

Responsiveness of primary care services: development of a patient-report measure – qualitative study and initial quantitative pilot testing

Carolyn Tarrant,^{1*} Emma Angell,¹ Richard Baker,¹ Mary Boulton,² George Freeman,³ Patricia Wilkie,⁴ Peter Jackson,⁵ Fatimah Wobi¹ and Diane Ketley¹

¹Department of Health Sciences, University of Leicester, Leicester, UK

²Department of Clinical Health Care, Oxford Brookes University, Oxford, UK

³School of Public Health, Imperial College London, London, UK

⁴National Association for Patient Participation, Walton-on-Thames, UK

⁵School of Management, University of Leicester, Leicester, UK

*Corresponding author

Declared competing interests of authors: Richard Baker reports grants from the National Institute for Health Research during the conduct of the study.

Published November 2014

DOI: 10.3310/hsdr02460

Scientific summary

Development of a patient-report measure

Health Services and Delivery Research 2014; Vol. 2: No. 46

DOI: 10.3310/hsdr02460

NIHR Journals Library www.journalslibrary.nihr.ac.uk

Scientific summary

Background

Primary care service providers do not always respond to the needs of diverse groups of patients, and so certain patients groups are underserved and disadvantaged. Such groups include those with disabilities and those who do not speak English. General practitioner (GP) practices are increasingly encouraged to be more responsive to patients' needs in order to address these inequalities. There is a lack of clarity about the meaning of responsiveness, and a lack of measures to assess the views of patients from diverse groups on how responsive primary care organisations (PCOs) are to their needs.

Objectives

- To explore how responsiveness in primary care is perceived by staff and patients, and enacted in PCOs.
- To develop a patient-report questionnaire for use as a measure of patient experience of responsiveness by a range of PCOs.
- To identify the challenges in collecting diversity data and mapping GP practice populations.

Methods

Overview

Stage 1 of the study involved a review of policy documents and literature, and qualitative research with patients and primary care staff, in order to define and operationalise responsiveness. Based on this work, a questionnaire was drafted and piloted in stage 2, before final testing in stage 3, including how to optimise the use of the questionnaire to access the views of diverse patient groups. Original plans to develop guidance for practices on mapping their patient populations were refocused on understanding the significant barriers and challenges to practices in undertaking this.

Stage 1

A narrative literature review was conducted to characterise definitions and approaches to measuring responsiveness across different fields of literature. This involved systematic searches of MEDLINE and Web of Knowledge from January 2001 to March 2011, and informal searches to identify 'grey' literature. We conducted qualitative work with patients and professionals, to explore how patients experienced responsive primary care, how practices attempted to deliver responsive service, and barriers and facilitators to this. We also explored the important features of a questionnaire on responsiveness for patients and for PCOs. We conducted semistructured interviews with staff ($n = 27$), patient representatives ($n = 6$) and patients ($n = 58$) from 13 PCOs in the East Midlands. PCOs were selected to include mainstream GP practices of varying size, population demographics and location, and other types of PCO including a walk-in centre, pharmacies and a specialist GP practice for homeless patients.

Qualitative data were analysed using a combination of framework analysis and the constant comparative approach, which involved both deductive and inductive elements. An initial coding frame was generated from the research questions, which acted to guide, but not constrain, the analysis. Interviews were coded using NVivo 8 (QSR, International, Warrington, UK), and themes and subthemes were developed and iteratively revised.

Based on analysis of interviews, we generated a model of the components of responsive service delivery, and generated descriptions of the key non-clinical aspects of primary care that act as indicators for responsiveness for patients. These were used to inform questions for the questionnaire in stage 2; the initial questions were tested in three patient focus groups involving patients from 'seldom-heard' groups, and revised as a result.

Stage 2

A draft questionnaire for GP practices was developed including the revised questions, open questions and sociodemographic questions. A version was produced on paper and another online. Piloting informed the refinement of questions and provided insight into the feasibility of use of the questionnaire across different service providers.

