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TITLE PAGE

Title:

Collaborative patient-centered quality improvement: A cross-sectional survey comparing the types and numbers of quality initiatives selected by patients and health professionals.

Running title:

Comparing quality improvement preferences

Key terms:

Ambulatory care; Health care surveys; Patient-centered care; Consumer participation; Quality improvement

ABSTRACT

Identification of patients' and health professionals' quality improvement preferences is an essential first step in collaborative improvement models. This includes experience-based codesign (EBCD), where service change is strategically introduced following stakeholder consultation. This study compared the number and types of improvement initiatives selected by outpatients and health professionals. Using electronic surveys designed to inform EBCD studies, 541 outpatients (71.1% consent) and 124 professionals (47.1% response) selected up to 23 general initiatives. On average, outpatients selected 2.4 (median=1, IQR=1-3) initiatives and professionals selected 10.7 (median=10; IQR=6-15) initiatives. Outpatients demonstrated a strong preference for improvements to clinic organization, such as appointment scheduling and clinic contact. Outpatients selected relatively fewer initiatives potentially reducing the complexity of service change and resources required to address preferences. Comparatively, professionals indicated a greater degree of change is needed and selected initiatives related to communication with patients and other professionals, including coordinating multidisciplinary care. Improvements to information provision were commonly selected by both groups and offer a strategic opportunity to address patients' and professionals' preferences. By quantifying the ways in which preferences differed, this study emphasizes the need for collaborative approaches to health service change and may be used to initiate an informed discussion on patients' and professionals' quality improvement preferences in tertiary care.

**Collaborative patient-centered quality improvement: A cross-sectional survey
comparing the types and numbers of quality initiatives selected by patients and health
professionals.**

Health policy and research is increasingly focused on improving the quality and efficiency of healthcare, in part due to the growing prevalence and costs of managing chronic medical conditions (OECD, 2011). In 2001, the Institute of Medicine defined high quality care as being safe, effective, timely, efficient, equitable and patient-centered (Institute of Medicine, 2001). However, health service deficits in these six key dimensions remain a major concern (McDonald, Chang, & Schultz, 2013; Osborn, Moulds, Squires, Doty, & Anderson, 2014; Schoen et al., 2007; Schoen et al., 2011). With ongoing financial and intellectual investment in quality improvement, addressing the obstacles to high quality healthcare is increasingly important (Groene et al., 2010).

To overcome the barriers to high quality healthcare, quality improvement and implementation science focus on introducing change using a scientific approach with the overarching goal to optimize practice and health outcomes (Marshall, Pronovost, & Dixon-Woods, 2013). These fields emphasize the importance of collaborative stakeholder involvement to facilitate design and adoption of quality improvement initiatives and models such as experience-based design are increasingly applied (Conry et al., 2012). Experience-based codesign (EBCD) is defined by Bate and Robert (2006) as a patient-focused design process with the goal of making patients' experiences accessible to health professionals or policy makers who are designing and driving health service change (Bate & Robert, 2006).

The benefits of a collaborative approach to quality evaluation and improvement are acknowledged by a marked increase in policy initiatives mandating consumer engagement in health policy and research (Australian Commission on Safety & Quality in Health Care, 2012; Craig et al., 2008; Tritter, 2009). This represents a paradigm shift from traditional

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improvement models where health service change is driven by health professional and researcher priorities towards a more patient-centered model. This model considers patients as an expert information source on the quality of care and recognizes patients' ability to identify potential areas of improvement based on their perceived needs and experiences (Gerteis, Edgman-Levitan, Daley, & Delbanco, 1993). Furthermore, patient-reported data can highlight and legitimize the need for specific types of change and the availability of patient information systems has been positively associated with quality improvement success (Coulter, Fitzpatrick, & Cornwell, 2009; Dixon-Woods, McNicol, & Martin, 2012; Kaplan et al., 2010; Tilney, 2004; Tzelepis et al., 2014).

