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Multidimensional collaboration: reflections on action research in a clinical context

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This paper reflects on the challenges and benefits of multidimensional collaboration in an action research study to evaluate and improve preoperative education for patients awaiting colorectal surgery. Three cycles of planning, acting, observing and reflecting were designed to evaluate practice and implement change in this interactive setting, calling for specific and distinct collaborations. Data collection includes: observing educational interactions; administering patient evaluation questionnaires; interviewing healthcare staff, patients and carers; patient and carer focus groups; and examining written and audio-visual educational materials. The study revolves around and depends on multi-dimensional collaborations. Reflecting on these collaborations highlights the diversity of perspectives held by all those engaged in the study and enhances the action research lessons. Successfully maintaining the collaborations recognises the need for negotiation, inclusivity, comprehension, brokerage, and problem-solving. Managing the potential tensions is crucial to the successful implementation of changes introduced to practice and thus has important implications for patients' well-being. This paper describes the experiences from an action research project involving new and specific collaborations, focusing on a particular healthcare setting. It exemplifies the challenges of the collaborative action research process and examines how both researchers and practitioners might reflect on the translation of theory into educational practices within a hospital colorectal department. Despite its context-specific features, the reflections on the types of challenges faced and lessons learned provide implications for action researchers in diverse healthcare settings across the world.

Keywords: action research; preoperative patient education; colorectal surgery; multidimensional collaboration; inclusivity; negotiation; brokerage

Introduction

Using action research to develop information for patients in clinical settings can be seen as problematic, since good health research designs are often assumed to aim for objectivity, not involvement. An action research study to improve Preoperative Education for Colorectal Surgery Patients and their Relatives (PREPARE) is being under-

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taken in one National Health Service (NHS) Trust that serves a city with a population of approximately 376,500 and a surrounding large rural area. This study aims to continuously evaluate and then make improvements to the preoperative education that is provided for nearly 500 patients who have colorectal surgery within the Trust each year. Three action research cycles are to be completed to evaluate what information is provided preoperatively and how it is delivered; to identify changes that might improve the preoperative education and to re-evaluate such changes when implemented.

The educational process within the colorectal unit can vary considerably according to the patient's diagnosis and proposed surgery; for example, whether the condition is benign or malignant; whether a temporary or permanent colostomy is required and whether adjuvant chemotherapy or radiotherapy is indicated. Specific information about different aspects of patients' planned surgery is provided by a variety of different healthcare professionals along their care pathway. Consultant colorectal surgeons, colorectal specialist nurses, stoma specialist nurses, clinic nurses, pre-assessment nurses and ward nurses each play a vital and individual role in providing preoperative information to patients and their families.

The existing preoperative education service for colorectal patients at this study site has never been evaluated formally. An interactive and situated evaluation of the preoperative education provided in this type of setting is therefore timely to assess how patients and carers, potentially facing life-threatening and probably life-changing health interventions, may not be benefitting optimally from education about what they confront and how this might be improved. The evaluation methods used throughout the cycles of action research enable a contextual examination of current practice intended to improve service in the light of ongoing findings and ongoing changes made. The intention is to be able to use informed findings from this evaluated and validated preoperative patient education service to help exemplify good practice and some of the challenges to developing best practice, for consideration and implementation across other healthcare settings.

The focus of this article is to describe the action research used by the PREPARE study within a specific clinical context, presenting some of the findings from the first action research cycle, to support a broader reflection on the challenges and multi-dimensional collaborations in which it is located; on which it depends and which, in turn, it needs to inform.

