

# Combining quantitative and qualitative research to engage stakeholders in developing quality indicators in general practice

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## Abstract

*In 2000, the Newcastle Institute of Public Health (NIPH) undertook a project that aimed to review, identify and where necessary, develop a range of indicators of quality service provision in general practice. We describe the way in which quantitative and qualitative research methods (including a Delphi style survey) were combined to investigate consensus amongst stakeholders in defining quality indicators. Over 500 general practice stakeholders were consulted. They included general practitioners (GPs) and their representative groups, academics, policy makers, and consumers. Several important lessons were learnt from the process, including the importance of involving a broad representative group of stakeholders, informing workshop participants in advance, providing adequate response times for the Delphi surveys and using videoconferencing technologies.*

## Indicators of quality in general practice

In December 1999 the Commonwealth Department of Health and Aged Care (DHAC) contracted with the Newcastle Institute of Public Health (NIPH) to undertake a project relating to the first stage of Recommendation 70 in the General Practice Strategy Review (General Practice Strategy Review Group 1998) which stated that research should be undertaken *to review, identify and where necessary develop a comprehensive set of indicators and associated minimum data set to measure quality in general practice*. The work was carried out between January and June 2000 and a report was submitted to DHAC in July 2000 (Jeacocke, Heller et al. 2000). Our paper reviews the processes and methods integral to this project.

Several Australian organisations are attempting to provide frameworks for monitoring quality in general practice (Jeacocke, Heller et al. 2000). Although Australia has been at the forefront of research on quality and safety

within health care (Wilson, Harrison et al. 1999; Britt, Miller et al. 1997), Australia has adopted a cautious evidence-based approach to implementing major changes to the structure of health services delivery (Jeacocke, Heller et al. 2000). The innovative approach taken in this project demonstrated a way of engaging stakeholders in a review of the evidence for indicators of quality in general practice.

## Methods: staged processes

The research aims were addressed through three distinct yet linked stages. *Stage 1* involved a review of the Australian and international literature with respect to distilling a set of quality indicators for consideration by stakeholders. *Stage 2* (the focus of this paper) employed semi-structured qualitative and quantitative research methods to advance the development of a quality framework within general practice. *Stage 3* incorporated two statistical analyses: firstly the analysis of survey responses and workshop discussion, and secondly statistical analyses to determine the usefulness of existing data sets with respect to deriving quality information about general practice.

### Stage 1: the evidence base

A major component of our research project was the identification of a range of evidence-based indicators for presentation to stakeholders for assessment and evaluation in stage 2. Only a small proportion of references obtained from the international literature provided information on recognised indicators for monitoring quality in general practice. The Australian National Health Priorities (Commonwealth Department of Health and Family Services 1996) were reviewed in addition to the ten most frequently managed conditions identified in the *Bettering the Evaluation and Care of Health* (BEACH) study (Britt, Sayer et al. 1999). A total of 29 quality indicators were identified from the literature in terms of their likelihood of improving quality in general practice. The model proposed by Campbell et al (Campbell and Roland 1998) formed the basis of indicator selection and grouping into the categories of preventive care, chronic disease management, access to care, patient evaluation of care, organisational performance and prescribing.

### Stage 2: three-phased stakeholder evaluation

The first of the three phases in stage 2 involved a two-round Delphi style survey (Normand, McNeil et al. 1998). The Delphi approach attempts to generate consensus between participants using a survey process characterised by anonymity, iterative and controlled feedback, and the aggregation of responses (Pope and Mays 1999). Some researchers would see Delphi methods as quantitative in that they measure consensus. Delphi methods also fit within a qualitative framework because they allow a consensus investigation of a broad range of viewpoints and opinions in a way not possible through a traditional cross sectional survey design (Pope and Mays 1999).

The Delphi procedure follows a series of rounds whereby individuals are invited to provide opinions on specific issues, these opinions are grouped and circulated in the form of a questionnaire, respondents rank their agreement with statements in the questionnaire, and rankings are summarised and included in a further version of the questionnaire. The process is repeated until a level of consensus is achieved (Pope and Mays 1999).

