

Research Article

General practitioners' experiences with multiple clinical guidelines: A qualitative study from Norway

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ABSTRACT

Background: It is well known that general practitioners (GPs) often do not adhere to clinical guidelines, but reasons for this seem complex and difficult to understand. Limited research focuses on the total amount of clinical guidelines as they appear in general practice. The aim of this study was to get in-depth information by exploring Norwegian GPs' experiences and reflections on the use of multiple clinical guidelines in their daily work.

Methods: A qualitative focus group study based on a purposeful sample of 25 Norwegian GPs within four pre-existing groups. The GPs' work experience varied from recent graduates up to 35 (mean 9.6) years. The interviews were analysed with systematic text condensation which is a phenomenological approach.

Results: 1) The GPs considered clinical guidelines to be necessary and to provide quality and safety in their clinical practice. 2) However, they found it difficult to adhere to them due to guideline overload, guidelines that were inaccessible and overly large, and because of a mismatch between guidelines and patients' needs. Adherence was especially difficult in

multimorbid patients where several guidelines were expected to be applied at the same time. 3) The discrepancy between judging guidelines as necessary but difficult to adhere to, created dilemmas for the practitioners. The GPs handled these by using their clinical judgement and by putting a greater focus on the patients' complaints and quality of life than on adhering to guidelines.

Conclusions: The GPs provided compelling reasons for low adherence to clinical guidelines despite considering them to be necessary. This challenge the idea that quality of care in general practice is largely synonymous with adherence to guidelines for single diseases.

Keywords: Clinical practice guideline, guideline adherence, general practitioners, patient-centred care, multimorbidity, qualitative research, focus groups.

Abbreviations: GP: General Practitioner; NEL: Norsk Elektronisk Legehandbok (Norwegian Electronic Medical Guidebook); GRADE: The Grading of Recommendations, Development and Evaluation.

How this fits in with quality in primary care

What do we know? Clinical guidelines are developed to improve quality of care, but adherence to guidelines amongst GPs and other clinicians is often low. Several barriers against adherence are identified, but despite strategies to overcome them, guideline adherence seems both difficult and complex. General practice is a broad discipline, and guidelines for several different diseases are available simultaneously. Still, most research focus on adherence to single guidelines.

What does this paper add? This paper provides in-depth information from the GPs' perspective on the use of multiple clinical guidelines in their daily work, and contributes to a deeper understanding of guideline adherence. The GPs in our study provided compelling reasons for low adherence to guidelines despite considering them to be necessary. They experienced a mismatch between guidelines and the patients' needs and quality of life, and seemed more committed to the patients than adhering to the guidelines. The results challenge the idea that quality of care in general practice is largely synonymous with adherence to guidelines for single diseases.

Introduction

Clinical guidelines are developed to improve quality and reduce undesired variations in health care, and also to help health professionals set appropriate priorities.¹ The National Institute for Health and Care Excellence (NICE) in England and the Scottish Intercollegiate Guidelines Network are examples of providers of national clinical guidelines. In Norway the Directorate of Health is the executive agency for providing the country's national clinical guidelines with recommendations mostly categorized according to the GRADE system.^{2,3} Local clinical guidelines may vary between different counties, are often developed by hospitals and are consensus based.⁴ The expectation is that the guidelines will result in best clinical practice, and adherence to national clinical guidelines is required by Norwegian regulations.⁵

Even though a great deal of effort is put into the development of clinical guidelines, it is well known that GPs often do not adhere to them.⁶ When GPs do not follow guidelines as intended, research findings that have been proven effective do not benefit the population at large, posing a challenge both to society and health authorities. A number of studies have identified varying attitudes towards guidelines and different barriers to adherence.^{7,8} Organizational readiness for change is seen as important in the implementation process, although a meta-synthesis of qualitative studies concluded that the purpose of the guidelines may influence adherence just as much as professional attitudes and organizational barriers.^{9,10} Despite strategies to overcome barriers, guideline adherence seems both difficult and complex.^{11,12}

