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Rural GPs' attitudes toward participating in emergency medicine: a qualitative study

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ABSTRACT

Objective: Health authorities want to increase general practitioner (GP) participation in emergency medicine, but the role of the GP in this context controversial. We explored GPs' attitudes toward emergency medicine and call outs.

Design: Thematic analysis of focus group interviews.

Setting: Four rural casualty clinics in Norway.

Participants: GPs with experience ranging from one to 32 years.

Results: The GPs felt that their role had changed from being the only provider of emergency care to being one of many. In particular, the emergency medical technician teams (EMT) have evolved and often manage well without a physician. Consequently, the GPs get less experience and feel more uncertain when encountering emergencies. Nevertheless, the GPs want to participate in call outs. They believed that their presence contributes to better patient care, and the community appreciates it. Taking part in call outs is seen as being vital to maintaining skills. The GPs had difficulties explaining how to decide whether to participate in call outs. Decisions were perceived as difficult due to insufficient information. The GPs assessed factors, such as distance from the patient and crowding at the casualty clinic, differently when discussing participation in call outs.

Conclusion: Although their role may have changed, GPs argue that they still play a part in emergency medicine. The GPs claim that by participating in call outs, they maintain their skills and improve patient care, but further research is needed to help policy makers and clinicians decide when the presence of a GP really counts.

Norwegian health authorities want to increase participation by general practitioners (GPs) in emergency medicine, but the role of the GP in this context is controversial.

KEY POINTS

- The role of the GP has changed, but GPs argue that they still play an important role in emergency medicine.
- GPs believe that their presence on call outs improve patient care, but they find it defensible that patients are tended to by emergency medical technicians (EMTs) only.
- GPs offered different assessments regarding whether to participate in call outs in seemingly similar cases.

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Introduction

In Norway, the main providers of prehospital emergency care are municipal casualty clinics and ambulance services. During open hours, family practices provide emergency care to some extent, but casualty clinics are increasingly providing 24/7 service. The casualty clinics are generally staffed by general practitioners (GPs), whereas emergency medical technicians (EMTs) run the ambulance service. A helicopter emergency medical service (HEMS) staffed with

anesthesiologists is established throughout Norway. However, the capacity of the HEMS ambulance is limited, and most patients are handled by the casualty clinic GPs and EMTs alone.[1,2]

If a life-threatening situation is suspected, the public is advised to contact the regional national emergency communication center (EMCC) directly by calling 1-1-3, the dedicated medical emergency number. The EMCC then classifies the problem using a decision aid.[3] If the operator classifies the call as a

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life-threatening situation (“red response”), he is advised to issue an alarm to both the GP on call and the local ambulance.[3] The GP then decides at his or her discretion whether to accompany the ambulance (i.e. take part in the call out). New regulations in 2015 state “The casualty clinic doctor shall contribute in accidents and other emergency situations, among other things attend to call outs when it is necessary”. [4] The regulations do not specify what is meant by “when it is necessary”. Furthermore, the GP has to take into account that the local casualty clinic has to manage without him or her if he or she accompanies the ambulance on a call out. The recently published white paper from the Norwegian government describing the prehospital system in Norway is critical of declining GP participation in call outs and recommends a higher degree of GP participation in medical emergencies outside hospitals.[5]

Despite regulations,[4] GPs are alerted by the EMCC in no more than 47% of emergency incidents and participate in less than half (42%) of these.[6] A study among EMTs found that they perceived themselves as being more competent than others in handling prehospital emergencies.[7] GPs were described as being the most problematic occupational group to cooperate with during emergencies.[7] Consequently, it has been suggested that the public is better served by better trained and equipped EMTs operating on their own.[8] However, other studies indicate that GPs may contribute substantially in terms of improved diagnostics, early treatment, and transportation to the appropriate level of care when needed.[9–11]

Like other resources, the GP is limited as a resource in prehospital emergency medicine. Evidence of how to use this resource wisely is still sparse. In the present study, we wanted to learn more about how GPs value their role in emergency medicine and their thoughts about taking part in and how they decide to participate in call outs.

