

**GLOUCESTERSHIRE
PRIMARY CARE CLINICAL AUDIT GROUP**

**An audit on
the management in primary care
of people with schizophrenia
in Gloucestershire**

2000 - 2001

Results

Section A

Summary of main findings

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Commentary

GLOUCESTERSHIRE PRIMARY CARE CLINICAL AUDIT GROUP

County wide audit on the management in primary care of people with schizophrenia : 2000 - 2001

Summary of main findings

The audit aimed to review the management of patients aged between 18 and 65 years with a confirmed diagnosis of schizophrenia, or who were being treated as if they had schizophrenia.

Participation

- 82 of the county's 85 practices took part. One practice had no patient eligible for inclusion.

Prevalence of schizophrenia

- 1133 patients were included in the audit. Practices identified patients for inclusion via their disease register, from searching their repeat prescribing database or from a list from the mental health services.
- Prevalence of schizophrenia overall was 0.34%. This may underestimate prevalence of those with a lifetime diagnosis of schizophrenia. Reported prevalence varied across the county.
 - prevalence range between PCGs : 0.17% - 0.41%
 - prevalence range between practices : 0.04% - 2.3%
- Just under half (45%) of the patients included in the audit had been diagnosed with schizophrenia since 1990. Information on learning disabilities was available for 83%. One in five (22%) had a learning disability.

Review of physical health

Management and control of blood pressure

- Most patients (95%) included in the audit had been reviewed by a GP or a hospital doctor or CPN in the previous 15 months. Slightly fewer (86%) had seen their GP in that time.
- Two out of three patients (67%) had had their blood pressure measured in the previous 5 years.
- Three out of four patients (75%) had had a blood pressure of 140/85 mmHg or below, the level recommended by the British Hypertension Society.

Smoking

- In the previous five years a record had been made on smoking status for two out of three patients (65%).
- Six out of ten patients (59%) were smokers. One in two (56%) smokers had received advice about stopping in the previous 15 months.

Alcohol consumption and substance misuse

- In the previous five years a record had been made on alcohol consumption for one in two patients (56%).
- One in eleven patients (9%) had a record of substance abuse in the previous 15 months. Just over half of these (58%) had been referred to the specialist services.

Weight management

- In the previous five years body mass index (BMI) measurement had been made and recorded for one in two patients (52%). Over half (56%) were overweight (BMI >25). Of those with a BMI outside the range 20-25, one in two (54%) had been given nutritional advice in the previous 15 months, and one in three (36%) had had urinalysis.

Access to screening

- Three out of four women with schizophrenia (76%) had had an up to date cervical smear or had a record of their ineligibility or of their wish not to have a smear taken.
- Just under half of all women over 50 (46%) had attended for breast screening in the previous three years. The figure for the county as a whole is 78%.

Review of mental health

Antipsychotic medication

- Seven out of eight patients (87%) were on antipsychotic medication at the time of the audit.
- Four out of eleven (44%) were taking a novel antipsychotic. Four out of ten (41%) were taking an oral conventional antipsychotic.
- One in three patients (36%) was prescribed a depot antipsychotic.
- One in five patients (19%) was prescribed more than one antipsychotic drug.
- In the previous 15 months there was a record of side effect assessment for three out of four patients (75%). One in four patients (27%) reported some adverse effects of treatment.
- Four out of eleven patients (44%) on antipsychotic medication were also taking an anticholinergic drug or had done so in the previous 15 months
- In the previous 15 months there had been an assessment of mental state for seven out of eight patients (87%) and a documented enquiry about social and environmental factors for four out of five patients (82%). Patients on medication were more likely to have had such assessments than those that were not.

Need for action identified

- Patient's mental health was of greatest concern. GPs thought that four out of ten patients would benefit from a review of their mental health in the next three months. One in three patients (35%) were recommended for a review of some aspect of their physical health.
- GPs said they felt the need for greater involvement in the care of one in four patients (24%).
- The need for better liaison with community mental health teams and for more community psychiatric nursing support was mentioned by a number of practices.

County wide audit on the management in primary care of people with schizophrenia 2000 – 2001

Overall performance against audit criteria

Total number of patients in audit:			1133
All patients with schizophrenia in audit	Audit result	Patient base (n)	Variation Between PCGs
The percentage of patients:-			
who have been reviewed by a GP or hospital doctor or CPN*	95%	1133	94 - 98%
who have had their blood pressure recorded in the last 5 years	67%	1120	58 - 71%
whose last recorded blood pressure was 140/85 mmHg or less	75%	743	74 - 79%
whose smoking status has been recorded in the last 5 years	65%	1126	58 - 71%
whose alcohol consumption has been recorded in the last 5 years	56%	1091	46 - 69%
with substance abuse noted* and who were referred to specialist services	5%	1120	2 - 7%
who have had their BMI measured in the last 5 years	52%	1104	48 - 54%
The percentage of smokers:-			
who have received advice on stopping smoking*	56%	408	45 - 75%
The percentage of patients with a BMI outside the range 20-25:-			
who have been given nutritional advice*	54%	321	40 - 88%
who have had urinalysis*	36%	316	26 - 44%
The percentage of women:-			
with an up to date cervical smear history or a record of wish not to participate in the screening programme	76%	450	70 - 87%
The percentage of women aged 50-64:-			
who have had breast screening in the last 3 years or a record of wish not to participate in the screening programme	59%	191	54 - 78%
The percentage of patients:-			
with an assessment of mental state*	87%	1095	81 - 95%
with an enquiry about social and environmental factors*	82%	1068	75 - 95%

* in the last 15 months

Patients were excluded from calculations if information on a particular criterion was missing.

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County wide audit on the management in primary care of people with schizophrenia : 2000 - 2001

Variations between PCGs

Wide variations in performance between practices are known to occur. Variations are also noted at PCG level and have been explored in detail in the main report of the audit.

To give PCGs an overview of these differences we have drawn together into this summary those areas of management where their performance or their patient profile differs significantly from that of the county as a whole.

These differences in performance are unlikely to have occurred by chance. Statistical tests of significance indicate that we could expect such results (on many of the criteria under consideration) in less than one in 1,000 such comparisons when there is no true difference between the PCG figure and that for the county.

Compared to the county as a whole, Cheltenham & Tewkesbury PCG	Significance of difference	Refer to section
<ul style="list-style-type: none">• has the highest prevalence of schizophrenia in the county	**	6.1
<ul style="list-style-type: none">• had most patients with a recent history of substance abuse	*	6.4.3

Compared to the county as a whole, Cotswold PCG	Significance of difference	Refer to section
<ul style="list-style-type: none">• has the lowest prevalence of schizophrenia in the county	**	6.1
<ul style="list-style-type: none">• has the most patients on antipsychotic medication	**	6.6
<ul style="list-style-type: none">• has the most patients on more than one antipsychotic drug	*	6.6.3
<ul style="list-style-type: none">• has the most patients who have had recent contact with the mental health services	*	6.3

** indicates that the difference between performance by the PCG and the county as a whole is significant at, or beyond, the 0.1% level

* indicates that the difference between performance by the PCG and the county as a whole is significant at the 1% level

Compared to the county as a whole, Forest of Dean PCG	Significance of difference	Refer to section
• has an above average number of patients with learning disabilities	**	6.2.3
• has the most patients with a record of alcohol consumption	**	6.4.3
• had the most patients with extreme BMI values who have had recent advice on nutrition	**	6.4.4
• has identified most patients in need of a review of their physical health	*	6.7

Compared to the county as a whole, Gloucester & South Tewkesbury PCG	Significance of difference	Refer to section
• has the fewest patients on medication with a recent assessment of mental state	**	6.5.1
• has the fewest patients with a documented assessment of social and environmental factors	**	6.5.2

Compared to the county as a whole, Stroud & Berkeley Vale PCG	Significance of difference	Refer to section
• has the fewest patients with a recent history of substance abuse	*	6.4.3
• has the fewest patients on antipsychotic medication	**	6.6

** indicates that the difference between performance by the PCG and the county as a whole is significant at, or beyond, the 0.1% level

* indicates that the difference between performance by the PCG and the county as a whole is significant at the 1% level

GLOUCESTERSHIRE PRIMARY CARE CLINICAL AUDIT GROUP

County wide audit on the management in primary care of people with schizophrenia : 2000 - 2001

County audit results

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GLOUCESTERSHIRE PRIMARY CARE CLINICAL AUDIT GROUP

County wide audit on the management in primary care of people with schizophrenia : 2000 - 2001

1 Introduction

1.1 What is schizophrenia?

Much of this introduction is taken from the Effective Health Care Bulletin on “Drug treatments in schizophrenia,” published by the NHS Centre for Reviews and Dissemination at the University of York. It is quoted with permission.

Schizophrenia is an illness or a group of illnesses affecting language, planning, emotion, perceptions and movement. Many clinicians divide the signs and symptoms into ‘positive’ and ‘negative’ (Box 1)¹

Positive symptoms often accompany acute psychotic episodes. Negative symptoms refer to the absence of function² and are characteristically, but not inevitably, associated with long-standing and unremitting illness.

Positive symptoms

- Delusions – strange beliefs, foreign to the person’s background, which cannot be shaken by logic or reason. For example the sure belief that secret agents are watching or listening.
- Hallucinations – the person hears, sees, tastes, smells or feels things that are not there. The most common hallucination is hearing voices.
- Disordered thinking – fragmenting of the process of logical thought. One thought may simply not flow from its predecessor or connect to those that follow.
- Catatonic movements – the person may freeze like a statue, adopt odd postures, or become very excited, restless and agitated.

Negative symptoms

- Feelings of emotional numbness.
- Difficulty in communicating with others.
- Lack of motivation.
- Inability to care about or cope with everyday tasks such as getting out of bed in the morning, washing and dressing.

Box 1. The symptoms and signs of schizophrenia

In acute psychotic episodes behaviour can be markedly disorganised. Some people become agitated and a few are aggressive, others may appear preoccupied with inner thoughts, appearing perplexed and withdrawn. Poor insight into the unusual nature of their experiences is common.

The International Classification of Diseases (ICD-10)³ and the Fourth Edition of the Diagnostic and Statistical Manual (DSM-IV) of the American Psychiatric Association⁴ both emphasise symptoms

such as hallucinatory voices commenting on the person's actions, delusions, experiences of interference with the person's thoughts, incoherent or irrelevant speech, changes in a person's ability to experience emotions and decline in their general level of functioning.⁵

There are no diagnostic physical tests for schizophrenia. It is defined by symptoms and signs. Diagnosis can be difficult initially since the early features of schizophrenia such as anxiety, depression, a vague sense of unease, suspiciousness, social withdrawal, loss of concentration and moodiness,⁶ are non-specific and common in adolescence.

Epidemiology

About 0.5% to 1% of the population – irrespective of culture, social class and race – suffer from schizophrenia at some time in their life.⁷ This incidence is relatively consistent across the world. Every year one to two people per 10,000 begin to fall ill with schizophrenia,⁸ making this illness about twice as common as epilepsy. In the UK, currently, approximately 250,000 people suffer from schizophrenia or a schizophrenia-like illness.⁹ Schizophrenia is more common in deprived inner-city areas.

Drug treatment forms the mainstay of effective management of people with schizophrenia, but should be used alongside a range of psychosocial interventions. One quarter of those who have experienced an episode of schizophrenia recover and the illness does not recur. Another 25% experience an unremitting illness. The remaining 50% have a recurrent illness but with long episodes of considerable recovery from the positive symptoms.¹⁰

Many with recurrent illness have enduring problems from schizophrenia such as persistent psychotic symptoms, but, for most, the problems consist of negative symptoms such as loss of enthusiasm and emotional responsiveness, apathy and social withdrawal.¹¹ These negative symptoms, though intrinsic to schizophrenia, are compounded by the adverse effects of drugs, living in impoverished circumstances and by the social stigma associated with mental illness.

Recovery from episodes of schizophrenia is often complicated by episodes of depression, substance abuse and anxiety. People with schizophrenia have a shortened life expectancy¹² due to physical illness, accidents, and other causes of violent death, especially suicide.¹³

Mental disorders are also more prevalent in people with learning disabilities. In particular, rates of schizophrenia are three times higher than in the general population although there are few data about other types of mental illness.

Impact

In national and personal terms, the impact of schizophrenia is very large (Box 2).

Direct: Hospitalisation Residential care Drugs Other public agencies Eg. criminal justice system Social security Capital eg. hospitals, residential homes, land value	Indirect: Employment effects Family costs Intangible costs: Carer quality of life Other societal costs
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Box 2 The impact of schizophrenia¹⁵

This relapsing illness often necessitates hospitalisation and some sort of long-term care – the bulk of the direct costs to society. In 1992, one in seven people with schizophrenia needed admission, accounting for half the total expenditure on schizophrenia care. Drug treatments currently represent a small proportion of the total outlay for this illness.

The personal cost of schizophrenia is often catastrophic. Sufferers, even before symptoms are overt, frequently find it impossible to achieve expected levels of functioning,¹⁴ and quickly encounter problems with employment and social stability. A family member with schizophrenia can also have a profound effect on the mental and physical health of their carers as well as on their own ability to maintain their every day lives.

1.2 Why audit schizophrenia?

The National Service Framework for Mental Health published in 1999 emphasised, among other things, the role of primary care in the support of people with mental health problems.

Whilst people with severe mental illness form a small proportion of those with mental health problems they do have, as outlined above, very high rates of psychological and physical morbidity. In a pooled analysis of twenty studies, mortality among people with schizophrenia was found to be more than one and a half times that of the general population; the risk of suicide nine times higher; and the risk of death from other violent incidents over twice as high. Although hospital services have an important role in the care of people with schizophrenia, primary and community care make an essential contribution.

The PCCAG had not ventured into mental health in a county wide audit previously. Most practices have also done relatively little audit in this area. This project provided an opportunity not only to review the care provided to a vulnerable group of patients, but also to think creatively about how co-ordination and joint-working with the specialist mental health services can be improved. We also hope it will pave the way for future work in other areas of mental health.

2 Audit Protocol

The development of the audit protocol was overseen by a multidisciplinary steering group drawn from the specialist mental health services, from primary care and from social services, under the chairmanship of Dr Rosie Dalton, a member of the Gloucestershire PCCAG. The group included someone with experience of living with, and also caring for, a family member with schizophrenia. The membership of the steering group is listed in section 10.

Through undertaking the audit we hoped to see:-

- Better assessment and identification of mental illness.
- Improved quality of life for patients.
- A decrease in the rate of relapse and in the adverse effects of treatments.
- Increased liaison between primary and secondary care leading to an enhanced service for people with schizophrenia.

The audit set out to review the management in primary care of patients aged between 18 and 65 years with schizophrenia. Patients were eligible for inclusion if they had a clearly documented diagnosis of schizophrenia or, where there was uncertainty about the diagnosis, if they were receiving treatment for a schizophrenic-like illness.

We included patients of working age in the audit, excluding those over the age of 65 years. Multiple pathology often complicates management in older people.

This was to be an audit based in primary care. It did not cover the nature of the health and social care being offered by the community mental health team, or assertive outreach, or work with patients' families. Recognising that patients with schizophrenia experience higher overall morbidity and mortality than the rest of the population, we included a number of criteria on physical health.

We are indebted to the Clinical Governance Research and Development Unit at Leicester University for permission to use their audit protocol as a basis for the development of our own. A draft protocol was piloted in several practices. The final audit concentrated on the following areas:

- Frequency of clinical review
- Assessment of mental state and physical health
- Anti-psychotic medication

We encouraged practices to set their own target standards.

The audit protocol included references to the research evidence on which the criteria were based. This report on the findings of the audit has not made extensive references to the literature and readers wanting more information are encouraged to consult the audit protocol, the NSF for mental health, Effective Health Care Bulletins on "Drug treatments for schizophrenia" and "Psychosocial interventions for schizophrenia", the Cochrane library or other sources.

Practices received the audit protocol in October 2000 together with a letter inviting them to participate signed jointly by the Gloucestershire PCCAG and their PCG Clinical Governance Lead. Each practice was identified by their Primary Care Clinical Audit Group (PCCAG) code number and was offered financial assistance to cover the cost of data collection. Practices were invited to send a representative to a briefing session and were encouraged to contact the PCCAG should any problem arise during the data collection process.

3 Participation

Number of participating practices : 82 (96% of all practices in Gloucestershire)

Although all practices had indicated their intention to participate, two did not manage to complete their data collection by the beginning of May 2001. One further practice had no patients with schizophrenia in the relevant age group.

Data was abstracted by the participating practices between December 2000 and April 2001.

4 Parallel work

4.1 GP Survey

As part of this project, GPs were asked to complete a questionnaire on their approach to the management of schizophrenia. 318 GPs (84% of GP principals in Gloucestershire) responded. Some registrars, assistants and long-term locums also responded.

The questionnaire covered the following areas: -

- Relationships with community mental health teams
- Provision of information for patients with schizophrenia and their carers
- Degree of involvement in Care Programme Approach (CPA)
- Support from voluntary and self-help agencies
- Crisis management
- Issues of confidence and knowledge
- Knowledge of the Mental Health Act
- Areas for development

Some of the findings have been incorporated into this main report. The remaining results will be found in Section C.

4.2 Gloucester Caseload Project

The Gloucester Caseload Project was conceived in 1999 by a group of local mental health professionals who were interested in learning more about the needs of the severely mentally ill in the Gloucester locality. The work was led by Dr Rob MacPherson. The aim was to establish a greater understanding, at an individual and locality level, of the needs of the severely mentally ill in Gloucester, and to facilitate more effective planning to meet those needs. Specifically the project had three broad aims:

- To carry out an epidemiological survey of levels of morbidity in severe mental illness in the Gloucester locality.
- For patients in contact with specialist mental health services:-
 - to collect information on demographics, illness type and services currently being used.
 - to assess “quality of life”, or “need”, using patient and keyworker ratings.
- To set up a longitudinal severe mental illness case register.

The first phase of the work has been completed and a report on the findings was published in January 2001. Readers who would like more information on this work should contact Dr MacPherson, consultant psychiatrist, Severn NHS Trust, Wotton Lawn, Gloucester, GL1 3PX.

4.3 Pathways to care

Long duration of psychosis prior to treatment with antipsychotic medication has consistently been shown to be related to poor long-term outcome. Giving neuroleptic treatment early improves outcome.

Dr Eric Davis, a clinical psychologist working with East Gloucestershire NHS Trust, is looking to develop an early intervention service in the county. With the East Gloucestershire's Clinical Audit Department, he is documenting pathways to care and length of untreated psychosis in people with a recent first episode of psychotic illness.

5 Identification of patients included in the audit

Patients could be identified via a number of routes.

All but eighteen practices had an existing **disease register**. These were not always complete or up to date. Practices in Gloucester who had been involved with the Caseload Project (see section 4.2) had already created a register of patients with severe mental illness. Patients not currently taking antipsychotic medication, or who were receiving their medication from their community mental health team, were not always included on such a register.

Practices were also able to identify patients for inclusion in the audit via a search on **antipsychotic medication** on their repeat prescribing database. We encouraged practices to include patients who had received such medication at any point in the previous five years. The resulting list needed to be screened for patients with psychotic illnesses other than schizophrenia.

Personal recollection by GPs and practice staff also played a part in the identification of patients for inclusion.