Background

Approximately 50,000 patients undergo colorectal surgery within the NHS each year in the United Kingdom. Awaiting surgery and anticipating life after surgery is a time of considerable anxiety for patients and their families who are often facing life-threatening circumstances. Preoperative education is used internationally by healthcare professionals to help patients prepare for their surgery and postoperative recovery. Fearon et al. described it as:

A clear explanation of what is to happen during a patient's hospital stay ... and a clear role with specific tasks to perform during the postoperative period. (2005, 468)

Research has shown that good preoperative education can have considerable beneficial outcomes for patients: helping to reduce their anxiety; their experience of pain; the likelihood of postoperative complications and their length of stay in hospital

(Spalding 2003; Kastanias et al. 2009). Furthermore, patients and carers who are well-informed about forthcoming surgery and what to expect afterwards are more likely to feel empowered and involved in their recovery process. This is increasingly seen as enabling patients and their families as proactive participants rather than passive recipients of care. For example, White et al. (2007, 1389) argue for a multidisciplinary approach and an ‘intensified nurse-based preoperative patient education program’ for colorectal patients that needs ‘to focus on what is expected from the patient as an active participant in the recovery and rehabilitation process’. A review of all clinical studies and trials of preoperative care prior to colonic resection (Fearon et al. 2005) concluded that information and counselling was one of several preoperative practices that can contribute to enhanced postoperative recovery, particularly for patients with high levels of anxiety. Clear information about what to expect from their hospital stay and what role they could play in the recovery process, including what they should eat and being physically active, was associated with quicker patient recovery.

Such findings are consistent with an enhanced recovery pathway for colorectal surgery patients that is currently being implemented in the Trust. Burch, Wright, and Kennedy (2009, 23) define ‘enhanced recovery’ as a way to ‘optimise care for patients before, during and after their operations’. They elaborate on this to say that:

... it is essential to ensure patients are as well prepared for the operation as possible. This includes not just optimising their physical condition but also preparing them by providing information on pre- and post-operative expectations. Pre-conditioning is an important part of enhanced recovery. Planning for discharge before admission guides patients’ expectations. (Burch, Wright, and Kennedy 2009, 23)

Many patients undergoing colorectal surgery have also to come to terms with a cancer diagnosis. Chelf et al. (2002, 863) explored the learning and support needs of adult patients with breast, prostate, lung and colorectal cancer and found that their preference was ‘to learn about their illness through interactive, interpersonal communication with their physicians’. They found that printed information reinforced such communication and that education/information was most successful when healthcare staff were able to adapt the delivery of education to the specific needs and preferences of individual patients. The desirability of individualised delivery of information to cancer patients is reported elsewhere (Kirk, Kirk, and Kristjanson 2004).

Using action research in a clinical context

Meyer (2000) sees action research as a particularly useful approach for identifying problems in clinical practice and for finding solutions to those problems in order to improve practice. She identifies its defining characteristics as an emphasis on democratic participation and achieving social change, reflecting Lewin’s early arguments for the role of action research in not just describing but helping to bring about social change in his work on group dynamics (Lewin 1947).

Writing recently for *Educational Action Research*, Kemmis (2010) reformulates an earlier interpretation (Carr and Kemmis 1986) of the goals of action research. He stresses that self-understanding and contributions to the body of knowledge are not the only goals or even the main goals of action research. He emphasises what he describes as the ‘happening-ness of action and practice’ (Kemmis 2010, 417) and

how action research can change the world for the better within a specific historical context. He is therefore at least as concerned with contributing to action as to theory:

Action research aims to explore new ways of doing things, new ways of thinking, and new ways of relating to one another and to the world in the interest of finding those new ways that are more likely to be for the good of each person and for the good of humankind, and more likely to help us live sustainably. (Kemmis 2010, 425)

In the context of improving health service delivery, a crucial aim is therefore to improve practice through evidence-building and testing, for the practitioners' benefit as well as the benefit of patients. The focus of benefit within our specific study site might therefore extend to the wider team of healthcare professionals within the colorectal department as well as the patients undergoing colorectal surgery and their families; and hopefully beyond if action research-based lessons and learning can be used as a more practice-accessible template of good practice in other healthcare settings. The processes of self-reflection, continuing evaluation and, most of all, the implementation of a sequence of tentative changes in the practice of patient preoperative education may therefore have potential to impact positively and interactively on all those who seek to experience an improved service.