With increasing evidence on the value of interdisciplinary teams and access to a variety of ancillary services, it is increasingly relevant to capture a range of health professionals' perspectives on the quality of care and preferences for health service change including nurses, physicians, laboratory technicians, and allied health professionals (Borras et al., 2014; Zwarenstein, Goldman, & Reeves, 2009). As the direct providers of care, they are in a unique position to identify technical and system-level issues which may negatively impact patient care. Professionals are also able to assess the degree to which it is feasible to implement quality improvement initiatives within healthcare settings. Previous research reports that health professionals can act as change champions with clinical leadership and supportive workplace culture associated with quality improvement success (Kaplan et al., 2010); however, when the degree of change proposed is perceived as too burdensome or complex, professionals may be reluctant to participate especially with increasing workload and associated burn-out (Dixon-Woods et al., 2012; Glasgow & Emmons, 2007). Garnering professionals' support for organizational change is a key factor to adoption and maintenance of quality improvement.

Following collaborative models such as EB CD, both patients' and health professionals' perspectives should be integrated into quality improvement programs (Bate & Robert, 2006). However, previous research suggests the two groups may have different priorities in the provision of care (Boivin, Lehoux, Lacombe, Burgers, & Grol, 2014; Conry et al., 2012; Gillespie, Florin, & Gillam, 2004; Teunissen, Visse, de Boer, & Abma, 2013). For example, a study involving 83 patients and 89 health professionals in primary care settings found patients tended to focus on interpersonal dimensions and the convenience of care such as respect or empathy, and wait-times ;professionals placed more emphasis on system processes, clinical indicators, and preventative aspects of care such as care coordination, emergency room visits, and physical activity counselling (Boivin et al., 2014). Professionals may believe these areas are more directly within the scope of practice in keeping with existing quality assurance programmes already maintained within many medical specialities (Conry et al., 2012; Richardson, Sitzia, Brown, Medina, & Richardson, 2005). However, few studies have directly compared different stakeholder (patient versus health professional) priorities for quality improvement and no study has done this in the context of tertiary care, where patients' needs may be intensified.

Objectives

To compare health professionals' and patients' preferences for quality improvement, the Consumer Preferences Survey (Consumer-PS) and Professional Preferences Survey (Professional-PS) was administered to report the:

1. Average number of general quality improvement initiatives selected by each group; and,
2. Similarities and differences between the two groups in the proportion selecting each general initiative.

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These data address two research questions that can help to better understand the different points of view between patients and professionals regarding patient-centered quality improvement within tertiary settings. Firstly, do healthcare professionals and patients believe the same degree of change (i.e. few versus many changes) is needed to improve patient-centred care? Secondly, do healthcare professionals and patients identify the same opportunities for quality improvement?

METHODS

This cross-sectional study was conducted according to The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement (Von Elm et al., 2007). The Hunter New England (HNEHREC:12/08/15/4.04) and University of Newcastle (H-2013-0169) Human Research Ethics Committees provided ethical approval.

Outpatient recruitment and eligibility

Outpatients were recruited from hospital-based clinics located in New South Wales, Australia: 1) a public-funded oncology centre; 2) a smaller private-funded oncology centre; and, 3) a public-funded centre providing cardiology and neurology ambulatory care. The patient throughput at these centres ranged from approximately 75 to 530 daily outpatient visits. Research assistants approached patients in waiting rooms or treatment areas to complete the touch-screen Consumer-PS. In order to be eligible, outpatients were 18 years of age or older, English-speaking, and had attended the clinic at least once prior to recruitment. This latter exclusion criterion ensured participants were able to draw upon a previous experience with the specific health service. The number of non-consenters were recorded along with genders and estimated ages. Outpatient data was collected over a 16-month period ending in January 2014.

