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Qualitative Research

Exploring primary health care professionals' perceptions about a patient feedback intervention to improve patient safety in Spanish primary health care centres: a qualitative study

Maria J Serrano-Ripoll[a,b,c,], Joana Ripoll[a,b,d], Erica Briones-Vozmediano[e,f], Joan Llobera[a,b,d], Maria A Fiol-deRoque[a,b] and Ignacio Ricci-Cabello[a,b,g,*]

[a]Primary Care Research Unit of Mallorca, IB-Salut, Palma, [b]Balearic Islands Health Research Institute, Palma, [c]Psychology Department, University of the Balearic Islands, Palma, [d]Primary Care Preventive and Health Promotion Research Network (redIAPP), Palma, [e]Department of Nursing and Physiotherapy, Faculty of Nursing and Physiotherapy, University of Lleida, Lleida, [f]Biomedical Research Institute of Lleida, GRECS Group, Lleida and [g]Biomedical Research Center in Epidemiology and Public Health, Madrid, Spain

*Correspondence to Ignacio Ricci-Cabello, Balearic Islands Health Research Institute, Carrer de l'Escola Graduada 3, 07002 Palma, Spain; Email: ignacio.ricci@ssib.es

Abstract

Background: Patient feedback interventions are receiving increasing attention given their potential to improve health care provision. However, primary health care (PHC) professionals' acceptability and perceived utility of this type of interventions remain largely unexplored.
Objectives: The aim of this study was to explore PHC professionals' perceptions, opinions and suggestions about a patient feedback intervention currently being designed to improve patient safety in Spanish PHC centres.
Methods: We conducted an exploratory qualitative study with 43 PHC professionals. Information was obtained from three semi-structured interviews and four focus groups. All data were audio-recorded, transcribed and analyzed using content analysis by three analysts.
Results: The patient feedback intervention was acceptable to health care professionals, who perceived it as a useful strategy to improve health care processes and activate patients. A number of factors potentially limiting the acceptability and perceived utility of the intervention were identified (low patient safety culture, low patient-centred care orientation and limited credibility of patient feedback data). Recommendations for designing and implementing the proposed intervention in the Spanish PHC centres were identified in relation to the following areas: 'collection and analysis of feedback data'; 'feedback display'; 'feedback delivery' and; 'implementation of safety improvement initiatives'.
Conclusions: Although the proposed intervention was generally perceived as useful and acceptable, our study identified a number of tensions about the practical aspects of using the patient-reported data and the credibility of the data and what actions would arise from its use. The intervention has been adapted to address these tensions before its formal evaluation in a randomized clinical trial.

Key words: Family health, medical errors/patient safety, practice management, primary care, qualitative research/study, quality of care.

Key Messages

- We explored providers´ views of an intervention to improve patient safety.
- It was perceived as helpful to improve health care and activate patients.
- Recommendations for designing and implementing the intervention are identified.

Background

Patient safety, defined as 'the avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the processes of healthcare' (1), is a priority for most health systems (2). Since the publication 20 years ago of the report 'To err is Human' (3), there have been considerable advancements in this field (4) but mainly focused in the hospital setting (5). In the primary health care (PHC) setting, patient safety presents particular challenges, including diagnosis uncertainty and management of high levels of polypharmacy (6). In Spain (country with the highest PHC consultation rates in Europe) (7), around 3 million adverse events occur yearly in PHC practices (8). These events affect patients and health care professionals alike (9). The majority of them are related to medication and diagnoses errors, and 70% are preventable (8).

Although patients' perspectives and experiences have traditionally received scarce attention (10), at present, there is growing interest both internationally (11) and in Spain (12) in developing and implementing strategies to promote patient participation in their own safety. Patient feedback, collected through validated patient-reported outcome measures (PROMs) and patient-reported experience measures (PREMs) (13), has been used for quality improvement purposes (14,15). Despite the recent advances in this area (16), there is still scarce evidence on the effectiveness of these interventions in improving patient safety in the PHC setting (17). To address this knowledge gap, we are carrying out a program of work that aims to develop and evaluate the effectiveness of a patient feedback intervention for improving patient safety in PHC centres in Spain (18). The intervention, targeted at PHC professionals, is based on the Clinical Performance Feedback Intervention Theory (15). It consists in using a specific instrument—the 'Patient Reported Experiences and Outcomes of Safety in Primary Care' (PREOS-PC) questionnaire (19)—to provide PHC professionals with patient feedback about their performance in terms of patient safety and to help them identify opportunities for the provision of safer health care.

