Liverpool
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Merseyside Mental Health Equity Audit

Equity in access to and provision of mental health services in Merseyside

Janet Ubido
Elaine Church
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A report for the Directors of Public Health, Merseyside PCTs.
Liverpool Public Health Observatory Report Series,
report number 59, December 2004

PROVIDING INTELLIGENCE FOR THE PUBLIC HEALTH

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Contents

There is a supplement to the main report that contains:

- a full literature review (as at Spring 2003)
- further discussion and details of deprivation and needs indicators, including the IMD, the LISI and the MINI.
- Appendix tables

Glossary

ADQs/Star-Pu: ADQs - analytical units produced in order to compare more accurately the prescribing activity of primary care practitioners. *StarPu's* – Specific theraputic group, age/sex related prescribing units.

APC CDS: Admitted patient care commissioning data set

CHAI: Commission for health care audit and improvement (now Healthcare Commission)

CMHT: Community Mental Health Team

CPA: Care Programme Approach, providing a network of care in the community for people with severe mental illness. *Standard CPA:* require support or intervention of one agency; good informal support; little danger to themselves or others. *Enhanced CPA:* multiple care needs, requiring complex inter-agency co-ordination across a range of sectors.

DETR: (former) Department of the environment, transport & the regions

DoH: Department of Health

HEAT: Health Equity Action Team (Central Liverpool PCT)

HES: Hospital Episode Statistics

ICD: International Classification of Diseases

IMD: Index of multiple deprivation

LEO: Lead Executive Officer (now Lead Improvement Officer)

LISI: Low income scheme index (measure of deprivation at practice level)

LIP: Local Implementation Plan

LIS: Local Implementation Strategy

LIT: Local Implementation Team

MINI: mental illness needs index

Neurosis: An abnormal emotional reaction to disturbing situations which does not deprive the person of contact with reality (Okon Ironbar 1983). Includes anxiety and depression.

NSF: National Service Framework

NWPHO: North West Public Health Observatory

ONS: Office for National Statistics

PAS: Patient Administration System

PCG: Primary Care Group

PCT: Primary Care Team

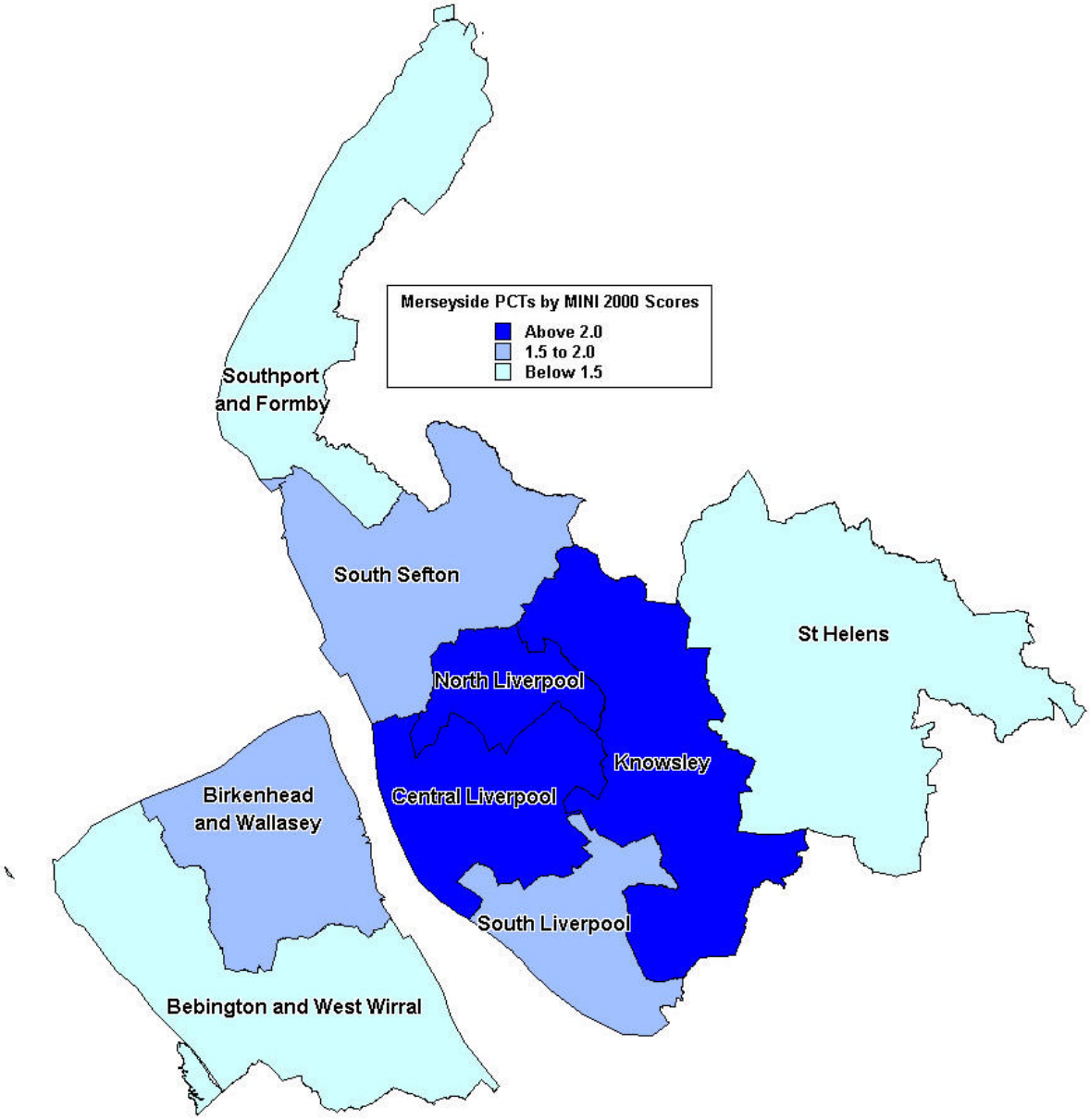
Psychosis: A major mental illness characterised by the loss of mental function with severe disruption of behavioural and affective responses. There is gross distortion of reality (Okon Ironbar 1983). Includes schizophrenia and manic depression.

SAFF: Service and financial framework

SHA: Strategic Health Authority

Map showing the 9 Merseyside PCTs included in the mental health equity audit, by Mental Illness Needs Index score (MINI 2).

Higher scores imply greater mental health care need. The national average is 1. All Merseyside PCTs score more than 1. For detailed MINI scores, see Section 3.3.1.



Map produced by the North West Public Health Observatory

The three Mental Health Trusts serving this area are:

- **Merseycare NHS Trust** (North, South & Central Liverpool, Southport & Formby, South Sefton, and parts of Knowsley PCTs)

- **5 Boroughs Partnership NHS Trust** (St.Helens and parts of Knowsley PCTs)

- **Cheshire and Wirral Partnership NHS Trust** (Birkenhead & Wallasey and Bebington and West Wirral PCTs).

Executive Summary and Recommendations

(see also table at Appendix 1)

1. The Merseyside Mental Health Equity Audit is being undertaken on behalf of the Directors of Public Health of Primary Care Trusts (PCTs) within Merseyside. The aim is to examine equity in access to and provision of services for mental health needs of residents of Merseyside PCTs, using 'readily available' performance measures It is the first time such work has been attempted, and has involved exploring the feasibility of mental health equity audit. It should be regarded as a baseline study, which future audits can modify, or add to and improve upon.

2. The Steering Group compiled a list of 23 indicators early in 2003. In June 2003, letters were sent out to the three Mental Health Trusts and nine PCTs requesting the data. Data collection was a slow process, and information was found to be variable in availability, definition and quality. The Steering Group is now at the end of stage 2 in the audit cycle (figure 1), having reached the stage where recommendations for action have been made. However, for many of the indicators, the equity profile needs to be repeated once data issues have been addressed.

3. 5 Boroughs Partnership NHS Trust was able to supply most of the data that was requested of them. This was also the case for the Merseyside PCTs (see table 3). Merseycare NHS Trust was also very cooperative, but limitations in their data collection systems meant that much of the data they supplied was incomplete. The biggest problem was that the north part of their area had not yet been included in their computer system. Very little data was made available by Cheshire & Wirral Partnership NHS Trust.

4. Of the data that was supplied, there were various problems with quality, e.g.:

- Even though *Readmissions to hospital* is one of the 3 high level performance indicators, estimations were often used by PCTs to fill in gaps in data, and there were problems with definition.
- With *A&E episodes of self-harm*, again data was based on estimations, with problems of definition.
- Data on *Care Programme Approach*, a very important indicator, was extremely limited, being available only for a 'point in time', and not comparable between trusts.
- Different Mental Health Trusts used different definitions when counting *Sections under the Mental Health Act*.
- This was also the case with *occupied bed days*.

5. There were only four indicators for which information on ethnic group was available, and even then, this was not always complete.

6. Data quality issues would suggest that any interpretation of the findings should be treated with caution. Because of missing data, it was often not possible to calculate population-based rates.

7. Equity analysis consisted of an examination of the distribution of the data according to age, sex, deprivation, geography and ethnic group.

Age

8. Data were not always available by age. With GP referrals to Community Mental Health Teams (CMHTs), and mental illness outpatient first attendances, there were higher rates amongst those aged 65+. There were very few recorded referrals and attendances of those aged 65+ to psychology services, compared with those aged 16-64. Either there are problems with the recording of data here, or there is inequity in access to psychological services for the 65+ age group.

9. There were no data for ages 65+ on readmissions to hospital. Amongst young people aged 16-24, males were more likely to be readmitted. For those aged 25-64, more females were readmitted. Suicide was more prevalent in males and people aged 15-54, but older people aged 75+ in St.Helens also had relatively high rates. The highest number of sections under the Mental Health Act were amongst those aged 25-44. This reflects the higher prevalence of psychoses amongst those aged 30-44.

Sex

10. There are statistically significantly higher levels of neurosis amongst women, and higher rates of psychosis in men.

11. GP referrals to CMHTs are more likely to be female, but referrals to psychiatrists are either the same for both sexes, or higher in men. The majority of referrals and attendances at clinical psychology are female. Mental illness first outpatient attendance rates are higher amongst males, and there are more men than women on enhanced Care Programme Approach (CPA).

