MANUAL

GENERAL PRACTICE ASSESSMENT QUESTIONNAIRE

(GPAQ) VERSION 2.1

www.gpaq.info

NATIONAL PRIMARY CARE RESEARCH AND DEVELOPMENT CENTRE

UNIVERSITY OF MANCHESTER

18th April 2007
Version 2.1

Contents

1 Introduction

This manual for the General Practice Assessment Questionnaire (GPAQ Version 2.0) explains how the questionnaire was developed, how it should be used, and the options for analysis. These include an Excel or Access program that practices can use. The manual also contains details of how to analyse GPAQ using SPSS for those who wish to carry out more detailed statistical analysis.

The GPAQ questionnaire is available to download from the GPAQ website at www.gpaq.info. Normative data from large populations can also be downloaded from the website.

In appendix 1, we outline how you might use GPAQ scores to improve care in your practice.

1.1 How was the General Practice Assessment Questionnaire (GPAQ) developed?

Some aspects of quality are best assessed by asking patients. We reviewed the literature to identify aspects of GP care which are most highly valued by patients. These include:

Availability and accessibility, including: availability of appointments, waiting times, physical access and telephone access.

Technical competence, including: the doctor's knowledge and skills, and the effectiveness of his or her treatments.

Communication skills, including: providing time, exploring patients' needs, listening, explaining, giving information and sharing decisions.

Inter-personal attributes, including: humaneness, caring, supporting and trust.

Organisation of care, including: continuity of care, and, the range of services available.

In order to assess these aspects of care we started from what we regarded as the best available questionnaire, the Primary Care Assessment Survey (PCAS) [1, 2, 3, 4], which had been extensively validated in the United States. In collaboration with the Health Institute in Boston, we modified PCAS for use in British general practice. The modified questionnaire was called the General Practice Assessment Survey (GPAS). We have used GPAS in large studies in the UK, and detailed research data on GPAS have been published [5, 6, 7, 8, 9].

For the new GP contract, we were asked to modify our original GPAS questionnaire, and have produced GPAQ. The main difference is that the new questionnaire is shorter. We have also produced two versions, one designed to be sent by post, and one designed to be given to patients after consultations in the surgery. Details of the minor differences between the two are described in sections 1.7, 3.6 and 3.7.

1.2 What does GPAQ measure?

GPAQ focuses mainly on questions about access, inter-personal aspects of care and continuity of care.

1.3 Why are there two versions of GPAQ?

When we originally developed GPAS, which was the forerunner of GPAQ, it was designed to be sent by post. Since then, many doctors have told us that they would like the option of giving it to patients in the surgery after consultations. There are two advantages to this:

1) It is cheaper because it avoids postal costs
2) The responses can be related to individual doctors and not just to practices. This means that you can use the results for your own personal appraisal, or in your revalidation folder.

However, administering questionnaires in the surgery is not straightforward and you need to read the manual carefully before you do this.

There are a number of differences between the postal and the consultation versions. However, the main sections, including access questions, questions about continuity of care, and questions on inter-personal aspects of care are the same in the two versions. We discuss in sections 1.7, 3.6 and 3.7 why there are minor differences between the two versions.

You can tell which version you are using by looking at the bottom right hand corner of the front page, where 'Postal version' or 'Consultation version' is printed.

1.4 Which version should I use?

There are small differences in the scores of GPAQ administered by the two methods (see benchmark scores on the GPAQ website at www.gpaq.info) [9].

Neither method is perfect. If you send GPAQ by post, you will have a problem of non-responders. If you are prepared to send reminders to non-responders, and to get a response rate in the order of 60%, then this is probably the best way to get an overall assessment of the practice. This may be the method that PCTs use.

However, the postal version does not give scores for individual doctors. If you want these (e.g. to include in revalidation folders) then you will want to use the consultation version. In some ways, it seems easier giving consulting patients a questionnaire to complete after the consultation. However, you still need some way of ensuring that all patients have actually been given one (not just the ones who you know like the practice!). You also need to make sure that you get as many back as possible. We go into more detail of how to administer the questionnaires by the two methods in section 2.

1.5 Using GPAQ with children and ethnic minority groups

GPAQ is designed for adults aged at least 16 years. There is no upper age limit for its use.

Multiple translations of GPAQ are now also available. Please refer to the GPAQ website for further details about the languages available.

1.6 Conditions for use of GPAQ

Conditions for use of GPAQ for practices

GPAQ is copyright of the National Primary Care Research and Development Centre at Manchester University and Dana Gelb Safran of the New England Medical Center Hospitals. The copyright can be found at the bottom of the first page and must be printed on each questionnaire.

GPAQ is free to use for practices who wish to photocopy or print enough questionnaires to run their own survey.

If you simply want to use GPAQ for your own practice, you do not need to contact us. You will find guidance on how to use GPAQ and software to help you with the analysis on the GPAQ website.

Some practices may also wish to survey their nurses and a version of GPAQ for nurses is available to download from the GPAQ website. However, this does not remove the requirement of the GMS contract to do a survey based on GPs.

If you want to run your own survey for your practice, but would prefer someone else to analyse your data and produce a report, you can still use one of our licenced suppliers. Several of these companies can also provide you with a complete service including printing, mailing and receiving the questionnaires on your behalf. If you are interested in administering GPAQ via electronic means (for example online or using a touchscreen in the surgery), please refer to the versions we recommend on the website.

We recommend that you do not alter GPAQ. Indeed, the incentives in the GMS contract are linked to using GPAQ in the approved form. In other words, no questions can be deleted or modified. A lot of development work has gone into GPAQ and keeping it in its original form will also retain validity and allow comparisons to be made with benchmark data. You may add questions to meet the particular needs of your practice if you wish. However, NPCRDC does not give specific approval to modifications of GPAQ.

Conditions for use of GPAQ for PCTs

GPAQ is copyright of the National Primary Care Research and Development Centre at Manchester University and Dana Gelb Safran of the New England Medical Center Hospitals. The copyright can be found at the bottom of the first page and must be printed on each questionnaire.

There is a charge of 10p per questionnaire (plus VAT) for the copy of GPAQ by PCTs or other groupings of practices.

The charge of 10p per questionnaire is for the number of questionnaires copied for use in a survey using the consultation version of GPAQ, and the number sent out (including reminders) for a postal survey. This charge is incorporated into the charges made if you use one of our licensed companies, otherwise we will bill you directly. To do this you will need to inform the GPAQ Administrator of how many questionnaires you are copying (as above) and the name and address of who to send an invoice to for this charge.

The charge is to enable NPCRDC to continue to provide a support service for GPAQ; we receive no other funding for this. An average practice will get 40 points on the quality and outcomes framework simply for carrying out a survey, equivalent to £5000 per annum. 10p per questionnaire represents approximately one fifth of one per cent of the money that is coming in to practices via the PCT for carrying out surveys.

If your PCT wants to carry out a survey across your practices, you have two options. First, you can contact one of our suppliers, who will provide the service for you. This is what we recommend. As an alternative, you can print your own copies of GPAQ (for your PCT only), and carry out your own analysis. If you do this, you must pay the charge of 10p per questionnaire.

Technically, you could remain within the copyright restrictions by arranging your own printing (and paying the charge of 10p per questionnaire), and then arranging for a commercial firm to carry out the analysis for you (which is outside the copyright restriction). However, if you are doing this, you would be better off using one of our licensed companies as they are experienced in analysing GPAQ. Please do not be persuaded to use this mechanism by the small number of commercial companies who wish we had granted them a licence.

We have chosen to link licensing to printing and selling hard copies of GPAQ for simplicity of administration. There are no restrictions on the following: analysing GPAQ data by third parties, and providing a GPAQ service via electronic means (e.g. internet, PC based). If you are interested in administering GPAQ via electronic means (for example online or using a touchscreen in the surgery), please refer to the versions we recommend on the website.

We recommend that you do not alter GPAQ. Indeed, the incentives in the GMS contract are linked to using GPAQ in the approved form. In other words, no questions can be deleted or modified. A lot of development work has gone into GPAQ and keeping it in its original form will also retain validity and allow comparisons to be made with benchmark data. You may add questions to meet the particular needs of your PCT if you wish. However, NPCRDC does not give specific approval to modifications of GPAQ.

