



Coproducing and Implementing Person-Centered Key Performance Indicators in Ambulatory Cancer Nursing

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BACKGROUND

Over the past decade, there has been a global commitment towards creating a more person-centred healthcare system. Driven by a growing body of evidence that links person-centred practice to a range of quality outcomes, the concept has been incorporated into recent policies and strategic frameworks^{1,2,3,4}. Research has shown that when patients have positive experiences of nursing care, nurses also experience a good and healthy work environment^{5,6}. Many studies analyse what patients consider as essential for a positive experience in healthcare, for example, rapid availability to test results, comprehensiveness of both verbal and written information and practitioners' ability to listen^{7,8}. There are, however, fewer studies that explore the significant contribution nurses make in determining a positive patient experience.

Measuring indicators that are considered central to a positive experience of nursing care, such as dignity, respect, privacy and communication is challenging. Evidence from cancer patient experience literature reveals that patients are more likely to consider the quality of their care experience favourably if a number of factors are met: they must receive well communicated information, be spoken to sensitively, feel they are being heard and involved in decisions, and be supported with the consequences of treatment⁹. The evidence suggests that people with a lived cancer experience have a significant preference for person-centred, as opposed to doctor-centred, consulting styles¹⁰. The study found that this applied to interactions across different stages of the cancer pathway and suggested that a person-centred care pathway needs to include, not only what matters most to patients, but also how 'what matters' might change over time. Macmillan et al ⁹ concluded that while person-centred care had no meaningful impact on clinical or functional outcomes, there was a link between person-centred care and improved emotional wellbeing. Perceptions of care quality were higher

where there was better communication, a trusting relationship and active engagement between the provider and the patient which focused on the patient's needs.

McCance et al¹¹ developed eight nursing key performance indicators (KPIs) that were sensitive to the unique contribution of nursing and focused on improving patient's experience of care. The eight KPIs, which are presented in Table 1, are considered novel in the context of the existing evidence base and are different from the other quality indicators generally used. The eight KPIs were also person-centred in their orientation as evidenced by their alignment to the Person-centred Nursing (PcN) Framework¹², which is illustrated in Figure 1. A measurement framework was also developed to accompany the KPIs¹³, which is described in Table 2. To make the process of data collection more streamlined and timely, a technological solution in the form of the iMPAKT App (Implementing and Measuring Person-centredness using an App for Knowledge Transfer) was developed to ensure that the information could be more accessible, captured in real time and used to improve experience of care¹⁴.

Insert here: Table 1: The Person-centred nursing key performance indicators

Insert here: Figure 1: Alignment of KPIs to the Person-Centred Nursing Framework

Insert here: Table 2: The Measurement Framework

The eight KPIs and measurement tools have been tested through a series of international implementation studies in a range of different clinical settings including: (i) general, specialist wards and mental health inpatients, ambulatory care, and a midwifery unit in acute hospital settings¹³; (ii) in paediatrics within specialist children's hospitals and paediatric wards in general acute care hospitals^{15,16}; and in a community nursing context¹⁷. Findings

from these studies confirmed that using the eight KPIs generated an enhanced engagement of nurses to make person-centred changes in practice, and an enhanced care experience. This paper describes an innovative approach used to implement the person-centred nursing KPIs within ambulatory cancer care and reports on the outcomes achieved for both patients receiving care and nursing teams delivering care.

Development of the iMPAKT App

The iMPAKT App was developed using a cross platform development framework. This enables the App to be deployed on iOS, Android, and Windows UWP platforms, therefore providing compatibility for all the commonly available tablet, mobile phone and computer platforms. All the data uploaded, per ward/clinical setting, is collated on the cloud platform and provides an overview of all the KPIs. Reports relating to each clinical setting can then be generated and downloaded.

The report generated by the App includes an analysis of the 8 questions in the survey and creates a bar chart that displays the frequency and percentage for each question in the survey. An analysis of the observations of practice is presented as a bar chart that illustrates the total percent of time that nurses are visible in the bay. For the record review, the App calculates the consistency between patient records and what is reported by the nurse and creates a pie chart. The patient stories are themed to identify data that relate to any of the eight KPIs and relevant comments (both positive and negative) are selected and presented in the report to highlight the findings. Outputs from the App are illustrated by screenshots in Figure 2.