Although low adherence is mostly regarded as a problem that needs to be solved by altering implementation strategies, some studies question whether it is best for the patient's health that a GP adhere to guidelines that are specific for single diseases.¹³⁻¹⁵ In multimorbid patients several guidelines for single diseases could be applied simultaneously, and this is described as problematic.^{16,17} Boyd et al generated a possible treatment schedule that would result if all the recommendations in the guidelines were followed on a hypothetical 79-year-old patient with hypertension, diabetes mellitus, osteoporosis, osteoarthritis and chronic obstructive pulmonary disease. The patient would have to take 12 separate medications and be recommended for 14 nonpharmacological activities.¹⁸ The prevalence of multimorbidity is as high as 42 % according to a Norwegian study and 23 % according to a Scottish study and patients with multimorbidity is therefore frequently encountered by GPs.¹⁹⁻²¹

General practice is a broad discipline, and guidelines for several different diseases are available. While implementation of different single guidelines is well documented little research have examined aspects related to adherence to multiple guidelines from the GPs' perspective. In this study we have explored Norwegian GPs' experiences and reflections on the use of multiple clinical guidelines in their daily work.^{11,22}

Materials and methods

Research design, recruitment and sampling

We chose to have a qualitative design as this is regarded to be the best way to provide rich descriptions of complex

phenomenon.²³ The phenomenon of interest in this study was the GPs' *experiences* with multiple clinical guidelines.²⁴ The theoretical framework we used is phenomenology, a philosophy and methodology that relies on first-person accounts as a source of knowledge.^{25,26} Focus group interviews with pre-existing groups were chosen under the assumption that familiarity with each other would allow participants to reflect more openly.²⁷ The Norwegian Continued Medical Education program for GPs made it possible to get overview over existing local groups and approach them. For convenient reasons we invited groups only from one region of the country, Mid-Norway, to participate. To ensure a purposeful sample of GPs with a spread of age and work experience two of the groups were junior GPs working towards fulfilling mandatory requirements for specialist training in general practice, which as a part of it required two years of group participation. The two other groups were self-directed under the formal Continued Medical Education frame and were all specialists in general practice (referred to as senior GPs). We planned to include more groups if these four groups did not encompass sufficient variety in gender and experience. All the authors have clinical experiences as either GPs (BA, BPM, and IH) or as a nurse (ASH) and all four are also university researchers and educators.

Interview settings

Each group was interviewed once in 2013 where the groups usually met. Three groups met at medical centres while one met at a silent café and each interview lasted 60-90 minutes. Two researchers participated as a moderator (BA) and an assistant (BPM in two interviews, HTB in the latter, see acknowledgements). The moderator ensured that all participants joined the discussion, and facilitated elaboration of different opinions and views. The assistant was responsible for the audio tapes, noted the order of speech and also posed some questions.

The interviews started by reading from a Norwegian chronicle that problematized disease-specific clinical guidelines for multimorbid and elderly patients in general practice.²⁸ The chronicle was based on the previously mentioned example of a multimorbid 79-year-old patient.²⁹ Then the groups were asked what they thought about the chronicle and whether it was recognizable from their clinical practices. During the discussions we used an interview guide to ensure that we covered the GPs' experiences and reflections on the following main themes: 1) Use of national clinical guidelines in their daily practice, 2) use of local clinical guidelines, 3) use of clinical guidelines in multimorbid patients, 4) guideline characteristics that might facilitate or hinder adherence, and 5) quality assurance in clinical practice. The questions were open ended and the order flexible. Related topics raised spontaneously during the interviews were followed up. The front pages of some Norwegian national and local guidelines were briefly presented. The group interviews were audio taped and transcribed verbatim. Overlapping speech was written as sequential voices.

