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Improving organisational performance in Australian primary care: The Primary Care Practice Improvement Tool (PC-PIT) & online supporting resource suite

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Building a Culture of Co-Creation in Research
Making a Difference at the Coalface

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https://www.mja.com.au/journal/2014/201/3/supplement (2014)

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CONTENTS

List of Acronyms

AAPM	Australian Association of Practice Managers
ACSQHC	Australian Commission on Safety and Quality in Health Care
AGPAL	Australian General Practice Accreditation Ltd
APNA	Australian Primary Health Care Nurses Association
CQI	Continuous Quality Improvement
PC-PIT	Primary Care Practice Improvement Tool
QI	Quality Improvement
RACGP	Royal Australian College of General Practitioners

Background

There has been a growing international evolution of the role and purpose of quality improvement in primary care; particularly in the United Kingdom, Europe, Australia and New Zealand. Research has focused on improving clinical care programs, with a corresponding focus on the identification and development of clinical measures and indicators of quality care. Subsequently, attention has been given to the role of clinical governance in the delivery of quality care in general practice, and exploration of the relationship between clinical management and patient health outcomes [1-5].

The past 12 years also witnessed an international movement from funders paying for activity to paying for outcomes. The UK introduced "pay for performance" in 2002, resulting in general practices receiving up to 25% of their funding from measuring and reporting against 134 quality benchmarks [6]. The United States debated options including significant bundled payments to family practitioners for quality targets [7]. New Zealand developed a framework to guide clinical quality in primary care [8]. Australia's quality measures, including the Practice Incentive Program and Service Incentive Payments, were introduced in 2002 but their funding has progressively decreased over recent years. The Royal Australian College of General Practitioners standards form the basis of general practice accreditation and include elements such as infrastructure and clinical management [9].

There is a growing international consensus regarding the impact of organisational elements on the delivery of quality care and as enablers of successful continuous quality improvement [10-12]. Elements included leadership, practical and human resources; active engagement of all staff; and attention to multifaceted interventions and coordinated action at all levels of the health system, such as investment in training and development of robust and timely data through supported information technology [13-15].

The relationship between practice assessment, organisational development and assessment and quality improvement is highly complex. An understanding of the elements of high-performing practices may contribute to the development of organisational and cultural assessment processes, which in turn lead to organisational development relevant to primary care as part of the broader concept of successful continuous quality improvement. Conversely, undertaking successful continuous quality improvement through activities associated with organisational development; using organisational assessment approaches may, in turn, indicate elements integral to high-quality practice performance. Indeed, there is dearth of evidence related to the impact of organisational components of general practice and patient outcomes [16]. However, there is currently no single tool available to general practices combining the traditional areas of practice organisation (clinical governance and the use of information technology) with more contemporary and, as yet, less widely used elements (such as change management and leadership) in an internally facilitated approach.

The development of an innovative approach to continuous organisational quality improvement in primary health care and general practice presented a particular challenge because it had to address the following needs: (i) the capacity to be adapted to variable and dynamic individual service settings; (ii) include elements or characteristics of most relevance to general practice and primary health care; (iii) address both clinical governance and the impact of organisational management as part of an ongoing quality improvement cycle; (iv) be led by Practice Managers as an internal process based on a 'whole-of-practice' approach; and (v) be delivered online and at low cost.

In 2011-14, Phases 1-3 were undertaken as part of the original research focus of the Centre for Research Excellence in Primary Health Care Microsystems (full details available at: http://aphcri.anu.edu.au/aphcri-network/research-completed/improving-quality-and-sustainability-integrated-phc-pc-pit-study).

The initial focus (Phase 1) was to identify those elements demonstrated as integral to high quality practice performance. For the purpose of this study, practice organisation was defined as systems, structures and processes which aim to facilitate or enable the delivery of good quality patient care', but which exclude clinical processes and clinical outcomes[17]. Following this, we developed and piloted the Primary Care Practice Improvement Tool (PC-PIT) with a focus on determining content and process validity (Phase 2). Phase 3 then commenced a trial of the PC-PIT with a range of practices nationwide. The key outcomes were,

> the identification of 13 elements integral to high performing general practices through completion of an international systematic literature review

> combining the above 13 elements with the preferred attributes of a general practice organisational performance tool, as identified by our partners and stakeholders, we then developed the Primary Care Practice Improvement Tool (PC-PIT) including both subjective and objective assessment processes

> the process and content validation of the online PC-PIT was completed, with six high functioning general practices

> the national trial of the PC-PIT process was commenced with 15 volunteering general practices, representing a range of practices sizes, business models and geographic locations

> the identification of a need for a high quality, online and free-to-access supporting suite of tools and resources to complement the PC-PIT elements, resulting in a 'one stop shop' of performance improvement bespoke to Australian general practice and primary health care, and

> the identification and investigation of strategies to embed the PC-PIT process in existing quality improvement activities, with key partner organisations, namely: Medicare Locals; the Australian Association of Practice Managers (AAPM), Australian Primary Health Care Nurses Association (APNA) and the Royal Australian College of General Practitioners (RACGP).

This report now presents the findings of the CRE extension (2015-16) which built on the above program of work. Findings from each phase, including the cyclical feedback from end users, partners and stakeholders, informed the direction and focus of each subsequent phase. During 2015-16, the Phase 3 trial was extended to a further 30 general practices nationwide and a validation of the objective indicators of the PC-PIT process was completed. This Phase also included an investigation into the use of the PC-PIT within Australian general practices, and a review of the types of improvements that practices undertook during their initial PC-PIT cycle. Phase 4 was the identification, assessment and selection of a supporting suite of high quality online resources which complemented the key elements of the PC-PIT to meet the needs of end users, as identified in the original program of work.

Ethics approval for the entire study was granted by the University of Queensland Social Sciences and Behavioural Ethics Review Committee (approval number 201000924). The final section of this report looks towards embedding the PC-PIT approach in existing quality improvement and practice support programs, with the Primary Health Networks (PHNs) and the RACGP in 2016 and beyond.

Methods

The study comprised of four phases. Phase 1 was the completion of a systematic review to identify key elements integral to high performing practices and included the identification of partners and key stakeholders to guide the study process and provide ongoing feedback study proceeded. Phase 2 was the design and development of PC-PIT and the content and process validation of the tool with six high functioning general practices. Phase 3 was a national trial of the PC-PIT with a focus on 20 practices, reflecting a range of business models, practice sizes, geographic contexts and settings. Phase 4 included a systematic review to identify additional high quality support resources and the assessment of these tools and resources by an expert panel of GPs and Practice Managers, to identify a final suite of 21 online resources which complemented the PC-PIT.

The methods for each phase are provided below. Further detail can be found in our published papers [18-22] and copies of the pilot and trial protocols are also contained in Appendix 1 (Pilot Study) and Appendix 2 (National Trial).

PHASE 1: SYSTEMATIC LITERATURE REVIEW

A narrative systematic literature review was undertaken and addressed two specific questions: (i) what elements (attributes or characteristics) were demonstrated to be integral to high quality primary care practice performance and (ii) what are the current key considerations relating to organisational performance in primary care?

Eligibility criteria and Information Sources

Abstracts were included if they were identified through the search term 'organisational assessment and quality improvement' or 'high functioning' general practice, primary care or primary health care. A search was conducted in a range of electronic databases, including PubMed, the Cochrane Library, EMBASE, the European Foundation for Primary Care, Emerald Insight, PsychInfo, the Primary Health Care Research and Information Service (PHCRIS) website and Google Scholar.

Other papers and reports were identified through the reference lists of identified studies. All additional articles and reviews identified through this process underwent the screening and data extraction process as detailed below. Additional information was gathered during interviews with stakeholders which included the end users (general practices) and key experts in quality improvement in following organisations: the Australian Commission on Safety and Quality in Health Care (ACSQHC), Australian General Practice Accreditation Limited(AGPAL), the Australian Association of Practice Managers, the Australian Primary Health Care Nurses Association, the Improvement Foundation, Australian Medicare Locals Alliance and the Royal Australian College of General Practitioners (RACGP).

Search strategy and selection of studies

The search focused on identifying systematic literature reviews conducted from 2003-12 (or 2013 in press, where available) using the following search terms: 'general practice', 'primary health care' and/or 'primary care' along with the terms 'quality improvement' and/or 'organisation, administration'. Additional key word searches included: 'high functioning practices; organisational attributes; general practice management; quality indicators and frameworks; quality improvement model; frameworks; models; approaches; quality indicators; components; characteristics and organisational innovation'.

Papers which discussed organisational assessment or development tools, models or approaches and focused on organisational elements (such as team-based care, communication, governance) of primary care were included. Those papers containing insufficient information about the elements of a reviewed tool or trial or where the tool could not be sourced were excluded from the study. Descriptive papers of models or frameworks

designed exclusively for clinical program improvement (for a specific disease or health issue) were also excluded (Table 1). We defined the term 'tools' as surveys, questionnaires or assessment instruments designed to measure overall or specific elements related to practice organisation.

Table 1 Study selection criteria

Inclusion criteria	Exclusion criteria
Presented or discussed quality improvement tools, models or approaches focused on organisational elements (e.g. team-based care, communication, governance) in primary health care	No information about the tool; elements; domains or characteristics of organisational assessment
	Unable to source the tool
	Tool(s), frameworks, models and approaches designed exclusively for clinical health care program improvement (for a specific disease or health issue)
	Tools which focused exclusively on patient satisfaction or patient inclusion
	Trials with no validity or reliability data

Data Collection Process

The titles and abstracts of identified studies were screened for relevance to the study questions. Articles included during the initial screening by either reviewer underwent full-text screening. One reviewer (LC) developed and utilised a data extraction framework guided by the template used by Dunbar et al (2007) 23. Data extracted from systematic reviews included definitions of organisational assessment or practice management; the tools included in the review; whether these were designed specifically for use in primary care settings or adapted for use in primary care settings; whether the tool was designed to be externally facilitated or internally led; the elements, domains or measures contained in the tools.

Synthesis of results

Realist positivist orientation using a top down configuration logic was applied in the synthesis of data. An iterative process was used to identify (i) the commonly utilised tools in primary care settings (ii) the commonly represented elements or domains contained in each of these tools using systematic review; papers describing the trial of tools. A qualitative inductive thematic approach was used to explore papers describing frameworks, models or approaches to organisational improvement or assessment in order to document elements identified as important to primary care organisational assessment or practice management. Commonly occurring themes or elements related to organisational assessment or practice performance were identified from existing tools as well as research papers and descriptive papers of models and frameworks.

Data were configured at the study level to allow for the inclusion of findings from a broad range of study types (systematic literature reviews, trials, frameworks, descriptive knowledge building papers and key informant discussions). Results of the iterative process were compared and combined to identify those elements of organisational assessment in primary health care which were integral to high quality practice performance.

PHASE 2: DEVLOPMENT AND PILOT OF THE PRIMARY CARE PRACTICE IMPROVEMENT TOOL

Phase 2 of the study aimed to design a tool to improve organisational performance in primary health care, using the elements identified in Phase 1. This was completed in two key stages. Stage 1 gathered information and feedback from a range of key national partners and stakeholders which assisted in the design of an organisational development tool, bespoke to Australian general practice. Following this, Stage 2 piloted the new improvement tool (then named the PC-PIT) with six high functioning general practices.

Stage 1: Stakeholder and partner feedback

Meetings (both formal and informal), incorporating formal presentations and targeted discussion, were held with study partners and stakeholders. These included the Practice Manager and principal general practitioner (GP) from a high functioning general practice; Australian Association of Practice Managers (AAPM); the Royal Australian College of General Practitioners (RACGP); the Improvement Foundation; Australian Primary Health Care Nurses Association (APNA), Australian Commission on Safety and Quality in Health Care (ACSQHC) and the Australian General Practice Accreditation Ltd (AGPAL).

Stage 2: Pilot of the PC-PIT

The pilot study was based on a formative assessment framework and mixed method research design. It had three key objectives; namely (i) to determine the readability of the PC-PIT; (ii) establish content validity of the PCPIT and (iii) to explore staff perceptions of the tool and its relevance to general practice settings.

Participants

The pilot study was conducted with a purposive sample of six general practices in Brisbane, Queensland, Australia. Critical case sampling [24] was used to select the practices whereby the most detailed, and information-rich data could be obtained on this topic due to the extensive experience of these practices in the use of quality improvement processes and their integration into the general practice setting. In addition, two Practice Managers were experienced practice accreditation assessors. A questionnaire was provided to all practice staff (Appendix 3) at each of the six practices and elicited quantitative and qualitative data on their experience completing the PC-PIT.

Quantitative data collection

Practice staff completed a series of Likert scales that specifically asked for ratings of the following content,

Readability

Ease of understanding the PC-PIT, unfamiliar words or phrases; words or phrases that users were unsure of.
Readability was also assessed using the Flesch-Kinkaid Readability Formula and Gunning-Fog Index [25] in a combined online test.

Content validity

Relevance to general practice; relevance to the role and position of practice staff; wording and understanding: Where and why users became stuck (layout versus content); what the various elements meant to users / how users would describe that element.

Process validity of the PC-PIT

Usability of the tool: ease of use online; layout of the questions; problems or issues completing the online PC-PIT; suggested changes to layout and process of completion.

Qualitative data collection

The questionnaire included a series of open-ended questions that asked staff to reflect on their experiences of completing the PC-PIT and their perceptions of the relevance and usefulness of the tool to general practice. Additional semi-structured interviews were conducted with Practice Managers to gain feedback on perceptions of the content of the PC-PIT, usefulness as a primary health care improvement tool and the process of using the PC-PIT in practice.

Data analysis

Quantitative Likert scale data for each practice was analysed using Microsoft Excel to enable basic descriptive statistics (frequencies). Open ended qualitative data were fully transcribed and imported into NVivo (QSR software) [26]. An inductive thematic analysis was undertaken to identify common themes. The results of this phase were then used to further edit and refine the PC-PIT for a Phase 3 national trial.

PHASE 3: NATIONAL TRIAL

The initial trial and validation of the PC-PIT was conducted with general practices across a range of Australian primary health care settings, using a similar extended methodology to the pilot study. This Phase had 3 objectives; namely to: (i) document and describe the use and adoption of the PC-PIT in general practice; (ii) validate the PC-PIT Independent Practice Visit objective indicators; and (iii) identify the support needs (resources; professional development and mentoring networks) to enhance Practice Managers as leaders in quality improvement in general practice. Appendix 2 provides the full trial protocol.

Study Design: Trial of the PC-PIT

Fifty private general practices in urban, regional and areas, representing a range of practice sizes (<2; 2 <5; 5 <10; 10+ full time equivalent GPs) were sampled from a group of volunteering general practices responding to information and expression of interest advertisements.

Stage 1: Practice Managers were supplied with links to the online PC-PIT (Appendix 4) and a short guide for using the PC-PIT in practice. Once the consent forms were collected, the link to the online PC-PIT was made available to all practice staff who were given 10 working days to complete it.

Stage 2: After the completion of the PC-PIT, onsite Independent Practice Visits were conducted with each practice by two researchers. The researchers determined how the practice met each element on the PC-PIT by:

(i) Ranking of the elements of the PC-PIT using an Independent Practice Visit form containing objective indicators for the 13 PC-PIT elements, using the same 1-5 Likert ranking scale as in the PC-PIT (Appendix 5). This enabled the researchers to complete an overall independent ranking for each of the 13 PC-PIT elements, for each practice. The visit assessed documented evidence that included but was not limited to, Policy and Procedures Manuals; Human Resource Manuals; Practice Communication Books and records; complaints documentation; patient population data reports and clinical data management systems; all practice agendas and minutes (where available).

(ii) Reviewing additional materials and documentation relating to the existence of specific practice quality improvement committees; scheduled meetings with the focus of discussing quality improvement; meeting minutes and other evidence of quality improvement work, either internal or external to the practice.

(iii) Conducting semi-structured interviews with the Practice Managers. The interviews used the Independent Practice Visit objective indicators as prompts and explored the resources and support Practice Managers might require to support this role They also asked Practice Managers to describe two most recent internal and/or external quality improvement or organisational development activities (as they perceived them) undertaken in the practice.

Stage 3: The completed staff PC-PIT staff surveys were aggregated to provide a whole of practice score for each of the 13 PC-PIT elements. As part of the validation process, the two Independent Practice Visit rankings for each of the 13 PC-PIT elements were compared by an external statistician to determine the concordance between the rankings. Both the staff PC-PIT scores and the Independent Practice Visit scores were compared in order to (i) make a comparison of highest and lowest ranking elements between the staff and independent practice visit scores and (ii) investigate the factors that may have led to these differences.

A PC-PIT Report combining the median staff PC-PIT element rankings and rankings from the Independent Practice Visit were sent to each practice. These reports provided a focus for facilitated staff discussions in order to identify an agreed area for improvement and strategies to achieve it. Practices continued to plan and then implement their improvement using the Plan-Do-Study-Act-Cycle (PDSA) approach, led by Practice Managers or a nominated staff quality improvement champion.

Individual, semi-structured interviews with Practice Managers explored their involvement in quality improvement and also their perceptions of resources and support needed to facilitate their role in performance improvement.

Changes to the PC-PIT: After a review of the qualitative and questionnaire data, any identified changes were made to the online PC-PIT. Specific focus was given to additional support required by Practice Managers in relation to using the PC-PIT, the means by which it might be embedded in practice and how the PC-PIT related to existing improvement activities such as accreditation.

Study procedures

Recruitment of practices and participants

Recruitment of practices was undertaken through a national expression of interest developed by the researchers and sent through the CRE partner organisations.

Data analysis

PC-PIT Reports were prepared using Microsoft Excel to process data. Interview recordings were transcribed and analysed using inductive thematic approach. The first author coded the transcripts and identified and classified recurrent themes, aided by NVivo (QSR software) [26].

A key outcome measure was the degree of concordance between rater one and rater two during the Independent Practice Visits. A purposeful sample of 20 practices were selected which represented a range of practice sizes, business models and geographic locations and which had received and acted on their completed PC-PIT Reports. A statistician supported the study team to assess the level of agreement between the two raters was measured using concordance and Kappa statistics. Quantitative data were entered into an Excel spreadsheet, imported into SPSS and analysed data using SPSS version 21.0 (SPSS) and Microsoft Excel 2013. A statistician compared the scoring between the two Independent

Practice Visit raters for each of the 13 PC-PIT elements and determined where the rankings were the same between both assessors; where they differed by one point; where they differed by two points and so on.

PHASE 4: IDENTIFICATION OF SUITE OF SUPPORTING TOOLS AND RESOURCES

This phase was completed to two stages. Stage 1 was a systematic literature review to identify the range of quality improvement tools and resources used in primary health care settings internationally. Following this, Stage 2 was a Delphi study to assess the relevance and utility of these tools and resources in Australian general practice settings.

Stage 1: Systematic literature review to identify tools and resources relevant to primary health care

A systematic review of published and grey literature was undertaken to identify existing quality improvement tools/resources.

The electronic databases CINAHL, Embase, and PubMed were searched for studies published between January 2004 and December 2013. The full search strategy can viewed in Janamian et al (2016) online at the Medical Journal of Australia site [21] (mja.com.au). The terms were searched in the title, abstract and subject headings, and limited to the English language. All searches were designed and conducted in collaboration with an experienced search librarian. For this review, there were no restrictions on the type or method of quality improvement tool/resource. It included any tool/resources (e.g. 'simple tools' such flow charts and checklists or more complex 'multiple-method tools' such as re-engineering and 'frameworks' such as the PDSA and audit cycle) that can be used by an individual in the practice, teams in the practice, or the whole organisation, to improve any aspect of organisational quality related to any of the seven elements outlined in the PC-PIT.

A comprehensive search of 'grey' literature was also undertaken March-April 2014 [27, 28]. This included an iterative manual search of the electronic databases GreyNet International, and relevant government and non-government websites. Experts were consulted to ensure key electronic databases, organisation website and online repositories were included in the search. Searches were also conducted using the Google Advanced search function and repositories such as OpenGrey (http://www.opengrey.eu/), worldcat (http://www.worldcat.org/) and OpenDOAR (http://www.opendoar.org/).

All relevant tools/resources identified through the grey literature search were also searched in the research databases CINAHL, Embase, and PubMed and Google Scholar to determine evidence of use. The bibliographies of identified relevant studies, reports, websites, databases, and tools/resources were reviewed to identify any additional quality improvement tools/resources for inclusion. All additional tools/resources identified through the snowballing process underwent the screening and assessment process.

Selection of studies and tools/resources

All citations were imported into an electronic bibliographic database (EndNote Version X7). To be included in the review, identified citations and tools/resources had to meet the following eligibility criteria: (i) purpose of the tool/resource is quality improvement; (ii) tool/resource is used in primary care setting or has potential for use in primary care; (iii) tool/resource addresses at least one of the seven elements integral to high quality primary care practice (e.g. patient-centred care and community focused care; leadership; governance; communication; change management; culture of performance; information and information technology); (iv) is published and available in the English language.

The initial screening process involved two reviewers screening the titles and abstracts of published citations and any articles, reports, and tools/resources identified through the grey

literature, categorising them as 'relevant' or 'not relevant' according to the review objective. The full-texts of all 'relevant' tools/resources were sought and reviewed by two independent reviewers with expertise in primary care quality improvement to further assess their relevance according to the eligibility criteria.

There is no single, well-established assessment or scoring instrument suited for quality improvement tools/resources which cover the broad range of tools/resources included in this review. Therefore a four-criteria appraisal framework was developed from common sets of criteria proposed for assessing a range of quality improvement tools/resources and initiatives (for examples guidelines, instruments, programs, and web-based resources) [29-35]. All identified tools/resources that passed the eligibility criteria were evaluated for their accessibility, relevance, utility, and comprehensiveness using the four-criteria appraisal framework. Two reviewers independently scored each tool/resource out of eight using the criteria. Tools/resources with a score of seven to eight were rated as 'best' and passed on to a Delphi study [22] to undergo further assessment. Tools/resources rated less than seven were rejected and not included in further assessment. The reviewers compared their ratings and any discrepancies were resolved through discussion.

Data extraction and synthesis

A data extraction template was created in excel by the investigative team to assist in systematically extracting information on the tools/resources that passed the eligibility criteria. A content analysis approach was used to explore the tool/resource to collate the following information: the name of tool/resource, country, author, the name of the organisation that provided access to the tool/resource, the URL of the websites the tool/resource was located, accessibility information or issues, a brief overview of each tool/resource, the quality improvement element it addresses, and any supporting evidence (published or unpublished data). If accessible, a copy of the tool/resource was downloaded into the endnote library. Any supporting evidence (studies, reports, and any other data) on the use of the tool/resource in primary care was also added to the endnote library.

Stage 2 Delphi study assessing the utility of quality improvement tools and resources in Australian primary care

Using a modified Delphi technique [36, 37] an expert review panel then evaluated 53 tools/resources identified in the systematic review (the full list of these tools is available in the online publication at mja.com.au) [22]. In comparison to the 'pure' Delphi process which provides collated feedback from reviewers back to all reviewers over a series of rounds, in this study de-identified collated feedback was only provided to all reviewers during the final (third) round. This modification was necessitated by the workforce and time constraints of the panel members. The modified Delphi process was chosen for its efficient use of time and resources as well as its ability to minimise the impact of group interaction and influence [38, 39]. It is also a method for providing valuable expert information where knowledge is incomplete [38].

Evaluation Process

A three-step approach was used in the evaluation (see Figure 1),

Step 1 Establishment of Expert Advisory Panel

A panel of six GPs and six Practice Managers, (as end-users of quality improvement tools/resources) were purposively recruited from practices which had participated in the PC-PIT trial (2013-14), and had more than five years' experience in quality improvement activities in general practice. The main task of the panel was to assess the relevance and utility of selected tools, identified through the international systematic literature review, using a standard assessment form [21].

