

# Developing and evaluating a tool to measure general practice productivity: a multimethod study

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## Scientific summary

### Measuring general practice productivity

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# Scientific summary

## Background

There is a continuing need in the NHS to make the best use of available resources for the best possible outcomes. Despite most initial contacts happening within primary care, systems for measuring the performance of general practices are extremely limited, with the main mechanism for doing so [the Quality and Outcomes Framework (QOF)] criticised for being too narrow and ineffective; in particular, in recent years the QOF has focused on clinical data at the expense of other areas of practice objectives, such as patient experience or broader public health activity. Similarly, other published indicators (e.g. Care Quality Commission inspection ratings) lack comprehensiveness, regularity or both.

General practice is awash with data, but few are available to help practices assess their performance on an ongoing basis. This project aimed to bridge this gap by developing a measure of productivity for general practices.

## Objectives

The main aim of this study was to develop and evaluate a measure of productivity (a ratio of quality-adjusted effectiveness to inputs) that can be applied across all typical general practices in England, and that may result in improvements in practice, leading to better patient outcomes.

The specific objectives were to:

1. develop, via a series of workshops with primary care providers and patients based on Productivity Measurement and Enhancement System (ProMES) methodology, a standardised, comprehensive measure of general practice productivity
2. test the feasibility and acceptability of the measure by piloting its use in 50 general practices over a 6-month period
3. evaluate the success of the pilot, leading to recommendations about the wider use of the measure across primary health care in consultation with key stakeholders at local and national levels.

## Methods

### Stage 1

The first stage of the study aimed to develop a standardised, comprehensive measure of general practice productivity that could be used by individual practices, which involved mostly routinely collected data. The main approach used was ProMES. ProMES is a well-validated method that enables team members to identify their main objectives, choose indicators to measure those objectives, and create 'contingencies' [functions that weight the different indicators and translate raw measurements into standardised effectiveness (or productivity) scores for each indicator, each objective and overall]. Previous research has shown that by tracking measures created in this way, team productivity has increased substantially. This study used an adaptation of the ProMES approach, one used in previous NHS research and that works with large numbers of team members and patients, to develop a measure that can be used commonly across many teams.

Two large-scale, full-day workshops, involving 25 general practice staff and 25 members of the public, were used to identify the objectives of general practices. These were followed by six smaller, half-day workshops, with 21 general practice staff and 10 members of the public, that were used to identify data

that could be used as indicators of these objectives. A further two large-scale workshops, involving 11 practice staff and 27 members of the public, were scheduled to work on developing the contingencies; however, owing to the scope and complexity of general practice, a further six smaller workshops, involving 23 practice staff and 10 members of the public, were added to complete the generation of indicators and development of contingencies. The result of these workshops was an overall measure, the General Practice Effectiveness Tool (GPET).

A consensus exercise was held to check on both the purpose and detail of the GPET. This involved a face-to-face meeting with 16 participants representing the NHS, general practitioners (GPs) and patient bodies, followed by two online surveys, which had 27 respondents, including eight GPs.

As some of the indicators were to come from clinical systems, we then worked with the PRIMIS team at the University of Nottingham to develop standardised queries that could be automatically run by practices each month to extract the relevant indicators. The GPET was converted into an online platform that would allow practices to enter all their indicators on a monthly basis and get an automated feedback report.

## Stage 2

The second stage of the study aimed to test the feasibility and acceptability of GPET by piloting its use with a range of practices over a 6-month period, and to evaluate how successful this pilot was.

A total of 51 general practices from 18 Clinical Commissioning Group (CCG) areas in several regions agreed to participate and received face-to-face training in using the GPET, together with a detailed manual on using the online system. These practices were then expected to use the measure over the next 6 months, entering data on each indicator each month, with data coming from a variety of sources, but predominantly existing already. Each month, a feedback report on each indicator, objective and overall effectiveness would be produced, and practices were encouraged to discuss these, for example in a practice's team meetings.