The second phase of stage 2 incorporated a series of semi-structured workshops with GPs and consumers including one workshop, run as a focus group, with Aboriginal participants. The workshops, known as the GP/Consumer workshops, required participants to independently evaluate a set of quality indicators and participate in feedback and discussion about these indicators.

The third phase of stage 2 involved a final consensus workshop involving previously informed participants. This was designed to determine options for moving forward within a quality framework, after considering results from the Delphi survey rounds and earlier workshops.

### Stage 2: stakeholder selection

The sampling process for the phase 1 *Delphi surveys* was two-stepped. As a first step, maximum variation sampling was used to draw up a list of key general practice stakeholders and relevant organisations. Chain sampling was then employed whereby stakeholder organisations were used to identify individuals to whom the Delphi survey questionnaire was to be mailed.

A total of 413 individuals were sent a copy of the first-round Delphi survey and 169 were returned (response rate 41%). After the responses were collated a second-round survey was sent to 163 of the 169 participants. There were 102 respondents to the second-round Delphi survey (response rate 63%).

The sampling process for phase 2, the *GP/Consumer workshops*, was opportunistic, with urban GP participants recruited by the Central Sydney Division of General Practice and rural GPs recruited through the Queensland Medical Rural Support Agency. Urban and rural consumer representatives were recruited through the Consumer Health Forum and Aboriginal representatives were identified through the National Aboriginal Community Controlled Health Organisation (NACCHO) who recommended the participation of the Awabakal Newcastle Aboriginal Co-operative.

For the *Final Consensus Workshop*, national and state stakeholder representatives were identified by the Commonwealth in conjunction with the project team.

## Stage 2: first-round Delphi survey

The stated aim of the Delphi surveys was to identify a set of potentially useful and evidence-based quality indicators for use in general practice. Participants were invited to indicate their consent to the study by completing the questionnaire and returning it in reply paid envelopes within 2 weeks. A follow up phone call or e-mail was made to non-respondents three weeks after the information package was sent.

The first-round Delphi survey (conducted in March 2000) included a list of the 29 quality indicators identified from the literature. The questionnaire included an evidence summary which presented information on the definition of the indicators, one or more sources recommending the importance of the aspect of care to general practice, evidence supporting the sources of recommendation, potential biases arising from indicator data collection, and potential confounders that might influence interpretation of the indicator. Specific criteria were also provided to participants under the three headings of relevance, usefulness and practicality to help in the assessment of the indicators. These were grouped under the four criteria of clinical evidence, statistical issues, confounding factors and method of implementation.

## Stage 2: second-round Delphi survey

The results of the first-round Delphi survey were collated into a second-round Delphi survey. In May 2000 this second survey was mailed to the first-round respondents along with a summary of the overall group ratings and comments obtained from the first-round Delphi survey. In this second-round survey, particular attention was paid to comments relating to how the indicators might best be utilised by practitioners and health policy makers. All information presented was de-identified to ensure the anonymity of participants. In recording their impressions on the second-round Delphi survey questionnaire, participants were asked to indicate the overall suitability of the indicators on a seven-point scale. This scale provided a comparable range to the three-point scale used in the first round of the Delphi survey. The two scales were used to generate a combined score.

The second-round survey was modified to clarify the distinction between the use of the indicators for internal monitoring by GPs, and also the use of the indicators for external monitoring at a government level. Due to feedback from respondents about the length of the first survey, only the 15 highest rating indicators (out of the original 29) were selected for further evaluation.

## GP/Consumer workshops

The second phase of stage 2 involved four semi-structured urban and rural workshops with GPs and consumers separately (held in March 2000) and a focus group with Aboriginal and Torres Strait Islander people (held in May 2000). The workshops were conducted over 90-minute sessions in which 30 minutes were allocated to examine each of the following key areas: how well the indicators addressed important quality issues in general practice; the validity, usefulness and practicality of specific quality indicators presented in the Delphi survey and also how quality indicators might be implemented in general practice. All of the workshops, which were facilitated by senior members of the project team, generated a considerable amount of discussion and feedback. Workshop discussion was transcribed using audiotapes and observers' notes.