Insert here Figure 2: Screenshots of the iMPAKT App

OBJECTIVES

The overall aim of this study was to explore the impact of a co-produced implementation project using the person-centered nursing KPIs to support the development of person-centred care across ambulatory chemotherapy units. More specifically the study objectives were to:

- i. establish the impact of the person-centred KPIs on patients and families/carers' experience of care
- ii. establish the impact of the person-centred KPIs on nursing staff experience
- iii. establish how the KPIs can support nurses in chemotherapy units to use evidence to develop person-centred cultures
- iv. benchmark the outcomes from the KPIs across chemotherapy units across Northern Ireland
- v. explore the impact of engaging people with lived experience of cancer in the development, implementation, evaluation and dissemination processes.

METHODS

A **qualitative** evaluation approach derived from the work of the Medical Research Council¹⁸ guides the research methodology for this programme of work. The guidance framework highlights four key phases involved in the process of a complex intervention: development, feasibility/piloting, evaluation and implementation. This project sits within the feasibility/piloting and evaluation phases of the MRC Framework.

As previously referenced, the theoretical positioning of this work is underpinned by the PcN Framework¹². Person-centred values were also reflected in the underpinning philosophy of this study, which was grounded in collaborative and engaged ways of working through the use of a formal model for co-production^{19,20}. From the conception of the project, through to

the local implementation of the findings, all aspects of the project were co-produced with people affected by cancer and with the nursing teams who engaged in the programme of work. The description of co-production offered by the National Co-production Advisory Group²¹ was used to guide the current study.

“Co-production is not just a word, it is not just a concept, it is a meeting of minds coming together to find shared solutions. In practice, co-production involves people who use services being consulted, included and working together from the start to the end of any project that affects them. When co-production works best, people who use services and carers are valued by organisations as equal partners, can share power and have influence over decisions made”.

Whilst this project focused on the implementation of the person-centred KPIs as a vehicle for improving the experience of patients undergoing chemotherapy, it also included a more explicit focus on the development of effective person-centred cultures underpinned by the principles of practice development²².

Setting and sample

This study was conducted across all chemotherapy units (n=6), in one region within the United Kingdom. The units were located across five healthcare organisations and participation was invited via Executive Directors of Nursing. One nurse from each participating unit was recruited as a champion, who was responsible for actively promote the project, ensuring that all nurse colleagues across their team were enthusiastically engaged. Several nurses from each unit were also invited to volunteer to be trained to collect data using the iMPAKT APP. Peer facilitators (persons with lived experience of cancer) were also included as part of each local implementation team and were recruited via the volunteer

service in each organisation. The total number of participants across the participating units included:

- 3 nurses per chemotherapy unit trained to use the iMPAKT APP (n=18)
- Nurse champions (n=6)
- Peer facilitators (n=7)

The study also used a purposive sample comprising patients/families in line with the measurement framework presented in Table 2 above. The following inclusion criteria were applied:

- Patients who have a cancer diagnosis and who are aware of their diagnosis
- Patients who are physically and mentally able to participate
- Patients who are able to tell their story e.g. are not post anaesthetic or have a significant disability that impacts on their ability to communicate

The total number of patient participants recruited from each site across the 3 cycles is presented below in Table 3.

Insert here: Table 3: Number of patient participants recruited from each site across the 3 cycles

Overview of the Implementation Process

The implementation process was led by the chief investigator and the project co-ordinator, who both acted as external facilitators for the participating sites. The implementation process was centred on three cycles of data collection, using the App to collect and analyse data as outlined in the measurement framework. Table 4 presents an overview of what data would be expected to comprise one cycle. The total data set collected over the duration of the project is

presented in Table 5. The outcomes from each cycle of data collection were used to develop the content of a series of **five** facilitated workshops, which were underpinned by practice development principles. This process supported teams to consider their practice and engage in quality improvement work through the development of action plans. **This supportive process can be summarised as follows:**

Workshop 1: Generating awareness and ownership

Implementation of data collection cycle 1

Workshop 2: Sharing learning from cycle 1

Workshop 3: Quality Improvement and Team

engagement

Implementation of data collection cycle 2

Workshop 4: Sharing learning from cycle 2

Implementation of data collection cycle 3

Evaluation interviews with key stakeholders

Workshop 5: Evaluation and celebration of

achievements

Insert here: Table 4: Overview of one cycle of data collection

Insert here: Table 5: Data collection undertaken using the iMPAKT App over the 3 cycles of the study.