Step 2 Development and pilot of the assessment form

The pre-tested assessment form was based on five domains commonly used for assessing quality of interventions, health information and websites: (i) target audience; (ii) relevance to the PC-PIT; (iii) usability; (iv) strengths; and (v) limitations (pertaining to utility) [40-42]. In addition, a mix of tick box categories and open-ended questions elicited qualitative feedback from the reviewers. The final section of the form asked reviewers to make an overall recommendation: 'I do not endorse this tool', 'I am unsure about recommending this tool' or 'I recommend this tool to be used to complement the PC-PIT' and provide a written justification for the chosen recommendation. A score from zero to ten for each tool (where zero indicated poor utility and ten highly utility) provided additional information about tool recommendation.

Step 3 Data collection

The review process was undertaken using the same assessment form and scoring system in Rounds 1 and 2.

Round 1 review

Quality improvement tools/resources were divided into six groups of approximately nine tools. Two reviewers (a GP and a Practice Manager) were allocated a group of tools to review. In this round, the tools/resources were categorised as recommended, not recommended, or unsure and reasons provided.

Round 2 review

Tools/resources from Round 1 that had received an 'unsure' recommendation from both reviewers or 'divergent' recommendations (i.e. one reviewer had recommended but the second reviewer either did not recommend the tool or was unsure) were sent out for Round 2 review using the same assessment form as for Round 1. The divergent tools/resources for Round 1 were reviewed by different pairs of reviewers.

Final review

The final review included the tools/resources previously recommended by both of the practice manager and GP in Rounds 1 and 2, plus the three highest scoring (i.e. a score of 29/40) 'divergent' Round 2 tools/resources that were relevant to the Australian context as indicated in the reviewer justification. Twelve members of the Expert Advisory Committee were invited to participate in the final review of which nine (five Practice Managers and four GPs) were able to do so. Each was sent an Excel spreadsheet which included online links to tools/resources with de-identified comments and scores from the Round 1 and 2 review process. Using the modified Delphi technique reviewers were instructed to consider the comments and scores from their peers and then make a decision to 'accept' or 'reject' the tool for inclusion in the final suite of resources along with a brief reason for their decision. This process provided reviewers with a final opportunity to revise their judgements in the light of the collated information from previous rounds.

Figure 1 Evaluation process
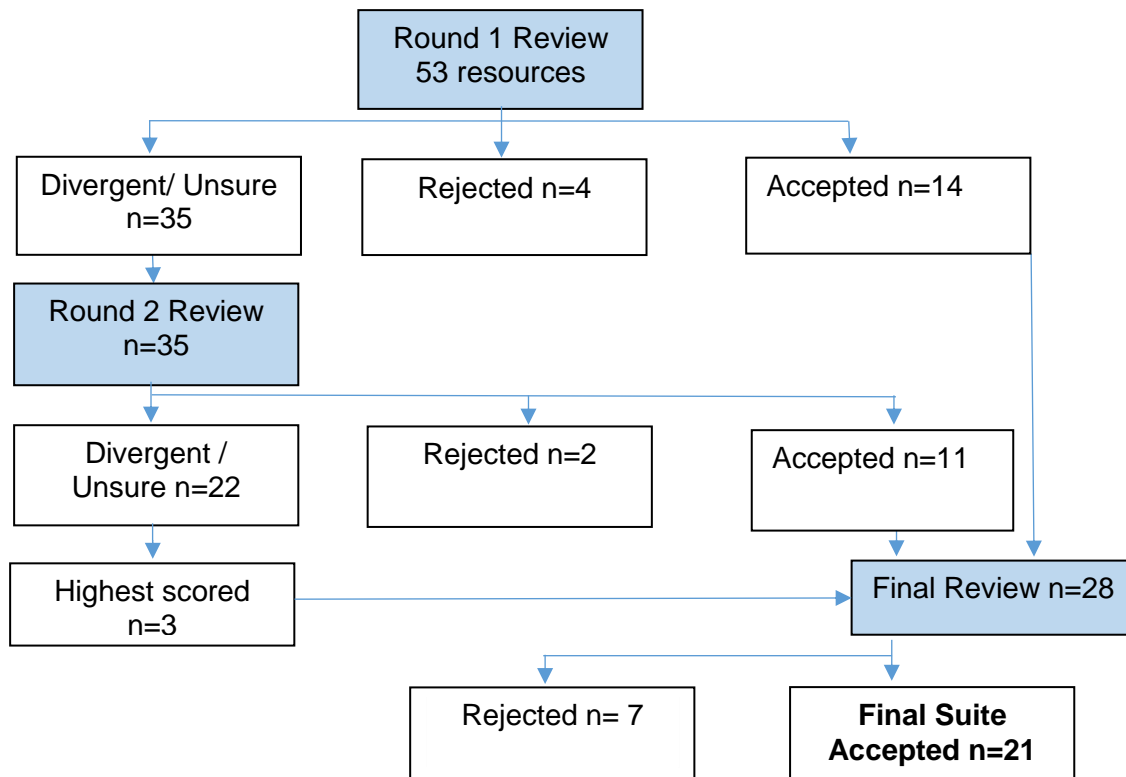
Analysis

Quantitative data were entered into a spreadsheet, imported into SPSS. Data were analysed using SPSS version 21.0 (SPSS) and Microsoft Excel 2013. An additional accuracy check of approximately 10% of coded and entered data was completed by one of the research team (LC). Descriptive statistics were used. Free text responses were explored using NVivo (QSR International) [26]. Thematic analysis was used to identify common themes relating to the strengths and limitations of each of the tools.

Results

PHASE 1: SYSTEMATIC LITERATURE REVIEW

A total of 241 manuscripts were identified from the literature search and obtained for review. Of these, 210 manuscripts were excluded due to no or insufficient information about the tool and elements of practice performance. Tools which focused on elements of patient safety (such as the Frankfurt Patient Safety Climate Questionnaire; NHS Manchester Patient Safety Framework and Primary Care SafeQuest); or on the developing patient role in health care decision making (including the General Practice Assessment Questionnaire and Europep) were excluded from data extraction [47-49]. A flow diagram detailing the systematic review screening process is presented in Figure 2.

Figure 2 Selection process of studies for analysis
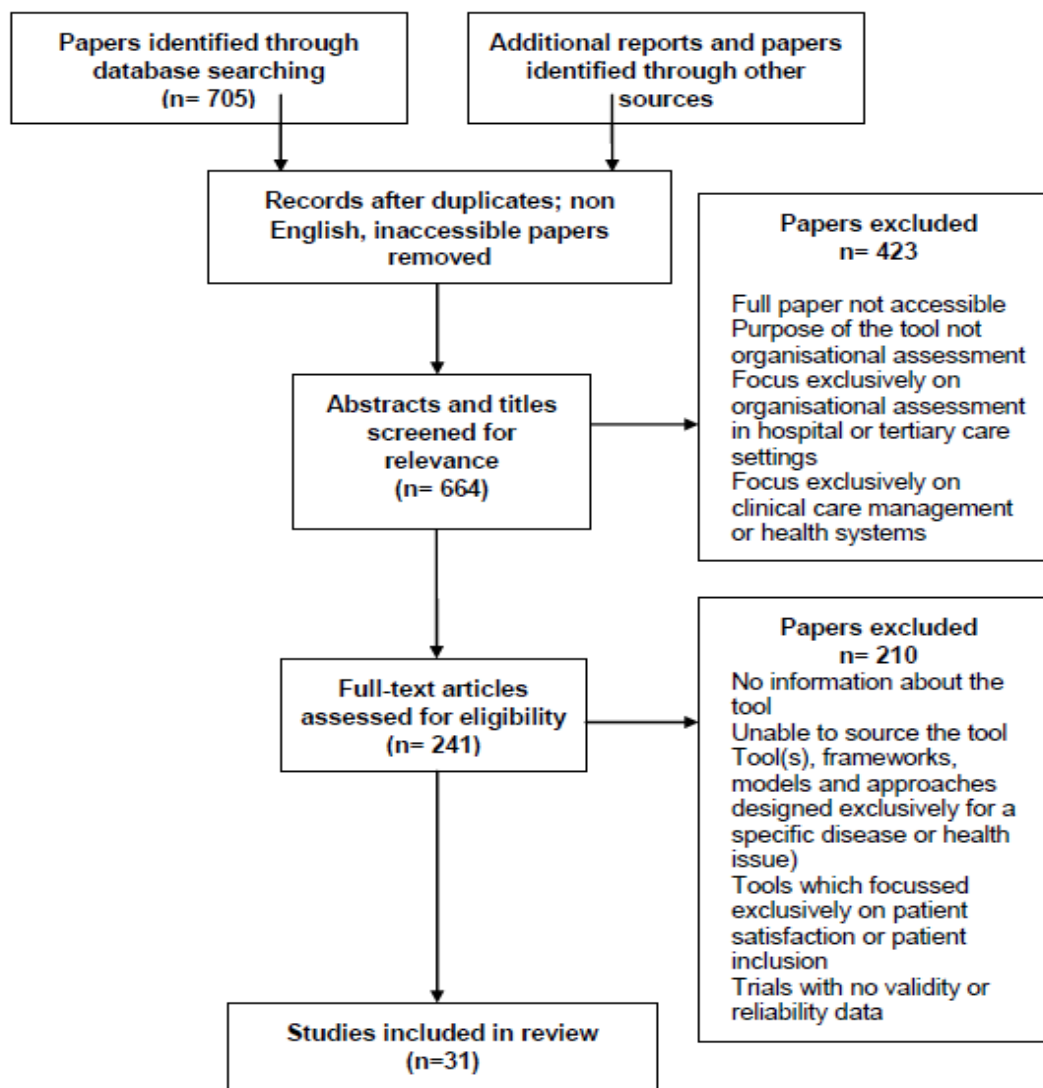
All citations were imported to Endnote and a total of 31 papers used for data extraction. This included literature from Australia, the United States, the United Kingdom, Europe and Canada.

Elements integral to high quality practice performance in general practice

Ten elements were identified which were integral to high quality organisational performance in general practice. Table 2 lists those elements, from the most commonly represented to the least. It should also be noted that this table highlights those elements which were specifically contained in the tools although several externally-facilitated tools such as the 'microsystem assessment tool' (MAT) and also the 'visit in practice' (VIP) tool, could draw out broader issues in practice management during facilitation.

The following 10 elements were most frequently included in existing organisational assessment tools:

1.   Patient centred approaches and tailoring service delivery to the context of family and the broader local community

This element included the importance of a community focus; use of community resources; and cultural competence in relation to a knowledge and understanding of the local community the practice serves.

2.   A focus on staff

This element contained the concepts of staff satisfaction and autonomy, as well as staff skills and professionalism. It addressed the monitoring of staff workloads and job stresses.

3.   Leadership and leading

Leadership and leading included both the concepts of knowledge of and attitudes to, key practice leaders in practice organisation, administration and clinical care. The element also related to individual practice members who may lead in relation to innovation and change; it addressed concepts of effective leadership and 'leading' behaviours, regardless of individual positions and roles.

4.   Education and training

Education and training was seen as a fundamentally important part of quality improvement. This element relates to both the provision of and access to, appropriate training for staff; as part of exiting roles. It also included education and training tailored to changes undertaken in the practice.

5.   Multi-professional teams

This element contained concepts of the ease of forming multi-professional teams in practice; of effective teamwork in relation to key diseases; the relationships between clinical and non-clinical staff including the understanding each other's roles and the ability to learn through conflict.

6.   Communication, collaboration, delegation

This element encompassed a range of concepts; from formal and informal processes of communication internal to the practice, to environmental and cultural factors which supported effective collaboration between the practice and other outside services and methods of timely referral and sharing of patient information and demonstrated effective links between the practice and other external services. It also encompassed environmental factors which supported the sharing of information with patients.

7.   Clinical governance; specific emphasis on clinical care structures and risk management

Closely associated with the element of communication and collaboration, the element of clinical governance related to the formal systems and structures in place to ensure effective

care delivery and clinical safety, such as patient complaints procedures; patient call-back processes and medicine alerts.

8. Performance results, and

9. Process improvement

Performance results encompassed the processes to support the reporting of results of performance measures internally and externally. It included the benchmarking of against other services. Closely linked to the element of performance results, the process improvement element also most commonly related to clinical processes of care; the systems in place for monitoring the process of practice health care delivery, and internal improvements to the practice.

10. Information and information technology

Finally, the use of information and information technology included aspects such as the effective collection and use of information and also the effective technology such as practice clinical software. This element most commonly focused on the use of patient clinical information, less common was the inclusion of information and data on practice finances and billing and data related to human resource management. Sharing of patient medical records and information internally and also between the practice and external services was also included in this element.

Three less commonly included characteristics were also identified. These characteristics were also identified as important attributes of high quality practice performance in the inductive thematic review; namely,

1. Organisational governance

This element included the definition of a shared direction; mission and values, strategic planning and implementation as well as the collection and inclusion of administrative data. It focused on human resource, team management and embraced the concept of governance models to support effective service integration.

2. Change and change management, the flexibility of the practice to deal with change; a history of change within the practice

This attribute was identified in the Survey of Organisational Attributes of Primary Care and also as part of the Baldrige criteria 50. It included the ability and willingness of the practice staff to adapt to new standards and procedures; the ability and willingness of the practice staff to make, manage and sustain change. A history of change was also identified as an important structural part of successful and ongoing performance improvement.

3. Incentives and rewards for staff (both financial and non-financial)

This attribute formed part of the extensive discussion in change management and organisational development. It included the ability of all staff to receive recognition and reward for their work, not solely financially but also in recognition from peers, ability to attend conferences or join professional groups. Financial incentives as part of organisational development facilitated and sustained effective team-based approaches to care. However, this element was not specifically included in existing tools.

Synthesis of results

Combined together, these 13 elements represent the characteristics of organisational context which are integral to high performing practices. Rather than being discreet elements, they are interlinked. For example, the element of communication – information availability defined as the sharing and communication of information both internally and externally to the practice, is also closely linked to the development of multi-professional team-based care

approaches. The element of education training for all staff and incentives is integral to successful change management and ongoing readiness for change.

Table 2 Combined elements of high-quality organisational performance

Element	Source	Association between elements	References
Patient-centred care	Development of a tool; multisite trials of existing tools; research article	Linked to clinical governance and team-based care	51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61
Leadership and leading	Multisite trial of existing tool; descriptive framework	Linked to organisational governance, team-based care; communication; process improvement and performance results	53, 54, 55, 56, 57, 58, 62, 63
Focus on staff	Multisite trial of existing tool; descriptive framework	Linked to leadership and organisational governance	51, 52, 53, 54, 56, 57, 59, 60, 62, 63, 64, 65, 66
Clinical governance	Development of a tool; multisite trial of existing tool; research article	Linked to team-based care	9, 50, 54, 55, 59, 60, 61, 62, 63
Multi-professional teams	Development of tools; multisite trial of existing tools; research article	Linked to communication and patient centred car	53, 54, 55, 58, 59, 60, 61, 62, 63, 67
Communication	Descriptive framework	Linked to collaborative and integrated approaches to care; team-based care	9, 53, 54, 55, 60, 62, 63, 64, 65
Education and training	Multisite trial of existing tools; descriptive framework	Linked to change management	9, 50, 52, 53, 54, 59, 60
Process improvement	Multisite trial of existing tool; descriptive framework	Linked to performance results	53, 54, 56, 57, 59, 60, 66, 67
Performance results	Multisite trial of existing tool; descriptive framework	Linked to element of information and information technology	53, 54, 56, 57, 60, 64, 66, 68
Information and information technology	Development of tool; multisite trial of existing tool; research paper to identify attributes	Linked to clinical governance; process improvement and performance results	9, 53, 54, 59, 60, 61, 64
Incentives and rewards	Descriptive framework	Linked to change management	69, 70
Organisational governance	Multisite trial of existing tool; descriptive framework; descriptions of cultural diagnostic tools	Linked to leadership and change management	9, 71, 72
Change and change management	Descriptive framework	Linked to leadership, education and training, process improvement, performance results and incentives	61, 62, 63, 72

PHASE 2: DEVELOPMENT AND PILOT OF THE PC-PIT

Thirteen (13) key elements integral high functioning practices were grouped into a functional table of key elements and corresponding sub-elements (Table 3). The format of the table was then translated into an online survey with instructions for completion. Formally named the Primary Care Practice Improvement Tool or 'PC-PIT', it was capable of being completed confidentially by all practice staff, with a link for individual access. Each element was accompanied by a description of the 'best practice' requirements for the element. In completing the online tool, practice staff rated their *perception* of how their practice met or did not meet the best practice definition. This was achieved using a five point Likert scale; where a ranking of one indicated the staff member perceived their practice did not meet any of the described best practice requirements for the element, to five which indicated the staff member perceived their practice met all of the best practice requirements for the element. Appendix 4 provides a hardcopy version of the online PC-PIT. In addition, the PC-PIT also collected basic demographic information for each staff member who completed the form, this included brief position description (administration; management; clinical; allied health), whether the staff member was a full time or part-time and if they were a permanent or contracted worker in the practice. It also asked staff to estimate the length of time they had been in employed in primary health care settings.

This phase had three objectives; namely (i) to determine the readability of the PC-PIT; (ii) establish content validity of the PCPIT and (iii) to explore staff perceptions of the elements contained in the tool and there relevance to general practice settings.

Elements of the PC-PIT

Each of the elements and sub elements included in the PC-PIT were clearly defined by using a range of 'best practice' approaches identified in the systematic literature review. A summary of each of these elements is presented in Table 3. *Table 3 Elements and sub-elements of the PC-PIT*

Element	Sub-element	Element description
Patient-centred and community focused care		The element focuses on a patient-centric approach to care delivery as was drawn from the patient centred medical approach [60, 73]
Leadership		Definition taken from aspects of leadership in primary health care. Encompasses both clinical and organisational leadership but also includes staff who may be involved in leading aspects of change or improvement [74].
Governance	Organisational	Divided into the two sub-elements of organisational and clinical governance. Organisational governance is defined as those non-clinical factors which contribute to the performance of the practice [11].Clinical governance relates to processes to manage clinical care and maintain patient safety.
	Clinical	

Element	Sub-element	Element description
Communication	Team-based care	Incorporates aspects of the integration of care identified by Jackson et al (2008) [72] and incorporates three sub-elements.
	Availability of information for patients	
	Availability of information for staff	
Change management	Readiness for change	Incorporates three key attributes of organisational change management and sustainable change [70, 75].
	Education and training	
	Incentives	
Performance	Process improvement	Incorporates two sub-elements identified previously in in Baldridge's assessment tool and also by Nelson et al, 2007 [50, 76].
	Performance results	
Information and information technology		Relates to the internal software and data management tools used by practice staff (clinical and non-clinical); their 'fitness for purpose' and ease of use. Also includes the electronic systems by which information is shared with other key external services.
Contextual practice information	Staff role; length of time in role; length of time in primary health care; practice mission or vision statement	

PC-PIT Pilot Study Results

Practice demographics

Six practices were enrolled in the pilot. Four practices completed the pilot and provided complete datasets. Two practices did not complete all data collection due to staff absences or other environmental factors which hindered full participation during the study period. These practices were not included in the final data analysis. Thus, a total of 28 staff comprising 10 GPs, six practice or community nurses, 12 administrators (including four Practice Managers; one business manager and seven reception or general administrative staff) completed the pilot.

Readability of the PC-PIT

Flecsh-Kinkaid Grade level, along with Gunning-Fog Index scores [25] were calculated for the definitions of each of the 13 online PC-PIT elements. The Flecsh-Kinkaid grade level indicated a reading age based on the United States (US) education reading assessment system. The Gunning Fog score is based on the number of words, and additional complex words (that is words containing three or more syllables) in the selected text. These reading indexes were chosen as they offered the ability to perform online comparisons and were specifically designed for web-based text.

Generally, a Gunning Fog score of 12 requires a US reading age of 18 years of age. However it should be noted this index has limitations in that not all complex words are difficult to understand. Table 4 provides a comparison of the readability scores for each of the PC-PIT elements and their corresponding definitions.

Table 4 Readability Scores

PC-PIT Element	Flecsh-Kinkaid Grade level (USA grade levels and indicated reading age)	Gunning-Fog Score
Patient-centred care	12.7 (21-22 years)	18.5
Leadership	8.6 (17-18 years)	12.2
Organisational governance	23.1 (22 years)	24.2
Clinical governance	24.4 (>30 years)	28.9
Team-based care	11.8 (19-20years)	16.1
Availability of information for staff	16.2 (19 years)	16.7
Availability of information for patients	14.4 (20-21 years)	13.7
Readiness for change	13.8 (20-21 years)	17.7
Education and training	10 (17-18 years)	11.3
Incentives	11.4 (19-20 years)	16.5
Process improvement	10.7 (18-19 years)	15
Performance results	9.1 (16-17 years)	12.7
Information and IT	21.8 (28 years)	24.5

Overall, the PC-PIT required a reading age 20 years or over. The definitions of organisational and clinical governance, along with those related to information and information technology were rated by participants as being highly complex text. These ratings were consistent with the qualitative feedback from several of the administrative practice staff who assessed these element descriptions as difficult to understand. The following section presents the combined quantitative Likert scores and qualitative comments provided by the participants.

Is the content of the PC-PIT understood by all practice staff?

Table 5 presents raw scores with calculated percentages and ranges to show the actual rating of each element from one 'I do not understand what this element means' to five 'I understand completely what this element means'.

The lower ratings (one-three) were provided by administrative or reception staff, many of whom found the elements of the PC-PIT difficult to understand. Two GPs also provided low ratings (one-three) for the element relating to education and training. This was due to confusion about how the element of education and training related to requirements for continuing professional development available to GPs in practice.

Table 5 Ease of understanding the definitions of each PC-PIT element

Likert scale Element	Responders ratings 1-3 n (%)	Responders ratings 4-5 n (%)	Range (mean)
Patient centred care	6/27 (22)	21/27 (78)	1-5 (4.4)
Leadership	7/27 (26)	20/27 (74)	1-5 (4.2)
Organisational governance	9/27 (33)	18/27 (67)	1-5 (4.0)
Clinical governance	6/25 (24)	19/25 (76)	1-5 (4.0)
Team based approaches to care	6/26 (23)	20/26 (77)	2-5 (4.5)
Availability of information for patients	10/27 (37)	17/27 (63)	1-5 (4.0)
Availability of information for staff	4/25 (16)	21/25 (84)	3-5 (4.3)
Readiness for change	6/27 (22)	21/27 (78)	2-5 (4.3)
Education and training	7/27 (26)	20/27 (74)	2-5 (4.2)
Incentives provided to all staff	6/27 (22)	21/27 (78)	1-5 (4.0)
Performance: Process Improvement	7/26 (27)	19/26 (73)	1-5(4.0)
Performance: Results	6/26 (23)	20/26 (77)	1-5 (4.13)
Information and info technology	5/26 (19)	21/26 (81)	2-5 (4.5)

Two key difficulties were identified by staff in the qualitative feedback: (i) complicated wording; and (ii) difficulties in understanding the terms 'governance' and 'performance' (Table 6). A range of staff (nurses, allied health professionals and administrative staff) felt that the wording of the PC-PIT definitions were long and complicated. Nursing staff also made suggestions to change the term 'governance' to 'management' in order to clarify the meaning for all staff.

Table 6 Qualitative feedback: Ease of understanding PC-PIT definitions

Areas of difficulty	Illustrative quote	Staff
Complicated wording	*Questions are a bit wordy*	Allied health
	Wording at time was very complicated	Nurse
	Can you say the same thing with fewer words?	Administrator
	I find it easy to understand as I've been involved in the primary care collaboratives but I'm unsure whether some of the wording will be easily understood by everyone across the practice team	Nurse

Areas of difficulty	Illustrative quote	Staff
Terms and concepts of governance and performance	*Change the name from governance to… for example … management administration*	Nurse
	Not familiar with the term governance - just use 'organisation'	GP
	Clinical governance - Is this mainly required for GPs? Difficult to understand	Administrative staff

Acceptability and relevance of the PC-PIT to general practice

The PC-PIT was seen as an acceptable tool, particularly as a web-based rather than paper-based survey with 74% of participants rating it as easy and more preferable to complete it online. Overall, 67% rated the PC-PIT as a useful tool for assessing key elements of practice organisation and function. Participants emphasised both the relevance of the PC-PIT to everyday practice work and planning and also the role of the PC-PIT in allowing all staff to be involved in the identification of areas for improvement (Table 7).