12. There are more sections under the Mental Health Act amongst males, who are also sectioned at a younger age than females. There are more females than males readmitted in most PCTs. Suicide rates are statistically significantly higher amongst males.

Deprivation

13. The prevalence of psychoses and neuroses is greater amongst people with the characteristics associated with deprivation, so much so that a mental illness needs index (MINI) has been developed that is based on deprivation levels. It would be expected that service provision and use would be higher in deprived areas.

14. However, there was no correlation between CMHT or assertive outreach caseload per head of population, and deprivation. There was no correlation between staffing levels of psychiatrists or other staff and deprivation. If deprivation is taken as an indicator of need, then there would appear to be some inequity in access to mental health services.

15. In three PCTs, there was a statistically significant correlation between deprivation and prescribing of benzodiazepines – but the main factor behind variations in

prescribing patterns would appear to be clinical practice. The distribution of prescribing of the new atypical antipsychotics does not appear to follow need, as prescribing patterns show no associations with deprivation.

16. There was a mixed picture in patterns of service use and the link with deprivation. There were some statistically significant correlations with deprivation in the following:

- GP rate of referral to CMHTs,
- total attendances for psychiatry (in four of the PCTs)

But there was either no association, or very little in other indicators:

- GP referrals to psychiatrists,
- mental illness outpatient first attendances,
- total attendances for psychology.

The stronger correlations for total attendances for psychiatry compared with outpatient first attendances could suggest that those from deprived backgrounds are more likely to have repeated, rather than 'one-off', attendances.

17. As the link with deprivation is not always strong, the most important factor explaining variations between practices is likely to be the clinical practice of the GP. It is possible that some GPs have less access to psychiatrists. Or perhaps some are more reluctant to engage with other services for some reason. As Soomro et al (2002) pointed out, it is likely that variations in clinical practice mask an association between deprivation and psychiatric morbidity at community level, particularly for neuroses. These issues, and reasons for the variation within PCTs, need further exploration. An analysis of referrals by diagnostic category would help to clarify the picture.

18. A&E episodes of self-harm are an indicator of the effectiveness of services. People from more deprived PCTs were statistically significantly more likely to present to A&E with deliberate self-harm. The percentage of people discharged from hospital who were readmitted within 90 days was strongly associated with deprivation, as was the female suicide rate. This would suggest that support services for people living in deprived areas are not sufficient or appropriate.

19. There is a need for more analysis of data at a smaller geographical level than PCT in order to obtain a clearer picture of the relationships between e.g. readmissions, need and deprivation. Data could be grouped together over a period of time to overcome the problem of small numbers. It was possible to carry out analysis of some indicators at practice level, which revealed large variations in deprivation within PCTs, even when there was little variation between PCTs. However, for many indicators, such as readmissions, PCT level data is the smallest geographical level available at present.

Need

20. Liverpool, Knowlsey and St.Helens LITs would require more than £1 million each to reach the average SHA investment levels. In each Merseyside LIT except Sefton, between £3 and £7 million would be needed to achieve equality with national investment. This is despite the fact that the mental illness needs index (MINI 2) shows that all Merseyside PCTs have scores above the national average. Extra funding is

required in Merseyside, so that investment can be redistributed according to need amongst LITs.

21. It was possible to use the MINI 2 on the few occasions where a full set of data by PCT was available. There was no correlation between the MINI and the prescribing of the new atypical antipsychotic drugs. There was a positive, but not statistically significant association between the MINI 2 and the acute bedspaces available per 100,000 population. This suggests that there is still some way to go in matching treatment and service provision to need.

22. Other indicators would suggest that services and treatment are not always provided according to need, e.g. as highlighted by the National Confidential Inquiry data on suicide.

Geography

23. There is a higher prevalence of mental illness in the North West compared to nationally. However, there is evidence of staff shortages and under-funding on Merseyside. All but South Sefton PCT had lower proportions of CMHT staff per caseload than the national average, especially in St.Helens and Central Liverpool. Caseloads per unit population were higher in each Merseyside PCT than nationally.

24. There were large variations between PCTs in proportions of psychiatrists and other CMHT staff, and in caseloads per unit population. As mentioned above, these variations did not appear to follow deprivation or other indicators of need.

25. Prescribing levels of benzodiazepines and atypical antipsychotic drugs in PCTs on Merseyside compared less favourably to the national picture. There was more than a five-fold variation within PCTs, between practices, but less variation between PCTs. This was also the general pattern in measures of service use, such as GP referrals and total attendances for psychiatry and psychology services, although there was also considerable variation between PCTs in the 65+ age group on some of these indicators.

26. Measures of the effectiveness of services include readmissions within 90 days of discharge. With the exception of South Sefton, all Merseyside PCTs have higher rates than nationally. North Liverpool and Southport & Formby PCT levels are statistically significantly under the DoH target. Only St.Helens and Knowsley had lower suicide rates than nationally – rates in Liverpool and Wirral were significantly higher than the national average (1999&2001). There were statistically significant variations between PCTs in levels of A&E episodes of self-harm, with very high rates in North and Central Liverpool, and St.Helens PCTs.

Ethnic group

27. Of the seventeen or more indicators for which it would have been appropriate to collect data on ethnic group, data was only available for four. Where ethnic group was recorded, there were large proportions of ‘not stated’. The method of recording needs checking – it could be that people from ethnic minority groups tend to be recorded as ‘not stated’.

28. In Merseycare NHS Trust, there were fewer GP referrals to adult mental health services than would have been expected amongst people from minority ethnic groups. Conversely, there were six times as many Black people and more than three times as many Irish people than would be expected who were being held under section of the Mental Health Act. This is also twice as high as would be expected from estimates using the National Psychiatric Morbidity Survey. There were also five times as many Black people than expected who were on enhanced CPA. There were around half as many Asian and people of mixed race on Standard or Enhanced CPA than might be expected, and slightly fewer Chinese people, suggesting possible problems in access to care for these groups.

29. The situation is different for the Irish, who are more likely to be held under section, but appear to face no inequities in being referred by GPs to mental health services, or in being placed on CPA.

30. The findings confirm the view in the literature that there are problems of access to primary care for ethnic minority groups, which for some means that they are more likely to develop acute mental health problems, as suggested by the higher proportions of Black people being held under section of the Mental Health Act. Mental Health Trusts need to explore these issues in more detail.

Discussion

31. Despite various problems, including delays in receiving data, different definitions being used and other data being incomplete or unavailable, the profile has nevertheless highlighted some of the inequities in access to, and provision of mental health services for residents of Merseyside.

32. For the next stage of the audit, members of the Mental Health Trusts should be re-invited onto the Steering Group. Other mental health related representatives could also be invited (e.g. service users, Mental Health Strategies, LIT representatives, PCT pharmacy managers, Local Authority and social service representatives, and Mental Health Trust IT managers). Partners should be up to Chief Executive level in their organisation.

33. A smaller number of indicators for further analysis would be more manageable. The extended Steering Group for the next stage of the audit should consider which indicators to include in future. As a priority, they should review data quality, ensuring that there is agreement on clear data definitions and that more complete data is collected.

34. This equity audit has made some recommendations, and is therefore at the end of stage 2 in the audit cycle (figure 1). However, for many of the indicators, the equity profile needs to be repeated once data issues have been addressed. To complete the cycle, recommendations will need to be considered, modified and acted upon, and then monitored by the Steering Group.

Summary of Recommendations

General data issues

1.
    a. Complete data sets should be made available for Cheshire & Wirral Partnership NHS Trust, and for the whole of the Merseycare NHS Mental Health Trust area.
    b. There need to be standard definitions/methods of recording data across all Mental Health Trusts, to ensure comparability of data.
    c. Data quality needs to be checked and improved where necessary.
    d. Once complete data is available from all Mental Health Trusts, then population-based rates by PCT can be calculated for all appropriate indicators.

Psychiatric Morbidity (Section 3.2)

1. Work needs to be undertaken in assessing access to services for women with neuroses, and males with psychoses.
2. Further analysis of psychosis in black and ethnic minority groups and their access to mental health services and primary care needs to be undertaken in Liverpool.
3. The Merseyside PCTs should consider taking part in the next ONS psychiatric morbidity survey, with additional survey work to provide specific estimates for Merseyside, to include ethnic monitoring and access to services.

Vacancy rate for consultant psychiatrists and mental health nurses (Section 3.4.1)

1. Data on wte consultants and mental health nurses in post, and vacancies in each PCT should be made readily available by Mental Health Trust, so that appropriate assessments of equity of provision can be carried out.

CMHT establishment (Section 3.4.2)

1. *Data:*
    a. The University of Durham Centre for Public Mental Health should consider making data available in the form of CMHT per head of population.
    b. Mental Health Trusts should provide up to date complete information on CMHT activity, caseload per head of population, and wte staff. Activity information should be broken down by age, sex, ethnic group and postcode.
    c. Mental Health Trusts should record ethnic group of staff, to help suggest how culturally sensitive services are likely to be, particularly in areas where there is a larger ethnic minority population.
2. Further work is required to examine equity of access to CMHTs, particularly in areas of deprivation – this requires complete data to be made available across the Mental Health Trust catchment area.
3. All Merseyside PCTs need to ensure increased staffing levels to reach the national average, especially St.Helens and Central Liverpool.
4. The high caseload per staff level in St.Helens PCT requires further investigation.

5. Further work is required to explore accessibility of CMHTs to the population aged 65+.

Wholetime equivalent psychologists and psychiatrists (Section 3.4.3)

1. *Data:*
    a. More complete and current population based data is required, so that any inequities in the distribution of staff can be recognised and acted upon.
    b. The recording of ethnic group of psychiatrists and psychologists should be considered, to help suggest how culturally sensitive services are likely to be, particularly in areas where there is a larger ethnic minority population.