Action research to improve clinical practice

Sharp (2005) reviewed the opportunities to improve health service delivery within the NHS Scotland through the use of action research. She found that evidence *about* good practice is not necessarily *becoming* good practice for a number of reasons, including difficulties in accessing evidence, questions about quality and validity of evidence and problems with introducing evidence into practice. She describes this as being 'data-rich, but knowledge poor' (Sharp 2005, i), and calls for a wider interpretation of what counts as evidence to include the knowledge and experience of patients and healthcare staff at all levels. This is consistent with the work of Stetler et al. (2006) which studies patient experience improvement and argues that traditional approaches to implementing research findings into improving patients' experiences have their limitations. By drawing on the experiences and evidence of patients, carers and all the healthcare professionals in the colorectal unit at our study site, it was envisaged that there might be a stronger and broader sense of ownership of whatever changes were introduced to practice.

Stetler et al. (2006, S1) look to 'new thinking' and 'progress-focused' new methods of doing and using research to improve the quality of clinical care, and Sharp (2005) argues for action research as a viable option to offer a way to break down the division between producing and using evidence. Yet transforming evidence into good practice still requires what she terms 'brokerage' in order to become absorbed into new ways of working. It is the creative ways in which this might be achieved that she stresses, many of which are associated with action research. These include enabling open dialogue and collaboration between academics, healthcare professionals and service users. Achieving successful collaborations throughout the duration of the PREPARE study would therefore be key in moving to meet our aims of improving practice and impacting positively on all those concerned.

Yet using action research to bring about change within any hospital environment needs to take account of the long history of change within the NHS and the likeli-

hood that health professionals are already experiencing considerable 'change fatigue'. It is unsurprising that Cameron et al. (2001) focused on identifying what does and what does not work in relation to managing change within the NHS. They highlight a number of obstacles to introducing change that centre on the imposition of change rather than shared involvement in planning and implementing it.

Cameron et al. (2001) go on to argue that a change framework which does not separate planning from implementation is essential. They, alongside leading action researchers (Carr and Kemmis 1986; Elliott 1991; Meyer 1993; Hart and Bond 1995), have especially advocated the action research process for integrating research and action to improve practice. Elliott expands on the issue of improving practice, saying that 'both product and process need to be jointly considered when attempting to improve practice' (1991, 50).

The action research process

Meyer's (1993) four-step action research framework, of planning, acting, observing and reflecting, was chosen to evaluate existing practice and implement change.

Acting

The ongoing provision of preoperative education that is being evaluated comprises: verbal information at clinic appointments with different colorectal service health professionals; DVDs; information packs; and pre-admission leaflets.

Observing

The multiple methods of data collection being used to evaluate practice comprise: observations of clinic interactions between staff and patients using Spradley's (1980) descriptive schedule; patient evaluation questionnaire surveys completed immediately after their assessment appointment to get feedback on the education they received; individual semi-structured staff interviews; longitudinal individual semi-structured patient and carer interviews before surgery, approximately two weeks post-surgery and 12 weeks post-surgery; patient and carer focus groups at three months post-surgery; records of in-patient service interventions; and an evaluation of educational material given to patients and carers.

Reflecting

The research team analyses, discusses and reflects on the data collected, working in pairs across the whole team. Recordings of the interviews and focus groups are transcribed and pseudonyms are used to provide anonymity. Vignettes (Ely et al. 1997; Spalding 2004; Spalding and Phillips 2007) are written to condense data into meaningful experiential stories and sent to participants to validate initial analysis. These vignettes are also being used in the focus groups so that participants can reflect on what other patients and carers have said and to stimulate discussion about their own experience of preoperative education:

vignettes are compact sketches that can be used to introduce characters, foreshadow events and analysis to come, highlight particular findings, or summarize a particular theme or issue in analysis and interpretation. Vignettes are composites that encapsulate

what the researcher finds through the fieldwork. In every case, vignettes demand attention and represent a growing sense of understanding about the meaning of the research work. (Ely et al. 1997, 70)

Themes around good practice are identified as well as areas for possible future improvement.

