

Nurses in municipal care of the elderly act as pharmacovigilant intermediaries: a qualitative study of medication management

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ABSTRACT

Objective: To explore registered nurses' experience of medication management in municipal care of the elderly in Sweden, with a focus on their pharmacovigilant activities. **Design:** A qualitative approach using focus-group discussions was chosen in order to provide in-depth information. Data were analysed by qualitative content analysis. **Setting:** Five focus groups in five different long-term care settings in two regions in Sweden. **Subject:** A total of 21 registered nurses (RNs), four men and 17 women, aged 27–65 years, with 4–34 years of nursing experience. **Results:** The findings reveal that RNs in municipal long-term care settings can be regarded as “vigilant intermediaries” in the patients' drug treatments. They continuously control the work of staff and physicians and mediate between them, and also compensate for existing shortcomings, both organizational and in the work of health care professionals. RNs depend on other health care professionals to be able to monitor drug treatments and ensure medication safety. They assume expanded responsibilities, sometimes exceeding their formal competence, and try to cover for deficiencies in competence, experience, accessibility, and responsibility-taking. **Conclusion:** The RNs play a central but also complex role as “vigilant intermediaries” in the medication monitoring process, including the issue of responsibility. Improving RNs' possibility to monitor their patients' drug treatments would enable them to prevent adverse drug events in their daily practice. New strategies are justified to facilitate RNs' pharmacovigilant activities.

KEY POINTS

This study contributes to the understanding of registered nurses' (RNs') role in medication management in municipal care of the elderly (i.e. detecting, assessing, and preventing adverse drug events or any drug-related problems).

- RNs can be considered to be “vigilant intermediaries” in elderly patients' drug treatments, working at a distance from staff, physicians, and patients.
- RNs occasionally take on responsibilities that exceed their formal competence, with the patients' best interests in mind.
- In order to prevent adverse drug events in municipal care of the elderly, new strategies are justified to facilitate RNs' pharmacovigilant activities.

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Introduction

Safe and appropriate use of medicines is a worldwide concern, and pharmacovigilance, the science and activities of detecting, assessing, understanding, and preventing adverse effects or any other drug-related problems, has become increasingly important.[1] Medication is particularly common among the elderly, and polypharmacy is especially prevalent in patients 70 years of age and above.[2] A high prescription rate is often justified based on the needs of the patient.[3] Yet prescription of

potentially inappropriate medications is common, a practice associated with increasing risk of adverse drug events (ADEs).[4,5] Recent studies from Sweden have reported signs of improving quality of drug prescribing to elderly people. This is especially evident among the oldest patients, although they still have the highest proportion of inappropriate medicines.[6,7]

Extensive medication use is particularly evident among those residing in long-term care settings, both in Europe and in the United States.[8,9] In such settings,

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registered nurses (RNs) are often responsible for the care of a large number of patients with complex health problems.[10] Handling pharmaceuticals is the most frequent activity among RNs in municipal care of the elderly [10,11] and requires constant vigilant awareness in order to provide appropriate medication to the patient.[12] RNs play an important role in ensuring medication safety [13] and their ability to detect drug-related problems such as adverse drug reactions has previously been described.[14] RNs are well placed to monitor and reduce drug-related morbidity [15] and should be at the forefront of structured medication monitoring. However, RNs' pharmacovigilant activities, i.e. detecting, assessing, and reporting drug-related problems, have been found to be low, in spite of a high level of self-rated competence within the area.[16]

Previous studies have described barriers to safe medication management that influence RNs' clinical practice in long-term care settings, and thereby contribute to ADEs. These barriers were related to the organization, work environment, and team, as well as to the patient, the RNs, and individual staff members.[13,17] Barriers also include time constraints, limited knowledge, interruptions, and distractions.[18] The monitoring phase is the part of the process that was perceived to be the greatest barrier to safe medication management.[17] It has also been reported that RNs do not regularly monitor the effects of medications following their administration.[19] They have doubts concerning their responsibility for monitoring effects and believe it is not part of their job.[17] In order to improve medication safety and reduce ADEs among the elderly, detecting ADEs and monitoring signs and symptoms during treatment are as important as the appropriateness of the initial prescription. In this monitoring process, RNs and other health professionals can play a central role.[20]