Materials and methods

Study design

Using qualitative methodology, we conducted four focus group interviews in rural casualty clinics in Norway between October 2014 and February 2015.

Participants and recruitment

We wanted to talk to GPs who worked in casualty clinics situated in rural areas throughout Norway. Via a colleague of MH, we established contact with one group of young doctors who met regularly to discuss

Table 1. Focus groups, participants and experience.

Participants	Gender	Years of experience
Teaching group (A)		
GP 1	Male	2
GP 2	Male	1
GP 3	Male	3
GP 4	Male	2
GP 5	Male	2
GP 6	Female	2
GP 7	Female	5
GP 8	Female	2
GP 9	Female	2
GP 10	Male	2
Casualty clinic (B)		
GP 11	Female	3
GP 12	Male	14
GP 13	Male	32
GP 14	Male	25
GP 15	Female	5
Casualty clinic (C)		
GP 16	Male	4
GP 17	Male	1
GP 18	Male	23
GP 19	Male	<1 (intern)
Casualty clinic (D)		
GP 20	Male	<1 (intern)
GP 21	Female	7
GP 22	Female	6
GP 23	Male	8
GP 24	Male	23

medical issues as part of specialist training. We performed the first focus group interview with this group. The other three groups consisted of GPs working at casualty clinics in rural areas where we knew the doctors in charge of the clinics. We emailed the doctors in charge, asking them to distribute the invitation to their colleagues. All doctors were welcome; the only requirement was that they had actual experience at casualty clinics. We specified in the email that we aimed for variety in experience and between five and eight participants. The first group included ten GPs with experience ranging from one to five years. The other groups had four to five participants with experience ranging from less than one year to more than 30 years. Of the 24 GPs who participated in interviews, eight were female and 16 male (Table 1).

Data collection and analyses

We created an interview guide based on the research questions, existing evidence, and our own clinical experience (Appendix 1). The focus group interviews were then conducted by MH, while PH observed, took notes, and asked follow-up questions at the end. MR was present at the first interview to observe and supervise MH and PH. MH and PH compared field notes after each interview and continuously refined the interview guide. All interviews were audio recorded and later transcribed by MH. Data sampling was terminated after four interviews because the

preliminary analysis indicated that we had enough data to answer our research question, and we started to come across the same patterns.

The data were analyzed using thematic analysis as described by Braun and Clarke.[12] All three authors read through the data after each interview, searching for meanings and patterns. MH then suggested initial codes, that is, elements of data that were of interest. The codes were then discussed among the authors. Based on these discussions, MH developed potential themes, that is, groups of codes that fit together. The themes were discussed and reviewed, and during this process, MH reread all interviews to validate the themes. At the end of the process, we defined and named the themes. Analysis and coding was a continuous process throughout the write-up.

Research team

The research team was composed of two academic and clinical GPs (MH and PH) and a specialist in medical anthropology (MR).

Results

Emergency medicine is now dominated by other professions

The GPs told us that their role in local emergency medicine has changed over the last few decades. The experienced GPs described a shift from being the community's sole provider of emergency care to being one of many players. The evolution in emergency medicine and transportation has led to a number of patients, such as those with stroke or heart attack, being admitted directly to the hospital by EMTs or the HEMS without the involvement of a casualty clinic GP.

And there is a great change. From being number one, the one and only, to not being in the loop at all. I cannot understand that the EMCC nurse can tell me as the doctor on call to just stay put. "You do not have to participate in the call out." I have heard that several times. Especially concerning stroke. "The helicopter will soon be there." And that is good, for the patient, but we (casualty clinic GPs) get sidelined (GP18; interview number: page in transcription, C:13; see Table 1).

