Simply no time? Barriers to GPs’ participation in primary health care research

Eva Hummers-Pradier, Christa Scheidt-Nave, Heike Martin, Stephanie Heinemann, Michael M Kochen and Wolfgang Himmel


**Background.** Non-participation of general practitioners (GPs) is a serious source of bias for practice-based studies.

**Objective.** To elucidate doctors’ motives for non-participation in, and subjective barriers to, general practice research.

**Methods.** German GPs that had opted out of a quality assessment project involving electronic patient records (EPRs) were mailed a questionnaire regarding their attitudes towards general practice research and their specific objections to the current project. A sub-sample of doctors was interviewed. Their statements were coded and classified with regard to the reasons given for non-participation and possible motivating factors.

**Results.** The survey response rate was 37% (96/263); 21 GPs completed an additional qualitative interview. Nearly all respondents (88/96) considered general practice research to be important, but 58% had not previously participated in research projects and 56% would not do so in the future. Nearly half (47/96) were opposed to having data extracted from their EPRs. The qualitative analysis revealed deep concerns related to the collection of EPRs (e.g. potential misuse of data, being subject to control or resulting computer problems). Some GPs expressed concerns about recruiting their own patients for the study. Some doctors complained of not being sufficiently recognized as a partner or not having a voice in the research process.

**Conclusion.** Doctors’ negative attitudes, concerns and ambivalent feelings should be addressed in recruitment strategies, especially when the analysis of EPRs or direct patient contact is required. Some doctors do not participate in research out of principle and will be very difficult to convince.

**Keywords.** Attitude of health personnel, electronic patient records, general practice, health services research, research design.

**Introduction**

Non-participation of GPs is a potential source of bias for practice-based studies and may threaten the validity of research results. Many studies from Europe and North America have focused on strategies to improve response rates such as improved questionnaire formats or reduced questionnaire length, monetary incentives, postal surveys instead of telephone interviews or web surveys. Some studies have investigated the factors associated with a positive attitude towards research participation. The most important factors were a higher scientific degree, teaching activities, and personal research experience as well as the perceived relevance for everyday practice and comprehensive information on the project.

Several authors have studied non-participation in surveys that focus exclusively on doctors themselves, revealing lack of time, high workload or low practical relevance of the research as the main reasons for not participating. These factors, however, appear to reflect peer-accepted arguments in a rational
discourse and may conceal deeper motives, prejudices or aversions towards research and/or academic researchers. Primary care-based research projects involving patients are increasingly recognized as a cornerstone of medical research relevant to everyday practice. Therefore, it is important to study non-participation in these projects: Whether the research takes place in practice-based research networks (PBRNs) or in loosely connected general practices, its validity depends on a sufficient participation rate.

The aim of our study is to better understand subjective barriers to general practice research and to identify strategies that may improve participation. We embedded this survey into the recruitment strategy of a research project, so that problems with participation could be discussed in the light of a concrete invitation to participate in a separate project and not in general.

Methods

Setting
Medizinische Versorgung [care] in der Praxis (MedViP) is a large, ongoing government-funded primary health care research project coordinated by the Department of General Practice at the University of Göttingen and approved by the local ethics committee. This project analyses, among others, electronic patient records (EPRs) to recruit patients who are then surveyed or examined by a study nurse. Some project parts were merely descriptive and others aimed at implementing general practice guidelines electronically or examining the value of biochemical or genetic markers to identify patients requiring treatment modifications for obstructive airway diseases, chronic heart failure and urinary tract infections. One sub-study of the project implemented the electronic assessment of a patient’s health-related quality of life, transferring the results of this assessment immediately to the doctor’s desktop to be available for the subsequent consultation. Participating practices were required to provide pseudonymized copies of their EPRs (all records were de-identified for personal data and then given a tracking number to identify anonymous patients for longitudinal analyses); the assistance of a computer expert was offered. Additionally, doctors were asked to allow patients to be examined by a study nurse in their practice (all materials were provided by the department). Participating GPs received a one-time compensation of 500€ and post-graduate education credit points.