There is a broad consensus that, in order to develop complex interventions such as the one described, it is crucial to take into account the perspectives of the relevant stakeholders (20). Formative qualitative research exploring the views from intervention recipients (PHC professionals) is important to maximize the uptake and beneficial effects of complex interventions (21,22). In this intervention, qualitative research is also needed to gain a deeper understanding of the practical issues surrounding the implementation of PROMs and the methodological issues associated with the effective use of the patient feedback data (23). The aim of this study is, therefore, to explore the perceptions, opinions and suggestions from PHC professionals about the acceptability, utility and feasibility of a patient feedback intervention to improve patient safety in the Spanish PHC centres.

Methods

Study design and recruitment

We carried out an exploratory qualitative study using an intentional and opinatic sample of PHC professionals from Majorca (Spain). First, we tried to recruit potential participants using social media. Then, we initiated a snowballing process sending email invitations to PHC professionals potentially interested in participating. These were provided by key informants at the Majorca PHC Management Service and sought maximum variation in terms of sex, rurality and background (family physicians, paediatricians, nurses, assistant nurses, physiotherapists and administrative staff). All the invitations were sent on behalf of the research team. Sixty-seven professionals were invited to participate. All the potential participants received a Patient Information Sheet indicating that they were free to take part or not in the focus group events and that their decision would not be disclosed to the Majorca PHC Management Service.

Data collection

We conducted three semi-structured interviews, followed by four focus groups. Two PHC physicians and one PHC paediatrician participated in the interviews. Forty professionals from 13 PHC centres participated in the focus groups (Table 1).

The qualitative interviews and the focus groups were conducted by two researchers with experience in qualitative methods (IRC and JR). IRC conducted the interviews and facilitated the groups. JR took field notes during and after the focus groups. We developed and used a topic guide (Box 1) based on findings from key publications in the area (24,25). The guide was semi-structured and flexible to allow emerging perceptions, suggestions and opinions related to the proposed intervention (26). The interviews and focus groups were held between April and June of 2018 and were digitally audio-recorded with permission.

Data analysis

The audio files were transcribed verbatim and imported to the qualitative analysis software NVivo11. A content analysis (27) was carried out. This analysis was inductive and, as such, was not placed into any existing theoretical framework. After an in-depth reading of the transcriptions, open codes were assigned to sentences or paragraphs with the same meanings. Then, by grouping codes, we created and refined categories and subcategories in an iterative process. This process was conducted by two researchers (MJS, IRC), and two more researchers (JR, EBV) were involved to solve discrepancies. The data were presented to the research team to be discussed and the results written up.

The interviewers critically examined their own role at all times and the object of research during the interviews and focus groups to avoid influencing participants' responses. In order to increase the internal validity of our findings, we triangulated the results from data obtained by different information collection techniques (individual interviews and focus groups). We collected sufficient data to meaningfully answer the research question and reached data saturation. Two interview and focus group participants critically reviewed and validated the results (28).

Results

Three main categories emerged: (i) perceived utility and acceptability of the proposed intervention model; ii) perceived utility and acceptability of the use of patient-reported information for safety improvement purposes and; iii) suggestions for designing and implementing

Table 1. Characteristics of the focus groups and individual interviews with Majorcan PHC professionals (2018)

Participants	Duration (minutes)	Setting where data collection took place	Sex of the participants	Background of the participants	Number of PHC centres represented[a]
Focus group 1	105	Urban PHC centre	Female *n* = 8; male = 3	GP = 7, paediatrician = 2, nurse = 1, administrative staff = 1	8
Focus group 2	101	Urban PHC centre	Female *n* = 8; male = 1	GP = 2, nurse = 4, assistant nurse = 2, physiotherapist = 1	4
Focus group 3	90	Rural PHC centre	Female = 11; male = 1	GP = 12	3
Focus group 4	50	Rural PHC centre	Female *n* = 7; male = 1	GP = 4, nurse = 3, administrative staff = 1	3
Individual interview 1	57	Majorcan Health Care Management Service offices	Female	GP	1
Individual interview 2	40	Majorcan Health Care Management Service offices	Female	GP	1
Individual interview 3	51	Majorcan Health Care Management Service offices	Female	Paediatrician	1

[a]Number of different PHC centres represented in each interview/focus group.