The experienced doctors reflected on how they have lost a great deal of their professional identity in this shift, whereas the younger doctors tended to be more open to change. The younger GPs thought it was natural that the EMTs took greater responsibility for prehospital emergencies. This difference in attitudes toward the change in task division was apparent

in all of the communities we visited. Due to the evolution of EMT-staffed ambulances, the GPs acknowledged that EMTs may often be able to select, with telephone guidance from a doctor, which patients to admit straight to the hospital and which patient should be brought to the casualty clinic for further examination. Some even argued, that in the future, EMTs would handle all critically ill patients without the help of the casualty clinic GP.

It is adequate health care to respond (with an EMT-only ambulance) to some of the patients with pain in their chest or stomach. So it isn't unsafe that a doctor is not coming along (on the call out).

But I choose to go along anyway when it is possible because the quality improves when I take part (GP17; C:4)

The GP in this example argued that EMTs would deliver appropriate health care in many classical emergency situations. Nevertheless, he then added that the quality improves when he, as a GP, takes part. We encountered this ambiguity often when the role of the GP was discussed. Some local communities are served by EMTs alone in emergency situations; the GPs would perceive this as safe but emphasize that their role makes a qualitative difference.

The less-experienced GPs reported limited participation in call outs. Consequently, they had less experience and tended to feel uncomfortable in emergency settings. They also thought that personal relationships with the EMTs would suffer from this lack of participation, possibly resulting in sub optimal work at the scene of the accident. However, even the more experienced doctors recognized this insecurity caused by fewer call outs.

Because emergency medicine is rare, the doctors emphasized that it was important for them to take part in the call outs in order to maintain their emergency medicine skills. During call outs, they get to see patients with medical problems that would not turn up in the casualty clinic. This experience is considered vital given that the ambulance could be absent for extended periods of time, leaving the GPs to handle call outs alone.

Suddenly we are at the scene and are supposed to know [emergency medicine], and doing it all alone, since the other resources are preoccupied. So it is all right to be able to come along, to take part in most of what is going on (call outs) (GP11; B:10).

Some of the GPs also mentioned that because call outs are so rare, it is important to train together with the EMTs. Training sessions were seen as opportunities to get to know each other and minimize the GPs' worry about participating in real situations.

GPs are still an important part of local emergency medicine

Despite less frequent call outs, the GPs still perceived emergency medicine as a natural part of being a doctor in a rural community. Overall, the doctors wanted to be alerted and were positive toward participating in call outs when necessary.

The GPs were under the impression that the local community appreciated their presence on call outs. They reasoned that, because the GPs care for their patients during all parts of life, it is innate to care for them during emergencies as well. The GPs' personal knowledge of their patients is thought to improve patient care.

As the local GP you will have to handle the follow-up (after an accident). So by taking part in current events, you will be better qualified to take care of the family and to follow-up. So I think that it is really important (that the GP is at the scene), even though there are plenty of personnel at the scene to handle the technical part of a resuscitation, it is more to it than just that (GP 14;B:3).

The GPs argued that they have a special interest in taking part in emergency medicine as they work in the community where they live. As fellow citizens they have a tacit and continuous understanding of the local community. Another important reason for taking part in emergencies according to the GPs is that they are the ones taking care of the patient and relatives afterwards. The GPs argued that the follow-up improves when they are involved in the situation from the beginning.

The GPs all experienced contributing to better patient care when participating in call outs. Their main contribution was described in terms of broader medical knowledge and superior diagnostic skills. Potential benefits were early initiation of treatment and the organization of transport to the appropriate level of care, but also the identification of cases in which the patient would be better off staying at home. The GPs could also offer an extra pair of hands, which is often needed in emergency situations.

Yes, then it is logistics, that one can bypass the casualty clinic. That the assessment otherwise done at the casualty clinic is done at the scene and one can proceed straight to the right level of treatment (GP 2;A:9)

The GPs challenged the presumption inherent in research and regulations that GP participation means leaving the casualty clinic to see the patient at the scene. They pointed out that they often participate in emergencies without leaving the casualty clinic, such as by phone or radio. In other situations, they saw the

patient at the casualty clinic because the patient turned up there instead of calling the EMCC.