In municipal care of the elderly in Sweden, RNs have the overall responsibility for the care of old, multimorbid patients who often need advanced nursing care.[10,21] They work alone, without daily contact with physicians, who usually are employed by the county councils. A community head nurse is formally responsible for ensuring that the procedures for medication management are effective and well functioning and that the patients receive the treatments that are prescribed by the physician.[22] The RNs have a consultative role in relation to the unlicensed personnel, henceforth referred to as the staff. The daily care for the patients is mainly performed by the staff, while the RNs primarily visit the patients when they are called upon by the staff.[21] Staff perform many tasks on delegation from the RNs, the most predominant of which involve medication management.[23] The RNs have been reported to have little

control over their work situation, and have to rely on other professional groups and make assessments based on second-hand information.[10,21]

There is a need for further research on the role of RNs in promoting medication safety in long-term care settings, because research on medication management in these settings is sparse and seldom addresses issues related to monitoring the effects of the medication.[17] Medication management procedures should be acknowledged and documented, in order to improve the quality of care.[18] The aim of this study is to examine the RNs' pharmacovigilant activities by exploring their experiences of medication management in long-term care settings in Sweden.

Material and methods

Design

A qualitative approach with focus-group discussions was employed. Focus-group discussions have proved to be a useful method for eliciting in-depth information, because interacting with others helps people to explore and clarify their own attitudes and perceptions.[24] An interview guide was developed in accordance with Krueger and Casey,[24] moving from general to specific questions. The introductory questions asked participants to brainstorm about daily work activities that in any way involve medication management. This was followed by transition questions regarding the meaning of medication monitoring and medication reviews. The key questions focused on how participants perceived their role in medication monitoring and what barriers or facilitators they could identify.

Participants and settings

RNs from five long-term care settings, located in two urban areas in Sweden, participated in the study. The settings consisted of assisted living facilities and nursing homes, including units for both general care of the elderly and dementia care, henceforth referred to as long-term care settings. Together the settings housed over 600 residents and they were all run as non-profit community services. Convenience sampling was used for recruiting the participants. The community head nurse and municipal administrators were asked to make initial contact with long-term care settings employing a minimum of four RNs. Interviewing pre-existing groups of colleagues enables participants to better relate to each other's comments and challenge each other on contradictions between what they say they believe and how they act in practice.[25] The number of RNs working in each of the settings ranged from four to six, 26

altogether. During the day, each RN was responsible for the nursing care of approximately 25–50 patients. On evening shifts this number could increase to more than 300. They all had the same medication management practice, in that a multi-dose system was used for the administration of medication, a task that was mainly delegated to staff. All 26 RNs agreed to participate but five were absent at the time of the discussions, for example due to sick leave. Four men and 17 women with a median age of 50 years (range 27–65) and with a median of 19 years of nursing experience (range 4–34) participated in the focus-group discussions.

Data collection

Five focus-group discussions, one in each long-term care setting, were carried out during May and June 2014, with 3–6 participants in each group. All focus groups were conducted by the first author, accompanied by an assistant moderator. The discussions took place in closed rooms in the long-term care settings, during working hours, at a time chosen by the RNs, and lasted for 72–88 minutes. The recorded discussions were transcribed verbatim by the first author, and the transcripts were subsequently checked for accuracy by the assistant moderator.

Data analysis

The discussions were analysed by content analysis, as described by Graneheim and Lundman.[26] This is a suitable method for analysing interview and focus-group data and can provide new insights and increase the understanding of specific phenomena.[27] The analysis process comprised several steps. The text was first read and re-read to capture the elements associated with RNs' pharmacovigilant activities. Meaning units consisting of words, sentences, and paragraphs of text associated through their content were then identified. Without sacrificing content, the meaning units were condensed and labelled with codes at a low level of abstraction. The codes were compared for differences and similarities and were subsequently abstracted into three categories and eight sub-categories. Finally, the underlying meaning of

the different categories was formulated into a theme (Table 1). The analysis was mainly performed by RMJP in collaboration with PBR, though all authors reflected on the data and agreed on the final results.

Results

The overall theme reflects how RNs perceived themselves as "vigilant intermediaries" in the elderly patients' drug treatment. This was manifested in how they act as mediators between health care professionals, assume expanded responsibilities, and attempt to compensate for organizational deficits.

Mediating between health care professionals

To be able to monitor drug treatments and ensure medication safety, RNs depend on other health care professionals while also acting as mediators between them. This is mainly performed at a distance, and consequently requires mutual trust, competence, and continuous communication within the team.

