There are still no conclusive findings on this matter, warranting future studies.

### Conclusions

The FPs included in this survey expressed approval of a national health portal; this would seem to confirm the potential benefit of this project and the need for a sound, trustworthy information platform that is easy to find for patients and doctors alike. As expected, respondents emphasized aspects that correspond to their role as primary care providers regarding the design of the portal – aspects such as providing guidance for patients, avoiding too much or too little care, and stabilizing patients. Implementing this service and benefiting from it in practice will depend on close coordination with primary care.

### Zusatzmaterial im Internet ([www.online-zfa.de](http://www.online-zfa.de))

**eTable 1** Situations in everyday practice

**eTable 2** Statements on a national health portal

**eTable 3** Questionnaire



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Foto: privat

### Interessenkonflikte:

Keine angeben.

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## 56. Kongress für Allgemeinmedizin und Familienmedizin

Patientenzentrierte Versorgung –  
 Die Hausarztpraxis im Zentrum der Versorgung



15. – 17. September 2022 | Greifswald



**Question: How often do you encounter the following situations in daily practice? (N = 3,585)**

	<b>Frequently</b>	<b>Occasionally</b>	<b>Seldom</b>	<b>Never</b>
Patients confront me with information on symptoms and diseases they have researched online.	28 %	62 %	9 %	1 %
Patients confront me with requests for specialised diagnostic methods after reading about them online.	39 %	43 %	17 %	1 %
Patients confront me with requests for specific treatments that they have researched online.	12 %	52 %	31 %	5 %
Patients ask me for advice or tips on where they can find more information on certain health and disease topics online.	8 %	27 %	48 %	17 %
I provide patients with info leaflets or brochures towards educating them on diseases and treatments.	29 %	42 %	24 %	5 %
I personally recommend certain websites to help patients do their own research.	9 %	30 %	36 %	25 %

**eTable 1** BSituations in everyday practice

**Question: How far would you agree with the following statements? (N = 3,585)**

	<b>Completely agree</b>	<b>Somewhat agree</b>	<b>Somewhat disagree</b>	<b>Completely disagree</b>
“Apart from providing information and education, a national health portal should for example reassure and stabilise patients and forestall unjustified anxiety in health matters.”	53 %	35 %	5 %	7 %
“A national health portal should create an overview of reputable health-related websites with reliable information on certain topics for patients.”	61 %	31 %	4 %	4 %
“A national health portal should help reduce the number of unnecessary doctor’s visits by encouraging self-management in minor complaints or disorders.”	51 %	31 %	8 %	10 %
“A national health portal should provide information on symptoms requiring immediate medical attention (red flags such as retrosternal discomfort, sudden paralysis, etc.).”	72 %	17 %	6 %	5 %

**eTable 2** Statements on a national health portal

**1. What do you estimate: How large is the proportion of people in your own patient population who occasionally or more frequently conduct research on health and disease topics on the Internet (e.g. 'googling' their own symptoms, obtaining information on diseases, diagnostics or therapies)? Please give a rough indication in percent.**

I guess about \_\_\_\_\_ %

**2. How do you assess it in principle when your patients find out about symptoms, diseases or therapies on the Internet?**

Very positive  Rather positive  Rather negative  Very negative  I don't know, no answer

**3. In your observations or experience, are the Internet researches that your patients carry out more in preparation for or as a follow-up to doctor visits?**

In preparation  As a follow-up  Both  I don't know, no answer

**4. What topics do the respective patients find out about? (More than one can be specified.)**

Symptoms  Diagnostics  Certain clinical pictures  Therapies  New drugs  
 Prevention, early detection  Healthy lifestyle, lifestyle change  Health insurance benefits  
 Individual health services, additional medical services  Care and nursing  Patient rights  
 Other, namely: \_\_\_\_\_

**5. How often do the following situations occur in your daily practice?**

	Frequently	Occasionally	Rarely	Never
Patients confront me with researched information from the Internet on symptoms or diseases / clinical pictures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patients confront me with the requirement for special diagnostics (e.g. MRI, laboratory) because they have read this on the Internet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patients confront me with requests for special therapies that they have researched on the Internet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patients ask me for advice or tips on where they can find (further) information on certain health and disease topics on the Internet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I give patients information sheets or brochures that should help, for example, with information about diseases or therapies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I personally recommend certain websites to patients where they can look up health information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**6. Overall, how would you assess your overview of existing health websites on the Internet?**

- Very good  Rather good  Not really that good  Hard to say, no answer

**7. Which of the following German health portals are you familiar with? (More than one can be specified.)**

- Netdoktor.de  Vitamet.de  Apotheken-Umschau.de  Gesundheit.de  
 Qualimedic.de  Ärzte.de  Jameda.de  Stiftung-gesundheitswissen.de  
 Patienten-universität.de  Gesundheitsinformation.de  Onmeda.de  Weisse-Liste.de  
 Krebsinformationsdienst.de  Patienten-information.de  Patientenberatung.de  
 Lifeline.de  Arzt-Auskunft.de  zentrum-der-gesundheit.de

**8. How competent do you feel when it comes to assessing the quality and reliability of such health portals?**

- Very competent  Rather competent  Not that competent  Hard to say, no answer

**9. Are there certain health portals that you consider to be particularly serious and trustworthy and that you would recommend accordingly? If so, please enter a maximum of three websites.**