Other service mapping data (Section 3.4.4)

1. *Data:*
    a. Mental Health Trusts need to ensure complete and up to date LIP service mapping data sets are available so that equity of access can be further assessed, and effective monitoring of service provision in relation to need can be undertaken.
2. The large variations between PCTs in service provision do not appear to bear any relationship to need or deprivation. This needs to be investigated further by Mental Health Trusts and PCTs. The large differences between PCT rates for psychotherapy referrals would suggest that the reliability of the data needs checking before any firm conclusions can be drawn. Access to psychotherapy should be prioritised.
3. A joint review of acute bedspaces according to need should be undertaken within all Mental Health Trusts.

Planned investment in mental health (Section 3.4.6)

1. *Data:*
    a. The production of data at PCT level as well as LIT level would help to identify specific areas of inequality in the distribution of investment.
    b. Data on the breakdown of funding between specific mental health service provision, (e.g. CMHTs, crisis resolution teams, inpatient care) would be useful in further pinpointing where inequalities in distribution lie.
2. Merseyside PCTs should review spending on mental health services with a view to increasing investment, to enable redistribution according to need amongst LITs.

Benzodiazepine prescribing (Section 3.5.1)

1. *Data:*
    a. Information should be made available on the characteristics of practices, e.g. whether or not there is access to counselling, or to graduate workers etc. This would assist further analysis of factors affecting variations in prescribing habits.
    b. There needs to be some consideration of how age, sex and ethnic group can be considered separately, and what other sets of pharmacy data might be made available.

2. Using the additional data outlined in the previous two points, there should be further analysis in the form of local audits undertaken in PCTs, to review the reasons for variations in prescribing. This would identify specific practices that need to be targeted and supported in reducing prescribing, with prescribing guidelines and access to alternative treatments, such as psychological therapies and social support. For example, it is likely that practices in more deprived areas may need extra support to reduce prescribing.

Atypical antipsychotic prescribing (Section 3.5.2)

1. *Data:*
    a. There needs to be some consideration about how age, sex and ethnic group can be considered separately, and what other sets of pharmacy data might be made available.
2. Local audits should be undertaken involving primary and secondary care clinicians and pharmacists, to examine the factors involved in variations in prescribing patterns within PCTs (especially with regard to patients from Merseycare NHS Trust). The Merseyside audit has shown that people in deprived areas need more equitable access to the new atypical antipsychotic medication. Local audits should explore this further.

GP referrals to CMHTs (Section 3.5.3)

1. *Data:*
    a. All Mental Health Trusts should provide accurate and complete data on GP referrals to CMHTS.
    b. The system of recording ethnic group should be reviewed, e.g. it could be that people from ethnic minority groups tend to be recorded as 'not stated'.
2. A comprehensive review of GP referrals to CMHTs should be undertaken, to include analysis of primary care support, e.g. access to counselling, graduate workers and primary care mental health teams.

GP referrals to psychiatrists (Section 3.5.4)

1. *Data:*
    a. Data on referrals to psychiatrists by practices should be readily available from each Mental Health Trust.
    b. Definitions and methods of recording referrals should be standardised across all Mental Health Trusts.
2. Equity of access to consultant psychiatrists by those from more deprived areas needs to be improved. A review of referrals to psychiatrists and reasons for variation within and between PCTs should be undertaken. This should include analysis by diagnosis, age, sex, ethnic group and deprivation.
3. Reasons for inequity of access by people from ethnic minority groups to primary and secondary care services, and referral patterns of GPs, need further exploration.

GP referrals to clinical psychology (Section 3.5.5)

1. *Data*
    a. As a key NSF indicator, this data should be readily available from each Mental Health Trust, and checked for quality. It is important that full ethnic coding be included.

b. Data on waiting times for first appointments should be made available and would help to identify barriers to accessing psychology services.

2. Analysis by deprivation should be carried out when data becomes available by PCT for each Mental Health Trust.
3. Further work should be undertaken in Newton & Haydock and Kirkby exploring the reasons for the low rates of referrals by GPs to clinical psychology.
4. The general finding of reduced access to clinical psychology by males and those aged 65+ should be further explored.

First attendances at clinical psychology services (Section 3.5.6)

1. *Data:*
    a. Data needs to be made available from each Mental Health Trust.
    b. The quality of data needs checking.
    c. It is important that full ethnic coding be included.
    d. Data on waiting times for first appointments would help to identify barriers to psychology services.
2. Analysis by deprivation should be carried out when data for each PCT becomes available.
3. The reasons for the shortfall in numbers attending, compared to numbers referred by GPs, need to be investigated and acted upon.
4. Further work needs to be undertaken to explore the apparent lack of access to psychology services by males and those aged 65+.

Total attendances for psychiatry and psychology (Section 3.5.7)

1. *Data:*
    a. Data should be made available for psychology referrals.
    b. All data should be available by ethnic group,
2. The stronger correlations with deprivation for total attendances compared with 1st attendances for psychiatry (see section 3.5.8) suggest that those from deprived backgrounds are more likely to have repeated, rather than 'one-off' attendances. This requires further investigation.
3. Further analysis of apparent inequities in access should be undertaken, to ensure that more people from deprived areas, males, and people aged 65+, have access to psychological services
4. Variations between practices need investigating, to ensure that all patients who could benefit from psychiatry and psychology services have an equal chance of receiving them. This should include analysis by age, sex, geography, deprivation and ethnic status. The relationships between deprivation, need, hospital episodes and access to community based services need to be explored further.

Mental illness outpatient first attendances (Section 3.5.8)

1. *Data:*
    a. A full set of data should be available from each Mental Health Trust.
    b. There should be agreed definitions between Mental Health Trusts on what is included in this dataset (e.g. psychotherapy).
    c. Data quality, especially for the over 65s, needs to be checked.
    d. The recording of ethnic group should be mandatory in this dataset.

2. Low rates, especially amongst those aged 16-64 in St.Helens, need further investigation – possible explanations include poor data quality, or lack of access to services.
3. The large variations in rates between PCTs amongst those over 65, and between practices for all ages, need further exploration. Further work should explore the differences between high-referring and low-referring practices, including links to deprivation.
4. It would be useful to collect data on the characteristics of those missing appointments, such as how long they had had to wait for their first appointment.

Occupied Bed Days (Section 3.5.9)

1. *Data:*
    a. Data quality should be investigated and improved in discussion with the three Mental Health Trusts.
    b. Mental Health Trusts need to work together with PCTs to develop a meaningful definition of occupied bed days. There may be complementary definitions that could also be developed.
2. Leave beds should also be included in future analysis, together with total number of beds per head of population

Hospital Admissions (Section 3.5.10)

1. *Data*:
    a. The possibility of obtaining hospital admissions data for mental illness from the NWPHO HES analytical service, and 'mental health service use' from the PCTs, should be followed up.
    b. Data should be presented by age and sex, and ideally by ethnic group, for the lowest geographical level possible, using combined years if necessary.
    c. Solutions to the problems with coding need to be explored.
    d. The possibility of exploring relationships between deprivation, need, hospital episodes and access to community based services at a smaller geographical level than PCT should be considered.
2. The high levels of hospital episodes for schizophrenia are of particular concern on Merseyside. Further analysis should be undertaken to explore the reasons for this.

Detentions under Section of the Mental Health Act (Section 3.5.11)

1. *Data:*
    a. Data quality should be improved, so that future audits can calculate population rates for PCTs, and comparisons with deprivation and need indicators can be made.
    b. There needs to be agreement on a clear definition of which sections of the Act should be included.
    c. Data in each Mental Health Trust should be coded for ethnic group
2. Mental Health Trusts need to explore ethnic differences in more detail to ensure that they are complying with the quality standards laid down by the Mental Health Act Commission.

Enhanced and Standard Care Programme Approach (Section 3.5.12)

1. *Data:*
    a. Mental Health Trusts should gather CPA data annually, rather than simply for a 'point in time'.
    b. Mental Health Trusts should work together to ensure that data is comparable.
    c. Ethnic coding needs to be improved.
    d. Once complete data is available from all Mental Health Trusts, then population-based rates by PCT should be calculated.
2. Issues around ethnic differences require further exploration, e.g. large proportions of Black people on CPA, and smaller proportions of other ethnic minorities, possibly suggesting inadequate access to care

Psychiatric readmissions (Section 3.6.1)

1. *Data:*
    a. As a high level performance indicator, the lack of complete and accurate up to date information on readmissions needs to be addressed by all three Mental Health Trusts.
2. There needs to be further analysis to determine whether high readmissions are due to problems with support in the community, or to poor data quality, or other factors. This should include an examination of the appropriateness of support services for areas and groups with high proportions of readmissions:
    - females aged 25+
    - males aged under 25 (especially in North Liverpool PCT)
    - areas of deprivation

Accident and Emergency episodes of deliberate self-harm (Section 3.6.2)

1. *Data:*
    a. PCTs should work with A&E departments to develop reliable methods of collecting data, and shared definitions of self-harm.
    b. This would enable comparisons to be made with SHA and national level data.
2. Further audit work should include access to mental health specialist consultants, staff attitudes, frequency of self-harm, etc. The links between the availability of crisis resolution and assertive outreach teams, and A&E episodes of self-harm should also be examined.

Suicide among people under care (Section 3.6.3)

1. There is a need for local suicide audit to examine the issues in more detail, e.g. the fact that 75% of those who commit suicide are not in touch with mental health services.
2. The high proportion of suicides amongst people in contact with services in the last week would suggest that risk assessment procedures are inadequate and need reviewing. This should form part of adverse incident reviews.
3. Suicides amongst in-patients, or those very recently discharged, requires urgent exploration, with an exploration of the factors behind such high proportions.
4. The possibility that there are variations in the coding of primary diagnosis should be considered.
5. There is a need for more careful monitoring of people who self-harm, with controlled leave, and improved access to support services.

6. Within suicide audit, the role of alcohol and substance misuse, and access to appropriate services should be explored.
7. There is a need for more support for families of people newly diagnosed with a mental illness, with the early intervention service having an important role.
8. Special attention to these issues is required in the 5 Boroughs Mental Health Trust area, which compares less favourably to the national average and to the other 2 Mental Health Trusts (e.g. the Trust has a statistically significantly higher proportion of suicides within 3 months of discharge from in-patient care). *N.B.the situation in the borough of St.Helens & Knowsley may be different to that in the wider trust area*.