Seeing, assessing, and acting through the eyes of others

The mediating function of RNs makes them dependent on the staff's assessments of patients' health status and reporting of any changes. Vicarious assessments made by staff thus serve as the basis for RNs' pharmacovigilant activities, and staff were described as the RNs' "eyes" and "tools":

... it's the eyes of the staff who report to me, and I have to form an opinion based on that, because I don't have time to see very much myself. ...

RNs experienced a lack of control and of opportunities to use their own "eyes". They expressed a desire to be more closely involved in the bedside care of the patients, to monitor and prevent drug-related problems themselves. They "keep an eye" on their patients remotely, and make quick assessments during a few brief meetings, sometimes when just passing through the ward.

Table 1. Sub-categories, categories, and theme revealed in the analysis.

Sub-categories	Categories	Theme
Seeing, assessing, and acting through the eyes of others	Mediating between health care professionals	Nurses as "vigilant intermediaries" in drug treatment
Relying on mutual trust		
Finding ways to communicate		
Depending on the team's competence		
Uncertainty about responsibilities	Assuming expanded responsibility	
Exceeding responsibilities		
Obstructive and informative administrative tasks	Compensating for organizational deficits	
Access to physicians and staff		

Relying on mutual trust

Trust was perceived by the RNs' as important in their collaboration with other health care professionals. The RNs need to rely on staff's assessments; however, they cannot always be sure that staff will detect and report drug-related problems. RNs' confidence may vary depending on staff members' experience and also on their own work situation, as they must rely even more heavily on staff when they are understaffed themselves. They have different strategies for dealing with "trust issues". They often rely on specific staff members to get certain things done. Based on their own knowledge and on different staff members' level of commitment, RNs have learned whom they can trust. RNs select from among staff's differing opinions, which in their view could be contradictory and subjective. They avoid trusting only what one person reports, and instead ask several. Mutual trust was also seen as necessary in collaborating with physicians. The physicians need to be confident that RNs make sound assessments, provide them with reminders, and get in touch with them if necessary:

... they [physicians] have no chance of checking everything; they work at a health care centre and keep in touch by phone, and might meet their patients every fortnight ... you need to have confidence and trust in each other, just like how we have to let go of things and trust her [the physician] to do her job. ...

Finding ways to communicate

It is primarily the staff who perform the bedside nursing care; consequently the RNs have to communicate with them continuously about the patients' drug treatments, both orally and in writing. They seek out staff on the wards and have meetings, and staff members are obliged to read the RNs' documentation. Nevertheless, RNs perceived gaps in the communication. One problem has to do with deficiencies in staff members' Swedish, both oral and written, which RNs perceived as a barrier to safe medication monitoring:

... even though we [RNs and staff] think we communicate with each other, we don't meet anywhere ... they think they've told us something but we don't think so, and we think we've said something but they haven't heard about it. ...

Regarding communication with physicians, in some cases RNs felt that they are not listened to, for instance when physicians make decisions that contradict their suggestions about patients' drug treatments. The opposite also occurs, with physicians listening to them and

acting solely on the basis of RNs' opinions, something that was even described as frightening:

... we [RNs] say, now they [patients] need Furix [a diuretic]. OK, for how many days? [the physician asks] ... it feels a bit scary sometimes. ...

Depending on the team's competence

RNs said that it is necessary for the whole team, i.e. RNs, the staff, and physicians, to have good knowledge and competence in pharmacology, since they need to collaborate on patients' medication monitoring. RNs sometimes felt they have inadequate knowledge and competence in relation to their degree of responsibility. They thought they needed to know about effects, adverse effects, and diagnostics in order to manage their jobs and to be able to discuss the physicians' assessments and prescriptions when necessary:

... you have [as an RN] a great deal of pharmaceutical responsibility but not as much knowledge and experience ... you know some basics ... but still you have quite a lot of responsibility. ...

The lack of knowledge may be explained by the limited time available for professional development, frequent replacement of generic medications, and the multi-dose system used for the administration of drugs. The generic changes lead to time-consuming information retrieval. The multi-dose system reduces the RNs' knowledge, since they no longer handle or distribute the drugs themselves.

