



**REPORT TO THE DISABILITY RIGHTS  
COMMISSION**

**HEALTH INEQUALITIES EXPERIENCED BY  
PEOPLE WITH SCHIZOPHRENIA AND  
MANIC DEPRESSION:  
Analysis of general practice data in England and  
Wales**

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## 2 Executive summary

This report presents the analysis of the clinical records of 1.7 million people registered with 242 general practices contributing to the QRESEARCH aggregated database (as of 10th May 2004). Patients of all ages were included in estimates of disease prevalence although the assessment of quality of care was based on patients aged 16 to 74 years. This was in order to reduce the variation due to differences in the age ranges.

The recorded prevalences found were:

- Schizophrenia – 2.23 per 1000 population (2.53 for males; 1.94 for females)
- Manic depression – 1.56 per 1000 population (1.18 for males; 1.96 for females)

Both schizophrenia and manic depression are more common in the middle-aged.

In terms of risk factors, we found that patients with mental health problems have higher levels of risk factors than patients without mental health problems. For example,

- Obesity was present in 33% of those with schizophrenia and 30% of those with manic depression compared to 21% of the remaining population
- 61% of people with schizophrenia and 46% of those with manic depression smoke, compared to 33% in the remaining population

The rates of co-morbidity are higher than in the remaining population (unadjusted for differences in age distribution):

- Ischaemic heart disease is more common in people with schizophrenia (4%) and bipolar disorder (5%) compared to the remaining population (3%)
- Stroke is more common in people with schizophrenia (2%) and bipolar disorder (1.5%) compared to the remaining population (1%)
- Hypertension is more common in people with schizophrenia (12%) and bipolar disorder (15%) compared to the remaining population (10%)
- Epilepsy is more common in people with schizophrenia (0.7%) and bipolar disorder (0.7%) compared to the remaining population (0.3%)
- Diabetes is more common in people with schizophrenia (6%) and bipolar disorder (4%) compared to the remaining population (2%)

We found some evidence of potential inequalities in preventative health care. For example:

- Women with schizophrenia were less likely to have had a cervical smear in the previous five years (63%) compared to the remaining population (73%), but this does not apply to those with manic depressive disorder

- In both groups with severe mental illness recorded mammography rates were lower than in the remaining population, but these findings have to be treated with caution
- 86% of patients with schizophrenia and ischaemic heart disease had a blood pressure reading recorded compared with 92% of the remaining population with ischaemic heart disease.
- 67.6% of patients with schizophrenia and ischaemic heart disease had a recent cholesterol test compared with 79.9% of the remaining population.
- Only 48% of stroke patients with schizophrenia had a cholesterol test in the last 15 months compared with 63% of the remaining population.
- Of those with a value recorded, only 52% had a value below 5 mmol/l compared with 63% of general stroke patients.
- 63% of patients with schizophrenia who had had a stroke were on aspirin (either prescribed or over the counter) in the last 15 months compared with 68% of general stroke patients.

Apart from these particular indicators, the levels of recorded measures (blood pressure, cholesterol, HbA1c etc) were comparable in those with severe mental illness compared to the remaining population with each of the co-morbidities; and the levels of disease control achieved are also comparable. For example

- More of those with severe mental illness had been recorded as receiving smoking advice and more had been prescribed smoking cessation medication compared to smokers in the remaining population
- More of those with severe mental illness had had their blood pressure recorded in the past year compared with the remaining population (60% of those with schizophrenia compared to 44% in the remaining population) and those with schizophrenia were more likely to have a normal blood pressure reading (82% versus 77%) .

While there is evidence of inequalities in health need, risk and health promotion, overall there is little evidence of substantially lower levels of disease intervention or disease control in co-morbidities. There may be some under testing and treatment of hyperlipidaemia in patients with schizophrenia and ischaemic heart disease and those with stroke compared with the remaining population. This is likely to be important given the increase in risk factors and higher prevalence of ischaemic heart disease and stroke in patients with schizophrenia. Equitable access to health care is about patients receiving the level of care appropriate to their level of need rather than a 'one size fits all' approach. For example, patients with higher levels of need and greater risk of adverse outcomes may need more energetic screening and management. We have found no evidence of this in this study.

This analysis only covers patients who are registered with a general practitioner and who have had the diagnosis of schizophrenia or manic depression recorded on computer. There are some people (e.g. those in prisons or other institutions or others not registered

with a general practitioner) who may not be accessing primary care at all. This report is unable to consider this important group, many of whom may be in deprived or disadvantaged areas and known to community mental health teams.

Whilst each of these indicators examined in this report have good face validity, can be measured, and have been agreed as a national standard, they measure specific aspects of particular diseases. There is a real need to develop robust, validated and measurable indicators for patients with mental health problems covering other diseases than those considered in this report.