Analysis and interpretation

We used systematic text condensation which is a modified phenomenological approach.^{29,30} It consists of the following steps: 1) Obtaining a total impression and bracketing previous preconceptions, 2) identifying and sorting meaning units

that represented different aspects of the GPs' experiences with guidelines and then coding them, 3) condensing and summarizing the coded groups, and 4) synthesizing descriptions and concepts that reflected how GPs relate to clinical guidelines. MindJet MindManager and NVivo were used in this process. All authors participated in the analysis and interpretation of the data.^{31,32}

Ethical approval

All participants gave written consent to participate in the study. They were anonymized. The research protocol was submitted to the Regional Committee of Medical Research Ethics in Norway, but formal approval was not required since health personal only were interviewed (2012/2336).

Results:

Participant characteristics are listed in Table 1. We categorized the results into the following major topics: 1) Guidelines as necessary for clinical practice, 2) reasons for low adherence, and 3) handling guideline dilemmas. These findings are further explored below.

1. Guidelines as necessary for clinical practice

Several participants said they regarded clinical guidelines as the foundation for quality in their practice because guidelines rely on evidence-based medicine. One described them as the 'backbone' in his treatment. However, the exclusion of multimorbid patients in studies that guidelines are based on was seen as problematic because it reduced the transferability of guidelines to general practice. One said that guidelines helped in ending problematic discussions with patients. Some of the junior GPs said that guidelines contributed to safety for the GP in the treatment of patients.

"But they also offer me safety and security in my practice. The guidelines mean someone has probably checked the treatment and done the necessary research." (Group 1, M4)

Some senior GPs were not that concerned with safety. Instead they focused on guidelines as an opportunity to provide similar or equivalent health care despite differences in geography, finances etc.

"I think the guidelines contribute to equality... I'm dedicated in my practice to giving the same treatment to the medical professor as to someone who is less well off." (Group 3, M11)

2. Reasons for low adherence to clinical guidelines

We categorized the reasons for low adherence into three sub-topics: 1) guideline overload, 2) inaccessible and overly large guidelines, and 3) mismatch between guidelines and patients' needs.

Guideline overload

Many national guidelines shown to the GPs were unknown to them, but some were familiar. All participants expressed frustration over the large number of these clinical guidelines, although one junior GP wanted more local guidelines. Participants described the large number of available guidelines as a 'jungle' and said it was impossible to keep up with them all.

"It is not possible for a human being to first take the time to learn them, and then remember them. So, you don't do it. It is very difficult to develop a routine for specific diseases that you don't see regularly." (Group 1, M1)

The overwhelming number of guidelines and lack of time in clinical practice were described as some of the reasons that guidelines remained unread. One senior doctor described what he did when he received new guidelines:

"I put these booklets (with guidelines) aside. And I plan to read them when I get the time, but I don't. My motivation is rather low, and I become less and less guilty about not reading them until they finally end up on the shelf, where there are quite a few unread guidelines." (Group 2, M5)

Inaccessible and overly large guidelines

Interviewees in all groups expressed frustration concerning the length and accessibility of the guidelines, and not all GPs knew where to find national guidelines. A 150-page national guideline, or even a shortened, 20-page version was seldom used because of the length. Local guidelines were shorter and sometimes simply procedures, which made them easier to use. However, local guidelines were often sent to GPs only as paper versions and were seldom re-sent. The GPs said it was difficult to remember and find these guidelines as the years passed. If the GPs were going to use guidelines they would have to be so short and easily accessible that they could be located and read during a patient consultation.

"You should have time to read it while the patient is out and has a blood test." (Group 4, M13)

Table 1: Characteristics of the study participants.