Planning

A summary of data analysis and suggestions for change from staff, patients and carers is used to plan changes to the preoperative education provided. A meeting with all staff groups within the colorectal unit is held to present the summary, discuss the suggestions and plan changes to the provision of preoperative education. Agreement is reached on which changes will be implemented in future practice and who will action the changes for the next action research cycle.

Collaborations and challenges

It was expected from an early stage that the multi-dimensional nature of the participation and collaboration involved in the PREPARE study would bring both challenges as well as rewards. The first of these collaborations is the research project team (see Figure 1).

The research team from three organisations comprises three university academic researchers (an occupational therapist and action researcher, a narrative researcher and a sociologist), two colorectal health professionals (a colorectal consultant surgeon and a colorectal specialist nurse) working within the colorectal unit at the study site, and a public and patient involvement (PPI) representative recruited from a local project set up by the Trust and the university to encourage volunteer members to participate actively with researchers in the organisation and delivery of research studies. This PPI representative is also a service user who is currently a patient within the colorectal unit, with first-hand knowledge of how patients experience the provision of education and information.

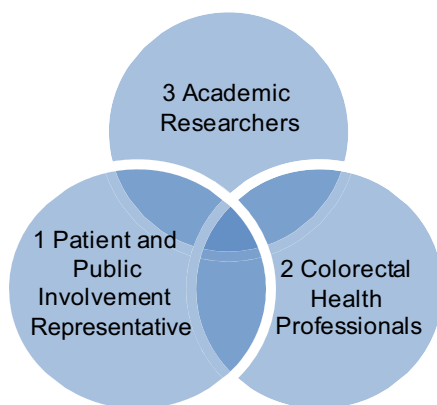


Figure 1. Collaboration One: the research team.

Planning the research brought several challenges because we have diverse experiences and expertise in preoperative education, in colorectal patient care, in being a colorectal patient, and in conducting qualitative research and action research. For example, the PPI representative brings considerable passion for improving patient education and invaluable contextual insight. Yet as a co-researcher she is also challenged to separate her own experience from her interpretation of how the patients participating in the study express their own experience of patient preoperative education.

We also have diverse expectations of improving patient preoperative education, improving patient experiences, managing changes to existing educational practices, managing a participative research study, and publishing high-quality research outputs. We belong to diverse and complex organisations with very different systems and priorities. One frustrating example of this was the non-transferability of criminal records bureau clearances between one organisation and another in order to collect data. We also needed to plan for transferability of an evaluated service to other healthcare settings.

The team meets monthly and has worked together closely since the first day; planning the research, bidding for funding and actively involved in ongoing decision-making. Having now reached the midway point in the research, decisions about ‘the right thing to do’ (Kemmis 2010, 418) have thus far rarely been contested, although Kemmis reminds us that even when consensus appears to be reached, there is the possibility that power differentials have influenced the joint decision-making process.

The second area of collaboration (see Figure 2) involves the research team gathering data from, and therefore needing to engage with, very different groups of people within the colorectal department: patients, carers and healthcare professionals. The challenge here is to successfully embrace the different lived experiences, priorities and perspectives of preoperative education held by all those involved.

There were many examples of their range of perspectives in cycle one. For example, one patient who had just learned what her surgery would involve said:



Figure 2. Collaboration Two: data collection.

Being clearly informed and what was good for me was being told what we're going to do and how it is going to be done; that you are in good hands; that the information is vital so that you feel in control rather than feeling other people are in control. (Carly, patient)

This perhaps illustrates a focus on what was immediately ahead of her; that the preoperative education was necessary in order to understand what she needed to know and that it contributed to her sense of control over the situation. When patients and carers attend clinic appointments they do not necessarily share the same needs for information. For example, Carly's husband seemed to be looking further ahead to how his wife's surgery and the need for chemotherapy would impact on their lives together:

I wanted to know about the effects of chemotherapy; how it would affect our lifestyle. (Bill, carer)

Carly also reflects on what her daughter wanted to know; that it was different to her own reaction to the information that she had cancer and needed colorectal surgery:

Daisy wanted to know about my chances of survival and she wanted to know will Mum be checked and how often will Mum be checked? If it spread into any other organs are you definite about that? Things like that which are very useful and I probably wouldn't have thought to ask myself because part of you wants to shut down ... (Carly, patient)

There was acknowledgement that the preoperative education could be frightening:

Some of the known things are scary but at least you can get it in your head. (Daphne, carer)

As action researchers our focus was on how the process could be used to engage both givers and receivers of education in improving practice:

The action research approach being used here will help patients, carers and staff to contribute their ideas for improving our understanding of what patients need to know before surgery

whilst one of the colorectal nurse specialists demonstrates her dual role of supporting and educating patients preoperatively with the need to work collaboratively as a team:

My aim is to make the hospital experience as stress-free as possible for patients but I am just a cog in a very big wheel – the biggest contribution I can make is to link with the members of the colorectal cancer team and ensure that patients are supported, and fully informed about their diagnosis and treatment.

Furthermore, the PPI representative's active involvement on the research team, combined with her experience as a colorectal patient with 'inside' knowledge about what it means to face cancer and have informational needs, provides uniquely relevant experience and motivation in this project:

It's about supporting a cultural, attitudinal and behavioural shift for patients and professionals.

These examples illustrate very different considerations in engaging with change in preoperative educational processes.

The experience and knowledge of the healthcare practitioners offers a particular depth of practice perspective to the research. Many of them have worked in the colorectal unit for several years and the research observations of their educational interactions highlighted specific ways in which they were able to bring skill and empathy to meeting the educational needs of this group of patients. So far they have expressed particular support for the research and keenness to collaborate on the basis that they may need to continually evaluate and improve practice.

A further feature of the healthcare practitioner contribution is the considerable variation in the skill mix and grades of those staff research participants. Within each action research cycle, healthcare professionals are therefore interviewed drawing from each staff group within the unit: a consultant colorectal surgeon, a colorectal specialist nurse, a pre-admission nurse, a clinic nurse and a ward nurse. Each staff group will therefore bring their own working practices, time constraints and views on how the service might be changed, bringing a valuable diversity of opinion but also raising the possibility of conflict in later decision-making processes.

There is also diversity within the patient group. They range from those requiring surgery for benign conditions to those with malignant diseases at different stages of progression. Some patients attend their clinic appointments alone and others attend with their carers (usually family members but, sometimes, a friend). The data so far collected indicate that some patients want minimal preoperative education whilst others want very detailed information and take the opportunity to ask a lot of questions. Furthermore, patients who attend their clinic appointments with a carer will not necessarily share each other's view of how much preoperative education they want to be given. Our challenge is to attend to all of these multiple and potentially divergent perspectives so that changes intended to improve the preoperative education could also be seen to meet an array of individual needs.

These are some of the challenges of participatory action research but they have offered their own learning. The patients participating in the study have so far shown extraordinary generosity and willingness to share their experiences with a stranger. Many of them are older people coming to terms with a diagnosis of cancer, yet have said they are motivated to participate in the study because they want to help make a difference for future patients. Listening carefully to what these patients and their carers say about their experience of preoperative education provides a key source of additional but distinctive evidence that also needs to be used to change practice. Listening to illness narratives has now become a well-established way to afford access to patients' worlds, as in Kleinman's (1988) ground-breaking 'illness narratives' that shifted the focus from the illness to the patient's experience of illness. Sharp's (2005) study demonstrates how patients' stories can provide resonance and real insight into their realities of healthcare delivery.

Actively working to combine healthcare staff, patient and carer experiential knowing or evidence enables a focus on multiple perspectives in this study. Action research provides a way to highlight the interconnections between these multiple views and makes use of the contributions from all those experiencing different parts of the same system. Kemmis (2006) emphasises that improvement to practice can

only be achieved by including the voices and perspectives of all those involved in the practice. He argues that to privilege the voices of health professionals over the voices of patients and their families would be an example of inadequate action research. In other words, those whose lives are directly affected by the practice of health professionals have much to contribute to ‘a greater understanding of the consequences of their practices’ (Kemmis 2006, 460). In practical terms, our action research therefore needs to negotiate and incorporate the perspectives of both givers and receivers of patient education.