Suicide and injury undetermined (Section 3.6.4)

1. Data should be made available by ethnic group.
2. Suicide levels need continued monitoring at PCT level, so that trends can be identified.
3. Each PCT needs to tailor its preventive work to suit the particular needs of its area, e.g. there needs to be a focus of attention on work with young males and with females in Liverpool.
4. Individual PCTs need to examine the most common mode and place of occurrence of death specific to their area, with special consideration given to these when developing action plans. The combination of several years' data would help to overcome the problem of small numbers here. This should form part of a suicide audit.

General recommendations for further equity audit work

1. Managers from Mental Health Trusts need stronger encouragement to remain involved on the Steering Group (see introduction).
2. Other mental health related representatives should be invited onto the Steering Group (e.g. service users, Mental Health Strategies, LIT representatives, PCT pharmacy managers, Local Authority and social service representatives, and Mental Health Trust IT managers).
3. Future audits should select a smaller number of indicators for analysis.
4. Time should be allowed for discussion and interpretation of results with PCT and Mental Health Trust data providers.
5. A future mental health equity audit may consider looking at the broader picture, including what preventive/health promotion work there is and where the gaps are (e.g. accessibility of counsellors in schools) – according to NSF guidelines. Access to mental health care for disabled people and socially excluded groups, such as homeless people, could be considered. Service provision in the voluntary sector, e.g. MIND could also be included.
6. There needs to be some discussion about the best way to measure deprivation at practice level, e.g. a consideration of the use of super output areas rather than Low Income Scheme Index scores.
7. The primary care needs index should be re-worked, so that, like the MINI 2, it can be updated regularly.
8. The local basket of indicators (see Section 3.3.2) and other possible data sources should be assessed for inclusion in future mental health equity audits. The Health Equity Action Team (Central Liverpool PCT) could become involved in helping to select the most appropriate socially based indicators.

Section 1.
Introduction and summary of the literature.

1.1 Introduction

The Merseyside Mental Health Equity Audit is being undertaken on behalf of the Directors of Public Health of Primary Care Trusts (PCTs) within Merseyside. A group was formed in October 2002 to establish the aim of the equity audit (box 1). The group consisted of representatives of the PCTs and Mental Health Trusts that cover the Merseyside area (see map at front), and also a representative from NIMHE (National Institute for Mental Health in England). Not all of the group remained closely involved, leaving a working Steering Group made up of PCT representatives only, joined by the Director of Liverpool Public Health Observatory and the researcher who would collect and analyse the data.

Box 1

Aim

The purpose of the audit is to examine equity of access to and provision of services for mental health needs of residents of Merseyside PCTs.

Scope of the study

The audit covers:

- all people aged 16 and over;
- all levels of care (primary, secondary, tertiary);
- age;
- gender;
- ethnicity;
- deprivation/ socio-economic factors;
- need; and
- geography.

A list of indicators was compiled early in 2003, based mainly on the DoH consultation document on NHS Performance Indicators (DoH 2002c, and see next section). Data collection began in June 2003. This is the first time such work has been attempted, and has involved exploring the feasibility of mental health equity audit. It should be regarded as a baseline study, which future audits can add to and improve upon. It was decided to use only readily available performance measures. This was to ensure that data collection would not be too time consuming and ensure maximum comparability across the patch. However, information was still found to be variable in definition, quality and availability between Mental Health Trusts and PCTs, and data collection became a very slow process.

Very little data was made available by Cheshire & Wirral Partnership NHS Trust. 5 Boroughs Partnership NHS Trust and the Merseyside PCTs were able to supply most of the data that was requested of them. Merseycare NHS Trust was also very cooperative, but limitations in their data collection systems meant that much of the data they supplied was incomplete. The biggest problem was that the north part of their area had not yet been included in their computer system. There are full details of problems with the availability of data in section 3.1.

Inequality/equity

- *Equality* is the outcome of the fair distribution of resources. *Health inequality* describes unfair differences in health experience and health outcomes between different population groups.
- *Equity* is how fairly resources are distributed. *Health inequity* describes differences in opportunity for different population groups that result in unequal life chances, access to services, etc.

(after Hamer et al 2003)

Health equity audit

The Department of Health 'Priorities and Planning Framework 2003-06' includes a requirement that:

> *'NHS improvement, expansion and reform should narrow the health gap by:…… ensuring that service planning is informed by an equity audit and supported by an annual public health report by the Director of Public Health'*
>
> (p.20, DoH 2002f)

Health equity audits focus on how fairly resources are distributed in relation to the health needs of different groups (Johnstone et al 1996, Hamer et al 2003, DoH 2003c). Evidence about health inequalities is used to propose and implement changes in service planning and delivery.

The latest DoH audit guidance was not available at the at the start of this equity audit (DoH 2003c). It outlines the six stages in health equity audit (Figure 1). The Steering Group is now at the end of stage 2 in the audit cycle (figure 1), having reached the stage where recommendations for action have been made. However, for many of the indicators, the equity profile needs to be repeated once data issues have been addressed. The full audit cycle may take up to 3 years or more. It involves more than merely defining an inequitable pattern of health or health care. It is dynamic, involving a review of the current local position and securing resources to tackle the inequities identified (Hamer et al, 2003).

Health equity audit differs from clinical audit in that it involves resident populations, not just service users. Its primary aim is to improve health outcomes for disadvantaged communities (Hamer et al 2003).

Paper copies: insert figure 1 here

Electronic version – go to page 1 in:

http://www.dh.gov.uk/assetRoot/04/08/41/39/04084139.pdf

1.2 Summary of the literature.

Prior to data collection and analysis, a literature review was undertaken during Spring 2003. Details of search terms used etc. are given in the full literature review (see the supplement to the main report).
The literature review follows the scope of the equity audit, with sections on socio-economic factors, ethnic groups, age and gender, disability, geography, primary and secondary level mental illness and treatment, public health annual reports and health authority reports.

Socio-economic factors
Proportions of people suffering from neuroses or psychoses are higher amongst those in lower social classes (HMSO 2001). There has been much written about the links between mental health and social deprivation, with theories of downward drift or alternatively social causation being put forward as explanations (Moser 2001, Hak 1998). There is much less literature available on inequalities in access, treatment and outcomes relating to mental health services. Ostler et al (2001) noted that they found no UK studies on the influence of deprivation on the outcome of mental illness.

Access
Certain types of care may be less accessible to some groups, for example it has been suggested that White middle-class people have greater access to interventions like talking treatments (MIND 2000a).

Use of services
There is some evidence to suggest that non-attenders at out-patient clinics are more likely to be in lower social classes (Goddard and Smith 2001). On the other hand, greater use of community mental illness services has been found to be associated with higher levels of deprivation (Buckingham and Freeman 1997).

Hospital admissions
In areas defined as 'deprived', it has been found that admission rates to psychiatric hospitals are up to three times higher than the national average (Hatloy 2002, Harwood and Nzuobontane 2002).). A survey of the general population found that poverty and unemployment increase the duration of episodes of common mental disorders (Weich 1998).

The associations are complex. High admission rates may indicate high overall levels of need. They may also suggest a lack of capacity in primary and community based mental health services to manage and contain mental health problems in the community. They may also be related to ease of access to services, and to variations in the diagnosis of mental illness (Pidd and Newbigging 2002). Soomro suggested the importance of variations in clinical practice (Soomro et al 2002).

Treatment
Moser (2001) found steep deprivation gradients in the prevalence of treatment for mental illness. Studies have suggested that good outcome after treatment for depression is predicted by low deprivation, high educational level and being in employment (Ostler et al 2001, Ronalds et al 1997). This could indicate that the more deprived groups receive inferior treatment, have inferior access to services, or that

their environment is keeping them ill, or a combination of these factors (Ostler et al 2001). Ostler et al (2001) noted that it seems there may be an effect of living in a deprived area that may have an influence over and above that of individual deprivation. There is also the possibility that simply being aware of income inequalities may have adverse consequences for mental health (Weich et al 2001).

Ethnic groups

There are large variations between ethnic groups in prevalence of and treatment for mental illness. In the National Psychiatric Morbidity Survey, those assessed as having a probable psychosis were four times more likely to be Black compared with those without psychotic disorder (HMSO 2001). There is much research showing that certain ethnic groups, notably African-Caribbean and Irish people, are over-represented within psychiatric hospitals (Hatloy 2002). People from the Irish Republic are more than twice as likely to be hospitalised for mental distress then their native-born counterparts (MIND 2000b). Black people are up to six times more likely to be detained under section of the Mental Health Act (Koffman et al 1997, Burnett et al 1999, Reid-Galloway 2001, MIND 2000b, Audini and Lelliot 2002).

The over-representation of black people among those apprehended by the police under section of the Mental Health Act was noted in another study by MIND (quoted by Reid-Galloway 2001). African and Caribbean patients are less likely to have seen their GP prior to psychiatric contact (Reid-Galloway 2001).

Once they have entered the mental health care system, black people are **more** likely than others:

- to be assessed as violent,
- to be kept in locked wards,
- to be seen by junior staff,
- to be treated with higher and more frequent doses of medication,
- to be medicated intra-muscularly (which is more painful)
- and to be given physical treatments (drugs and ECT).

they are **less** likely:

- to receive counselling or psychotherapy, especially from a black counsellor, or in a minority language.
- to remain in contact with services and to be seen by senior clinicians in follow-up.

(Reid-Galloway 2001, MIND 2000b, Bhui 1995).

There are fewer black psychiatrists, and psychiatric training is Euro-centric in its approach (Reid-Galloway 2001).

Of all ethnic groups in the Britain, the Irish have the highest rates of suicide (Reid-Galloway and Stewart 2001). Suicide rates among Asian girls aged 15-24 are double national levels (quoted in Worcestershire Health Authority 1998). However, they are no more likely to feel suicidal (Lloyd 1998), suggesting that lack of access to support may be a factor.