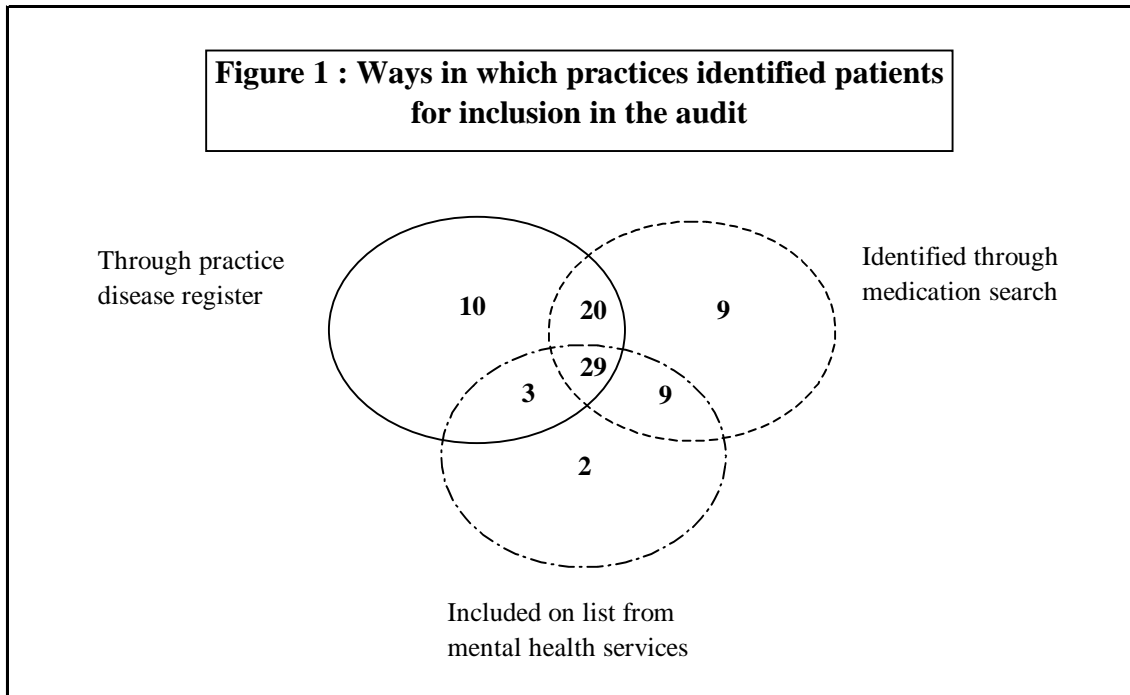
Finally, the **mental health services** were able to supply practices with names of patients known to them. Over half the practices which took part in the audit indicated they had approached their local source for such a list. 62 patients (6% of the total) would have been omitted from the audit without this information.

Most practices used a combination of the methods outlined above to arrive at a list of patients who fulfilled the criteria for inclusion. Fig 1 illustrates the combination of methods used by the 84 participating practices.

Practices were encouraged to make an appropriate Read code entry for each patient identified. A Read code formulary for the major mental health disorders had been agreed by the Primary Care Data Quality Project and distributed with the audit protocol and with the invitation to participate in the audit.

We recognised at the outset of this project that a clear diagnosis would not be evident for every patient with psychotic symptoms. Diagnosis is not straightforward, and can take a time to establish. Inadequate communication between psychiatrist and GP can also lead to uncertainty over diagnosis. GPs did raise queries over the inclusion of specific patients with us. For instance, was a diagnosis of schizophrenia relevant for patients who had had a single schizophrenic episode twenty or thirty years ago and who had been well since? We reminded them of the guidance on inclusion in the audit

protocol, but also suggested that they consider the appropriateness of the audit criteria to the management of the patient in question.



6 Results

Introduction

The audit reports on documented care. Since documentation may be incomplete, the results may underestimate the care provided. Many of the patients in this audit receive care and support from a number of health care professionals and agencies. Without good communication and liaison, the GP may be unaware of, for example, changes in medication, or patients who are no longer in touch with the community mental health team.

The audit has produced a wealth of information and a rich database. It is important that, in the analysis and presentation of results, the main findings are not obscured. In most of the figures the results have been expressed only as percentages. Denominators have not been quoted; these vary between the different criteria adopted for the audit as patients with information missing on particular criterion are excluded from the percentage calculation. Readers may find it helpful to refer back to Table 1 when reading the results and interpreting the information from the graphs which compare performance between PCGs.

Readers who would like the raw figures, or who would like any further details or analysis, should contact the Gloucestershire PCCAG Office. Although every effort has been made to eliminate error and maintain accuracy, the need to work within tight time-scales may have increased the likelihood that some errors may have crept in. Again, readers are encouraged to contact the PCCAG Office with any queries.

No sophisticated statistical analyses have been attempted, although tests of statistical significance have been employed. χ^2 tests have been used most frequently, and were the chosen method where not explicitly stated otherwise. Such tests seek to establish the strength of the evidence against the hypothesis that the variables under consideration are unrelated.

The results are reported in the following sections:

- 6.1 Prevalence of schizophrenia in Gloucestershire
- 6.2 Characteristics of patients included in the audit
- 6.3 Contact with health services
- 6.4 Review of physical health
- 6.5 Review of mental health
- 6.6 Antipsychotic medication
- 6.7 Identified need for action

In each section, overall county performance is reported. Subsequent paragraphs explore differences in performance between PCGs and examine inter-practice variation.

Reference is made to the histograms in the “inter-practice results” section of the folder. These graphs are denoted by the prefix “Fig. GP”.

6.1 Prevalence of schizophrenia in Gloucestershire

How many patients were included in the audit? What is the prevalence of schizophrenia in the county?

In all, 1133 patients were included. This gives an overall prevalence figure of **0.34%** for schizophrenia in people aged between 18 and 65 years.

How does this figure compare with those from other sources? Is schizophrenia more or less prevalent in Gloucestershire than elsewhere?

The number of people with schizophrenia, or a schizophrenia-like illness in the UK, has been estimated as 250,000⁹, giving a prevalence rate of around 0.4%. Our figure of 0.34% for Gloucestershire residents aged 18 to 65 years is slightly lower than this.

The only other local data relates to hospital inpatient episodes. Comparative data on hospital admissions from the Public Health Common Data Set suggests that hospital episode rates for schizophrenia in men in Gloucestershire in 1999 were lower than national rates, and those for women higher. These differences did not reach the five per cent level of statistical significance.

How many patients from each PCG were included? How much did prevalence vary across the county?

The number of patients included by PCG is reported in Table 1 below, whilst Figure 2 illustrates the differences in prevalence between PCGs.

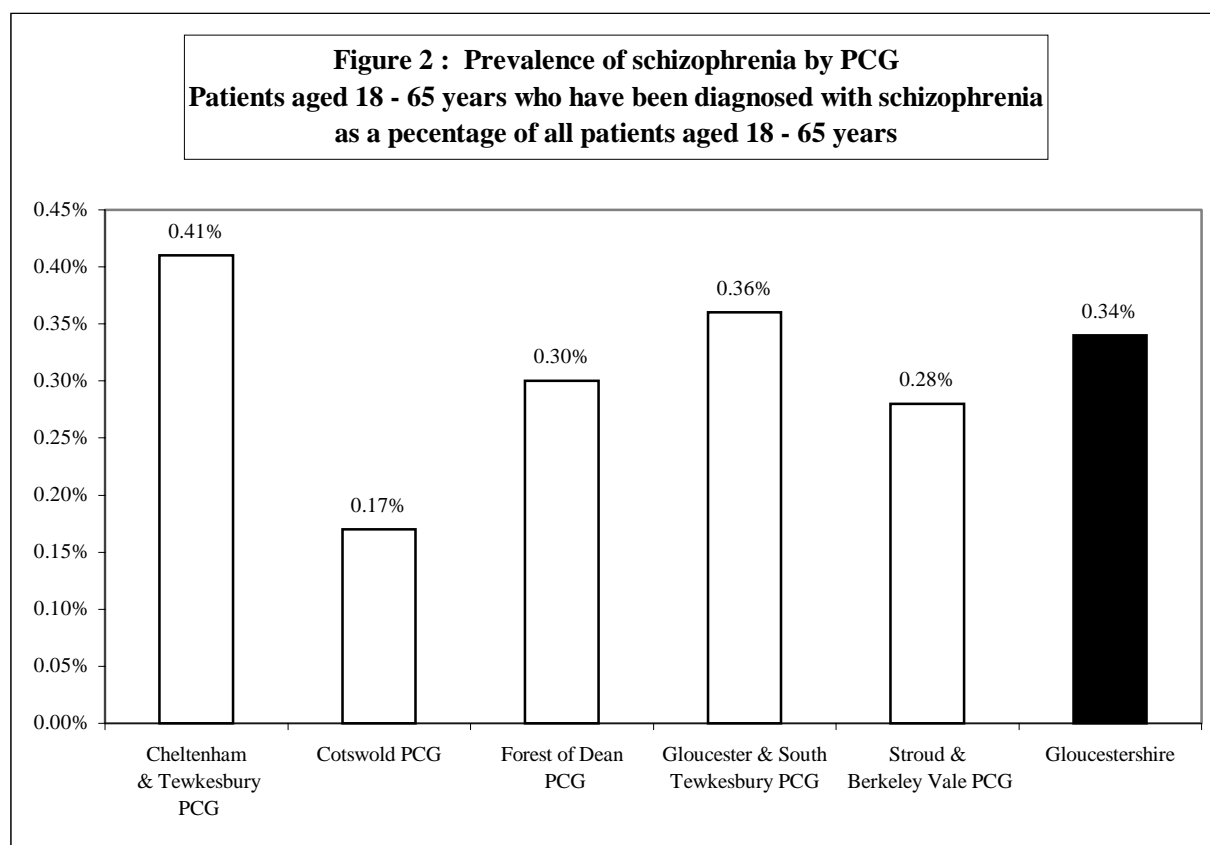
PCG	Cheltenham & Tewkesbury	Cotswold	Forest of Dean	Gloucester & South Tewkesbury	Stroud & Berkeley Vale	Total
No. of patients in audit	412	77	133	324	187	1133

Table 1 : Numbers included in the audit by PCG

Prevalence varies considerably across the county. The Primary Care Groups which encompass the rural areas of the county care for significantly fewer patients with schizophrenia. Prevalence is lowest in the Cotswolds. The highest prevalence figures were recorded for Cheltenham and Tewkesbury. The differences are highly statistically significant. ($P < 0.01\%$).

Two publications, the Annual Report of the Director of Public Health 2000 on “Mental Health in Gloucestershire”, and Gloucestershire Health Authority’s report on the Public Health Common Data Set 1999, have already drawn attention to the high hospital episode rates for schizophrenia in Cheltenham and Tewkesbury in comparison with other areas in the county.

The Gloucester Caseload Project identified 474 patients with a lifetime diagnosis of functional psychosis in people aged 18 to 65 years in Gloucester and South Tewkesbury; schizophrenia and related disorders accounted for 63% of this population, or just under 300. The audit identified a slightly higher number of patients with a diagnosis of schizophrenia (324) within the same area.



How much did prevalence vary between practices?

A great deal. The number of patients included in the audit ranged from one, in several small rural practices, to 53, in a large urban practice.

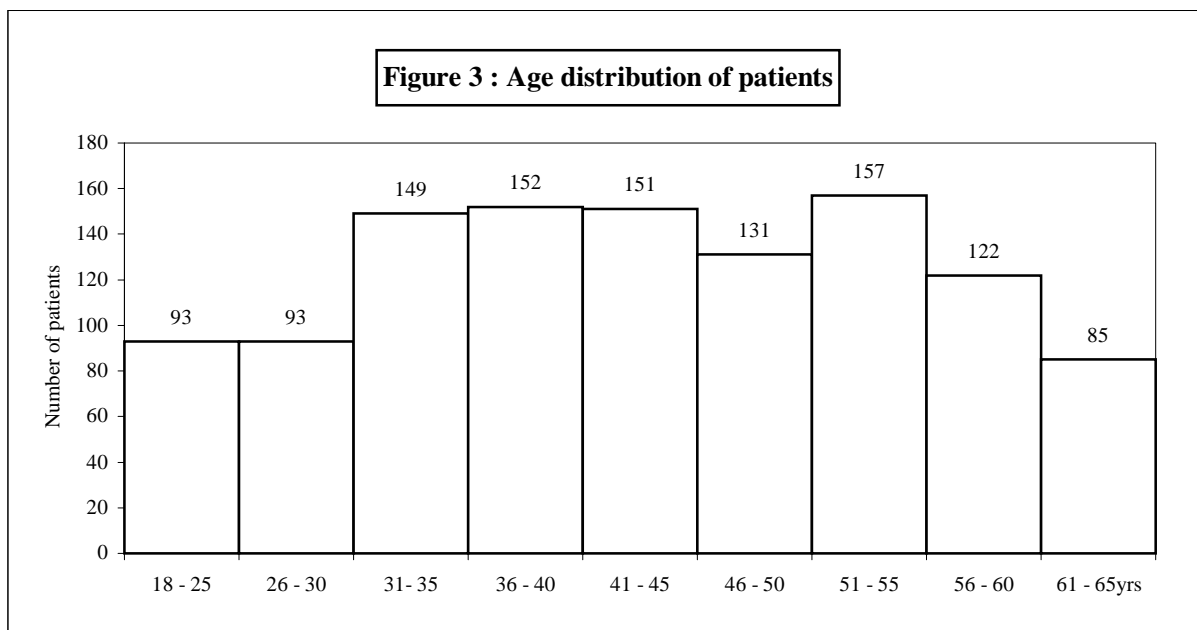
Fig GP1 shows that several practices have particularly high numbers. This may reflect, at least in part, the interest and expertise of one of the partners, the location of the practice close to an urban centre, or the inclusion of a number of residential homes on the practice list.

Performance against the audit criteria in such practices will have a disproportionate effect on the results for their PCG. In the Forest of Dean, for example, one practice looks after more than a third (38%) of the PCG's 133 identified patients with schizophrenia.

6.2 Characteristics of patients included in the audit

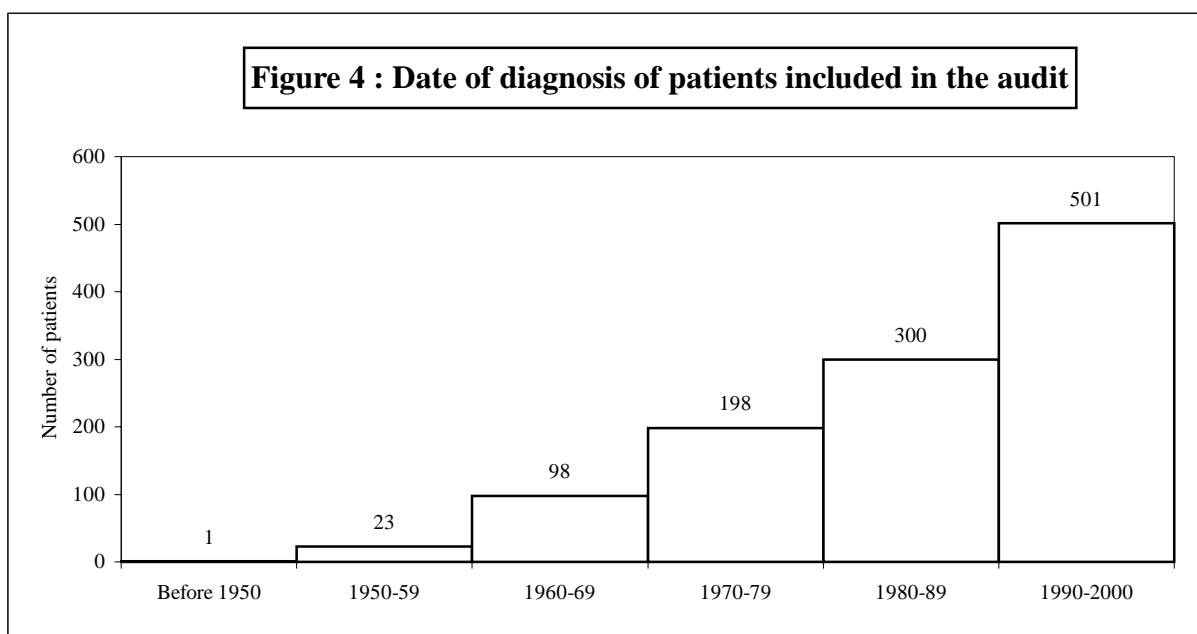
6.2.1 Age

Patients were included in this audit if they were of working age, that is they were aged between 18 and 65 years at the time of data collection. The average age was 43, with a standard deviation of 12 years. Age distribution was fairly uniform, although there were fewer patients under 30 and over 60 years. (Figure 3). Just over half (58%) were male.



6.2.2 Time since diagnosis

Just under half (45%) of those included in the audit had been diagnosed with schizophrenia since 1990. Less than three out of ten (29%) had lived with a diagnosis of schizophrenia for more than thirty years. (Figure 4).



Patients whose diagnosis was made several decades ago, and who have not been prescribed antipsychotic medication in recent years, are the group who are most likely to have been omitted from the audit.

6.2.3 Patients with learning disabilities

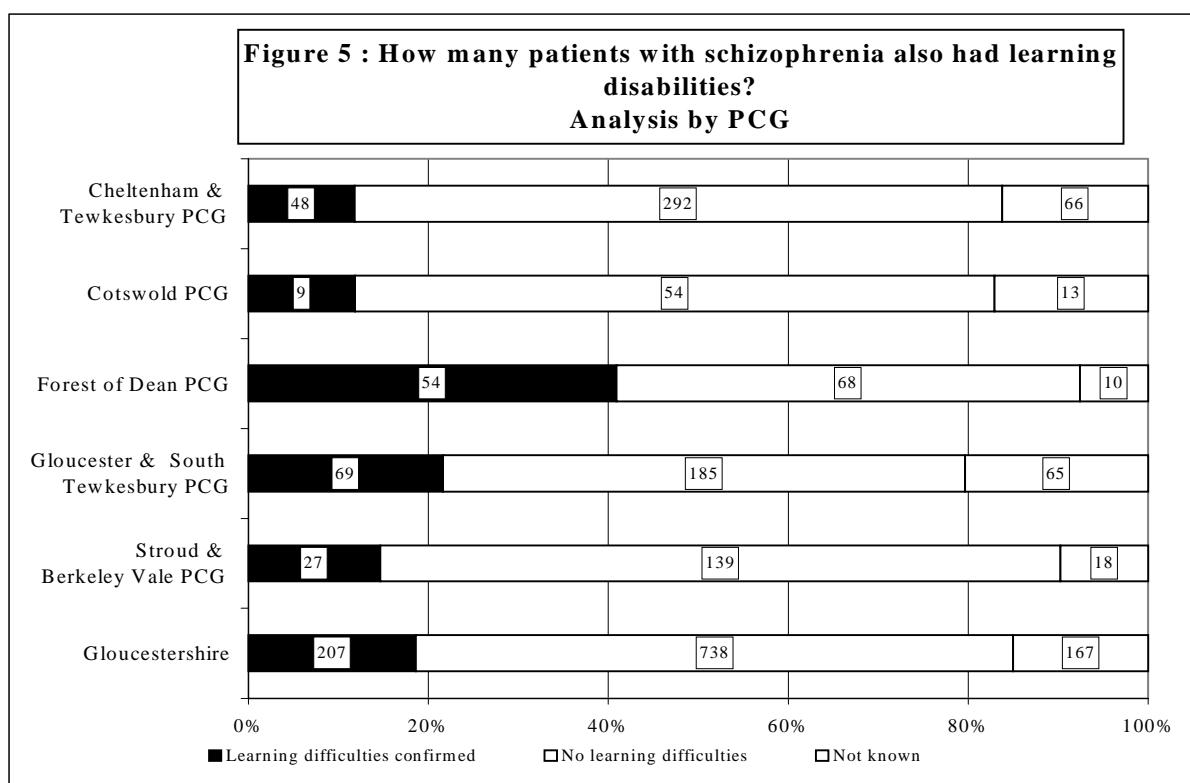
People with learning difficulties are more likely to suffer from schizophrenia than the general population. Such a group pose a particular challenge to the health services. Provision of mental health services for these patients has sometimes been patchy and underfunded. A recent editorial in the BMJ called for a separate national service framework for mental health services for people with learning disabilities to ensure better and more equitable provision.