Further research is needed to identify levels of physical health outcomes for patients with mental health problems. This includes 'hard end points' such as mortality and malignancy rates but also intermediate measures of health care. There are plans to undertake some of these analyses in the near future.

### **3 Introduction**

This is the second report written for the Disability Rights Commission [contract reference number CON/2399]. The overall aim of the work is to use the QRESEARCH general practice database to describe the extent of any health inequalities for patients with mental health problems (manic depression or schizophrenia).

In our first report, we described the population of patients with mental health problems to be used in subsequent analyses. In this report we include the prevalence data from the first report and explore the extent to which there are differences in health promotion, health risks and disease control in co-morbidities for the population with schizophrenia or manic depression.

### **4 Background**

The QRESEARCH database is a new general practice derived database. It contains data derived from the health records of general practices using the EMIS system (EMIS supplies 2/3<sup>rd</sup> of all practices in England and Wales). Eventually, the QRESEARCH database will contain 500 practices and the records of 8 million patients (including those who are currently registered, those who have died and those who have left). Longitudinal records are available in 60% of practices as early as 1990. The records contain information on patient demographics (age, sex, and deprivation), diagnoses, clinical values, laboratory investigations, prescription, consultations and referrals. The database was set up primarily for research but QRESEARCH also offers an analysis service in which we produce reports for organisations (such as the DRC) on the understanding that the source of the data is acknowledged. General information on QRESEARCH is also available on our website [<http://www.qresearch.org>].

### **5 Aim**

The aim of this report is to describe the prevalence of schizophrenia and manic depression, and to explore the extent to which patients with schizophrenia or manic depression have experienced health promotion activity; have different health risks from the population; and have adequate disease control in co-morbidities.

### **6 Methods**

The third national version of the QRESEARCH database was used for this analysis. This contains data from 242 practices and was downloaded on 10<sup>th</sup> May 2004. Of these practices, there were just three practices from Wales (additional practices from Wales are

likely to be included on the full QRESEARCH database when all the uploads are complete).

We identified all patients registered with 242 QRESEARCH practices on the 1<sup>st</sup> January 2004. To qualify for the analysis patients had to be registered for the whole of the previous 6 months.

For the section of the report concerning case identification, we compiled lists of Read codes in order to identify patients with schizophrenia or manic depression

### **6.1 Patients with schizophrenia**

Patients with schizophrenia were patients who had a diagnosis of schizophrenia recorded in the medical records before 1<sup>st</sup> January 2004. We also identified a subset that have had prescription for anti-psychotic medication.

### **6.2 Patients with manic depression**

Patients with manic depression were patients with a computer recorded diagnosis of manic depression before 1<sup>st</sup> January 2004. We also identified a subset of patients with manic depression who had been prescribed anti-psychotic medication or antidepressant medication using the relevant chapters from the British National Formulary.

### **6.3 Clinical indicators**

For the clinical indicators section of the report, we based our searches on measures from the new GMS contract for General Practitioners where possible. However, we have reported on the care of patients aged 16-74 years to reduce the differences between groups which might be due to age alone. We selected indicators related to five major diseases which were diabetes, coronary heart disease, stroke, hypertension and epilepsy and then compared the achievement of these indicators in patients with schizophrenia, bipolar disorder and the remaining population without each disease. We also determined levels of cervical screening, mammography, blood pressure recording, smoking status recording and obesity in the relevant age-sex bands of the population overall.

We selected the time period before 1<sup>st</sup> January 2004 for the assessment of each indicator as this is the period for which the data were most complete when the project was started. However, it is anticipated that overall levels of recording will increase rapidly across all patients groups during 2004/5 due to the introduction of the new GP contract in April 04.

## 7 Results

Overall, there were 1,667,173 patients registered on 1<sup>st</sup> January 2004 with 242 practices contributing to the QRESEARCH database (version 3, downloaded on 10<sup>th</sup> May 2004).

### 7.1 Prevalence of schizophrenia

We identified 3,726 patients with a recorded diagnosis of schizophrenia giving a prevalence of 2.23 per 1000 patients registered on 1<sup>st</sup> January 2004. Overall, we identified 2113 men with a diagnosis of schizophrenia and 1613 women. The table below shows how the prevalence of schizophrenia varies by age in men and women. As expected, the prevalence was higher in men at younger ages (peaking at 4 per 1000 in men aged 40 to 49 years). In women the peak prevalence was 4 per 1000 and occurred at age 60 to 69 years.