Collection of evaluation data

A range of data were also collected to evaluate the experience of engaging in the project from the perspective of different stakeholder groups in line with key objectives, which is summarised below.

- The action plans developed between the cycles of data collection.
- Feedback from the workshops (n=4) including: *visual data, consisting of the artwork produced by participants; and textual data comprising conversations and discussions occurring during the workshop including the exploration of claims, concerns and issue*²³.
- One focus groups undertaken with the champions (n=6)
- Stakeholder analysis undertaken with two groups of peer facilitators comprising three and four peer facilitators respectively (n=7).

Data analysis

The thematic analysis approach of Braun and Clarke²⁴ was used to analyse the data. The researchers immersed themselves in the entire data set, reading and re-reading all the extracts to get the feeling and flavour of the common threads, the differences and the unique occurrences. Initial codes were generated systematically for specific features in the entire data set. Potential themes were identified and relevant data aligned to each potential theme. The themes were reviewed and checked against the coded extracts firstly and then the entire data set. The process of reviewing and refining the themes helped determine if the themes were representative of the overall data set and helped to identify additional themes/subthemes.

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Ethical considerations

Key ethical considerations for this study focused on: ensuring voluntary participation and gaining informed consent; assuring anonymity and confidentiality for participants where appropriate; dealing with any unforeseen ethical issues such as disclosure of poor or dangerous practice; and protecting those who are vulnerable through, for example, use of exclusion criteria and development of a distress protocol. Ethical approval was sought and granted in line with research governance framework requirements (Sponsor reference 18/0054; Ethics committee reference 18/NI/0141).

RESULTS

The results of the thematic analysis were brought together using the process of cognitive mapping. *A cognitive map is the representation of thinking about a problem that follows from the process of mapping*” (p.673)²⁵. The cognitive map (see *Figure 2*), illustrates how the themes map back to the original objectives of the study.

Insert here: Figure 3: Cognitive map illustrating main themes mapped to the objectives of the study

Four recurring key themes were identified from analysis of the data which included: building relationships that nurture the care experience; inspiring nursing staff to flourish; shaping practice and service changes through the nature of the conversations; and becoming person-centred through co-production.

Building relationships that nurture the care experience

Evidence from the patient stories revealed that patients place significant value on the relational aspects of care. This is evidenced in extracts relating to KPI 1 (*Consistent delivery of nursing care against identified need*), KPI 7 (*Nurse's support for patients to care for themselves where appropriate*) and KPI 8 (*Nurse's understanding of what is important to the patient and their family*) in particular, as illustrated in Table 4. The quality of the interpersonal relationships between patients and staff in the chemotherapy unit was a key factor in making their journey easier. Patients spoke about how the nurse gave them clear information about specific chemotherapy at the beginning of their treatment and at key stages during their treatment plan. Many of the patient stories highlighted how the nurse listened to them, saw them as an individual, prioritised what was on their mind, and was sensitive in their approach. One patient reflected on feeling emotionally supported by the nurse who recognised that the patient's cancer journey was affecting her whole life. including the people close to her.

Insert here: Table 6: KPI evidence in patient stories that communicates the relational aspects of care

The peer facilitators described the nurse as an “*emotional coach and advocate*”; having witnessed the significant emotional support that nurses gave to patients (Peer Facilitator Focus group). The patient stories revealed that being treated as “*normal*” by the nurse and being able to engage in friendly humorous banter with the staff in the chemotherapy unit, were seen as important factors in helping patients feel supported throughout their cancer journey. Some patients pointed out that even though the nurses appeared to be “*rushed off their feet*” at times, they still demonstrated sensitivity in being able to pick up on how the patient was feeling at specific times during their treatment and prioritised the person's needs

amidst the busyness. Patients also identified the nurse as an advocate who “*translated*” the medical jargon and implications of treatment into language they could understand, and who signposted them to other key Macmillan services, for example, Macmillan Information and Support, Benefits Services, and ‘Move More’.