Conditions for use of GPAQ for commercial organisations

GPAQ is copyright of the National Primary Care Research and Development Centre at Manchester University and Dana Gelb Safran of the New England Medical Center Hospitals. *You may not print or sell copies of GPAQ without a licence from us.*

We have issued a number of licences, and do not intend to issue any more at the moment. This is an agreement with our current licensees. We will not increase the number of licensees unless the current licensees are unable to provide a satisfactory service.

There are no restrictions on the following: analysing GPAQ data by third parties, and providing a GPAQ service via electronic means (e.g. internet, PC based). If you wish to provide these services, you do not need to contact us.

We have chosen to link licensing to printing and selling hard copies of GPAQ for simplicity of administration. The charge is to enable NPCRDC to continue to provide a support service for GPAQ; we receive no other funding for this.

<u>Conditions for use of GPAQ for research organisations</u>

GPAQ is copyright of the National Primary Care Research and Development Centre at Manchester University and Dana Gelb Safran of the New England Medical Center Hospitals. The copyright can be found at the bottom of the first page and must be printed on each questionnaire.

If you are an academic department, you do not need permission to use GPAQ for research purposes. There is also no charge for the use of GPAQ in this case. If you are not an academic department and wish to use GPAQ for research purposes, please contact the GPAQ Administrator.

A lot of development work has gone into GPAQ and keeping it in its original form will retain validity and allow comparisons to be made with benchmark data. However, you can modify GPAQ for your own research purposes but NPCRDC does not give specific approval to modifications of GPAQ.

1.7 What questions does GPAQ contain?

A summary of the questions in the postal version of GPAQ is shown in table 1 below:

Questions	Number	Abbreviated description of question *(see questionnaire for exact wording)*
Receptionists	2	How do you rate – the way you are treated by the receptionists
Access	3a	How do you rate – the hours that your practice is open for appointments
	3b	What additional hours would you like the practice to be open?
	4a	When you want to see a particular doctor, how quickly do you get to see that doctor?
	4b	How do you rate this?
	5a	When you are willing to see any doctor, how quickly do you usually get seen?
	5b	How do you rate this?
	6	If you need an urgent appointment, can you normally get one on the same day?
	7a	How long do you usually have to wait at the practice for consultations to begin?
	7b	How do you rate this?
	8a	How do you rate – ability to get through to practice on the phone
	8b	How do you rate – ability to speak to a doctor on the phone
Continuity	9a	How often you see your usual doctor?
	9b	How do you rate this?
Communication		*Thinking about consulting with your doctor, how would you rate the following*:
	10a	How thoroughly your doctor asks about your symptoms
	10b	How well your doctor listens to what you say
	10c	How well the doctor puts you at ease during your physical examination
	10d	How much the doctor involves you in decisions about your care
	10e	How well your doctor explains your problems or treatments you need
	10f	The amount of time your doctor spends with you
	10g	Doctor's patience with your questions or worries
	10h	Doctor's caring and concern for you
Practice nursing		*Thinking about the nurses you have seen, how would you rate the following:*
	12a	How well they listen to what you say
	12b	The quality of care they provide
	12c	How well they explain your health problems or any treatments

Table 1. Questions in the postal version of GPAQ

A summary of the questions in the consultation version is shown in table 2. The main differences are that we have included questions on enablement in the consultation version (question 11, described in more detail in section 3.7). The nursing questions (question 12 in the postal version, described in more detail in section 3.6) are not included in the consultation version.

Questions	Number	Abbreviated description of question *(see questionnaire for exact wording)*
Receptionists	2	How do you rate – the way you are treated by the receptionists
Access	3a	How do you rate – the hours that your practice is open for appointments
	3b	What additional hours would you like the practice to be open?
	4a	When you want to see a particular doctor, how quickly do you get to see that doctor?
	4b	How do you rate this?
	5a	When you are willing to see any doctor, how quickly do you usually get seen?
	5b	How do you rate this?
	6	If you need an urgent appointment, can you normally get one on the same day?
	7a	How long do you usually have to wait at the practice for consultations to begin?
	7b	How do you rate this?
	8a	How do you rate – ability to get through to practice on the phone
	8b	How do you rate – ability to speak to a doctor on the phone
Continuity	9a	How often you see your usual doctor?
	9b	How do you rate this?
Communication		*Thinking about consulting with your doctor, how would you rate the following*:
	10a	How thoroughly your doctor asks about your symptoms
	10b	How well your doctor listens to what you say
	10c	How well the doctor puts you at ease during your physical examination
	10d	How much the doctor involves you in decisions about your care
	10e	How well your doctor explains your problems or treatments you need
	10f	The amount of time your doctor spends with you
	10g	Doctor's patience with your questions or worries
	10h	Doctor's caring and concern for you
Enablement		*After seeing the doctor today, do you feel (much more / little more / same)*
	11a	Able to understand your problem or illness
	11b	Able to cope with your problem or illness
	11c	Able to keep yourself healthy

Table 2. Questions in the consultation version of GPAQ

There are also some socio-demographic and other questions in both questionnaires, shown in table 3.

Question number		Abbreviated description of question *(see questionnaire for exact wording)*
Postal version	Consultation version	
1	1	How many times seen doctor in practice in past 12 months?
11	N/A	Seen a nurse in practice in past 12 months?
13	12	Male / female
14	13	Age
15	14	Limiting long-standing illness, disability or infirmity
16	15	Ethnic group
17	16	Accommodation
18	17	Employment status

Table 3. Socio-demographic and other questions

We generally recommend that you calculate the scores for individual questions for your practice. In order to make most use of the information, we suggest that you use mean

(average) scores for each question expressed as a percentage of the maximum possible score, so the best possible score in each case would be 100.

If you use the Excel or Access programs that can be downloaded from our website, you will find that the mean scores are automatically updated in the reports – you do not need to make these calculations yourself.

You can also calculate summary scores for the main scales, which are receptionists, access, continuity, communication, nursing (postal version only), and enablement (consultation version only). The main reason you would want to do this would be to perform some more sophisticated statistical analysis – for example adjusting scores for differences in age between practices. If you want to calculate scores for scales, rather than individual items, you will need to use a statistical package rather than Excel. We imagine that PCTs are more likely to want to do this than practices. In appendix 2 we have included details of how to calculate the scale scores, using the SPSS statistical package.

1.8 GPAQ for nurses

We have developed a version of GPAQ specifically for nurses for those practices who may also wish to survey their nurses. Please note, this does not remove the requirement of the GMS contract to do a survey based on GPs.

GPAQ for nurses has been adapted from the consultation version of GPAQ. A summary of the questions in this version is shown in the table below. The main differences are that we have combined Q4 and Q5 from the doctor's version into one question, and we have also removed Q6 (which asks if you need an urgent appointment, can you get seen on the same day). In the doctors version, Q4 and Q5 ask about a "particular doctor" and "any doctor" respectively, while the nurses version does not specify this and asks instead about "a nurse".

Questions	Number	Abbreviated description of question *(see questionnaire for exact wording)*
Receptionists	2	How do you rate – the way you are treated by the receptionists
Access	3a	How do you rate – the hours that your practice is open for appointments
	3b	What additional hours would you like the practice to be open?
	4a	When you want to see a nurse, how quickly do you get to see that nurse?
	4b	How do you rate this?
	5a	How long do you usually have to wait at the practice for consultations to begin?
	5b	How do you rate this?
	6a	How do you rate – ability to get through to practice on the phone
	6b	How do you rate – ability to speak to a nurse on the phone
Continuity	7a	How often you see your usual nurse?
	7b	How do you rate this?
Communication		*Thinking about consulting with your nurse, how would you rate the following*:
	8a	How thoroughly your nurses asks about your symptoms
	8b	How well your nurse listens to what you say
	8c	How well the nurse puts you at ease during your physical examination
	8d	How much the nurse involves you in decisions about your care
	8e	How well your nurse explains your problems or treatments you need
	8f	The amount of time your nurse spends with you
	8g	Nurse's patience with your questions or worries
	8h	Nurse's caring and concern for you
Enablement		*After seeing the nurse today, do you feel (much more / little more / same)*
	9a	Able to understand your problem or illness
	9b	Able to cope with your problem or illness
	9c	Able to keep yourself healthy

Table 4. Questions in the nurse version of GPAQ

There are also some socio-demographic and other questions, shown in the table below.