Health professional eligibility and recruitment

Professionals affiliated with participating clinics were recruited using one or more of the following strategies: i) email invitation with a web link to the survey using department lists; ii) face to face recruitment at department meetings with the opportunity to complete the touch-screen survey on-the-spot; and, iii) distribution of leaflets with a web link. To be eligible, professionals were actively involved in outpatient care. However, in order to capture a wide range of perspectives, eligibility did not rely on individuals' qualification or role in outpatient care. To report response rates, the total number of individuals approached using each method was summed and used as the denominator; this provides a conservative estimate as some individuals may have been approached via more than one method. The characteristics of non-consenters could not be collected. Health professional data was collected over a 4-month period ending in December 2014.

Measures

The Consumer-PS and the Professional-PS: Using touch screen devices, outpatients and a range of health professionals were presented with 23 general service initiatives and asked to select those that would improve experiences of outpatient care (Fradgley, Paul, Bryant, et al., 2015). Participants could select as many or as few of the initiatives as so desired. The initiatives focused on patient-centered care dimensions such as: information provision; decisional involvement; physical or emotional needs; and accessibility and convenience of care (Gerteis et al., 1993). The specificity of this approach makes it a useful tool for the purpose of quantifying patient and professional views which can assist policy makers to understand the ways in which stakeholder perspectives may vary and therefore, identify potential obstacles to collaborative service improvement. Areas of agreement may be strategic targets in which health policy can address both groups' preferences.

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Minor differences in the item wording between the two surveys were required to reflect the differing roles of patients and professionals in receiving or delivering the initiative (e.g. “Keep you up-to-date on the progress of your treatment and condition” vs. “Ability to provide up-to-date information to patients on their treatment or condition progress”). The research team reviewed the Consumer-PS and Professional-PS to ensure the initiatives were comparable.

The Consumer-PS has moderate to substantial test-retest reliability and has been evaluated to ensure it is comprehensive and relevant to patients’ preferences for quality improvement. (Fradgley, Paul, Bryant, et al., 2015). The Consumer-PS contains two additional exercises, selecting increasingly specific initiatives and a relative prioritization exercise, which are not presented here.

Outpatient demographic items: Questions included: date of birth; gender; marital status; highest education level attained; Aboriginal and Torres Strait Islander origin; and if they possess a concession card. Australian concession cards are part of a government initiative to provide health service and pharmaceutical rebates to vulnerable groups, such as pensioners and low-paid workers (Australian Government, 2016). Concession cards allow holders to access healthcare services for free or at a reduced fee. Participants reported their appointment frequency in the last six months and reason for attending the clinic (response options: routine exam for a diagnosed condition; discuss symptoms for a diagnosed or non-diagnosed condition; or receive tests or treatments).

Health professional demographic items: Questions included: profession; health condition(s) of interest; gender; length of time providing outpatient care; and if they were affiliated with privately-funded facilities or rural facilities.

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Both participant groups were able to skip or select 'Prefer not to answer' for any demographic question. The confidentiality of survey responses was emphasized on survey start screens and participant information forms.

Statistical methods

Summary statistics are provided for demographic information, the average number of initiatives selected, and the sample proportion who selected the initiative according to participant group (outpatient or professional). Chi-square and Fisher's Exact tests were conducted to identify statistically significant differences in the two group proportions. Due to multiple tests, a corrected Bonferroni value of 0.002 was used to assess statistical significance. To provide another point of comparison, the ten most-frequently selected initiatives are listed for each group and were ranked according the proportion selecting the initiative. Top-ten lists have been used previously in need assessment literature to highlight important areas of improvement and potential differences in stakeholder priorities for care (Armes et al., 2009; Zamanzadeh, Azimzadeh, Rahmani, & Valizadeh, 2010).

To ascertain any consent biases, Chi-square tests were conducted according to consent status and age, gender and recruiting clinic. Similarly, Chi-square tests were conducted to determine if those who did not complete the survey were significantly different according to age, gender, education, recruiting clinic and reason for clinic attendance. Participants who did not fully complete the survey were removed from analyses. Data analyses were completed using Stata 11 (Statacorp, College Station, TX).