The first pilot was conducted in three GP practices selected from PCOs recruited for stage 1. A patient survey was handed out to 150 patients in each practice (450 in total). A purposive sample of responders was invited to take part in semistructured interviews to assess face validity and acceptability. Informed by this, the GP questionnaire was modified and a pharmacy version developed. The second pilot was conducted in a different set of two GP practices, and in two pharmacies. In this second pilot, 450 patients received a questionnaire. Cognitive interviews were conducted with a sample of responders, including non-English speakers, to identify problems with question wording or questionnaire design. We also conducted a consultation with groups and individuals (e.g. learning disability organisations, community organisations) to identify preferences for a range of formats, and approaches to administering the questionnaire. The questionnaires were revised again following pilot 2, and a walk-in centre version was developed.

Stage 3

To assess the reliability, validity, and acceptability of the questionnaire, a large-scale test was undertaken in 16 PCOs across three regions in England: six of the PCOs recruited for stage 1 of the study, five new PCOs from the Northern and Yorkshire/North West region, and five new PCOs from Greater London. This comprised seven GP surgeries, five pharmacies, three walk-in centres and one Health and Social Care centre. The questionnaire was handed to a sample of up to 250 users attending most PCOs; smaller PCOs were asked to hand out 75 or 100. Responders who expressed an interest were mailed a second copy of the questionnaire, to enable test-retest reliability assessment.

Analysis was conducted on the data from the GP questionnaires. We carried out an exploratory factor analysis to investigate the structure of the questionnaire, and to identify key questions to form the basis of scores which could be used as a measure of patient experience of responsiveness. Cronbach's alpha coefficients were calculated to assess internal consistency of the scores. Construct validity was assessed using Pearson correlations between the scale scores, and scores on two subscales of the SERVQUAL questionnaire ('responsiveness' and 'empathy'). Kappa scores and intraclass correlation coefficients were calculated for the test-retest questionnaires. Analysis was conducted using SPSS v20 (SPSS Inc., Chicago, IL, USA).

We also worked with a sample of PCOs to explore ways of including patients from 'seldom-heard' groups in the survey process. We engaged a specialist in Easy Read materials to produce and pilot an Easy Read version of the questionnaires.

Diversity data in primary care

We investigated approaches for GP practices to increase their understanding of the diversity and needs of their populations. We explored approaches to and attitudes towards mapping diversity in primary care. This involved a review of available methods and challenges in mapping populations, and interviews with staff in four GP practices.

Results

From the literature review we identified three distinct bodies of literature, in which responsiveness was defined in relation to service quality; inequalities and the needs of diverse groups (in health or other services); and consumerism and patient involvement. We described the implications of these three distinct conceptualisations of responsiveness, all of which feed into notions of responsiveness in primary care, leading to a lack of focus.

Through the staff interviews we identified three categories of strategies for delivering responsive primary care: developing an awareness of the needs of the local population through proactive population-orientated strategies; adapting systems and services to better meet these needs through reactive population strategies; and ensuring that staff are willing and able to respond sensitively and flexibly when patients use the services by employing patient orientated strategies. We also identified a range of barriers to responsiveness in practice. Staff interviews indicated that responsiveness was best understood as interplay between the organisation and delivery of services, and patient needs; responsiveness was achieved through alignment between needs and service provision. Working to improve the design and flexibility of service was important, but sometimes responsiveness could involve managing the needs and expectations of patients.

We identified five key aspects of non-clinical care for which patients across different groups consistently expressed needs, and for which patients felt that alignment between their needs and the provision of services by PCOs was most important. Key aspects of care were access to a suitable appointment; staff attitudes and behaviours; alignment of the physical environment with patient needs; co-ordination and support for ongoing care; and diversity awareness and alignment. The findings of the patient interview study provided a framework for development of questions for the questionnaire.

In pilot 1, from the 450 questionnaires distributed, 232 (52%) were completed and returned and, of these, 20 respondents were interviewed. For the second pilot, 163 (36%) of the 450 questionnaires distributed were returned. The response rate varied from 19% to 76%. Cognitive interviews were held with 14 respondents to help to refine wording and layout.

In pilot 3, over 3000 questionnaires were administered, and an overall response rate of 39% (1139 questionnaires returned) was achieved, ranging from 22% in a GP practice for homeless patients to 79% in a pharmacy.