There are no accurate measures of the numbers of people with learning disability in Gloucestershire. Prevalence of moderate and severe learning disability (those whose needs are such that they will come into contact with health and social services) is usually quoted as 3-4 per 1,000.

How many people with schizophrenia in the audit were known to have a learning disability?

If we remove from the calculation those for whom information on learning disability is missing, (17%), we can see that 207/945 (22%) had a known learning disability (Figure 5). This proportion reached four out of ten in the Forest of Dean.

In interpreting the results of the audit in the following sections of the report, it will be important to



bear in mind that, overall, one in five patients were known to have a dual diagnosis. In a few practices, the majority of patients with schizophrenia also had learning disabilities (Fig GP3). The proportion reached 80% in one Forest of Dean practice.

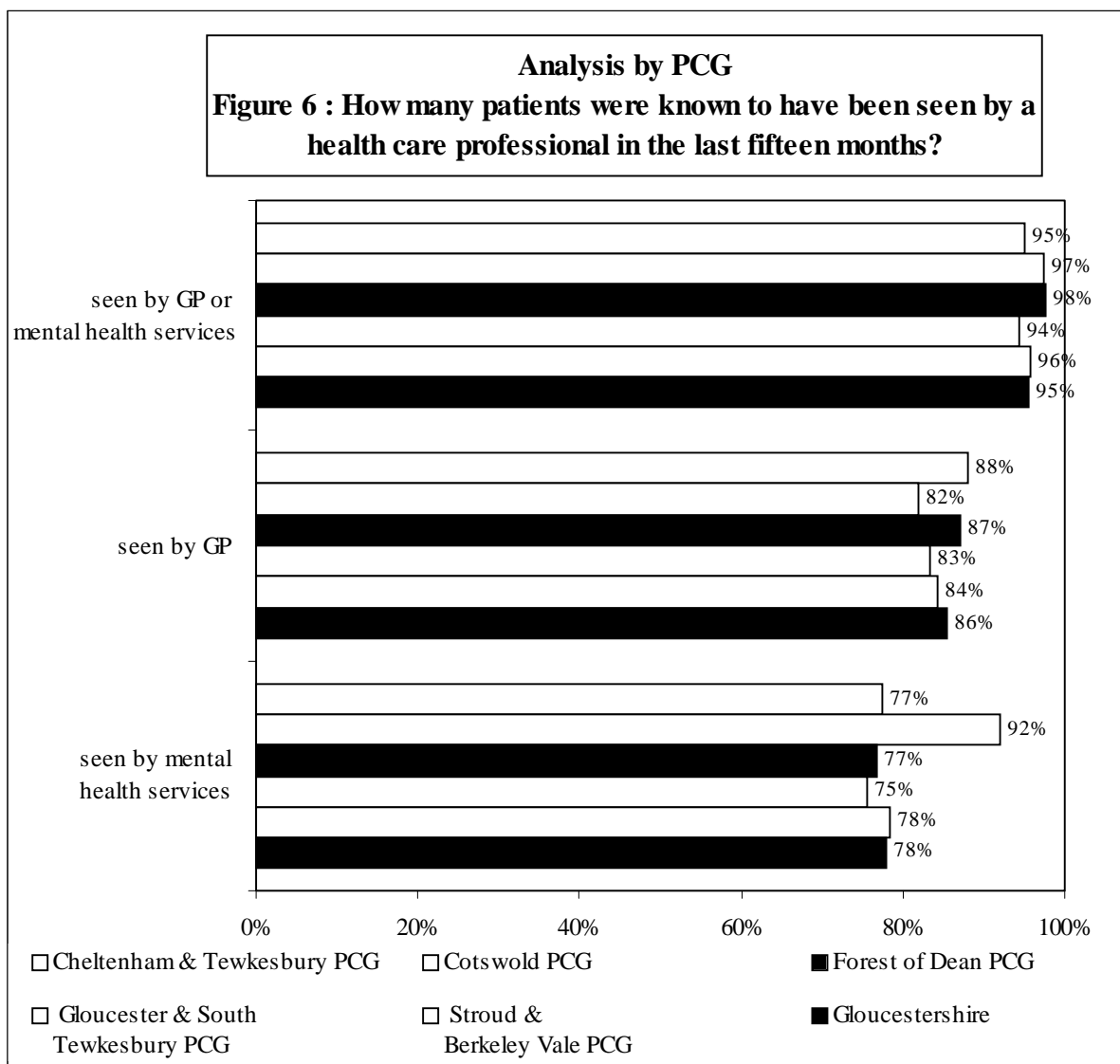
6.3 Contact with health services

People with schizophrenia have greater needs for comprehensive health care than the general population. Support from community mental health teams and from primary care can enable patients to live independent, stable lives. The GP has an important role, particularly for those who lose contact with the secondary mental health services. The flexibility and non-stigmatising nature of GP consultations is particularly suited to maintaining long-term contact.

Audit criterion : The records show that patients with a diagnosis of schizophrenia, or who are being treated for a schizophrenic-like illness, have been seen by a GP or by a psychiatrist or by a CPN within the last 15 months.

How many patients had had some contact with health care professionals in the previous 15 months?

Almost all. 95% had been seen by their GP or by someone from the specialist mental health services in that time. 86% had seen their GP. (Figure 6.) Between practices with at least twelve patients with schizophrenia, the percentage who had seen their GP in the previous 15 months varied from 74% to 100%. (Fig GP4).



Three out of four patients (78%) were known to have been in contact with a CPN or psychiatrist. There was much greater inter-practice variation reported here, with the percentage ranging from 48% to 100%. (Fig GP5). The picture varied little throughout the county with one exception. Patients in the Cotswolds had more frequent contact with the mental health services than in other areas, with more than nine out of ten with documented contact in the previous 15 months.

There is always the risk of duplication of effort if GPs are not aware of mental health services' involvement in their patients' care. Ideally, general practice records should indicate whether patients are in current contact. The Care Programme Approach requires GPs to be informed of their patients' involvement with psychiatric and social services, and to receive copies of care plans.

Maintenance of contact between GPs and Community Mental Health Teams was raised in the survey which was run in parallel with the audit. The survey demonstrated that the CPN was the prime contact for two out of three GPs. Frequency of contact varied. Some were in touch regularly and frequently. For others contact was relatively infrequent (one in three reported being in contact quarterly or less frequently). A number indicated that communication and support had been better in the past. Contact was most often maintained by telephone. For further details on the survey see section C of the results.

We know that 86% of all patients had seen their GP in the last 15 months. But do we know more about the timing of the most recent contact with the primary health care team?

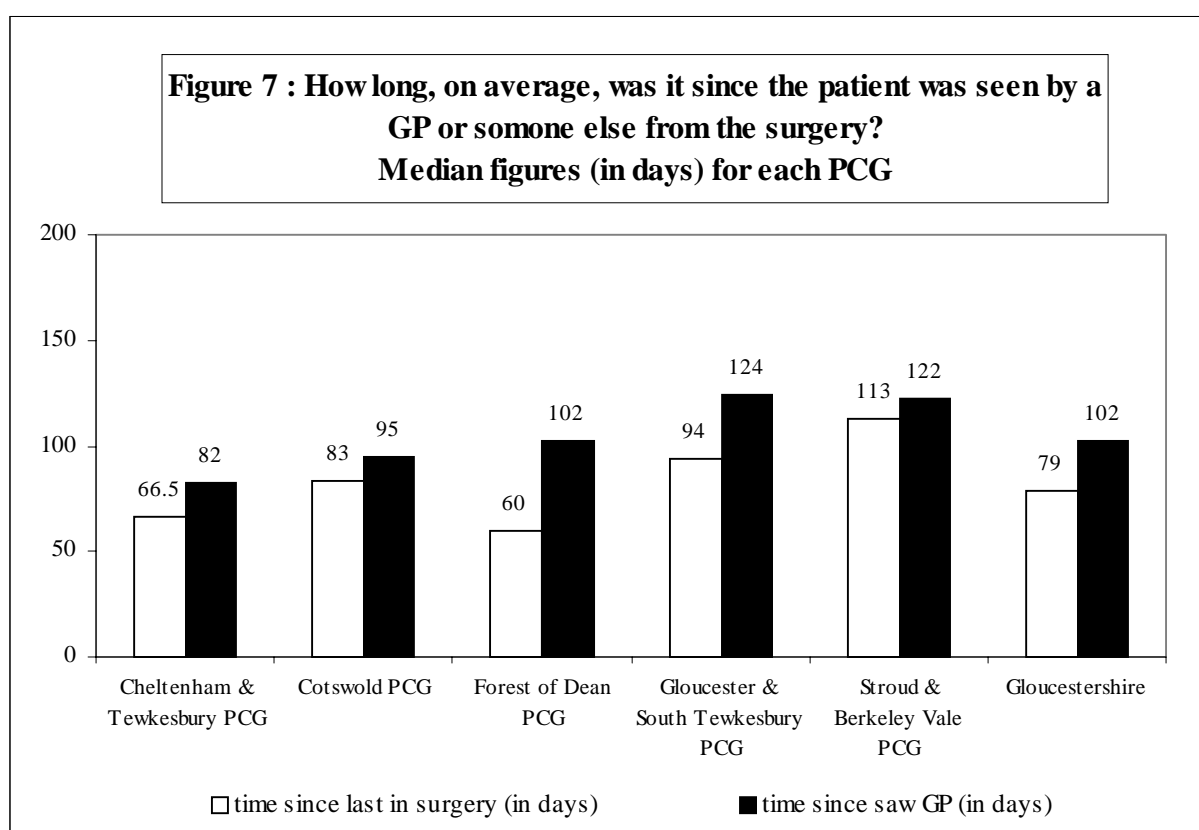
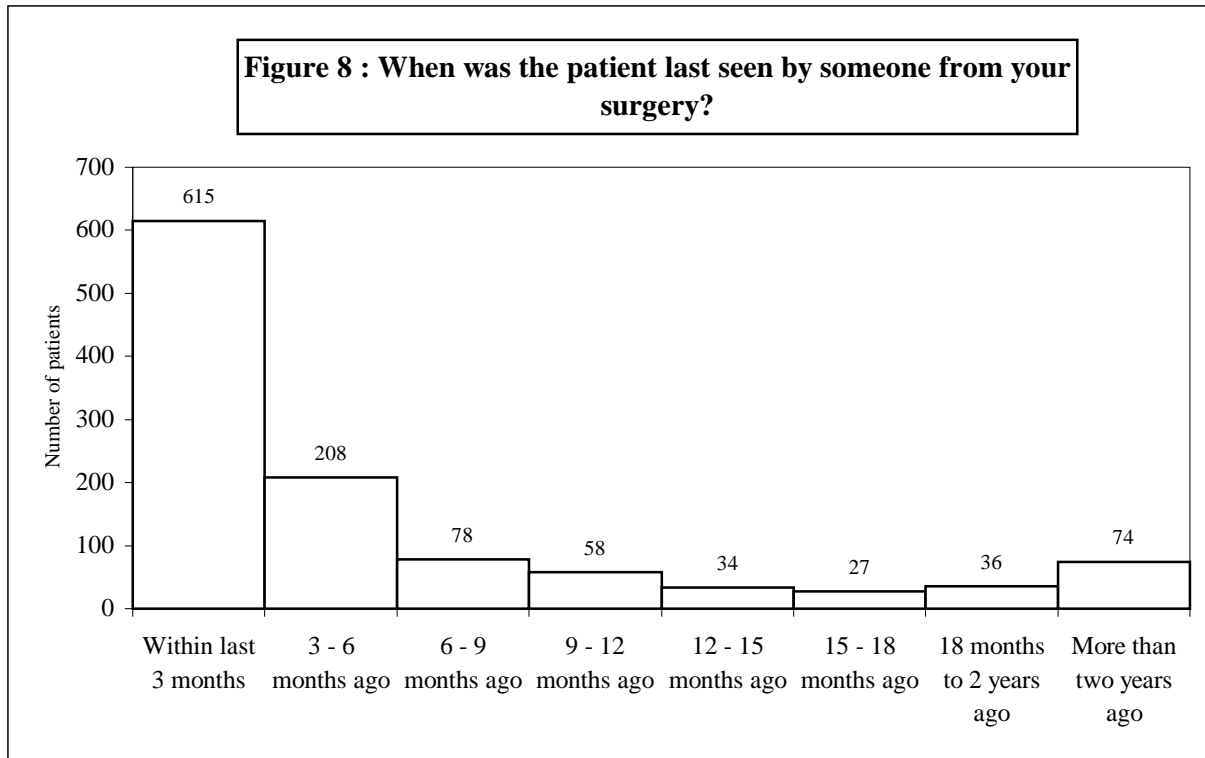


Figure 7 tells us that half had seen their GP in the last 100 days (102 days to be exact) and over half had had seen either a nurse or GP in the previous three months.

Figure 8 displays this information more fully and shows us that almost three out of four patients (73%) had been seen by someone in the surgery in the previous six months.



The length of time since last contact with the health services varied across the county.

Median figures for each PCG appear in Figure 7 and differ significantly for both variables^a. The non-parametric Kruskal-Wallis test statistic for differences between median values is significant at the 2% level (time since patient saw a GP), and at the 0.3% level (time since patient was seen in surgery).

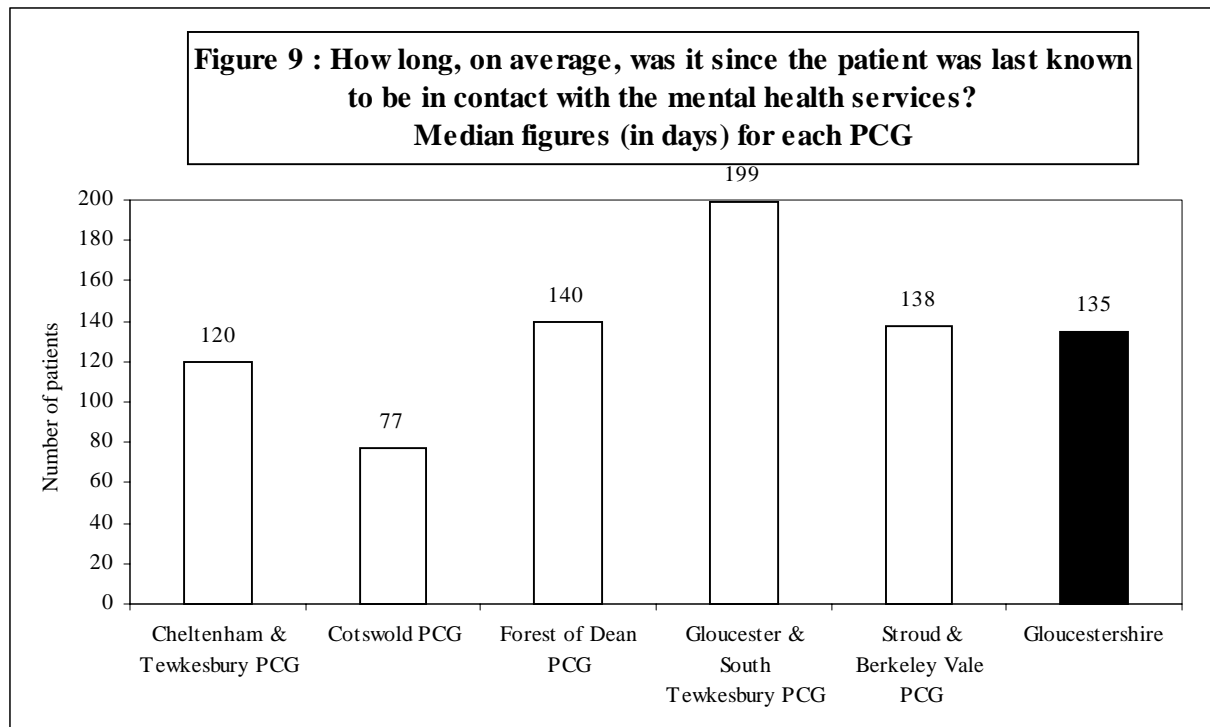
Patients in Stroud and Berkeley Vale have been in contact with their surgery the least recently. Patients in Cheltenham and Tewkesbury have had the most recent recorded contact with their GP, although patients in the Forest of Dean have more recent contact with either a nurse or doctor.

We know from Figure 6 that, overall, 78% of patients were known to have had contact with the mental health services in the previous 15 months and that patients in the Cotswolds were seen the most frequently.

Figure 9 overleaf reinforces this finding. It shows us that over half the patients in the Cotswolds had had contact with the mental health services in the previous three months. Patients in Gloucester and South Tewkesbury had the least recent contact, with less than half having any documented contact in the previous six months. These differences between PCGs are highly statistically significant.

Not all patients appreciate contact with health services. The audit data collection forms included a space for free text. Several GPs wrote of their patient’s refusal to attend the surgery despite invitations and encouragement. “Avoids doctors like the plague” was one such comment. When looking at reported levels of performance against the audit criteria the reluctance of some patients to engage with those seeking to help them needs to be borne in mind.

^a The median is a better summary statistic than the mean in this situation, where a few very large observations can “inflate” the mean and cause it to be an inferior measure of central tendency.



6.4 Review of physical health

Standardised mortality rates are twice as high for patients with schizophrenia as in the population generally, with accidents, suicides and cardiovascular and respiratory disorders being the principal causes of the higher mortality rate¹⁶. It is not uncommon for general practitioners to overlook the identification of risk factors for these conditions in patients with schizophrenia^{17,18}.

A number of criteria concerning physical health and lifestyle were included in the audit, with the aim of ensuring that this aspect of health was not overlooked. The following areas were included:-

- blood pressure measurement and control
- smoking, and advice on smoking cessation
- alcohol and substance use and misuse
- weight and nutritional advice
- participation in national screening programmes

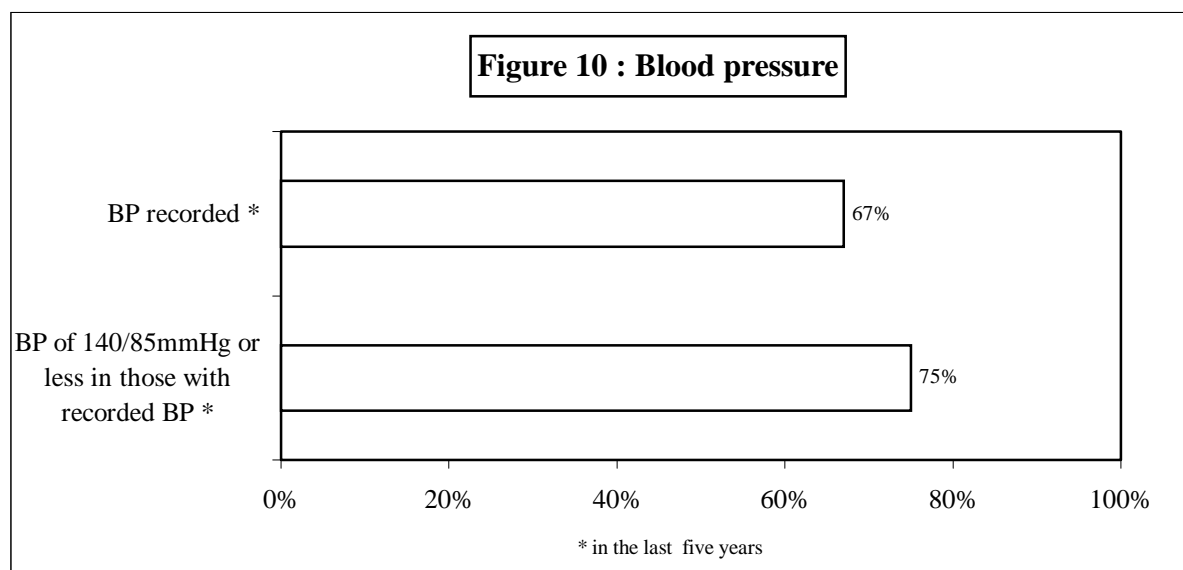
6.4.1 Measurement and control of blood pressure

Hypertension is common and is a major risk factor for stroke and ischaemic heart disease. The British Hypertension Society (BHS) guidelines recommend that all adults should have their blood pressure measured routinely at least every five years until the age of 80 years.