RESULTS**Outpatient sample**

A total of 741 of 1042 (71.1%) individuals consented to participate in the study. There was significant association between age and consent status ($p=0.007$) with lower consent rates observed for individuals over 70 years of age (60.3%) and higher consent rates

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for those aged between 18 and 25 (86.8%). Additionally, oncology patients attending the private clinic were significantly more likely to participate (89.2% consent, $p=0.001$) than those attending the public clinic (68.8% consent).

The final sample includes 541 participants (73.1% completion). Of the 200 cases removed from analysis, 114 (57.0%) individuals were excluded as they did not complete the demographic module (presented first). The remaining 86 individuals did not fully complete the Consumer-PS; this represents a small proportion of the total number of consenting individuals (11.6%; 86/741 individuals).

Participants completing the survey while receiving tests or treatment had higher completion rates than those waiting for a physician consultation (96.3% vs. 76.9%, $p\text{-value} = 0.002$). Those who had completed 12 years of formal education were also less likely to complete the survey than those who had completed only 10 years of formal education (80.1% vs. 67.4%, $p\text{-value} = 0.003$). Outpatient demographic characteristics are available in Table 1.

Table 1: Outpatient sample demographic and clinical characteristics (n=541)

Outpatient characteristics	Number of participants (%)
Years of age	average = 60.2 (SD=15.3)
Male	262 (48.4)
Highest level of education attained	
High school equivalent of year 10 or lower	270 (49.9)
High school completion	64 (11.8)
Diploma or trade certificate	119 (22.0)
Bachelor's or postgraduate degree	88 (16.3)
Marital status	
Married or living with partner	371 (68.6)
Single (never married, divorced or widowed)	170 (31.6)
Aboriginal and/or Torres Strait Islander origin	21 (3.9)
No private insurance coverage	282 (52.1)
Concessional card	355 (65.6)
Recruited from	
Cardiology or neurology, public facility	205 (37.7)
Medical oncology, public facility	271 (50.2)
Medical oncology, private facility	65 (12.0)
Reason for attending	
To discuss symptoms/treatments/tests, diagnosed	90 (17.0)
To discuss symptoms/tests, undiagnosed	36 (6.8)
To receive tests or treatments, diagnosed	189 (35.6)
For a routine exam , diagnosed	216 (40.7)
Do not know	5 (0.9)
Number of appointments in last three months	
At least once in the last six months	259 (47.9)
2-3	112 (20.7)
4-5	78 (14.4)
6 or more	92 (17.0)

Professional sample

Approximately 272 individuals were invited to participate, of which 128 (47.1%) completed the Professional-PS. A range of professionals participated including: physicians (32.0% of participants); nurses and care coordinators (32.8%); allied health professionals, such as social workers (19.5%); and clinic support staff, such as clinic schedulers and receptionists (11.7%). Professional demographic characteristics are available in Table 2.

Table 2: Professional sample demographic characteristics (n=128)

Professional characteristics	Number of participants (%)
Role in outpatient care	
Physician, trainee or medical officer	41 (32.0)
Nurse and/or care coordinator	42 (32.8)
Allied healthcare professional	25 (19.5)
Clinic support staff	15 (11.7)
Other	5 (4.9)
Related chronic condition*	
Medical oncology and/or haematology	48 (37.5)
Radiation therapy	19 (14.8)
Surgery associated with a chronic condition (e.g. cancer)	20 (15.6)
Psychiatry	5 (13.3)
Neurology	17 (13.3)
Cardiology	42 (32.8)
General practice	8 (6.3)
Years providing outpatient chronic disease care	
Less than 6 months	7 (5.5)
6-12 months	7 (5.5)
1 to 2 years	10 (7.8)
3-4 years	16 (12.5)
5-10 years	38 (29.7)
More than 10 years	46 (35.9)
Prefer not to answer	4 (3.1)
Type of healthcare facility	
Public-funded only	95(74.2)
Private-funded only	1 (0.8)
Both public- and private-funded	30 (23.4)
Prefer not to answer or not applicable	2 (1.6)
Location of healthcare facility	
Urban	105 (82.0)
Rural	22 (17.2)
Prefer not to answer or not applicable	1 (0.8)
Female	80 (62.5)

*Respondents were able to select more than one option.