Exploratory factor analysis to investigate the structure of the questionnaire identified key questions to form the basis of scores which could be used as measures of patient experience of responsiveness. Questions were excluded from the factor analysis on the basis of initial results and on consideration of content validity. We aimed to include generic questions (relating to universal needs and relevant to the majority of patients, regardless of which group they belonged to) and remove questions specific to certain groups.

Factor analysis generated a three-factor solution, with 15 questions included, which explained 57.7% of the variance. Factor 1 (five questions) described the ease of access to a suitable appointment, factor 2 (seven questions) described welcome, help, and support for ongoing care, and factor 3 (four questions) described ease of using the building and facilities, and information. Cronbach's alpha coefficients for factors 1 and 2 showed 'good to excellent' internal consistency (0.7–0.9), while factor 3 was 'acceptable to good' (0.6–0.7). This suggests that it would be appropriate to compute scores for each of the three factors.

External validity was assessed by calculating Pearson correlations between the responsiveness scores and the two SERVQUAL scales. The correlations between the factor scores and the indicators were all in the expected direction. All correlations were significant at $p < 0.001$.

Kappa scores were calculated for each of the 15 questions, to compare the extent to which individuals responded consistently to the original questionnaire and the retest questionnaire. Kappa values across the 15 questions ranged from 0.37 to 0.73. All were significant at $p < 0.001$. Inspection of cross-tab tables indicated that in the majority of cases where there was a mismatch between responses to the first and retest questionnaires, this was due to a shift of one point on the response scale (usually between 'very easy' and 'quite easy').

Intraclass correlation coefficients were calculated to assess consistency of factor scores. All correlations are high, and significant at $p < 0.001$, suggesting that the scores on each factor are stable across the original and retest questionnaire.

A substudy included 40 additional patients from 'seldom-heard' groups, who completed the questionnaire with support from staff members or an interpreter. We found very good acceptance of the questionnaire by 'seldom-heard' groups when they were offered the questionnaire in a tailored and supported way.

Subsequently, the questionnaire was modified and made into an Easy Read format for GP practices, pharmacies and walk-in centres, and piloted with 14 people with learning difficulties, feedback from whom informed further refinement of the questionnaires.

The final questionnaire is available in three versions: a GP surgery version, a pharmacy version and a walk-in centre version. The majority of questions are common across the three versions, but each contains some questions specific to the particular type of PCO. The questionnaire is designed as a self-completion paper questionnaire in standard and Easy Read formats, but can also be interviewer-administered (including via an interpreter) or completed online.

Measuring and improving responsiveness requires an understanding of the characteristics of the patient population, and in particular the groups within that population who may be underserved and hard to reach. We found that although there are a number of sources of data on practice population characteristics, the information they contain is often incomplete. Interviews with four GPs and three practice managers identified that all practices recorded some non-clinical data for each patient within their patient records, but data collection was not systematic, and the views of staff about the value of such data varied. Practices did very little with the data they held. Collection of such data was mostly motivated by government policy and financial incentives rather than the desire to reduce inequalities or tailor services to patients. Barriers and challenges were identified to both collection and use of non-clinical diversity data, including a lack of awareness of the value of such data, staff reluctance to request information from patients, and patient resistance to providing personal information.

Conclusion

Responsiveness is a complex concept interpreted in a narrow way in practice. It involves alignment between service delivery and the needs of diverse patient groups. Reactive and proactive strategies at individual and population level are required, but mainly only reactive approaches are used routinely. Being responsive means giving good care equally to all, and some groups may require extra support. What this extra support is will differ, reflecting the different patient populations, and so knowledge of the practice population is essential to be responsive. Practices need to be motivated to collect and use diversity data. 'Seldom-heard' groups are not so hard to involve, provided that time and effort are invested.

Our analysis provides a helpful insight into the strategies employed by staff in primary care in being more responsive, the ways in which responsiveness can be successfully implemented, and barriers that need to be overcome. Initial evidence suggests that the GP version is a reliable and valid measure of patient experience of responsiveness, and could be used as part of a process of identifying lack of alignment, for example, between the needs of specific patient groups and the provision of local primary care.