There is still some debate over optimal blood pressure for reduction of major cardiovascular events, with the BHS guidelines recommending 140/85 mmHg, although admitting that even with best practice, these targets will not be achieved in all hypertensive patients. The BHS state that the minimum acceptable level of control recommended is 150/90 mmHg.

Audit criterion : The records show that in the last 5 years blood pressure has been checked and is 140/85 mmHg or below.

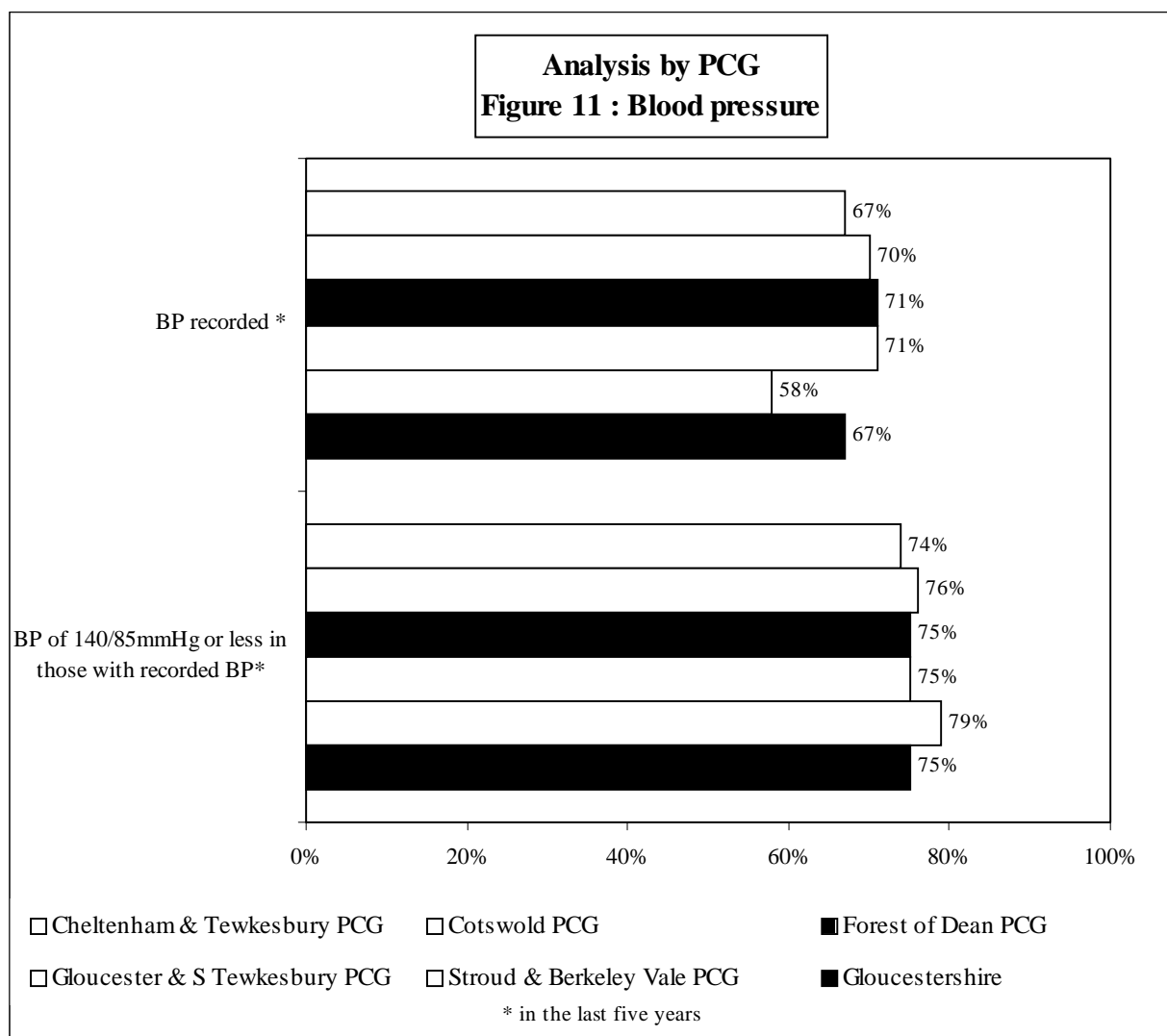
Two out of three patients (67%) had had their blood pressure measured and recorded in the previous five years (Figure 10). Practices in Stroud & Berkeley Vale PCG were the least likely to take and record such measurements. (Figure 11). Based on a χ^2 test of association, differences between PCGs were shown to be significant at the 5% level.



There were marked differences between practices in the recording of blood pressure. In one practice only one in five patients (20%) had a recorded reading in the previous five years, whilst a couple of practices had measurements on nine out of ten patients (Fig GP6).

How well was blood pressure controlled?

Three out of four patients (75%) with a blood pressure reading in the previous five years achieved the BHS recommended level. Differences in control of blood pressure between PCGs were small and not statistically significant. (Figure 11).



Differences were more evident at practice level. In three practices, less than half of those with a record of blood pressure measurement in the previous five years had achieved the BHS recommended level. In another three practices, all patients had blood pressures below 140/85 mmHg. (Fig GP7).

6.4.2 Smoking

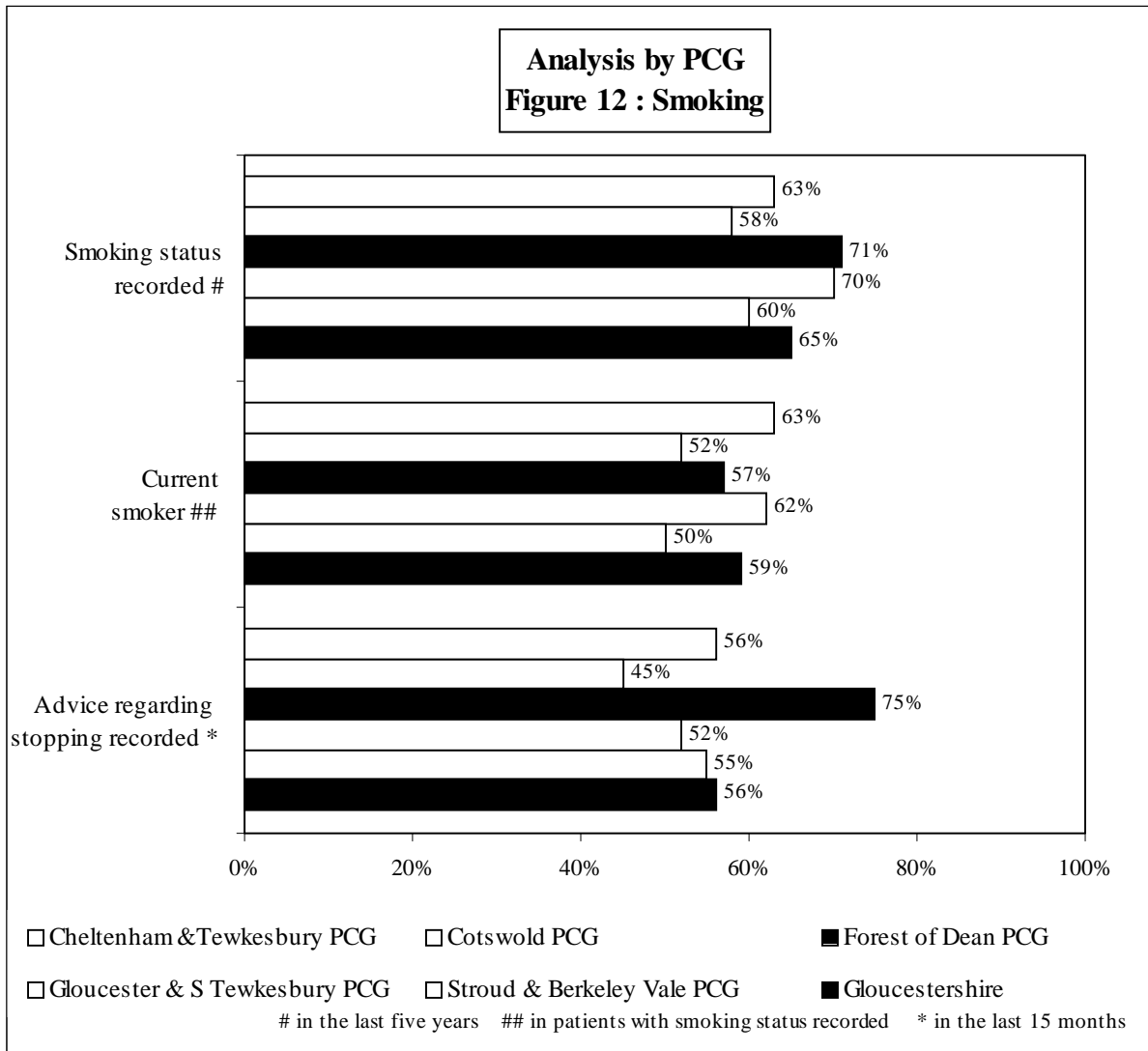
People with schizophrenia are more likely than the general population to abuse alcohol, drugs and tobacco.

Smoking is implicated as a strong risk factor in respiratory diseases. Stopping smoking brings a reduction in risk, although it is likely to remain higher than that of non-smokers for a number of years, particularly in those with a history of heavy smoking. Smoking cessation programmes have been set up across the county to provide support and treatment to patients who have decided they want to quit.

Audit criterion : The records show that smoking status has been recorded within the last 5 years.

Did practices have recent information on the smoking habits of their patients?

From Figure 12 we can see that two out of three patients (65%) with a diagnosis of schizophrenia had been asked about their smoking habits in the previous five years and that this had been recorded. Between practices this percentage varied between 9% and 100% (Fig GP8).



Practices in the Forest of Dean and Gloucester and South Tewkesbury were the most likely to record this information on their patients although this comparison falls just short of the 5% level of significance.

How many patients were smokers?

Six out of ten patients (59%) were found to be smokers. This is twice the figure of 28% quoted in the Health Survey for England 1996, and more than twice the figure of 24% from the 2000 Health & Lifestyle Survey in Gloucestershire.

Although, the rural areas of the county report the lowest smoking levels, differences between PCGs in the percentage of smokers were not statistically significant. Between practices with at least twelve patients in the audit with smoking status recorded the percentage of smokers varied from 9% to 82% (Fig. GP9).

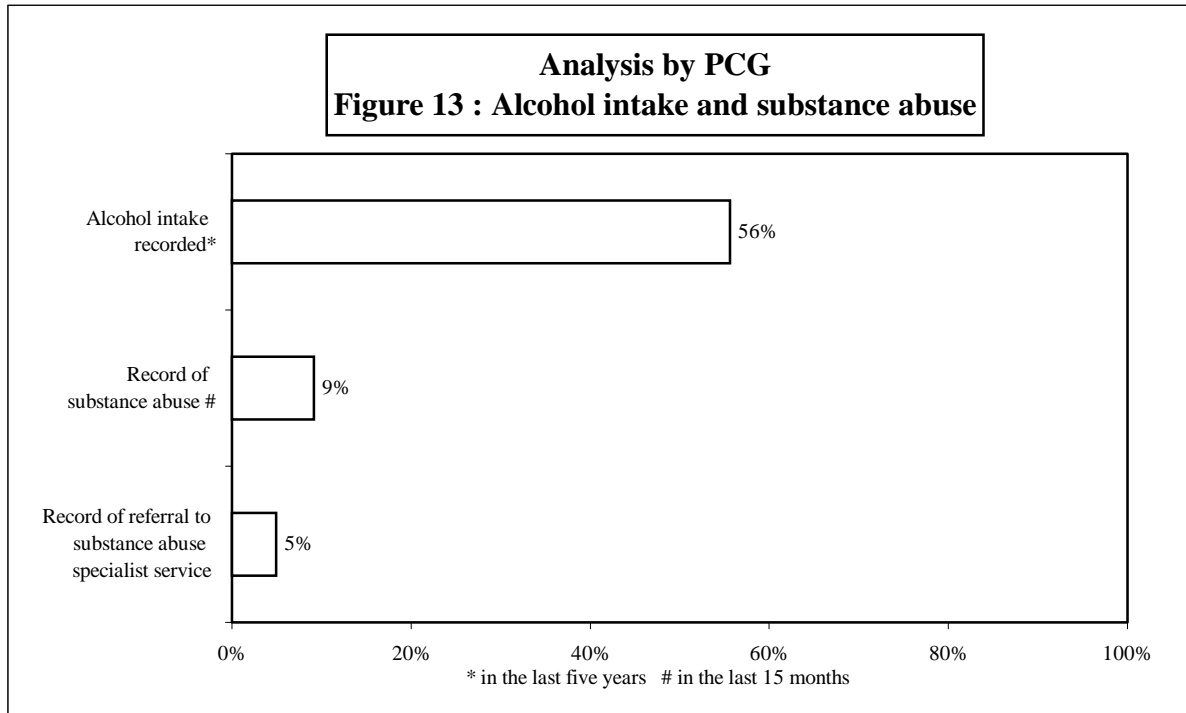
Audit criterion : Patients who smoke should have been advised to stop in the past 15 months and this should be recorded in the notes.

How many smokers had received documented advice about quitting in the previous 15 months?

Just over half (56%) of the patients who were known to smoke had received advice about stopping in the previous 15 months (Figure 12). The true proportion may be higher; some of the advice and support given may not be documented. Practices in the Forest of Dean were the best at ensuring that patients were encouraged to stop smoking, with three quarters (75%) receiving advice in the previous 15 months (Figure 12).

6.4.3 Role of alcohol and substance misuse

Problems with alcohol and drugs can exacerbate mental health problems and can also make diagnosis more difficult. The National Service Framework on Mental Health cites a 1998 Department of Health publication¹⁹ which suggests that around 30% of those seeking help for mental illness will have current substance misuse problems. Individuals who misuse alcohol or drugs are at a significantly increased risk of suicide.



Audit criterion : The records show that alcohol consumption has been recorded within the last 5 years.

Did practices have up to date information on alcohol consumption?

Information on alcohol intake had been recorded or updated in the last five years on just over one in two patients (56%). (Figure 13). We did not ask practices to quantify intake as we had doubts about the ability to standardise this information. It is also widely recognised, that in discussions with their GP or practice nurse, patients may tend to underestimate their consumption. Nor did we seek further information from practices on the numbers of heavy drinkers referred to outside agencies for specialist help.

Practices in the Forest of Dean seemed to be particularly proactive in recording information on alcohol consumption, having a record in the last five years for 69% of their patients with schizophrenia. Contrast this with the position in the Cotswolds where such a record was found for half (46%) of their patients in the audit. A χ^2_4 figure of 16.0 indicates the differences between PCGs are significant at the 1% level of significance (Figure 14).

Some practices had a record of alcohol consumption on almost all of their patients. In others such a record was the exception rather than the rule (Fig. GP10).

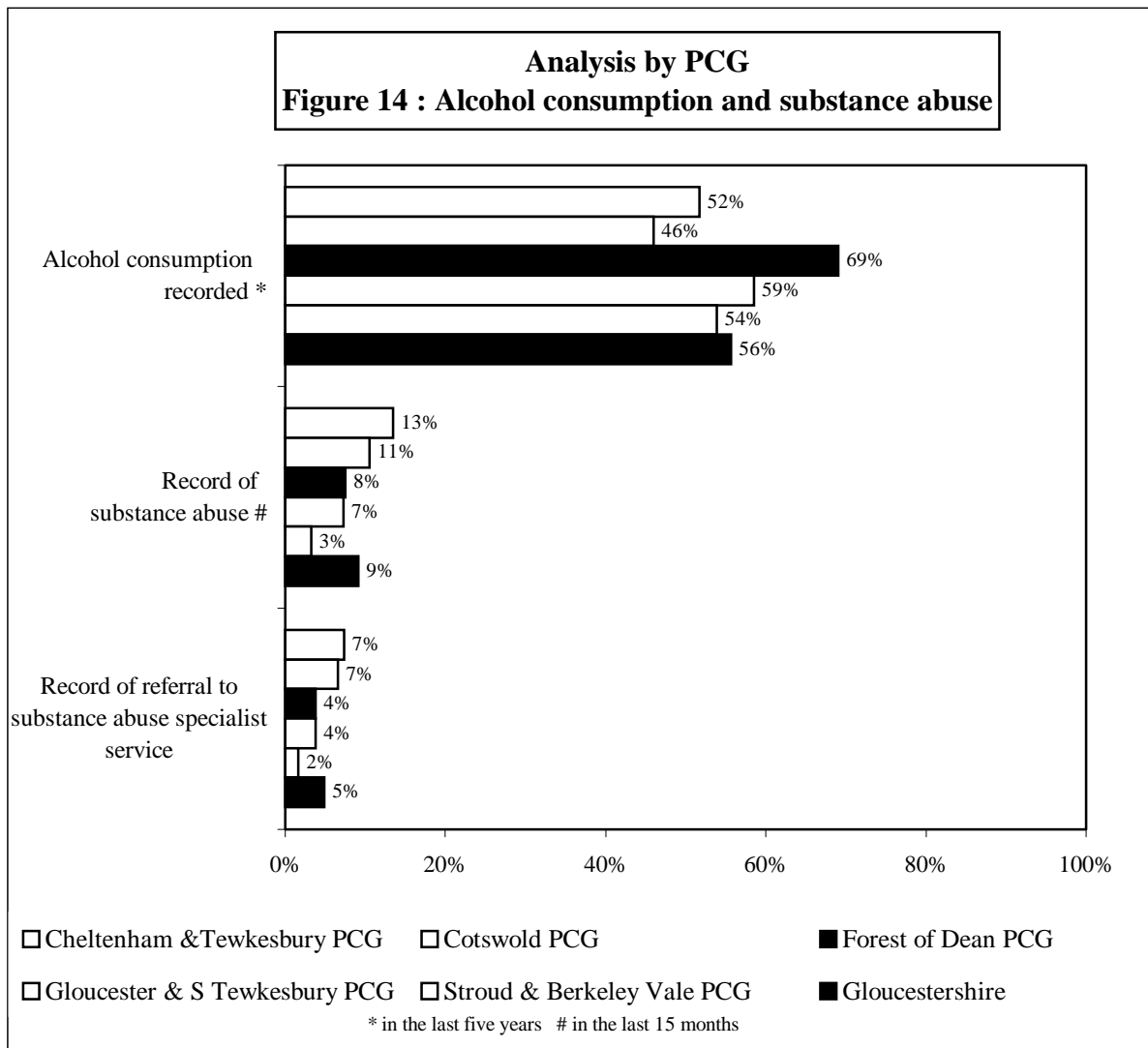
Substance abuse in patients with schizophrenia

Audit criterion : The records show that any substance abuse has been noted within the last 15 months and that abusers have been referred to specialist services.

One in eleven (9%) patients had admitted to substance abuse in the previous 15 months. This figure rose to one in seven (14%) in Cheltenham and Tewkesbury practices.

There were marked differences between PCGs in the percentage of patients with a recent record of substance abuse ($\chi^2_4 = 19.2$; $P < 0.1\%$). Reported substance abuse was at its lowest in Stroud and Berkeley Vale PCG.