Studies of ethnicity and mental illness have focused on secondary care, with an inevitable emphasis on psychosis (Lloyd 1998). Lloyd notes that relatively little work has been done in primary care (where 95% of mental illness is treated) and even less

in community settings. A study by Shaw et al (1999) concluded that low recognition by GPs of mental disorders remains the greatest barrier to care, especially for African Caribbeans, but also for White European people with depression and anxiety. British studies indicate that black people are less likely to receive diagnoses of anxiety or depression in primary care.

Explaining the differences: Explanations have been proposed which are either patient or service based (Davies et al 1996). It has been suggested that high rates of compulsory admission may be attributable to:

- different types of schizophrenia in the black population;
- different perceptions of health services by black patients;
- the police and health professionals treating mentally ill black people differently from their White counterparts. Cultural differences may lead to misunderstandings, with e.g. black people seen as aggressive or threatening, when it may just be their way of talking;
- later presentation to the psychiatric services. Negative views or experiences of psychiatry may lead to black people delaying seeking help. A consequence of delay in seeking psychiatric help is that individuals are more disturbed by the time they reach services. This might lead to an unwillingness to accept the need for treatment, resulting in their enforced detention

(Davies et al 1996, Reid-Galloway 2001, Friedli 2003).

Action

The government's National Service Framework on mental health has acknowledged that people from black and minority ethnic communities are much less likely to be referred to psychological therapies (DoH 1999). The NHS Executive has noted that those responsible for the commissioning and provision of psychotherapy services should monitor their accessibility (Reid-Galloway 2001).

People from black and ethnic minority communities need to be involved in the planning and implementation of mental health services from the outset, rather than being slotted into services which are not tailored to meet their needs (Reid-Galloway 2001).

Age and gender

In the Hampshire Depression Project, it was found that older patients attending general practice were less likely to have improved at 6 weeks, and the retired group at 6 months (Ostler 2001).

In a survey of people attending 8 general practices in Bristol, it emerged that GPs had particular difficulty in detecting depression and anxiety in males, and in younger age groups (Kessler et al 1999). It was thought that this was due to their increased tendency to 'normalise' or play down the significance of any psychological symptoms.

The overall prevalence of mental illness does not appear to differ significantly between women and men. For specific disorders however, clear gender differences emerge. Anxiety, depression and eating disorders are up to one and a half to two times more common in women. Substance misuse and anti-social personality disorders are more common in men (DoH 2002d). Poverty, social isolation, employment

inequalities, child sexual abuse and domestic violence have all been identified as contributing to the mental ill health of women (DoH 2002d).

Women are also more likely to admit to mental health problems and seek help (Barry et al 2001 and Hatloy 2002). The same is true of older people. Also, psychiatrists are much more likely to diagnose women as suffering from a mental health problem than men (Hatloy 2002).

The needs of men should also be considered. Men use primary healthcare services less than women, allowing problems to become more serious. Men are rarely given the choice of having their health needs met by men (DoH 2000).

Disability
Social exclusion amongst people who are deaf affects both their mental health and their access to appropriate mental health services (DoH 2002e). The same could be true for people with other kinds of disabilities. There is no routine data on numbers of disabled people accessing mental health services or treatment. Special surveys would help to highlight inequalities faced by disabled people (e.g. Ubido et al 2002).

Geography
There are often inequalities between geographical areas in access to services and provision of treatment. For example, a recent study of secondary care found a 34-fold variation between Mental Health Trusts in rates of prescribing clozapine, a newer type of 'atypical' drug used to treat schizophrenia. These differences are sometimes linked to deprivation, e.g. in the Wirral, Birkenhead and Tranmere wards had hospital admission rates to acute psychiatric care twice those of England. Heswall, Royden, Thurstaston and Wallasey wards, also on the Wirral, had admission rates half those of England (Harwood and Nzuobontane 2002).

Other mental health equity audits
A search early in 2004 of annual reports of directors of public health in the various English health regions revealed that mental health equity audit/profiles undertaken in Wirral and in South Humber appear to be the only ones of their kind so far. The Wirral Mental Health Equity Audit (Harwood and Nzuobontane 2002) looked at differences between PCTs on the following indicators:

- *Hospital admissions to acute psychiatric care*
- *Emergency psychiatric readmissions*:
- *Number of attendances at psychiatric outpatient appointments:*
- *Whether seen by consultant at outpatient appointment:*
- *Rates of non-attenders and cancellations (patient and health provider)*:
- *Community Psychiatric Nurse(CPN), whole-time equivalent(WTE):*

The South Humber mental health equity profile analysed rates of sectioning and rates of people under the care of mental health services (i.e. on CPA) for each Primary Health Care Team (South Humber 2001).

Although not an equity audit, a project in London recently developed a method for adjusting mental health activity data for need. They focussed on acute admissions, bed days, readmissions, numbers on enhanced CPA and staffing levels. It was found that a significant proportion of variation in mental health activity could be explained by variations in socio-demographic need (McCrone and Jacobson 2004).

A recent survey by Birmingham University found there was very little mental health equity audit work being undertaken by PCTs, and no full mental health equity audits (University of Birmingham, 2004). The Centre for Public Health at Liverpool John Moores University are developing a toolkit to support health equity audit planning (Tocque 2004).

Section 2.
Methods

2.1. NHS Indicators

In a truly national health service patients have a right to expect consistently high standards of treatment and care wherever they live (DoH 2002a). The Government is determined to tackle inequalities in the provision and outcome of health care. They point out that sometimes variations can be partly explained by particular local circumstances, such as the overall prosperity of the area, but in many cases they cannot (DoH 2002a).

The National Service Framework (NSF) for Mental Health was launched in September 1999. It has been developed with the assistance of a group including health professionals, service users, health service managers. Under the NSF, national standards are set, and methods of ensuring progress are established.
A set of performance indicators has been compiled. Health authorities and Mental Health Trusts with deteriorating performance on these indicators are expected to take action locally to improve their position and thus contribute to a narrowing of the health inequalities gap (CHI 2003a&b).

A small number of high-level performance indicators were specified by the NHS Executive. These are collected, analysed, interpreted and published nationally. Data collection for these started in 1998/99. Amongst the 51 high level performance indicators specified by the NHS Executive in February 2002 (DoH 2002a&b), there were three relating directly to mental health: suicide rates, prescribing rate of benzodiazepines, and psychiatric re-admission rate. In addition, a wider range of indicators has been developed for use by health and social care communities in assessing their performance. Indicator sets are constantly being developed and improved as new sources of information become available. Indicators are grouped into different categories according to the NHS Performance Assessment Framework (PAF). There is also a PAF with a set of performance indicators for social services. This includes some 'interface indicators', which also feature in the health authority PAF. This is in recognition of the fact that health and social services must increasingly work together to improve the care that people receive.

Box 2.1
Performance Indicators
? NHS performance indicators
? NHS high level performance indicators
? Social service performance indicators
? SAFF indicators
? LIP submissions
? CHAI

Other indicators include SAFF indicators, LIP submissions, and CHAI (see glossary) (Box 2.1).

Of the NHS performance indicators that should be routinely available, 27 were selected by the Steering Group as being relevant to an analysis of equity in access to and provision of services. They were indicators that should be comparable at small area level. This was to be used to build up a picture of mental health equity in Mersey.

However, it soon became apparent that there would be problems. In practice, the data was not always easily available. There were not always specific definitions of indicators, which could have made it difficult to ensure comparability of data e.g. between PCTs. The Steering Group therefore went through the list of indicators, specifying how each should be defined, and which indicators it would not be possible to use (tables 1 and 2). The list of indicators was compiled early in 2003. In June 2003, letters were sent out to the Mental Health Trusts and PCTs requesting the data.

The three specialist Mental Health Trusts responsible for meeting mental health need on Merseyside are Merseycare NHS Trust, 5 Boroughs Partnership NHS Trust and Cheshire and Wirral Partnership NHS Trust. The nine PCTs in Merseyside are Central Liverpool, North Liverpool, South Liverpool, South Sefton, Southport& Formby, St.Helens, Knowsley, Bebington & West Wirral and Birkenhead & Wallasey (see map at beginning of report).

The details of requests for data were such that an analysis could be carried out in terms of equity, as illustrated in box 2.2.

Box 2.2
Equity analysis:

For each indicator, data was requested by:

- **Age/sex:** *by age group, or ages 16-64 and 65+, depending on availability and how small numbers were.*
- **Ethnic group**
- **Geography:** *by PCT, and also by ward and/or practice where possible.*

data was also to be analysed by:

- **Deprivation:** *where possible, data was to be analysed by the index of multiple deprivation (PCT or ward level data) and the low income scheme index (LISI, for practice level data).*
- **Need:** *data was to be considered alongside indicators of need, where these were available and appropriate.*

Table 1
Performance indicators analysed
The data requested was for the period April 2000 – March 2003 wherever available and unless otherwise specified.

	Performance Indicator (*=high level indicator)	**Source of data**
*1.	***Prescribing rates** for drugs acting on **benzodiazepine** receptors (age and sex standardised). Units to be ADQ's/StarPu.	PCT Pharmacist
2.	**Prescribing of atypical antipsychotics** as a proportion of all antipsychotics units (age and sex standardised). ADQ's/StarPu.	