However, involving service users in service improvement research can also pose problems and challenges. For example, in their action research study of mental health services using interviews and observation of team meetings, Robert et al. (2003) found that mental health service users and staff often had different perspectives influenced by their relationships with each other. They found that involving patients in shaping services had benefits for them in terms of being therapeutic, confidence-building and raising self-esteem, but also proved to be costly to staff in terms of finance and time.

During the ‘planning’ stage of each each action research cycle, the research team invites all of the health professionals working within the colorectal unit at the study site to attend a lunchtime meeting to discuss the potential changes to the pre-operative education that the participants have identified and collaboratively decide which ones should be implemented (see Figure 3). The meeting also provides an opportunity to highlight good practice and provide positive feedback from the participants. This was conveyed by sharing some of the quotations from the patient and carer interview transcripts from cycle one:

.... you know, you’re given so much information; there’s so much concern that you should know what’s going on and not be worried about it. (Chris, patient)

... yes, very helpful; they’ve explained everything very well, gone through everything. (Carl, patient)

It was incredibly clear. (Brian, carer)

One of the patients described the importance of being treated as an individual:

The surgeon interacted on a very personal level ... not just me as a piece of flesh on the table. (Carly, patient)

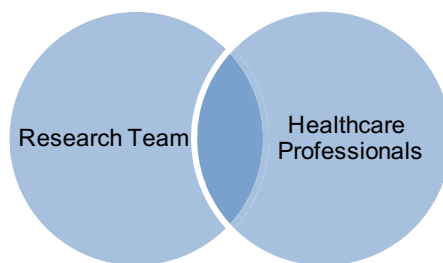


Figure 3. Collaboration Three: decision-making.

whilst others expressed their preference for being fully informed about the risks involved and their prognosis:

They have been honest which, you know, is really good . . . There is nothing we wish we had not been told; the unknown is quite fearful. (Daphne, carer)

I think it's good to know exactly what's going to happen, what could happen. (Carl, patient)

I think I would rather know. (Dot, patient)

Some of their comments capture the difficulties of absorbing all the verbal information given at a clinic appointment, particularly where they are perhaps still coming to terms with a diagnosis of cancer:

. . . it's a bit of a shock and you hear things when they're talking and then sometimes you just hear one thing and you've taken that in, but they carry on talking . . . so you know, I think on that sort of thing I think it's important to go through it again. (Daphne, carer)

It was nice to have the information in writing because there's an awful lot to sort of take in. (Catherine, carer)

This illustrates the importance of having written information to back up what has been provided verbally. There was also positive feedback on the audiovisual material provided:

I found the DVD really useful. . . . you're reassured seeing that it's real people. (Catherine, carer)

Despite many of the staff identifying a lack of time to spend with their patients, there was positive feedback about feeling unhurried:

. . . they never gave the impression that they're in a hurry. . . . If you asked them some more they took great pains to answer all your questions. (Chris, patient)

The three most important things that patients and carers wanted to know preoperatively were also highlighted at the meeting:

- An approximate timescale for their recovery, i.e. how soon would they be back to normal?
- What type of surgery would they have and would they need a stoma?
- What happens on the day they come in for surgery?

Using the suggestions for change that had been made by patients, carers and health-care professionals, eight changes to practice were identified and it was agreed who would be responsible for their implementation. These were as follows:

- (1) A new 'Going Home' information sheet incorporating an individualised timeline for recovery, advice on what to eat and drink when patients go home, how their bowels will work after colorectal surgery, the emotional

response patients might experience, common symptoms to be expected and symptoms that require medical help:

The timescale yes; she gave us a rough idea but you don't know how you are going to be when you get out of here do you and each person is different. (Brian, carer)

We weren't actually told about that until it happened so when you were being sick and everything ... we didn't really know what was happening and then afterwards I had to say to them 'Is this sort of a common thing?' because they didn't really say these are things that can happen. (Daphne, carer)