**Table 1 Prevalence of schizophrenia per 1000 patients in 242 QRESEARCH practices in 2004**

<b>Ageband label</b>	<b>Sex</b>	<b>Patients with diagnosis of schizophrenia</b>	<b>Total population</b>	<b>Prevalence per 1000 with diagnosis</b>
0 to 9 years	F	0	76605	0.00
10 to 19 years	F	3	98252	0.03
20 to 29 years	F	61	91153	0.67
30 to 39 years	F	152	123990	1.23
40 to 49 years	F	276	119916	2.30
50 to 59 years	F	359	109810	3.27
60 to 69 years	F	343	85587	4.01
70 to 79 years	F	261	69732	3.74
80 to 89 years	F	139	45063	3.08
90 and over	F	19	12375	1.54
	<b>Females</b>	1613	832483	1.94
0 to 9 years	M	1	79691	0.01
10 to 19 years	M	6	104312	0.06
20 to 29 years	M	193	96416	2.00
30 to 39 years	M	448	133367	3.36
40 to 49 years	M	528	130721	4.04
50 to 59 years	M	424	114000	3.72
60 to 69 years	M	304	85215	3.57
70 to 79 years	M	163	59227	2.75
80 to 89 years	M	40	27037	1.48
90 and over	M	6	4704	1.28
	<b>Males</b>	2113	834690	2.53
	<b>overall</b>	3726	1667173	2.23

There was one patient diagnosed with schizophrenia aged 9 and this probably reflects a coding error, especially since that patient was not on any anti-psychosis medication.

Of the 3726 patients with a diagnosis of schizophrenia, 2926 patients (78.5%) had had a recorded prescription for at least one anti-psychotic drug. As shown in the next table, the proportion of patients with medication varied by age with older patients being less likely to have a recorded prescription. Older patients may have been prescribed medication when they were much younger and this would not be recorded on the database unless it was within the last ten years or so. Also, some prescriptions may have been issued by specialist mental health services, as in the case of manic depression.

**Table 2 Percentage of patients with schizophrenia on medication**

<b>Ageband label</b>	<b>Sex</b>	<b>Patients with treated schizophrenia</b>	<b>Patients with diagnosis of schizophrenia</b>	<b>% of patients with medication</b>
0 to 9 years	F	0	0	n/a
10 to 19 years	F	3	3	100.0
20 to 29 years	F	47	61	77.0
30 to 39 years	F	127	152	83.6
40 to 49 years	F	230	276	83.3
50 to 59 years	F	299	359	83.3
60 to 69 years	F	283	343	82.5
70 to 79 years	F	196	261	75.1
80 to 89 years	F	101	139	72.7
90 and over	F	18	19	94.7
	<b>Females</b>	1304	1613	80.8
0 to 9 years	M	0	1	0.0
10 to 19 years	M	6	6	100.0
20 to 29 years	M	157	193	81.3
30 to 39 years	M	363	448	81.0
40 to 49 years	M	419	528	79.4
50 to 59 years	M	314	424	74.1
60 to 69 years	M	226	304	74.3
70 to 79 years	M	114	163	69.9
80 to 89 years	M	19	40	47.5
90 and over	M	4	6	66.7
	<b>Males</b>	1622	2113	76.8
	<b>overall</b>	2926	3726	78.5

## 7.2 Prevalence of manic depression

We identified 2597 with a recorded diagnosis of manic depression giving a prevalence of 1.56 per 1000 patients. As expected, the prevalence was higher in middle aged patients and in women as shown in the table below.

**Table 3 Prevalence of manic depression per 1000 patients in 242 practices in QRESEARCH**

<b>Ageband label</b>	<b>Sex</b>	<b>Patients with diagnosis of manic depression</b>	<b>Total population</b>	<b>Prevalence per 1000 with diagnosis</b>
0 to 9 years	F	0	76605	0.00
10 to 19 years	F	6	98252	0.06
20 to 29 years	F	60	91153	0.66
30 to 39 years	F	180	123990	1.45
40 to 49 years	F	287	119916	2.39
50 to 59 years	F	386	109810	3.52
60 to 69 years	F	296	85587	3.46
70 to 79 years	F	250	69732	3.59
80 to 89 years	F	123	45063	2.73
90 and over	F	20	12375	1.62
	<b>Females</b>	1608	832483	1.93
0 to 9 years	M	0	79691	0.00
10 to 19 years	M	4	104312	0.04
20 to 29 years	M	43	96416	0.45
30 to 39 years	M	136	133367	1.02
40 to 49 years	M	196	130721	1.50
50 to 59 years	M	246	114000	2.16
60 to 69 years	M	192	85215	2.25
70 to 79 years	M	124	59227	2.09
80 to 89 years	M	41	27037	1.52
90 and over	M	7	4704	1.49
	<b>Males</b>	989	834690	1.18
	<b>overall</b>	2597	1667173	1.56

### 7.3 Proportion of patients with manic depression on treatment

The next table shows the proportion of patients with a diagnosis of manic depression who had received antidepressant or antipsychotic medication (including lithium). Overall, 2173 patients had recorded prescriptions (83.7%). Half of the patients with a diagnosis of manic depression aged 10 to 19 years had been on treatment. We suspect that the real treatment rates are higher than this but that the prescriptions are being issued by secondary care rather than via the general practitioner.