Study population and recruitment
Recruitment for the MedViP project addressed all GPs (net target sample n = 447) in the district of Göttingen, Lower Saxony. Details of the recruitment procedure, response rates and respondents’ characteristics have been described elsewhere. In summary, eligible GPs received an invitation letter (and, if necessary, two reminders), an information sheet about the MedViP project and a request to complete a short questionnaire on basic practice- and doctor-related characteristics. Of those who actively declined MedViP but answered this short questionnaire, more than 60% reported time constraints as the dominant reason for non-participation. All non-participating GPs identified from the initial recruitment phase of MedViP were considered for this particular survey. Forty GPs whose practice partner(s) had participated or who had indicated that they needed more time to make up their mind were excluded, resulting in a net sample of 263 non-participating GPs. A total of 135 (51%) GPs actively declined participation in MedViP; the remainder (128/263) failed to respond to a total of three invitation letters (Fig. 1).

Data collection and instruments
The current study had initially been planned as a telephone survey, but all 11 GPs addressed in a pilot study refused a direct interview due to lack of interest/time or as a matter of principle. However, some of them suggested a written questionnaire or a personal visit. Consequently, a two-stage protocol was adopted.

First, a one-page 11-item structured questionnaire (see Appendix 1) was mailed to all 263 doctors, addressing general attitudes towards primary care as well as issues related to the MedViP study, such as adequacy of a financial compensation, collection of data from EPRs and recruitment of their own patients. A compensation of 5€ was offered on receipt of the questionnaire.

Second, we asked if they would agree to a short face-to-face or telephone interview (however, without any further payment), which was scheduled with all who replied positively. Two interviewers were instructed to be non-directive and allow the doctors to voice their thoughts and reservations freely. Four questions (key issues) were to be addressed in all interviews:

(i) Apart from time restraints, what were your personal reasons for declining/non-response to the MedViP project?
(ii) Do you feel that your participation in studies would make a difference?
(iii) Under what conditions would you be willing to participate in research projects?
(iv) Do you have any advice for researchers?

During the interviews, the interviewers took notes (recording of the interviews was rejected by the GPs in a pilot study). Detailed protocols of the GPs’ statements and the general atmosphere were written down immediately after each interview. Both interviewers had the strong feeling that after 14 or 15 interviews, all possible themes and opinions had been mentioned.
by their informants and further interviews simply confirmed their results. Even so, they finished the complete number of interviews ($n = 21$).

**Data analysis**

To test for group differences in the survey, chi-square and Wilcoxon tests were used as appropriate. A probability level of $P < 0.05$ was considered statistically significant based on two-tailed tests.

Interview notes were analysed by two independent researchers (HM and EHP) using a coding framework that focused on the diversity of arguments and motives voiced. Statements were coded and then classified into themes describing reasons for non-participation while also accommodating more positive views on research and motivating factors. The researchers discussed the set of codes and themes until an agreement was reached.

**Results**

Ninety-six (37%) GPs of our target group ($n = 263$) returned the questionnaire; the remainder did not react. As can be seen from Figure 1, most respondents had been active non-participants to the MedViP project (78/135), only few (18/128) had been passive non-participants (58% versus 14%). According to characteristics detectable in publicly accessible data, the 263 GPs addressed in this survey could not be distinguished from all 303 MedViP non-participants (data not shown). Compared to non-respondents to this survey, the 96 respondents were more likely to have a higher level of vocational training (e.g. board certified GP) and to be members of the German College of General Practitioners (Table 1). Compared to the participants of the MedViP project, the respondents to this survey were less likely to be members of the college ($P < 0.05$). Participants of the MedViP project as well as respondents to this survey were more likely to teach medical students in their practice.

**Survey data: quantitative analysis**

Nearly all of the 96 respondents (91%) stated that they considered general practice research important, though they did not want to participate personally in the MedViP project. Only 37 (40%) had ever participated in a study themselves. Of these, less than one-third reported details on their nature, indicating that about half of the studies were open industry-led, non-controlled trials, and half were research projects initiated by university departments. Some survey respondents said they would definitely (10/96) or probably (25/96) participate in future research projects, while the majority (64%) was not willing to take part in any research even in the future. Nearly 70% of the respondents thought that a university department of general practice should coordinate research projects, 16% would prefer projects managed by specialists and 15% preferred industry-led research or indicated no preference. Two-thirds (46/96) considered the 500€
for participating in the MedViP study an adequate compensation, 7% thought the amount was too high, 8% thought it was too low and 18% did not answer this question. About half of the doctors were both uncomfortable with allowing access to their EPRs for study purposes and with having their patients examined by study nurses (Fig. 2).