Table 7 Qualitative feedback: Use of the PC-PIT in practice

Themes relating to use of the PC-PIT in Practice	Illustrative quote	Staff
Relevance to general practice	*All the questions can be put into everyday theory at our practice. It reinforces ways to improve our services*	Administrator
	It's a useful indicator of what different areas need improvement so it would be helpful in planning	GP
Whole-of-practice approach	*It's great to have feedback from all staff who give and assist with the direction of the practice … to find areas that we need to improve in or address*	Practice Nurse
	A straight forward way to see how all staff understand and also feel about and understand their practice	Administrator
Involvement of all staff	*Some staff may not be aware nor even need to be aware of how performance is rated*	Senior Business Manager
	Not relevant to all staff?	Administrator

Finally, 33% (8/24) did not think it would be useable as a future assessment tool in practice. This group was made up of administrative staff, who had also found the PC-PIT elements very difficult understand. It also included two GPs who perceived that the PC-PIT covered areas that were predominantly outside clinical management processes. Four (4/24) participants did not respond to the question.

Based on the results of the pilot, significant amendments were made to the PC-PIT in order to simplify the terminology and reduce the wording in each of the best practice definitions. Definitions were reduced to three or four focused sentences which encompassed the key aspects of the each of elements, based on existing definitions identified from the systematic literature review. Clarification was also made in relation to the individual elements, for example, 'organisational governance' was renamed

'organisational management', as per the suggestion made by practice staff in the qualitative feedback. These changes were made to the online PC-PIT and the amended tool was then used in the Phase 3 national trial.

PHASE 3: NATIONAL TRIAL

The refined PC-PIT approach was then trialed nationwide with three objectives; namely to: (i) document and describe the use of the online PC-PIT in practice; (ii) validate the PC-PIT Independent Practice Visit objective indicators; and (iii) identify the support needs (for example resources and/or professional development) to develop Practice Managers as leaders of performance improvement in general practice.

It is important to note that the PC-PIT is subjective. It has been developed as an online tool to allow practice staff to rate their **perceptions** of how their practice meets (or does not meet) the best practice definition of each of 13 key elements. This approach was taken to enable and ensure the participation of **all** practice staff in organisational improvement, seen as essential by our partners and stakeholders. The Independent Practice Visit provided a set of objective indicators against which to compare the perceptions of staff in order to create a combined and clear understanding of practice performance.

Participating practices

A total of 45 general practices trialed the PC-PIT. Complete data sets were available for 34 of these. These represented a range of geographic locations (urban, regional and rural areas) although the majority were urban and regional practices. It also included a range of practice sizes (< 2; 2 <5; 5 <10; 10+ full time equivalent GPs) and represented a range of business models (privately owned; partnerships; and corporate business models).

Ten practices described undertaking internal such as PDSA cycles, as well as involvement in externally run quality improvement activities such as Medicare Local programs; National Prescribing Service activities and the Improvement Foundation collaboratives. The remaining practices described either internal or involvement in external improvement programs. One of the 34 practices was newly established and had not undertaken any improvement activities within the past 12 months. The Practice Managers came from a variety of backgrounds including business management, nursing and allied health. Appendix 6 provides the characteristics of participating practices.

PC-PIT Practice Reports

After each Independent Practice Visit and rankings, a PC-PIT Report was completed and sent to each practice. These PC-PIT Reports were designed to provide a comparison between the ratings given to each of the PC-PIT elements by all practice staff (staff perceptions) and the Independent Practice Visit ratings (objective indicators).The short reports displayed de-identified median staff PC-PIT ratings along with ratings from the Independent Practice Visit in two side-by-side spider diagrams. A review of the two diagrams highlighted the PC-PIT elements where the median practice staff scores and the Independent Practice Visit scores were ranked highly (four-five) and those elements which were ranked lower (three or lower) by **both** staff and Independent Practice Visits. It also highlighted those elements where the rankings differed by one or more points; particularly those ranked four or five versus those ranked three or lower. For example, those PC-PIT elements with an Independent Practice Visit ranking of four or five versus a median practice staff ranking of one or two for the same element. Table 8 provides a summary of the Likert ratings and what they mean in the context of the PC-PIT.

Table 8 Summary of rating process for staff PC-PIT and Independent Practice Visits

PCPIT Staff Rating	Independent Visit Rating	What it means	What it indicates
1-3 (perception)	1-3 (objective indicators)	Staff **perceive** the practice **does not at all** meet (rating 1) / only **partially meets** (rating 2-3) the best practice definition of the element Documented **evidence** reviewed against objective indicators during the Independent Practice Visit indicates practice **does not at all meet** (rating 1) **/ only partially meets** (rating 2-3) best practice definition of element	Improvement needed. Recognised by staff and demonstrated in objective indicators
4-5 (perception)	4-5 (objective indicators)	Staff **perceive** the practice entirely meets (rating 5) / almost entirely meets (rating 4) the best practice definition of the element Documented **evidence** reviewed against objective indicators during the Independent Practice Visit indicates practice **entirely meets / almost entirely meets** best practice definition of element	No or limited improvement needed at this time. Focus is on monitoring and sustaining best practice function
1-3 (perception)	4-5 (objective indicators)	Staff **perceive** the practice **does not at all meet** (rating 1) **/ only partially meets** (rating 2-3) the best practice definition of the element Documented **evidence** reviewed against objective indicators during the Independent Practice Visit indicates practice **entirely meets / almost entirely meets** best practice definition of element	Improvements needed. Indication that the best practice processes evidenced in the practice documentation (policy and protocol) are **not** embedded in practice workflow and/or are unknown by practice staff
4-5 (perception)	1-3 (objective indicators)	Staff **perceive** the practice **entirely meets** (rating 5) / **almost entirely meets** (rating 4) the best practice definition of the element Documented **evidence** reviewed against objective indicators during the Independent Practice Visit indicates practice **does not at all meet** (rating 1) **/ only partially meets** (rating 2-3) best practice definition of element	Improvements needed. Indication that the best practice process perceived by staff are not evidenced in practice documentation (policy or protocols)

Qualitative data gathered via the Independent Practice Visit interviews with Practice Managers and other staff (practice nurses, GPs and administration, as available) were used to assist in explaining why these differences may have occurred.

The PC-PIT reports aimed to provide Practice Managers with a focus for discussions with their staff, in order to identify a specific and agreed area for improvement and strategies to achieve it. Practices continued to plan, implement and measure their improvement using the PDSA approach, led by Practice Managers or a nominated quality improvement champion within the practice.

Use of the PC-PIT in practice

Using the combined online PC-PIT element ratings, the Independent Practice Visit ratings and also interviews with Practice Managers, three specific practice types were identified. Each had a distinct ways of using the PC-PIT. Rather than being discreet, these three types represented key points along a continuum of organisational performance; from the lower scoring to higher scoring practices (see Figure 3).

Overall, 14% were appeared to have separate and uncoordinated clinical and practice management processes. This was evidenced by uncoordinated clinical governance and organisational management activities and the incomplete translation of clinical and management processes into formalised policies and protocols clearly known and understood by all staff (both clinical and administrative). These were also amongst the lowest scoring practices.

A further 24% practices had a primary focus on clinical governance, with organisational management as a supporting basis. In this model, Practice Managers had limited or no autonomy in relation to organisational changes within the practice. This was illustrated by a lack of documented evidence (and so lower scores), cited during the Independent Practice Visit, on the element of organisational management including key indicators such as evidence of staff role descriptions; performance appraisals, internal quality improvement activities and the use of information such as data reports; formal meetings and discussion to improve the internal function of the practice. The practice manager generally worked in a supporting role to the general practitioner(s) however there was limited evidence of communication and coordination between clinical and organisational management.

Following this, 21% of practices recognised the equal importance of organisational and clinical management in supporting the ongoing operation of the practice as a whole, demonstrated by high ratings in both the Independent Visit and staff PC-PIT ratings. Documented evidence of meeting minutes and previous Plan-Do-Study-Act (PDSA) processes and outcomes showed that management processes were constantly reviewed, in a combined approach by clinical and administrative/management staff and readjusted to facilitate patient care. These practices were the highest scoring and demonstrated close communication and shared decision-making in relation to continuous quality improvement, championed by an autonomous practice manager who worked closely with a defined clinical leader. They were also appeared more likely to have a history of involvement in a range external continuous quality improvement programs.

The remaining 41% of practices fell along the continuum, with the majority toward the lower scoring level. These practices were generally characterised by positive staff perceptions of the 13 PC-PIT elements but a lack of documented evidence, most particularly on the use of the practice data in making ongoing improvements to their organisational processes and in reviewing and using performance results. Table 9 provides examples of all three practice types, the PC-PIT median element scores given by the staff and the raters; illustrative interview quotes and evidence cited during the Independent Practice Visits.

Appendix 7 provides two examples of de-identified practice reports. PC-PIT Report 'Practice A' was a high scoring practice, demonstrated by the similar high rankings of both median staff ratings and Independent Practice Visit objective indicators. 'Practice B' had rankings which differed between the staff and the Independent Visits. It demonstrated a lack of documented evidence to meet the objective indicators for several of the PC-PIT elements, even though these elements were ranked highly by staff. Supported by feedback from the practice manager, it indicated a largely informal approach to the practice function, with limited evidence demonstrating that these were both formalised as policies and protocols and adapted as part of daily practice workflow. This created significant issues in managing the day to day function of the practice and implementing organisational improvements.

Figure 3 Practice type and use of the PC-PIT in practice

Low scoring | High scoring

Clinical Management

Practice Management

Clinical management / Practice management

Clinical management / Practice management

Uses PC-PIT to:

Promote practice management leadership

Initiate communication and identify common elements

Improve teamwork in clinical and practice management

Achieve accreditation requirements

Uses PC-PIT to:

Promote practice management leadership

Redirect focus to areas of organisational improvement

Identify and address areas where organisational and clinical management overlap

Uses PC-PIT to:

Reinforce and sustain practice management leadership

Formalise strategies to identify areas for improvement

Undertake a whole of practice approach with delegated responsibilities for quality improvement activities to all staff
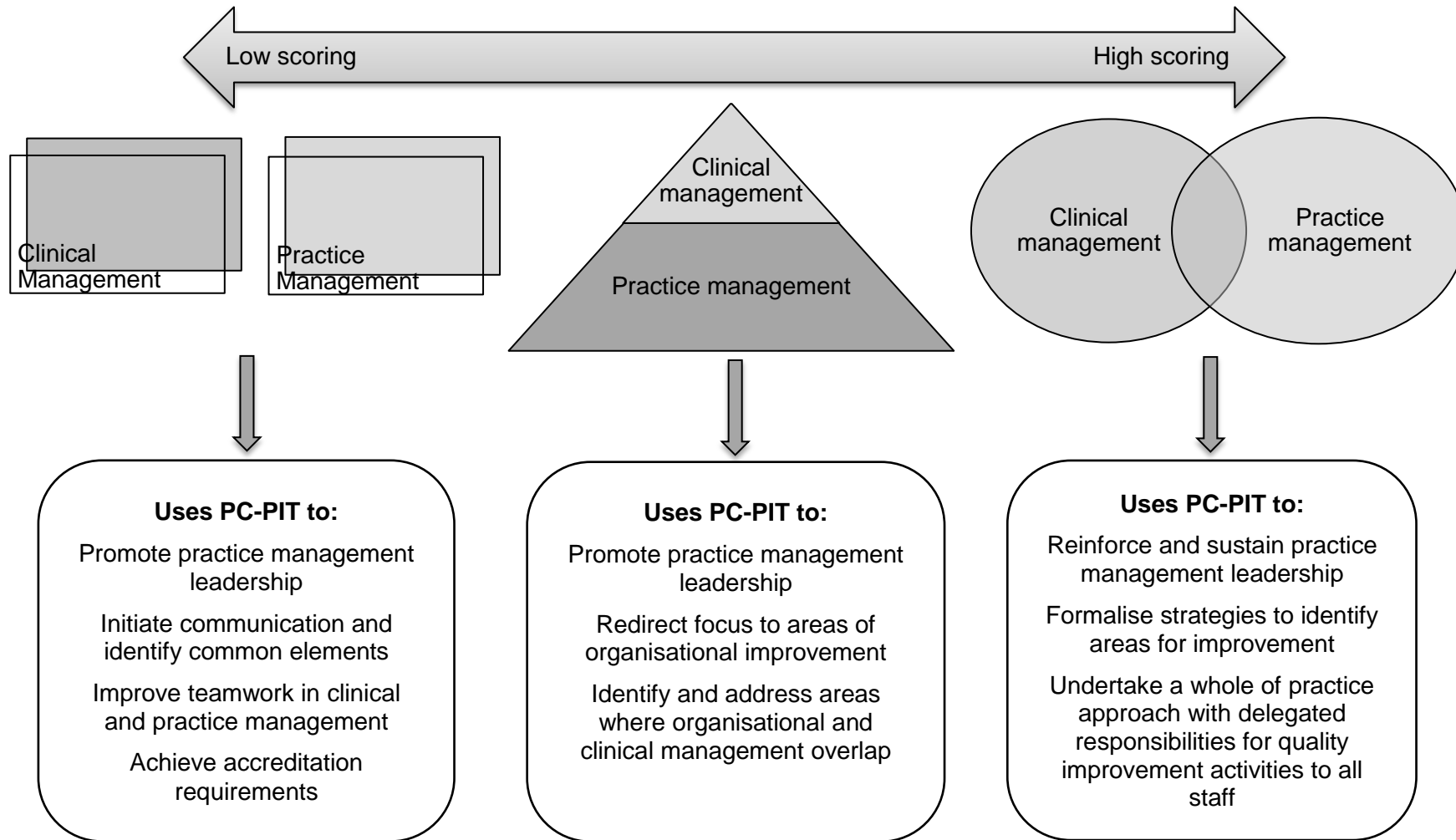
Table 9 Practice types and illustrative interview quotes from the Independent Practice Visits (IPV)

Practice type	PC-PIT Element and Rating (1-5 Likert scale)		PC-PIT Examples from qualitative interviews	Independent Visit Sources	Improvement identified
☐ ☐Separate clinical and organisational management processes; lack of coordinated approach	**Organisational Management**		*We have separate but … regular admin meetings; just no joint meetings with the GPs. I can't make any changes here, I'm not allowed to really… and so there's just no way to do it… I don't even know when [the GPs] are planning leave… We don't know who is following up any urgent pathology or other results, we don't know if we should be offering patients appointments with other GPs so we can't even tell [patients] when their GP will be back … and I don't know what to tell the reception staff to do…I developed up this flow table, which shows what we have to do, it can go in our manual but we're not doing it in practice. We need to sort this out – it's part of our 2015 accreditation but there's just no motivation* (Practice B, Practice Manager)	Policy and procedures manuals; Practice Manager interview; agenda and meeting minutes (administrative meetings and clinical meetings).	Development of (i) a staff leave recording system (ii) a formalised GP buddy system using established protocol developed by Practice Manager and GP, following accreditation requirements
	Staff	**IPV**			
	3	2			
	Performance - Results		*We have a PenCat Report on our type 2 diabetes patients – it shows the number of patients and treatment information… I send it to the GP and registrars to help with our service delivery* (Practice C, Practice Manager) A review of the report by the Independent Practice Visit assessors showed the data were incorrect. There was a significant underestimate of current active type 2 diabetes patients. A further review of patient data showed this was primarily due to a lack of consistent diagnosis information recorded for type 2 diabetes patients. The Practice Manager was not aware report was incorrect *… There aren't standard approaches to data entry – for clinical data into our patient files; we have a lot of registrars that come and go… they enter things the way they want – we haven't got a standard way of entering information. I think we*	Practice Software and PenCat Report: Active Type 2 diabetes patients; Practice Manager interview; Practice Nurse interview	Practice Manager to undertake further training in the use and interpretation of the PenCat tool and Reports. Practice Manager and Nurse to develop protcolos to guide clinical data entry for visiting registrars ; role of the nurse in data cleaning with initial focus on type 2 diabetes patients
	Staff	**IPV**			
	4	2			

Practice type	PC-PIT Element and Rating (1-5 Likert scale)		PC-PIT Examples from qualitative interviews	Independent Visit Sources	Improvement identified
			could develop a standard system for the common things like diabetes, a session for new registrars and have a reminder sheet… … I haven't spoken with the Practice Manager about it… we don't really get together to discuss problems (Practice C, Practice Nurse)		
▲ Primary focus on clinical governance; with organisational management as the basis for clinical support	**Manage change - Incentives**		*There are arrange of incentives that are available… they're mostly for the GPs but there are some for the staff... maybe [the staff] don't really know about them… or maybe we don't update them and tell them… its sort of something I guess we need to keep track of…*(Practice Manager, Practice L)	Human Resource Manuals; Policy and Procedures; Meeting minutes; review of position descriptions; practice nurse, practice manager and GP interviews	Development of quarterly news sheet for staff, outlining upcoming professional development opportunities approved by practice and method of applying for support to attend. Review of existing protocols to support staff education and training in practice
	Staff	**IPV**			
	3	5	In a review of the available evidence, the Independent Visit assessors, there were policies concerning paid leave and financial support for staff to attend training and conference meetings, however it was clear from the median staff score that staff were unaware of the available incentives. Conversely, while these incentives may have been part of documented practice policy, they were not a part of daily workflow, or staff performance review		

Practice type	PC-PIT Element and Rating (1-5 Likert scale)		PC-PIT Examples from qualitative interviews	Independent Visit Sources	Improvement identified
⬭ Clinical and practice management of equal importance; coordinated and consultative approaches to patient care and practice management	All elements		*D--, our principal GP here and myself are talking now … we want to work together on looking at our patients with type 2 diabetes, especially the organisational side of recall and follow up, with our nurses and admin staff… we think it would be good to see how changes made to the management of our recall and follow up systems result in better HbA1cs and other outcomes for our patients.*(Practice Manager, Practice N)	Human Resource Manuals; Policy and Procedures; data printout (active type 2 diabetes patients) Communication Book Meeting minutes; review of position descriptions; practice nurse, practice manager interviews	Initial focus on reviewing current recall and follow-up procedures; working to identify appropriate methods to link
	Staff	**IPV**			
	4	4			

Overall, there was complete agreement between rater one and rater two in 11 of the 19 practices. Rater one scored higher for 11 elements and lower for one element. The mean difference was zero to 10. Table10 presents Kappa (κ) statistic for each element.

Table 10 Agreement between rater 1 and rater 2

Element	Sub Element	Kappa (κ*) statistic	Standard error	95% CI
Patient centred care		0.78	0.12	0.54-1.00
Leadership		0.86	0.09	(0.68, 1.00)
Organisational	Organisational Management	0.64	0.14	(0.35, 0.93)
	Clinical Governance	0.65	0.14	(0.38, 0.92)
Communication	Team-based care	0.43	0.15	(0.14, 0.73)
	Availability of info for patients	0.54	0.14	(0.27, 0.83)
	Availability of info for staff	0.59	0.17	(0.26, 0.92)
Change management	Readiness for change	0.68	0.14	(0.39, 0.96)
	Education and Training	0.87	0.12	(0.63, 1.00)
	Incentives	0.91	0.09	(0.74, 1.00)
Performance	Process improvement	0.85	0.08	(0.69, 1.00)
	Performance results	0.86	0.08	(0.70, 1.00)
Information/Info Technology		0.93	0.06	(0.81, 1.00)

Overall Kappa Coefficients: 0.82, s.e. 0.0287, 95% CI: 0.76 - 0.87

Test for homogeneity: Chi square = 21.34 d.f. = 12 p = 0.046

The element with the lowest kappa (0.43) was 'team-based care'. For this element, the raters agreed in 11/19 practices, rater one scored higher seven times and less once. Without this element, the chi square for homogeneity was 14.66, p = 0.20.

In order to identify reasons for key discrepancies by practice and by element, the raters reviewed their evidence-based assessment forms, discussed the discrepancies and possible reasons for these. The discrepancy in practice ten was due to an instance in which the raters were required, due to circumstances, to interview different informants and cite separate documentation in relation to the elements. Poor concordance between the ratings for element 'team-based care' reflected a lack of formally documented policies and procedures available to Practice Managers, while additional (undocumented) information

could be provided by practice nurses. Rater one scored this verbal (but undocumented) information while rater two did not.

In terms of practices, rater one scored more elements higher than rater two in six practices, especially for practice 10, where there was agreement on only one element. There was complete agreement in 11 of the 19 practices (see Table 11).

Table 11 Agreement between rater 1 and rater2 by practice

Practice ID Number	Number of elements (n=13) for which		
	Rater 1 higher	Agreement for all	Rater 2 higher
1	5	8	0
2	2	9	2
3	0	13	0
4	1	12	0
5	0	12	1
6	6	7	0
7	1	8	4
8	3	7	3
9	4	8	1
10	12	1	0
11	0	13	0
12	0	13	0
13	0	13	0
14	0	13	0
15	0	13	0
16	0	13	0
17	0	13	0
18	0	13	0
19	0	13	0

The resources and support needs of Practice Managers

During the in-depth interviews with the Practice Managers and practice nurses, four key themes were identified in relation to Practice Managers' perceived resource and support needs. Most Practice Managers were not familiar with internal organisational development tools, other than those previously developed by former Divisions of General Practice. The majority of these tools were neither trialed nor validated in general practice settings. Only one practice manager described the use of a formalised approach to organisational development (Six Sigma), recently adapted for use in general practice but which required extensive external facilitation to complete. Practice Managers perceived the benefits of additional supporting tools which related to elements in the PC-PIT, and also identified strategies such as online forums or shared email updates, based on the PC-PIT elements of high performing practices, which might focus on sharing key problems and solutions for organisational performance improvement. Table 12 presents a summary of the key themes.

Table 12 Additional support and resources to assist Practice Managers

Themes relating to additional resources and support for Practice Managers	Illustrative quote	Staff
Unsure	*There are no standard approaches to organisational performance in general practice – we still use things that popped up during the division days… we just shared them with each other. … I don't know what's out there.*	Practice manager (Practice F)
Practice visits or links with other Practice Managers	*Knowing what other Practice Managers are doing … being able to talk to some and share strategies.*	Practice manager, (Practice C)
	Is there a way we could organise visits from another Practice Manager or a GP? Someone who is making changes in practice and can tell everyone what it has meant to the way the practice has performs.	Practice manager, (Practice B)
Online forum or email system	*An online forum or email system, just so you can read the things of relevance to you – but see what problems are being discussed and look at potential solutions used by others*	Practice manager (Practice E)
	It's getting out and visiting other practices… like the one in the town next to us… seeing what's going on is really useful… you need to see what ideas others have, what they do and think if they will work for you… that's how you do it.	Practice manager (Practice L)
Other comments	*The PC-PIT … it's none punitive, it's all staff and a much easier place to start when you're new to all of this.*	Practice manager (Practice B)

Finally, one Practice Manager mentioned the PC-PIT as being the good starting point for practices unused or unfamiliar with quality improvement and describe it as a 'non punitive'. They saw the key benefit as being the inclusion of all staff as part of a potentially wholly internal process.