		PCT Pharmacist
*3 a.	*Number of patients **aged 16-64** who were **re-admitted to the care of a psychiatric specialist within 90 days of discharge**. SAFF Line Number 5316	PCT Information Dept
b.	Psychiatric readmissions of people **aged 65+** to the care of a psychiatric specialist within 90 days of discharge.	North West Public Health Observatory
4.	**Occupied bed days** Number of occupied bed days between 1 April 2002 and 31 March 2003 for patients with mental illness.	Mental Health Trust
5.	Number of **A&E episodes of deliberate self-harm**. SAFF Line Number 5501	PCT Information Dept
6.	Proportion of **people under care of mental health services in the past year** (i.e. on CPA) **committing suicide**. Data to be requested from National Confidential Inquiry level.	National Confidential Inquiry
7.	(see table 2– number of high risk discharges)	
8.	**Vacancy rate for consultant psychiatrists.** At 31st March 2003 wholetime equivalents.	Mental Health Trust
9.	**Vacancy rate for mental health nurses**. At 31st March 2003, wholetime equivalents.	Mental Health Trust
10.	**Standardised hospital admission rates** – for all appropriate ICD10 codes.	NWPHO/ Researcher
11.	**Numbers of sections under the Mental Health Act**	Mental Health Trust
*12.	*** Mortality from suicide and injury undetermined**.	Researcher/ NWPHO
13.	**Number of people on enhanced and standard CPA per head of population registered with a GP.** At 31st March 2003 (snapshot)	Mental Health Trust
14.	Level of **psychiatric morbidity** at PCT level or local authority level or former health authority level. Latest available.	National Psychiatric Morbidity Survey
15.	**Referral rates by GP practices to CMHT's**.	Mental Health Trust
16.	**Number of referrals by GP practices to psychiatrists**,	Mental Health Trust
17.	**Mental illness outpatient first attendances**	Mental Health Trust

18.	Number of **referrals by GP practices to clinical psychology services.**	Mental Health Trust
19.	Number of **first attendances to clinical psychology services**	Mental Health Trust
20.	**Total number of attendances:** **a. Psychiatry** **b. Psychology**	Mental Health Trust
21.	**CMHT establishment per head of population** From LIP stage IV (Durham service mapping data).	Durham website (ages 16-64) / Specialist Trust (age 65+)
22.	**Wholetime equivalent psychologists and psychiatrists** From LIP stage IV (Durham service mapping data).	Durham website
23.	Adjusted **cost of local specialist mental health services**. At PCT level from LIP stage IV.	Mental Health Strategies

The Steering Group decided not to use the following indicators, for the reasons given:

Table 2
Performance Indicators not used, and why

Performance Indicator	Why not used
Ratio of prescribed volumes of benzodiazepines to all anti-depressant drugs	Anti-depressants are also used to treat other conditions (e.g. pain relief, bed-wetting and anxiety).
Delayed discharge rate	The reporting of this is not always reliable enough. It's done as a snapshot – one day will be quite different to another.
High/low/medium length of stay rate	Different definitions are used by different Mental Health Trusts, so data would not be comparable. Also, data was not available for single PCTs.
Out of area admission rate	Data is unreliable – and some Mental Health Trusts are unable to provide it
Deaths associated with schizophrenia at former health authority level.	Not that useful if only at health authority level.
Consultant outpatient 'did not attend' rate	Data may be available from the Mental Health Trusts, but not from PCTs yet. It's not always recorded.
Individuals receiving day care for mental illness	Only 'numbers through the door' available – no idea on how many individuals.
Number of high risk discharges (from inpatient hospital care under a psychiatric specialist) of patients with a current or recent history of severe mental illness and/or	The DoH no longer requires this: PCTs are asked to look at post-discharge policy – and are not now asked to collect numbers.

deliberate self-harm, or who at some time during their admission were detained under the Mental Health Act because of a high risk of suicide, where the patients were followed-up within 7 days (with a face to face contact with a mental health professional)**.**	

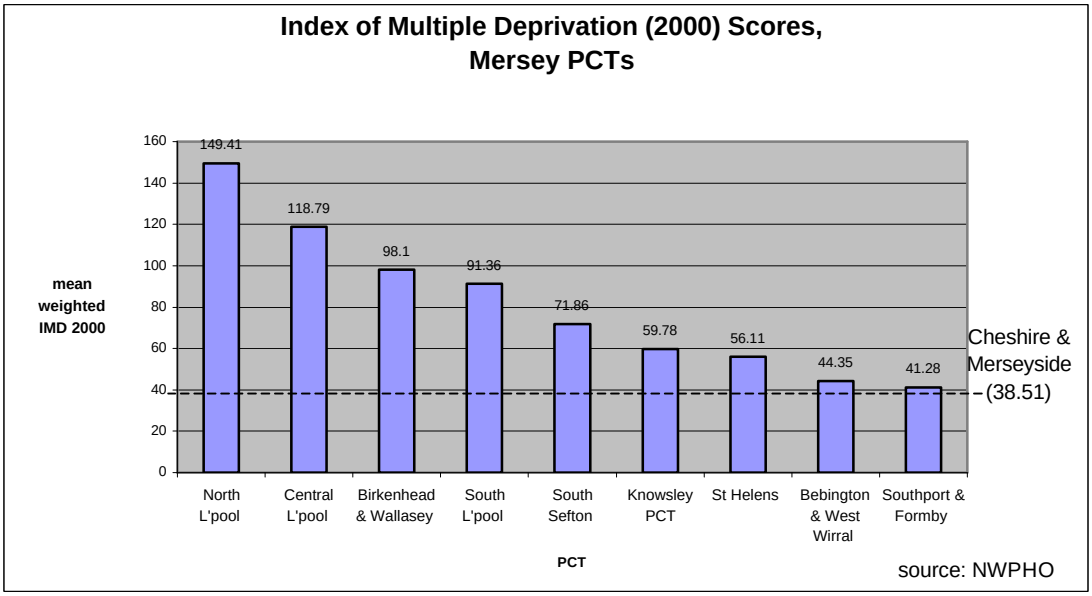
2.2. Deprivation and needs indicators

For the equity profile, the following measures were used to indicate deprivation and need for mental health services. They are especially suitable for indicating need at a small area level:

- IMD 2000 for ward level and PCT comparisons
- Number of patients with free prescriptions for practice level data (LISI)
- MINI 2000 for hospital and acute comparisons

IMD 2000: Ward level deprivation
The index of multiple deprivation (IMD 2000) was designed specifically to indicate deprivation at a small geographical (ward) level. It is recognised as one of the most sensitive tools for describing deprivation in populations at ward level (Lowey et al 2002, Hussey and Johnstone 2001). The NWPHO have recently calculated IMD scores for all the PCTs in the North West (Figure 2) (NWPHO 2003). This was done by mapping wards to PCTs (as with MINI PCT scores).

Figure 2.



There are wide variations in deprivation amongst Mersey PCTs (figure 2) and even greater variations within PCTs. Figure 2 shows that North Liverpool has a deprivation score more than three times higher than that of Southport and Formby. All Merseyside PCTs have scores above the Cheshire and Merseyside score.
The IMD 2004 has recently been released. It replaces ward analysis with the smaller Super Output Areas. Scores are also produced at district and county level. The IMD 2004 has not been considered for use here, because at the time, it had not been calculated by PCT.
(For further discussion of IMD, see the supplement to the main report).

Number of patients with free prescriptions (LISI scores): *Practice level deprivation*

Some of the NHS indicators gathered for the equity profile are based around practice data, for example prescribing rates for benzodiazepines. There is currently no widely acceptable indication of deprivation at practice level with which to link this data.

Box 3
People included in
Low Income Scheme Index

- recipients of family credit & their dependents
- recipients of income support & their dependents
- others qualifying on grounds of low income

It was decided to use the Low Income Scheme Index (LISI), which was the best available measure of practice deprivation. The LISI is based on claims for exemption from the prescription charge on the grounds of low income. The index is calculated and distributed by the Prescribing Support Unit in Leeds and has the advantage that it can be updated annually or even quarterly. The LISI score for a practice is the cost of prescriptions that are exempt on the grounds of low income as a percentage of the cost of all prescriptions (box 3) (PSU 2003). The data to be gathered for the audit covers the time period April 2000 to March 2003. As a mid-point, LISI scores for the period April 2001 to March 2002 were used for comparison.

There are some problems with using the index, for example it is acknowledged that it is likely to be an underestimate of deprivation (Lloyd et al 1995, Roberts 1995). There is a full discussion of the issues around the use of the index in the supplement to the main report.

MINI: secondary mental health care need

The Mental Illness Needs Index (MINI) has recently been developed for use in guiding the allocation of resources in mental health (Glover et al 1998). It is based on the recognition that the types of mental health problem commonly associated with use of specialist care show a greater degree of concentration in areas of social deprivation (CPMH 2002). The MINI was originally derived from selected census variables and developed specifically to predict the population prevalence of psychiatric hospital admission for small areas in the former NE Thames NHS region.

Box 4
Components of the MINI 2

- 2 of the IMD domain scores: *health deprivation and disability'* and '*geographical access to services'*.
- ONS area of residence classification.

In recognition of the fact that census data quickly becomes out of date, a new MINI 2 has been devised, which is based manly on 1998 IMD data (box 4). *(There are more details on how the MINI is calculated in the supplement to the main report).*

Harrison et al (1995) pointed out that whilst measures of social deprivation may indicate need for secondary care services for patients with psychotic disorders, there is no clear relationship between deprivation and admission rates for neurotic disorders. Non-psychotic disorders are generally less acute, so there is more likely to be a relationship between deprivation and demand for primary mental health care.

Glover similarly noted that while the MINI may give a reasonable picture of the distribution of the need for general secondary mental health services, it will not reflect the distribution of primary care level problems (Glover et al 2003).

Section 3.3.1 gives MINI 2 scores for Merseyside wards and PCTs.

Primary Care Needs Index

The Centre for Public Mental Health at the University of Durham have explored ways of estimating mental health care need in primary care (CPMH 2002). They looked at depression and neurotic disorders, for which people commonly consult their GPs. Prevalence data from the 1993 National Psychiatric Morbidity Survey was combined with selected census variables to calculate probable rates of any neurotic disorder and of depression in any area. The index was too out of date to be used in the mental health equity audit. There has been another national psychiatric morbidity survey (HMSO 2001), which could be used in conjunction with the 2001 census data to produce a more up-to-date index, but as yet, there are no plans to do so.

Section 3
Results

3.1 Availability of data: data collection problems

Data collection was a slow process - information was found to be variable in definition, quality and availability between Mental Health Trusts and PCTs.

Mental Health Trusts:
Data was requested from the commissioning managers of the Mental Health Trusts. 5 Boroughs and Merseycare Trusts were very responsive and helpful, and did what they could within the limitations of their information systems. There was less success with attempts to obtain data from Wirral. The situation improved early in 2004, with the appointment of a new information manager based across the two PCTs in Wirral, who agreed to chase up the Wirral Trust data. However, there are still large gaps in the Wirral data.