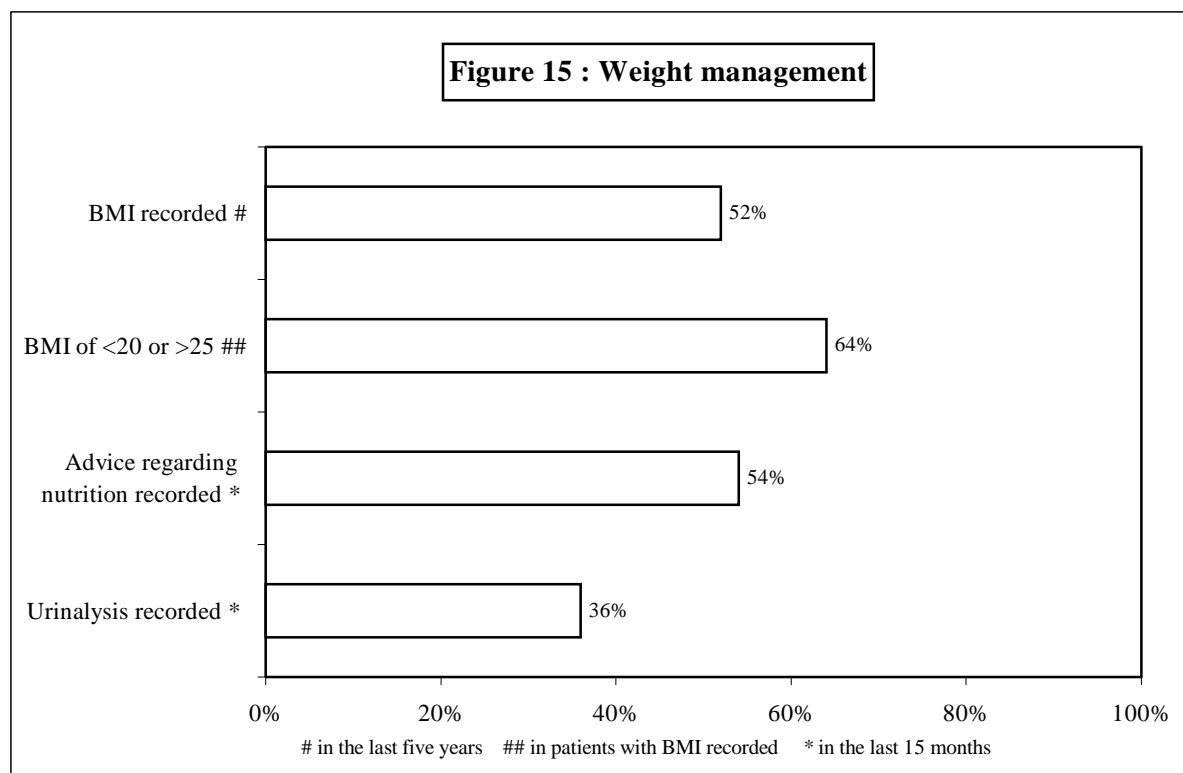
Approximately half those with a substance misuse problem had been referred to one of the specialist services. One in twenty (5%) of the county’s patients with schizophrenia had been referred for further help in the previous 15 months.



6.4.4 Weight management

Between 25-50% of patients on antipsychotics will experience weight gain. Weight gain & weight loss have potentially serious implications for health and are also factors contributing to poor compliance with medication. Patients who are overweight are known to have a higher risk of coronary heart disease, diabetes, hypertension, gallstones and degenerative joint disease.

Audit criterion : The records show that BMI has been measured in the last 5 years.



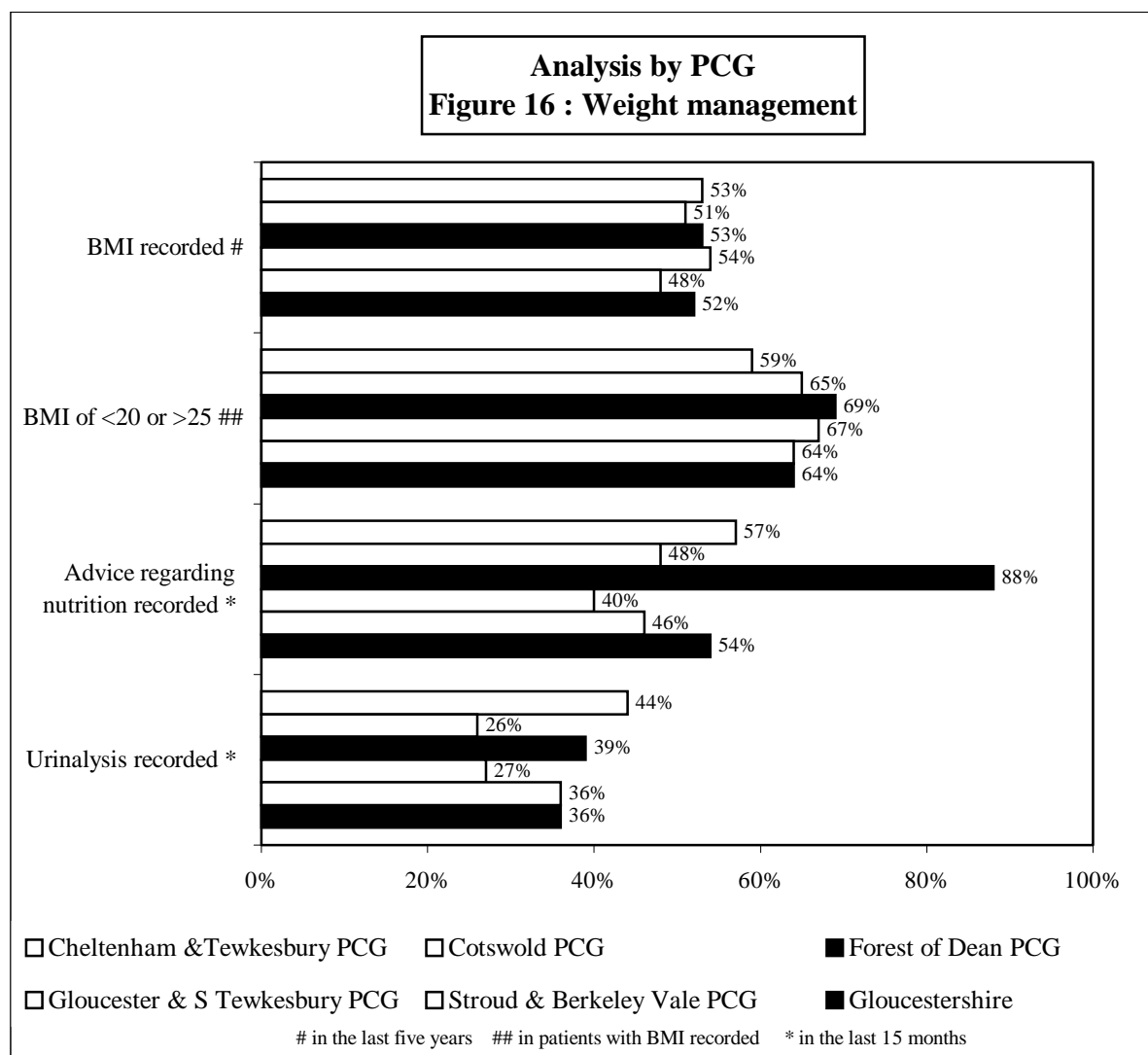
Did practices have a recent information on the body mass of their patients?

From Figure 15 we can see that one in two patients (52%) had a record of body mass index (BMI) measurement (or a record of height and weight) in the previous five years. There were no significant differences in the percentage of patients with a recorded BMI between PCGs (Figure 16). Recording of body mass varied widely between practices. In two or three, less than 10% of patients with schizophrenia had a record of BMI in the last five years; the “best” practices reported a figure of 80%. (Fig. GP11).

How many patients were underweight or overweight?

Almost two out of three patients (64%) had a BMI of less than 20 or more than 25. Seven out of eight of these patients were overweight. In a couple of practices this percentage was close to 90%. (Fig GP12).

There were significant differences in BMI between PCGs. The non parametric Kruskal Wallis test for differences between PCGs in extremes of body mass produces a χ^2 statistic of 12.5; a result significant at the 2% level. Patients in the Forest of Dean tend to have the highest BMI values; two thirds of those with a recorded BMI were overweight.



Audit criterion : Patients with a BMI outside the range 20 and 25 should have been given advice about nutrition and have had urinalysis within the last 15 months.

How many patients had received documented nutritional advice in the previous 15 months?

Half of those (54%) who had a BMI of less than 20 or over 25 had a record of having been given advice on diet or nutrition in the previous 15 months. Practices in the Forest of Dean (possibly aware that obesity is a particular issue for them) seemed particularly good at giving such advice. Here the figure receiving advice was nine out of ten (88%), more than twice the percentage in Gloucester & South Tewkesbury. This difference between PCGs is highly significant; at the 0.1% level (χ^2 test).

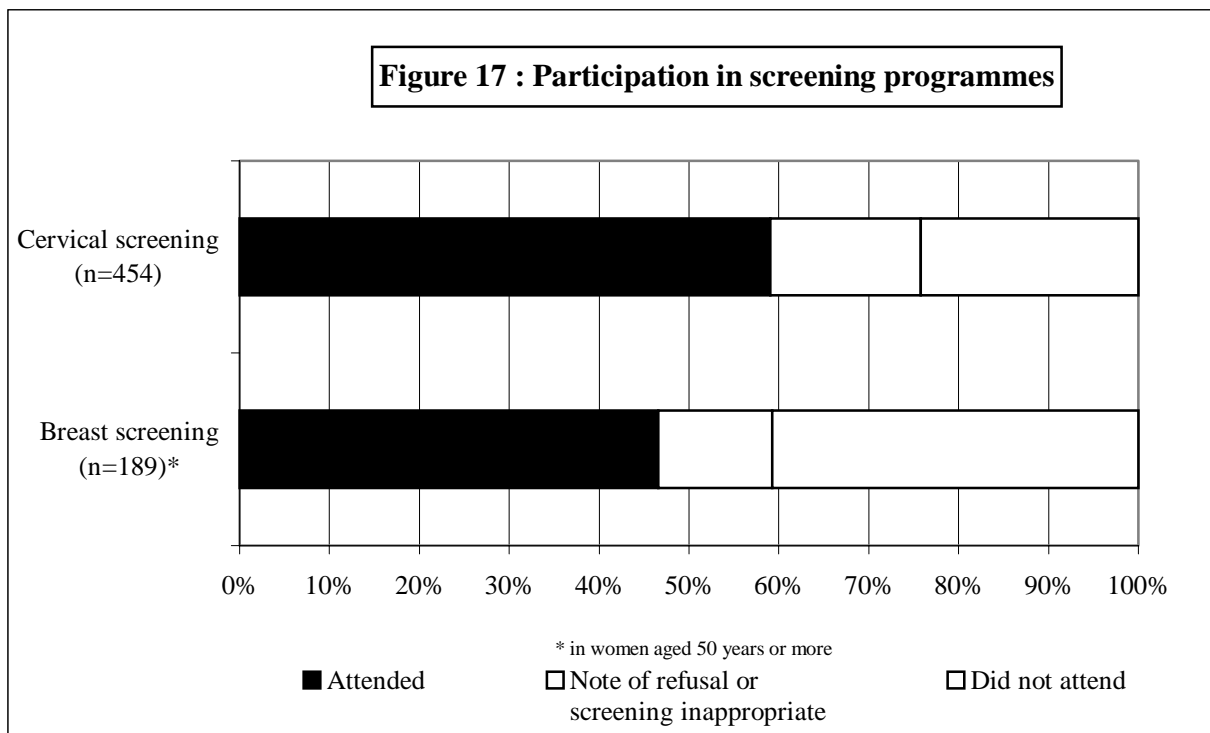
How many patients had a record of urinalysis in the previous 15 months?

Patients who are overweight are at increased risk of diabetes. Early detection is important to reduce the risk of end-organ damage and cardiovascular mortality. One in three patients (36%) had had their urine tested for glucose in the previous 15 months. Although the percentage tested varied between PCGs (Figure 16), the differences were not statistically significant.

6.4.5 Participation in national screening programmes

Women are encouraged to take part in the two national screening programmes which aim to reduce mortality from cervical and breast cancer.

Cervical screening identifies abnormalities which, if left untreated, may develop into cervical cancer. All women aged 20 to 64 years are invited for a smear test every three years up until the age of 35 years and every five years thereafter. Cervical screening is inappropriate for some women. Women who have had a total hysterectomy, for example, are not included in the programme. Others decline to attend for different reasons. The figures quoted in Figures 17 and 18 take account of women who have indicated that they do not wish to participate, or for whom screening is deemed inappropriate.



Breast screening is available for all women aged 50 and over with women invited for a repeat screen every three years. Although women aged 50 or older are eligible for breast screening some will not receive their first invitation to attend for mammography until they are 51 or 52 years old. This delay will result in slightly lower uptake rates in women in their early fifties. Again some women decline to be involved. The breast screening programme notifies GPs of these decisions. Not all practices add this information to their patients’ medical record. In these circumstances, it is difficult to know, whether non-attendance at the screening programme had been accompanied by a formal declaration of a decision not to participate.

Did women with schizophrenia attend as frequently as other women in Gloucestershire?

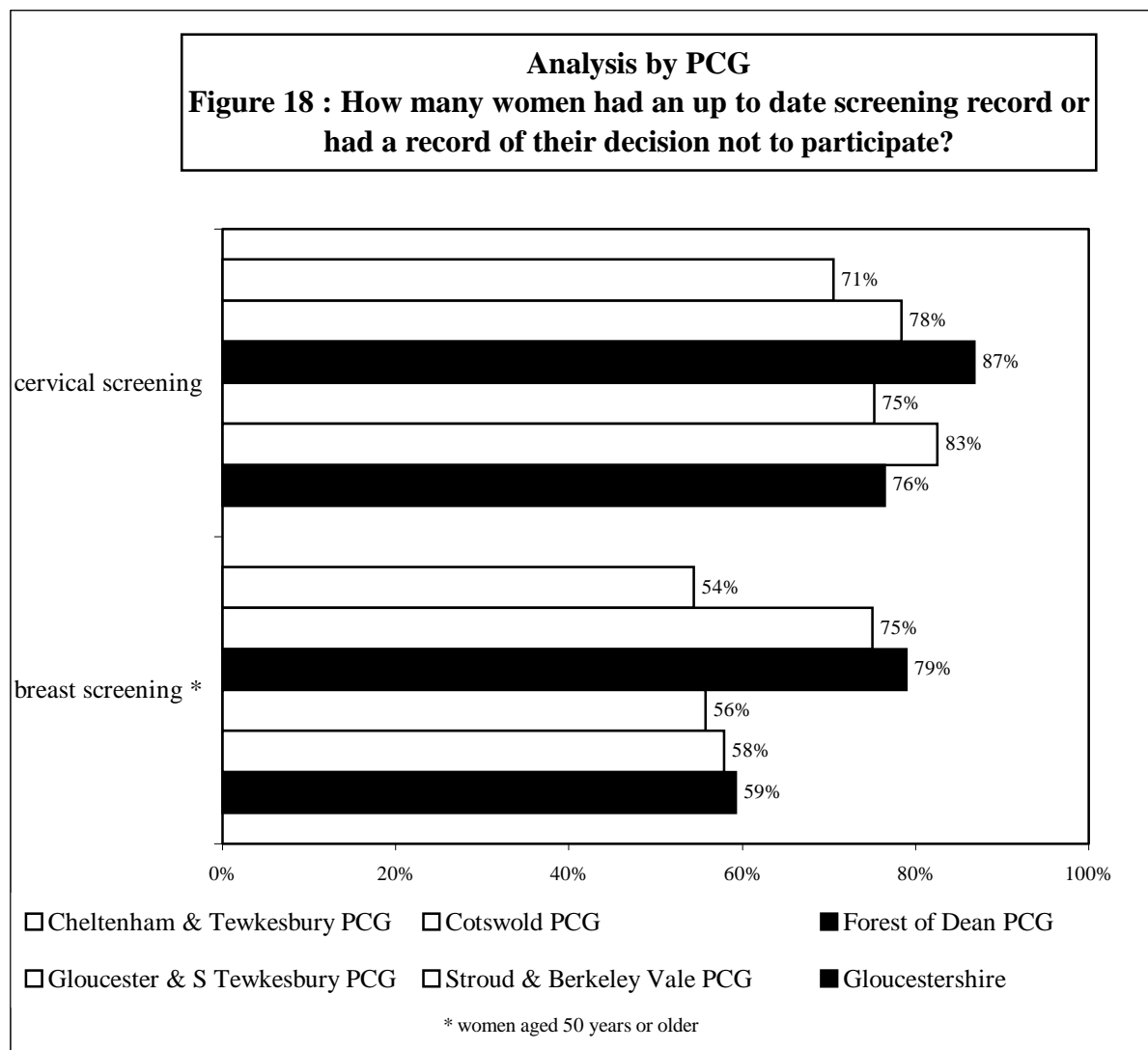
No. Uptake is lower in women with schizophrenia.

Cervical screening

Audit criterion : The records show that females have an up to date cervical smear history or have a record that they do not wish to participate in the screening programme

In 1999-2000 12% of all women in the county aged 25-64 years did not take part in the cervical screening programme (after having a total hysterectomy or signing a disclaimer form). Of those who were eligible for screening, 86% had been tested in the previous five years. (Annual Report of the Gloucestershire Cervical Screening Programme).

Amongst the 454 women included in the audit on whom information was available, one in six (17%) had decided not to take part or was ineligible. 71% of the remaining group had had a recent cervical smear. (It is not possible to make an exact comparison of screening rates between the two populations, as the county figures are based on smears within the last five years, whilst the audit criterion reflected the three year frequency of screening between the ages of 20 and 34 years. There were slight differences in the age-groups under consideration as well).



Three out of four women (76%) had had a cervical smear, or were ineligible for screening or had indicated they did not want to take part.

Breast screening

Audit criterion : The records show that females aged 50-64 years have had a mammogram in the last three years or have a record that they do not wish to participate in the screening programme.

Uptake of breast screening in Gloucestershire women in 1999-2000 was reported as 78% (Annual Report of Breast Screening Service). In the report no reference is made to the number of women who formally decline to attend. Among the 189 women with schizophrenia in the audit on whom breast screening attendance information was available, one in eight (13%) had a documented decision not to participate. Just under half, 46% had been screened in the last three years, a figure far short of the county figure of 78%.

Overall, four out of ten women had no record of breast screening or of their decision not to participate. (Figure 18).

Did attendance vary between PCGs?

Yes, attendance did vary, with patients in the Forest of Dean having the highest attendance, (or having documented reasons for non-attendance). Patients in Cheltenham and Tewkesbury were the least likely to attend for both cervical and breast screening. However these differences did not reach the often quoted 5% level of statistical significance.

6.5 Review of mental health

Some patients with schizophrenia who experience a first episode recover completely and experience no further illness. Not all fare so well. Research has shown that three out of four will suffer recurrent relapse and may require repeated hospitalisation.