Box 1. Topic guide used in the interviews and focus groups

Introduction: brief presentation of the overall research project (facilitator).

- Analyzing the proposed tool:
- What are the positive and negative aspects (barriers and facilitators) for the use of the proposed intervention as part of routine practice in your PHC centre?
- What aspects should we take into account to make this intervention more useful and acceptable for PHC professionals?
- What aspects should we consider for developing a tool that effectively helps frontline staff improving patient safety?
- Analyzing the intervention model:
- What do you think about the idea of trying to improve patient safety based on information obtained by patients (i.e. PROMs/PREMs)?
- What are the main advantages and disadvantages?
- How will the PHC centres see it?
- Group discussion about the PREOS-PC questionnaire and its versions.
- Patient feedback display: the facilitator briefly shows a number of different examples of formats used to feed performance data back to health care professionals in previous studies.
- What aspects should we considered when feeding the patient data back to the PHC centres?
- What are the main advantages and disadvantages of the different presentation formats?
- What aspects should be taken into account to help PHC centres design actions to improve the problems identified?

the intervention. A summary of the categories, subcategories and most representative quotes is available in Table 2, whereas codes and additional quotes are available in Supplementary material.

Perceived utility and acceptability of the proposed intervention model

Participants perceived that the intervention could represent a useful tool to improve patient safety. They identified two interrelated mechanisms by which the intervention could support PHC professionals to undertake safety improvements: by increasing their capability (through a better understanding of the safety threats perceived by their patients) and by increasing their motivation to initiate and maintain activities to support patient safety.

Although participants showed a positive attitude towards the proposed intervention, they described a number of factors that could limit the acceptability among frontline staff, including a low level of patient safety culture (a deep-rooted culture of blame could lead to misconceptions about the real purpose of the intervention) and a misperception (underestimation) of the risks patients are exposed to when seeking primary care. The need for brief training activities to raise PHC professionals' awareness about the importance of patient safety emerged as an important prerequisite to help align the intervention with their inherent motivation to improve care.

Perceived utility and acceptability of the use of patient-reported information for safety improvement purposes

Although participants showed a positive attitude towards the use of patient-reported information, a number of barriers limiting the acceptability and perceived utility of patient-reported information

Table 2. Categories and subcategories identified as part of the content analysis and most representative quotes from the interviews and focal groups with the Majorcan PHC professionals (2018)

Categories	Subcategories	Quotes
(i) Perceived utility and acceptability of the proposed intervention model	Perception of the utility of the intervention	'in some way, we will gain an understanding of things that seem irrelevant to us, but that cause them stress' (woman, 55 years old)
	Factors determining the acceptability of the intervention	'one of the essential things in this (intervention) is training… in our center we have never seen anything regarding patient safety' (woman, 48 years old)
(ii) Perceived utility and acceptability of the use of patient-reported information for safety improvement purposes	Utility in improving health care processes	'knowing what [the patients] know and their opinions would improve the patient-doctor work team' (woman, 47 years old)
	Utility in empowering patients	'so, if the same patient (that we have already begun to educate, because patients should be educated)…suddenly says, "well, they are counting on me and asking me questions…then I have the option to participate in my own treatment"' (woman, 48 years old)
	Factors determining the acceptability of the use of this type of information by professionals	'people in these areas are people with a pretty low level of education. So, I think that there are things that they won't even understand'. (woman, 46 years old)
(iii) Recommendations for designing and implementing the proposed intervention	Collection and analysis of patient feedback data	'tablets, new technology, depending on the patient, they won't know how to use them' (woman, 39 years old)
	Feedback display	'the colorful one, like a traffic light, is very visual and easy to understand at a first glance' (woman, 53 years old)
	Feedback delivery	'It would be nice that you could sent this report individually to all the professionals, so everyone can read it, check it and think about it individually' (woman, 43 years old)
	Supporting the implementation of safety improvement initiatives	'just like there is a nurse in charge of diabetes, there could be a nurse or someone in charge of this program' (woman, 29 years old)