Changes to the PC-PIT process

No significant changes were required to the online PC-PIT. However, from 2016 the PC-PIT Independent Practice Visit will be revised so it may be conducted by a staff member as part of a wholly internal PC-PIT review process, with potential support provided to practices as needed.
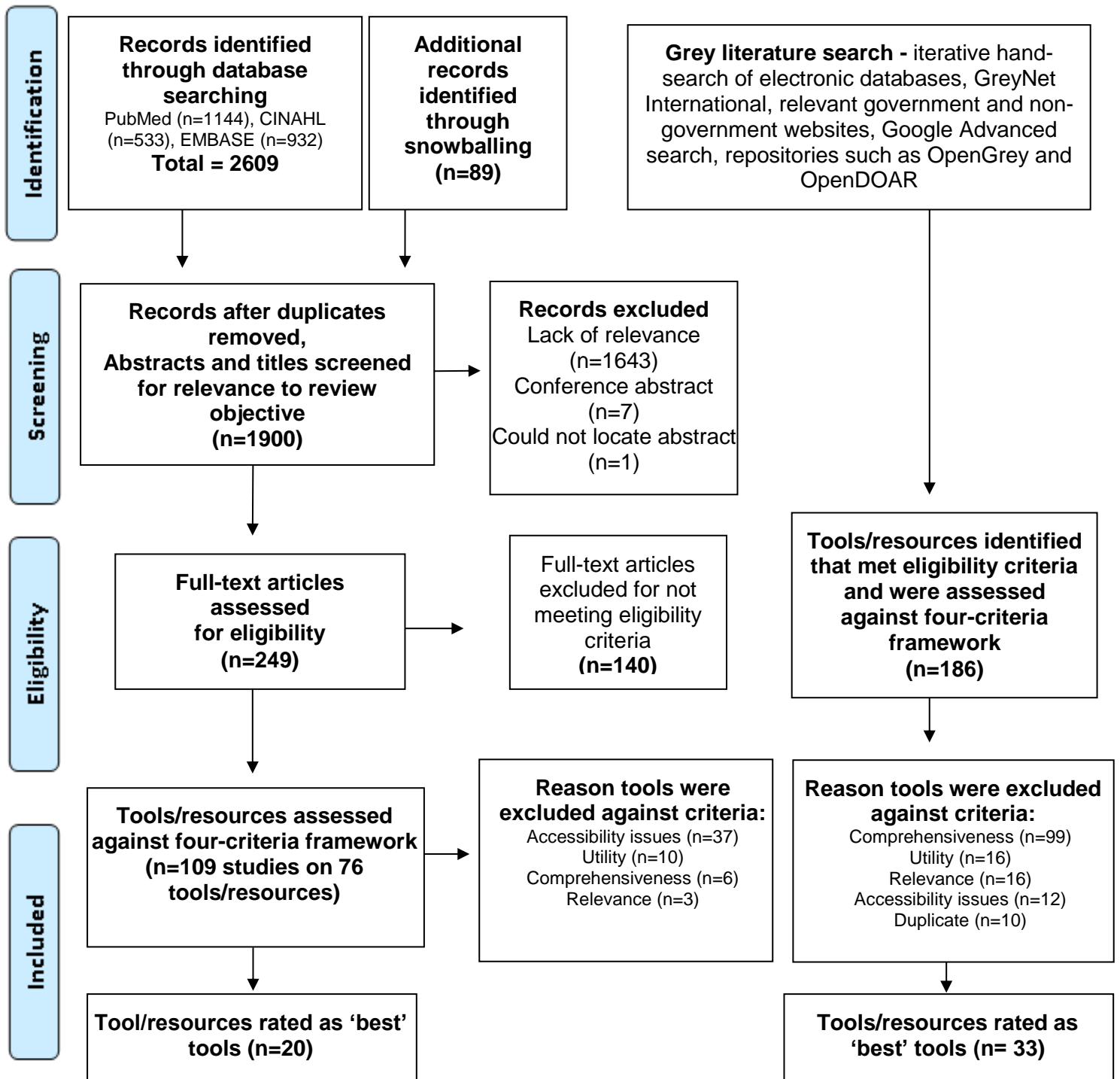
PHASE 4: IDENTIFICATION OF A SUPPORTING SUITE OF ONLINE TOOLS AND RESOURCES

Following on from the feedback from Practice Managers, and in keeping with the desired attributes of an online quality improvement tool, as identified by the partners and end users; a process was undertaken to identify, assess and select a suite of additional tools/resources that would complement the PC-PIT elements. As described previously, this phase included two stages; Stage 1 being a systematic literature review to identify a range of online improvement tools/resources suitable for use in Australian primary health care and Stage 2 being the assessment and selection of a final suite of tools by an expert panel of GPs and Practice Managers for use as part of the PC-PIT. Full details of the methods for both stages and the list of tools identified can be found in the two publications (online at mja.com.au) [21, 22].

Systematic literature review: Identifying online quality improvement tools

The databases search yielded 1,900 citations when duplicates were removed (see Figure 4). After reviewing the titles and abstracts for relevance, the total was reduced to 249 manuscripts. Of these, 140 were excluded leaving 109 manuscripts that met the eligibility criteria. The majority of citations did not meet the inclusion criteria because the tools/resources were not used in primary care settings. From the 109 citations, 76 quality improvement tools/resources were identified. The level of empirical evidence for each tool varied substantially, some tools/resources such as the Plan Do Study Act (PDSA) had numerous studies supporting use in primary care [77-81] whereas other tools/resources such as the Organisational Capability Questionnaire were only taken to pilot stage [82]. More than half of the 76 tools/resources were accessible. The remainder were either not readily available; were obtainable only by registration or membership to an organisation; or had to be purchased. From 76 identified tools/resources identified in the published literature, 37 were initially excluded due to accessibility issues. Of the remaining 39 tools/resources, 19 scored less than seven on the four-criteria appraisal related to issues of utility (10), relevance (three), and comprehensiveness (six). Therefore 20 were classified as 'best' tools/resources.

Figure 4 Flow diagram outlining selection process of tools/resources

Identification

Records identified through database searching
PubMed (n=1144), CINAHL (n=533), EMBASE (n=932)
Total = 2609

Additional records identified through snowballing (n=89)

Grey literature search - iterative hand-search of electronic databases, GreyNet International, relevant government and non-government websites, Google Advanced search, repositories such as OpenGrey and OpenDOAR

Screening

Records after duplicates removed, Abstracts and titles screened for relevance to review objective (n=1900)

Records excluded
Lack of relevance (n=1643)
Conference abstract (n=7)
Could not locate abstract (n=1)

Eligibility

Full-text articles assessed for eligibility (n=249)

Full-text articles excluded for not meeting eligibility criteria **(n=140)**

Tools/resources identified that met eligibility criteria and were assessed against four-criteria framework (n=186)

Included

Tools/resources assessed against four-criteria framework (n=109 studies on 76 tools/resources)

Reason tools were excluded against criteria:
Accessibility issues (n=37)
Utility (n=10)
Comprehensiveness (n=6)
Relevance (n=3)

Reason tools were excluded against criteria:
Comprehensiveness (n=99)
Utility (n=16)
Relevance (n=16)
Accessibility issues (n=12)
Duplicate (n=10)

Tool/resources rated as 'best' tools (n=20)

Tools/resources rated as 'best' tools (n= 33)

Overall, 186 tools/resources that met the eligibility criteria were identified through the grey literature search. From these 12 were initially excluded due accessibility issues. A further 10 tool/resources were duplicates and also excluded. Of the remaining 164 tools/resources, 131 scored less than seven on the four-criteria appraisal and were excluded due to issues related to comprehensiveness (99), utility (16) and relevance (16). Therefore there were 33 tools/resources identified as 'best' from the grey literature.

Of the total 53 'best' tools/resources identified, 13 of were from Australia and the remainder were from UK (14), USA (14), Canada (four), New Zealand (four), and Europe (four). There was significant overlap of the PC PIT elements covered by the 'best' tools/resources; 27 mainly addressed performance, 23 addressed patient centred care, 22 addressed governance, 14 change management, 10 addressed leadership and communication and eight addressed information technology (IT).

Delphi study to assess the utility of quality improvement tools and resources in Australian primary care

From the 53 'best' tools/resources provided to the expert panel, 28 were included in the final review round. Of these 21 were selected for inclusion in the final suite. Tools/resources were selected for inclusion in the final suite if they received five or more recommendations from the expert panel of nine. Figure 1 (see Methods section) shows the number of tools/resources accepted or rejected in each Round.

Tables 13 and 14 show the mean and range of scores for recommended, rejected and divergent tools/resources in both Rounds 1 and 2. Overall, results suggest good concordance in ratings between Practice Managers and GPs and clear delineation between recommended and rejected tools/resources. All reviewers provided a recommendation, however not all provided a final score.

Table 13 Round 1 Tool Review Scores

Review Category	Recommended n=14	Rejected n=4	Divergent/Unsure n=35
Total score: #/20 mean (range)	17 (14-20)	5 (5)	13 (8-17)
	n=12	n=2	n=30
GP score #/10 mean (range)	8 (5-10)	1 (0-2)	6 (0-10)
	n=13	n=2	n=33
PM score #/10 mean (range)	9 (7-10)	3 (0-5)	7 (0-10)
	n=13	n=4	n=32

Table 14 Round 2 Tool Review Scores

Review Category	Recommended N=11	Rejected N=2	Divergent/Unsure N=22
Total score: #/20 mean (range)	16 (12-19)	5 (3-6)	11 (6-15)
	n=11	n=2	n=21
GP score #/10 mean (range)	8 (5-10)	2 (0-3)	5(0-10)
	n=11	n=2	n=21
PM score #/10 mean (range)	8 (6-9)	3 (3)	6 (1-10)
	n=11	n=2	n=22

Of the final suite of 21 tools/resources, five were Australian specific, six were from the United Kingdom and seven were from North America. The majority of tools/resources addressed two or more elements of PC-PIT, with the most common elements being

leadership, change management, and resources to support patient centred-care. The majority of tools/resources took a whole of practice approach and involved most practice staff. The final suite of tools can be viewed in the online publication (mja.com.au) [22]. It should be noted that reviewers perceived the tools/resources to be relevant to different target audiences and PC-PIT elements, therefore only consensus results are reported.

Qualitative Results

Key results of the qualitative feedback from Practice Managers and GPs are summarised below. Three key themes were common to recommended tools; namely they were (i) easily used (high utility), (ii) useful to practice (high value) and (iii) complemented and supported elements of the PC-PIT. Tools/resources were more likely to be scored highly if they had been successfully used on previous occasions by the reviewer(s); had the perceived potential to be modified or adapted, or the reviewer indicated an intention to use the tool in the future.

> *It is beautiful in its simplicity. It is well laid out and easy to use. This can be used easily with minimal training and support. All practice staff should find this easy to use.* (GP Round 1)

> *A very useful tool to enable change to occur in small managed steps that become improvements not just changes for the sake of change. A tool that assists in reaching goals and monitoring progress toward the goal.* (Practice Manager, Round 1)

Despite the fact that these tools/resources were recommended, a broad range of limitations were also noted. GP comments centred mainly on poor utility (too complex or too general) whereas both GPs and Practice Managers focused on potential implementation challenges including the need for further resourcing, strong leadership and 'buy in' from other members of the practice.

> *It is easy to use and quite simple….. It does require a facilitator and team time to be most effective, this can sometimes be difficult to arrange in a busy practice.* (Practice Manager, Round 2)

The six unanimously rejected tools/resources from Rounds 1 and 2 were perceived to have poor utility (hard to follow, too sophisticated, too generalised, too time and resource intensive or too wordy); were relevant mainly to hospitals or other non-primary care organisations; already out of date; required external facilitation and either duplicated or were perceived to be of no value to PC-PIT.

> *It is not simple to follow. Language is not simple and is too wordy without practical summaries to tie it all in together. It would need extensive facilitation and would achieve minimal practical benefit.* (GP, Round 2)

There were 35 tools/resources in Round 1 and 22 in Round 2 where Practice Managers and GPs gave divergent or unsure judgements. The majority of these tools complemented the PC-PIT however there were mixed comments on the utility and usefulness of the tool; perceptions of the lack of relevance of the tool/resource to the broader Australian context or the context of general practice. If reviewers perceived the tool replicated the PC-PIT or duplicated existing accreditation resources, these were also noted as limitations.

> *I can't recommend the tool as is but really recommend the concept. I've found it to be excellent in my own practice. It could be worked on to be feasible in Australian General Practice through the use of case conferencing items and sponsored*

workshops which explain how it works. (GP, Round 2)

Overall, the tools/resources accepted in the final suite were perceived to have high utility and relevance which outweighed any limitations.

> *This is a well-designed resource. A number of the modules would be useful in the Australian setting but some are not - if offered as a resource for PC-PIT there needs to be an explanation…* (Practice Manager)

Tools/resources excluded from the final suite were primarily rejected by the majority of reviewers because they did not fit the Australian context or were too complex. All excluded tools/resources were perceived to have some strengths but more limitations in relation to utility, when compared to the larger set of final tools/resources.

> *This is a useful tool but does not fit with Australian General Practice training at a practice level.* (Practice Manager)

Discussion

There is international interest in the best methods for improving quality of care in primary health settings [83, 84]. As a result governments and health care organisations carry out large scale programs including national quality strategies and accreditation in an effort to improve the quality of services, enhance patient experience and health outcomes, and reduce the cost of care [85-88]. Quality improvement involves "…a structured process that includes assessment, refinement, evaluation and adoption of processes by an organisation and its providers to achieve measurable improvements in outcomes to meet or exceed expectations" [89 p 1].

In Australia, a system wide approach for quality improvement has been driven by the endorsement of national frameworks and policies including the Quality Framework for Australian General Practice (2007) [90], the Australian Safety and Quality Framework for Health Care (2010) [91], the National Primary Health Care Strategic Framework (2013) [92] and most recently the Primary Health Network (PHN) Quality Partnership Framework (2015) [93]. Most quality improvement activity in general practice has been motivated by the accreditation process based on the national standards of the Royal Australian College of General Practitioners (RACGP) [87] and the opportunity to participate in externally facilitated programs such as the Australian Primary Care Collaboratives (APCC) [88]. They have addressed issues such as chronic disease management, access and e-health and while these have had a positive impact in improving health care and building practice capacity in these areas, only 2,116 out of approximately 7,035 practices have been involved in some aspect [94, 95].

Whilst the external drivers such as frameworks and accreditation for quality improvement are important, internal factors such as organisational infrastructure, strong team leadership and culture of quality improvement enable practices to improve their performance and the outcomes of their patients [89, 96] .However, specific areas that practices choose to address through ongoing quality improvement efforts, and the methods they use to address them, are likely to vary based on the practice's concerns, circumstances, capacity and resources [85]. Evidence suggests general practice teams need to own the quality agenda, take leadership and be actively engaged as partners in quality improvement [86]. Quality improvement which is internally led at a practice level with support from regional networks is also demonstrated as being more likely to be effective [5].

Thus the organisational context in which qualitative improvement initiatives take place indeed becomes increasingly recognised as a crucial determinant of how effective the initiatives may be [10 -11]. In their research on primary care practice development, Miller et al identified those contextual elements as 'adaptive reserves'; or features that represent a practice's internal capability [71]. While there is an undeniable need to focus on the role of GPs in quality improvement and the translation of effective clinical evidence and guidelines to practice, it also worth noting that the elements related to organisational improvement are (and perhaps should be seen as) the domain of practice or operational managers. Indeed, many Practice Managers are responsible for large and fluctuating numbers of staff, high yearly financial turnovers; and the ongoing facilitation and management of change, many with limited access to appropriate training and ongoing professional development, validated resources and mechanisms for support.

The Phase 2 pilot provided evidence that the PC-PIT is an acceptable and easy to complete quality improvement tool that offers a new approach to improving practice performance in areas which are not routinely addressed. While inclusion of all staff was noted as particularly useful, feedback from some sectors of senior administration indicated a belief that not all staff needed to be aware of areas of practice function, such as performance measures and aspects of organisational and clinical governance. These attitudes may comprise the future effective use of the PC-PIT, particularly as many staff roles and responsibilities are highly

interdependent and improved teamwork is based on an understanding and appreciation of the complementary aspects of these roles.

Based on findings from the pilot, the element definitions were reworded and simplified to ensure lower reading grade levels; this includes replacing the term 'governance' with 'management'. Based on the attitudes expressed by business managers, a further free to access online pre-recorded presentation continues to provides an introduction to the purpose of the PC-PIT and the focus on a 'whole of practice approach' in order to clarify the aim of the tool and ensure that all staff have a basic understanding of the elements related to practice performance and how these relate to their own roles and responsibilities.

The Phase 3 national trial sought to determine the utility and effectiveness of the tool across this range of practice models, and explore the role of context in the adaption and use of the tool in inner urban, regional and rural settings. However, rather than highlighting the ways in which the PC-PIT was used by practices with different business models or based in different geographic locations; the trial highlighted three specific practice types along a continuum of low to high performing practices. Initial evidence gathered during the PC-PIT trial suggested that lower performing practices may have developed protocols and policies as part of meeting accreditation requirements that were not necessarily translated into daily workflow, either due to the hurried way in which they were developed and implemented or an overall lack of motivation relating to the adoption and sustained change in practice. An example of this was a practice which had developed a formalised protocol for leave notification and guide for a GP clinical buddy system but could not find a way to have this implemented and adopted in practice workflow. While it is not designed to replace existing accreditation processes, those lower performing practices which struggle to implement and/or sustain changes associated with accreditation appear to be using the PC-PIT as a process of change introduction and management. The PC-PIT thus provides a link between both the tangible aspects of quality improvement (such as the presence of defined processes of care; formalised meetings; data collection and review, as highlighted by accreditation) as well as less tangible domains such as communication, change management and the creation of culture of performance. At the other end of the performance continuum were those high performing practices already working as a team to explore the links between organisational improvements and corresponding improved patient health outcomes. These practices provided evidence, through their PDSA plans, to demonstrate they were seeking a method to link organisational improvements to specific improved patient health outcomes.

The pilot and trial of the PC-PIT suggested that teamwork and collaboration between clinical and organisational expertise within a practice group, where both have a recognised equal importance, may be the way forward. In relation to the accompanying online suite of tools and resources to complement the PC-PIT, our research demonstrates that there is a need to consider both the capacity of health professionals and Practice Managers to undertake and drive quality improvement initiatives and the preferences of practice staff for tools/resources most applicable to the context of their practice.

The final suite of tools/resources, conducted in Phase 4 of the research program, comprised those unanimously recommended by the expert panel: adverse event analysis, clinical engagement and PDSA. These types of tools/resources are familiar to practices; the PDSA is particularly widely used by both the Australian Primary Care Collaboratives and RACGP quality improvement programs [78, 99]. Tools/resources that can be used by all staff and involve all domains of practice operation are considered of highest value, particularly in identifying areas in need of change and in facilitating and monitoring the change process [85]. Tested and proven tools/resources (that is, those with high credibility) and those perceived to be easily adapted to suit practice context were judged as most acceptable. Indeed, the credibility of a tool has been linked to greater adherence and implementation, particularly in the use of clinical guidelines [5].

The final suite of high quality, validated and free-to-access resources will now become part of an entire PC-PIT organisational performance improvement process and seek to provide

Practice Managers and other practice staff with the resources to further development their own, as well as the capacity of their practice, to effectively engage in quality improvement initiatives and achieve demonstrated improvements in organisational function.

PC-PIT: WHERE TO NEXT?

Following this, there are three key areas in the ongoing development of the PC-PIT process, namely: (i) the engagement and partnership with two PHNs to develop and trial and approach to embed the PC-PIT process as part of PHNs quality improvement and practice support programs, with the overall aim of developing a national framework to guide the use of the PC-PIT process by PHNs; and (ii) to continue established partnerships with RACGP to develop a national framework to support the application and embedding of the PC-PIT process within the existing RACGP quality improvement activities and finally (iii) to foster partnerships in practice and with key consumer organisations to explore patient engagement in the application of the PC-PIT (with end users and Consumer Health Forum).

In addition, while the Independent Practice Visit was conducted by two raters, it is anticipated that this will become part of the PC-PIT as a wholly internal assessment process. This combined approach will further strengthen the PC-PIT approach and provide Practice Managers with an in-depth understanding of their practice function.

The establishment of the PHNs and the release of the discussion paper for the Review of the Performance and Accountability Framework indicators illustrate the integration of aspects of quality improvement across the health reform strategy 97. Although, as yet incomplete, the national primary health organisational performance quality objectives focus on outputs related to safety, responsiveness (based on measures of patient experience); capability and capacity 97, 98. In addition, the development of the national PHN evaluation framework lists continuous quality improvement activities, outputs and outcomes related to provision of practice support and the identification of high priority practices; the provision of accreditation support and support in the use of data for practice improvement as clear roles of the PHNs. Thus, the PC-PIT process provides a standardized and simple approach for PHNs and suits a wide range of practice capacities, locations and business models. Indeed, the PC-PIT may also afford previously unforeseen benefits, as identified by our participating partners. Most notably, the ability for organisations such as the RACGP and PHNs to identify and understand those lower scoring practices and provide targeted to support in order to more effectively engage them in organisational improvement activities. It may also provide future options for practices to benchmark their organisational performance against like practices nationally.

There has also been extensive interest in the application of the PC-PIT from within the broader primary health care community, with over 100 practices expressing interest in using the tool nationwide. This includes requests from Refugee Health Services, the Australian Psychology Association and Aboriginal Medical Services. The potential to adapt the PC-PIT to these settings is also a focus of future work as our partnership and stakeholder groups increase.

LIMITATIONS OF THE NATIONAL TRIAL STUDY

Although the trial was conducted with volunteering practices, every effort was made to ensure a range of geographic locations and practice sizes were incorporated in the rater comparison. However, there was an over-representation of urban and regional practices. Many rural practices were unable to commit due to perceptions of time required to complete improvement activities. However, this is area that may be of interest to the newly established PHNs, given their formal role in as facilitators and supporters of practice engagement in quality improvement. Likewise, the authors acknowledge the lack of consumer involvement during the trial phase of the PC-PIT. Further work to refine and embed the PC-PIT in existing quality improvement programs will seek to involve the Consumer Health Forum as a

key partner in the process, with emphasis on the role of consumer feedback as an embedded feature of external validation.

In relation to the rater comparison, it should be noted that the calculation of the aggregate value of Kappa over the 13 elements assumes that the Kappas are independent, which is unlikely. The lack of independence, however, is unlikely to affect the aggregate value but might increase the standard error to a small degree.

In relation to the selection of the support tools and resource suite, while the Delphi technique is a well-recognised review method, the judgements of the selected expert panel may not be representative and tool/resource acceptability may vary according to the specific interest of individuals. Perceptions of utility may also change with exposure to specific quality improvement tools/resources and increasing familiarity. However we endeavoured through the panel selection process to engage those with a high level of experience in the field and from a diversity of practices. The modification of the Delphi technique also limited the number of rounds of review for each of the tools/resources. Ideally, all panel members would have reviewed all tools/resources in each round, however due to time constraints and reviewer workloads this was not possible. The authors acknowledge that there is a constantly changing and evolving background of quality improvement. New tools/resources are constantly becoming available and will not have been included in the evaluation described in this report, while existing tools/resources can become outdated or difficult to access. It is also likely that several of the excluded tools/resources could be useful for specific tasks in practice, despite their identified limitations.

Recommendations

Following on from the work conducted and achievement made as part of the as part of the Centre for Research Excellence in Primary Health Care Microsystems (full details available at: http://aphcri.anu.edu.au/aphcri-network/research-completed/improving-quality-and-sustainability-integrated-phc-pc-pit-study) and the extension of work (2015-16), we now make four key recommendations in relation to the PC-PIT as part of existing quality improvement activities in 2016 and beyond:

General Recommendations

> Engagement and partnership with two PHNs to develop and trial an approach to embed the PC-PIT process as part of PHNs quality improvement and practice support programs, with the overall aim of developing a national framework to guide the use of the PC-PIT process by PHNs; and

> Continue established partnerships with RACGP to develop a national framework to support the application and embedding of the PC-PIT process within the existing RACGP quality improvement activities.