- Yes, namely: \_\_\_\_\_

- No => please go directly to [question 12](#)

**10. What do you like about the pages you mentioned? (Please state a maximum of five aspects.)**

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**11. How often do you recommend the health pages you mentioned to your patients or refer your patients to them for research or to look up certain health information?**

- Frequently  Occasionally  Rarely  Never  Hard to say, no answer

**12. When it comes to recommending certain health information on the Internet to patients, there may be a choice between commercial and non-commercial health websites whose information is equally reputable. Given these conditions, how important would it be for you that the information you recommend comes from a non-commercial source (e.g. operated by health insurance companies, state institutions, medical organizations)?**

- Very important  Rather important  Not that important  Not important at all  No answer

**13. In your opinion, how difficult or easy is it to assess whether health websites on the Internet are commercial providers?**

- Very difficult  Rather difficult  Rather easy  Very easy  No answer

**14.** The federal government recently decided that a national health portal should be set up. This portal is intended to provide the public with neutral, evidence-based and understandable health information as a non-commercial offer. In this way, patients should be able to obtain reliable, quick and comprehensive information about medical issues and structures of the health care system.

Do you think the establishment of such a national health portal is a good thing or are you rather skeptical about it?

Good thing    Rather skeptical    Hard to say, no answer => please go directly to [question 16](#)

**15.** Why are you positive or negative about the federal government's plan to set up a national health portal? Please provide a few key points.

Positive because: \_\_\_\_\_

Negative because: \_\_\_\_\_

**16.** Assuming that there was a national health portal that provides reliable information, is known among patients and easy to find on the Internet: Could you imagine that such a portal would support you in your information and advice activities as a general practitioner? (What is meant is the support potential that you attach to such a portal.)

Yes, the support of my work as GP would be...    very large    rather large    rather small

No, I can't imagine    Hard to say, no answer

**17.** What specific benefits or advantages can you imagine for your work as a general practitioner if there were such a national health portal? (Please state a maximum of five aspects.)

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**18.** In your opinion, what should a national health portal offer above all so that it can support you as well as possible in your information and advice activities as a general practitioner? (Please state a maximum of five aspects.)

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**19.** In your opinion, should such a health portal serve more to prepare for or follow up on doctor visits?

Preparation    Follow up    Both    Hard to say, no answer

**20.** From your perspective as a general practitioner, how important would the following focal points or components be in a national health portal?

	Very important	Rather important	Rather unimportant	Not important at all
<b>Evidence-based health information based on existing guidelines</b> (empirically sound information on diseases, diagnoses, therapies and quality of life despite illness)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Focus on primary prevention, precaution and early detection</b> (information and advice on a healthy lifestyle such as diet / exercise, overview of prevention offers, information on early detection and preventive examinations, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Navigator to advice and help offers, (special) clinics, doctors and care facilities</b> (telephone, personal and online advice offers, help in finding suitable hospitals, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Navigator to ongoing clinical studies on various clinical pictures</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Education about the structures and requirements of the health system for the most appropriate use</b> (information on the structure of the German health system, correct behavior in emergencies, explanations as to why not all therapies / drugs can be prescribed, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Dealing with current media coverage</b> (reports on current health topics as well as evaluation and comments)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Doctors can create a personalized area on the portal in which they put together specific information packages that they can pass on to patients for targeted advice</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Possibility of direct exchange between doctors via a separate area of the portal</b> (e.g. to exchange experiences or pass on best practices)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Conveying information with the help of explanatory videos and visual aids such as diagrams</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**21.** Please name three to five topics that are particularly important to you and that should be covered in detail by a national health portal in order to inform and educate patients.

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**22.** Which patient target groups do you think should be given special attention by a national health portal?

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**23.** To what extent do you agree with the following statements?

	Agree Strongly	Agree Moderately	Disagree Moderately	Disagree Strongly
<i>"In addition to information and education, a national health portal should aim to calm and stabilize patients in order to counteract the emergence of unjustified health fears."</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>"A national health portal should offer an overview of reputable health sites on which patients can reliably obtain information on certain topics."</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>"A national health portal should pursue efforts to reduce the number of unnecessary doctor visits by helping patients to help themselves with minor complaints or disorders."</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>"A national health portal should provide information about the symptoms for which immediate medical or medical help should be sought ('red flags' such as retrosternal tightness, sudden paralysis, etc.)."</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Now we need some statistical information from you. Like the rest of the questionnaire, this information will of course be treated as strictly confidential and will be anonymized accordingly.*

**You are...**  male  female  diverse

**Your age:** \_\_\_\_\_

**You are a specialist in...**  general medicine  internal medicine  Other

**Where is your practice located?** In a municipality / city with...

more than 100.000  20.000 to 100.000  5.000 to 20.000  less than 5,000 inhabitants

**What applies to your practice?**

Individual practice (you are the only doctor)  Individual practice with employed doctors

Group practice  Practice community  Other

**How many patients does your practice treat each quarter?**

500 to 750  751 to 1000  1001 to 1500  1501 to 2000  More than 2000

**Thank you for your participation!**

What else would you like to tell us? Below you will find space for suggestions, comments and criticism.

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