Inspiring nursing staff to flourish

Nurses and peer facilitators viewed the iMPAKT App’s ability to enable real-time/near-time reporting as a key feature in the collection of patient experience data. This not only enabled the evidence generated by the App to inform the team’s practice improvement work, but it also provided timely and meaningful evidence of the team’s performance in relation to providing a good care experience for patients. The value of the information generated by the App boosted team morale and encouraged them to celebrate achievements in practice.

“...they initially saw it as my [the champion’s] work ... they only got interested when they could see the results first hand! The results on the App gave them great encouragement and they could see that we were doing really well...we could then feed this up to senior management and celebrate” (Champion Focus Group).

During the workshops that followed each of the three cycles of data collection, participants shared the learning from the data that was specific to their own unit and discussed how they would celebrate and profile their data. Figure 3 represents the interpretation by one team of their report using creative approaches. Participants used a journey metaphor to represent the insight they gained about person-centred care and the patient’s experience across the three cycles. The hands represent team members coming on board because of the positive feedback from the initial data. This boosted team morale and gave them a great incentive to work together and continue to improve practice. Furthermore, the KPIs not only boosted team

morale in the chemotherapy units, but also illustrated the unique contribution of the chemotherapy nurse to the patient experience.

It's so reassuring to have the same staff consistently- they know my needs and have been there throughout my journey...they have a very calming presence-it's like there's a comradery. The nurses do the real business you know... this is cancer treatment and they know what they're about (Extract Patient story, Cycle 2).

Insert here: **Figure 4:** Creative representation from Site 3/Workshop 2

Shaping practice and service changes through the nature of conversations

The workshops focused on the evaluation outcomes from the cycles of data collection and through the use of practice development methods, became the catalyst that influenced the nature of the conversations taking place. These conversations challenged custom and practice and led to the development of practice improvement initiatives and the shaping of service changes.

It became evident that the data generated from KPI4, KPI5 and KPI8 consistently revealed a lower score for all six sites. Evidence from the patient stories relating to KPI 5, revealed patient dissatisfaction with excessive waiting times. Many patients described feelings of frustration at waiting long past their scheduled appointment before they could even start their chemotherapy treatment.

... From the results we could see that KPI 5, 'time spent' was really our downfall! Patients mentioned that most of the time they weren't told the reason why they had to wait... (Champion Focus Group).

The champions worked with their teams in the individual sites to focus on various interventions that would enhance the experience of waiting/treatment times for their patients. Examples included: offering complimentary therapies to reduce stress and anxiety and to facilitate relaxation; establishing a nail bar for patients to provide nail care and hand massage while they wait; a multidisciplinary approach to letting patients know, at each stage, the reason(s) for prolonged waiting times; patients living nearby to the hospital, waiting for a long period of time, going home until they were phoned by staff to say their treatment was ready. Benchmarking KPI 5 across the sites revealed an improvement over time in this indicator for five out of the six sites. This is confirmed by an increase in the mean scores as illustrated in Figure 4.

Insert here: Figure 5: Mean scores for KPI 5 across the 3 cycles

Site participants discussed the relatively low score generated by KPI 8. Their conversations revealed that the newly introduced electronic documentation system was limited in capturing what was currently important to the patient and their family. The results on the App for KPI 8 therefore revealed significant inconsistency in the cross check between what the nurse said was important to the patient and a review of the patient record. Using a collective voice this issue was presented to the Project Board, which comprised high-level strategic leaders from stakeholder organisations to include Heads of Services & Senior Managers at regional level. The conversations that took place within this model of co-production were based on the evidence from the person-centred KPIs and impacted on a regional change in the electronic record to capture what is important to the patient and their family.

The collaboration between the nurse managers, the peer facilitators and ourselves was brilliant! You could share your experience and the learning in the workshops... I don't

think we would have got the RISOH documentation altered to reflect what was important to the patient only we came together like this... (Champion Focus Group).