**Table 4 Percentage of patients with manic depression on treatment**

<b>Ageband</b>	<b>Sex</b>	<b>Patients with treated manic depression</b>	<b>Patients with diagnosis of manic depression</b>	<b>% of patients with medication</b>
0 to 9 years	F	0	0	n/a
10 to 19 years	F	3	6	50.0
20 to 29 years	F	45	60	75.0
30 to 39 years	F	157	180	87.2
40 to 49 years	F	253	287	88.2
50 to 59 years	F	329	386	85.2
60 to 69 years	F	248	296	83.8
70 to 79 years	F	206	250	82.4
80 to 89 years	F	106	123	86.2
90 and over	F	16	20	80.0
<b>Females</b>		1363	1608	84.8
0 to 9 years	M	0	0	n/a
10 to 19 years	M	2	4	50.0
20 to 29 years	M	34	43	79.1
30 to 39 years	M	117	136	86.0
40 to 49 years	M	168	196	85.7
50 to 59 years	M	205	246	83.3
60 to 69 years	M	154	192	80.2
70 to 79 years	M	92	124	74.2
80 to 89 years	M	32	41	78.0
90 and over	M	6	7	85.7
<b>Males</b>		810	989	81.9
<b>overall</b>		2173	2597	83.7

### 7.4 Comparison with other data

We compared our prevalence data with that reported in the ONS Psychiatric Morbidity Survey (2000). This survey reports interviews with 8580 adults aged 16 to 74 years to

determine the prevalence of psychotic illness using standard psychiatric instruments. The criteria for a diagnosis included patients having been given a diagnosis of a psychosis or having been prescribed anti-psychotic medication or having relevant psychiatric symptoms in the last year. The results found that 5 patients in every thousand had some evidence of having a psychotic illness within the last year. Whilst the methods are not directly comparable with the methods used in QRESEARCH, the overall prevalence data is broadly comparable.

## 7.5 Study population for clinical care

Table 5 shows the number of patients age 16-74 who were included in the remaining analysis. There were 3,503 patients with schizophrenia aged 16 to 74 and 2,135 patients with bipolar depression.

**Table 5 Patients age 16-74 registered on 1st January 2004**

	Number of patients	Percent
Schizophrenia	3,503	0.3
Bipolar Disorder	2,135	0.2
Remaining population	1,312,039	99.6

## 7.6 Obesity

Recording of body mass index in the last five years was slightly higher in patients with schizophrenia and bipolar disorder than the remaining population. For example, 58% of patients with schizophrenia had a value recorded compared with 47% of the remaining population. Of those patients with a recorded value, 30% of patients with bipolar disorder were obese (i.e. had a body mass index of more than 30 kg/m<sup>2</sup>) and 33% of patients with schizophrenia compared with 20.5% of the remaining population

**Table 6 Recording of body mass index & obesity in patients aged 16-74 in the last 5 years**

		No. of patients	Total	%
Schizophrenia	Body mass index recorded	2047	3503	58.4
	Obesity <sup>1</sup>	680	2047	33.2

<sup>1</sup> Obesity in those with a recording of body mass index

Bipolar Disorder	Body mass index recorded	1163	2135	54.5
	Obesity <sup>1</sup>	346	1163	29.8
Remaining population	Body mass index recorded	621821	1312039	47.4
	Obesity <sup>1</sup>	127639	621821	20.5

## 7.7 Smoking

Recording of smoking status was higher in patients with mental health problems than the remaining population. This could be due to consultation behaviour - if patients with mental health problems attend their GP more often then they have more chance of having smoking status recorded opportunistically. Almost two thirds of patients with a smoking status recorded were smokers compared with about a third of the remaining population. Smoking rates in patients with bipolar disorder were also higher than the remaining population but less marked than that found in patients with schizophrenia

Table 7 Smoking status in last 5 years for patients aged 16-74 years

		No. of patients	Total	%
Schizophrenia	smoking status recorded	2345	3503	66.9
	smoker <sup>2</sup>	1439	2345	61.4
Bipolar Disorder	smoking status recorded	1368	2135	64.1
	smoker <sup>2</sup>	622	1368	45.5
Remaining population	smoking status recorded	704692	1312039	53.7
	smoker <sup>2</sup>	230485	704692	32.7

<sup>2</sup> Status of current smoker recorded in those with a recording of their smoking habit

## 7.8 Smoking cessation advice

Table 8 shows the recording of smoking cessation advice and prescriptions for smoking cessation treatments in patients within the previous 15 months. Approximately 65% of patients with mental health problems had been advised about smoking cessation which is slightly higher than the 59% of patients from the remaining population

Approximately 10% of patients with either schizophrenia or bipolar disorder had been prescribed a treatment which was slightly higher than that for the remaining population. One explanation for this is that smoking treatments are more likely to be available free on prescription for patients with mental health problems which might make patients consult rather than purchase over the counter therapies.