- (2) A new 'Contents' page to the Information Booklet so that specific information is easier to find.
- (3) To use future patient and carer interviews to ascertain what to include in a new Frequently Asked Questions section in the information booklet.
- (4) Giving results of biopsies to patients on the ward post-surgery in private:

... when they told you good news I'm just wondering what affect that had on other patients. I'm just thinking that when they are giving results of the histology, I think it could have been done in private. (Bill, carer)

- (5) Ongoing evaluation of the written patient information by the PPI to ensure that all the terminology used is understandable and does not use hospital jargon.
- (6) To ensure that patients and carers know when and where they can say 'good-bye' to each other when patients go to the operating theatre:

and so all that we could do really is that ... I just kissed him goodbye in the corridor. (Daphne, carer)

- (7) To provide update training for pre-admission clinic staff:

I think sometimes it would help if we perhaps had sometimes ... perhaps just basic information around some of the operations... just some regular updates of the information regarding that operation. (Beth, pre-admission clinic nurse)

- (8) To ensure that patients accepting short-notice cancellation appointments for scans and investigations receive the same information that other patients are sent by post:

... well there wasn't nothing really to the scan but at the time we didn't know what it was going to be or what it was about, not really. (Dot, patient)

We have accepted cancellations all the way through. (Brian, Dot's husband)

The sharing of this first decision-making process between the researchers and the healthcare professionals who provide the preoperative education presented several challenges. It was a stage when ownership of the action needed to pass from the research team to those actively involved in a practice that would be changed as a result of the evaluations. It was difficult to anticipate how the evaluations would be received, particularly given the obstacles to introducing change within the NHS identified earlier in this paper (Cameron et al. 2001). Would some staff feel defen-

sive or hostile towards suggestions for change made by the patients and carers and their working colleagues?

An added dimension here was the duality of identities now being imposed on healthcare staff who had earlier acted as research participants in the observations and interviews, and were now required to act as decision-makers and implementers of change. A striking example of this was how all of the healthcare professionals interviewed had identified that having more time to spend with their patients at clinic appointments would improve their preoperative educational practice. Yet when this issue was discussed, they all readily accepted that this was not a practical option; it was an ideal but it was neither manageable nor affordable.

It is perhaps this duality of identity offered by the research design and the experienced involvement of practitioners in contributing their data that helped support their sense of ownership of any changes made. The meeting ran in a harmonious way and decisions about what changes could be made to the preoperative educational service were reached swiftly and without contention. However, the changes introduced are now being re-evaluated in the second research cycle. This will provide the opportunity for healthcare professionals within the colorectal unit, and indeed a new group of patients and carers, to comment on the effects and effectiveness of the changes made thus far.

Discussion

This action research study entailed multi-dimensional collaborations, which generated its aims, which needed to be acknowledged and accepted to progress its work. In turn, it had to inform these collaborations to move findings into practice implementation. At each point, maintaining these collaborations demanded dealing with specific challenges of negotiating, inclusivity, comprehension, brokerage, and problem-solving.

The collaborations necessitated within this action research such as the one between the three organisations from which the research team was drawn and where the research took place affected the stability and focus of attention of the project. Time and resources continually needed to be negotiated as the requirements for time to be allocated to the research needed to be fitted into different organisations' pre-existing routines and priorities.

The promise of action research lies in its inclusivity of many of those affected by its outcomes in comprehending, agreeing and reaching those outcomes. Collaborations in this case helped multidimensional networking and communication, both in finding ways to engage a wide range of people in the research and also to take multiple perspectives into account in formulating priorities to take forward in the research. However, the terms of collaboration – for instance the specific membership of the research team, which included senior clinical staff – may have impacted on ownership by staff groups who we may have assumed had been included in the process. For instance, while decision-making in the cycle one staff meeting appeared to encounter few obstacles, it was clear that many staff had not attended the meeting for reasons that are not yet understood. However, it is clear that the diversity within the research partnership has helped enhance the range of people we have been able to reach and include.