The RNs thought that the staff have insufficient medical knowledge to understand the connections between patients' illnesses and their medication. The RNs described them as able to detect and report changes in the patients' condition, but the uncertainty increases when inexperienced staff are on duty. RNs feel responsible for the staff's ability to cope with drug-related tasks, and adjust their own activities based on the staff's experience and competence:

... now they [the staff] haven't called in for a whole day. Is it good or bad ... do they not know what to ask. ...? Maybe you should be more attentive and walk around and check ... if we know it's a bit shaky we may try to cover for them a bit more. ...

Shortcomings were also perceived regarding physicians' experience and knowledge concerning patients with dementia or elderly people in general. Their having sufficient relevant knowledge about medicines and current guidelines seems to create a sense of safety among RNs. It reassures them that their patients will receive adequate and safe treatment.

Assuming expanded responsibility

RNs assume expanded responsibilities in the medication management process, either to prevent patients from suffering or because of uncertainties about their areas of responsibility. This implies that they overstep their formal competence and responsibilities as RNs.

Uncertainty about areas of responsibility. RNs clearly expressed uncertainty about the division of responsibilities between themselves and physicians. They claimed that the physicians are ultimately accountable for the patients' drug treatments, but it is the RN's responsibility to see to that everything gets done. For their part, physicians should check medication lists and contraindications, renew prescriptions on time, and follow up treatments, for example by checking test results. Yet, RNs described themselves as the ones who plan and prioritize the physicians' work. They check medication lists, monitor and evaluate the drug treatments, and ask the physicians to prescribe or discontinue specific medicines based on their assessments and checks. RNs were given full authority to monitor treatments; much depends on them and they expressed concern about what could happen if they make a misjudgement:

... if the physician prescribes a medicine and says we have to evaluate it in three weeks' time, then in actuality it's my responsibility, but of course it must also be a responsible physician? ... I'm unsure ... I feel that quite a lot depends on us ... if I were to miss writing up the three weeks [in the calendar], what would happen then? Is it my responsibility, I'm a bit unsure....

Exceeding responsibilities. RNs feel responsible for the physicians' actions, which results in constantly checking that they are doing their job and reminding them of what must be done. When several physicians are linked to the same long-term care settings, their sense of responsibility appears to decrease. Those physicians who only deal with long-term care settings were perceived as more focused towards the elderly and less fragmented, as they can put all their effort into that and do not have to share their time with the health care centre. RNs felt that they need to have control for their own sake, but mainly to prevent patients from suffering. This can result in their exceeding their responsibilities as RNs, since that is the simplest solution for everyone involved:

... we must take on a very great responsibility, which we do not have the authority to take....

Compensating for organizational deficits

RNs also act as intermediaries in relation to the organization. They attempt to compensate for elements

that impede their pharmacovigilant activities, such as deficits in administrative practices and the accessibility of health care professionals.

Obstructive and informative administrative tasks. Administrative tasks were often described as obstacles for the RNs' pharmacovigilant activities. These range from time-consuming documentation in electronic health records, quality registers, and rating scales to ordering supplies. In the RNs' view, several of these obligations are not nursing tasks and deprive them of time for monitoring their patients. In addition the staff have to perform more and more administration, which in turn reduces their time for bedside patient care:

... data registers and a systematic approach are good, but you also need time to see the patient and the individual....

Although the administrative tasks take too much time, the information received was also perceived to be a supplement to the "clinical eye". Registrations are supportive in medication monitoring since several conditions, such as nutritional problems and fall accidents, may be linked to medicines. Annual medication reviews, including symptom evaluations, were seen as important for detecting changes in a patient's condition and being in control of their drug treatment. The procedures for these are decided by the physicians and therefore differ considerably in content and implementation between the settings:

... we [staff or RNs] do symptom evaluations for everyone. Some say you don't need to, but I think you should, because that's what gives you a picture of how the medicines are working. How else would you get it?

When patients are assigned to different physicians and health care centres the RNs stated that they had even less control over the patients' medicines, because in that case medication reviews and tests are managed by the health care centre.

Access to physicians and staff. When it comes to physician accessibility, the health care centres do not always live up to their commitments to the long-term care setting. RNs felt that patients do not receive the amount of physician time stated in the agreement, and that they have to look after patients' rights. In some cases the physicians only appear for their rounds or are difficult to get in contact with. Deficiencies in the physicians' accessibility may result in RNs not receiving the support they need in their assessments and decisions. The feeling of not being able to provide necessary assistance to the patient generates frustration and a sense of powerlessness:

... we have a physician who visits once a week, then she's at the hospital and doesn't have time to talk to

us. ... We're supposed to call the health care centre, but they don't have time for us either. ...