The main problem with **Merseycare** data was that their information systems only collected data for the area covered by the old North Mersey Community Trust (i.e. excluding Aintree & West Lancs)– so that for many of the indicators, data on residents of parts of north Liverpool and Sefton was missing. It was expected that all parts of the Trust will be on-line from Oct 2004.

5 Boroughs data was more complete, but they still pointed out some limitations in their information systems, e.g. ethnicity in some cases is not available, and in others not very complete – they have only recently started capturing this on their information systems.

Problems with the collection of data on specific indicators are shown in table 3, and listed here:

Occupied bed days: Merseycare and 5 Boroughs used different definitions. Merseycare said they had to use APC CDS data to compile information for this indicator. They said they were only able to supply data for finished consultant episodes and not unfinished episodes at the end of the year. They reported that they could not provide data on occupied bed days, as they do not have information on unfinished episodes at the end of the year. The spreadsheet that they sent lists ‘patient days’ by PCT, for adult & EMI combined.

Vacancy rate for consultant psychiatrists and mental health nurses: Data from each of the Mental Health Trusts was incomplete. Merseycare data was available for psychiatrists, but not by PCT (we did get this from 5 Boroughs). There was no data available on nurse vacancies from Merseycare. 5 Boroughs data included ‘nurses in post’, but not vacancies. Wirral supplied data on vacancies, but not nurses in post.

Sections under the Mental Health Act: There was a problem with definition, because although transfers and re-grades were excluded, Merseycare don’t have anyone on Sections 135/6, and 5 Boroughs do (see section 3.5.11 for further discussion). 5 Boroughs data was complete, except for a lack of meaningful ethnic coding.

Merseycare data was good quality, with data available by age; sex; PCT; first 3 digits of postcode; and ethnic group. But there was no data for the north part of the Trust – so data on parts of north Liverpool and Sefton was missing. This meant that it was only possible to compare proportions of e.g. men and women, or black and white people under section – population-based rates could not be calculated.
Wirral data was not available by PCT – only for the whole of Wirral, and not by ethnic group.

Official government statistics on sections are only available at district level, and at this level, only for a 'point in time', and not by age or ethnic group. We did consider using social service statistics – but enquiries made in Liverpool revealed that social services rely on the Mental Health Trust for their data on sections.

Numbers on standard and enhanced CPA (care programme approach): For all three Mental Health Trusts, limitations of their information systems meant that they could only get this data on an "as at today" basis. If data was needed for a specific date, they would need this date in advance in order to actually produce the figures on that date. Also, for Merseycare, data was again only available for part of the Trust area. Wirral data was not available by PCT.

GP Referrals to Community Mental Health Teams: It was anticipated that obtaining this data might be a problem, because not all CMHTs would yet be up and running. No data was available for Merseycare, where CMHT referrals are not collected on their Patient Administration System (PAS). Where data was collected it was a manual paper record. No data was available for Wirral.

GP Referrals to psychiatrists: 5 Boroughs were able to supply this data, but not Wirral. For Merseycare, again data was only available for part of the Trust area, and for referrals to 'the service' only – not psychiatrists in particular**.**

Mental illness outpatient 1st attendances:
Wirral data was not available by age or sex**.** In Merseycare, ethnicity for this indicator was not available, as they reported that it is not mandatory in this data set. Activity for some services like psychotherapy is missing too as the data is not held on a PAS. 5 Boroughs did supply data, but as with all their data, not by ethnic group.

GP referrals to clinical psychology:
Number of first attendances to clinical psychology services:
Total number of attendances for psychiatry and psychology :
For these three indicators, Merseycare reported that there are no datasets for psychology – only manual records. The Southport service was able to provide data on number of referrals by GP practice to clinical services April 2002 - March 2003.

Data was available from 5 Boroughs, but not Wirral.

Table 3. Availability of data

(i = incomplete, ✓=data available, X=data unavailable)

Indicators requested from Mental Health Trusts	MCare	5Bs	Wirral
Occupied bed days	✓?	✓	X
Vacancy rates	i	i	i
Sections under the Mental Health Act	i	✓	i
Numbers on CPA	i	✓	i
GP referrals to CMHTs	X	✓	X
GP referrals to psychiatrists	i	✓	X
Mental illness outpatient 1st attendances	✓	✓	i
GP referrals to clinical psychology	X	✓	X
Clinical psychology 1st attendances	X	✓	X
Total attendances for psychiatry & psychology	i	✓	X
CMHTs per head of population (age 65+)	i	✓	X

Indicators requested from PCTs	
Benzodiazepine prescribing	✓ for all PCTs
Atypical antipsychotic prescribing	✓ for all PCTs
Readmissions within 90 days of discharge	✓ but quality low, & n/a for Wirral PCTs
A&E episodes of deliberate self-harm	✓ but quality low

Indicators requested from elsewhere	
Hospital admissions	NWPHO: Raw data only, & n/a by age i
Readmissions of over 65s	NWPHO: Data quality poor i
Suicide	DoH & PCTs ✓
Suicide amongst people under care	From confidential enquiry ✓
Wte psychologist & psychiatrists	Durham website (LIP Stage IV) ✓
Cost of m.h.services, at PCT level	Mental Health Strategies ✓
Psychiatric morbidity	From national survey ✓
CMHTs per head of population (adult)	From Durham Univ. website ✓ (for 2002)
Mental Illness Needs Index	(MINI) from Durham Univ. website ✓

Primary care needs index	From Durham Univ. ✓
Index of Multiple Deprivation	From DoH website ✓

Community Mental Health Teams per head of population: Merseycare did not have data for ages 65+ - only 16-64. Data was available from 5 Boroughs, but not Wirral. Data by population from the Durham website was not up to date.

PCTs:
There was more success with data requests made to PCTs. Full sets of data were received from pharmacy departments at the PCTs on the two prescribing indicators. There were some problems with the other two indicators:

Readmission to care within 90 days of discharge: - this is one of the government's high level performance indicators, and yet PCTs reported that data quality is poor. Knowsley PCT information department pointed out that PCTs rely on getting the data from their main mental health providers, therefore the majority of the time they either get some information and have to estimate for other Mental Health Trusts, or they don't get any information at all. Numbers would be too small for an analysis by practice. Wirral provided limited data.

A&E episodes of deliberate self-harm: A&E data may be relatively poor for a number of reasons. - but they pointed out that data quality is likely to be poor for everybody. This data has only recently started to be collected, so there is no previous years' data. Wirral data was available, for this indicator by PCT.

Data requested from elsewhere:
With the exception of hospital admissions and readmissions of people age 65+, the data relating to the remaining indicators was successfully obtained (see table 3).

Hospital admissions and readmissions: The North West Public Health Observatory (NWPHO) were approached for data on hospital admissions, and on readmissions within 90 days of discharge for the over 65s. However, the data on these two indicators was only available in raw form. Hospital admissions were not available by age group, which meant that it was not possible to calculate directly standardised rates. NWPHO said that there were various problems with the data, including variations in coding. They said that there are possible remedies, but that these are difficult to apply, especially in the case of readmissions data.

The raw data on hospital admissions from NWPHO was used to calculate standardised episode ratios, but as yet, this has not been done by age or sex. In future, the NWPHO will consider making this data routinely available through its Hospital Episode Statistics analytical service.

Equity analysis:
Wherever possible, data was considered by age, sex, geography and ethnic group. The index of multiple deprivation (IMD), and the mental illness needs index (MINI) were

also used to analyse data. A summary of the equity analysis is given in the table in the appendix of this report.

3.1 Availability of data: data collection problems

Key points

Data collection was a slow process - information was found to be variable in definition, quality and availability between Mental Health Trusts and PCTs.

Recommendations

Recommendations on improving data quality for each indicator are made in each subsequent section of the report.

3.2 Psychiatric Morbidity

Data requested: Level of psychiatric morbidity at PCT level, local authority level or former health authority level. Latest available.
Data sources: National Psychiatric Morbidity Survey (HMSO 2001); Psychiatric morbidity in Liverpool (Singleton and Lee 2002); 2001 Census, ONS neighbourhood statistics.

The latest in a series of National Psychiatric Morbidity Surveys was carried out by the Office for National Statistics in 2000 (HMSO 2001). Liverpool Health Authority commissioned additional survey work in Liverpool to provide estimates for their health authority area, and produced a separate report (Singleton and Lee 2002). The Liverpool survey was based on a relatively small sample of 300.The surveys aimed to provide estimates of prevalence of mental health problems amongst adults living in private households. They also examined the use of services (including medication) and the receipt of care.

A detailed report on morbidity has been produced for the mental health equity audit. It includes extracts from the national and Liverpool surveys, with a closer look at the survey data on personal & social characteristics, linking it with census data for the population of Merseyside (Ubido 2004b). A summary is presented here.