In view of the difficulties in gathering together large numbers of rural GPs and consumer group representatives in one location, two rural workshops (one for GPs and one for consumers) were conducted by videoconference across a number of rural and remote sites in Queensland. A maximum of 14 participated in each videoconference, up to 20 stakeholders participated in the two face to face GP/consumer workshops, and 3 Aboriginal people participated in the small Aboriginal workshop.

The Aboriginal workshop was conducted as a focus group with two members of the management of Awabakal Newcastle Aboriginal Co-operative, one Aboriginal health worker and two observers. In order to ensure cultural appropriateness, the focus group was less structured than the urban and rural GP/consumer workshops. A copy of the first-round Delphi survey was provided as a discussion prompt only.

### **Evaluation workshop: June 2000**

The main aim of the final half-day face-to-face semi-structured workshop in June was to investigate consensus between various stakeholders about the use and practical implementation of indicators for quality improvement in general practice. Each of the stakeholder groups was invited to nominate one representative to participate in the final workshop.

At the commencement of the workshop, a presentation was provided on the information obtained from the Delphi survey and the GP and consumer workshops. This was followed by a statistical presentation of the analysis of general practice quality indicators using Health Insurance Commission data. The presentations were designed to allow a synthesis of feedback from GPs, consumers and stakeholders about the indicators and indicator application at various levels within general practice.

## **Results**

### **Indicators**

The highest suitability-rated indicators for improving the quality of care provided Royal Australian College of General Practitioners (RACGP) in general practice were the provision of adult patients who have been screened for hypertension according to the RACGP recommendation; the percentage of sexually active women under 70 having a record of receiving a pap test in the last 2.5 years; the proportion of all children older than 7 years of age who have been appropriately immunised; the proportion of non-insulin dependent diabetics seen over the last month with a record of an HbA1c (Haemoglobin A1c) being performed in the last 14 months, and the percentage of medical records with up to date patient summaries based on an audit of randomly selected records from patients examined in the previous week.

### **Processes**

The methods used in stage 2 of the project resulted in a set of key qualitative and quantitative findings that involved over 500 participants in total. Our project did not seek to understand causal relationships, as is the case with quantitative research (Higginbotham, Albrecht et al. 2001; Murphey and Mattson 1992; Ezzy 2001). One of the innovative features of this project was that it provided the process and context for stakeholders to discuss perceptions, viewpoints and opinions regarding what is commonly done in everyday general practice.

### **Recommendations**

The recommendations have been grouped into seven key elements: international experience; current practice; selection of indicators; analysis of indicators; use of indicators; future directions and strategies to promote change. These key elements are listed below.

The main lesson learnt from the international literature was that there is a need to establish a national quality framework in Australia to better integrate existing quality initiatives. It was also agreed that this framework should involve a bottom-up approach based on the principles of clinical governance.

In relation to current practice, it was agreed that there is a need for a review of the existing approaches to fund allocation under the Practice Incentives Program and to move to a system that is not based on indicator targets. Stakeholders stated that there was also a need to explore models allowing indicator feedback to be coupled with educational material relevant to GPs' practices.

The main lessons learnt in relation to the selection of indicators were that the monitoring of indicators using existing data should be undertaken prior to the establishment of national data collection mechanisms, and that the indicators examined in this project should undergo further evaluation as part of practice based implementation strategies.

Stakeholders agreed that an academic group with expertise in quality indicator evaluation should be appointed to undertake routine monitoring using existing data sources, and also that academic general practitioners might provide technical expertise in analysing regionally collected indicator data as part of quality improvement activities under the primary care research strategy (which was newly proposed at the time).

The main lessons learnt from the use of indicators were that the new primary care research strategy should incorporate the evaluation of indicators to identify priorities for general practice research and guideline development, as well as direct quality research agendas in the divisions of general practice (divisions), and also that practice needs should be addressed as part of the indicator implementation process. It was further agreed that a system should be developed to ensure that regional indicator feedback to divisions is effective in promoting appropriate changes in addressing local quality issues.