	Group 1 (n = 7)	Group 2 (n = 8)	Group 3 (n = 3)	Group 4 (n = 7)	Total (n = 25)
Female (n)	3	2	0	5	10
Age in years min – max (mean)	31 – 39 (34.3)	45 – 62 (55.9)	40 – 47 (44.3)	31 – 45 (37.0)	31 – 62 (43.4)
Years as GP ¹ min – max (mean)	1 – 4 (2.9) ¹	8 – 35 (22.6)	12 – 13 (12.3)	0 – 4 (2.4) ¹	0 – 35 (9.6)
Specialist in general practice (n)	0	8	3	0	11
Specialist in another medical discipline (n)	1	1	0	1	3

¹Years of experience in open, unselected general practice. Two of the participants with the least experience as GPs had 5-6 years of experience in an Emergency Ward.

Several GPs used an updated, Norwegian web-based medical decision support tool called “Norsk Elektronisk Legehandbok” (NEL) when they needed guidance.³³ This tool integrates national guidelines into more general medical information on different topics and makes it possible to get answers related to specific details relatively quickly and at point-of-care.

“NEL can help us sort out the information so it takes us five seconds to get the information that the guidelines address instead of having to read through a thick booklet.” (Group 1, W1)

This point-of-care tool led to increased awareness of guidelines and was much praised, but some participants were concerned about the increasing amount of information per topic. That also led to reduced use.

“The shoulder guidelines used to be one page in NEL, and now they are ten pages... So the guidelines should not be too long, the advice should be short and simple, and available online.” (Group 1, M4)

The GPs expressed varying opinions about electronic reminders in the patient journal as a way to remember and adhere to guidelines. One said it was brilliant and helped doctors remember different aspects of diabetes control, for example, but this was seen as problematic by others if the same patient had to have several different reminders.

“So basically I think it is okay that there are pop-ups on the screen... you get them instantly and you can skim through them. But if it is overwhelming, like a primeval forest of guidelines, then, ‘Help, delete button!’” (Group 3, M12)

Mismatch between guidelines and patients’ needs

While guidelines focus on single diseases and how to prevent or treat them in an ideal way, the GPs were ‘patient centred’ in their approach - focusing on the patients’ symptoms and quality of life. That meant that guidelines were often not compatible with clinical reality.

“It is quite artificial because that's not how it is in everyday life. She has all the diseases in everyday life as well, but she doesn't say: ‘I have these 5-6 diseases, what will you do about them?’ She comes with a symptom: I'm more breathless now than I was last week.” (Group 4, W8)

Many of the GPs said that the guidelines would not fit their individual patient, even for what could be seen as a ‘simple’ medical situation.

“Even in patients where only one guideline is applicable or with one disorder we still only follow the guidelines to a certain extent. And that is probably because it is unrealistic; it does not fit with the reality of what we see in general practice. ... They were created with the best intentions, but they do not fit.” (Group 2, M5)

The difference between guidelines and clinical practice was extremely problematic in the treatment of multimorbid patients and those with complex medical stories. The GPs reported frequently encountering multimorbid patients; the senior GPs on daily basis but less often for some of the junior doctors.

Applying several clinical guidelines simultaneously to the same patient was described as neither desirable nor feasible. This was described as a major reason for low adherence.

“If a pregnant woman also has hypertension, diabetes, and is overweight, there will be many conflicting guidelines. And the general problem for us is that they conflict, because it reduces the quality of life for the patients if we follow one guideline after another.” (Group 2, M6)

3. Handling guideline dilemmas

The discrepancy between seeing the guidelines as necessary and having difficulties adhering to them caused several dilemmas for the GPs. They presented numerous examples of guidelines that conflicted with the patients’ own preferences and quality of life. When several guidelines were applicable simultaneously or when recommendations conflicted, the GPs prioritized amongst them and used their clinical judgement to handle the situation.

“If the patient has colon cancer it's not that important that their HbA1c is 7, right?” (Group 3, M11)

The GPs seemed to be more committed to patients’ complaints and quality of life than in following recommendations from different guidelines. Although this commitment to patients was problematized and nuanced for some guidelines such as follow-ups after breast cancer, nobody disagreed that the main focus was on the patient and not the guidelines.