The data entered were tracked centrally by the research team and analysed for completeness of data entry (using descriptive statistics) and for change over time (using multilevel growth modelling). In addition, various practice characteristics were tested for associations with both completeness and change.

The main evaluation of the feasibility and acceptability of the GPET was accomplished via a telephone interview with a representative from each practice, as well as an online questionnaire sent to the practice manager. The interview and questionnaire both asked about overall perceptions of the GPET, including its content, usability and usefulness, and examined specific areas within it. The practice manager questionnaire also asked for monthly financial data to enable the construction of a more traditional productivity index. In addition, telephone interviews were held with four patient representatives, and seven other patient representatives participated in focus groups, to establish whether or not the GPET was appropriate and useful from a patient perspective.

## Results

### Stage 1

The first phase of workshops revealed nine separate objectives of general practices. Subsequently, one of these (better clinical care) was judged to be too broad for a single objective and, so, was split into three different objectives.

Because of the large number ( $n = 11$ ) of objectives produced compared with usual ProMES exercises (4–6 is typical), these objectives were organised into four 'performance areas' that form an extra level between the objectives and overall effectiveness. The four performance areas and 11 objectives are presented in *Table a* (shown also with the weighting each area was given from subsequent workshops and the consensus exercise).

TABLE a Performance areas and objectives of general practices

Performance area	Weighting within overall measure (%)	Objective	Weighting within performance area (%)
<i>Clinical care</i>	37	General health and preventative medicine	33
		Management of long-term conditions	33
		Clinical management	33
<i>Practice management</i>	30	Effective use of IT systems	21
		Good physical environment	19
		Motivated and effective practice team	31
		Good overall practice management	29
<i>Patient focus</i>	18	High levels of patient satisfaction with services	50
		Ease of access and ability to book appointments	50
<i>External focus</i>	15	Good partnership working	44
		Engagement with public	56

IT, information technology.

A large range of indicators was suggested for many of these objectives, although for some (particularly in the *external focus* performance area), identification of appropriate sources of data that would be available to all practices was harder. In total, 52 indicators were agreed across the workshops to measure these 11 objectives:

- 19 of the indicators were gathered from clinical information systems, with Morbidity Information Query and Export Syntax (MIQUEST) queries developed to extract these data automatically from EMIS (EMIS Health, Leeds, UK) and SystemOne [The Phoenix Partnership (TPP), Leeds, UK]
- 14 indicators came from practice records (including staff records, minutes of meetings, attendance records, etc.)
- 15 indicators were based on checklists (questionnaires) answered by the data inputter (each includes several yes/no questions)
- 3 indicators came from patient views, collected as part of an enhanced regular Friends and Family Test (FFT)
- 1 indicator came from a very brief (five-item) questionnaire administered to practice staff.

An additional 10 indicators were thought to be potentially useful, but it was recognised that most practices would not have the data readily available. These were therefore left as optional indicators that practices could choose to use if they wanted to, but that would not contribute to the overall effectiveness score.

The consensus exercise workshop gave a clear steer that the most useful aspect of the GPET would be to enable practices to monitor and improve their own performance across time, as it was thought that differences between practice populations and local commissioning arrangements would make a direct comparison in scores between practices unfair from a performance management point of view. However, the ability to track data within practices over time was felt to be a very positive attribute. The online survey part of the consensus exercise enabled some refinement of indicators and contingencies, and suggested the weightings for each performance area and objective, as seen in *Table a*.

## Stage 2

Of the 51 practices that were trained to use the GPET, 38 continued to use the tool independently after the training. Of these, 10 did not continue to enter data for at least 5 months, meaning that 28 out of

51 practices (55%) managed to use the GPET as it was fully intended. Of those that did not participate fully, the most common reasons were a lack of time and changes in practice personnel, making participation difficult. In particular, 13 indicators were found to be problematic for data gathering, meaning that even among those practices that did fully participate, not all managed to complete every indicator. The extent of participation was not associated with most practice characteristics examined, although there was a greater level of participation from practices that had participated in stage 1 and from those practices using the EMIS clinical system, which was likely to be because these practices were trained first.