A further example of the changing nature of conversations was based on the evidence generated for KPI 4 (*Patient involvement in decisions made about his/her nursing care*). The conversations, which included the peer facilitators, revealed that the champions' perceptions about how they involved patients in decisions about their care centred mainly on treatment options and preferences. The champions acknowledged that they found it difficult to clearly articulate their contribution to meaningful shared decision-making with the patient. Based on her lived experience as a cancer patient, one peer facilitator commented that she felt the role of the nurse in shared decision-making was contingent on the nurse's ability to see the person as they are, within the context of their lives. Participants were encouraged to reflect on their values and beliefs in relation to shared decision-making and explore the factors in the chemotherapy care environment that influenced their practice in relation to this indicator. Their related conversations with their teams became the catalyst for developing person-centred practice improvement initiatives within their unit e.g. Benchmarking KPI 4 across the sites revealed an improvement over time in this indicator for four out of the six sites. This is confirmed by an increase in the mean scores as illustrated in Figure 3.

No

Insert here: Figure 6: Mean scores for KPI 4 across the 3 cycles

Becoming person-centred through co-production

This study demonstrates true innovation through the process of genuine co-production and collective leadership with people affected by cancer i.e. the peer facilitators, the clinical nursing teams, cancer service improvement leads, managers, academic expertise and

information technology. The evidence reaffirms that involving people with a lived experience of cancer in the research has been instrumental in creating meaningful engagement with patients in the chemotherapy units. During the second workshop, the peer facilitators used their hand tracing to reflect on their experience of collecting the patient stories in cycle 1. Figure 4 presents the feedback from the peer facilitators' reflections.

Insert here: **Figure 7:** Hand tracing illustrating the feedback from the peer facilitators' reflections

Champions described the value of having people affected by cancer working alongside the nursing teams in the chemotherapy units. Many found that the compassion and understanding shown by the peer facilitators helped to create a context where the patient felt at ease to be open and honest in sharing their views about their experience of care. This was evident as the champions worked with the stories to mapped them to the KPIs.

...we found that a patient speaks different to someone with a lived experience than they would with one of us as nurses. They might discuss their treatment with us...but they wouldn't go into the depth of their experience and show the amount trust, like they do with the peer facilitator (Champion Focus Group).

Peer facilitators in the focus groups described the importance of the champion's role and how it was pivotal in supporting them to undertake *their* role. The champion was the peer facilitator's key contact in the chemotherapy unit and the person who introduced them to the patients and the rest of the nursing team. Many of the peer facilitators described the strong relationship they had established with the champion and highlighted that this was a crucial factor in building their confidence to collect the data and, particularly, to undertake the patient stories. Peer facilitators also valued their involvement in reviewing the results from each cycle and in developing action plans to celebrate achievements and improve practice.

I will treasure the fact that things mentioned by patients in their stories were acted on. For example patients waiting on chemo have to drink a lot of water. The water on the ward was warm and awful. When this was fed back to the team and they discussed what they could do, the champion got bottled chilled water supplied for the patients... (Peer facilitator Focus group).

DISCUSSION

This study set out to explore the impact of a co-produced implementation project using the person-centered nursing KPIs to support the development of person-centred practice across ambulatory chemotherapy units. One of the key messages that has emerged from the study is the power of the KPIs to heighten awareness about the importance of the relational aspect of care in cancer nursing. The findings reveal several significant components that evidence how the KPIs have explicitly focused on important aspects of person-centred practice, presented in the PcN Framework¹². The study findings illustrate a strong link between KPI4 (*Patient involvement in decisions made about his/her nursing care*), and how *shared decision-making* is described in the PcN Framework. McCormack and McCance describe shared decision-making as: *the facilitation of involvement in decision-making by patients and others significant to them by considering values, experiences, concerns and future aspirations*^{26(p.54)}. There is a recognition in the literature that shared decision-making is challenging and is sometimes more often about information-giving or selecting treatment options in cancer care, than true authentic shared decision-making^{27,28}. The importance of the nurse investing time to explore the patient's feelings and preferences is viewed as being fundamental in the achievement of shared decision-making²⁹. In a qualitative study exploring the experience of oncology nurses in patient counseling in the ambulatory care setting, nurses highlighted the importance of supporting patients with decisions about how they can achieve a balance

between treatment and making their daily lives as normal and productive as possible³⁰. The findings from this study show that a change in the nature of conversations based on the evidence generated, and enhanced by the involvement of people with lived experience, encourages nursing teams to think differently about how they can truly involve patients in decisions about their care and what really matters to them in their daily lives.