for safety improvement purposes were identified. Participants described the ways in which the patient reported the data could be useful for identifying problems and planning improvements, yet some were concerned about PHC professionals rejecting the credibility of the information from patients due to its potential lack of accuracy. Fear that patient questionnaires could be used as a vehicle for unconstructive or disrespectful criticisms to PHC professionals emerged as a barrier limiting its acceptability. Despite this, assuming that the data were seen as credible and constructive, there was recognition that involvement of patients in this way could build honest and trustworthy professional–patient relationship, which would be very useful in achieving safety improvements. Inviting patients to provide feedback through the PREOS-PC survey (which contains a definition of patient safety and examples of patient safety events and types of harm) was also perceived as a strategy for empowering patients towards their own safety by means of increasing their awareness and knowledge about the potential risks they are exposed to when receiving health care.

Recommendations for designing and implementing the proposed intervention

Participants were provided with a brief description of the proposed intervention. Their suggestions about how to optimize its implementation and roll out were then sought. The following four subcategories emerged.

Collection and analysis of patient feedback data

Although the use of digital devices to electronically collect patient feedback was perceived as a useful strategy to streamline data collection and allow the provision of real-time feedback, concerns were voiced in relation to the difficulties elderly patients may experience when using digital devices—which could potentially limit the accuracy of the patient feedback data if views from the elderly were underrepresented. In relation to the three available versions of the PREOS-PC questionnaire (the complete PREOS-PC with 61 items, the PREOS-PC compact with 27 items and the PREOS-PC screen with 6 items), finding the right balance between administration burden and level of detail was perceived as an important feature. The need for patient data to be collected and analyzed by external investigators (rather than by PHC professionals) was perceived as a requisite to reduce the complexity of the implementation of the intervention.

Feedback display

Including clear instructions to support the interpretation of the patient feedback data and using a user-friendly design with coloured graphs were identified as important features for enhancing the usability of the feedback display. Feedback data should be presented with various levels of detail, that is, summarizing areas for improvement at-a-glance but also presenting highly detailed information to allow PHC professionals clearly identify the areas for improvement. Benchmarking (data comparing their current performance to that of other PHC professionals, organizations or regions), timeliness (use of recent data to calculate recipients' current performance) and specificity (information about the performance of individual PHC professionals rather than of the wider team) also emerged as desirable features.

Feedback delivery

Participants suggested that feedback should be delivered electronically via email as timely as possible. In order to support teamwork, they stressed the need to make the results individually available to all professionals at a centre.

Supporting the implementation of safety improvement initiatives

A number of strategies to support the implementation of safety improvement initiatives were identified, including: promoting peer

discussion (encouraging professionals to discuss the feedback with their peers), involving senior staff in identifying and prioritizing improvement actions, providing training about problem solving and action planning as part of the intervention and suggesting a framework to facilitate monitoring of the agreed initiatives.

Adaptations introduced in the intervention model as a result of the formative qualitative study with PHC professionals

A number of adaptations were introduced in the proposed intervention based on the information obtained from the individual interviews and focus groups. These included modifications to increase the acceptability and utility of the intervention; to streamline and address the challenges identified in relation to data collection and analysis and feedback delivery and display and to support the implementation and monitoring of safety improvement initiatives (Box 2).

Discussion

This qualitative study explored the perceptions and opinions of PHC professionals regarding a patient feedback intervention aimed to improve patient safety in PHC centres in Spain. It offers insight about professionals' acceptance and attitudes towards the use of patient-reported information to drive safety improvements. The study also identifies a number of recommendations, which have been taken into consideration for the design and development of the proposed intervention.

Although the participants generally perceived the intervention as acceptable, in line with previous studies (29,30), we observed that professionals may perceive safety improvement initiatives as an attempt to oversee their work or to blame them for their possible mistakes. The need for training on patient safety to change this perception and support a more positive attitude towards these initiatives clearly emerged in our study, supporting findings from previous studies elsewhere (31).