There was evidence that, over the course of the 6-month pilot, practice effectiveness increased significantly. Specifically, each month, the increase was estimated to be 1.3% of the total effectiveness points, or a standardised effect of 0.09 ( $p = 0.01$ ). There were significant increases in both the *practice management* and *patient focus* performance areas, and for each objective within these areas except for *good physical environment*. Although the level of change was not linked to most of the practice characteristics, there was some evidence that larger practices were likely to observe greater levels of improvement ( $p = 0.02$ ). Although this tallies with previous ProMES research that has shown improvements in performance, it cannot be known whether or not this improvement is due to the use of the GPET as there was no control group, and other factors (e.g. time of year) may have contributed to improved performance.

The practice staff interviews and practice manager questionnaire both gave clear indications that there was a wide variety of perceptions of the GPET. Practice managers rated it, on average, 4.5 out of 10.0 for usefulness, suggesting that just under a half found it useful. Forty-nine per cent of respondents to the practice manager questionnaire said that there were difficulties gathering certain indicators (with five indicators highlighted as being problematic), 27% said that there were difficulties with entering data and 29% said that there were difficulties with getting used to the online system (factors that might be inherently improved with some further development of the tool). Most practice interviewees (66%) indicated that it had taken more time to use than they had anticipated. However, 40% said that they would like to keep using it if they had the chance, and 41% had had discussions about the results in team meetings. There was a consensus that the areas covered by the GPET were appropriate, and there were no clear omissions. These findings were similar for the patient representatives.

Unfortunately, most practices were unable to provide sufficiently detailed monthly financial data, which meant that it was not possible to generate a more conventional productivity index using inputs (i.e. financial expenditure) as a denominator.

## Conclusions

### Implications for health care

The different stages of this study have different implications. One aspect of the study that seemed highly successful was the development of a model for evaluating the effectiveness of general practices. The model devised in the stage 1 workshops, comprising four performance areas (i.e. *clinical care*, *practice management*, *patient focus* and *external focus*) covering 11 objectives, was found to be appropriate and comprehensive, not only in the initial workshops, but also in both parts of the consensus exercise, in both methods of evaluation of the pilot practices and by additional evaluation with patient representatives. This model could serve as a basis for measuring effectiveness in general practice more widely, whether or not it is using the indicators developed for the GPET.

In particular, as the NHS prepares to adapt or replace the QOF, this may provide one model that allows multiple aspects of general practice activity to be considered in future developments, including good practice management, high levels of patient satisfaction, working more widely to ensure joined up working with other agencies, and a broader focus on public health. This could also apply to any models for general practice used by other agencies, including CCGs and integrated care systems.

There is initial evidence to suggest that the GPET could, with some refinement, be used as an improvement tool for practices. There was clearly an appetite for such a tool in many practices. The fact that there were improvements in effectiveness shown over a small number of months points to the potential benefits of using the tool itself, and also to the tool's sensitivity for detecting change. However, there are also limitations of this research. In particular, the GPET cannot provide a fair comparison between practices, which was one of the original objectives, and also, the tool does not measure productivity in its traditional sense. Furthermore, the research was conducted in a relatively small number of self-selecting practices, and there was no control group.

### **Recommendations for research**

First, it is recommended that some additional research is conducted to refine the GPET by updating indicators produced from clinical systems to the new Systematized Nomenclature of Medicine (SNOMED) codes (introduced since the study), by refining other problematic indicators either via clearer guidance on data collection or alteration of the indicator itself, and by improving the online system so it is easier for practice staff to use.

Second, an enhanced testing of the tool is also recommended by comparing its use in practices receiving feedback with a control sample of practices that do not view the results of their performance. This would enable a test of the hypothesis that it is specifically the use of the tool that has led to improvements in performance.

Third, it is suggested that this study provides supporting evidence of the usefulness of the large-scale ProMES process, and that future research considers this as a possible approach for measure development in the NHS.

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