“It is important that there are guidelines. But then we have to try to translate them into what the patients want. Some will say that going to the doctor every two weeks is positive, they feel secure, want follow-ups from all the specialists, and will take all the medicines... But there are others who don't want that. We have to sort out what is most important for the patient.” (Group 4, W7)

The GPs mainly saw the guidelines as advice that could be considered for specific clinical situations, not as ‘laws’ they were obliged to follow. However, some felt pressured to adhere to guidelines by regulation, supervisory authorities or the specialist health service, and found this problematic.

“Clinical judgement has become vulnerable, because if you make mistakes, it might be reported, and the people who evaluate our actions are lawyers. And their way of thinking is only based on existing guidelines, and the degree to which it has been documented in writing that we followed the guidelines.” (Group 2, M7)

Discussion

Summary of main findings

The GPs considered clinical guidelines to be necessary, but they had difficulties adhering to them because of guideline overload, guidelines that were inaccessible and overly large, and a mismatch between guidelines and patients’ needs. They handled these dilemmas by using their clinical judgement and by focusing on the patients’ complaints and quality of life rather than on guideline adherence.

Strengths and limitations of the study

Our study was conducted in Norway, where national

clinical guidelines are provided by the health authorities and local guidelines are developed by hospitals. This may limit the transferability of our findings to countries that have a different approach in the development and implementation of clinical guidelines. Diversity is considered a strength in qualitative studies.³⁴ Our sample of 25 GPs was diverse for demographic variables such as age, gender and work experience but all worked in Mid-Norway. Apart from that, participants did not differ systematically from Norwegian GPs as a group.³⁵ Shortly before the interview we became aware that only three participants could attend one of the focus groups. We considered choosing another group, but decided to go through with the interview. We found the discussion in this group to be rich despite few participants and included therefore the group in our material. After conducting four focus groups, we critically read the transcripts and found the material sufficiently saturated.

The fact that the moderator was a GP can be seen as both an advantage and a challenge. Talking to one of their own profession, with a presumed common understanding of clinical work, could make the participants speak more openly. A challenge could be that the participants wanted to 'comfort' the moderator, thus leading to important contradicting or nuanced views being overlooked. We therefore tried to bracket our preconceptions by asking open questions, and encouraged participants to provide contradicting views. All authors also critically evaluated the interview guide and the results. Our experience was that the moderator being a GP facilitated disclosure of arguments among the participants.

The interviews started with use of a chronicle.²⁸ This was done because we wanted to explore their experiences with guidelines in their daily clinical work, which includes treatment of multimorbid and elderly patients. Most of the GPs recognized the patient story in the chronicle from their own practice, and the chronicle did not seem controversial to them. On the other hand, this entrance to the focus group interviews could potentially influence the participants to respond more critically on their use of guidelines, than they actually were. However, we think the participants familiarity with each other contributed to make them feel safe in a way that allowed them to disagree with the chronicle and each other. This enhanced the complexity and variety in our material.

Barriers against adherence: attitudes, overly large guidelines and accessibility

The literature describes a number of barriers to the use of clinical guidelines, including poor attitudes towards them.⁷ Participants clearly expressed positive attitudes in our study, and considered guidelines necessary. Low adherence despite positive attitudes may seem contradictory, but others studies support this finding.³⁷ A French study based on 1759 GPs documented that differing attitudes towards guidelines influenced awareness of them, but did not necessarily affect the use of them.³⁷