Question number	Abbreviated description of question *(see questionnaire for exact wording)*
1	How many times seen nurse in practice in past 12 months?
10	Male / female
11	Age
12	Limiting long-standing illness, disability or infirmity
13	Ethnic group
14	Accommodation
15	Employment status

<u>Table 5. Socio-demographic and other questions in the nurse version of GPAQ</u>

If you wish to survey the nurses in your practice, you can do this in the same way that you would run the survey using the consultation version of GPAQ, as discussed in Section 2.2 of this manual.

Please note that apart from this section of the manual (Section 1.8), all references to GPAQ in the remainder of the manual refer to the original doctors version of GPAQ.

2. Running a GPAQ survey

2.1 Running a GPAQ survey by post

The postal version of GPAQ has been designed to be sent by post to a random sample of registered patients, to give more general information about the practice. Although it does ask about the patient's "usual" doctor, it should not be used for individual assessments of doctors – for this you should use the "consultation" version of GPAQ. We do not advise administration of the postal version of GPAQ in surgery settings.

The following are some useful points to consider if you are administering your own GPAQ survey by post.

Take time to make sure the sample is correct

This will pay dividends in the end and enhance the response rate. Make sure the sample is legitimate and up-to-date and that the sampling strategy you use is clear. For example, make sure patients you send the questionnaire to are in the correct age range (16 years or older) and that they are still registered with the practice. It also pays to check if any patients on the sample list have died.

Get the sample size right

Quality & Outcomes Framework guidance recommends that 25 questionnaires per 1000 registered patients on the practice's list should be returned. However, in terms of individual assessment we would still recommend that 50 questionnaires are collected per doctor for statistical reliability, even though many practices with smaller list sizes (e.g. less than 2000 patients) could collect less than 50 questionnaires per doctor.

Write a short covering letter

Make sure it is clear that the practice has given full support of the survey and that doctors and nurses will not be able to identify individual patients from the responses. Also make it clear that whatever views the patient expresses, these will not affect their future care. Give the phone number of someone in the practice to phone if they have questions.

Use postal reminders

After around two weeks, send out reminder notices to patients who have not yet returned the questionnaire. You should aim for a response rate of 60%, and you will almost certainly need at least one reminder to achieve this. In order to know which patients have responded to a postal survey, you will also have to put a patient identification number on the top of each questionnaire, linked to a list of patients you have sent the questionnaire to. Because you will need to use a patient identification number, it is very important to make sure it is clear that the doctors and nurses will not be able to identify individual patients from their responses. Patient identification numbers can also be used to enable checking of data entry at a later point (we recommend checking 10% of the data that is entered).

Do not underestimate how long it will take

It takes a significant amount of time to administer the survey (including sending reminders) and to enter the data (unless this is being done by professional data entry clerks, in which

case do not underestimate the cost). Administering the survey is probably the hardest and most time consuming part.

2.2 Running a GPAQ survey in the surgery

The "consultation" version of GPAQ has been designed to allow individual assessment of doctors. The results can also be combined to produce information about the practice overall.

The following are some useful points to remember if you are running your own GPAQ survey in the surgery.

Preparation

- Ensure you have plenty of pens and clipboards available for patients to use
- Photocopy around 120 questionnaires if you want 100 returns (i.e. 20% extra)
- Number the questionnaires beforehand using the identification numbers at the top of the first page. Practice identification numbers only need to be used when more than one practice is included in a survey (e.g. PCT wide surveys). The GP identification number should be for the GP the patient is to have the consultation with, which may *not* be the doctor they are registered with. The name of the doctor the respondent records can be used as a check that the GP identification number is correct when you come to enter the data. Patient identification numbers can also be recorded to enable checking of data entry at a later point (we recommend checking 10% of the data that is entered).
- Display posters/notices informing patients that the survey is being carried out
- Provide a suitable box in which patients can confidentially return their questionnaires

The sample

- Tell patients about the survey when they book in at reception. Ask them if they could stay behind for a few minutes to complete the questionnaire after they have seen the doctor
- It is often best to select one doctor's surgery at a time to survey, rather than trying to survey all the patients attending the practice that day. If you do that, you can make sure that the questionnaires are marked up in advance with the doctor's identification number, so that you can identify them later.
- Make sure that respondents are in fact patients of the practice. Don't include temporary residents.
- Make sure the patient is at least 16 years old
- It is very important that you give a questionnaire to every patient on the list who is able to complete one. Leaving some patients out will give biased results.
- Explain that the questionnaire asks about patients' views of the practice and the quality of care they receive from their GP.
- Explain that the questionnaire is confidential and that the doctor will not be able to identify a patient's individual responses. Doctors SHOULD NOT hand out the questionnaires themselves to patients while they are in the consultation.
- Patients can look at the questionnaire before they go in to see the doctor, but they should not fill it in until they come out
- When patients book in, ask them if they could stay behind for a few minutes to complete the questionnaire when they have seen the doctor.

- Receptionists should remind people on their way out. If patients can't wait, they should be given a stamped addressed envelope to return the questionnaire in.
- It is very important to try and get as many back as possible. If you can have one member of staff responsible for running your survey on a particular day, this will make it easier.
- Quality & Outcomes Framework guidance recommends that 25 questionnaires per 1000 registered patients on the practice's list should be returned. However, in terms of individual assessment we would still recommend that 50 questionnaires are collected per doctor for statistical reliability, even though many practices with smaller list sizes (e.g. less than 2000 patients) could collect less than 50 questionnaires per doctor.

2.3. Should GPAQ scores be calculated for a practice or for individual doctors?

Some practices wish to collect GPAQ scores for individual doctors. The consultation version of the questionnaire can be used for this purpose. However, if you have collected information on each of the doctors in your practice separately, you can still combine the data to give an overall practice score.

If you want to make allowances for some doctors working more than others in the practice, then it would be possible to do so. You would need to take the mean scores for each doctor, and weight them according to the relative amount that each doctor works in the practice. Here is a worked example of weighting the scores to give an average practice score for doctors who work different amounts in the practice:

> Suppose there are 3 doctors in the practice. Doctor A works twice as much as his part time partners, Dr B and Dr C. Each collects information on 50 patients following consultation.

> Suppose Doctor A's score on the communication scale is 70, Dr B's is 60, and Dr C's is 50.

> The unweighted average or mean is 60 (70 + 60 + 50 / 3).

> If we weight by amount of work done, we double doctor A's score, add doctor B and C, then divide by 4 instead of 3 (70 + 70 + 60 + 50 / 4 = 62.5).

2.4 How many questionnaires does each practice need to collect for GPAQ surveys?

Quality & Outcomes Framework guidance revisions were made in August 2004. Minor amendments included a change to the sample sizes required in the Patient Surveys indicator (PE 2.1). This has been changed to reflect an agreement between the BMA and DH that 25 questionnaires per 1000 registered patients on the practice's list should be returned (rather than 50 per doctor).

Previously it was recommended that 50 questionnaires per doctor needed to be analysed. Therefore, the main change is that it means more questionnaires need to be administered for doctors with large list sizes.

Under the contract guidance, many practices with smaller list sizes (e.g. less than 2000 patients) can now collect less than 50 questionnaires per doctor. However, in terms of

individual assessment we would still recommend that 50 questionnaires are collected per doctor for statistical reliability.

How were these numbers chosen?

The calculation of the number of questionnaires needed (the sample size) depends on deciding on how accurately you want to know GPAQ scores for an individual practice.

We have calculated the sample size on the basis of wanting to be 95% confident that a score is accurate to within plus or minus 4 points when scale scores are calculated. This means that if a scale score is 64, a practice can be reasonably confident that, if the survey were to be repeated, the values would lie between 60 and 68. These figures come from our own data and published research on GPAS [5-7].

What this means in practice is that 50 patients per doctor (and fewer for larger practices) will be enough to show up important differences between doctors or practices, e.g. to be sure of picking out very high or low scoring doctors or practices.