The three main lessons learnt with respect to future directions were: firstly, research is necessary on the effectiveness of practice audits as part of quality improvement projects targeted to practice and regional quality needs using regional indicators; secondly, research should be conducted to identify effective and acceptable methodologies for involving consumers in the evaluation of quality health care and thirdly further research is necessary to evaluate or develop indicators for specific practice population groups such as Aboriginal and Torres Strait Islanders and patients attending rural and remote practices.

## **Lessons learned**

The project faced a number of challenges. The lessons learnt from the difficulties, as well as the successes, will be valuable for future research. The key elements that contributed to the success of the stakeholder engagement processes are listed below.

### **Stakeholder representativeness**

Considerable time and effort was put into ensuring a broad national representation across general practice stakeholders, who included consumers as well as health professionals. Discussion was held with all key stakeholder groups at the outset to help guide the selection of stakeholder representatives for participation in the Delphi surveys and workshops. The participation of consumer and Aboriginal representatives was also a strength of the project.

### **Data collection for workshops**

As is generally the case with qualitative research, the data collection from the workshops examined individual as well as collective viewpoints. Accordingly, the qualitative data analysis generated a rich collection of stakeholder views.

### **Final workshop**

One aim of the final evaluation workshop was to ensure that participants came along well informed. All participants were mailed (as advance reading material) feedback information on the project including the results of the Delphi surveys and previous workshops. The workshop also commenced with a presentation component to ensure a baseline level of background knowledge. These strategies appeared to work well, as evidenced through the informed discussion that ensued.

### **Adequate response time and follow up**

The project team attempted to provide sufficient response times for the Delphi surveys, as well as adequate notification of workshop dates and times. In addition the study team contacted many stakeholders by phone to increase response rates.

## **Volume and format of information**

The specifications of this project were broad: to review, identify and where necessary develop a comprehensive set of indicators and associated minimum data set to measure quality in general practice. A major challenge was to provide an appropriate volume of information for stakeholders without overloading them. The decision to select 15 out of the 29 indicators in the second-round Delphi survey was based on feedback suggesting that the round one survey was too long. Similarly the determination of an effective format for both surveys and workshops was a balance between providing concise time efficient presentations and sufficient detail.

## **Geographic issues**

Apart from some minor telecommunication problems, the videoconferences were very effective in identifying and understanding the barriers to optimal health care for rural and remote stakeholders. The technology was embraced by rural GPs and consumers alike, despite the fact that many had not participated in videoconferences before.

## **Cultural sensitivity**

A further challenge was to ensure cultural sensitivity when working at the level of GPs, consumers and Aboriginal and Torres Strait Islander people. The significance and understanding of the indicators differed between the groups and the facilitators encouraged workshop discussions to flow from the differing perceptions of the participants. This was also a strength of the research.

## **Informing participants**

Providing sufficient information to facilitate effective participation by all stakeholders was both a strength and a limitation. Many consumers found some indicators (eg HBA1c) too technical. Therefore, at times, the clinical descriptors could have been made more consumer-friendly.

## **Conclusions**

One of the strengths of the project was that it combined both qualitative and quantitative methods to produce a rich set of baseline information gleaned from over 500 stakeholders. Our project facilitated an investigation of GPs' and consumers' views on the issues concerning quality indicators in a more open-ended and iterative manner than would have been possible under a purely quantitative framework.

This project employed a complementary balance of qualitative and quantitative methods: firstly the evidence base was sourced through a comprehensive literature search in stage 1; secondly semi-structured qualitative methods were used in stage 2, and thirdly quantitative methods were used to analyse data sets in stage 3. These methods adhered to the study's purpose and all three stages were necessary in order to meet the project deliverables which were: an international literature review; a list of specific indicators of quality in general practice relating to perceived priority areas for quality improvement, and acceptable peer-determined quality indicators resulting from the stakeholder consultation.

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