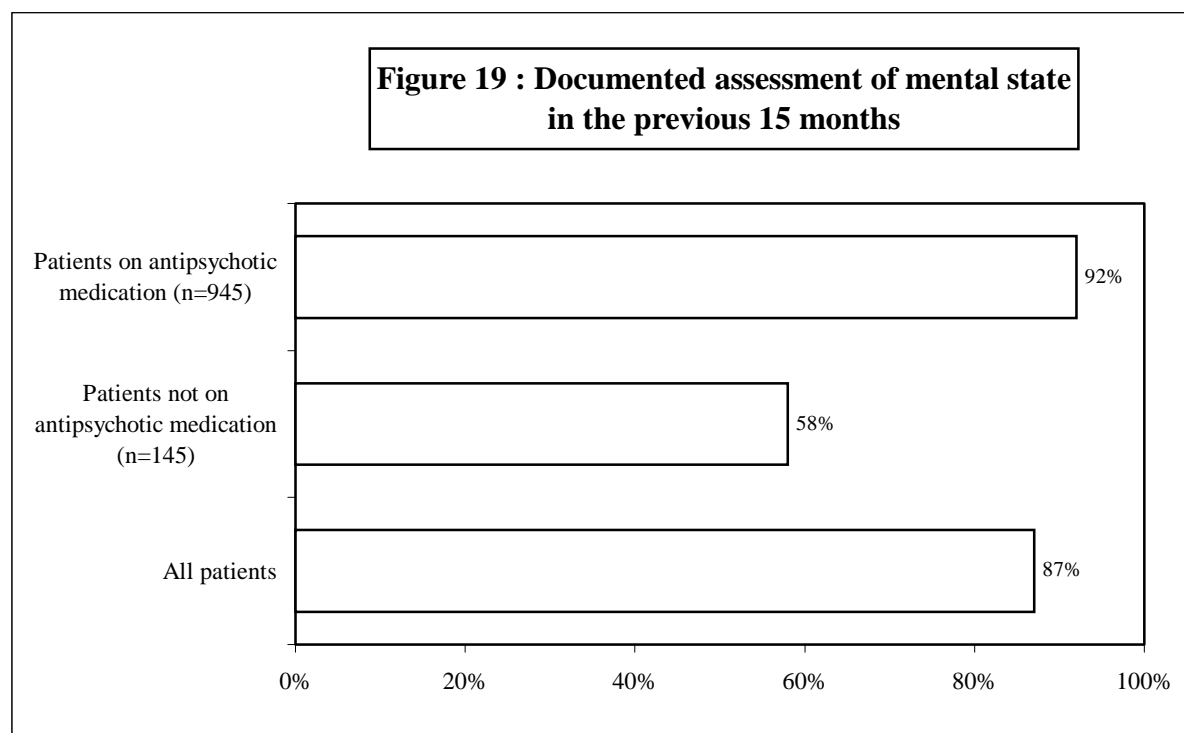
Changes in mental state are important indicators of impending relapse. Prodromal signs and symptoms which herald such a relapse can include depression, anxiety, apathy, delusions, aggression towards others, poor rapport and self-neglect.

Suicide is the leading cause of premature death in people with schizophrenia. The risk of suicide has been estimated as eight times greater than that experienced by a healthy population.

6.5.1 Assessment of mental state

Audit criterion : The records show that within the past 15 months there has been an assessment of mental state.

Within the last 15 months, the majority of patients (87%) in the audit had evidence of an assessment of their mental state. This may have taken place at the Care Programme Approach (CPA) annual review or more informally at a routine consultation in the surgery.



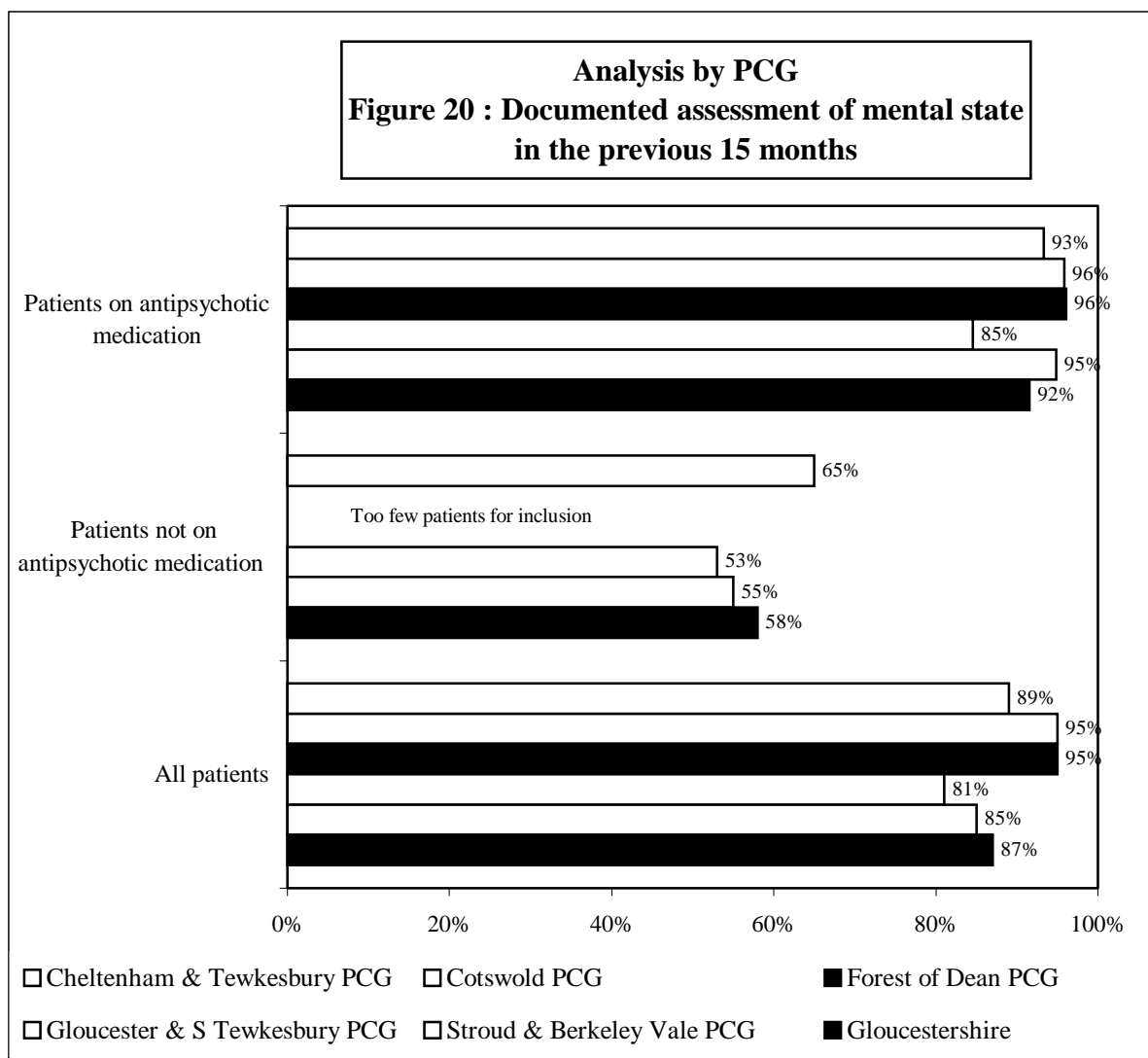
Compared to patients on anti-psychotic medication, patients who were not currently taking such medication were much less likely to have had such an assessment in the previous 15 months (92% vs 58%). (Figure 19). Some patients in this latter group may have experienced long periods of mental stability and have been thought not to warrant an annual review of their mental health.

Did the frequency of assessment of mental health vary across PCGs?

Yes. This was partly due to the variance in the proportion of patients on antipsychotic medication between PCGs.

Figure 20 explores the frequency of assessment between PCGs for patients currently taking medication and for those who were not. (Only two patients in the Cotswolds and three in the Forest were not taking antipsychotic medication – too few for inclusion in the graph).

We find significant differences between PCGs in assessment of mental state – but only for those on anti-psychotic medication ($\chi^2_4 = 26.1$; $P < 0.01\%$). Evidence of assessment of mental state was least likely to be found for patients registered with practices in Gloucester & South Tewkesbury.



Interpractice variation is documented in Figure GP13.

6.5.2 Documented enquiry about social and environmental factors

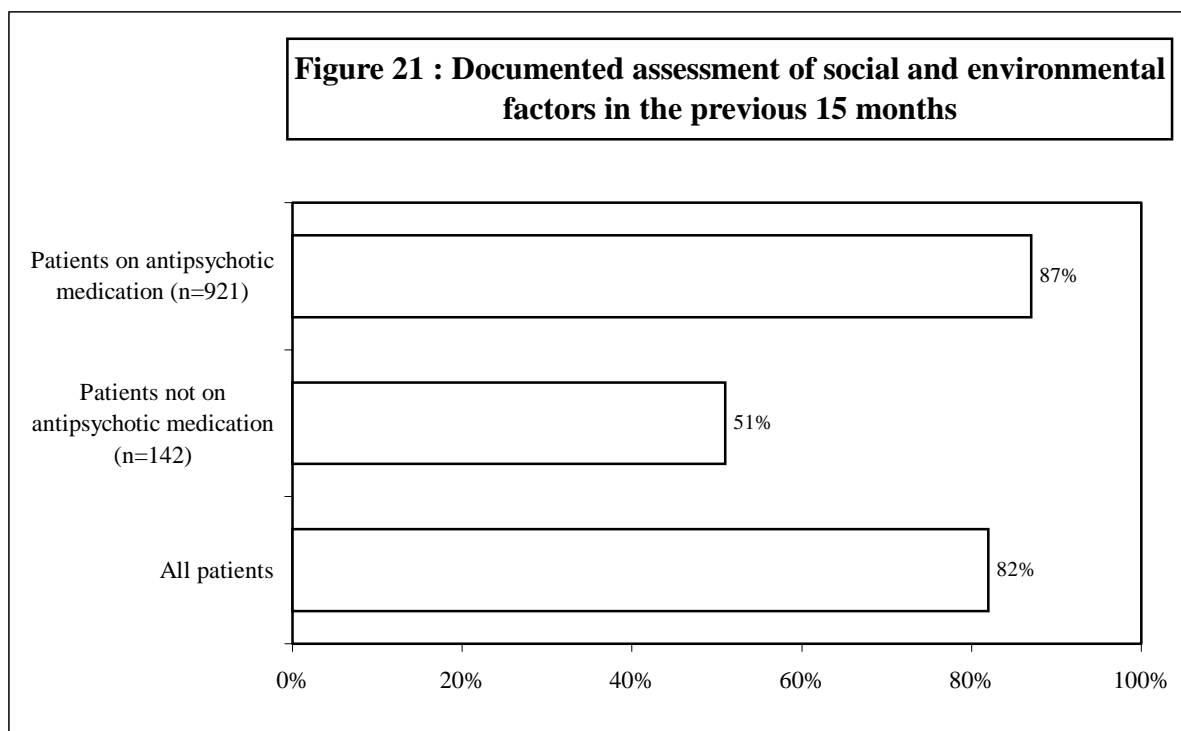
Audit criterion : The records show that within the past 15 months there has been an enquiry about social and environmental factors.

Life events, particularly stressful ones, have been shown repeatedly to influence the course of psychotic illnesses, including schizophrenia. Adverse social conditions (for example, financial hardship and inadequate or insecure accommodation) also have a direct impact on outcome.

People who are technically homeless are far more likely to have a psychotic illness as are people returning to the NHS from prison, where the prevalence is 10%. Housing and the need for more supported forms of residential care should be considered as forming an important part of the overall care of people with schizophrenia.

How much attention had been focussed on the patients’ social environment?

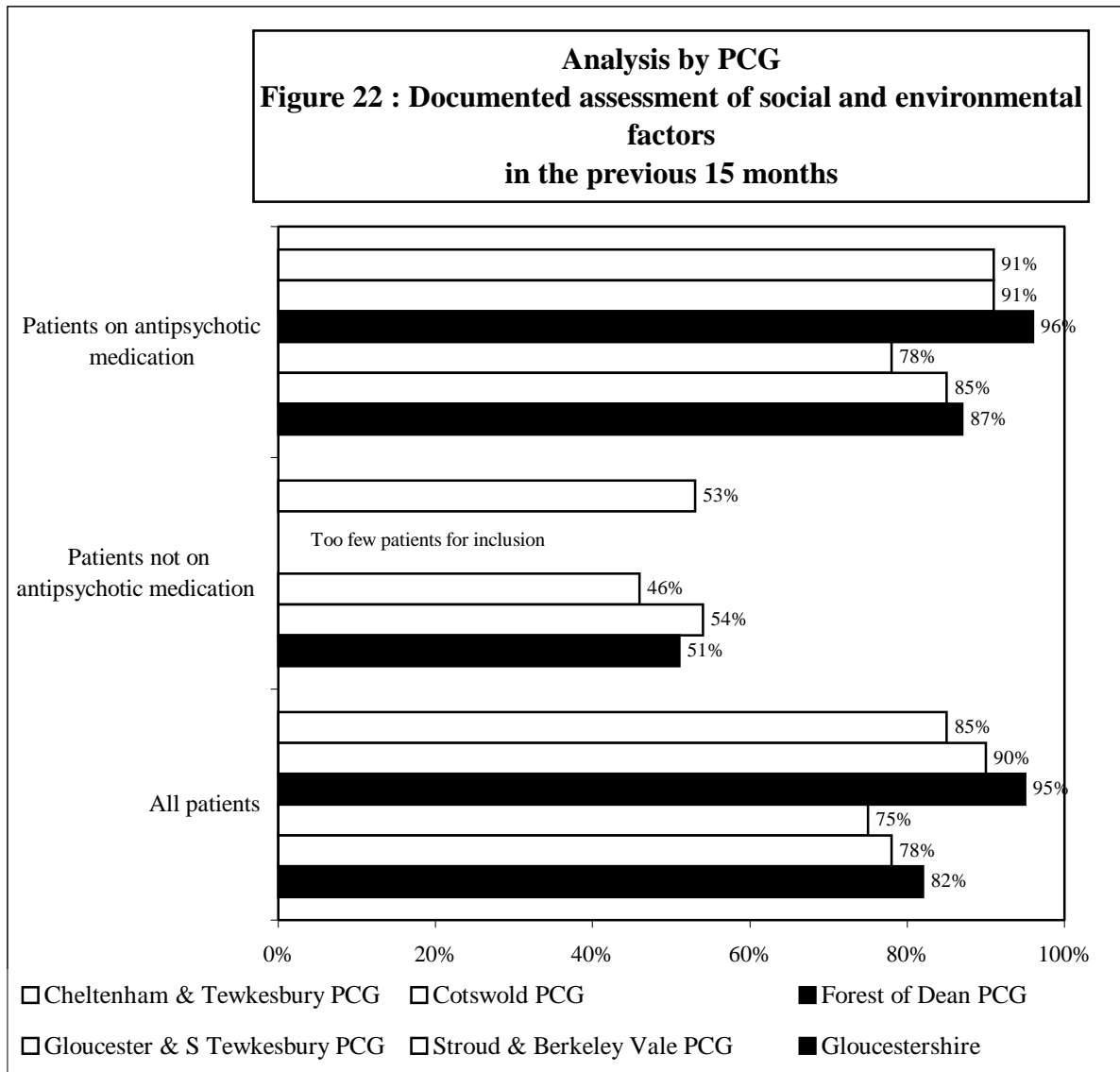
There was evidence of an enquiry about social and environmental factors in four out of five patients (82%). (Figure 21). We specifically asked whether their notes contained at least one reference to significant life events, (ie to accommodation, to home /carer support, to occupation, or to contact with social services).



How much variation was there between PCGs in regular recording of social & environmental factors?

The picture is broadly similar to that outlined in assessment of mental state. (Figure 22). The differences between PCGs lie mainly with patients on antipsychotic medication and are highly statistically significant ($\chi^2_4 = 31.4 : P < 0.01\%$).

Evidence of enquiry into social environment is found least often for patients in Gloucester and South Tewkesbury. Practices in the Forest of Dean are the best at making and documenting such enquiries.



Some practices are better at assessing and documenting patients’ social and environmental background; a few have done so for all their patients. One practice appeared to have no such records for any of their patients. (Fig. GP14.)

6.6 Antipsychotic medication

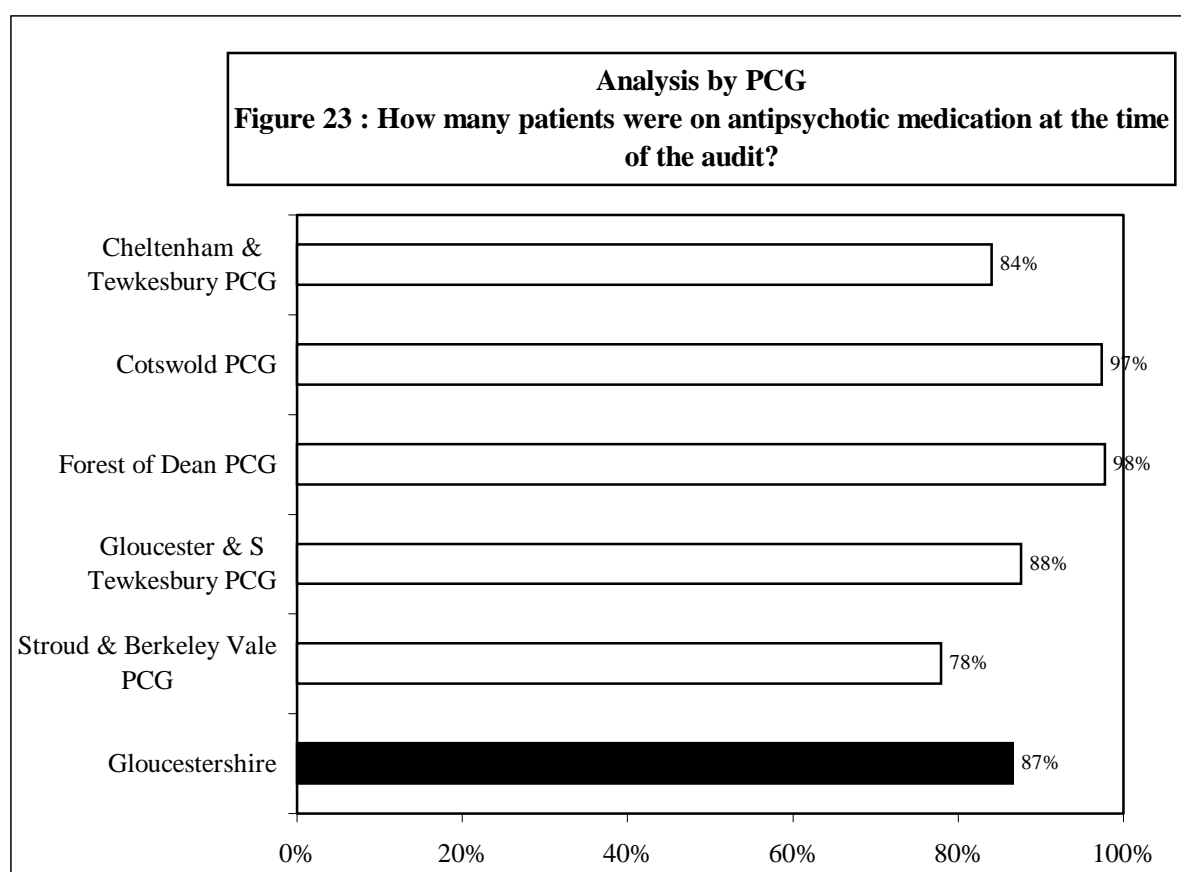
6.6.1 Role of medication

Antipsychotic drugs relieve florid psychotic symptoms such as hallucinations, delusions and thought disorder, and prevent relapse. Long term treatment is often necessary. The drugs fall into two broad groups depending on how they act upon the brain. Although most patients show a moderate to substantial reduction in their positive symptoms after treatment with antipsychotic drugs about 30% do not respond.

Audit criterion : The records show that within the past 15 months there has been an assessment of the patient’s use of antipsychotic medication.

Seven out of eight patients (87%) were on antipsychotic medication at the time of the audit. (Figure 23). Since repeat prescribing systems provide surgeries with the easiest route to identify their patients with schizophrenia, patients on medication are, if anything, likely to be over-represented in the audit population.

The proportion of audit patients on medication was the lowest in Stroud & Berkeley Vale PCG. (Figure 23). Between practices with at least 12 patients with schizophrenia, the percentage on medication varied from 55% to 100%. (Fig. GP15).