**Table 8 Smoking cessation advice & treatments in last 15 months for smokers aged 16-74 years**

		No. of patients	Total	%
Schizophrenia	smoking cessation advice	925	1439	64.3
	NRT or bupropion	135	1439	9.4
Bipolar Disorder	smoking cessation advice	409	622	65.8
	NRT or bupropion	63	622	10.1
Remaining population	smoking cessation advice	135615	230485	58.8
	NRT or bupropion	17539	230485	7.6

## 7.9 Blood pressure monitoring

Blood pressure was recorded in the last five years in 59% of patients with schizophrenia, 74% of patients with bipolar disorder and 44% of the remaining population.

Of those with a recorded value, 82% of patients with schizophrenia had a normal value recorded, 77% of patients with bipolar disorder and 77% of the remaining population.

**Table 9 Blood pressure recording in the last 5 years in patients aged 16-74 years**

		<b>No. of patients</b>	<b>Total</b>	<b>%</b>
Schizophrenia	Blood pressure recorded	2069	3,503	59.1
	Blood pressure controlled (<=150/90mmHg) <sup>3</sup>	1692	2069	81.8
Bipolar Disorder	Blood pressure recorded	1570	2135	73.5
	Blood pressure controlled (<=150/90mmHg) <sup>3</sup>	1205	1570	76.8
Remaining population	Blood pressure recorded	570930	1312039	43.5
	Blood pressure controlled (<=150/90mmHg) <sup>3</sup>	439010	570930	76.9

<sup>3</sup> Blood pressure controlled under or equal to 150/90 in those with a blood pressure recorded

## 7.10 Prevalence of major diseases

The next table shows the prevalence of five major diseases in patients with and without mental health problems in patients aged 16-74 years. The true population prevalence of each disease is higher than this since every disease is more common in patients over the age of 74 years.

Ischaemic heart disease was most common in patients with bipolar disorder where the prevalence was 5.1%. It was also more common in patients with schizophrenia (4.0%) than the remaining population where the prevalence was 2.7%.

Diabetes was almost three times as common in patients with schizophrenia (6.4%) as in the remaining population (2.3%). It was also more common in patients with bipolar disorder where the prevalence was 4.1%.

Similarly, stroke, hypertension and epilepsy were substantially more common

**Table 10 Prevalence of disease in patients age 16 to 74 years**

		No. of patients	Total	%
Schizophrenia	Ischaemic heart disease	139	3503	4.0
	Stroke	60	3503	1.7
	Hypertension	421	3503	12.0
	Epilepsy	26	3503	0.7
	Diabetes	223	3503	6.4
Bipolar Disorder	Ischaemic heart disease	108	2135	5.1
	Stroke	32	2135	1.5
	Hypertension	313	2135	14.7
	Epilepsy	15	2135	0.7
	Diabetes	87	2135	4.1
Remaining population	Ischaemic heart disease	35130	1312039	2.7
	Stroke	11537	1312039	0.9
	Hypertension	127110	1312039	9.7
	Epilepsy	4250	1312039	0.3
	Diabetes	29956	1312039	2.3

## 7.11 Cervical smears

Table 11 shows uptake of cervical smears in patients aged 25-64 years in the last 5 years. The figures are slightly lower than the national average as the preferred codes in the new GMS contract are slightly restricted.

Patients with schizophrenia had substantially lower uptake rates than either patients with bipolar disorder or the remaining population. Just under 2/3<sup>rd</sup> of patients with schizophrenia had evidence of a cervical smear compared with 3/4 of the remaining population. Interestingly, the rates for patients with bipolar disorder were similar to the remaining population.

**Table 11 Cervical smears in women aged 25 to 64 years in the last 5 years**

		No. of patients	Total population	%
Schizophrenia	smear done	658	1048	62.8
Bipolar Disorder	smear done	745	1014	73.5
Remaining population	smear done	335994	462231	72.7

## 7.12 Mammography

Unlike with cervical cytology, patients are not recalled for mammography by their general practice. It is done via central registers held by Primary Care Trusts. Therefore the data held on general practice databases, such as QRESEARCH, is likely to be incomplete. Many practices will only record suspicious or positive mammograms, while others will attempt to record all mammograms. This is likely to explain why, in this analysis of general practice data, 49% of women in the remaining population had mammography recorded whereas the national rate is nearer 70%. However, it is notable that the uptake of mammography in both women with schizophrenia and with bipolar disorder is lower than that for the remaining population.