Recommendations for future research

1. Additional work to evaluate the reliability and validity of the questionnaires including the pharmacy, walk-in centre and Easy Read versions.
2. Develop guidelines for the use of the questionnaires: develop guidance for sampling and administering the questionnaires and for interpreting scores, and explore how this measure of patient experience can be integrated into a more holistic assessment of responsiveness.
3. Develop and implement interventions to support improving responsiveness for patients from disadvantaged groups, and evaluate effectiveness.
4. Research into how to facilitate the use of patient experience data in primary care.
5. Work to explore the incentives and benefits reported by proactive, responsive practices.

Funding

Funding for this study was provided by the Health Services and Delivery Research programme of the National Institute for Health Research.

Health Services and Delivery Research

ISSN 2050-4349 (Print)

ISSN 2050-4357 (Online)

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: nihredit@southampton.ac.uk

The full HS&DR archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hsdr. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

Criteria for inclusion in the *Health Services and Delivery Research* journal

Reports are published in *Health Services and Delivery Research* (HS&DR) if (1) they have resulted from work for the HS&DR programme or programmes which preceded the HS&DR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

HS&DR programme

The Health Services and Delivery Research (HS&DR) programme, part of the National Institute for Health Research (NIHR), was established to fund a broad range of research. It combines the strengths and contributions of two previous NIHR research programmes: the Health Services Research (HSR) programme and the Service Delivery and Organisation (SDO) programme, which were merged in January 2012.

The HS&DR programme aims to produce rigorous and relevant evidence on the quality, access and organisation of health services including costs and outcomes, as well as research on implementation. The programme will enhance the strategic focus on research that matters to the NHS and is keen to support ambitious evaluative research to improve health services.

For more information about the HS&DR programme please visit the website: <http://www.nets.nihr.ac.uk/programmes/hsdr>

This report

The research reported in this issue of the journal was funded by the HS&DR programme or one of its proceeding programmes as project number 09/1801/1029. The contractual start date was in October 2010. The final report began editorial review in November 2013 and was accepted for publication in April 2014. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HS&DR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HS&DR programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HS&DR programme or the Department of Health.

© Queen's Printer and Controller of HMSO 2014. This work was produced by Tarrant *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).

Health Services and Delivery Research Editor-in-Chief

Professor Ray Fitzpatrick Professor of Public Health and Primary Care, University of Oxford, UK

NIHR Journals Library Editor-in-Chief

Professor Tom Walley Director, NIHR Evaluation, Trials and Studies and Director of the HTA Programme, UK

NIHR Journals Library Editors

Professor Ken Stein Chair of HTA Editorial Board and Professor of Public Health, University of Exeter Medical School, UK

Professor Andree Le May Chair of NIHR Journals Library Editorial Group (EME, HS&DR, PGfAR, PHR journals)

Dr Martin Ashton-Key Consultant in Public Health Medicine/Consultant Advisor, NETSCC, UK

Professor Matthias Beck Chair in Public Sector Management and Subject Leader (Management Group), Queen's University Management School, Queen's University Belfast, UK

Professor Aileen Clarke Professor of Public Health and Health Services Research, Warwick Medical School, University of Warwick, UK

Dr Tessa Crilly Director, Crystal Blue Consulting Ltd, UK

Dr Peter Davidson Director of NETSCC, HTA, UK

Ms Tara Lamont Scientific Advisor, NETSCC, UK

Professor Elaine McColl Director, Newcastle Clinical Trials Unit, Institute of Health and Society, Newcastle University, UK

Professor William McGuire Professor of Child Health, Hull York Medical School, University of York, UK

Professor Geoffrey Meads Professor of Health Sciences Research, Faculty of Education, University of Winchester, UK

Professor Jane Norman Professor of Maternal and Fetal Health, University of Edinburgh, UK

Professor John Powell Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK

Professor James Raftery Professor of Health Technology Assessment, Wessex Institute, Faculty of Medicine, University of Southampton, UK

Dr Rob Riemsma Reviews Manager, Kleijnen Systematic Reviews Ltd, UK

Professor Helen Roberts Professor of Child Health Research, UCL Institute of Child Health, UK

Professor Helen Snooks Professor of Health Services Research, Institute of Life Science, College of Medicine, Swansea University, UK

Please visit the website for a list of members of the NIHR Journals Library Board:
www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: nihredit@southampton.ac.uk