It is the HEMS that takes care of [heart attack and stroke] patients now, except those that turn up directly at the casualty clinic. And they are quite a few, who don't call the EMCC and just turns up at the clinic (GP 13; B:12)

These patients may be just as ill as the patients that are the subject of call outs, and the casualty clinic has to be prepared to handle these cases. Furthermore, in the areas located far from hospitals, EMTs usually take the patient to the local casualty clinic, not directly to a hospital. In these cases, the patient is seen by a GP, even if the GP did not take part in the call out.

The decision whether to leave the casualty clinic is difficult

When deciding whether to leave the casualty clinic, the GPs often considered where they would be needed the most. Some GPs were afraid of putting the casualty clinic in jeopardy if leaving for a call out. Consequently, they would need to know the distance to the ill or injured patient and how long they would be away. Other seriously ill patients expected at the casualty clinic may be a reason to stay there. Furthermore, the number of patients in the waiting room would have some weight in the decision.

The casualty clinic, the casualty clinic without a doctor, it will not function. A call out can actually function without a doctor (only EMTs) (GP10;A:18).

Others thought that incoming patients or patients in the waiting room would hardly constitute a reason against leaving the casualty clinic. They argued that cases triggering a call out would usually be more serious than other cases. Furthermore, through formal or informal back up systems, the casualty clinic could always get another doctor if needed.

It is not very often that I do not respond to a call out. ... I believe I usually take part, even though I have patients waiting at the clinic. It is very seldom that I am working with a patient at the clinic that is more severe than the patient the call out is about (GP 23;D:10)

When asked how the information from the EMCC influences their decision to leave the casualty clinic on call outs, the GPs had different opinions. Some told us that they responded to all call outs unless they were tied up with a seriously ill patient at the casualty clinic, regardless of the details offered by the EMCC. Other GPs were more specific and told us that they responded to accidents, cardiac arrests, situations involving many patients or if the patient's condition

was perceived as serious. Sometimes they chose to participate in a call out if informed that there were few other resources available.

It was a serious event the traffic accident. And then it is, as we all agreed upon, important that the doctor is present. But then again there is the issue of knowing (whether it is a serious event beforehand) (GP 10;A:11).

They used words such as “potentially serious” or “dramatic” as examples of cases they would attend to, but they had trouble exemplifying what they meant. The GPs also talked about difficulties identifying these cases beforehand.

I have not seen any guidelines on that. And they probably do not exist. And people feel that what the experienced doctors do is based on experience, and random. I know doctors who consistently say, “no, chest pain, we do not respond to that”... Whereas another doctor says that we have to respond to chest pain in our area, “it might turn into a cardiac arrest etc.” That makes me think, that there are two distinct opinions on what to respond to. Concerning something that is so... chest pain, that is something one should be able to make guidelines about (GP 2;A:17)

The above GP is frustrated that his more experienced colleagues give him different advice when he asks for guidance. At least for some typical cases, such as chest pain, he argues that there should be guidelines recommending when the doctor should participate in the call out.

Apart from patient characteristics, some doctors noted that organizational factors, such as being collocated with the ambulance service, increased the likelihood of GP participation in call outs. When co-located the EMTs and GPs often briefly discussed the case together before the GP decided whether to participate.

The GPs generally thought that the decision of whether to attend a call out was difficult. They felt that they could not attend every time, but they were also afraid of missing out on helping an ill patient. The information from the EMCC was often perceived as insufficient. GPs felt that the EMCC was inaccurate in their assessment and that the patients were seldom as ill as expected (i.e., a high degree of over triage). The GPs had experienced the situation appearing less urgent when they obtained more information, often choosing then to not attend the call out. Other GPs acknowledged that the EMCC has a difficult job selecting patients and that some over-triage must be accepted. Some GPs follow their gut instinct, and others choose to go along with almost all call outs. Evidently, the GPs have different ways to deal with the difficult question of how to respond to the alarm.

Even though the GPs described the decision as being difficult, they still felt that the local doctor should decide whether to leave the casualty clinic.