Fifty patients will not be enough to show small differences between doctors or practices. If you had a particular reason for wanting to be more certain about a doctor's score, you could sample more patients. However, it would probably be more important to look at other sources of bias – e.g. increasing the response rate to postal questionnaires, or making sure that all questionnaires were returned by patients after consultations in the surgery.

2.5 Benchmark GPAQ scores

National benchmarks for comparing the performance of your practice can be found on the GPAQ website (http://www.gpaq.info/benchmarks.htm). These benchmarks correspond to mean (i.e. average) scores obtained on each evaluative item and GPAQ sub-scale, based on responses to both the postal and consultation versions of GPAQ collected nationwide during the 2005-6 contract year. Once sufficient data corresponding to the 2006-7 contract year have been sent to us, collated and analysed, these benchmarks will be updated. Therefore, please check the GPAQ website periodically for updated benchmark scores.

3. Notes on individual questions in the GPAQ questionnaire

These notes outline issues of interpretation relating to individual questions. A full list of variables, and recommended coding to calculate scale scores, is given in appendix 2.

3.1 Frequency of consultation

Question 1 asks, 'In the past 12 months, how many times have you seen a doctor from your practice?'.

This question may be used to interpret responses to the main questionnaire. Responses by those who rarely visit the doctor will be based on longer recall periods than those of frequent attendees. Frequent attendees tend to be sicker, and in some previous surveys sicker patients give less positive responses to patient evaluation questionnaires than less sick patients, perhaps because they have more opportunity to discover flaws in the system. However, in other studies, sicker patients have higher ratings of their care, perhaps reflecting gratitude for their medical care.

3.2 Receptionists question

This is a single question (Question 2).

3.3 Access questions

Individual questions on this scale may be interpreted on their own, although you can also calculate an overall score for this scale (see appendix 2)

Four report questions (tables 1 and 2) relate to specific assessment questions. These pairs of questions are as follows:

3a   How do you rate the hours that your practice is open for appointments? (assessment question)

3b   What additional hours would you like the practice to be open? (report question)

4a   When you want to see a particular doctor, how quickly do you usually get to see that doctor? (report question)

4b   How do you rate this? (assessment question)

5a   When you are willing to see any doctor, how quickly do you usually get seen? (report question)

5b   How do you rate this? (assessment question)

7a   How long do you usually have to wait at the practice for consultations to begin? (report question)

7b   How do you rate this? (assessment question)

For the last three pairs of questions, the actual experience of the patients may be related to their evaluation of the service. Therefore it is possible to determine, for example, what length of wait for a consultation is regarded as 'fair', 'good', etc, as we have done in our published research [8]. Likewise, for questions 3a and 3b, it is possible to see what change in

surgery hours could potentially have the greatest impact on patients' evaluation of opening hours.

The question 'What additional hours would you like the practice to be open?' is the only question in a GPAQ scale for which there are multiple legitimate responses. These are 'Early morning', 'Lunchtimes', 'Evenings', 'Weekends' and 'None, I am satisfied'.

3.4 Continuity of care questions

There are two questions for continuity of care. The first is a report question, and the second a rating question.

> 9a   How often do you see your usual doctor?' (report question)
> 9b   How do you rate this?' (assessment question)

This enables the assessment of continuity of care to be expressed in terms of the actual continuity which patients report they receive.

3.5 Communication questions

These questions (10a to 10h) relate to those aspects of care which patients consistently report as being important to them in consultations.

3.6 Nursing questions (only in the postal version)

We have only included one scale on nursing (and several on doctors). The reason for this is that, although nursing plays an increasingly important role in primary care, there are still around ten times as many consultations with doctors than with practice nurses across the country. There are many patients who have no experience of contact with the nurse, whereas most people have consulted with a doctor in the relatively recent past. In this question, we have deliberately decided not to ask patients to distinguish between practice nurses and district nurses, as we believed that many would have difficulty in doing this.

Question 11 on the postal version of GPAQ asks 'Have you seen a nurse from your practice in the past 12 months?'. If the answer to this question is 'No', then the nursing scale (12 a, b and c) should not have been completed.

The nursing questions are not included in the consultation version of GPAQ as this relates to a specific consultation with a doctor. Although we have not done this, there is no reason why practices should not modify this questionnaire so that it related specifically to consultations with nurses.

3.7 Enablement questions (only in the consultation version)

We have included three questions about enablement in the version of GPAQ to be used after consultations (i.e. questions 11a to 11c). We previously included enablement questions in the postal version, but they aren't so well understood in this context. Enablement questions were originally designed to be used after consultations. The ones we have used are derived from the published enablement questionnaire [10]. We are grateful to Professor John Howie for advising us on the selection of enablement questions to include in GPAQ.

3.8 Socio-demographic and other questions

We imagine that users of GPAQ will most often use information from these questions when they want to see how their respondents compare with others in the wider population of their practice or PCT.

Age and sex

These are the first of the socio-demographic questions.

Limiting long-standing illness

The long-standing illness question is one often used in major national surveys. It is a strong predictor of a high consultation rate.

The wording of this question is the same as that used in the 2001 Census, so that you can compare your respondents to local or national survey figures if you wish.

Ethnicity and socio-economic status

The classification we have used for ethnicity is a condensed version of the classification which was used in the 2001 National Census. This is so that you can compare your respondents to local or national survey figures if you wish.

We have chosen one single question, housing tenure (accommodation), to reflect socio-economic status as housing tenure is the Census question which is most strongly related to other socio-economic variables.

These questions can also be used to adjust for or explain differences in scores between practices [6].

Employment

This question is again a condensed version of a question that was used in the 2001 Census, allowing comparison between samples of GPAQ responders with local and wider populations.

3.9 A note about 'Overall satisfaction' (now omitted from GPAQ 2.0)

The postal, consultation and nurse versions of GPAQ 1.0 (which were used in the 2004-5 contract years) included a question asking patients how satisfied they were with their practice overall. This question has now been omitted from GPAQ 2.0 on the basis of evidence that a significant minority of patients misread the response options which were presented in reverse order to preceding items in the questionnaire.

The decision to omit this question altogether from GPAQ 2.0 has been taken because, generally speaking, experts in the field are critical of bland satisfaction questions such as this, and it is our view that the main GPAQ questions which can be linked directly to some action that the doctor can take (e.g. better listening or explaining of problems) will be of greater value to practices.

National benchmark scores for 'Overall satisfaction' will no longer appear on the GPAQ website and we recommend that practices use the new version of GPAQ (2.0) for the contract year 2006-7 and any subsequent contract year.

4. Contributors to the development of GPAQ

GPAQ was developed from the GPAS questionnaire which has been used in research at NPCRDC over the past five years. Martin Roland, Director of NPCRDC led the team. Nicki Mead, Pete Bower, Sophie Jerrim and Stephen Campbell, all research staff at NPCRDC, have all been involved in the development and validation of the questionnaires. Professor John Campbell of Peninsular Medical School has also contributed to the research we have done on patient questionnaires. Our original GPAS questionnaire was developed from the Primary Care Assessment Survey (PCAS) with the assistance of Dr Dana Gelb Safran and the New England Medical Center Hospitals, who shares the copyright of GPAQ.

Appendix 1. Taking action on GPAQ scores

There is little purpose in doing a survey unless you are prepared to act on the results. In this section, we discuss briefly how you might do this.

GPAQ has been designed so that it is as easy as possible to know how you can use your scores to improve care in your practice. All the questions can be linked directly to some action which you could take. For example, in the communication questions, we have included questions on listening and explaining rather than important but rather nebulous concepts like trust. So for every question in GPAQ, there is some behaviour which you could think about improving.

Some of the work of deciding how to use the results can be done with the practice staff. So, for example, some of the access questions throw up issues which can be addressed through the practice management – e.g. managing the appointment system, phone answering, etc. The access questions form the largest single group of questions.

The next largest group is about communication. This is more difficult to address, but there are well tested methods of improving doctors' communication skills in consultations. These generally rely on critical analysis of videotaped surgeries, usually with a partner or friendly mentor. This is something which all training practices will have had experience of in recent years, as consultation skills training forms an important part of vocational training.

In thinking about who to discuss your survey results with, you should think about:

- Your partners and other doctors working in the practice
- Nurses working in the practice
- Your practice managers and receptionist / admin staff

Some issues (e.g. scores on the access scale) will need to be discussed with all your staff.