**Table 12 Mammography in women aged 50-64 in the last 5 years**

		No. of patients	Total	%
Schizophrenia	mammography	222	551	40.3
Bipolar Disorder	mammography	213	515	41.4
Remaining population	mammography	76919	157459	48.9

### 7.13 Clinical indicators for ischaemic heart disease patients

This next section reports on the care of patients with ischaemic heart disease. 86% of patients with schizophrenia and ischaemic heart disease had a blood pressure reading recorded compared with 92% of the remaining population with ischaemic heart disease. 67.6% of patients with schizophrenia and ischaemic heart disease had a recent cholesterol test compared with 79.9% of the remaining population. Whilst recording levels were slightly lower, the achievement of target values for cholesterol and blood pressure were similar to the remaining population of patients with ischaemic heart disease and levels of treatment with aspirin were good.

Compared with the remaining population, patients with bipolar disorder had similar levels of recording and blood pressure although they were less likely to have satisfactory blood pressure or cholesterol values indicating a possible element of under-treatment

**Table 13 Blood pressure & cholesterol in the last 15 months in patients with ischaemic heart disease aged 16-74 years**

		No. of patients	Total	%
Schizophrenia	BP recorded in last 15 months	120	139	86.3
	BP <=150/90 mm Hg	104	120	86.7
	Cholesterol done in last 15 months	94	139	67.6
	Cholesterol within target (< =5 mmol/l)	65	94	69.1
	On aspirin	118	139	84.9
Bipolar Disorder	BP recorded in last 15 months	100	108	92.6
	BP <=150/90 mm Hg	75	100	75.0
	Cholesterol done in last 15 months	89	108	82.4
	Cholesterol within target (< =5 mmol/l)	54	89	60.7
	On aspirin	87	108	80.6
Remaining population	BP recorded in last 15 months	32244	35130	91.8
	BP <=150/90 mm Hg	26083	32235	80.9
	Cholesterol done in last 15 months	28067	35130	79.9
	Cholesterol within target (< =5 mmol/l)	20100	28067	71.6
	On aspirin	28726	35130	81.8

## 7.14 Clinical indicators for stroke patients

There was a slightly different pattern for the care of stroke patients. Only 48% of stroke patients with schizophrenia had a cholesterol test in the last 15 months compared with 63% of the remaining population. Of those with a value recorded, only 52% had a value below 5 mmol/l compared with 63% of general stroke patients. 63% of patients with schizophrenia were on aspirin (either prescribed or over the counter) in the last 15 months compared with 68% of general stroke patients.

Overall care for patients with bipolar disorder was similar to general stroke patients except a lower percentage had acceptable cholesterol levels (53% compared with 63%).

These findings suggest under-treatment of hyperlipidaemia in patients with mental health problems compared with the remaining population. However these data must be treated with caution since the numbers are small.

**Table 14 Blood pressure & cholesterol in the last 15 months in stroke patients aged 16-74 years**

		No. of patients	Total	%
Schizophrenia	BP recorded in last 15 months	48	60	80.0
	BP <=150/90 mm Hg	37	48	77.1
	Cholesterol done in last 15 months	29	60	48.3
	Cholesterol within target (< =5 mmol/l)	15	29	51.7
	On aspirin	38	60	63.3
Bipolar Disorder	BP recorded in last 15 months	27	32	84.4
	BP <=150/90 mm Hg	24	27	88.9
	Cholesterol done in last 15 months	21	32	65.6
	Cholesterol within target (< =5 mmol/l)	11	21	52.4
	On aspirin	23	32	71.9
Remaining population	BP recorded in last 15 months	9839	11537	85.3
	BP <=150/90 mm Hg	7549	9837	76.7
	Cholesterol done in last 15 months	7242	11537	62.8
	Cholesterol within target (< =5 mmol/l)	4550	7242	62.8
	On aspirin	7883	11537	68.3

### 7.15 Clinical care of patients with hypertension

In this section we report on the care of patients with hypertension. We found no difference between the three groups of patients with respect to recording or level of control of blood pressure. Overall two thirds of patients had a last blood pressure reading within the target range but less than half have acceptable cholesterol levels.

**Table 15 Blood pressure recording & control in patients with hypertension aged 16-74 years**

		No. of patients	Total	%
Schizophrenia	BP recorded in last 15 months	378	421	89.8
	BP $\leq$ 150/90 mm Hg	248	378	65.6
	Cholesterol done in last 15 months	228	421	54.2
	Cholesterol within target ( $\leq$ 5 mmol/l)	102	228	44.7
Bipolar Disorder	BP recorded in last 15 months	294	313	93.9
	BP $\leq$ 150/90 mm Hg	195	294	66.3
	Cholesterol done in last 15 months	164	313	52.4
	Cholesterol within target ( $\leq$ 5 mmol/l)	69	164	42.1
Remaining population	BP recorded in last 15 months	116093	127110	91.3
	BP $\leq$ 150/90 mm Hg	77802	116074	67.0
	Cholesterol done in last 15 months	70995	127110	55.9
	Cholesterol within target ( $\leq$ 5 mmol/l)	31771	70995	44.8

## 7.16 Clinical care of patients with epilepsy

The next table shows the number of patients with frequency of fits recorded and the number who have been free from seizures in the last 15 months. It is difficult to conclude very much about this as the codes had only just started to be used in response the new GMS contract for GPS. Also, there were only 26 patients with schizophrenia and epilepsy and 15 patients with both bipolar disorder and epilepsy.