Discussion

Principal findings

This study explored GPs' views regarding their role in emergency medicine. According to the GPs, their role has changed from being the only provider of emergency care to being one of many participants. Yet, the GPs felt that they still play an important part in emergency medicine as the prehospital work is thought to improve when they participate in call outs. Participation is also thought to lead to increased skills and competence crucial to attending to grave illness on their own. However, it might be acceptable practice that ambulance personnel handle call outs on their own. We found that GPs have different approaches when deciding whether to participate in call outs.

Strengths and limitations

The strength of this study is that we had the opportunity to explore the GPs' thoughts and experiences in depth. In this way, the study supplements the quantitative studies already done in this field. We are not aware of any similar studies. The organization of casualty clinics and prehospital care in Norway and Scandinavia has a heterogeneous structure. However, we think that our findings are relevant for rural communities where casualty clinic GPs and EMTs form the basis of emergency medicine resources.

The study is based on focus group interviews in which the GPs narrated their thoughts and experiences to the researchers, and this method does not capture decisions and actions made in real life. Furthermore, as the data are a result of context-dependent social interactions, we acknowledge that there has been a process through which participants attributed authority to the knowledge claims of others.[13] As the GPs who were interviewed are located in rural districts, we cannot exclude that GPs from urban areas may have other thoughts and experiences. The interviews, except the first, were performed by two GPs. It is possible that interviewers with other backgrounds would have identified other aspects.

Given PH's background working with rural medicine and MH's background working with casualty clinics, we were aware of potential bias in favor of active GP involvement in local emergency care. The fact that

one of our main findings points to less GP involvement indicates that this is not the case. On the other hand, we think that our clinical and academic experience in the field helped us connect and communicate with the GPs we interviewed.

Findings in relation to theory and other studies

The change in the role of the GP as described by the experienced physicians we interviewed is an international phenomenon, with specially trained nurses now doing work formerly done by GPs and other physicians.[14] The GPs had a pragmatic attitude toward participation in emergencies outside the casualty clinic. Even if the GPs believed that patient care improved in their presence they also thought that it is often sufficient to send the EMTs alone. We also got the impression that whether the patient was seen by a GP sometimes depended on the GP on call and factors at the casualty clinic, not necessarily on patient characteristics. This random GP participation was not an issue in the potentially most serious cases, but then even these patients would not be seen by a GP if they occurred in areas served only by EMTs. That EMT assignments have evolved was one of the key results when Norwegian EMTs were interviewed about the role of the GP in pre-hospital emergency medicine in 2014.[11] Although this change in task division in pre-hospital acute incidents has been described by other parts of the emergency care community,[8] we have not found this to be clearly stated by GPs in other studies.

The GPs in our study reported that patient treatment improved when they took part in prehospital treatment. EMTs interviewed in 2014 shared this opinion.[11] Studies have found that GPs improve patient care by improving diagnostics and decision making.[9–11] Significant medical expertise was also found to be the important reason for the presence of a doctor in an observational study from Bergen in 2015.[15] We found that GPs relate the improvement in patient care to local knowledge of patients' lives. This phenomenon was described by Helman, who argued that a GP in a local context has a different form of communication, that is, high context communication, with the patient because he or she often lives in the community and knows the patient and his family. Being sensitive to context is thought to improve medical treatment.[16] The GPs we interviewed all wanted to participate in the most acute cases, but not all found it necessary to take part in the less dramatic alarms. We argue, however, that it is in these less dramatic cases that the GPs' medical expertise is most valuable,

including the possibility of letting the patient stay at home.