The essence of KPI 8 (*Nurse's understanding of what is important to the patient*) is captured in the person-centred processes of the PcN Framework as *working with the person's beliefs and values*. This process is closely aligned to that of shared decision making in the Framework and is described as: *having a clear picture of what the person's values about his/her life and how he/she makes sense of what is happening from their individual perspective, psychosocial context and social role*^{26(p.54)}. Several studies highlight that a great degree of emphasis is placed on diagnosis and treatment in oncology, and support for patients about what is important in their lives is commonly provided by practitioners, separately from routine clinical practice^{30,31}. The findings from this study suggest that the conversations that took place to influence the documentation about KPI 8, succeeded in making it a central part of practice, whilst also ensuring that the nursing contribution in ambulatory care settings is captured.

KPI 5 (*Time spent by nurses with the patient*) is linked to the person-centred process of *providing holistic nursing care* in the PcN Framework, and described by McCormack and McCance as: *the provision of treatment and care that pays attention to the whole person through the integration of physiological, psychological, sociocultural, developmental and spiritual dimensions of person*^{26(p.58)}. Prolonged waiting times cause frustration for patients and their families and have been shown to adversely affect patient adherence to future appointments and treatment schedules^{32,33}. Two recent studies identify similar strategies to

decrease patients' prolonged waiting times in ambulatory chemotherapy units. These include: site-specific improvements to appointment processing, enhancing communications, and incorporating information technology applications^{34,35}. The findings from this study reveal that the champions and their teams implemented several interventions aimed at providing holistic nursing care to patients, to enhance the experience of waiting/treatment times. This person-centred approach to addressing prolonged waiting times in ambulatory chemotherapy units is not often reported in the literature.

Patient and public involvement (PPI) is a well-established co-production principle in health research. It ensures that research is not just about service users, but is also conducted with their involvement³⁶. A review of the literature, however, reveals that a power gap still exists between researchers and PPI contributors and the involvement of patients and members of the public across a programme of research is uncommon^{37,38,39}. From the conception of this study, people with a lived experience of cancer played an active decision-making role throughout the whole research process. This included their involvement in the project board and their direct involvement in data collection and in the workshops. This co-production approach, where people with a lived experience (the peer facilitators), and the professionals participated in the research as equals, has enabled a positive culture of influence. Both the champions and the peer facilitators alike, have highlighted that the close working relationship they developed with each other was a key benefit of the project. It was evident, particularly during the workshops, that contribution of everyone involved in the project, (peer facilitators, champions, cancer service improvement leads, managers and researchers), was acknowledged and valued. Each person contributed their own distinct expertise, strengths and assets to the collaboration. This reflects the core concept of co-production as discussed earlier in the

report, and the six key principles as outlined in the Co-Production Guide for Northern Ireland²⁰.

The peer facilitators took a lead role in data collection using the iMPAKT App, particularly focusing on the patient stories. A review of the literature on co-production and PPI suggests that the approach taken in this study is novel. In a recent qualitative study by Locock and colleagues³⁶, service users were involved in the analysis of patient narrative interviews as part of a quality improvement method called experience-based co-design. The literature on service user involvement in collecting research data is sparse and suggests that PPI involvement has been limited to advising on research questions and research design, leaving professional researchers to complete data collection and analysis.

The findings clearly demonstrate that the KPIs generate evidence that drive practice improvements focusing on person-centredness. This aligns with a practice development approach, which centres on getting evidence into practice and developing effective person-centred cultures²². Facilitation has been described as being fundamental to the practice development approach⁴⁰ and a key factor in ensuring successful implementation of research findings into practice^{41,42}. The concept of facilitation is frequently viewed in the literature as a process of providing support to enable change to occur⁴³. This is consistent with the findings of the study that evidence the nature of support provided by the champion in each of the participating sites. The champion was the internal (insider) practice development facilitator⁴⁴, from within the organisation, who liaised with the clinical teams to motivate and inspire buy in, assessed the culture and ensured engagement in the project's success. Cranley and colleagues⁴⁵ identify a number of external (outsider) facilitators who are not part of the organisation. They describe the *research facilitator* as an external facilitator *who provides*