> Foster partnerships in practice and with key consumer organisations, to explore patient engagement in the application of the PC-PIT (with end users and Consumer Health Forum).

> Continue to explore the application of the PC-PIT within a broader range of primary health care settings, including allied health professions, Aboriginal Community Controlled Medical Services and specialist community health clinics.

Recommendation to the Department of Health:

> Continue our partnership with the Department of Health, most specially the PHN Establishment Branch, to develop a process to embed the PC-PIT in existing quality improvement programs, with focus on present quality improvement and practice support activities conducted by PHNs.

Conclusion

With the continued focus on the important place of general practice and primary health care in the broader health care context and a refocus on the importance of organisational aspects of practice in relation to quality care delivery, the time is now right to focus on a standardised internally-led approach to improving practice performance, designed for the dynamic context of primary health care.

Work will continue with our key partners in a co-creation approach with a specific focus on developing and trialling frameworks to embed the PC-PIT in existing quality improvement and practice support programs as undertaken by the RACGP and the PHNs. The overall aim to will to provide the PCPIT as a process that may be facilitated by these organisations, and linked to existing professional development and quality improvement activities.

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Appendix 1 Protocol for the pilot of the Primary Care Practice Improvement Tool (PC-PIT) – readability and content validity

AIMS OF THE STUDY

This study has 3 main phases. Phase 1, the identification of elements integral to high functioning primary care practices has been completed. Phase 2 involves the development and then pilot of new organisational improvement tool, namely the Primary Care Improvement Tool (PC-PIT), with six high functioning general practices in Brisbane region to determine content and process validity. Phase 3 will be the nationwide trial of the PC-PIT with 15-20 practices, representing a range of sizes, business models and geographic settings, nationwide.

This protocol outlines the methods of Phase 2: the pilot of the PC-PIT with 6 general practices. The online PC-PIT, with a built in scoring system, will be trialed with 6 high functioning general practices in the Brisbane region. The key reason for using an expert sample of practices is to gain critical feedback on the appropriateness and acceptability of the elements included in the PC-PIT as well as its readability for all practice staff. There is currently no single tool available to general practices which address all these elements.

The tool will be completed by all practice staff, facilitated by the Practice Manager. The online tool will include an automatic reporting system which will generate aggregated scores for employee groups within each practice. These employee groups will include administrative, medical and allied health staff. The primary aim of this stage of the study will be to determine the content and process validity of the online PC-PIT.

Objectives

This stage has 3 objectives, to

1. determine the linguistic validity (readability) of the PC-PIT
2. determine the content validity of the PC-PIT
3. to use the findings in order to order to refine the existing PC-PIT for a broader trial with a range of general practices nationwide.

Research Questions

Does the PC-PIT measure elements of key importance in the delivery of high quality patient centred care?

Is the PC-PIT highly acceptable to Practice Managers and staff as a quality improvement tool in general practice?

Is the content of the PC-PIT understood by all practice staff?

Are the elements of the PC-PIT of relevance to general practice?

Study Design

A qualitative case study design will be used to determine the content and process validity of the online PC-PIT. Validity will be established using a panel of experts (The Practice Manager Reference Group) and a field test to gain specific feedback on the PC-PIT.

Step 1: Readability Flesch Reading Ease and Gunning-Fog Index are formulas used to determine readability. Readability can be conducted by using these formulae in a combined

online test to determine reading age and grading. Further feedback will also be sought from practice staff during data collection.

Step 2: Content and process validity Self-completed feedback questionnaire provided to all practice staff. This questionnaire will ask practice staff key questions about the PC-PIT, they will be a combination of Likert scales and open-ended questions. Follow-up semi-structured interviews with key the negative cases from employee groups (from administration and reception; medical staff and allied health) in each practice will also be carried out to further investigate any issues in the understanding or completion of the PC-PIT raised by staff in the feedback questionnaires.

The questionnaire survey will gather data in three main areas,

> Readability

How easy was it to understand the PC-PIT, were there any words or phrases you were unfamiliar with; were there any words or phrases you were unsure of?

> Content validity of the PC-PIT

Relevance to general practice; relevance to the role and position of practice staff

Wording and understanding: Where did you get stuck; why did you get stuck (layout versus content); what does this element mean to you / how would you describe this element?

> Process validity of the PC-PIT

Usability of the tool: ease of use online; layout of the questions; problems or issues completing the online PC-PIT; suggested changes to layout and process of completion.

Step 3: Practice Manager Reference Group expert opinion The Practice Manager Reference Group will provide answers in relation to the content and process validity of the PC-PIT as described above. In addition, they will also provide information on their role in using and facilitating the PC-PIT.

Step 4: Changes to the PC-PIT After the analysis of all survey questionnaire data, changes will then be made to the PC-PIT based on the findings. A second readability test will be undertaken if substantial changes have been made to language and wording of the PC-PIT.

Study Setting/location

Six general practices in the Brisbane region.

Study population

Population the participants will be drawn from

Six general practices will be drawn from the greater Brisbane area using a purposive sampling strategy.

Total numbers and number within any subgroups

Each practice will include the subgroups of: administration and reception; medical; nursing and allied health.

Eligibility criteria

Inclusion/exclusion criteria

A purposeful sample of expert general practices with extensive prior experience and a record of using quality improvement processes as part of their day-to-day practice activities. These practices will have processes to support quality improvement activities in place. Practices will be of varying size; from smaller (defined for the purposes of this research as

practices with ≤ 10 total staff members) to larger group practices (defined for the purposes of this research as practices with >10 total staff members.

Primary outcomes

Content validity of the online PC-PIT, including the qualitative feedback from all staff about key changes made to the descriptions and the wording of the statements in the PC-PIT; and relevance of areas to their everyday practice.

A readability assessment using the online combined Fog Index, Flesch Reading Ease, Flesch-Kinkaid Readability Formula, and Gunning-Fog Index tests.

Process validity of the online PC-PIT: qualitative feedback from all practice staff about the ease of completion of the online PC-PIT and the appropriateness and acceptability of the online form.

Secondary outcomes

Feedback from the Practice Manager Reference Group relating to: the perceptions of Practice Managers in undertaking quality improvement activities; and the identification and description of the key contextual elements from each practice which can enable or limit the application of the PC-PIT in practice.

Recruitment of participants

Initial introductory telephone calls will be made to the Practice Managers. These calls will outline the study, aims and key methods, the role of practice staff, in particular, the Practice Managers.

After the telephone calls, information sheets which outline the purpose and processes of this study will be faxed or emailed to the Practice Managers and Practice principals, along with practice consent forms. One consent form will be used to consent the entire practice and will be completed by the Practice Principal. Due to their specific role in the pilot of the PC-PIT, a second information sheet and consent form will be used to specifically consent the Practice Managers to ensure they have a full understanding and agreement in the extent of their role in this pilot and the timeframe for completion of the review of the PC-PIT.

Describe exactly what will happen once participants have enrolled in the study

> Practice Managers Reference Group: Orientation and focus group session

Practice Managers will undertake an evening information session. This session will introduce Practice Managers to PC-PIT form; its use as a quality improvement tool in general practice; and the role and function of Practice Managers in using the PC-PIT in concert with the RACGP Plan-Do-Study-Act cycle. At this time formal consent to participate will be gained from the Practice Managers. Consenting Practice Managers will be provided with hard copies of the PC-PIT along with information sheets and consent forms for their principal general practitioner and other staff. The orientation session will cover the method for gaining feedback from staff and each Practice Manager will be provided with a secure box where staff can place all completed feedback surveys. Finally, a focus group discussion will he held which will discuss Practice Managers' perceptions of their present role and function in facilitating and supporting quality improvement in practice and the current training and support available to them; and any gaps they identify in this training and support. This focus group will aim to gather key feedback on present perceptions of the role and function of Practice Managers and the external support they may require to lead quality improvement activities in practice.

> PC-PIT completed by all practice staff

Practice Managers will be given access to the PC-PIT online and will then be responsible for facilitating its completion with their staff.

Staff in each practice will be given up to one week to complete the PC-PIT.

> Data collection and analysis

When the majority of staff completes the online form, the Practice Manager will distribute the de-identified, self-completed feedback questionnaire. This questionnaire will collect information from staff about their perceptions and experiences of the content of the PC-PIT and the process of completing it.

Staff who do not complete the PC-PIT will be followed up face-to-face, individually by the researcher at the practice in the weeks following the completion of the tool, to investigate the reasons why they did not complete the tool.

Following the completion of the feedback questionnaires, a purposeful sample of negative cases; that is those people who indicated in the feedback questionnaire that they experienced difficulty in understanding or completing the PC-PIT from each of the administration; medical and allied health groups in each practice will be invited to complete face-to-face, confidential semi-structured interviews with the researcher. These interviews will further explore the barriers to staff understanding and/or completing the PC-PIT and investigate the ways it could be improved by asking the key informants for changes to content, wording, layout and/or presentation of the PC-PIT.

The data from the feedback questionnaires (Likert scales) will be analysed using Microsoft Excel for basic descriptive statistics. Open-ended questions and interview data will be analysed using NVivo qualitative software using an inductive thematic approach.

How the data will be collected

Two focus group discussions with the Practice Manager Reference Group.

Self-completed feedback questionnaires completed by all staff.

Semi-structured face-to-face interviews with key informants (negative cases) from each practice employee groups (administration; clinical and allied health).

When the data collection will occur

Once practices have completed the online PC-PIT and Practice Managers have generated and reviewed their practice report, staff will be presented with the feedback questionnaire to complete. After these have been completed and analysed by the researcher, face-to-face interviews will be conducted with the key informants.

Practice Manager focus groups will be conducted as part of the initial Practice Manager Reference group orientation session and once again after all practices have completed the PC-PIT and received their PC-PIT report.

Procedures for rigour/validity

The investigator is an experienced interviewer and qualitative researcher.

All interview transcripts will be independently reviewed by two researchers to determine and confirm the key themes. Any differences identified will be resolved through discussion and agreement.

Staff who do not complete the PC-PIT will be followed up individually by the researcher to investigate why they did not complete the tool.

Data monitoring

Practices who decide not to complete the PC-PIT pilot and take part in the feedback will be invited to undertake exit interviews. These interviews will gather basic information about the reasons why the practice chose not to continue with the PC-PIT trial. The key focus will be on difficulties in understanding, completing and/or using the online PC-PIT form and those issues to do with the role and expectations of the Practice Managers in facilitating the tool. Replacement practices of similar size and experience in quality improvement will be identified and invited to participate.

Statistical considerations and data analysis

Readability scores will be generated using the online combined Fog Index, Flesch Reading Ease, Flesch-Kinkaid Readability Formula, and Gunning-Fog Index test.

Self-completed feedback questionnaires will contain a combination of likert scales and open-ended questions. Likert scale data for each practice will be analysed using Microsoft Excel to enable basic descriptive statistics (frequencies).

Interview and focus group recordings will be transcribed and the analysed using inductive thematic approach aided by NVivo (QSR software).

Ethical considerations

Ethical clearance has been granted by the University of Queensland ethics committee.

OUTCOMES AND SIGNIFICANCE

The key outcome for Phase 2: is an assessment of the content and process validity of the PC-PIT. The key significance of Phase 2 is the development and refinement of an assessment tool to improve the quality, sustainability and integration of primary health care in Australia.

Appendix 2 Protocol for the national trial of the Primary Care Practice Improvement Tool (PC-PIT) - validity and use of the tool in practice

AIMS OF THE TRIAL

This describes Phase 3 of an ongoing study to develop, pilot, trial and validate a new approach to improve organisational performance in Australian primary health care, namely the Primary Care Practice Improvement Tool (PC-PIT). Phase 3 is the trial of the PC-PIT with general practices in a range of Australian primary health care settings; validate a set of objective indicators, as part of the PC-PIT Independent Practice Visit (part of the overall PC-PIT approach); and investigate the use and adaption of the PC-PIT in private general practice settings.

While up to 50 general practices will be invited to trial the PCPIT, a purposeful sample of 20 of these, representing a range of practice sizes, geographic locations and business models will be selected as part of the validation of the objective indicators.

OBJECTIVES

This Phase has three objectives; namely to,

(i) document and describe the use and adoption of the PC-PIT in general practice; (ii) validate the PC-PIT Independent Practice Visit objective indicators as part of the ; and (iii) identify the role and needs (resources; professional development and mentoring networks) to support and enhance Practice Managers as leaders in quality improvement in general practice.

STUDY DESIGN

PC-PIT - Study procedures

Twenty (20) private general practices in Queensland urban and regional areas representing a range of practice sizes which follow the (<2; 2 < 5; 5 < 10; 10+ full time equivalent GPs) will be sampled from a group of volunteering general practices responding to information and of expression of interest advertisements.

Stage 1: Practice Managers in general practices will be supplied with the PC-PIT. Practice Managers will also be provided with a guide for using the PC-PIT in practice. They will be given 1 week to get familiar with the PC-PIT and the process of the trial.

Practices Managers will then make the link to the online PC-PIT available to all practice staff. Staff will be given up to 10 working days to complete it.

Stage 2: After the completion of the PC-PIT, onsite Independent Practice Visits will be conducted by 2 researchers; 1 of whom is independent to the study team. The researcher will use the following methods to determine how the practice meets each element on the PC-PIT:

1. Ranking of the elements of the PC-PIT against objective indicators to complete an overall independent score for each practice using documented evidence including but not limited to Policy and Procedures Manual; Human Resource Manuals; Practice Communication Books and records; Complaints documentation; practice meeting minutes; patient population data reports; clinical data management systems.

2. Information such as the existence of quality committees; scheduled meetings with the focus of discussing quality improvement; meeting minutes and other evidence of quality improvement work.

The principal CRE researcher will also develop a scored report for each practice using the online PC-PIT surveys completed by staff members.

Stage 3: The completed PC-PIT surveys will be scored as a whole of practice aggregated rating. Where the practice is large enough (that is, ≥11 full-time practice staff); the CRE researcher will also provide aggregated scores by employee group (for example: contracted versus full-time staff; or by staff groups administration; clinical and allied health staff).

Results from the aggregated staff completed online PC-PIT surveys and the ratings from the Independent Practice Visit will be provided to each of the practice in a short combined report. The report will assist practices to identify an area for improvement and strategies to achieve it. Practices will continue with their Plan-Do-Study-Act-Cycle (PDSA) using their individual PC-PIT reports and feedback from the independent visits.

As part of the Independent Practice Visit, semi-structured interviews will be conducted with staff including Practice Managers and Practice Nurses (where available) in order to explore their perceptions of their role in improving practice performance; the resources they require to support this role; the most appropriate ways they can be supported to undertake quality improvement; barriers and enablers to internal practice led quality improvement (such as perceptions of the training and support needed in conjunction with the PC-PIT and practice incentives (both financial and non-financial) to undertake quality improvement.

Changes to the PC-PIT: After the comparison analysis of all qualitative and questionnaire data, the CRE researcher will then make any changes required to the online PC-PIT.

Specific recommendations will be made in relation to how the PC-PIT may expand the existing accreditation processes and appropriate incentives to encourage its uptake and use in general practices.

Study population

General practices will be drawn from the range of self-selecting general practices and primary health care clinics in Australia. These will be practices that attended the webinar, who responded to expression of interest distributed via the Queensland Medicare Locals or who received direct communication from the CRE researcher.

Total numbers and number within any subgroups

Each practice will include the subgroups of: practice management; administration and reception; medical; allied health. Exact numbers cannot be determined as yet.

Eligibility criteria

Inclusion/exclusion criteria

All practices registering interest through the Expression of Interest form will be included as participants in the trial (up to 50 general practices). Twenty practices will be purposefully selected as part of the validation of the objective indicators.

Study Outcomes

Primary outcomes

Validation of the PC-PIT in private general practice including the identification and understanding of the key factors contributing to how the PC-PIT is scored and used in small (< 10 full time equivalent staff) and large (≥ 10 full time equivalent staff) practices.

Understanding of the key training and support identified by Practice Managers in undertaking quality improvement using the PC-PIT.

Study procedures

Recruitment of participants

Recruitment of practices will be undertaken through a national Expression of Interest (EOI) which will be developed by the researchers .The researchers will forward the EOI to the following organisations for inclusion in their publications, e-newsletters and notifications; the Australian Association of Practice Managers (AAPM); the rural workforce and recruitment agencies and the Medicare Locals. The EOI will include details on how the Practice Manager or principle GP can register interest to participate in the trial. As many practices as possible will be invited to trial the PC-PIT. However, the researchers will work with 20 practices to conduct the validation process which will include the independent practice visits.

Once 20 practices have been selected, an information pack will be sent to them which will include an introduction to the trial, its aims and purpose; the role of practice and Practice Managers and summary information sheets and return consent forms. Practices will be followed up via telephone and email to gain their written consent.

Figure 1 Recruitment Process

Step 1

Telephone contact made with MedicareLocals and Workforce agencies, The Australian Association of Practice Managers (AAPM) and the Royal Australian College of General Practitioners to determine an appropriate of promoting and advertising the date/time for a webinar information session

Step 2

Expression of Interest form sent to organisations for distribution for e-newsletter or promotional email which detials the webinar presentations

Registrations taken by each organisation for a series of webinar information sessions

Step 3

Webinar information sessions will be held for each organisation (this will include (i) an introduction to the PC-PIT and (ii) information about what is required from those practices who wish to participate in the trial and (ii) contact information to enable practices to regioster their interest in consenting to particpate in the trial

Step 4

Practices wishing to consent to participate in the trial will then contact the CRE researchers and an information pack including consent forms will be sent to each practice

Describe exactly what will happen once participants have enrolled in the study

Practice Managers will be provided with an online guide to using the PC-PIT in practice. This session will introduce Practice Managers to PC-PIT form; its use as a quality improvement tool in general practice; interpreting the automatically generated practice report and score and how it should be used in concert with the RACGP Plan-Do-Study-Act (PDSA) cycle to plan and implement an improvement. It will also provide information on, and links to other resources including guides for coaching in quality improvement; a leadership capability measure and existing resources related to quality improvement and initiating change in health care.

Practice Managers will be given access to the online PC-PIT and will then make this available to all practice staff.

Staff in each practice will be given up to 10 working days to complete the online PC-PIT. Once the majority of staff have completed the online form, the CRE researcher will use the completed forms to generate a PC-PIT report and median ranking score for each of the 13 PC-PIT elements, for each participating practices. The lower ranked elements (1-3) will be highlighted as areas in which the practice may wish to improve whilst higher ranking element (4-5) will be highlighted as areas where the practice is performing well. In larger practices (≥10 staff) Practice Managers will also be able to request that their scores be aggregated by employee group (i.e. administration, medical and allied health or contracted versus non-contracted staff).

After the completion of the PC-PIT, onsite practice visits will be conducted by 2 researchers 1 of whom is independent to the study team. The researchers will use the following methods to determine how the practice meets each element on the PC-PIT,

> Observation within the practice during the Independent Practice Visit.

> Review of the PC-PIT elements by both Independent Practice Visit assessors against defined objective indicators, in order to complete an overall ranking for each element, for each practice. This will be done using all relevant documentation and information such as protocols; guidelines; scheduled meetings (agendas and minutes) with the focus on quality improvement; other evidence of quality improvement work.

> Interviews with Practice Managers and, where available, Practice Nurses and other staff.

After the Independent Practice Visit has been conducted, the CRE Researcher will develop a confidential scored report for each practice using the completed PC-PIT staff surveys and the PC-PIT rankings and information from the independent practice visit. This report will then be sent back to each Practice Manager for action. Practice Managers will use these reports to facilitate discussions with staff in order to identify a key area for improvement, a strategy to achieve the improvement, a means of measuring when the improvement has been made and a timeframe for achieving the improvement. This will achieved by using the RACGP Plan Do Study Act (PDSA) approach.

Practices will then undertake 1-2 PDSA cycles (using the RACGP Quality Improvement and Continuing Professional Development PDSA Form).

Practice Managers will act as leaders and facilitators of the identified improvement. They will be responsible for encouraging and supporting staff to implement the improvement, using the PDSA cycles. PDSA cycles will be undertaken until the improvement has been achieved, as demonstrated by the key performance measures on the PDSA form.
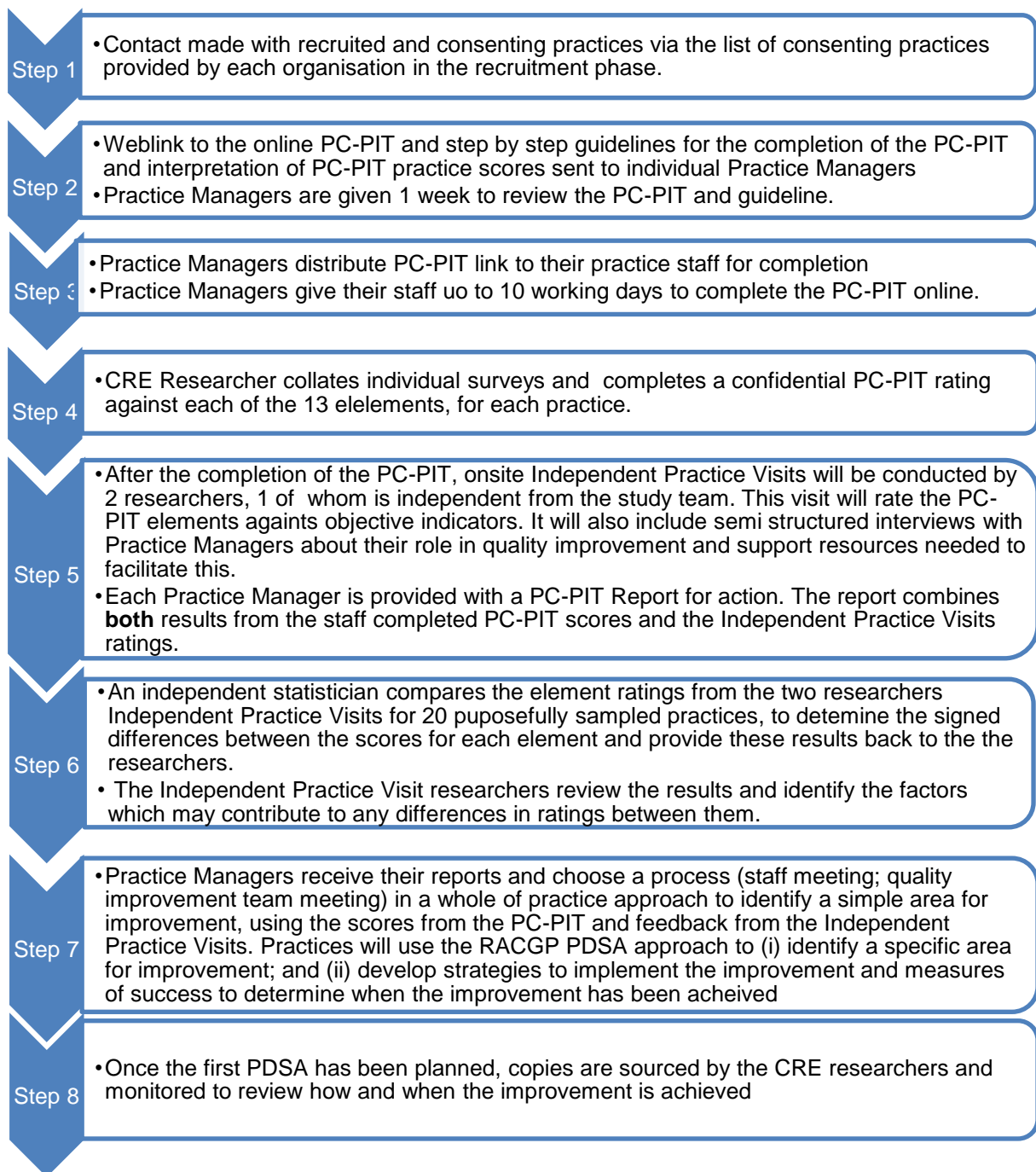
If the improvement takes one PDSA cycle, Practice Managers will refer back to the PC-PIT report in order to identify a second area for improvement and plan strategies, once again using the RACGP PDSA approach. It is anticipated that where simple areas for improvement

are chosen, practices will be able to achieve these within one PDSA cycle; the more complicated the area for improvement (such as requiring multiple strategies and longer term out measures), the more likely practices will complete up to 2 PDSA cycles in order to achieve the improvement.