To get level 2 and level 3 payments for the new contract, you will need to do more than this and will have to have discussed the results of your survey with patients (e.g. a 'critical friends' group or a patient participation group), and shown that you have done something about the results.

We are aware that most practices have little experience of how to use questionnaires to help them improve care. So, the National Primary Care Research and Development Centre, with the University of Exeter and CFEP have written a practical handbook on this subject. This is freely available to download from NPCRDC's website (http://www.npcrdc.man.ac.uk/PublicationDetail.cfm?ID=111).

Appendix 2. Analysing GPAQ with SPSS

This appendix describes how to calculate individual scale scores for GPAQ and provides SPSS programs to help you do so.

This appendix is not for practices and GPs who simply want a summary of their own scores. They should use the Excel or Access programs that are freely available to download from the GPAQ website at http://www.gpaq.info/download.htm.

The more detailed analyses described in this appendix are for those who want to undertake more complex calculations – e.g. looking separately at the responses from different age or ethnic groups. For more complex analyses, the responses to individual questions can be analysed. However, in many cases, it will be more suitable to calculate scale scores than to use individual questions. This appendix gives details of how GPAQ scale scores are calculated.

The following tables summarise the GPAQ questions, with the addition here of suggested variable names. These are the variable names used in our SPSS program.

Postal questionnaire			
Questions	Number	Variable name for SPSS	Abbreviated description of question *(see questionnaire for exact wording)*
	1	Gpcons	How many times seen a doctor in practice in past 12 months?
Reception-ists	2	Recept	How do you rate – the way you are treated by the receptionists
Access	3a 3b	Hours Morning Lunch Evening Weekend None	How do you rate – the hours that your practice is open for appointments What additional hours would you like the practice to be open?
	4a 4b 5a 5b 6 7a 7b 8a 8b	Partic1 Partic2 Anydoc1 Anydoc2 Urgent Wait Waitrate Phone1 Phone2	When you want to see a particular doctor, how quickly do you get to see that doctor? How do you rate this? When you are willing to see any doctor, how quickly do you usually get seen? How do you rate this? If you need an urgent appointment, can you normally get one on the same day? How long do you usually have to wait at the practice for consultations to begin? How do you rate this? How do you rate – ability to get through to practice on the phone How do you rate – ability to speak to a doctor on the phone
Continuity	9a 9b	Usual Contrate	How often you see your usual doctor? How do you rate this?
Communi-cation	10a 10b 10c 10d 10e 10f 10g 10h	Comm1 Comm2 Comm3 Comm4 Comm5 Comm6 Comm7 Comm8	*Thinking about consulting with your doctor, how would you rate the following*: How thoroughly your doctor asks about your symptoms How well your doctor listens to what you say How well the doctor puts you at ease during your physical examination How much the doctor involves you in decisions about your care How well your doctor explains your problems or treatments you need The amount of time your doctor spends with you Doctor's patience with your questions or worries Doctor's caring and concern for you
	11	Nurse	Seen a nurse in practice in past 12 months?
Practice nursing	12a 12b 12c	Nurse1 Nurse2 Nurse3	*Thinking about the nurses you have seen, how would you rate the following:* How well they listen to what you say The quality of care they provide How well they explain your health problems or any treatments
	13	Sex	Male / female
	14	Age	Age
	15	Chronic	Limiting long-standing illness, disability or infirmity

	16	Ethnic	Ethnic group
	17	Accom	Accommodation
	18	Employ	Employment status

Table 6. Questions in the postal version of GPAQ and suggested variable names

Consultation questionnaire			
Questions	Number	Variable name for SPSS	Abbreviated description of question *(see questionnaire for exact wording)*
	1	Gpcons	How many times seen a doctor in practice in past 12 months?
Reception-ists	2	Recept	How do you rate – the way you are treated by the receptionists
Access	3a	Hours	How do you rate – the hours that your practice is open for appointments
	3b	Morning Lunch Evening Weekend None	What additional hours would you like the practice to be open?
	4a	Partic1	When you want to see a particular doctor, how quickly do you get to see that doctor?
	4b	Partic2	How do you rate this?
	5a	Anydoc1	When you are willing to see any doctor, how quickly do you usually get seen?
	5b	Anydoc2	How do you rate this?
	6	Urgent	If you need an urgent appointment, can you normally get one on the same day?
	7a	Wait	How long do you usually have to wait at the practice for consultations to begin?
	7b	Waitrate	How do you rate this?
	8a	Phone1	How do you rate – ability to get through to practice on the phone
	8b	Phone2	How do you rate – ability to speak to a doctor on the phone
Continuity	9a	Usual	How often you see your usual doctor?
	9b	Contrate	How do you rate this?
Communi-cation			*Thinking about consulting with your doctor, how would you rate the following*:
	10a	Comm1	How thoroughly your doctor asks about your symptoms
	10b	Comm2	How well your doctor listens to what you say
	10c	Comm3	How well the doctor puts you at ease during your physical examination
	10d	Comm4	How much the doctor involves you in decisions about your care
	10e	Comm5	How well your doctor explains your problems or treatments you need
	10f	Comm6	The amount of time your doctor spends with you
	10g	Comm7	Doctor's patience with your questions or worries
	10h	Comm8	Doctor's caring and concern for you
Enable-ment			*After seeing the doctor today, do you feel (much more / little more / same)*
	11a	Enab1	Able to understand your problem or illness
	11b	Enab2	Able to cope with your problem or illness
	11c	Enab3	Able to keep yourself healthy
	12	Sex	Male / female
	13	Age	Age
	14	Chronic	Limiting long-standing illness, disability or infirmity
	15	Ethnic	Ethnic group
	16	Accom	Accommodation
	17	Employ	Employment status

Table 7. Questions in the consultation version of GPAQ and suggested variable names

Coding missing values

Missing values should in general be coded '9' (or entered as a period '.' if the analysis is being carried out in SPSS).

Please note that in the Excel program for the standard report form missing values are simply left blank – they are not given a separate code. However, if you are using the Excel program, you shouldn't be using this appendix at all. You should be following the instructions in the downloadable standard report form.

Age should be assigned three columns. Missing values for age should be coded '999' or entered as a period '.'. The SPSS program that follows automatically assigns ages of greater than 110 as 'missing'.

The SPSS program below treats missing values and 'non-applicable' responses as separate when producing frequency distributions for each question. However, when the scale scores are calculated, 'non-applicable' responses are recoded as missing values.

Coding questions where more than one response has been ticked

With the exception of question 3b (additional opening hours), all questions require one response <u>only</u> to be ticked.

However, sometimes respondents will tick more than one response. In such cases, the following rules should be applied:

1) Where two responses are adjacent (e.g. 'good' and 'very good'), code the response that gives the least favourable report. In general, this is the lower code (e.g. 4 for 'good' rather than 5 for 'very good').
2) Where the two responses are not adjacent (e.g. a respondent checks both 'good' and 'poor'), record the question as missing.

Recoding values

Recoding is necessary for some questions to derive the final values to use in the SPSS analysis. Three tasks comprise this process (please note, the SPSS program that follows will automatically make these calculations):

a) changing all out of range responses to missing values
b) changing 'does not apply' and 'don't know' responses to missing values
c) recalibrating certain questions for scaling purposes

<u>a) Recoding all out of range responses to missing values</u>

Prior to assigning the final question value, all variables should be checked to ensure that they fall within the maximum and minimum coding values, using the coding values pre-printed on the questionnaire. All questions lying outside the minimum and maximum values should be recoded as missing values.

<u>b) Recoding 'don't know' and 'does not apply' values to 'missing' for the purpose of scaling only</u>

For a number of the assessment questions which are used to calculate scale scores, the respondent has the option to tick 'Does not apply' or 'Don't know'. These questions are *partic2, anydoc2, phone1, phone2, Comm1 to Comm8, and Enab1 to Enab3* (questions 4b, 5b, 8a-b, 10a-h and, only in the consultation questionnaire, questions 11a-c). For calculating the scale values, these responses need to be recoded as missing.