Prerequisites for participation in future studies were detailed by 20 respondents: little or no extra time was the predominant factor selected (11/20). One GP named ‘feasibility for a practising doctor’ (without any further explanation); another explicitly mentioned ‘not touching practice computers’. One-third of the 96 respondents identified specific research topics they considered important: the most frequent were common chronic diseases or pharmacotherapy; doctor–patient communication or health care organization was also mentioned. Two-thirds did not answer this question.

Interview data: qualitative analysis
Initially, 26 survey respondents had declared a willingness to be interviewed. However, five GPs either withdrew their consent or declined to be interviewed on more than three occasions, resulting in a response rate of 22% of the survey respondents (Fig. 1). Depending on the doctors’ preferences, a total of 12 interviews were performed by telephone and 9 face-to-face, lasting 10–30 minutes. Though the number of interviews was thus limited by the doctors’ readiness to participate rather than methodological considerations, saturation seemed to be achieved. The majority (n = 14) of the interviewees expressed ambivalent feelings towards research, six were clearly negative.

These statements could be categorized into eight main themes related to the decision not to participate (Table 2). Each theme collated several concepts and motives, reflecting the diversity of barriers to participating as well as prerequisites for possible research participation.

Apart from personal issues, such as family obligations, that hindered GPs from participating in research, the perceived relevance of research was a cornerstone for the GPs’ decision. Several GPs stated that research was ‘generally important’ or ‘important for the discipline of general practice’. However, most GPs attached a low relevance to research in general practices. In addition, the perceived personal quality of the researchers was also of high relevance. Most doctors had a general distrust and negative attitude towards researchers. Consequently, some interviewees participated for other reasons than general interest in research. For example, one physician said he wanted to help students who prepared a doctoral thesis; another physician appreciated the ‘good interaction between the university and GPs’. Similar arguments were also important for some doctors who expressed interest in influencing the research and/or liked to be personally invited by the university department’s professor to take part in a study. However, all interviewees—even those who found research generally important—wanted to be excused from personal participation in the original MedViP project and from research in general.

**Table 1** Characteristics of the surveyed GP population in comparison to all doctors initially invited to participate in MedViP

<table>
<thead>
<tr>
<th>MedViP project</th>
<th>Surveya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants, n = 144 (%)</td>
<td>Respondents, n = 96 (%)</td>
</tr>
<tr>
<td>Non-participants, n = 303 (%)</td>
<td>Non-respondents, n = 167 (%)</td>
</tr>
<tr>
<td>Female 25.7</td>
<td>35.4</td>
</tr>
<tr>
<td>Board certified GP 85.4</td>
<td>85.2**</td>
</tr>
<tr>
<td>Single handed 59.0</td>
<td>57.5</td>
</tr>
<tr>
<td>DEGAM memberb 8.3***</td>
<td>3.13***</td>
</tr>
<tr>
<td>Teaching medical students 37.5</td>
<td>31.3***</td>
</tr>
<tr>
<td></td>
<td>17.8***</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td><strong>33.7</strong></td>
</tr>
<tr>
<td><strong>Board certified GP</strong> 85.4**</td>
<td><strong>76.2</strong></td>
</tr>
<tr>
<td><strong>Single handed</strong> 59.0</td>
<td><strong>58.4</strong></td>
</tr>
<tr>
<td>DEGAM memberb 8.3***</td>
<td>1.7***</td>
</tr>
<tr>
<td>Teaching medical students 37.5</td>
<td>17.8***</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td><strong>31.1</strong></td>
</tr>
<tr>
<td><strong>Board certified GP</strong> 85.4**</td>
<td><strong>70.7</strong>*</td>
</tr>
<tr>
<td><strong>Single handed</strong> 59.0</td>
<td><strong>61.1</strong></td>
</tr>
<tr>
<td>DEGAM memberb 8.3***</td>
<td>0***</td>
</tr>
<tr>
<td>Teaching medical students 37.5</td>
<td>9.0</td>
</tr>
</tbody>
</table>

*aThe survey sample (n = 263) comprised all non-participants of the MedViP project, excluding 40 physicians whose practice partners had either participated or who had indicated that they needed more time to make up their mind.