Copies of the completed PDSAs will be sourced by the CRE researcher and reviewed and monitored to identify the specific improvement chosen, how and when it is achieved.

Figure 2 Trial Steps

Step 1
- Contact made with recruited and consenting practices via the list of consenting practices provided by each organisation in the recruitment phase.

Step 2
- Weblink to the online PC-PIT and step by step guidelines for the completion of the PC-PIT and interpretation of PC-PIT practice scores sent to individual Practice Managers
- Practice Managers are given 1 week to review the PC-PIT and guideline.

Step 3
- Practice Managers distribute PC-PIT link to their practice staff for completion
- Practice Managers give their staff uo to 10 working days to complete the PC-PIT online.

Step 4
- CRE Researcher collates individual surveys and completes a confidential PC-PIT rating against each of the 13 elelements, for each practice.

Step 5
- After the completion of the PC-PIT, onsite Independent Practice Visits will be conducted by 2 researchers, 1 of whom is independent from the study team. This visit will rate the PC-PIT elements agaits objective indicators. It will also include semi structured interviews with Practice Managers about their role in quality improvement and support resources needed to facilitate this.
- Each Practice Manager is provided with a PC-PIT Report for action. The report combines **both** results from the staff completed PC-PIT scores and the Independent Practice Visits ratings.

Step 6
- An independent statistician compares the element ratings from the two researchers Independent Practice Visits for 20 puposefully sampled practices, to detemine the signed differences between the scores for each element and provide these results back to the the researchers.
- The Independent Practice Visit researchers review the results and identify the factors which may contribute to any differences in ratings between them.

Step 7
- Practice Managers receive their reports and choose a process (staff meeting; quality improvement team meeting) in a whole of practice approach to identify a simple area for improvement, using the scores from the PC-PIT and feedback from the Independent Practice Visits. Practices will use the RACGP PDSA approach to (i) identify a specific area for improvement; and (ii) develop strategies to implement the improvement and measures of success to determine when the improvement has been acheived

Step 8
- Once the first PDSA has been planned, copies are sourced by the CRE researchers and monitored to review how and when the improvement is achieved

Measurement tools to be used

The Primary Care Practice Improvement Tool (PC-PIT).

How the data will be collected

PC-PIT Independent Practice Visit validity:

> Twenty (20) consenting practices will be provided with the online PC-PIT link and all staff given 1 week to complete the tool.
> Completed PC-PITs from participating practices will be accessed and downloaded by the researcher online through the Qualtrics website and analysed.
> Onsite Independent Practice Visits will be conducted by 2 researchers, 1 of whom is independent to the study team. The researchers will use the following methods to determine how the practice meets each element on the PC-PIT,
>> a. Observation within the practice
>> b. Rate each elements of the PC-PIT against objective indictors
>> c. Review information and materials such as the existence and use of protocols; guidelines; scheduled meetings with the focus of discussing quality improvement; meeting minutes and other evidence of quality improvement work.

When data collection will occur

Individual PC-PIT tools will be accessed and downloaded by the researcher once the Practice Manager has determines the majority of staff have completed the PC-PIT tool.

Independent Practice Visits will be conducted once each practice has completed the PC-PIT.

Procedures for rigour/validity

Statisticians have assisted in developing an appropriate trial protocol.

Statisticians will assist in analysing data (Independent Practice Visits) to determine the validity of the PC-PIT objective indicators as part of the PC-PIT process.

The CRE leading researcher in this study is an experienced interviewer and qualitative researcher.

Data monitoring

What happens if any practices drop out/discontinuation of data collection?

Practices who decide not to complete the PC-PIT pilot and take part in the feedback will be invited to undertake exit interviews. These interviews will gather basic information about the reasons why the practice chose not to continue with the PC-PIT trial. The key focus will be on difficulties in understanding, completing and/or using the online PC-PIT form and those issues to do with the role and expectations of the Practice Managers in facilitating the tool. Replacement practices of similar size in Queensland will be identified and invited to participate.

Statistical considerations and data analysis

PC-PIT Reports will be prepared using Microsoft Excel to process data. Interview recordings will be transcribed and analysed using inductive thematic approach, aided by NVivo (QSR software).

A purposeful sample of 20 practices will be selected for the Independent Practice Visit validation and the Independent Practice Visit ratings for each element will be into Microsoft

Excel. A statistician will compare the scoring between the two Independent Practice Visit raters for each of the 13 PC-PIT elements and determine where the rankings are the same between both assessors; where they differ by one point; by two points and so on. Concordance will be determined by weighted Kappa and a presentation of the distribution of signed differences (that is, rater 2 scores compared with rater 1 scores) for each of the 13 elements.

Ethical considerations

Ethical clearance has been granted by the University of Queensland ethics committee.

OUTCOMES AND SIGNIFICANCE

The three significant outcomes for this phase are,

    (i)   The development of a tool to improve the quality, sustainability and integration of primary health care in Australia.

    (ii)   The identification and understanding of key factors influencing how the PC-PIT is used in practice and the role and validation of the Independent Practice Visit in the PC-PIT process.

    (iii)   Recommendations for a Practice Managers professional development plan, with a specific focus on high quality resources needed to support their role as leaders or facilitators of quality improvement.

Appendix 3 Pilot Study of the Primary Care Practice Improvement Tool (PC-PIT) - Feedback Questionnaire

Introduction

Your Practice Manager will shortly give you access to a confidential, online quality improvement questionnaire that has been designed specifically for primary health care – the **Primary Care Improvement Tool (PC-PIT)**. Your practice has been selected as one of six general practices in Brisbane to receive the tool, to complete it online and give us critical feedback about how we might improve it.

There are **4 key steps** you will take as part of completing the PC-PIT and providing us with your feedback:

1. You will receive a **consent form and information sheet** which tells you about our study and asks you to consent to participate in trying out the PC-PIT and providing us with feedback. Please ensure you have read the information sheet and signed this consent form and handed it to your Practice Manager **before** you begin filling out the PC-PIT and answering the questions about it on the feedback questionnaire.

2. The PC-PIT will be made available to you **online**. Once you have received access to the PC-PIT, you have a **one week** to try it by filling it out. Your Practice Manager will tell you how to access it. Open it up the link, follow the instructions and have a go completing it!

3. Remember, this is a completely new tool for general practice so, while you are completing it, we would like you to **tell us the good things and bad things about the PC-PIT** by answering the questions in the **feedback questionnaire** which is attached here. The feedback questionnaire asks you questions such as: **is the PC-PIT easy to read; is it easy to follow; does it contain elements that are relevant to general practice and your work?** It is important that you answer **all** the questions as this will enable us to adjust and improve the PC-PIT to make it relevant to general practice and useful to **all** practice staff. Your answers to both the PC-PIT and feedback questionnaire will remain completely confidential.

4. Once you have tried filling out the PC-PIT and answered the feedback questionnaire, please take your feedback questionnaire and place it in the box in your reception for collection by our researcher. Once we have received the feedback questionnaires, we may arrange **brief follow-up interviews** with some members of the practice to seek further guidance on how we can improve the PC-PIT. These interviews will also be completely confidential.

Your Practice Manager will be assisting us to send out the PC-PIT and collect your feedback questionnaires but they will **not see** your completed PC-PIT tool or your completed feedback questionnaire. Only our researcher (Dr Lisa Crossland) will see these.

This tool has been developed from an extensive review of national and international literature about quality improvement as well as detailed feedback from our key partners which include the Royal Australian College of General Practitioners; the Australian Commission on Safety and Quality in Health Care; Australian General Practice Accreditation Ltd and of course our end-users – you! This is an important and exciting stage in developing a quality improvement tool, designed by general practice for general practice!

Thank you for your participation

Primary Care Practice Improvement Tool (PC-PIT) Feedback Questionnaire

Please complete this questionnaire to provide us with feedback about what YOU thought of PC-PIT as a quality improvement tool for general practices, if it could be improved and how we could improve it. It is important that you answer ALL the questions. Your answers are entirely confidential and will help us improve the PC-PIT so we can make it relevant to <u>all</u> staff in general practice. Thank you for your participation.

Section 1: This section asks you for your general impression of using the PC-PIT (tick the box below the number that best applies)

Overall, did YOU find the PC-PIT easy to use?	1 Extremely easy to use	2	3	4	5 Extremely difficult to use
Please comment: What was easy, what was difficult?					

Overall, how easy was it to <u>understand</u> the <u>wording</u> used in the PC-PIT?	1 The PC-PIT was <u>very</u> easy to understand	2	3	4	5 I could not understand the PC-PIT at all
Please comment: How could the the PC-PIT be improved?					

Section 2: This section asks you to reflect on the WORDING of the PC-PIT

Below is a list of each of the elements from the PC-PIT. Please indicate how easy was it to understand them by ticking the most appropriate box from 1-5. If you think the wording of the element could be changed to make it easier to understand, please write down how YOU would describe the element	1 It is very difficult to understand what this element means	2	3	4	5 I understand what this element means
1. *Patient centred care*					
How could this element be reworded to make it easier to understand:					
2. *Leadership*					
How could this element be reworded to make it easier to understand:					
3. *Governance – organisational governance*					
How could this element be reworded to make it easier to understand:					
4. *Governance – clinical governance*					
How could this element be reworded to make it easier to understand:					
5. *Communication – team-based care*					
How could this element be reworded to make it easier to understand:					

Section 2: Continued…

Below is a list of each of the elements from the PC-PIT. Please indicate how easy was it to understand them by ticking the most appropriate box from 1-5. If you think the wording of the element could be improved, please write down how YOU would describe the element	1 It is very difficult to understand what this element means	2	3	4	5 I completely understand that this element means
6. *Communication – availability of information for patients*					
How could this element be reworded to make it easier to understand:					
7. *Availability of information for staff*					
How could this element be reworded to make it easier to understand:					
8. *Manage change – readiness for change*					
How could this element be reworded to make it easier to understand:					
9. *Manage change – education and training*					
How could this element be reworded to make it easier to understand:					
10. *Incentives – provided to the staff by the practice*					
How could this element be reworded to make it easier to understand:					

Section 2: Continued…

Below are listed each of the elements from the PC-PIT. Please indicate how easy was it to understand them by ticking the most appropriate box from 1-5. If you think the wording of the element could be changed, please write down how YOU would describe the element	1 It is very difficult to understand what this element means	2	3	4	5 I completely understand that this element means
11. *Performance – process improvement*					
How could this element be reworded to make it easier to understand:					
12. **Performance – Performance results**					
How could this element be reworded to make it easier to understand:					
13. **Information and info technology**					
How could this element be reworded to make it easier to understand:					

Were there other areas or elements for quality improvement that were not covered by the PC-PIT that are important to the functioning of your practice or your work?	YES	NO
Please comment: If YES, what elements or areas do you feel are missing from the PC-PIT:		

Section 3: This section asks you to reflect on the LAYOUT of the PC-PIT

How easy was the PC-PIT to complete online (Tick the box that best applies)	1 NOT useful at all	2	3	4	5 Very useful

Please comment: What made it difficult to complete (eg. the layout made it hard to follow; it was difficult to understand how to answer the questions; I don't have access to a computer all the time; it takes too long to complete)?

Does making the PC-PIT an online quality improvement tool make it easier to complete?	YES	NO

Why or why not? If not, how would YOU prefer to fill out the PC-PIT?

Section 4: This section asks about your perceptions of the PC-PIT as a quality improvement tool

Overall, did you find the PC-PIT useful for assessing the functioning of your practice? (Tick the box that best applies)	1 NOT useful at all	2	3	4	5 Very useful

Please comment: Why did you find the PC-PIT useful or not useful?

Would you use the PC-PIT as a quality improvement tool for your practice in the future?	YES	NO

Why or why not?

Section 5: This final section asks about YOUR role in this practice

Are you (tick the box that applies)	☐ Practice Nurse ☐ Community / specialist service nurse ☐ Allied health (including diabetes educators, podiatrists, dieticians and nutritionists) ☐ GP / Medical Practitioner	☐ Pharmacist ☐ Administrator; Manager; Receptionist; IT/IM ☐ Medical Student ☐ Other (please describe in the space below)
Do you	☐ Work for this practice? OR ☐ Are you a contractor?	
Please describe your key duties in the practice:		
How long have you worked in <u>this</u> practice? ……………………………….. How many weeks/month/years experience do you have working in general practice? ………………………		

This information will help us tailor the PC-PIT so it is relevant to ALL staff in a general practice

Please provide any other feedback on your experience filling out the PC-PIT in the space below

Thank you for your participation

Appendix 4 The Primary Care Practice Improvement Tool (PC-PIT) – Hardcopy example of the online tool

THE PRIMARY CARE PRACTICE IMPROVEMENT TOOL (PC-PIT)

International research [1, 4-7] shows the way a general practice functions in its day-to-day work impacts on the quality of its patient care and outcomes. There are **13 key elements** that strongly support the provision of quality sustainable care. These elements are the proven building blocks of a high-functioning general practice. They are also inter-related – where poor practice function in one element will also significantly affect the function of another.

This tool allows for ALL PRACTICE STAFF to reflect, assess and rate how THEY see their practice function in each of these key elements. Once the tool has been completed practice staff can use the findings in the RACGP PLAN-DO-STUDY-ACT plan and implement improvements in the identified areas of need. The PC-PIT can be used continuously as part of your practice's ongoing quality improvement cycle by identifying areas for improvement and monitoring how your practice changes and improves over time. This is not a test of **how well a practice doing** but is about how **EACH STAFF MEMBER perceives their practice performs in relation to these elements**. Honest answers will help identify the MOST important areas to improve the function of the practice.

PLEASE REFLECT ON YOUR ROLE AND YOUR WORK IN THIS PRACTICE. FOLLOW THE INSTRUCTIONS TO COMPLETE THE PRIMARY CARE PRACTICE IMPROVEMENT TOOL.
The tool contains the definitions of and statements about, each of the key elements. Read the accompanying statements and CIRCLE the **NUMBER** (1 to 5) that **BEST** describes how **YOU BELIEVE YOUR** practice matches each element. If you feel the element is not applicable to your role and work in this practice, please circle 'N/A'.
You should try and rate **AS MANY ELEMENTS** as possible.

PC-PIT - PART 1: *Read each statement and CHOSE THE NUMBER that BEST DESCRIBES where YOUR primary health care practice fits*

1. PATIENT CENTRED and COMMUNITY FOCUSED CARE	1	2	3	4	5	
The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient – health care professional relationship of trust, clinical expertise and the use of best available evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way their care is provided.	I do not believe our practice takes the patient centred care approach as described.				We always work together to ensure our patients can access comprehensive coordinated care. We work in partnership with all services within and outside the practice. We use best available clinical guidelines. We focus on the health of our patients in the context of their families. We have a system in place to enable patients to have input.	N/A
2. LEADERSHIP	1	2	3	4	5	
Leaders routinely motivate and empower others to make a difference in their day to day work. Leaders actively maintain(s) the vision or mission of the practice. Leaders support and coordinate staff. They use sound resource management processes to achieve a shared practice goal.	Maintaining or improving our practice is not a key role of our leader(s). The practice does not have leaders who coordinate and support us in our day-to-day work.				Leader(s) coordinate and support us in our day to day work. Leader(s) focus on improving the quality of our practice. I understand the goal(s) of this practice. I understand the expectations the leader(s) have of my work. The leader(s) ensure that I have access to the knowledge, support and resources I need to perform to my best ability.	N/A
3. MANAGEMENT - Organisational Management	1	2	3	4	5.	
Organisational governance is the process by which a practice manages its staff and other resources. It includes a clear practice goal, mission or vision; defined roles, responsibilities and accountability for all staff; flexibility in the way staff can work; conflict resolution strategies; cash flow management; processes for budgeting and regular staff meetings to communicate and review activities.	I am unaware of a shared goal for this practice. My role and my responsibilities are not clearly defined. My work is not routinely monitored. There is poor resource management.				My role and my responsibilities are both clearly defined. My work is routinely monitored. There is a well-defined practice goal. There are financial and other resource management systems. We have regular meetings to review our work.	N/A

PC-PIT - PART 2: *Read each statement and CHOOSE THE NUMBER that BEST DESCRIBES where YOUR primary health care practice fits*

4. MANAGEMENT - Clinical governance	1	2	3	4	5	
Clinical governance is the process a practice uses to manage clinical care. It includes the use of clinical information and management systems such a patient registers and recall systems; processes for tracking referrals; medication interaction alerts; allergy alerts; evidence-based reminders for patients and appropriate clinical protocols. Practices have regular clinical review meetings. They have clear patient safety and complaints procedures that are known and understood by all practice staff.	This practice has none of processes described here, in place.				This practice has ALL of the described processes in place.	N/A
5. COMMUNICATION - Team-based care	1	2	3	4	5	
A practice uses team-based approaches to all work. This is characterised by collaboration and a willingness to work together. All staff understand and value the roles of everyone else in the practice and how these roles complement each other. Staff communicate with each other both informally and formally in their day-to-day work.	I work entirely independently and I am responsible for my own work. I am unsure about how my role relates to the work of other staff.				We always work as a team to meet the goal of this practice. I collaborate with my fellow staff members. I value and make use of the contribution of all my colleagues. We communicate formally and informally in our day-to-day work.	N/A
6. COMMUNICATION -Availability of information for patients	1	2	3	4	5	
Patients are provided with access to information about their health and also the opportunity to discuss it. Patients are routinely asked what information they would like and how it can be best provided to them.	Patients have access to some standard information that is available to all patients.				Patients have a variety of ways to get the information they need. We routinely ask patients for feedback about what information they would like and how we can best give this to them.	N/A

PC-PIT - PART 3: *Read each statement and CHOOSE THE NUMBER that BEST DESCRIBES where YOUR primary health care practice fits*

	1	2	3	4	5	
7. COMMUNICATION - Availability of information for staff A practice has ways to support the effective communication of information (such as patient health care information and practice management information) to help all practice staff to do their work. It also has effective communication between the practice and other outside services. There are systems in place to ensure timely information exchange with outside services.	I always have difficulty tracking down the information that I need to do my work. There are no systems in place to assist me.				The information I need to do my work is readily available and accurate. There are systems in the practice to ensure it is there whenever I need it. Where necessary, I can easily share information with outside services.	N/A
8. MANAGE CHANGE - Readiness for change Staff are informed of necessary changes to the way work is done in the practice. Staff are involved in planning for change and know why changes are taking place. The practice has procedures for implementing changes and supporting staff while changes are taking place.	Changes are always implemented without communication or discussion with staff.				I am informed about changes taking place. I am part of planning during changes to the practice. I am involved and supported in the introduction and implementation of new ways of working. My needs are taken into account.	N/A
9. MANAGE CHANGE - Education and Training Education and training is a vital part of managing change. The practice provides ongoing education and training to all staff to help staff when changes have been made to the way the practice works. The practice ensures that the training provided matches the work staff do. It promotes an environment of learning and improvement.	No education or training is provided to help me adjust to changes in this practice.				I am asked to identify my education needs for working in a changed environment. I am provided with the education I need to undertake new ways of working.	N/A
10. MANAGE CHANGE - Incentives provided to staff by the practice Incentives are an important part of encouraging staff to implement and maintain change in general practice, by recognising and promoting areas for improvement new skills, techniques and ways of working. Incentives may be financial or include professional memberships and attendance at conferences or meetings. These incentives are available to all practice staff.	Incentives are not available to me in this practice to promote the adoption of new skills, techniques and approaches.				There are a range of incentives in this practice to encourage and assist in managing change. I have access to incentives that recognise the adoption of new skills, techniques and approaches.	N/A

PC-PIT - PART 3: *Read each statement and CHOOSE THE NUMBER that BEST DESCRIBES where YOUR primary health care practice fits*

11. PERFORMANCE - Process improvement	1	2	3	4	5	
A practice is able to identify its service delivery processes and make improvements where necessary. Data is collected and analysed such as data on the workload of staff members and the management of casual staff; data on patient waiting times; data about billing processes and financial management. The practice regularly reviews this data and has systems in place for staff to identify and discuss areas to improve the way the practice works.	This practice has no mechanisms in place to identify and improve service delivery procedures.				This practice has mechanisms to improve service delivery processes. I am encouraged and able to report my issues or concerns with aspects of service delivery and know these will be addressed.	N/A
12. PERFORMANCE - Performance results	1	2	3	4	5	
A practice uses established, well-recognised and up to date data collection systems. It ensures that data is entered routinely and accurately. This data is then analysed regularly and the results are used to monitor and improve the way the practice works. These results are communicated to all staff.	There is limited or no data collected on the way this practice operates, including the provision of care and the outcomes of that care.				The data we collect in our practice is regularly reviewed and results are fed back to the staff. We make changes to the ways we work based on these results.	N/A
13. SOFTWARE AND INFO TECHNOLOGY	1	2	3	4	5	
The use of software systems to collect and process quality information and data about the clinical care of patients, their needs and their health outcomes as well as information about the financial and billing aspects of a practice is crucial to being able to reflect on a practice's performance. The software systems that each staff member uses are easy to use and enhance the way a staff member is able to do their work.	There are either no software systems, or the system is inadequate. It does not make my job easier or allow me to enhance my work.				The technology and software used in this practice is easy to use and helps me do my job. I have access a range of data and information that I use to support and enhance my work.	N/A

Appendix 5: The Primary Care Practice Improvement Tool (PC-PIT) Independent Practice Visit Form v. 2015-16

INTRODUCTION

Thank you for meeting with us/me today. The purpose of this visit is to help us ensure the PC-PIT will work effectively for your practice.

I'd like to do this is 2 ways: Firstly, an interview with you about your impressions of how your practice functions against the key elements of the PC-PIT. That will take approximately 50 minutes and secondly to review your documented evidence from sources such as

- > **Human Resource Manual**
- > **Policy and Procedures Manual**
- > **Meeting minutes**
- > **Communications or Practice Information Book**
- > **Complaints book**
- > **Accreditation Manual**
- > **Any other documented evidence you might have**

Once we have processed this information, you will receive a report which will include BOTH the PC-PIT scores from your staff as well as the scores and feedback from this visit. You can then use both of these to identify an area you might want to improve. All this information is entirely confidential and the finished report will only be made available to you, to share with your practice staff. It will contain no individual identifying information.

In order to make our interview as fast as possible, I would also like to record it using a digital recorder. The talk will be transcribed by the CRE Researcher, Lisa, with no identifying information. Once the transcription has been made, the recording will be deleted. If you would prefer NOT to be recorded, I will take notes as we proceed. Are you happy to be recorded?

YES   **NO (CIRCLE ONE)** PLEASE TAKE NOTES WHERE NO CONSENT TO RECORD IS GIVEN

I can be very flexible so if you would like to stop for a break, or if you need to attend practice work as we talk, please just let me know.

How would like to start (interview or sources review)?

INDEPENDENT RESEARCH VISIT: THE PRIMARY CARE PRACTICE IMPROVEMENT TOOL - PRACTICE PROFILE INFORMATION

Practice Name: **FINISH TIME** **Practice type:** **Who was interviewed?** **Practice Manager** **Nurse** **GPs** **Other (eg. reception, business development, allied health)**	**DATE** **/** **/** <u>**START TIME**</u>

Practice postcode: ☐ ☐ ☐ ☐

Does the Practice Manager have a clinical background?   **YES**   **NO**   **(PLEASE CIRCLE ONE)**

If **YES**, describe (eg. allied health, nursing, other)

Total number of staff:	**Total number of staff in each group:** ☐ Practice Nurse(s) ☐ Community / specialist service nurse(s) ☐ Allied health (including diabetes educators, podiatrists, dieticians and nutritionists) ☐ GP / Medical Practitioner	☐ Pharmacist ☐ Administrator; Manager; Receptionist; IT/IM ☐ Medical Student ☐ Other (please describe in the space below)
	☐ Number of staff permanently employed by the practice? ☐ Number of staff contracted by the practice	

Practice involvement in EXTERNAL CQI (for example have you participated in the PC collaborative, Health Workforce Agencies, Medicare Locals):

Do you have a quality improvement group?