For the variables *partic2, anydoc2, phone1, phone2 and comm1 to comm8,* the reassigned values are as follows:

Value name	Old code	Reassigned code
Very poor	1	1
Poor	2	2
Fair	3	3
Good	4	4
Very good	5	5
Excellent	6	6
Don't know or Does not apply	7	9

For the enablement variables *enab1* to *enab3,* the reassigned values are additionally changed by the SPSS program as follows:

Value name	Old code	Reassigned code
Much more than before the visit	1	3
A little more than before the visit	2	2
The same or less than before the visit	3	1
Does not apply	4	9

We recommend that the recoded variables are assigned new variable names when SPSS is used. In the SPSS syntax each variable is given a new name prior to recoding by prefixing the old variable name with an 'r', e.g. *phone1* becomes *rphone1*. This preserves the original data which may be required for other analyses.

Dealing with missing data and 'does not apply' responses for calculating scale scores

Missing data occurs when respondents do not answer GPAQ questions, when an out of range value is discovered during data checking, or, for certain 'don't know / does not apply responses' (see section above). For each scale a minimum number of questions must have been rated for a scale score to be calculated for that respondent.

In general, a scale score is calculated when half or more of the questions for that scale have been completed by the respondent. The following are the minimum number of responses needed to calculate scales scores for individual respondents. If there are insufficient responses recorded for any scale, then the scale as a whole should be listed as missing. The SPSS program will do this for you automatically.

Scale	Question/s in scale	Number of questions in scale	Minimum number of valid responses needed to calculate scale score
Receptionists	2	1	1
Access	3a, 4b, 5b, 7b, 8a, 8b	6	3
Continuity of care	9b	1	1
Communication	10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h	8	4
Enablement – consultation version only	11a, 11b, 11c	3	2
Practice nursing – postal version only	12a, 12b, 12c	3	2

Table 8. Minimum number of valid responses needed to calculate scale scores for an individual patient

Calculating scale scores

The next step involves calculating a scale score. In all the scales, 0 is the lowest possible score and 100 is the highest possible score. This can be interpreted as a percentage of the maximum possible score. Presenting the data as scale scores allows the results for practices to be compared more readily across different scales.

The calculation involves the following stages for each respondent. Please note that these steps are carried out automatically by the SPSS program which follows.

a) Check for out of range responses, missing values and 'does not apply' values. Recode and recalibrate as described in the sections above.

b) Determine whether sufficient questions have been rated for a scale (from table 6) for a scale score to be calculated. Note that checking a 'does not apply' response does not count as a rating for these purposes – these will already have been recoded as 'missing' as part of the previous step.

c) Where sufficient questions have been completed, calculate the mean score of the completed questions, using recoded / recalibrated values where appropriate. When calculating this mean score, be sure to divide by the number of completed questions not the total number of questions in the scale.

Then, for each scale, calculate a 0-100 scale by using the following formula:

Scale score = (mean score of completed questions - lowest possible question value) x 100
                                    (maximum question range)

The lowest possible question values and maximum question ranges for each of the scales, using recalibrated and recoded values are:

Scale	Lowest question value	Highest question value	Maximum question range
Access	1	6	5
Receptionists	1	6	5
Continuity	1	6	5
Communication	1	6	5
Enablement – consultation version only	1	3	2
Practice nursing – postal version only	1	6	5

Table 9. Lowest and highest possible question values and question ranges
(using recalibrated and recoded values)

Example 1:

Communication scale	Value
Question 10a COMM1	3
Question 10b COMM2	4
Question 10c COMM3	missing
Question 10d COMM4	5
Question 10e COMM5	3
Question 10f COMM6	4
Question 10g COMM7	5
Question 10h COMM8	missing

Any questions out of range? - No
Any questions require recoding / recalibration? - No
Can scale score be calculated? - Yes - there are six completed questions
Mean score of completed questions = (3+4+5+3+4+5)/6 = 4
Lowest possible question value = 1
Maximum question range (i.e. 6-1) = 5

Scale score = $\frac{(4-1) \times 100}{5}$ = 60

Example 2:

Enablement scale	Value	Recoded value	Recoded variable name
Question 11a ENAB1	3	1	RENAB1
Question 11b ENAB2	2	2	RENAB2
Question 11c ENAB3	3	1	RENAB3

Any questions out of range? - No
Any questions require recoding / recalibration? – Yes, recoded as on right
Can scale score be calculated? - Yes - there are three completed questions
Mean score of completed questions = (1+2+1)/3 = 1.33
Lowest possible question value = 1
Maximum question range (i.e. 3-1) = 2

Scale score = $\frac{(1.33-1) \times 100}{2}$ = 16.5

Summary of precoded and final values for GPAQ questions for SPSS analysis

Receptionist scale variable

Q2 (*Recept*)

Response choice	Precoded item value	Final item value (no change)
Very poor	1	1
Poor	2	2
Fair	3	3
Good	4	4
Very good	5	5
Excellent	6	6

Access scale variables

Q3a, 7b (*Hours, Waitrate*)

Response choice	Precoded item value	Final item value (no change)
Very poor	1	1
Poor	2	2
Fair	3	3
Good	4	4
Very good	5	5
Excellent	6	6

Q4b, 5b, 8a, 8b (*Partic2, Anydoc2, Phone1, Phone2*)

Response choice	Precoded item value	Final item value
Very poor	1	1
Poor	2	2
Fair	3	3
Good	4	4
Very good	5	5
Excellent	6	6
Does not apply / don't know	7	9

(Reassignment of variable names for recoded values recommended)

Continuity scale variable

Q9b (*Contrate*)

Response choice	Precoded item value	Final item value (no change)
Very poor	1	1
Poor	2	2
Fair	3	3
Good	4	4
Very good	5	5
Excellent	6	6

Communication scale variables

Q10a-10h (*Comm1 to Comm8*)

Response choice	Precoded item value	Final item value
Very poor	1	1
Poor	2	2
Fair	3	3
Good	4	4
Very good	5	5
Excellent	6	6
Does not apply	7	9

(Reassignment of variable names for recoded values recommended)

Enablement scale variables - *consultation version only*

Q11a-11c (*Enab1, Enab2, Enab3*)

Response choice	Precoded item value	Final item value
Much more	1	3
A little more	2	2
The same	3	1
Does not apply	4	9

(Reassignment of variable names for recoded values recommended)

Practice nursing scale variables - *postal version only*

Q12a-12c (*Nurse1, Nurse2, Nurse3)*

Response choice	Precoded item value	Final item value (no change)
Very poor	1	1
Poor	2	2
Fair	3	3
Good	4	4
Very good	5	5
Excellent	6	6

SPSS program to analyse GPAQ data

These notes are for those who wish to analyse GPAQ data using SPSS 7.5 for Windows or higher. They provide SPSS syntax for calculating the scale scores described in this manual.

Scale score calculations must be done on variables which have been recoded or recalibrated as outlined above. You do not need to do this yourself as the commands for recoding and recalibrating have been built into the SPSS syntax below. For all variables that contribute to scales, the scale score may only be calculated where a minimum number of questions have been completed by the respondent. SPSS commands are used to ensure that a scale score is calculated only when there are sufficient completed questions for an individual set of responses.

The first set of COMPUTE commands assign new variable names to variables that need to be recoded: in each case the new variable name is created by prefixing the old variable name with an 'r' (e.g. the variable *rpartic2* is created which, prior to recoding, is the same as *partic2).* This enables the original variable to continue to be used when needed while the recoded variables are used to calculate scale scores.

The next set of RECODE commands contain instructions for the recoding and recalibration described above. In addition, 'system missing' values are assigned to inadmissible or missing values for all other variables. Ages over 110 are assigned as 'missing'.

The next six COMPUTE commands calculate the scale scores for GPAQ. Note that for all but single question scales (receptionists and continuity), the minimum number of questions required to be present is specified by the SPSS command. For example, *MEAN.4(comm1, comm2, comm3, comm4, comm5, comm6, comm7, comm8)* calculates a mean value of comm1 to comm8 only in cases where there are at least four completed questions present.

We have also included 17 more COMPUTE commands to calculate the scores for the individual items that the main scale scores above are based on, excluding the three scales that are already based on single items. However, please note that in many cases it will be more suitable to use the main scale scores than to use these scores based on individual questions.

The final FREQUENCIES commands calculate frequency distributions for all of the questions in GPAQ.