**Table 16 Recording & frequency of seizures in patients with epilepsy aged 16-74 years**

		No. of patients	Total	%
Schizophrenia	frequency of fits recorded	9	26	34.6
	fit free for 15 months	6	26	23.1
Bipolar Disorder	frequency of fits recorded	8	15	53.3
	fit free for 15 months	9	15	60.0
Remaining population	frequency of fits recorded	1133	4250	26.7
	fit free for 15 months	823	4250	19.4

## 7.17 Clinical care of patients with diabetes

In this section we look at the care and clinical control of patients with diabetes. In the remaining population diabetes is nearly as common as ischaemic heart disease, and in those with schizophrenia its prevalence is 1.5 times that of ischaemic heart disease. This may be partly due to the increased rate of obesity in this group. Diabetes is associated with a higher level of morbidity and marked decrease in life expectancy. It is therefore an important disease to consider in this context. In table 18 we demonstrate that there is a lower level of recorded screening for pulses and retinopathy, but recording of blood pressure and glycaemic control is better than in the remaining population, and disease control measures (HbA1c and BP) are broadly similar.

**Table 17 Clinical indicators for patients with diabetes aged 16-74 years**

		No of patients	total	%
Schizophrenia	HBA1C checked	194	223	87.0
	HBA1C under 7.5%	112	194	57.7
	HBA1C under 10%	176	194	90.7
	Retinal screening done	112	223	50.2
	Pulses checked	80	223	35.9
	Neuropathy checks done	41	223	18.4
	BP recorded	209	223	93.7
	BP under 145/85	136	209	65.1
	Cholesterol checked	188	223	84.3
	Cholesterol <=5 mmol/l	110	188	58.5
Bipolar disorder	HBA1C checked	82	87	94.3
	HBA1C under 7.5%	52	82	63.4
	HBA1C under 10%	78	82	95.1
	Retinal screening done	53	87	60.9
	Pulses checked	23	87	26.4
	Neuropathy checks done	12	87	13.8
	BP recorded	82	87	94.3
	BP under 145/85	46	82	56.1
	Cholesterol checked	76	87	87.4
	Cholesterol <=5 mmol/l	49	76	64.5
Remaining population	HBA1C checked	25616	29956	85.5
	HBA1C under 7.5%	12898	25616	50.4

HBA1C under 10%	23125	25616	90.3
Retinal screening done	15874	29956	53.0
Pulses checked	11186	29956	37.3
Neuropathy checks done	6721	29956	22.4
BP recorded	27588	29956	92.1
BP under 145/85	16993	27588	61.6
Cholesterol checked	24375	29956	81.4
Cholesterol <=5 mmol/l	16556	24375	67.9

## 8 Discussion

First we must place caveats around these findings in order to be able to interpret them appropriately. People with severe mental health problems, especially schizophrenia and manic depression (bipolar disorder), have a markedly shorter life expectancy than the remaining population<sup>1-3</sup>. While these facts emphasise the case for this report, they also mean that the prevalent group will not include those who have died before 1st January 2004. The survivors may be untypical of the whole population experiencing severe mental illness.

The second caveat concerns the age distributions of the populations being compared. As tables 1 and 3 demonstrate, those with schizophrenia and manic depression have a skewed age distribution. So when comparing, for example, their health promotion activity compared to the remaining population, there may be significant biases from the different age distributions. This could be overcome by comparing narrower age bands or by adjusting for age in statistical testing (something which was outside the scope of this report).

The third caveat is that some comparisons, particularly between those who have experienced a stroke or have epilepsy, involve relatively small numbers and therefore, where this is the case, there must be caution over interpretation of the findings.

Our fourth caveat is that these indicators only give a narrow view on the total health care received. Whilst each of these indicators has good face validity, can be measured, and has been agreed as a national standard, they are very focused on specific aspects of particular diseases. There is a real need to develop robust, validated and measurable indicators for patients with mental health problems covering other diseases than those considered in this report. Further research is needed to identify levels of physical health outcomes for patients with mental health problems. This includes 'hard end points' such as mortality and malignancy rates but also intermediate measures of health care such as appropriate use of statins in patients at high risk of cardiovascular problems and the outcomes of symptoms such as hoarse voice, rectal bleeding and post menopausal bleeding. There are plans to undertake some of these analyses in the near future.

Our fifth caveat is that equitable access to health care is about patients receiving the level of care appropriate to their level of need rather than 'one size fits all' approach. For example, patients with higher levels of need and greater risk of adverse outcomes (such as patients with schizophrenia clearly who have increased risk of ischaemic heart disease) may need more energetic screening and management and this may need to be done at a younger age to get the maximum health gain possible.