Making guidelines accessible and in a format that is easy to use are known strategies for adherence.⁶ In our study the length of the guideline booklets and the total amount of clinical guidelines seemed to work as barriers against adherence. The number of guidelines was compared with the Tower of Babel already in 1998, and since then many new guidelines have been

developed.³⁸ Guideline overload results from a single-disease-approach, sometimes referred to as 'silos', where each single disease or risk factors have their own guideline.³⁹ However, the use of a point-of-care tool helped the GPs overcome these barriers and access guidelines. The reasons they gave for using the tool summarizes what they need for access: something that is so easily available that it can be located and used during the consultation; i.e. when in need of guidance. The specific point-of-care tool the participants mentioned is frequently used by Norwegian GPs. According to the company producing it 95 % of Norwegian GPs are customers, and it is used daily by more than 60 %.⁴⁰

Nevertheless, the GPs in our study reported compelling reasons for low adherence despite the possibility of accessible and short guidelines. This suggests that reasons for low adherence go deeper than just being a question of altering implementation strategies or overcoming barriers.

Gap between research and clinical practice

It is well known that there is a gap between research findings and clinical practice.⁶ To reduce this gap different strategies for implementation and also clinical guidelines are developed.^{41,42} Adherence is important to health care authorities and others in order to provide better quality of care. However, a literature review of NICE recommendations for primary care documented that nearly two-third of the publications cited were of uncertain relevance to patients in primary care.⁴³ Also, when national clinical guidelines are developed in Norway, the number of participating GPs is often low. This complicates the validity of some recommendations for general practice.

Mismatch between guidelines and patients' needs

Levenstein et al described the physicians' twofold task as: "to understand the patient and to understand the disease".⁴⁴ The GPs in our study experienced a mismatch between guidelines and patients' needs which created dilemmas for them. On one side they wanted to follow guidelines and also felt pressured to do so, but on the other side they were committed to the patients' needs and quality of life. We believe understanding this tension is important in order to interpret their experiences with guidelines.

There has been an increasing focus in recent years on how multimorbidity challenges the established treatment and guidelines for single diseases.^{45,46} Some studies also question whether the theoretical basis and contemporary guidelines for single diseases give the best quality of care.^{14,47,48} GPs encounter patients with all their diseases, worries and preferences simultaneously.⁴⁹ Clinical guidelines however, focus on single diseases or fragments of medicine, they are based on research on the same topics, and they rarely include patients' preferences, quality of life or the aspect of multimorbidity.^{50,51}

In general practice the consultation often aim to have a patient-centred approach - as opposed to being doctor-centred.^{52, 53} In this patient-centred model, the patient's story, and the social and psychological context of the presented problem is explored further than in a strict biomedical model, more in line with Engel's bio-psycho-social disease model.⁵⁴ More value is given to the presented problem of the patient, and less

to single diseases. Our findings of GPs being more committed to the patients' needs and quality of life than following recommendations for different single diseases is supported by the patient-centred model, but challenges the evidence-based medicine that guidelines for single diseases often are based on.

Even though studies have documented successful adherence to single guidelines our findings indicate that it is difficult to use the combined total of guidelines for single diseases that might apply to individuals, especially in handling multimorbid patients.²² The mismatch between guidelines and patients' needs seem to be one of the main reasons for low adherence.

Conclusions

The GPs provided compelling reasons for low adherence to guidelines despite considering them to be necessary. Guideline overload and guidelines that were inaccessible and overly large were barriers against adherence, but possible to overcome. Still, the mismatch between guidelines and patients' needs seems to be the main reason for low adherence because the GPs appeared to be more committed to the patients' complaints and quality of life than to following guidelines. Our results provide information for politicians and health care authorities in the development of guidelines for general practice. The results challenge the idea that quality of care is largely synonymous with adherence to guidelines for single diseases. We recommend more research on the role of clinical guidelines for multimorbid patients, and also on the potential for unwanted consequences of guidelines, such as overtreatment and polypharmacy.

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AUTHORS' CONTRIBUTION

BA participated in design of the study, data collection, the analysis and drafted the manuscript. BPM participated in design of the study, data collection, the analysis, and editing the manuscript. IH and ASH participated in design of the study, the analysis, supervising and editing the manuscript. All authors read and approved the final manuscript.

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