SPSS program for the postal version of GPAQ 2.0

```
COMPUTE rpartic2 = partic2 .
COMPUTE ranydoc2 = anydoc2 .
COMPUTE rphone1 = phone1 .
COMPUTE rphone2 = phone2 .
COMPUTE rcomm1 = comm1 .
COMPUTE rcomm2 = comm2 .
COMPUTE rcomm3 = comm3 .
COMPUTE rcomm4 = comm4 .
COMPUTE rcomm5 = comm5 .
COMPUTE rcomm6 = comm6 .
COMPUTE rcomm7 = comm7 .
COMPUTE rcomm8 = comm8 .

RECODE rpartic2 ranydoc2 rphone1 rphone2
  (0=SYSMIS) (7 thru Highest =SYSMIS).
```

```
RECODE rcomm1 rcomm2 rcomm3 rcomm4 rcomm5 rcomm6 rcomm7 rcomm8
  (0=SYSMIS) (7 thru Highest =SYSMIS).
RECODE gpcons wait (0=SYSMIS) (6 thru Highest =SYSMIS).
RECODE recept hours waitrate contrate usual
  (0=SYSMIS)  (7 thru Highest =SYSMIS).
RECODE partic1 partic2 anydoc1 anydoc2 phone1 phone2
(0=SYSMIS) (8 thru Highest =SYSMIS).
RECODE urgent (0=SYSMIS) (4 thru Highest = SYSMIS).
RECODE morning (0=SYSMIS) (2 thru Highest =SYSMIS).
RECODE lunch (0 thru 1 =SYSMIS) (3 thru Highest =SYSMIS).
RECODE evening (0 thru 2 =SYSMIS) (4 thru Highest =SYSMIS).
RECODE weekend (0 thru 3 =SYSMIS) (5 thru Highest =SYSMIS).
RECODE none (0 thru 4 =SYSMIS) (6 thru Highest =SYSMIS).
RECODE comm1 comm2 comm3 comm4 comm5 comm6 comm7 comm8
  (0=SYSMIS)  (8 thru Highest =SYSMIS).
RECODE nurse1 nurse2 nurse3 (0=SYSMIS) (7 thru Highest =SYSMIS).
RECODE employ (0=SYSMIS) (8 thru Highest =SYSMIS).
RECODE ethnic (0=SYSMIS) (7 thru Highest =SYSMIS).
RECODE nurse chronic accom sex (0=SYSMIS) (3 thru Highest =SYSMIS).
RECODE age (0 =SYSMIS) (110 thru Highest =SYSMIS).


COMPUTE acc_sc = ((mean.3(hours, rpartic2, ranydoc2, waitrate, rphone1, rphone2)-1)*100)/5 .
COMPUTE recep_sc = (recept-1)*100/5 .
COMPUTE cont_sc = (contrate-1)*100/5 .
COMPUTE com_sc = ((mean.4(rcomm1, rcomm2, rcomm3, rcomm4,
rcomm5, rcomm6, rcomm7, rcomm8)-1)*100)/5 .
IF (nurse = 1) nur_sc= ((mean.2(nurse1, nurse2, nurse3)-1)*100)/5 .

FREQUENCIES
  VARIABLES=acc_sc recep_sc cont_sc com_sc
nur_sc/ FORMAT = NOTABLE /
STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.

COMPUTE ethnic2 = ethnic.
RECODE  ethnic2 (1=1) (2=2) (3=2) (4=2) (5=2) (6=2) .
VALUE LABELS ethnic2
  1.00000000000000 "White"
  2.00000000000000 "Other".
MEANS
  TABLES=acc_sc recep_sc cont_sc com_sc nur_sc BY ethnic2
  /CELLS MEAN COUNT STDDEV MEDIAN
  /STATISTICS ANOVA .

COMPUTE age2 = age.
RECODE age2  (16 thru 44=1)  (45 thru 110=2)  .
VALUE LABELS age2
    1.00000000000000 "16 to 44"
    2.00000000000000 "45 and 0ver".
MEANS
  TABLES=acc_sc recep_sc cont_sc com_sc nur_sc BY age2
  /CELLS MEAN COUNT STDDEV MEDIAN
  /STATISTICS ANOVA .

MEANS
  TABLES=acc_sc recep_sc cont_sc com_sc nur_sc BY sex
  /CELLS MEAN COUNT STDDEV MEDIAN
  /STATISTICS ANOVA .


COMPUTE hours_sc = (hours-1)*100/5 .
```

```
COMPUTE part2_sc = (rpartic2-1)*100/5 .
COMPUTE anyd2_sc = (ranydoc2-1)*100/5 .
COMPUTE wtrt_sc = (waitrate-1)*100/5 .
COMPUTE ph1_sc = (rphone1-1)*100/5 .
COMPUTE ph2_sc = (rphone2-1)*100/5 .

COMPUTE com1_sc = (rcomm1-1)*100/5 .
COMPUTE com2_sc = (rcomm2-1)*100/5 .
COMPUTE com3_sc = (rcomm3-1)*100/5 .
COMPUTE com4_sc = (rcomm4-1)*100/5 .
COMPUTE com5_sc = (rcomm5-1)*100/5 .
COMPUTE com6_sc = (rcomm6-1)*100/5 .
COMPUTE com7_sc = (rcomm7-1)*100/5 .
COMPUTE com8_sc = (rcomm8-1)*100/5 .

IF (nurse = 1) nur1_sc= (nurse1-1)*100/5 .
IF (nurse = 1) nur2_sc= (nurse2-1)*100/5 .
IF (nurse = 1) nur3_sc= (nurse3-1)*100/5 .

FREQUENCIES
  VARIABLES=hours_sc part2_sc anyd2_sc wtrt_sc ph1_sc ph2_sc
/ FORMAT = NOTABLE / STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.

FREQUENCIES
  VARIABLES=com1_sc com2_sc com3_sc com4_sc com5_sc com6_sc com7_sc com8_sc
/ FORMAT = NOTABLE / STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.

FREQUENCIES
  VARIABLES=nur1_sc nur2_sc nur3_sc/ FORMAT = NOTABLE /
STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.


FREQUENCIES
  VARIABLES=gpcons recept hours morning lunch evening weekend none
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=partic1 partic2 anydoc1 anydoc2 urgent
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=wait waitrate phone1 phone2 usual contrate
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=comm1 comm2 comm3 comm4 comm5 comm6 comm7 comm8
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=nurse nurse1 nurse2 nurse3
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=age
  /FORMAT= NOTABLE
  /STATISTICS=MEAN MIN MAX
  /ORDER  ANALYSIS .

FREQUENCIES
  VARIABLES=sex chronic ethnic accom employ
  /ORDER ANALYSIS .
```

When your data come from more than one practice, separate values can be calculated for each practice by including the lines:

sort cases by prac_id.
split file by prac_id.

at the start of the program, where 'prac_id' is the variable name which identifies practices. Note that once this command has been executed, all subsequent commands are carried out by practice (unless the data file is closed and re-opened). Therefore, analyses for the whole sample (e.g. a PCT) are generally best done before those for individual practices.