*bDEGAM, German College of General Practitioners and Family Physicians.

***P < 0.05.
In most instances, the interviewees' views and motives referred not only to the MedViP project but also to studies in general. However, several arguments and attitudes were specifically directed towards the focus and demands of the MedViP study, especially the need to enrol their own patients and to allow access to EPRs (Fig. 2).

**Discussion**

Our mixed-methods survey revealed that GPs’ reservations towards participating in research were not merely a matter of time and workload. More subtle concerns and beliefs seem to be important as well. Some GPs believed that research participation did not fall within the professional remit of a GP. Others perceived a lack of recognition or voice in the research process and some additionally feared being observed or measured by researchers. Many had reservations about submitting pseudonymized EPRs for research purposes or did not like to recruit their own patients into a study.

Most GPs in Germany, as in other countries, are very busy and work long hours. Continuous medical education (CME) activities draw on their leisure time and research commitments can add to this burden. Consequently, many of our respondents refused additional obligations and perceived research participation to be tedious and complicated and had never participated in research themselves, nor were they ready to do so in the future. If their claim to be ‘generally interested’ in primary care research is not a simple expression of social desirability, it obviously reflects ambivalence between a theoretical interest in research and true personal commitment to its implementation.

Especially the qualitative analysis helped us recognize the conflict that some GPs feel exists between providing good patient care and participating in active research. This barrier to participating in primary care...
research may have been caused, for example, by the marketing activities of the pharmaceutical industry, which is highly interested in receiving anonymized prescribing data. This data is often analysed by companies calling themselves ‘research institutes’ and used for marketing purposes, for example, prescription profiling. Consequently, some doctors in our survey perceived such research activities and data analyses to be in conflict with their own or their patients’ interests and believed that it was even their role to protect patients from researchers. For future research projects, it may be useful for academic departments of general practice to emphasize their directing role more clearly.

A disrespectful or even contemptuous attitude (research as modern nonsense) held by some of the GPs in our study resembles attitudes detected in a British qualitative study with GPs in the Bristol area. Some of them did not regard most research as valuable for clinical practice in primary care. They questioned the relevance of randomised controlled trials’ findings for general practice and expressed cynicism about the value of published research. Attitudes in this study and our study seem to mirror misconceptions about the relation and priority of research and clinical practice, so that many of our respondents were not ready to recruit their own patients for a study or to allow a study nurse to work on their premises. Until now, most researchers obviously have not been able to effectively communicate to their practicing colleagues that caring for patients also involves being part of the process of discovering which treatments are effective.

Strategies creating a ‘sense of collective ownership of projects between researchers and participants’ have been described as important predictors of successful recruitment as many as 15 years ago. Several statements made us realize that GPs are no longer willing to participate in traditional research projects in which they and their patients are treated like objects under study, but wish to be involved and valued as an influential partner in the research process. PBRNs, which are emerging especially in the UK and the US, may be a model to give practising physicians a more active role. Such programmes aim to establish research as more than an academic exercise; it becomes an important tool through which problems that are relevant for a physician’s daily practice can be better understood and—most important—solutions to these problems can be studied.

Many respondents to our survey had a negative opinion of EPRs being used in health care research. Some doubted their validity, presumably believing that such electronic documentation does not properly reflect practice reality. This may partly be due to the fact that many German GPs still use paper records in conjunction with a computer or have electronic records tended by their practice assistants for billing purposes only. Several interviewees associated this type of research with surveillance; some feared a violation of data privacy or confidentiality.

Similar fears have been reported in a study from the US investigating physician barriers to the introduction of electronic health records and are reflected in patients’ aversion to such electronic records. Confidence-building measures have been shown to improve acceptance and may also be appropriate in facilitating the participation of GPs, especially when EPRs are the database for a project.