If yes who are the member of this group?

Do you have a regular meetings dedicated to discussing areas for improvement in the practice?

If yes, do you have a documented attendees; any meeting minutes

Existing INTERNAL quality improvement activities/frameworks your practice uses (DESCRIBE)

SOURCES	ELEMENT	*These indicators relate to the way you provide care and work with your practice patients*	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Practice Policy and Procedures Manual Answer machine messages; printed information Formal reports	**E1 PATIENT CENTRED CARE** The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient– health professional relationship of trust, clinical expertise and the use of best available evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way their care is provided.	**Access** ☐ Provides same day appointments ☐ Provides timely clinical advice by telephone during office hours ☐ Provides after hours access to clinical advice **(SEE E1, protocols registers pg. 13)** ☐ Has clearly advertised opening hours (internet; practice information brochures) ☐ Physical access to clinic (ramps; easy to use doors; adjacent parking; adjacent public transport stops	1 2 3 4 5 **Comments**
Software data management systems: **What does the practice use?** **Evidence** **Interview**	**E7 INFORMATION & INFO TECHNOLOGY** The use of software systems to collect and process quality information/ data about the clinical care of patients, their needs and health outcomes; information about the financial and billing aspects of a practice is crucial to being able to reflect on a practice's performance. The software systems that each staff member uses are easy to use and enhance the way a staff member is able to do their work	**Technology and software** ☐ Evidence of use of software data management systems ☐ Practice management online ☐ Staff have access to all relevant areas of data and information relevant to their role and duties ☐ Software systems work continuously, there is evidence of few issues and breakdowns ☐ Staff can explain how they can access and manipulate data relevant to their own work	1 2 3 4 5 **Comments**

| Practice Policy and Procedures Manual | E1 PATIENT CENTRED CARE

The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient–health professional relationship of trust, clinical expertise and the use of best available evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way their care is provided. | **Patient input/feedback on health care delivery (Go to E 4.1 patient feedback on health care information)**

☐ Has evidence of formal process to include patient input into practice care delivery
[Tick level]

☐ Level 1: informal processes with no formal documentation
☐ Level 2: Use of patient surveys and mail-outs (patient survey report results) with internal or external support
☐ Level 3: Patient surveys and patient representation on practice executives or board

Patient centred care

☐ Provides printed materials and health care information that reflects the practice population
☐ Evidence practice engages in activities to understand the racial and ethnic diversity of its population (cultural awareness training; workshops; internet
☐ Provides bilingual services as required

Evidence of guiding policies/protocols

Contacts for interpreter services prominent in the practice or easy to access

Use of interpreter information services | 1　　　2　　　3　　　4　　　5

Comments |

SOURCES	ELEMENT	INDEPENDENT INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)				
Patient surveys and mail-outs (preferences for provision of health care information) **Observation and interview**	**E4.1 Availability of information for patients** Patients are provided with access to information about their health and also the opportunity to discuss it. Patients are routinely asked what information they would like and how it can be best provided to them.	**Patient input feedback on health care information** ☐ Formal processes for patient feedback or input into delivery of health care information ☐ Demonstrated evidence about the incorporation of this feedback into the way that information is tailored to patients – disease specific; tailored to vulnerable populations Practice team can describe processes for the delivery of patient information (in relation to the practice; in relation to patient health care)	**1**	**2**	**3**	**4**	**5**
			Comments				
Brochures **Practice website**	**E4.1 Availability of information for patients** Patients are provided with access to information about their health and also the opportunity to discuss it. Patients are routinely asked what information they would like and how it can be best provided to them.	**Information** ☐ Brochures; leaflets; written information ☐ Electronic information(emailed; web-based)	**1**	**2**	**3**	**4**	**5**
			Comments				

SOURCES	ELEMENT	*These indicators relate to organisational governance of the practice*	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Practice Policy and Procedures Manual Website/brochures	**E3 GOVERNANCE - Organisational governance** Organisational governance is the processes by which a practice manages its staff and other resources. They include having a clear practice goal or vision; defined roles, responsibilities and accountability for all staff; flexibility in the way staff can work; conflict resolution strategies; cash flow management; processes for budgeting and regular staff meetings to communicate and review activities.	**Practice goal/mission** ☐ Defined practice mission or goal ☐ Mission/goal accessible to staff ☐ Mission/goal accessible to patients	1 2 3 4 5 **Comments:** **Mission goals available to patients?**
Staff position descriptions	**E3 GOVERNANCE - Organisational governance** Organisational governance is the process by which a practice manages its staff and other resources. They include having a clear practice goal or vision; defined roles, responsibilities and accountability for all staff; flexibility in the way staff can work; conflict resolution strategies; cash flow management; processes for budgeting and regular staff meetings to communicate and review activities.	**Defined roles and responsibilities (see E2)** ☐ Staff position descriptions for clinical and non-clinical staff requirements and specifications of roles Position descriptions ☐ The practice clearly defines roles for clinical and non-clinical members ☐ Formal staff orientation process ☐ Availability of information to undertake work (**easy access to clinical guidelines; financial management systems; billing procedures; guidelines and protocols) (SEE E1, pg 13 Clinical Guidelines)**	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	INDEPENDENT INDICATORS: *Following on in organisational governance, these indicators relate to different kinds of leadership in the practice (clinical, organisational and other leadership)*	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Human Resource Manual Communication Book	**E2 LEADERSHIP** Leaders routinely motivate and empower others to make a difference in their day to day work. Leader(s) actively maintains the vision or mission of the practice. Leaders support and coordinate staff. They use sound resource management processes to achieve a shared practice goal.	<u>**Expectations of leaders**</u> ☐ Evidence of **regular formal PPR** (performance review) and documented outcomes ☐ Formal (regular meetings; one-on-one discussions) and informal (access to leaders; ability to get answers at short notice) systems for feedback/discussion and questioning between staff leaders Meeting minutes Communication Book entries Intranet messaging system Staff can identify the leaders in the practice (organisational leader; clinical leader; immediate supervisor)	**1 2 3 4 5** **Comments**

SOURCES	ELEMENT	INDEPENDENT INDICATORS Systems and process to monitor staff work	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Human Resource Manual Communication Book	**E2 LEADERSHIP** Leaders routinely motivate and empower others to make a difference in their day to day work. Leader(s) actively maintains the vision or mission of the practice. Leaders support and coordinate staff. They use sound resource management processes to achieve a shared practice goal.	☐ Evidence of **work review** meetings for staff (clinical and non-clinical staff) ☐ Formal systems for staff accountability (hierarchy or reporting structures in place) ☐ Formal strategies to address conflict in the workplace ☐ Flexible working (flexible holidays; sick days; short notice leave; back filling) ☐ Regular staff meetings Led by Practice Managers Led by GPs or other medical staff Led by others	1 2 3 4 5 **Comments**
Practice Policy and Procedures Manual Answer machine messages; printed information Formal reports Complaints register	**E3 GOVERNANCE - Organisational governance** Organisational governance is the processes by which a practice manages its staff and other resources. They include having a clear practice goal or vision; defined roles, responsibilities and accountability for all staff; flexibility in the way staff can work; conflict resolution strategies; cash flow management; processes for budgeting and regular staff meetings to communicate and review activities.		1 2 3 4 5 **Comments**

SOURCES	ELEMENT	INDEPENDENT INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Rosters Monitoring of scheduled leave **Staff meeting minutes**	**E6 PERFORMANCE - Process improvement** A practice is able to identify its service delivery processes. It collects and analyses relevant data to identify areas for improvement such as data on the workload of staff members and management of casual staff, data on patient waiting times, data about billing processes and financial management. It regularly reviews this data and has systems in place for staff to identify and discuss areas for improvement.	**Staff data** ☐ Formal meetings which allow all staff to discuss **their own work issues** (able to access and present their own data; information) and **identify areas for improvement** ☐ Evidence of data collected on staff workloads ☐ Formal internal staff complaints procedures	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	INDEPENDENT INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)				

Human Resource Manual
 	
Communication Book
	E2 LEADERSHIP
	
	Leaders routinely motivate and empower others to make a difference in their day to day work. Leader(s) actively maintains the vision or mission of the practice. Leaders support and coordinate staff. They use sound resource management processes to achieve a shared practice goal.
		<u>**Access to knowledge and support (go to: E 3.2 and E 5.1)**</u>
		
		☐ Evidence that leaders are active in maintaining availability of relevant information to staff (easy access to clinical guidelines; financial management systems; billing procedures; guidelines and protocol)
		☐ Processes for revising internal training to staff as required
		  Internal surveys to assess perceived training needs
		  Internal/external workshops in line with perceived needs and new practice initiatives
		
		☐ Documented evidence of training completed and signed off (certificates; lists of attendance)
			1	**2**	**3**	**4**	**5**

			Comments				

SOURCES	ELEMENT	*These indicators are about clinical governance and clinical data*	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Practice Policy and Procedures Manual **Complaints register**	**E3.1 GOVERNANCE - Clinical governance** Clinical governance is the processes a practice uses to manage clinical care. They include the use of clinical information and management systems such a patient registers and recall systems; processes for tracking referrals; medication interaction alerts; allergy alerts; evidence-based reminders for patients and appropriate clinical protocols. Practices have regular clinical review meetings. They have clear patient safety and complaints procedures that are known and understood by all practice staff.	**Patient safety and complaints processes** ☐ Clinical Patient **safety (physical environment)** ☐ Practice patient safety systems ☐ Complaints register and patient complaints procedures ☐ Evidence of complaints addressed	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	INDEPENDENT INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Practice software	**E3.1 GOVERNANCE - Clinical governance** Clinical governance is the processes a practice uses to manage clinical care. They include the use of clinical information and management systems such a patient registers and recall systems; processes for tracking referrals; medication interaction alerts; allergy alerts; evidence-based reminders for patients and appropriate clinical protocols. Practices have regular clinical review meetings. They have clear patient safety and complaints procedures that are known and understood by all practice staff.	**Guidelines; protocols, registers, alerts and reminders** ☐ Clinical protocols/evidenced based guidelines ☐ Patient chronic disease registers ☐ Patient recall systems ☐ Evidence-based reminder systems ☐ Process to track referrals ☐ Medication interaction alerts / Medication reviews ☐ Home medication reviews as necessary ☐ Process for accessing care out of practice hours (written information; answer machine messages) ☐ Access to and use of clinical guidelines for patients who identify as Aboriginal and/or Torres Strait Islander	1 2 3 4 5 **Comments**
Online and printed manuals **Practice software**	**E1 PATIENT CENTRED CARE** The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient–health professional relationship of trust, expertise and the use of best evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way	**Clinical guidelines** ☐ Clinical guidelines accessible to all staff (online; software; paper copies) ☐ Process(es) in place to update clinical guidelines (practice software)	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	*These indicators relate to the patient data you collect and use in practice and then approaches for team-based care*	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
	their care is provided.		
Practice software as data collected as part of quality improvement	**E1 PATIENT CENTRED CARE** The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient–health professional relationship of trust, clinical expertise and the use of best available evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way their care is provided.	**Comprehensive care** ☐ Documents patient age; family information; individual or special needs ☐ Collects practice population data ☐ Conducts a comprehensive health assessment	1 2 3 4 5 **Comments**
Practice data & registers: Complete and accurate data Evidence of data cleansing Practice population data for quality improvement	**E6 PERFORMANCE - Process improvement** A practice is able to identify its service delivery processes. It collects and analyses relevant data to identify areas for improvement such as data on the workload of staff members and management of casual staff, data on patient waiting times, data about billing processes and financial management. It regularly reviews this data and has systems in place for staff to identify and discuss areas for improvement.	**Practice data** ☐ At least 3 preventive care measures documented ☐ At least 3 chronic or acute care measures documented ☐ At least 2 measures of practice utilisation documented (eg. able to identify cohorts of patients attending or not attending the practice) ☐ The ability to and evidence of stratification of data to vulnerable populations	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	INDEPENDENT INDICATORS	SCORE / COMMENT **(MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)**
Policy and Procedures Manual **Practice software-and alerts for abnormal results**	**E4.2 Availability of information for staff** A practice has ways to support the effective communication of information (such as patient health care information and practice management information) to help all practice staff to do their work. It also has effective communication between the practice and other outside services. There are systems in place to ensure timely information exchange with outside services.	**Processes and systems** ☐ Systems for follow-up of tests and results within ## days (software with flags or notes for abnormal results) **(Ensure monitoring for timely follow-up and action of alerts)**	1 2 3 4 5 **Comments**

Disease management Plans
 	
Reports from team members or other Meeting minutes/outcomes
	E3.1 GOVERNANCE - Clinical governance
	
	Clinical governance - processes a practice uses to manage clinical care, including the use of clinical information and management systems eg. patient registers and recall systems; processes for tracking referrals; medication interaction alerts; allergy alerts; evidence-based reminders; clinical protocols. Regular clinical review meetings. Clear patient safety and complaints procedures that are known and understood by all practice staff.
		Meetings and reviews
		
		☐ Regular clinical review meetings involving all team
		
		  Meeting minutes
		
		  Attendees
		
		  How often meetings held and date of most recent meting
		
		  Evidence of regular scheduled meeting
			1 2 3 4 5
			
			Comments

SOURCES	ELEMENT	INDEPENDENT INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Disease Management Plans Disease management plan – **reports from team members** Meeting minutes Observation	**E4 COMMUNICATION - Team-based care** A practice uses team-based approaches to work. This is characterised by collaboration and a willingness to work together. All staff understand and value the roles of everyone else in the practice and how these roles complement each other. Staff communicate with each other both informally and formally in their day-to-day work.	<u>**Practice team**</u> ☐ Have regular clinical review meetings involving all team members (REFER PAGE 15) ☐ Evidence of assigned care teams to coordinate care for individual patients (multi-professional clinics) –reports from each team –member present in patient file Level 1: Disease management plan Level 2: Multi-professional chronic disease clinics Defined roles for clinical and non-clinical team members	1 2 3 4 5 **Comments**
Disease Management Plans	**E4 COMMUNICATION - Team-based care** A practice uses team-based approaches to work characterised by collaboration and a willingness to work together. All staff understand and value the roles of everyone else and how these roles complement each other. Staff communicate with each other both informally and formally in their day-to-day work.	<u>**Communication processes (formal and informal)**</u> ☐ Training and designating health care team members in communication skills – content of reports from team-member	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	These indicators relate to communication and information sharing – both internal and external to the practice	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)				
Practice software and internal email and messaging Communication Book Observation and discussion and information exchange	**E4.2 Availability of information for staff** A practice has ways to support the effective communication of information (such as patient health care information and practice management information) to help all practice staff to do their work. It also has effective communication between the practice and other outside services. There are systems in place to ensure timely information exchange with outside services.	**Information** ☐ Evidence of internal communication processes – intranet systems; communication book; other ☐ Evidence of information sharing between the practice team (formal and informal) Evidence of multi-professional meetings Meeting minutes	**1** **2** **3** **4** **5** **Comments**				
Practice software – patient files	**E4.2 Availability of information for staff** A practice has ways to support the effective communication of information (such as patient health care information and practice management information) to help all practice staff to do their work. It also has effective communication between the practice and other outside services. There are systems in place to ensure timely information exchange with outside services.	**Information exchange with outside services** ☐ Demonstrated processes to ensure timely and accurate handover of patient care with external services ☐ Clear referral information requests **Information exchange internally** Formalised internal handover processes and systems to support internal handover (intranet) nurses and GPs	**1** **2** **3** **4** **5** **Comments**				

SOURCES	ELEMENT	INDEPENDENT INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)				
Policy and Procedures Manual	**E1 PATIENT CENTRED CARE** The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient–health professional relationship of trust, clinical expertise and the use of best available evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way their care is provided.	**Partnerships with other services (see E 4.2)**	1	2	3	4	5
			Comments				

SOURCES	ELEMENT	*These indicators relate to how you and your practice staff use he practice data you collect – both patient data and other administration data to help improve your practice*	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Practice population data for quality improvement (Practice software) Staff meeting minutes (evidence of feedback and discussion by all staff)	**E6.1 Performance results** A practice uses established, well-recognised and up to date data collection systems. It ensures that data is entered routinely and accurately. This data is then analysed regularly and the results are used to monitor and improve the way the practice works. These results are communicated to all staff.	<u>Use of results to improve practice performance</u> ☐ Evidence of compiled results of practice data such as reports ☐ Evidence of use of complied results in staff meetings; discussions to identify areas for improvement ☐ Practice team can describe aspects of practice that have been improved in the past 3 years ☐ Evidence of implementation of practice improvements	1 2 3 4 5 **Comments**
Formal process for reviewing data and identifying areas of focus -**Clinical meeting minutes including staff attendees** -**PDSA cycles**	**E6 PERFORMANCE - Process improvement** A practice is able to identify its service delivery processes. It collects and analyses relevant data to identify areas for improvement such as data on staff workload, data on patient waiting times, data about billing processes and financial management. It regularly reviews this data and has systems in place for staff to identify and discuss areas for improvement.	<u>Review process</u> ☐ Evidence of formal review of the collected data and information	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	*These final indicators relate to how you and your practice staff plan for and manage change*	SCORE / COMMENT **(MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)**
Practice Policy and Procedures Manual Formal reports	**E1 PATIENT CENTRED CARE** The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient–health professional relationship of trust, clinical expertise and the use of best available evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way their care is provided.	<u>**Improving the quality of our practice**</u> ☐ Evidence that leaders have developed processes and procedures for reviewing practice data ☐ Evidence of appointment and work on data cleansing, internal or via Medicare locals or software support services ☐ Data Reports and date of most recent report	**1 2 3 4 5** **Comments**

Can you please describe a change that you have either had to undertake (an external change), or chose to undertake (one that was identified by you and your practice staff)

Examples of change in practice (following page)

Examples of change in practice

Example of INTERNAL / EXTERNAL change (CIRCLE ONE)	
What was the specific change/improvement you made	
How was this identified as an area for improvement	Who was involved? Staff meeting/discussion
What strategies did you use to make the change (formal or informal)	Who was responsible and how was the decided Were there formal or informal approaches (eg. Plan-Do-Study-Act cycle)
What measures did you use to know when you had achieved the change	
Were there any other benefits from the change you were not aware of	

Other comments –

Example of INTERNAL / EXTERNAL change (CIRCLE ONE)	
What was the specific change/improvement	
How was this identified as an area for improvement	Who was involved? Staff meeting/discussion
What strategies did you use to make the change (formal	Who was responsible and how was the decided Were there formal or informal approaches (eg. Plan-Do-Study-Act cycle)
What measures did you use to know when you had achieved it?	
Were there any other benefits from the change you were not aware of?	

Other comments - What resources or training might help you to identify and undertake future organisational improvement activities?

SOURCES	ELEMENT	INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)				
Practice Policy and Procedures Manual Formal reports	**E1 PATIENT CENTRED CARE** The practice provides continuing and comprehensive medical care to individuals and their families, through a continuing patient–health professional relationship of trust, clinical expertise and the use of best available evidence. Clinical teams, resources and services are all coordinated in the practice. Patients have input into the way their care is provided.	**Improving the quality of our practice** ☐ Evidence that leaders have directed and sustained change in practice (clinical/organisational) Meeting minutes and dates of most recent meeting Evidence of PDSA approach with documentation of: change to be implemented; strategies; timeframes; responsibilities and achievement Evidence of other approaches used and what these are Staff can clearly describe the processes (the leaders) used make practice improvements	**1** **Comments**	**2**	**3**	**4**	**5**
Policy and Procedures Manual – changes made and dated in manual	**E5 MANAGE CHANGE – Readiness for change** Staff are informed of necessary changes and involved in planning for change. Staff know why changes are taking place. The practice has procedures for implementing changes and supporting staff while changes are taking place	**Processes and procedures: Prior history of change in practice** ☐ Evidence of staff meetings or formal committee structures to discuss change in a whole practice approach ☐ Evidence of clearly articulated change needed and reasons why change required (clarity of vision for change) ☐ Evidence of delegated responsibility ☐ Evidence of change planning and monitoring process used in the past	**1** **Comments**	**2**	**3**	**4**	**5**

SOURCES	ELEMENT	INDICATORS	SCORE / COMMENT
			(MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)
Scheduled **staff meetings with a focus on change in practice** – identify those changes initiated BY practice (internal change) versus external change **Meeting minutes** Interviews (clarity of vision for change)	**E5 MANAGE CHANGE – Readiness for change** Staff are informed of necessary changes and involved in planning for change. Staff know why changes are taking place. The practice has procedures for implementing changes and supporting staff while changes are taking place.	**Attributes of change** ☐ Evidence of schedules staff meetings or formal committee structures to **discuss change** ☐ Evidence of clearly articulated change needed and reasons why change required (clarity of vision for change) ☐ Evidence of change planning and monitoring	1 2 3 4 5 **Comments**
Scheduled **staff meetings** **Meeting minutes** Interviews (clarity of vision for change)	**E5 MANAGE CHANGE – Readiness for change** Staff are informed of necessary changes and involved in planning for change. Staff know why changes are taking place. The practice has procedures for implementing changes and supporting staff while changes are taking place.	**Leader(s) for change implementation** ☐ Evidence of delegated responsibility ☐ Evidence of leadership support and direction (Practice Manager and/or clinical leader)	1 2 3 4 5 **Comments**

SOURCES	ELEMENT	INDICATORS	SCORE / COMMENT (MEETS ALL = 5 MEETS SOME =2-4 MEETS NONE = 1)				
Practice Training Register **Training certificates** Policies and procedures manual (training matched to identified change made in manual)	**E5 MANAGE CHANGE – Readiness for change** Staff are informed of necessary changes and involved in planning for change. Staff know why changes are taking place. The practice has procedures for implementing changes and supporting staff while changes are taking place.	**Education and training (see E2)** ☐ Evidence of formal process to determine education and training needs for all staff (surveys; staff meetings) aligned with **planned change** ☐ Evidence of staff provided with timely education and training relevant to change ☐ Evidence of training and education courses identified relevant to all staff ☐ Evidence of education undertaken by all staff	**1** **Comments**	**2**	**3**	**4**	**5**
Salary bonus structures **Provision of protected/paid time for training** (this is usually not within Policies and Procedures Manual) Interviews	**E5.2 Incentives - Incentives provided to staff by the practice** Incentives are an important part of encouraging staff to implement and maintain change in general practice, by recognising and promoting the adoption of new skills, techniques and ways of working. Incentives may be financial or include professional memberships and attendance at conferences or meetings etc. These incentives available to all practice staff.	**Incentives** ☐ Evidence of incentives available to all staff (clinical training; administration training) relevant to areas of change in the practice ☐ Evidence of supported attendance at meetings and information sessions ☐ Evidence of training provided onsite and externally as appropriate	**1** **Comments**	**2**	**3**	**4**	**5**

Appendix 6 Profile of participating practices in national trial

RRMA	Practice Size (<2; 2 <5; 5 <10; 10+ FTE GPs)	Practice model	Professional background of Practice Manager	Previous QI involvement	Interviewees
RA1	5<10	Privately owned	Nursing	Yes (external; collaboratives; BEACH; Medicare Local)	Practice Manager
RA1	5<10	Privately owned GP partnership	Administration	Yes (internal activities; external programs; Medicare Local; PDSA cycles)	Practice Manager; nurse
RA1	5<10	Privately owned GP partnership	Nursing	Yes (internal activities; external programs; collabortaives)	Practice Manager
RA1	5<10	Privately owned GP partnership	Administrative	Yes (internal Medicare Local)	Practice Manager; GP
RA1	5<10	Privately owned	Nursing	Yes (external programs; BEACH; internal activities; PDSA cycles)	Practice Manager; Assistant Practice Manager; GP
RA1	2<5	Privately owned	Nursing	Yes (internal audit)	Practice Manager; Nurse
RA1	2<5	Privately owned	Nursing	Yes (external and internal; collaboratives; PDSA cycles)	Practice Manager; nurse
RA1	2<5	Privately owned Practice Manager owner	Business management	Nil (new practice)	Practice Manager

RRMA	Practice Size (<2; 2 <5; 5 <10; 10+ FTE GPs)	Practice model	Professional background of Practice Manager	Previous QI involvement	Interviewees
RA2	2<5	Privately owned GP	Engineering; Project Manager	Yes (internal activities)	Practice Manager; Nurse; GP
RA2	5<10	Privately owned GP partnership	Nursing	Yes (internal activities)	Practice Manager
RA2	5<10	Associateship of 4 individual companies	Administrative	Yes (internal activities ; education and training; ethics)	Practice Manager
RA2	5<10	Corporate	Nursing	Yes (internal activities; external programs; Medicare Local	Practice Manager
RA2	10+	Privately owned	Business management (farming)	Yes (external programs and internal activities; PDSA cycles)	Practice manager; nurse
RA2	10+	Corporate	Business management	Yes (external programs; internal activities)	Practice Manager; nurse
RA4	2<5	Specialised Defence Force model	Nursing	Yes (6 Sigma US framework)	Practice Manager; nurse

Appendix 7 Two examples of Primary Care Practice Improvement Tool (PC-PIT) Reports – High and low scoring practices

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PRACTICE A (High scoring)

Primary Care Practice Improvement Tool Report, March 2013

Introduction
The following report presents:
> The PC-PIT Staff scores – these scores represent a ranking based on staff **perceptions** of how they believe the practice meets or does not meet that best practice definition of the element.
> PC-PIT Independent Visit scores - these scores are a ranking of each PC-PIT element **based on objective evidence** provided to the CRE Independent Visitor.