Lastly, and arguably most importantly, this analysis only covers patients who are registered with a general practitioner and who have had the diagnosis of schizophrenia or manic depression recorded on computer. There are some people (e.g. those in prisons or other institutions or others not registered with a general practitioner) who may not be accessing primary care at all. This report is unable to consider this important group, many of whom may be in deprived or disadvantaged areas and known to community mental health teams.

Having expressed those caveats, the findings in this report can be used to throw light on any inequalities in the care of those with schizophrenia and manic depression.

We know from the literature that people with severe mental illnesses have a higher mortality from diabetes and ischaemic heart disease (among other excess risks) compared with the remaining population<sup>1-3</sup>. Although this report has not looked at survival and mortality, it has shown (table 11) the expected excess<sup>4-6</sup> in ischaemic heart disease, stroke, hypertension, epilepsy and diabetes among those with schizophrenia and manic depression compared with the remaining population. Since all these five diseases are associated with lowered life expectancy in their own right, this finding fits with current knowledge and understanding.

The higher rate of smoking (table 8) in those with severe mental illness is expected<sup>7</sup>, with 61% of those with schizophrenia (and with smoking status recorded) being current smokers, compared with 33% in those aged 16-74 years in the remaining population. The higher level of weight and obesity in those with severe mental illness (table 7) was also expected, and this may explain some of the increased risk of diabetes<sup>6</sup>.

The higher rates of smoking and obesity in those with severe mental illness may, therefore, be key contributors to the excess in hypertension, stroke, ischaemic heart disease and diabetes<sup>8-9</sup> alongside the increased risk of cardiovascular disease from psychotropic medication<sup>5-10-13</sup>. And the more recent atypical antipsychotic drugs may have an independent contribution towards the development of diabetes<sup>14</sup>.

This evidence argues for special efforts to minimise lifestyle risks and to ensure health promotion in those with major mental illness<sup>8-15-16</sup>. The finding in this study that more people with schizophrenia (64%) and manic depression (66%) had recorded smoking advice than the same age group in the remaining population (59%) offers some mild reassurance. At least the advice rate is not lower than for the remaining population as has been found in other studies<sup>16-18</sup>. The increased rate of prescribing of Nicotine Replacement Therapy or Bupropion is also encouraging, although this may partly reflect

the fact that people with mental health problems are more likely to live in poverty and thus to receive these treatments free from primary care, rather than pay at a pharmacy.

In this study those with severe mental illness also have a higher rate of recording of blood pressure in the previous five years compared with the remaining population; and of those with blood pressures measured more of those with schizophrenia had a normal blood pressure. Again this can be viewed as cautiously reassuring, since it suggests that the health needs of these patients are not being ignored.

Less encouraging is the lower rate of cervical cytology uptake (table 12) among those women with schizophrenia (63% compared with 73% in the remaining population), a finding echoed in the literature but with much less disparity than found here<sup>19 20</sup>. However, it may reflect an underlying attitude that such screening is less appropriate in those women with schizophrenia<sup>21</sup>. The lower rates of recording of mammography (table 13), while being in keeping with other reports<sup>22</sup>, must be treated with caution. Since mammograms are not undertaken by general practices, the recording is likely to be less consistent and therefore less reliable. However, there is no reason for us to suspect that recording would differ between the groups and so the lower rate of mammography compared with the remaining population probably reflects lower screening rates.

As already discussed, co-morbidities are more common among those with severe mental illness (Table 11): 4% of those with schizophrenia and 5.1% of those with manic depression have ischaemic heart disease compared to 2.7% in the remaining population (without adjustment for the different age distributions). Table 14 shows that, broadly, these patients are receiving the same level of care (recordings of blood pressure and cholesterol) and achieving the same levels of disease control as the remaining population (with the possible exception of cholesterol levels in those with bipolar disorder).

There are small numbers of patients with severe mental illness and stroke, but within the limits of interpretation, their care and disease control (table 15) is not remarkably different from the remaining population. Again, looking at the care for people with hypertension (table 16), those with severe mental illness have similar care and disease control compared with the general population.

The last major co-morbidity that we examined was diabetes (table 18) and this confirms the findings in other disease areas. The differences in care and disease control are small and inconsistent. Overall there is no real case for significant inequalities in health care.

While there is evidence of inequalities in health need, risk and health promotion, overall, there is little evidence of substantially lower levels of disease intervention or disease control in co-morbidities, nor is there evidence of substantially higher levels of intervention that might be indicated by greater levels of need. There may be some under testing and treatment of hyperlipidaemia in patients with schizophrenia and ischaemic heart disease and those with stroke compared with the remaining population. This is likely to be important given the increase in risk factors and higher prevalence of ischaemic heart disease and stroke in patients with schizophrenia.

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