The number of quality improvement initiatives identified by outpatients and professionals

On average, outpatients selected 2.4 (median= 1, SD=2.6) and professionals selected 10.7 (median=10; SD=5.4) initiatives (Figure 1). The distribution patterns of the number of initiatives selected by each group differed: the interquartile range of the outpatient sample was smaller than that of the professional sample and had a right skew; while that of the professional sample had a very slight left skew. Approximately, 30.3% of outpatients selected only one initiative.

Figure 1: Box-plot distributions of the number of initiatives selected by each participant group, with marked median (x).

Similarities and differences between the two groups in the proportion who selected each initiative

For each initiative, the proportion of the professional group selecting the initiative was significantly higher (p values of >0.001) than the outpatient group (Table 3).

Initiatives are ranked according to the sample proportion and presented according to whether: (1) the initiative is within the ten mostly frequently selected by participant groups (8 initiatives), the outpatient group only (4 initiatives), the professional group only (3 initiatives), or (2) the initiative is within neither groups' ten most frequently selected (8 initiatives). While eight initiatives were included within both groups' ten most frequently-selected, seven initiatives were included in only one group's top ten. Up-to-date information provision, the convenience of clinic scheduling, ease of clinic contact, and improved hospital catering (which included including the convenience, availability, and variety of beverages and food) was ranked higher for the outpatient group. Comparatively, care coordination, patient communication, and transportation were ranked higher for professionals only.

Table 3: Group proportions selecting each initiative with goodness of fit test-statistics (n=669)

Initiatives	Ranking by proportion		Participant group, n (%)		Test statistic	
	Outpatient	Professional	Outpatient	Professional	χ^2 (df=1)	P
Selected in top ten by both outpatients and professionals						
Improve car parking	1	1	326 (60.3)	112 (87.5)	34.0	<0.001
Reduce waiting times	2	3	107 (19.8)	85 (66.4)	110.0	
Access to information at home	6	4/5	69 (12.8)	78 (60.9)	140.2	
Information to manage medical emergencies	7	6	60 (11.1)	76 (59.4)	149.0	
Assistance/information to maintain activities of daily living	8	4/5	53 (9.8)	78 (60.9)	171.9	
Assistance/information to manage physical symptoms	10/11	2	48 (8.9)	86 (67.2)	219.8	
Assistance/information to manage emotional symptoms	10/11	8	48 (8.9)	64 (50.0)	125.6	
Selected in top ten by outpatients only						
Up-to-date information on treatment or condition progress	3	11	81 (15.0)	60 (46.9)	63.4	<0.001
Convenient appointment scheduling	4	14/15	77 (14.2)	55 (43.0)	54.0	
Ease of clinic contact	5	18	70 (12.9)	42 (32.8)	29.3	
Improve hospital catering	9	22	49 (9.1)	31 (24.2)	22.6	
Selected in top ten by professionals only						
Arrange transport to and from the clinic	13	7	35 (6.5)	72 (56.3)	190.9	<0.001
Patient concerns are discussed with health professionals	12	9/10	44 (8.1)	62 (48.4)	126.1	
Improved coordination of care	15/16/17	9/10	28 (5.2)	62 (48.4)	166.4	

DISCUSSION

This cross-sectional study compared outpatients' and professionals' preferences for patient-centered quality improvement in terms of number and type of initiatives selected. Professionals, on average, selected an additional eight initiatives as compared to patients and a greater proportion of health professionals selected each initiative. While several initiatives were included in both groups' top ten most frequently selected initiatives, a few areas of disagreement in the groups' preferred initiatives were reported.

Health professionals and outpatients identified a few different areas of improvement

The ten most-frequently selected initiatives reported by each participant group highlighted several areas of agreement. These initiatives may be strategic approaches to satisfying both groups' preferences for change and may be more readily adopted into practice. For both groups, improved parking was selected by the largest proportion of participants. Previous research suggests these more 'front-line' areas are relatively amenable to change compared to more interpersonal (and potentially complex) dimensions of care such as decisional involvement (Boiko et al., 2014).