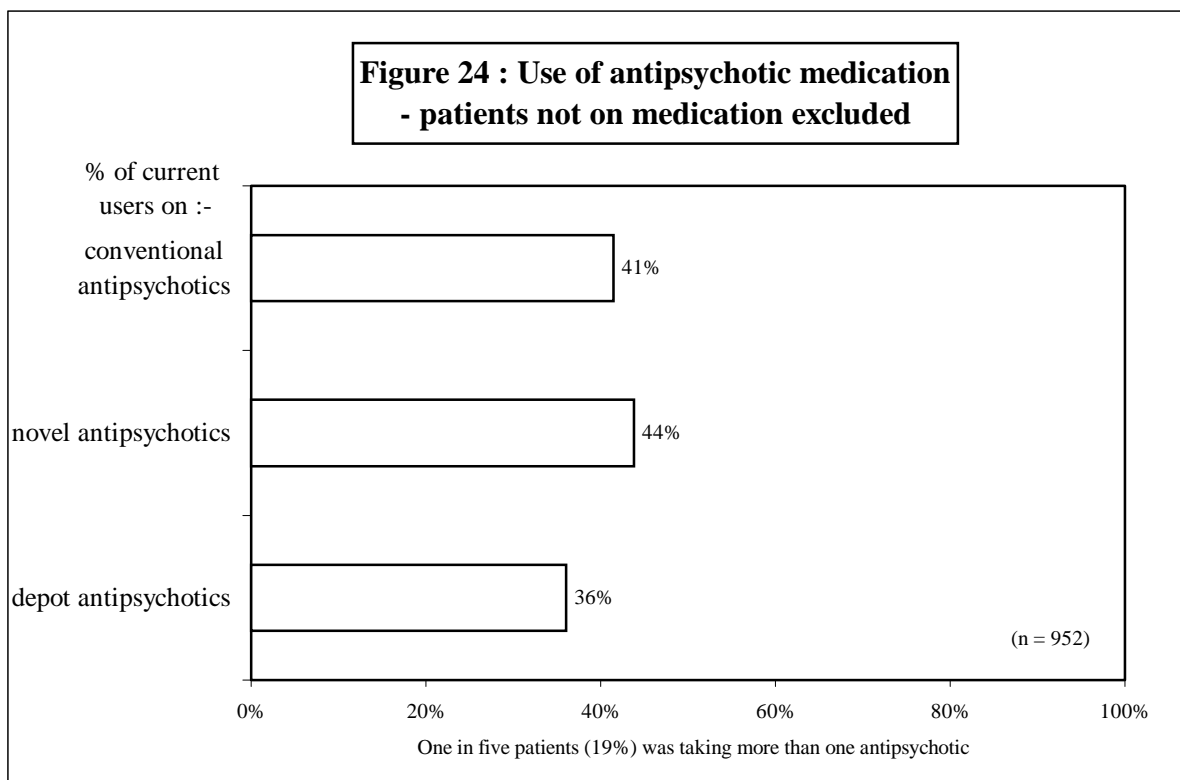
Conventional or typical antipsychotic drugs have been in use for the past fifty years. Although relatively cheap, adverse effects are common. Sedation can be problematic, as can dry mouth, blurred vision, constipation, impotence and dizziness resulting from lowered blood pressure. Movement disorders resembling the symptoms of Parkinson's disease, (expressionless face, shuffling gait and tremor) occur frequently. Akathisia is a distressing movement disorder characterised by a report of

inner restlessness or mental unease, which can be intense, and occurs in a significant proportion of patients on typical antipsychotics.

Every year one in twenty of those who continually use these drugs begin to have abnormal, repetitive and involuntary movements, frequently around the mouth and face, characteristic of tardive dyskinesia. Tardive dyskinesia, is a particularly severe form of movement disorder, which occurs in over 20% of those using typical antipsychotics for longer than three months. It does not always recede if the antipsychotic is stopped or reduced.

Novel or atypical drugs are usually better tolerated, causing fewer side effects, and, in short term trials have been shown to be as least as effective as traditional medication. However, they are expensive. Further economic evaluations are needed to establish whether the increased expenditure is offset by decreases in hospitalization and other associated costs.

Long-term compliance with any medication is difficult and depot preparations, which slowly release medication over periods of weeks to months, are frequently used. When compared with oral medication, they can give rise to a higher incidence of side effects. Injections are usually given at intervals of between one and four weeks.

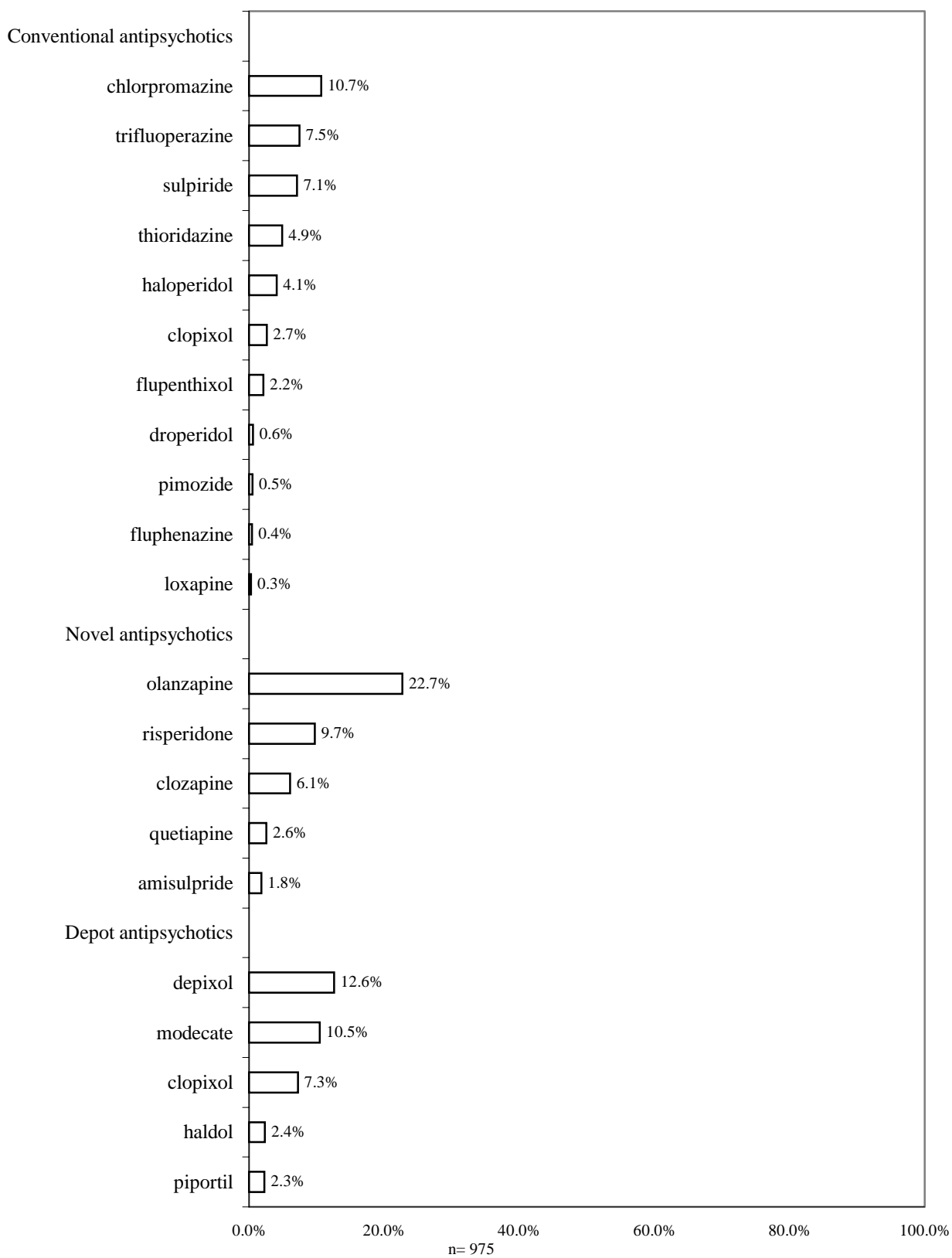


6.6.2 Preferred antipsychotic medication

Overall, in Gloucestershire, 44% of patients on medication were taking a novel, or atypical, antipsychotic. This rose to 64% in those who have been diagnosed with schizophrenia since 1995. Olanzapine was the drug of preference for almost one in four patients on medication (23%). (Figure 24).

Slightly fewer patients (41%) were taking oral conventional antipsychotic medication. Chlorpromazine was the drug of choice here, prescribed for one in nine (11%) audit patients.

Figure 25 : Antipsychotics prescribed



151 patients were not on medication and have been omitted; the role of medication was unclear in a further seven

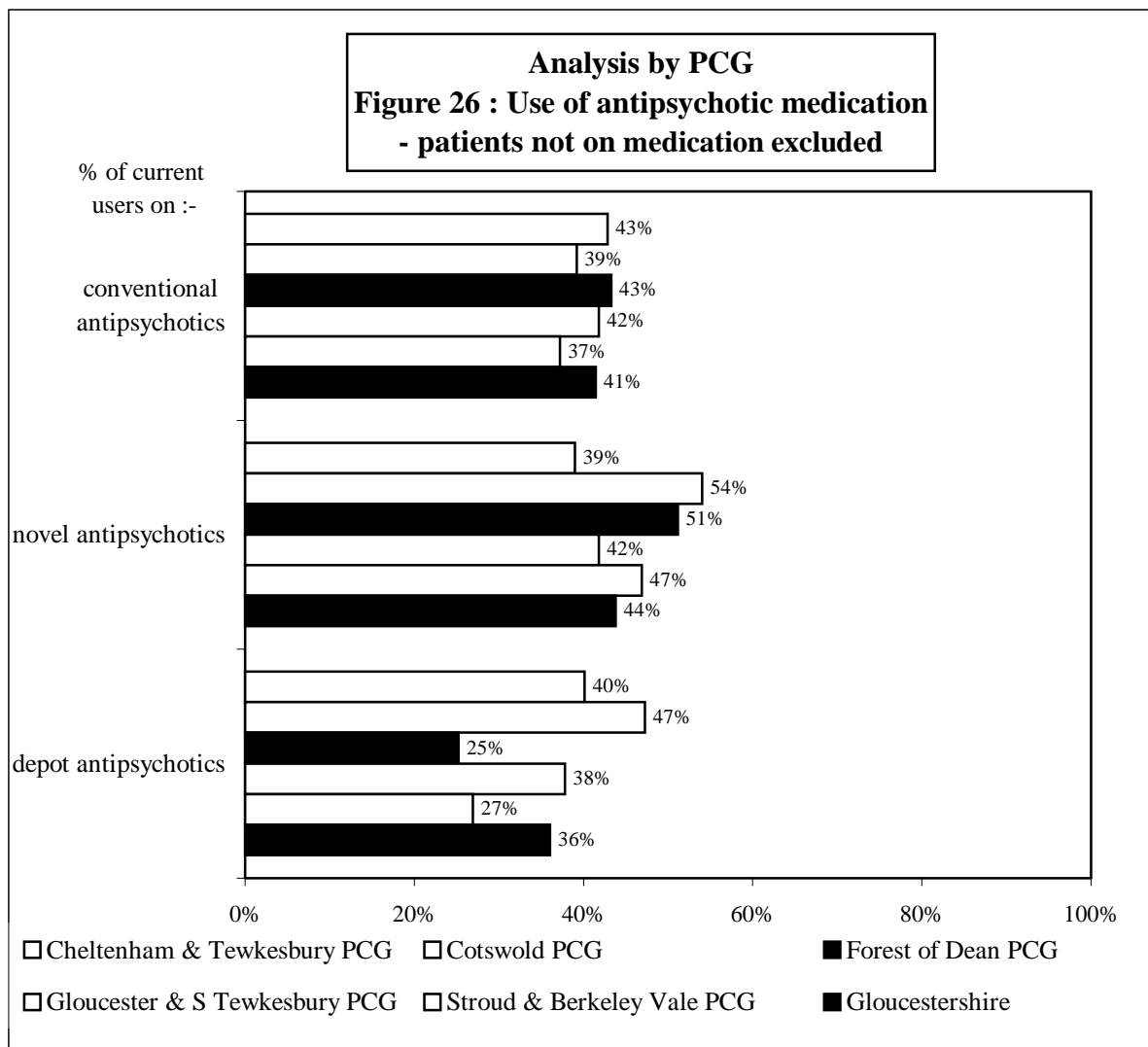
Just over one in three patients (36%) were receiving their antipsychotic medication by depot injection. Such medication is most frequently prescribed for those who have been living with the condition for a number of years. Most injections were given by community mental health teams; one in four patients (24%) received their depot medication from their surgery.

We asked surgeries whether they had a system in place to follow up patients who failed to come for their depot injection. Just under half (47%) said they had. In most of these surgeries the nurse or another team member telephones any patient who does not attend. Some then inform the CPN if the patient fails to appear. In one practice the district nurse calls on the patient.

Few surgeries (13%) had a special system for following up patients who failed to request or to collect repeat prescriptions for antipsychotic medication. One practice indicated that each patient had a designated key-worker, or relative, who informed the practice when concordance was a problem.

Some patients were taking more than one antipsychotic. This issue is explored in more detail in Figure 27. Figure 25 provides detailed information on the frequency of prescribing of twenty different antipsychotic drugs.

Did prescribing patterns vary between PCGs?



There were significant differences between PCGs, particularly around the prescribing of depot antipsychotics. (Figure 26). ($\chi^2_4 = 18.6$; $P < 0.1\%$). These were prescribed least frequently in the Forest of Dean and in Stroud and Berkeley Vale.

Differences between PCGs in the prescribing of novel antipsychotics were less marked, but still significant at the 5% level of significance. The urban areas of the county (Cheltenham & Tewkesbury and Gloucester and South Tewkesbury) used these drugs the least frequently.

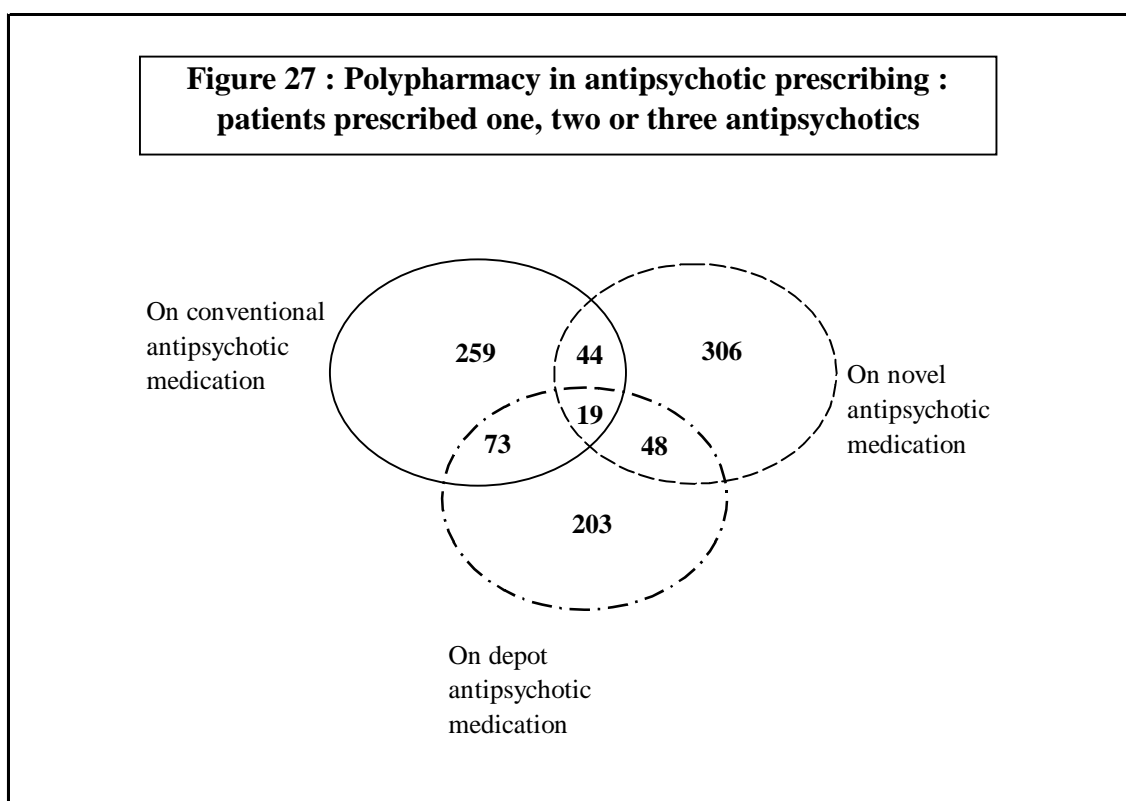
The use of conventional antipsychotic medication was more uniform, ranging little between PCGs.

In three practices less than one in five patients was taking novel (or atypical) antipsychotic medication. This contrasts with the prescribing of novel antipsychotics for two out of every three patients in a couple of other practices. (Fig GP16).

6.6.3 Polypharmacy in antipsychotic prescribing

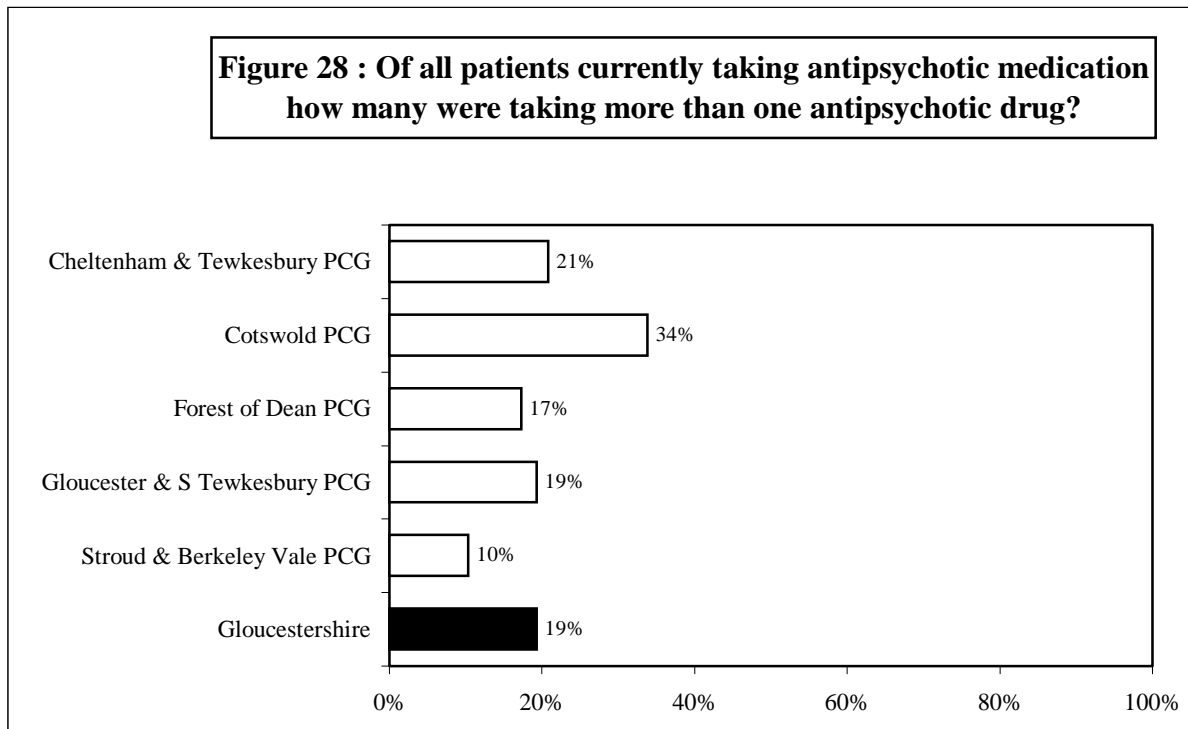
The prescribing of more than one antipsychotic at a time is not recommended by the BNF or by the Maudsley 2001 Prescribing Guidelines. In a study in 1998 by Waddington²⁰ patients receiving more than one antipsychotic had a higher ten year mortality risk than patients on only one.

One in five patients, (19%), were taking more than one antipsychotic and two per cent were taking three. The most frequently used combination was one of an oral conventional antipsychotic prescribed alongside a depot preparation. Details on the number of patients receiving one, two or three antipsychotics are given in the diagram below. (Figure 27).