Being able to contact the physicians at any time of day, or for the physicians themselves to get in touch with the RNs, was perceived as extremely valuable and provided a sense of security.

Staff accessibility is similarly important because it is primarily they who monitor the effects of the patients' medications. Thus their working terms and conditions have an impact on the process. Critical factors are scheduling, staffing, and the number of staff with delegation to administer medicines on duty. Lack of continuity, part-time workers, and staff under pressure contribute to prolonging the intervals between medication evaluations:

... then one [staff member] can't monitor medications ... it's difficult to evaluate medicines when you don't have time... It might take a month to evaluate a medicine when it really should have taken a week. ...

Discussion

Principal findings

The role of RNs in pharmacovigilant activities has been shown to consist of being "vigilant intermediaries" in the elderly patients' drug treatments. Their controlling role was prominent and they continuously attempted to compensate for shortcomings, both in relation to other health care professionals and within the organization. RNs adapted their own work and responsibilities and tried to compensate for deficiencies in skills, experience, accessibility, and responsibility-taking. Hence they exceeded their responsibilities as RNs as well as their formal competence, acting with the patients' best interest in mind.

Strengths and limitations

The present study focuses on RNs' pharmacovigilant activities in long-term care settings, while previous research has described their role in medication safety in general [13,17] as well as in medication management.[18,28] The participating RNs were working in different settings within elderly care and thereby had a variety of experiences to share and discuss with each other. The RNs knew each other, so the discussions were wide ranging and they felt free to talk about their experiences. Not many contrasting views were expressed, possibly suggesting a strong consensus about what the RNs perceive to be the main problems with pharmacovigilance in care of the elderly. This is despite a considerable spread of age (27–65 years) and

work experience (4–34 years) among the participants. Perhaps a greater variation in the sex of the participants would have enriched the discussions and findings.

All focus-group discussions were conducted by the same author (RMJP) who followed an interview guide constructed in collaboration with the other authors, which increases the trustworthiness. Each step in the analytical process was discussed until consensus was reached. One weakness of the study concerns the recruitment of participants. Two focus groups ended up with only three participants, instead of the intended 4–6. The discussions were nevertheless held, because small groups may be suitable if the purpose is to gain more in-depth insight.[24] The four planned focus groups were increased to five. Because much of the information that emerged in the fifth discussion had already been obtained in the earlier ones, saturation was assumed. Focus-group discussions can help people to challenge each other and to explore and clarify their views.[24,25] Nevertheless, it is possible that individual interviews would have provided more in-depth answers.

Interpretation of the results and comparison with the literature

RNs' important role as "vigilant intermediaries" in the patients' drug treatments is mainly performed at a distance from other health care professionals as well from as the patients. Previous research has shown that RNs in municipal health care are forced to rely on the competence of the staff.[10,21] The present results appear to indicate that this also applies to pharmacovigilant activities, thus requiring effective inter-professional collaboration, which involves aspects of mutual trust and the individual health professionals' competence, accessibility, and responsibility. The issue of responsibility includes uncertainty among RNs about who actually is responsible for monitoring the effects and possible adverse effects of the patients' drug treatments, an uncertainty that has been reported previously as well.[17] The physicians make assessments and prescribe appropriate treatments. However, their activities depend on the work of RNs, and the RNs in turn depend on the staff. The resulting chain of assessments and actions clearly illustrates the role that RNs play in mediating between staff and physicians. It has previously been argued that RNs have the ability to detect drug-related problems [14] and that they should be at the forefront of structured medication monitoring.[15] However, the present findings indicate that, rather than being at the forefront, RNs have to rely on vicarious assessments from the staff. It is questionable whether this process of monitoring patients' drug treatment is

consistent with safe medication utilization. One could also ask whether RNs' competence is being properly utilized, and if patient safety (in relation to medicines) would increase if RNs were more closely involved in the daily nursing care in long-term care settings. Swedish regulations require RNs to report suspected adverse drug reactions to the Swedish Medical Product Agency.[29] This task would be facilitated by increased opportunities for RNs to monitor their patients in the daily activities of nursing care.