The difficulty of delivering the right resource to the right patient (i.e., triage) was a recurrent theme. The GPs wanted the EMCC to be better at selecting the patients in need of a GP. At the same time, the GPs themselves had difficulty identifying the types of cases in which they would contribute most. The information from the EMCC was also described by the GPs as being insufficient. On the other hand, the GPs' assessment of whether to participate in call outs differed in seemingly similar cases and we could not clearly identify what kind of information would simplify the decision-making process. The importance of the quality of the notification from the EMCC on each GP's decision was also highlighted in a study of 252 incidents in 2015.[15] The challenge of the EMCC picking out the right resource for the right patient was recently discussed in a paper on the use of HEMS in Norway.[2] A study from 2013 showed that the EMCC assessment was downgraded in 42% of cases and upgraded in 11% of cases when the patient was seen by a GP.[9] The problem of under triage was also shown in a systematic review of telephone triage in out-of-hours care.[17] Interestingly, the GPs we interviewed mentioned under-triage to some extent, but most of their concern dealt with the possibility of over triage. The GPs called for better triage by the EMCC in order to identify the cases most suited for GP participation. Rørtveit argued in 2013 that there are few evaluations of the effectiveness and reliability of prehospital emergency systems and that health care personnel often do intuitive triage when they examine the patient.[10] The evidence that triage systems are based on is weak, and when the Norwegian Knowledge Center for health services performed a comprehensive search for studies in order to evaluate triage systems for prehospital care they could not complete the review because of a lack of scientific evidence.[18] Based on this knowledge, it may be unrealistic to expect that the EMCC will be better at triaging given the tools they have at the moment. Perhaps the best solution is, for the GPs to decide case by case based on the information given by the EMCC.

Implications for practice, policy and research

In regards to the presence of the GP improving patient care, our findings suggest an inequity in health care, as it seems somewhat random as to whether a patient gets to see a GP on call outs. Further research is needed to determine whether and in what ways GP participation actually improves patient care, bearing in

mind that GPs do participate in emergency medicine without necessarily taking part in call-outs. If it is possible to identify more precisely the cases in which a GP can make a difference and to incorporate this into the EMCC's decision making tools, the use of GPs may become more precise and GP involvement improve.

Conclusions

The role of the GP in emergency medicine in rural Norway has changed, but they still consider themselves as playing an important part. GPs want to take part in callouts in order to maintain skills, serve the local community and improve patient care. However, they find it defensible that patients are seen by EMTs on their own. The decision of whether to take part in call outs was perceived as difficult, and the GPs wanted more information to aid them in this decision. The GPs had divergent approaches when deciding whether to participate in call outs. The current situation, with somewhat arbitrary and possibly inequitable use of GPs in call outs, is probably at odds with the preferences of patients, policymakers and clinicians. Further research might contribute to better legislation, better decision-making tools, and ultimately to putting GPs where they really count.

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Appendix 1

Interview Guide, as used during the first interview

Aims: To gain insight into the participants' experiences and attitudes toward emergency medicine.

To gain insight into the participants' experiences and attitudes toward participating in call outs.

Themes to discuss: Role of GPs in emergency medicine:
What is your role as a casualty clinic GP in emergency medicine?

How can you contribute as GP?

Can you recount an experience when you played an important role?

How did you contribute in this example?

In what way are you prepared to take part in medical emergencies?

What is the most important factor contributing to you performing in medical emergencies?

What challenges do you face as a GP in medical emergencies?

What can be done to make you perform better in medical emergencies?

Role of GPs in outs

What is your experience with call outs?

What is your role when you take part in call outs?

How do you decide whether to participate in call outs?

Cases to discuss Case 1

You are working at your local casualty clinic. It is 7:30 in the evening. There are several patients waiting to be examined by you and the alarm sounds.

The EMCC are dispatching an ambulance to a 60-years-old male with chest pain and wonder if you will take part in the call out.

Discuss

What is your immediate reaction?

Which aspects influence your decision?

Case 2

You are working at your local casualty clinic. It is 7:30 in the evening. There are several patients waiting to be examined by you and the alarm sounds.

The EMCCs are dispatching an ambulance to a traffic accident. A car has driven off the road 40 min outside of town hitting a tree at the side of the road. There were two people in the car. They are awake but complaining of stomach and chest pain. The EMCC wonder if you will take part in the call out.

Discuss

What is your immediate reaction?

Which aspects influence your decision?