Electronic patient data represents an excellent and promising research tool. Paradoxically, research studies based on electronic data seem not only to be distrusted per se but medical doctors themselves seem hesitant to embrace the technology. For example, a study in 2005 by Burt and Sisk reported that US physicians have been reluctant to implement electronic health records; less than 20% of the physicians surveyed had electronic records. Although EPRs are not necessarily associated with better care, non-participation in research because of EPRs seems to represent a threat to the future professionalization of general practice research. In any case, negative attitudes towards EPRs should be discussed more openly among researchers and practising doctors.

**Strengths and limitations**

The target group of our survey was GPs not participating in the MedViP study. Doctors addressed in our postal survey did not differ from all MedViP non-participants with regard to publicly available characteristics. While being relatively low when compared internationally, the response to this survey was in line with other German studies, which is remarkable considering the fact that we addressed a negatively selected sample of doctors who deliberately did not want to participate in research.

Although the respondents to our survey did not participate in the more complex MedViP study, their participation in a survey reflects some ambivalence towards research projects instead of plain rejection which is typical for ‘routine non-responders’. Their answers cannot be generalized to all non-responders, but especially their motives are of high relevance. It is exactly this sub-set of ambivalent GPs who are presumably more likely to agree to participate in future research projects. Therefore, their reservations towards more complex studies are most interesting for researchers when designing recruitment strategies. The ambivalence of this group of doctors, compared to plain non-responders, is also reflected in their greater willingness to be involved in activities such as medical teaching that go beyond their usual office obligations.

**Conclusion**

Doctors’ negative attitudes, concerns and ambivalent feelings towards research activities should be
addressed in recruitment strategies, especially when the analysis of EPRs or direct patient contact is required. Some doctors do not participate in research out of principle and will be extremely difficult to convince. Implementing a research culture in settings where this is not yet traditional should focus on appreciative communication, practicing GPs’ needs and securing active involvement of local GPs in project planning, as well as maximizing transparency regarding the intentions and processes of projects.

Acknowledgements
We thank all the GPs who participated in this survey and interview study.

Declaration
Funding: German Ministry of Education and Research (01GK0201).
Ethical approval: None.
Conflicts of interest: None.

References
7 Breault JC, Graham ID, Visentin L, Stiell IG. Print format and sender recognition were related to survey completion rate. *J Clin Epidemiol* 2006; 59: 635–641.
30 Burt CW, Sisk JE. Which physicians and practices are using electronic medical records? Survey data show limited use of these information tools. *Health Aff (Millwood)* 2005; 24: 1334–1343.
Appendix

1. Please fax your response to 0551-3914222

Department of General Practice
University of Göttingen
Humboldtallee 38
37073 Göttingen
Tel: 0551 – 3914221
Fax: 0551 – 3914222
e-mail: allgem1@gwdg.de
Praxis-Code

1. There’s a compensation of EUR 500 for participating in this study. Do you think this is appropriate?
   □ yes         □ insufficient         □ too much
2. Have you participated in a study/studies before?
   □ yes         □ no
   If yes, which?

3. Is research in general practice necessary and useful for the daily work in practices?
   □ yes         □ no

4. How do you keep your knowledge up to date? Several answers possible through:
   □ German journals
   □ English journals
   □ exchange with colleagues/quality circles
   □ further education programs
   □ your own experience in practice

5. Would you under certain circumstances participate in research projects of general practice / health services research in the future?
   □ yes         □ probably         □ unlikely         □ no
   If yes,
   a. Which topics are you interested in?
   .........................................................................................................................................
   b. Which other prerequisites do you consider to be important?
   .........................................................................................................................................
   c. Who should guide the study?
      □ A university department of general practice
      □ Drug industry
      □ Specialist department of the university
      □ other
      □ doesn’t matter
   d. Would you agree to data collection techniques using anonymised data from the electronic data processing at your practice?
      □ yes         □ no
   e. Are you willing to motivate your patients to participate in studies?
      □ yes         □ no
   f. Would you allow study nurse from the Department of General Practice to examine patients in your practice?
      □ yes         □ no

We want to question some physicians personally about their “attitude towards studies”
May we ask you for such a short interview? (if yes, which method would you prefer)
   □ phone
   □ visit of an assistant at your practice
Please give your phone number for the arrangements of further appointments:

.........................................................................................................................................