support to staff to strengthen their research skills and knowledge, and participation in research in a clinical setting^{45(p.5)}. In this study, external facilitation was provided by the academic researchers who played an active and visible role in leading engagement across the six chemotherapy sites. The findings reaffirm the fact that the peer facilitator's role has been instrumental in creating meaningful engagement with patients in the chemotherapy units. The findings also suggest that the key to the success of this project centres on the collaboration of all three facilitator roles, i.e. the champion, the research facilitator and the peer facilitator. Whilst Cranley and colleagues⁴⁵ recognise the key personal attributes and skills of two of these facilitator roles, this study clearly identifies an additional facilitator role that is fundamental to practice development and successful culture change in cancer nursing.

The findings are confirmatory and validate the power of the KPIs, evidenced in previous implementation studies across a range of specialities, and spanning countries in the United Kingdom, Europe and Australia^{13,15,16,17}. The evaluation outcomes in this study confirm: 1) the data generated from the KPIs, particularly through the patient stories, drove practice change and provided useful information to think about what needed to be considered to improve the care experience in the chemotherapy units; 2) provided the opportunity to benchmark practice and to identify patterns and trends, enabling evaluation of person-centred practice over time; and 3) most importantly it illustrated that the KPIs boosted team morale, which in turn created an opportunity to celebrate the positive aspects of chemotherapy nursing practice. However, the additional insights provided through this study focus on the mechanisms for delivery i.e. facilitated co-production, that can further enhance these outcomes and develop person-centred cultures for cancer nursing.

IMPLICATIONS FOR NURSING

Implementing the person-centred nursing KPIs using a co-production approach facilitates improvements in cancer nursing practice. When cancer nurses work collaboratively with people with a lived experience, they collaboratively facilitate practice development work and contribute to the development of person-centred cultures within the chemotherapy units.

Cancer nursing practice can be enhanced through the nature of the conversations that challenge custom and practice and heightened awareness of the importance of the relational aspects of person-centeredness. The value of the real-time/near-time information generated by the iMPAKT App has implications for nursing in two ways: it boosts team morale and encourages teams to celebrate achievements in practice and, secondly, nursing teams can use the person-centred KPIs, via the App, to generate data and review patterns and trends, enabling them to evaluate person-centredness over time. **This feedback can also promote reflective practice and inform opportunities for ongoing teaching and learning.** There is transferability of these KPI's across specialist fields of nursing practice and provides an opportunity to explore wider implementation across cancer services.

Strengths and limitations

Six months into the project, there was a delay in receiving governance approval, which caused the project timeline to fall behind. Due to the commitment and engagement of the Project Board, additional funding was secured from the Public Health Agency, Northern Ireland to extend the project for a further five months. A key limitation for the project came when the fifth workshop was planned and organised for mid December 2019. The purpose of the workshop was to evaluate the overall experience of the project and celebrate achievements with the champions, peer facilitators, clinical teams and managers. Due to the planned industrial action by nurses during December 2019, the workshop was cancelled.

Evaluation of the project took place through a virtual forum. Unfortunately, a formal celebration of achievements has not yet taken place due to Covid 19 restrictions.

CONCLUSION

The evidence presented in this report demonstrates how the KPIs have explicitly focused on important aspects of person-centred practice in cancer nursing using a model of co-production. The project provides evidence of innovation through the process of genuine co-production and collective leadership with people affected by cancer i.e. the peer facilitators, the clinical nursing teams led by the nurse champion, cancer service improvement leads, managers, and academic expertise. People with a lived experience of cancer not only took an active role in the project board and the workshops, but also had direct involvement in data collection and review of the results following each cycle. This approach has enabled a positive culture of influence through the changing nature of conversations and a facilitated practice development approach. It is important, however, to highlight that successful implementation of the KPIs and driving practice change in cancer nursing requires facilitation. As the findings suggest, the key to the success of this project centres on the collaboration of all three facilitator roles, i.e., the champion, the research facilitator and the peer facilitator. This study clearly provides a firm foundation for wider implementation in the future.

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