The presence of normative legitimacy (i.e. the belief that listening to patients is a worthwhile exercise) is a key driver of acceptability and perceived utility of patient feedback interventions (32). Health care professionals are more likely to take steps to improve patient care in response to patient feedback if they perceive that the data is credible, is aimed at improving patient care and provide an indication of the source of the problem (24). In that sense, despite the observed general agreement about the idea that patients are an excellent source of complementary information to improve the quality and safety of PHC services (supporting findings from previous works (33)), we also identified a number of factors negatively affecting normative legitimacy, such as a lack of culture of patient-centred care and limited credibility of patient feedback data (34,35). In line with previous studies (35), we observed that structural legitimacy has to be in place: PHC professionals need adequate autonomy, ownership and resource to enact change. High-level assistance and

Box 2. Characteristics of the intervention model determined as a result of the formative qualitative study with PHC professionals

Optimization of the acceptability and perceived utility of the intervention model

- The invitation to participate in the study will clearly state that the aim of the intervention is to support positive change rather than punish suboptimal performance.
- In addition to the patient feedback report, PHC centres will also receive written educational materials to increase their awareness and knowledge about patient safety and about quality improvement strategies.

Collection and analysis of patient feedback data

- Patient feedback data will be collected using the PREOS-PC compact version as it is perceived as the version of the best balance between administration burden and level of detail.
- Patient feedback data will be collected by the investigators rather than by frontline staff.
- Patient feedback data will be collected using tablet computers (electronic administration), but patients will also be offered the option to use a paper version of the questionnaire or have the questionnaire administered by an interviewer (researcher).

Feedback display

- Patient feedback will be presented at three levels of detail: brief summary, detailed information (with information reported at the scale level), and very detailed information (with information reported at the item level).
- Patient feedback will be presented through a user-friendly design, including coloured graphs.
- The performance of each centre will be compared with the performance of the rest of participating centres.

Feedback delivery

- The feedback report will be made available via email to all PHC professionals participating in the study.

Supporting safety improvement actions

- Participants will be encouraged to discuss the feedback with their peers.
- Participants will be provided with a form that will allow them to record and monitor the progress of the action plans agreed.

organizational readiness are key elements to enable these improvements (31,32).

We also identified a number of strategies for supporting intervention uptake, some of which had already been identified in the previous literature, namely: delivering patient feedback to professionals with the appropriate level of knowledge to increase acceptance through higher credibility and social influence (36), using timely data to increase feedback actionability and credibility (37), using benchmarking strategies to support behaviour change through increased social influence (38), providing training for clinicians on the interpretation of the patient feedback data and on action solving and planning (25,39) and using user-friendly designs to reduce complexity of the information feedback (37). Developers of patient feedback interventions should consider using these strategies to optimize intervention acceptability, utility and uptake.

Strengths and limitations

An important strength of this study is its methodological rigor. The study meets the main trustworthiness criteria: credibility, dependability, transferability and conformability (28). The analysis categories comply with the criteria of comprehensiveness, relevancy and objectivity. In terms of limitations, our sample was opportunistic. Participants included relatively fewer (14%) male participants. In case the perceptions and opinions of the PHC professionals differ by gender, this unbalanced proportion could have limited the validity of our findings. The focus group participants were mixed in terms of professional categories. Although we explicitly encouraged participants to speak freely, maybe some participants have not felt free to express their opinions and contribute equally to the discussion. If existent, a differential power could have biased our results towards a more homogeneous perception of the acceptability and utility of the intervention.

Conclusions

This study explored the perceptions, opinions and preferences from PHC professionals about a theory-based intervention to improve patient safety in PHC centres. Although the intervention was generally perceived as useful and acceptable, a number of tensions appeared about the practical aspects of using the patient-reported data, the credibility of the data and what actions would arise from its use. The design of the intervention has been adapted to address these tensions. The intervention is now being formally evaluated in an ongoing randomized clinical trial.

Supplementary material

Supplementary material is available at *Family Practice* online.

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Ethical approval: the study was approved by the Research Ethics Committee of the Balearic Islands (CEI-IB-07/18).

Conflict of interest: none

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