Moving beyond the well-documented concern of parking (Dilworth, Higgins, Parker, Kelly, & Turner, 2014), six initiatives relating to information provision were frequently selected by both groups. This finding is supported by previous research reporting information provision as a common unmet need in multiple chronic disease groups, including several primary cancer types, stroke, and cardiovascular conditions (Harrison, Young, Price, Butow, & Solomon, 2009; S. Kohlmann, M. S. Kilbert, K. Ziegler, & K. H. Schulz, 2013; Smith et al., 2008). Initiatives to improve the efficiency and quality of information provision are urgently needed and are strategic policy targets which address both groups' preferences.

Two areas of disagreement between the outpatient and health professional groups were identified and may pose a barrier to implementation. Convenient appointment

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scheduling, ability to easily contact the clinic, and catering, were only included in the outpatient group's ten most frequently selected initiatives. While ability to contact the clinic and catering might not be considered clinical issues, previous research indicates poor accessibility and accommodation can impact patient outcomes and are frequently identified as salient components of patients' experiences (Fradgley, Paul, & Bryant, 2015; Klosky et al., 2008). For example, appointment convenience may impact patients' ability and willingness to attend a clinic and thus adherence to long-term care. In this way, policies which mitigate practical barriers to care may have long term patient and system implications.

Initiatives included only in the health professionals' top ten most frequently selected were generally focused on improved professional-patient communication and coordination of multidisciplinary care. This finding is supported by qualitative research in which health professionals frequently equated ability to provide patient-centered care with communication skills (Gillespie et al., 2004). The emphasis on coordinated care may reflect the increasing evidence on the value of a multidisciplinary team in providing complex and comprehensive chronic disease care (Borras et al., 2014; Zwarenstein et al., 2009). However, this strategy is relatively recent and further evaluation of barriers to adopting and maintaining this specific approach is needed.

Health professionals and outpatients did not identify a similar degrees of change

There are a few possible explanations for the finding that professionals identify more quality improvement initiatives relative to patients. Health professionals are able to draw upon more global experiences across patient groups and consider the varying needs of all their patients. This incorporates professionals' knowledge and expectations of which services should be provided by an institution to the totality of their patient population. This accords with the patient data in that all initiatives were selected by at least one patient (data not shown).

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Health professionals are aware of the need to deliver consistent, high quality care while striving for continual improvement (Klaber & Roland, 2013). As such, they may be more critical and reflective of the gaps in all aspects of patient care. Previous studies also suggest the definition and provision of patient-centered care differs across health professionals (Gillespie et al., 2004; Kitson, Marshall, Bassett, & Zeitz, 2013). This lack of clarity and consensus may have lead professionals to ‘err on the side of caution’ by selecting a wider range of initiatives. Additional qualitative research exploring how professionals evaluate and define the quality of care, specifically patient-centeredness, would be valuable.

Outpatients’ selection of relatively few items accords with the findings of need assessment studies which report patients identify small mean or median numbers of unmet needs (S. Kohlmann, M. S. Kilbert, K. Ziegler, & K.-H. Schulz, 2013; McKeivitt et al., 2011). All participants had attended the clinic at least once prior to completing the Consumer-PS and the majority (52.1%) of respondents had attended the clinic on at least a monthly basis. While this suggests patients were able to draw upon numerous experiences with the service and provide a comprehensive assessment, it is unclear if the number of initiatives selected would change as individuals continue to experience care potentially exposing areas of improvement. However, previous work by the study authors found no significant associations between outpatients’ appointment frequency and the adjusted odds of selecting initiatives (Author omitted for anonymity, 2015. *System-wide versus person-specific: a cross-sectional study identifying demographic and clinical characteristics associated with patient preferences for health service change in specialist outpatient care*. Unpublished manuscript).