The comparison of these two graphs will assist in identifying areas for improvement and how the chosen improvement may best be addressed.

Understanding the PC-PIT Spider Diagrams
> The PC-PIT **median score is the middle scores for each of the 13 elements** ranked by staff on the online PC-PIT. These scores are indicated on the **1 to 5 ranking scale** given to each of the 13 PC-PITs elements.
> Each element is listed around the outside of the graph. A ranking of 1 (in the middle of the diagram) to 5 (on the outer ring of the diagram) is given to each element by staff completing the online PC-PIT tool. The median score for each element is calculated from these responses.
> The Independent Visit scores are those based from objective indicators developed by the CRE and the rankings are based on the evidence displayed during the onsite practice visit.

Lower ranking scores
> If there is a score in any of the elements of 3 or less, you are probably not working to the maximum ability of your practice. These lower ranked elements are those where you might consider undertaking staff discussions to identify key areas requiring change or improvement.

Where there is an element ranked 4 or 5 in your Independent Visit diagram, but 3 or lower by your staff - this is an indication that your staff may not have all the knowledge about the element that they require to make a judgment. It may also be an indication that they have had a negative experience which has given them a poorer perception of this element. It is important to reflect on any differences and why they may have occurred
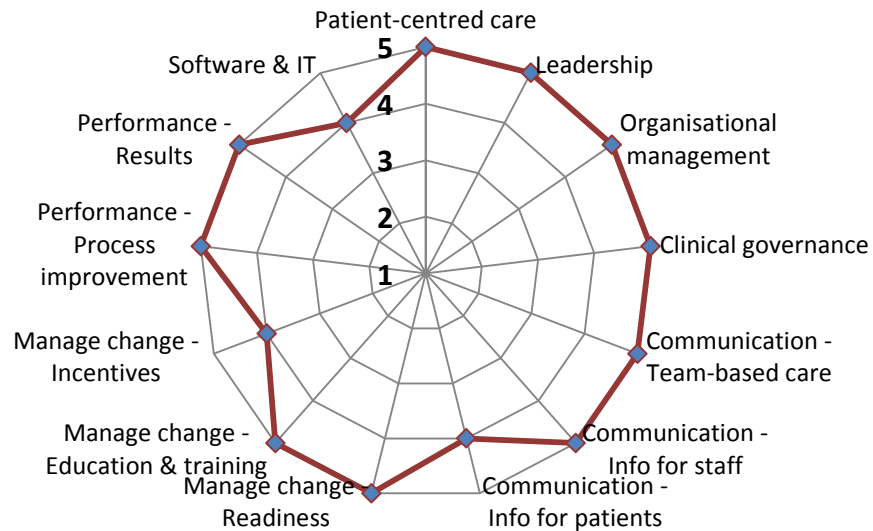.

Compare the PC-PIT Median Staff Scores (left hand diagram) with the Independent Visit Scores (right hand diagram)

Practice A: PC-PIT Median Staff Scores

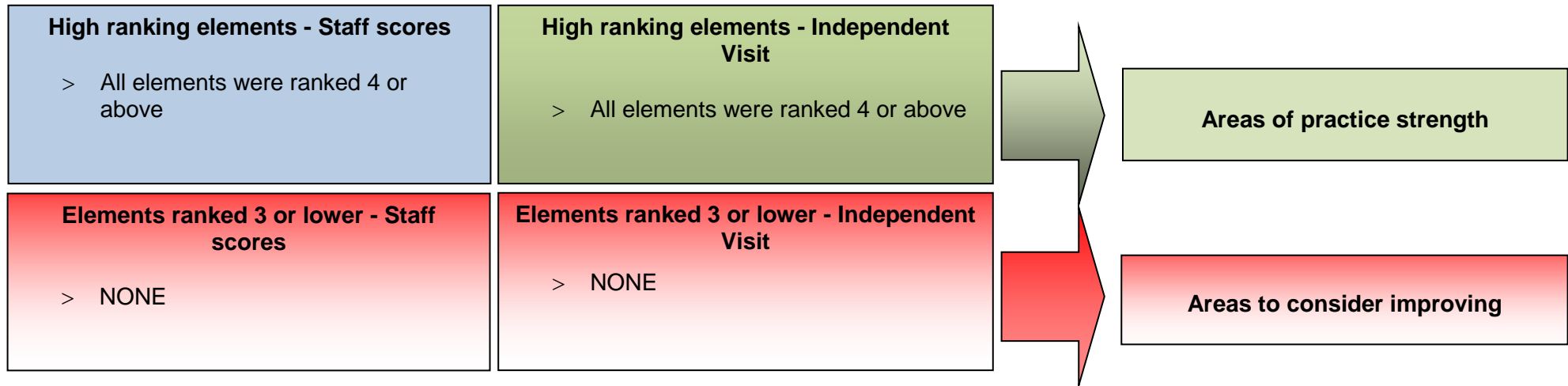Practice A: PC-PIT Independent Visit Scores
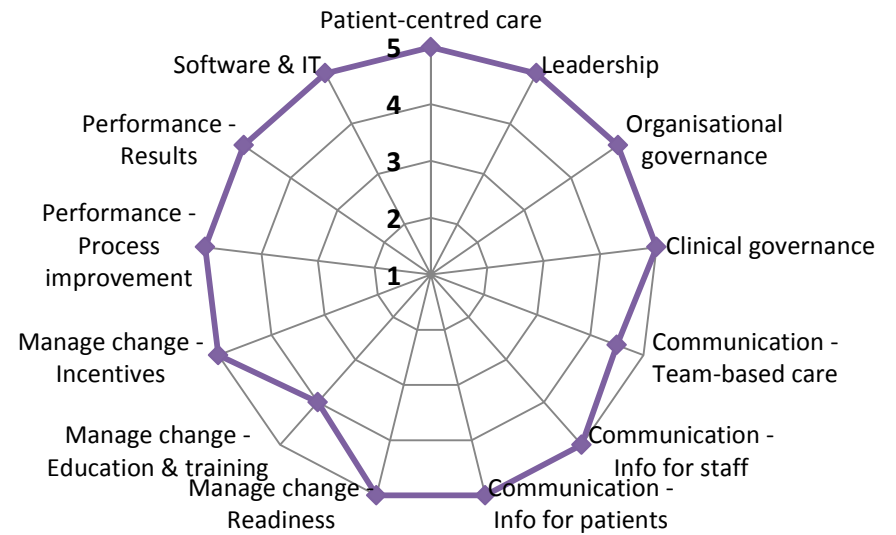
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Interpreting the PC-PIT Staff scores and Independent Visit Scores

High ranking elements - Staff scores	High ranking elements - Independent Visit	
> All elements were ranked 4 or above	> All elements were ranked 4 or above	**Areas of practice strength**

Elements ranked 3 or lower - Staff scores	Elements ranked 3 or lower - Independent Visit	
> NONE	> NONE	**Areas to consider improving**

Consider the Following …

*Your practice had **no** elements that were ranked 3 or lower by staff or by the Independent Visit. However this does not mean there aren't areas in which you could make small improvements.*

> Consider that you may not have had responses from ALL your staff, so you may be missing some vital feedback…

> Follow up with your staff by discussing the results of this report in a group meeting. Pay particular attention by focusing on each element and its 'best practice' definition as given in the PC-PIT form. They should then be invited to share **one positive and one area they feel may be potentially improved for each element** – no matter how small. It may be worth asking if there were any elements that staff found difficult to understand or score and if so, what these were.

> Use this information to identify some possible small area you may improve. Once you have chosen an element to focus on, develop a short PDSA to document what the change is that you will make, how you will achieve it and how you will know when it has been achieved?

Where to next?

Now is the time to use your report to undertake **open discussions with your staff to discuss report findings,** identify an area for improvement and how that improvement might be achieved. Use the comments in [Consider the Following…] box to assist in planning discussions with your staff.

Follow these guiding principles

1) Take off your practice manager hat – you are now a quality improvement **facilitator** – it is your role to facilitate staff to openly discuss the lower ranked areas and encourage them, in a safe environment, to identify areas related to this element that they want to change.

2) Use the general PC-PIT 'best practice' element descriptions as a way of starting your staff discussions. Respect staff confidentiality in their answers given on the online PC-PIT.

3) Encourage your staff to identify key issues which may require improvement in relation to each of the **lower ranked elements**, then chose an area for improvement that is SIMPLE. Remember, you do not have to improve the entire element in one cycle; rather identify specific issues or challenges related to the element and chose ONE of these to improve as starting point.

4) Follow the **Plan-Do-Study-Act framework** to identify the issue; determine strategies and key activities to improve your chosen area; allocate a timeframe for the improvement; identify those responsible for each of the activities and, finally, determine the measures of how you will know when the improvement had been achieved.

5) Your measures for improvement should be SMART (Specific, Measureable, Achievable, Realistic and placed within a stated Timeframe).

6) It is important to ensure there is a real and measurable **BENEFIT** to your service delivery; your staff; your patients in making the improvement. These improvements can be challenging! Clear planning, implementation and measures of success will assist you in this process.

The CRE PC-PIT Team is here to guide and assist you.

The PC-PIT is a work in progress and your participation and feedback is vital to ensure we develop a practical, easy to use and effective practice improvement tool.

Please call or email with any questions or queries to
Dr Lisa Crossland   t: 0404 511 489   e: l.crossland1@uq.edu.au

PRACTICE B (Low scoring)

Primary Care Practice Improvement Tool Report, March 2013

Introduction
The following report presents:

> The PC-PIT Staff scores – these scores represent a ranking based on staff **perceptions** of how they believe the practice meets or does not meet that best practice definition of the element.

> PC-PIT Independent Visit scores - these scores are a ranking of each PC-PIT element **based on objective evidence** provided to the CRE Independent Visitor.

The comparison of these two graphs will assist in identifying areas for improvement and how the chosen improvement may best be addressed.

Understanding the PC-PIT Spider Diagrams

> The PC-PIT **median score is the middle scores for each of the 13 elements** ranked by staff on the online PC-PIT. These scores are indicated on the **1 to 5 ranking scale** given to each of the 13 PC-PITs elements.
> Each element is listed around the outside of the graph. A ranking of 1 (in the middle of the diagram) to 5 (on the outer ring of the diagram) is given to each element by staff completing the online PC-PIT tool. The median score for each element is calculated from these responses.
> The Independent Visit scores are those based from objective indicators developed by the CRE and the rankings are based on the evidence displayed during the onsite practice visit.

Lower ranking scores
> If there is a score in any of the elements of 3 or less, you are probably not working to the maximum ability of your practice. These lower ranked elements are those where you might consider undertaking staff discussions to identify key areas requiring change or improvement.

Where there is an element ranked 4 or 5 in your Independent Visit diagram, but 3 or lower by your staff - this is an indication that your staff may not have all the knowledge about the element that they require to make a judgment. It may also be an indication that they have had a negative experience which has given them a poorer perception of this element. It is important to reflect on the differences and why they may have occurred.
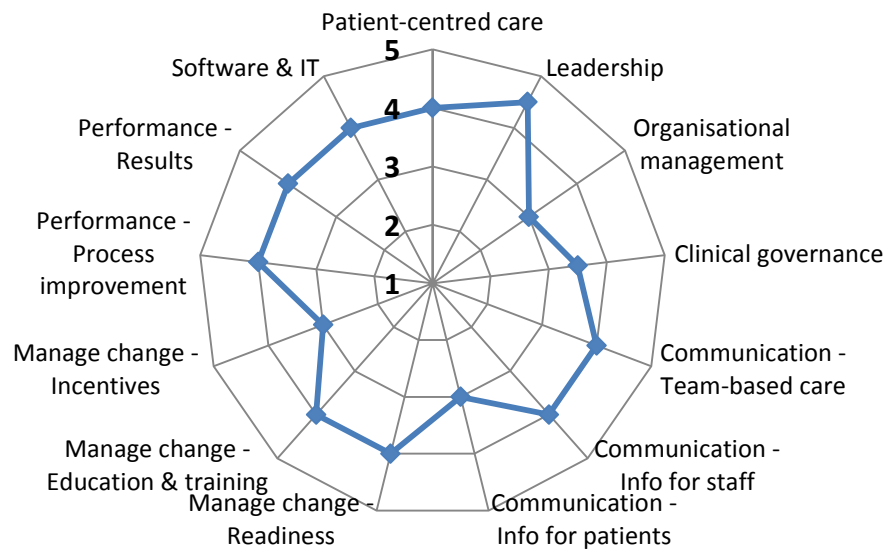
Compare the PC-PIT Median Staff Scores (left hand diagram) with the Independent Visit Scores (right hand diagram)

Practice B: PC-PIT Median Staff Scores

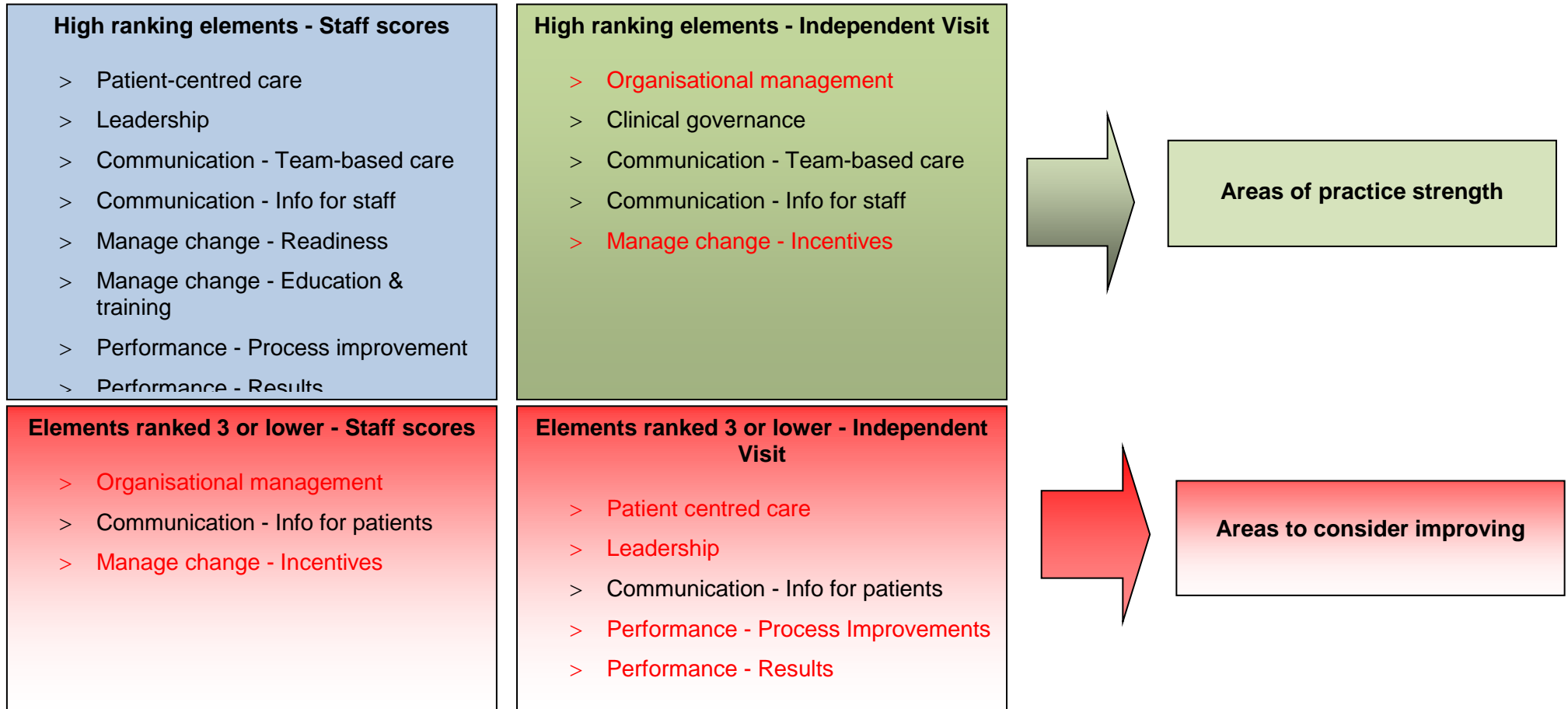Practice B: PC-PIT Independent Visit Scores
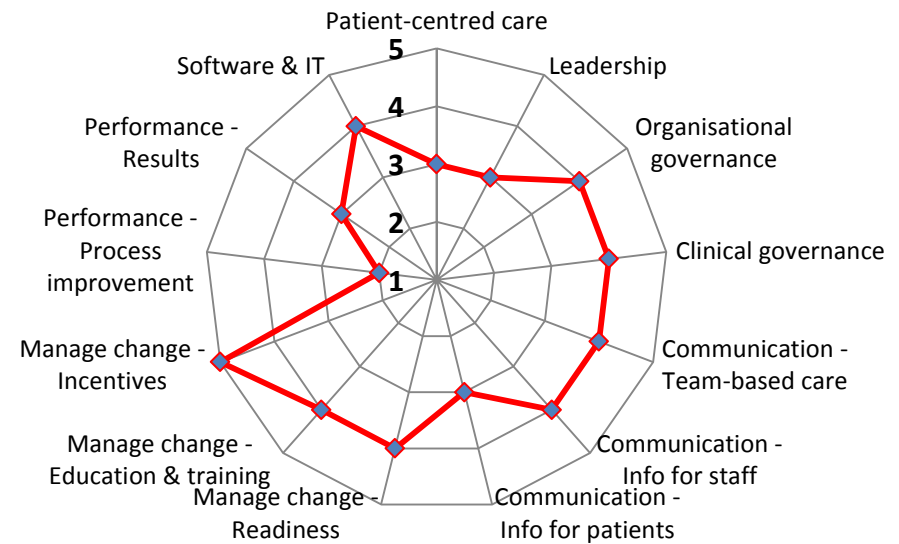
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Interpreting the PC-PIT practice scores and Independent Visit Scores

High ranking elements - Staff scores

> Patient-centred care

> Leadership

> Communication - Team-based care

> Communication - Info for staff

> Manage change - Readiness

> Manage change - Education & training

> Performance - Process improvement

> Performance - Results

High ranking elements - Independent Visit

> Organisational management

> Clinical governance

> Communication - Team-based care

> Communication - Info for staff

> Manage change - Incentives

Areas of practice strength

Elements ranked 3 or lower - Staff scores

> Organisational management

> Communication - Info for patients

> Manage change - Incentives

Elements ranked 3 or lower - Independent Visit

> Patient centred care

> Leadership

> Communication - Info for patients

> Performance - Process Improvements

> Performance - Results

Areas to consider improving

Consider the Following …

Elements ranked lower by both Staff and Independent Visits

> **Communication – Info for patients** was ranked low by both Staff and the Independent Visit. This finding suggests Staff perceived there is a lack of adequate information available to patients outside of the clinical consultation and this perception was supported by the objective findings of the Independent Visit. The practice might consider exploring the types of information about: the practice, the self-management of chronic disease, additional links and resources and also the way in which this information is made available to patients (such as multilingual information sheets, website links, other sources).

Elements ranked differently by Staff and Independent Visits

> The element **Organisational management** was ranked **higher in the Independent Visit** and **lower by Staff.**

> The element **Leadership** was ranked **higher by Staff but lower in the Independent Visit.**

These 2 elements are linked. While Staff are supportive of clinical and organisational leaders in the practice, they rank organisational management (that is, the management of the practice) lower. Evidence cited during the Independent Visit demonstrates adequate organisational management systems. However, Independent Visit interview and cited evidence suggested the organisational leader (that is, the Practice Manager) may lack overall autonomy in relation to making management decisions. This lack of autonomy may be reflected in the ways in which Staff perceive the effectiveness of the management systems in place, those which are missing. This is an area for further Staff discussion.

> The element **Manage change - Incentives was ranked lower by Staff but higher during the Independent Visit**. This may be due to the fact that some Staff are unaware of the incentives available to them, or feel these incentives do not apply to them. This is an area for further discussion and clarification with Staff.

> The element **Patient centred care was ranked lower by the Independent Visit**. Apart from patient surveys, there are limited ways for patients to have formalised input into the way health care is provided in the practice. This may be complicated by the many multi-cultural and multi-lingual groups attending the practice and may require the practice to develop creative approaches to ensuring representative patient input is fostered and maintained. This is an area for further Staff discussion.

> **Performance - Process improvements was ranked lower by the Independent Visit.** There was less evidence demonstrating how process improvements were identified, how data and information such as Staff workload, patient wait times and billing processes are documented and most importantly, reviewed. There is also a lack of evidence which demonstrates how this information is used by the practice Staff to identify potential areas for improvement.

> **Performance - Results was ranked lower by the Independent Visit.** This also indicates there was less evidence of the practice's up-to-date data collection methods and the process by which data accuracy ensured. There was also limited evidence of how these data were reviewed and the results used to monitor and improve the way the practice works. There is also little evidence that these results are communicated with relevant Staff.

> The elements **Performance – Process improvement** and **Performance - Results** are also linked. They may be considered together during Staff discussions.

Where to next?

Now is the time to use your report to undertake **open discussions with your staff to discuss report findings,** identify an area for improvement and how that improvement might be made. Choose **one** of the lower ranking elements listed in the above and use the comments in [Consider the Following…] box to assist in planning discussions with your staff.

Follow these guiding principles

1) Take off your practice manager hat – you are now a quality improvement facilitator – it is your role to facilitate staff to openly discuss the lower ranked areas and encourage them, in a safe environment, to identify areas related to this element that they want to change.

2) Use the general PC-PIT 'best practice' element descriptions as a way of starting your staff discussions. Respect staff confidentiality in their answers given on the online PC-PIT.

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Please call or email with any questions or queries to
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