As "vigilant intermediaries" RNs were compelled to take charge of patients' drug treatments and, when necessary, to compensate for deficiencies that could negatively affect the monitoring of the treatment. RNs' control of staff has previously been described in relation to medication management in the nursing of elderly patients.[28] In the present study, however, this controlling function is expanded to comprise staff, physicians, and organizational elements, since all these aspects seem to affect the monitoring of drug treatments. RNs' attempts to cover for deficiencies in other health care professionals' competence, experience, and accessibility sometimes put them in situations where they assume responsibilities for which they have neither the authority nor the formal competence. This suggests that RNs' qualifications are not always congruent with their responsibilities. Knowledge regarding medication for the elderly has been rated as a priority area for further education.[30] However, in a previous study we reported that although additional academic education in the areas of pharmacotherapy and pharmacovigilance increased the RNs' self-rated medication competence, it did not increase their pharmacovigilant activities in clinical practice.[16] In the present study we demonstrate that competence is merely one of several elements affecting RNs' drug monitoring. Other inter-professional and organizational aspects should be addressed in clinical practice in order to facilitate their pharmacovigilant activities.

In Swedish long-term care settings, RNs have the overall responsibility for a large number of old, multimorbid patients and they often work alone on a consultative basis in relation to staff and without daily contact with physicians.[10,21] Continuous communication with the team, without any gaps or risk of misunderstanding (e.g. due to oral or written language deficiencies) is therefore essential. Inter-professional communication difficulties in the medication management process have previously been reported [11,17,18] and were also evident in the current study. Given the current conditions, new strategies would be justified to make it easier for RNs to detect and prevent ADEs in these settings. This is in line with previous research

calling for new strategies to improve medication safety and reduce the burden of ADEs in elderly patients.[20] A team-based approach with responsibility-sharing among health care professionals has been advocated. Another measure is to include the use of health information technology in daily practice.[20] Computerized systems for quality assurance in drug treatments have previously been reported to be supportive in long-term care settings in Sweden.[31] Maybe such support could facilitate the communication between healthcare professionals by continuously monitoring signs and symptoms in the patients in daily care. Existing computerized quality registers, though time-consuming, were shown to be helpful in relation to medication monitoring and to be partly able to replace RNs' physical presence in bedside care. Another form of support mentioned was the performance of systematic medication reviews, including symptom evaluations, which were found to be useful in the process of detecting and preventing ADEs. Swedish regulations require health care providers to offer medication reviews to all patients 75 years or older who are prescribed at least five medicines, or when drug-related problems are suspected.[32] However, the awareness of these regulations seems to vary considerably, and the implementation depends on the individual physician's preferences. In view of the RNs' limited presence in bedside nursing care, and the low attendance of physicians in long-term care settings, these medication reviews should serve as valuable tools for monitoring the patients' drug treatments.

Conclusion

RNs in municipal long-term care settings play the complex and delicate role of being "vigilant intermediaries" in patients' drug treatments. They act as mediators between staff and physicians, but also in relation to the organization, and try to compensate for shortcomings on either side.

Clinical implications

Based on our findings and existing conditions in long-term care settings in Sweden, strategies for safe medication monitoring should be discussed and further developed. These strategies involve inter-professional as well as organizational aspects. A team-based approach is essential, including awareness of the shared responsibility to monitor the patients' drug treatments. Nevertheless, explicit areas of responsibility must be made clear for the professions involved. The conditions for RNs to perform pharmacovigilant activities should be improved, perhaps through higher

attendance in bedside care, use of information technology, updating of competence, and implementation of systematic medication reviews, including symptom evaluations. Additionally, organizational measures are justified to give the RNs, as well as staff and physicians, the possibility to monitor their patients and reduce the occurrence of preventable ADEs.

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Authors' contributions

All authors except PBR contributed to the design of the study. RMJP conducted the focus groups, transcribed the interviews, and made the initial interpretation of data. Further analysis was done in collaboration between RMJP and PBR, but all authors were involved by reading the transcriptions and reflecting on the analysis. The writing of the article was mainly done by RMJP and LM, though KJB, JF, and PBR also read and critically revised it. All authors read and approved the final version of the article.

Ethical considerations

The study was approved by the Regional Ethical Review Board Uppsala (Dno. 2013/488) and was conducted in accordance with the Helsinki Declaration. Informed consent was obtained from all participants. They were informed that the discussions were being tape-recorded and that all data would be treated confidentially.

Disclosure statement

The authors report no conflicts of interest.

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