<u>SPSS program for the consultation version of GPAQ</u>

```
COMPUTE rpartic2 = partic2 .
COMPUTE ranydoc2 = anydoc2 .
COMPUTE rphone1 = phone1 .
COMPUTE rphone2 = phone2 .
COMPUTE rcomm1 = comm1 .
COMPUTE rcomm2 = comm2 .
COMPUTE rcomm3 = comm3 .
COMPUTE rcomm4 = comm4 .
COMPUTE rcomm5 = comm5 .
COMPUTE rcomm6 = comm6 .
COMPUTE rcomm7 = comm7 .
COMPUTE rcomm8 = comm8 .
COMPUTE renab1 = enab1 .
COMPUTE renab2= enab2 .
COMPUTE renab3 = enab3 .

RECODE rpartic2 ranydoc2 rphone1 rphone2
  (0=SYSMIS) (7 thru Highest =SYSMIS).
RECODE rcomm1 rcomm2 rcomm3 rcomm4 rcomm5 rcomm6 rcomm7 rcomm8
  (0=SYSMIS) (7 thru Highest =SYSMIS).
RECODE renab1 renab2 renab3 (0=SYSMIS) (4 thru Highest =SYSMIS) (1=3) (3=1).

RECODE gpcons wait (0=SYSMIS) (6 thru Highest =SYSMIS).
RECODE recept hours waitrate contrate usual
  (0=SYSMIS)  (7 thru Highest =SYSMIS).
RECODE partic1 partic2 anydoc1 anydoc2 phone1 phone2
(0=SYSMIS) (8 thru Highest =SYSMIS).
RECODE urgent (0=SYSMIS) (4 thru Highest = SYSMIS).
RECODE morning (0=SYSMIS) (2 thru Highest =SYSMIS).
RECODE lunch (0 thru 1 =SYSMIS) (3 thru Highest =SYSMIS).
RECODE evening (0 thru 2 =SYSMIS) (4 thru Highest =SYSMIS).
RECODE weekend (0 thru 3 =SYSMIS) (5 thru Highest =SYSMIS).
RECODE none (0 thru 4 =SYSMIS) (6 thru Highest =SYSMIS).
RECODE comm1 comm2 comm3 comm4 comm5 comm6 comm7 comm8
  (0=SYSMIS)  (8 thru Highest =SYSMIS).
RECODE enab1 enab2 enab3 (0=SYSMIS) (5 thru Highest =SYSMIS).
RECODE employ (0=SYSMIS) (8 thru Highest =SYSMIS).
RECODE ethnic (0=SYSMIS) (7 thru Highest =SYSMIS).
RECODE chronic accom sex (0=SYSMIS) (3 thru Highest =SYSMIS).
RECODE age (0 =SYSMIS) (110 thru Highest =SYSMIS).

COMPUTE acc_sc = ((mean.3(hours, rpartic2, ranydoc2, waitrate, rphone1, rphone2)-1)*100)/5 .
```

```
COMPUTE recep_sc = (recept-1)*100/5 .
COMPUTE cont_sc = (contrate-1)*100/5 .
COMPUTE com_sc = ((mean.4(rcomm1, rcomm2, rcomm3, rcomm4,
rcomm5, rcomm6, rcomm7, rcomm8)-1)*100)/5 .
COMPUTE enab_sc = ((mean.2(renab1, renab2, renab3)-1)*100)/2 .

FREQUENCIES
  VARIABLES=acc_sc recep_sc cont_sc com_sc
enab_sc/ FORMAT = NOTABLE /
STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.

COMPUTE ethnic2 = ethnic.
RECODE  ethnic2  (1=1)  (2=2)  (3=2)  (4=2)  (5=2)  (6=2)  .
VALUE LABELS ethnic2
  1.00000000000000 "White"
  2.00000000000000 "Other".
MEANS
  TABLES=acc_sc recep_sc cont_sc com_sc enab_sc BY ethnic2
  /CELLS MEAN COUNT STDDEV MEDIAN
  /STATISTICS ANOVA .

COMPUTE age2 = age.
RECODE age2  (16 thru 44=1)  (45 thru 110=2)  .
VALUE LABELS age2
    1.00000000000000 "16 to 44"
    2.00000000000000 "45 and 0ver".
MEANS
  TABLES=acc_sc recep_sc cont_sc com_sc enab_sc BY age2
  /CELLS MEAN COUNT STDDEV MEDIAN
  /STATISTICS ANOVA .

MEANS
  TABLES=acc_sc recep_sc cont_sc com_sc enab_sc BY sex
  /CELLS MEAN COUNT STDDEV MEDIAN
  /STATISTICS ANOVA .


COMPUTE hours_sc = (hours-1)*100/5 .
COMPUTE part2_sc = (rpartic2-1)*100/5 .
COMPUTE anyd2_sc = (ranydoc2-1)*100/5 .
COMPUTE wtrt_sc = (waitrate-1)*100/5 .
COMPUTE ph1_sc = (rphone1-1)*100/5 .
COMPUTE ph2_sc = (rphone2-1)*100/5 .

COMPUTE com1_sc = (rcomm1-1)*100/5 .
COMPUTE com2_sc = (rcomm2-1)*100/5 .
COMPUTE com3_sc = (rcomm3-1)*100/5 .
COMPUTE com4_sc = (rcomm4-1)*100/5 .
COMPUTE com5_sc = (rcomm5-1)*100/5 .
COMPUTE com6_sc = (rcomm6-1)*100/5 .
COMPUTE com7_sc = (rcomm7-1)*100/5 .
COMPUTE com8_sc = (rcomm8-1)*100/5 .

COMPUTE enab1_sc = (renab1-1)*100/2 .
COMPUTE enab2_sc = (renab2-1)*100/2 .
COMPUTE enab3_sc = (renab3-1)*100/2 .

FREQUENCIES
  VARIABLES=hours_sc part2_sc anyd2_sc wtrt_sc ph1_sc ph2_sc
/ FORMAT = NOTABLE / STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.
```

```
FREQUENCIES
  VARIABLES=com1_sc com2_sc com3_sc com4_sc com5_sc com6_sc com7_sc com8_sc
/ FORMAT = NOTABLE / STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.

FREQUENCIES
  VARIABLES=enab1_sc enab2_sc enab3_sc/ FORMAT = NOTABLE /
STATISTICS=MEAN MEDIAN MINIMUM MAXIMUM.


FREQUENCIES
  VARIABLES=gpcons recept hours morning lunch evening weekend none
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=partic1 partic2 anydoc1 anydoc2 urgent
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=wait waitrate phone1 phone2 usual contrate
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=comm1 comm2 comm3 comm4 comm5 comm6 comm7 comm8
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=enab1 enab2 enab3
  /ORDER ANALYSIS .

FREQUENCIES
  VARIABLES=age
  /FORMAT= NOTABLE
  /STATISTICS=MEAN MIN MAX
  /ORDER  ANALYSIS .

FREQUENCIES
  VARIABLES=sex chronic ethnic accom employ
  /ORDER ANALYSIS .
```

When your data comes from more than one practice, separate values can be calculated for
each practice by including the lines:

sort cases by prac_id.
split file by prac_id.

at the start of the program, where 'prac_id' is the variable name which identifies practices.
Note that once this command has been executed, all subsequent commands are carried out
by practice (unless the data file is closed and re-opened). Therefore, analyses for the whole
sample (e.g. a PCT) are generally best done before those for individual practices.

References

[1] Gelb Safran D et al. The Primary Care Assessment Survey. Tests of data quality and measurement performance. Medical Care 1998; 36: 728-39

[2] Gelb Safran D et al. Linking primary care performance to outcomes of care. Journal of Family Practice 1998; 47: 213-220.

[3] Murray A, Gelb Safran D. The Primary Care Assessment Survey: a tool for measuring , monitoring and improving primary care. In: Maruish M (ed) Handbook of Psychological Assessment in Primary Care Settings. 1999. Lawrence Erlbaum Associates.

[4] Taira DA et al. Asian American patient ratings of physician primary care performance. Journal of General Internal Medicine 1997; 12: 237-242

[5] Ramsay J, Campbell J, Schroter S, Green J, Roland M. The General Practice Assessment Survey (GPAS): tests of data quality and measurement properties. Family Practice 2000; 17: 372-379

[6] Campbell JL, Ramsay J, Green J. Age, gender, socioeconomic, and ethnic differences in patients' assessments of primary health care. Qual Health Care. 2001 Jun;10(2):90-5

[7] Bower P, Mead N, Roland M. What dimensions underlie patient responses to the General Practice Assessment Survey? A factor analytic study.Fam Pract. 2002 Oct;19(5):489-95.

[8] Bower P, Roland M, Campbell J, Mead N. Setting standards based on patients' views on access and continuity: secondary analysis of data from the general practice assessment survey. British Medical Journal 2003; 236: 258-60.

[9] Bower P, Roland MO. Bias in patient assessments on general practice: General Practice Assessment Survey scores in surgery and postal responders. British Journal of General Practice 2003; 53: 126-128.

[10] Howie JG, Heaney DJ, Maxwell M, Walker JJ. A comparison of a Patient Enablement Instrument (PEI) against two established satisfaction scales as an outcome measure of primary care consultations. Fam Pract. 1998 Apr;15(2):165-71