Questions about comprehension and inclusivity lead to other questions about the possibility of what power differentials may have influenced the joint decision-

making that would inform change. For instance, within the research team the presence of a surgical consultant with considerable authority within the hospital, a PPI representative with highly relevant personal experience but without professional research experience, and academic researchers with extensive research expertise but without the specialist clinical understanding, may all have influenced their sense of power within the negotiation of the action research decision-making. In addition, the power of patient and carers' stories to achieve greater resonance through the action research process to prompt visceral responses from staff to their deeply felt needs can also be appreciated.

The range and types of collaboration within this study clearly had potential for posing specific difficulties for its successful progress. Asking staff under pressure and patients facing major surgery with uncertain outcomes to take part in research into improving patient education may have been less of a priority to them, resulting in some resistance to participate. However, so far there has been a possibly surprising degree of cooperation from all groups in undertaking the study. Possible reasons for this may include the wide initial appreciation of most staff to improve these patients' care through education and possibly for many patients that their stories needed to be heard. It has also been possible for the research team to demonstrate at an early stage the power of listening to each other's specific priorities and stories as part of managing the study in a coherent way. In a resource-pressured environment, however, it appears there may be potential for later disagreement about feasible actions.

This may be reflected in some of the less expected outcomes of key decision-making meetings about which changes should be implemented. For instance, staff in individual interviews had universally endorsed the importance of spending more time in consultation with patients but as a group decided that this could not be realised. This raises questions about whether individuals are able to express aspirations in one-to-one discussions with, for example, a researcher that in group decision-making meetings cannot be seen as feasible. The effect of collective rather than individual choice-making is a limitation and clearly needs to be revisited and addressed in some other way later in the action research process.

Part of the answer here may lie in learning from our experience so far of the power of brokerage in translating participant experiences and priorities into action through the action research processes that construct collaboration. These can be specifically seen in the linking of expressed participant views to discussions in the staff decision-making meeting, which led to specific changes aimed at solving problems identified in patient education practices embedded in the organisation of care.

Conclusions

This action research study identified the new and specific collaborations entailed in focusing on a particular healthcare setting; the challenges raised and the potential learning offered for the action research process in translating theory into educational practices within a hospital colorectal department. Despite the context-specific features of this process, the lessons learned provide implications for action researchers in diverse healthcare settings across the world. It is acknowledged, however, that the context-specific focus will also limit the transferability of our learning to some extent since different mixes of people in other settings and countries are likely to need to seek different solutions to differing challenges.

Our findings highlighted nuances in the action research process, stemming from the collaborative experience of a particular mix of healthcare professionals, academics, a public and patient representative, patients and carers. There have been many lessons that these collaborations offered, the most important perhaps being to engage with the potential for difficulty in an action research study that involves, must harness and make something of multiple perspectives, roles and work environments. Learning the necessary lessons has demanded inclusivity, comprehension, negotiating, brokerage and problem-solving that both address and draw on these collaborations.

Taking action research forward in these circumstances has initiated a learning curve that has demanded mutual appreciation of many perspectives. This has involved embracing diversity and finding ways to incorporate a wide mix of skills and experience. Establishing multidisciplinary involvement in the process right from the outset, in developing the research proposal onwards, may well have helped to emphasise research team-working practice that yielded further returns in inclusivity and richness of action responses. Being pushed to take on board other perspectives and priorities meant that the team was also confronted with the need to change its early ideas about what would be realistic in terms of what action research-stimulated changes might be achievable within the existing constraints of practices, time and expense.

The core strength of this research was the multidimensional collaboration that took place and the developed ability to work across two organisations (the university and the hospital), highlighting the organisational differences and barriers underpinning the research itself. Notwithstanding such challenges and the multi-dimensional nature of our collaborations, it is perhaps the shared purpose of improving the preoperative education provided to a group of patients and carers facing life-threatening dilemmas that may have motivated working towards more agreement and cooperation between all those contributing to the PREPARE study.

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