Polypharmacy was most prevalent in the Cotswolds where a third (25 out of the 74 patients on medication) were taking at least two antipsychotics. It occurred least often in Stroud and Berkeley Vale patients where only 10% were taking more than one antipsychotic. Differences between PCGs in the proportion of patients on more than one antipsychotic were statistically significant. ($\chi^2_4 = 18.2$; $P < 0.1\%$). (Figure 28).

In a couple of practices half the patients were on more than one antipsychotic. (Fig GP17).



6.6.4 Assessment of side effects of medication

Adverse side effects are a feature of antipsychotic medication and can lead to non-compliance or a significant reduction in quality of life. The aim must be to minimise the incidence of side effects whilst relieving psychotic symptoms and preventing relapse.

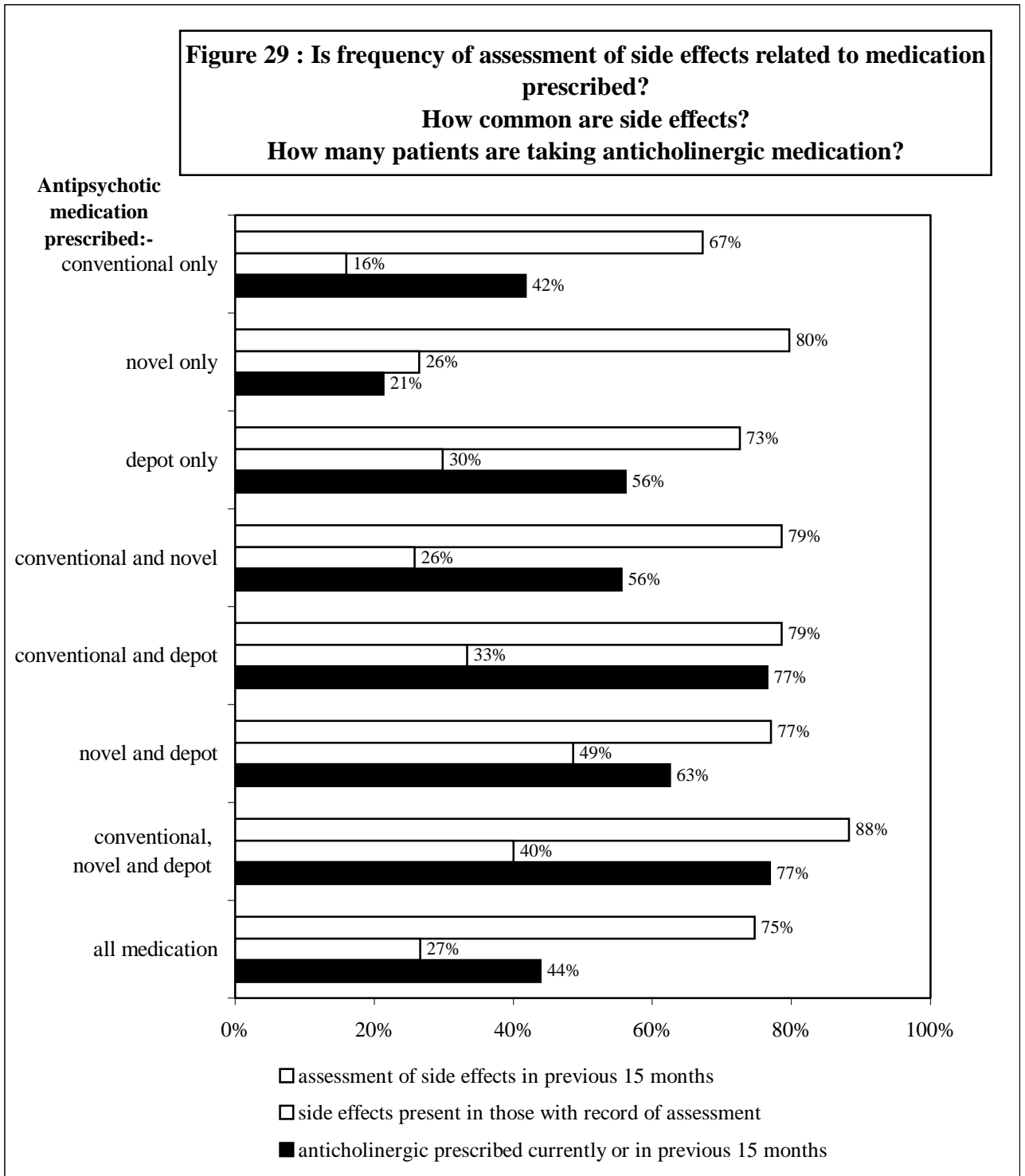
How frequently are side effects being assessed?

For all patients taking antipsychotic medication, the audit enquired whether, as part of an overall review of medication, there was a record of side effect assessment in the previous 15 months. For those who were unfamiliar with antipsychotic medication, guidance on the range of potential side effects was given in the audit protocol.

There was a record of side effect assessment for three out of four patients (75%). Figure 29 demonstrates that side effects were more likely to be assessed and recorded for patients on a combination of drugs. Side effect assessment occurred least frequently for patients taking conventional antipsychotic medication alone. Differences in assessment between treatment groups is statistically significant ($\chi^2_6 = 14.5$; $p = .03$).

How many patients reported adverse side effects?

Of those with a documented assessment in the previous 15 months, one in four (27%) had experienced adverse effects associated with their treatment. (Figure 29). Side effects tended to occur more often in those on a combination of drugs and least frequently in those taking conventional antipsychotics alone. (Differences significant at the 0.1% level of significance).

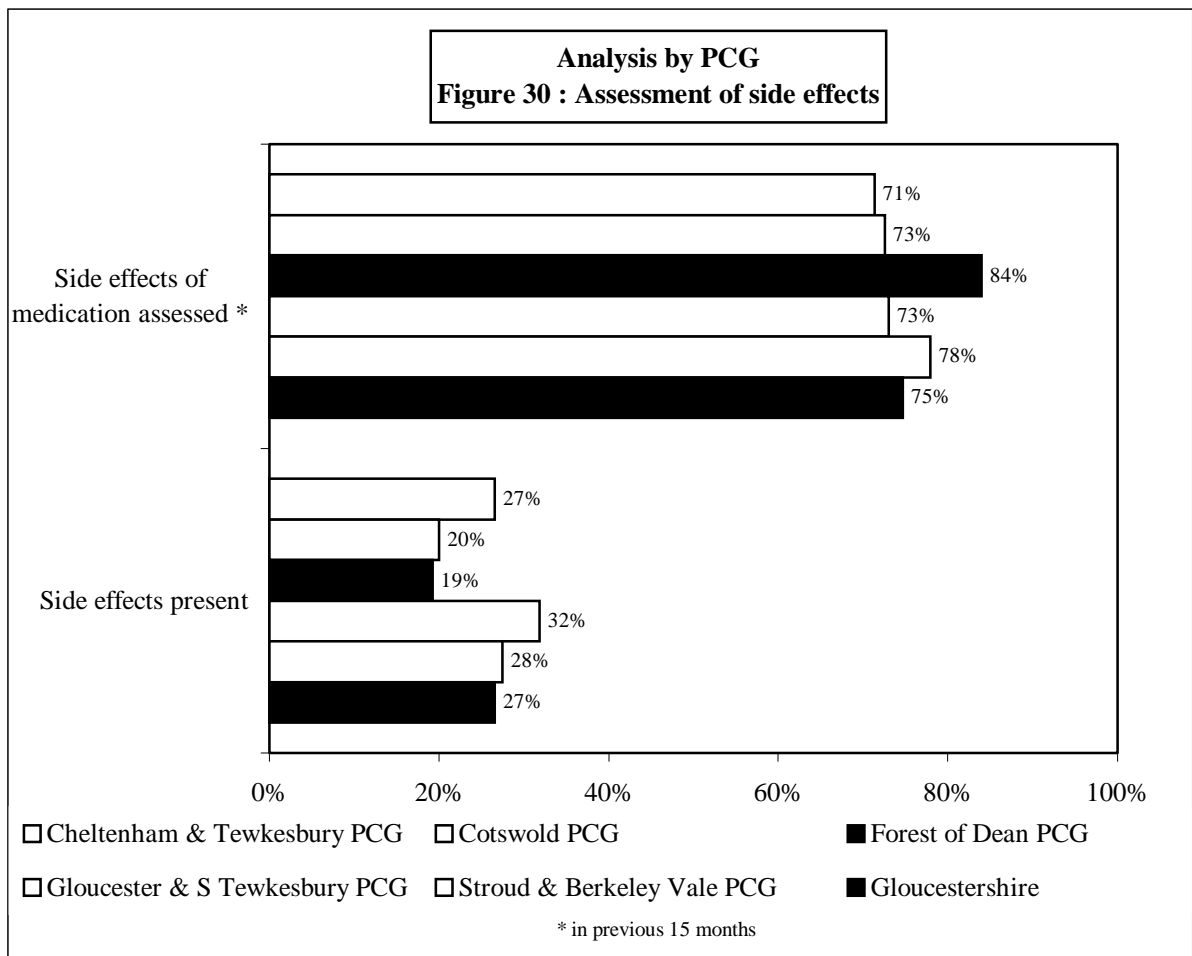


Were there marked differences in frequency of side effect assessment between PCGs?

In the main, no, although patients in the Forest of Dean were most likely to have had such an assessment in the previous 15 months (Figure 30). A couple of practices performed less well than the rest, assessing and recording side effects on only one in five of their patients on antipsychotic medication. (Fig. GP18)

Side effects were found most commonly in patients in Gloucester and South Tewkesbury. Three out of ten patients (32%) reported side effects compared to two out of ten in the Cotswolds and the Forest

of Dean. Three practices found adverse effects of medication occurring in more than half of their patients. (Fig GP19)



Abnormal movements are a particularly distressing adverse effect of antipsychotic medication. The audit enquired whether there was a specific entry in the patients' notes about this. One in eight (13%) of those with a record of recent side effect assessment had a specific entry regarding abnormal movements. Due to poor wording on the form used for collecting the data, it was impossible to tell whether these entries indicated whether or not the patient was experiencing abnormal movements. The entry may have been a note regarding absence of symptoms.

6.6.5 Anticholinergic medication

Anticholinergic (or antimuscarinic) drugs suppress parkinsonian side-effects. The routine giving of these drugs is not advocated since not all patients suffer such adverse effects and because tardive dyskinesia may be worsened by them. They can also adversely affect cognitive functioning.

Just under a half of those on antipsychotic medication (44%) were currently taking anticholinergic medication or had been prescribed such medication in the previous 15 months. Procyclidine (prescribed for 45% of those taking an anticholinergic) and benztropine (taken by 36%) were the favoured drugs. One in seven (14%) were prescribed benzhexol, with 4% taking orphenadrine and 1% hyoscine.

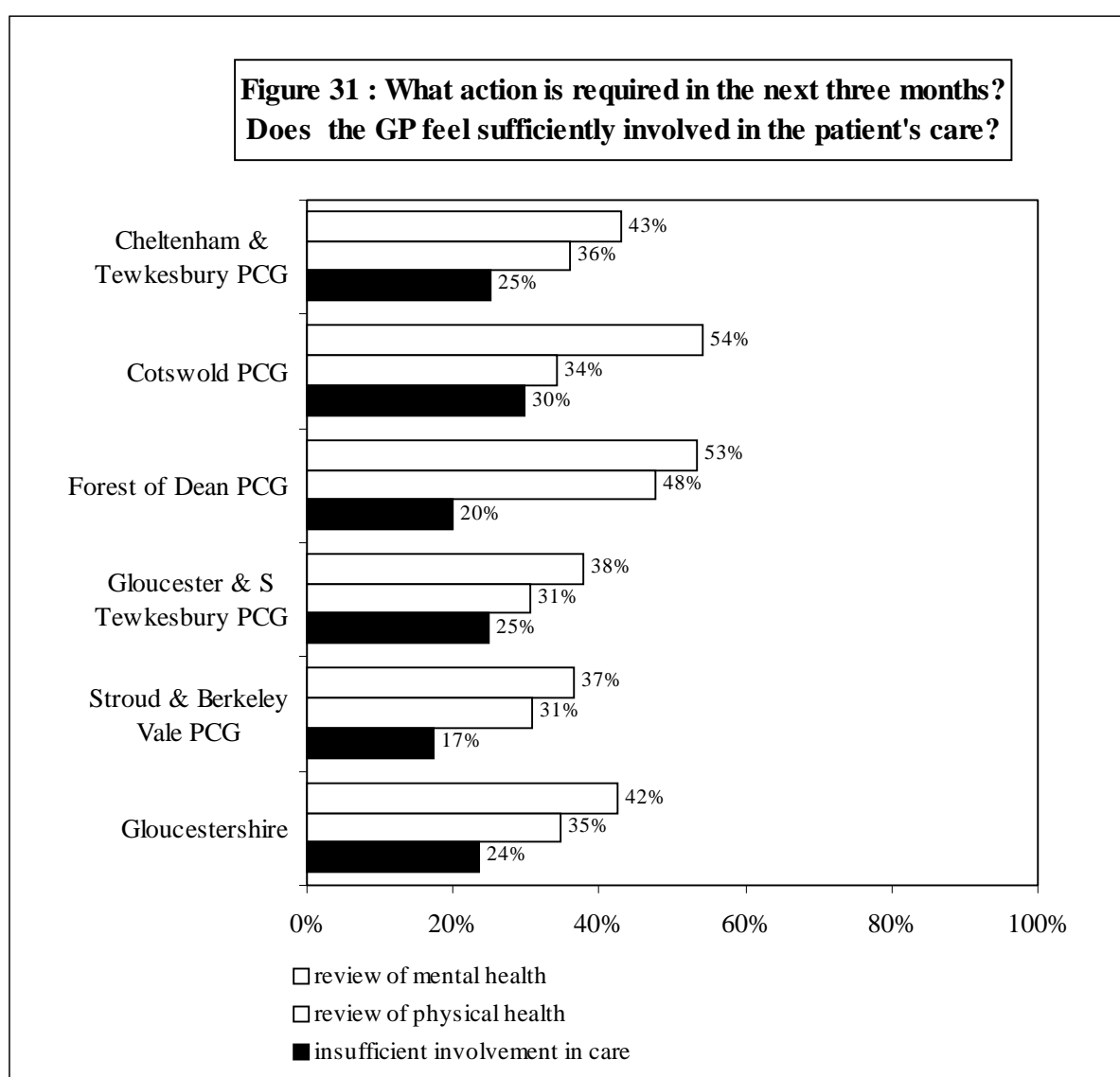
Anticholinergic drugs were prescribed most frequently for patients on a combination of antipsychotic drugs and for those on depot medication. They were prescribed least frequently for patients taking solely novel antipsychotic medication.

6.7 Identified need for action

Audit is about change and improving patient care. The process of data collection will alert clinicians to the need for specific action on individual patients. To aid clinicians, three “action” questions were included at the end of the data collection sheet. They asked GPs to decide whether the patient would benefit from a clinical review of their mental and/or physical health in the next three months, and to say whether or not they, as the patient’s GP, felt sufficiently involved in their care.

Where did the greatest need lie?

Patients’ mental health was of greatest concern. (Figure 31). GPs thought that four out of ten patients (42%) would benefit from a review in the next three months. This proportion rose to one out of two for patients not currently taking antipsychotic medication. Reviews were indicated most frequently for patients in the Cotswolds and the Forest of Dean.



GPs reckoned that slightly fewer patients (35%) would benefit from a review of some aspect of their physical health in the next three months. They were more inclined to advocate such a review for patients not currently taking antipsychotic medication; 44% were thought to be able to derive benefit. GPs in the Forest of Dean were the most proactive.

Did GPs feel sufficiently involved in the care of their patients with schizophrenia?

In general, they did, although they said they felt the need for greater involvement in one in four patients (24%) (Figure 31), and in one in three of those not currently taking any antipsychotic medication.

GPs in the Cotswolds felt the least involved in the care of their patients with schizophrenia.

GPs in Stroud and Berkeley Vale were the most satisfied with their degree of involvement in the care of their patients and felt less need for a review of their patients' mental or physical health. Differences between PCGs in the need for patient review and in the degree of GP involvement in care were statistically significant (at the 2% level or beyond).

Some practices felt they were in touch with and sufficiently involved in the care of all their patients with schizophrenia in the audit. Others were less satisfied with the status quo. One practice was seeking greater involvement in the care of more than half of its patients with schizophrenia (Fig. GP20).

7 Evaluation

This audit has afforded most practices the opportunity to review the care of a group of patients with a severe mental illness for the first time. Due to competing pressures, mental health is not always afforded the priority it deserves. Although the first National Service Framework published in 1999 focussed on mental health, its impact on primary care seem to have been overshadowed by the subsequent NSF on coronary heart disease. This audit has been an attempt to redress the balance slightly.

The audit has demonstrated that schizophrenia is much more of an issue for some practices than others. Prevalence varies widely across the county. Some practices have only a handful of patients; others care for as many as fifty. For the former, data collection was quick and straightforward. Others needed to set aside several hours.

This was the first countywide project in which all participating practices abstracted their own data, without direct help from the PCCAG audit assistant. We wanted to promote and develop “in-house” expertise in all practices. We hope a few have gained some new skills and a better understanding of audit processes.

Over the years practices have valued the opportunity to compare their performance against that of their peers in countywide audits. However, due to the relatively small number of patients with schizophrenia, the potential for such comparison in this piece of work is diminished.

Some would have wanted us to extend the audit to look at patients with a schizophrenia-like illness. We could also have included older patients. Individual practices might like to extend their work to include these extra patients. Although considered at the outset, we did not include a specific reference to CPA annual assessments in the final document. On balance we felt this was more of an issue for the specialist mental health services than for primary care.

The issues of liaison and communication between primary care and the specialist mental health services came up time and time again. Some practices were keen to approach their CPN for up-to-the-minute information. We discouraged this (only from the point of view of the audit!), as we wanted to review what was already known to the practice on a day-to-day basis. The accompanying survey has again indicated the need for greater CPN support and better liaison. Sadly a number of GPs remarked that the support and communication had deteriorated in recent months rather than improved.

8 Acknowledgements

The PCCAG would like to record their thanks to all those who have contributed to this project in some way. We acknowledge the commitment of members of the steering group, and the enthusiasm and creative thinking of those who helped plan the study day.

We have valued the support and encouragement of those working in the specialist mental health services from both East Gloucestershire NHS Trust and Severn NHS Trust. We hope that we might be able to work together again on other projects in the future.

We want to thank all GPs, nurses and practice staff who were involved in some way in the identification of patients and in the data collection. We have appreciated the support of the PCG clinical governance leads, who have lent their support to the audit and have encouraged practices to participate.

I would also like to thank my colleagues in the PCCAG office, Ann Wellington, Fiona Fleming and Mary Morgan, who have seen this project through to completion. Ann Wellington, in particular, has managed the project on a day-to-day basis, provided a set of audit results for each practice and has contributed to this final report. Julie Sterling undertook much of the data entry and we want to record our thanks to her.

9 Moving ahead; improving the outcome for patients

Each practice that participated has received several copies of their audit results for circulation, internal discussion and action. In these reports we reminded surgeries about the patients that GPs had flagged up for clinical review. We hope by now that most of these check-ups will have taken place. We hope that, by promoting regular reviews of both physical and mental health, we will see a reduction in the very high mortality and morbidity associated with the disease.

We hope too that practices will have taken the opportunity to think widely and creatively about their support of patients with severe mental illness. The survey has thrown up a number of ways in which practices and PCGs might further develop their services. Some GPs have already identified their need for more training and support and have begun to think what they can do to promote better liaison and more effective working with community mental health teams. Now is a good time to translate these ideas into action.

Rosemary Clifford
May 2001

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