From a policy perspective, outpatients identified a few concise targets for health service improvements. This targeted approach may address common barriers to quality improvement, such as the complexity of service change and resources required (Dixon-Woods et al., 2012). This is an encouraging message for services and professionals who have

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previously reported patient-centered care cannot be improved given limited resources (Gillespie et al., 2004). However, this finding should be cautiously interpreted as it may be the result of a ceiling effect found in similar survey tools (Urden, 2002).

Limitations

Although the Consumer-PS takes approximately 9 minutes to complete, approximately 25% of the sample did not provide complete data as a result of the active recruitment approach in the health care setting (Fradgley, Paul, Bryant, et al., 2015). A completion bias was also observed according to education level but was the reverse of that usually encountered (higher for patients with a lower education level). Furthermore, the acceptability of the Consumer-PS has been evaluated with results suggesting outpatients find the survey easy to complete with a Flesch-Kincaid reading level below the recommended level for health information (Fradgley, Paul, Bryant, et al., 2015). While the reliability and acceptability of the consumer version of the survey has been established, the Professional-PS has yet to be evaluated and is important to note there were minor wording differences between the two versions that may have impacted upon responses.

The response rate for the professional sample was 47.1%. This compares favourably to a recent systematic review of survey studies with health professionals which reported a lower average response rate (38%) for online surveys (Cho, Johnson, & Vangeest, 2013). This high response rate suggests a potentially representative professional sample despite use of convenience recruitment techniques. It is possible the two participant groups were not completely correspondent, i.e. professionals who did not provide care to at least one of our participating outpatients may have completed a survey. While the general demographic characteristics of the two groups suggests we achieved a reasonably high degree of correspondence, for confidentiality reasons we are unable to identify where this may have

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occurred. Furthermore, it is important to note that only a small proportion of each sample was associated with a private-funded clinic (24.2% of health professionals and 12% of outpatients) and the study results may not be generalizable to privately-funded services.

Future research applications

This study provides a summary of preferred initiatives and identifies areas of disagreement in both the types and number of initiatives selected. These results suggest there is a need to negotiate differing stakeholder priorities and engage in collaborative quality improvement. A recent cluster randomised control trial in primary care settings compared a professional-only approach to setting priorities for quality improvement with a process involving both patient and professional perspectives at baseline (Boivin et al., 2014). The types of initiatives selected by the intervention and control sites were significantly different at follow-up with intervention sites reporting greater agreement rates between patients and professionals in the final improvement initiatives selected. This is a promising approach and is similar to other collaborative models such as experience-based codesign (Bate & Robert, 2006; Kilo, 1998).

This study uses a new tool designed to facilitate direct selection of general initiatives for change. The Consumer Preference Survey was specifically designed as a priority-setting exercise in order to capture and incorporate a large number of patients' perspectives of health service change. This provides a foundation on which to begin collaborative quality improvement and supplements other consumer involvement approaches such as consumer advocates which are equally valuable but may not represent the range of patient experiences and priorities in the decision making process (Tritter, 2009). However, we recognize that describing and achieving consensus on the types of initiatives identified by the Consumer-PS and Professional-PS is only one component of a comprehensive strategy to implement and sustain quality improvement programmes (Coulter et al., 2009). An intervention study is

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currently underway to assess the effectiveness of a collaborative quality improvement strategy, informed by the intervention participants' use of the Consumer-PS, in improving aspects of tertiary cancer services (Australian New Zealand Clinical Trials ID: ACTRN12614000702617).

CONCLUSIONS

This report provides a summary of the number and types of patient-centered quality improvements identified by two stakeholder groups in a range of tertiary outpatient settings. From a policy perspective, it is important to be aware that while there are many commonalities across stakeholders, there is a likelihood that health professionals may emphasise aspects which relate to their daily practise (patient-provider interaction), while patients may emphasise factors which relate to their daily lives (accessibility). The differing perspectives in the number and types of initiatives selected emphasize the importance of including patients and health professionals in a collaborative approach to develop health policy. The results presented here can be used to initiate an informed discussion on the value and feasibility of policy and service changes to improve patient-centered care.

Competing Interests

Authors have no competing interests to declare.

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