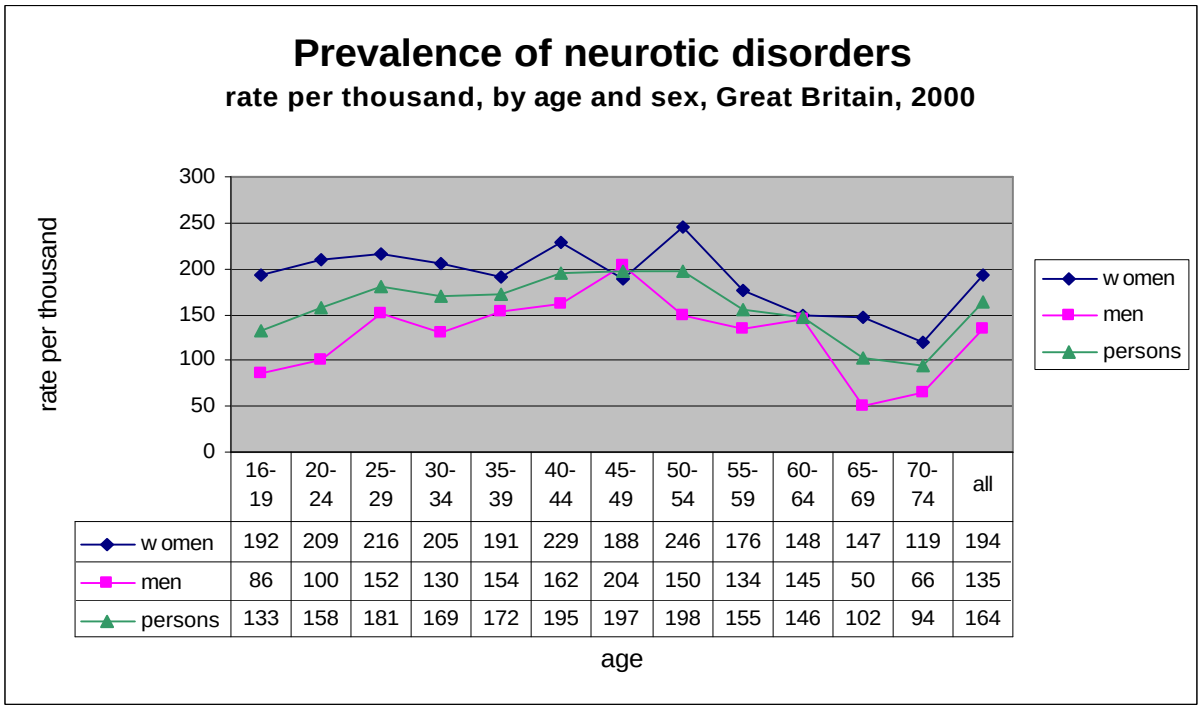
Neuroses
Around 1 in 6 of all adults reported some form of neurotic disorder (figure 3). The highest regional prevalence of any neurotic disorder occurred in the North West, with a rate of 1 in 5. In Liverpool, the rate of 1 in 4 was even higher, statistically significantly higher than the national figure (table 4).

Prevalence rates were statistically significantly higher among women than men. This was true for most age groups, except amongst those aged 45-49. Amongst Liverpool women, there was a prevalence of neurotic disorder of 1 in 3 – over 60% above the national rate (table 4).

Across Britain, the highest prevalence was found amongst those aged 45-54, where 1 in 5 had neurotic disorder. This was statistically significantly higher than the lowest rate, which was found among older people aged 65+ (1 in 10), especially males. Rates amongst young men aged 16-19 were also low.

South Asian and 'other' adults had higher rates of prevalence for most neurotic disorders than their white counterparts, while black adults appeared to have lower rates.

Figure 3



Source: Psychiatric Morbidity Survey, HMSO 2001

Table 4
Prevalence of neurotic disorders (rate per thousand)
by region & sex

	Liverpool	North West (including Lpool)	Gt. Britain
Women	318	252	194
Men	182	154	135
Persons	246	203	164

Source: Psychiatric Morbidity Survey, HMSO 2001; Singleton and Lee, Psychiatric Morbidity Survey, 2002

Treatment & service use
Large numbers of those with neurotic disorder are receiving no treatment at all (76%, table 5).
Table 6 shows that as many as 61% of those with a neurotic disorder had **not** consulted their GP in the previous 12 months about a mental or emotional problem.

Of those with neurotic disorder, 84% had **not** used community care services in the last year.

Table 5
Treatment received for mental or emotional problems

	Gt. Britain	
%	Neurotic disorder	No neurotic disorder
no treatment	76	96
medication only	15	3
counselling or therapy only	4	1
both medication & counselling	5	0

Source: HMSO 2001; Singleton and Lee 2002

Around 1 in 10 of community services are turned down, which would suggest that the appropriateness of some community services needs to be reviewed.

Both nationally and especially locally, there are large proportions of people with neurosis who are not accessing services and treatment.

Access to services for those with neurotic disorders, especially women, needs to be targeted as a priority.

Table 6
Services used by those with and without neurotic disorder

	Gt. Britain	
%	Neurotic disorder	No neurotic disorder
spoken to GP in last year	39	6
outpatient visit in last quarter	3	0
inpatient stay in last quarter	1	0
use of community care service in last year	16	4
turned down a community service in last year	9	2

Source: HMSO 2001; Singleton and Lee 2002

In the Liverpool survey, data available on treatment and service use were based on very small numbers, so are not included here.

Social deprivation.
Compared to those with no neurotic disorder, those with neurotic disorder were more likely to:

- be separated or divorced (twice as likely);
- be living as a lone parent family unit;
- be tenants of the local authority or a housing association;
- have a long-term limiting illness;
- come from a lower social class;
- be economically inactive and
- have no formal educational qualifications

(HMSO 2001)

The populations of Liverpool and Knowsley tend to have more of the characteristics that are more prevalent amongst people with neurosis. The other local authorities on Merseyside also share some of these characteristics, with higher proportions than the national average of lone parents, long-term limiting illness and people with no qualifications, and lower proportions in employment (see full psychiatric morbidity report for details - Ubido 2004b).

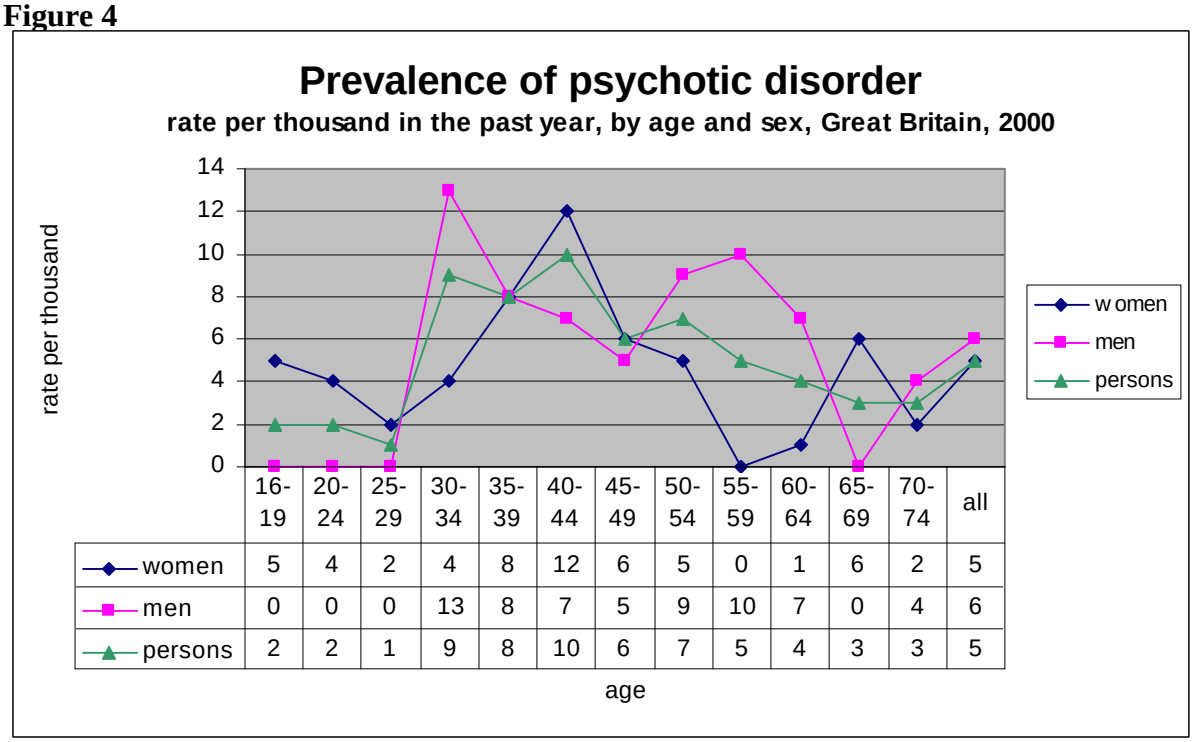
Psychoses
The prevalence rate for psychotic disorder was 5 per 1,000, with a concentration of cases amongst those aged 30-44 (figure 4).

Nationally, there was little difference between the sexes in overall rates. There was more of a difference in the North West, where the male rate was 8 and the female rate was 5 per thousand (table 7).

Prevalence of psychosis amongst black people was more than three times greater than amongst white people (table 8). Although no local prevalence data was available by ethnic group, data elsewhere in this report show that on Merseyside, black people are over-represented amongst those under section of the Mental Health Act (3.5.11) and those on CPA (Care Programme Approach: 3.5.12). Psychosis amongst black people in Liverpool should be of special concern, where proportions of black people resident are around six times higher than in the other local authorities in Merseyside. Numbers of South Asian and people from 'other' ethnic groups with psychosis were too small to appear as rates in table 8.

The high prevalence amongst black people links with the finding that black people are over-represented in psychiatric hospitals, and up to six times more likely to be detained under section of the Mental Health Act, (Reid-Galloway 2001, MIND 2000b, Audini and Lelliot 2002 – also discussed earlier in the literature review). There is a debate as to whether black people are actually more likely to have psychosis, or are simply more likely to be mis-diagnosed, for reasons such as cultural misunderstanding. It is possible that the interview schedule used in the morbidity survey was not culturally sensitive enough, and was more likely to mis-classify black people.

Figure 4



Source: Psychiatric Morbidity Survey, HMSO 2001

Table 7
Prevalence of probable psychotic disorder (rate per thousand in past year)
by region & sex

	North West	Gt. Britain
women	5	5
men	8	6
persons	6	5

Source: HMSO 2001; Singleton and Lee 2002

Table 8
Prevalence of probable psychotic disorder (rate per thousand in past year)
by ethnicity & sex

	white	black	south asian	other	all
women	5	17	_	_	5
men	6	18	_	_	6
persons	5	18	_	_	5

Source: HMSO 2001

Treatment and service use
Of those with a psychotic disorder, 15% were receiving no treatment at all (table 9).

More than 1 in 4 (29%) of those with a psychotic disorder had not spoken to their GP in the last 12 months about a mental or emotional problem (table 10).

Almost half of those judged to have psychotic illness had not used any community care service in the previous twelve months. There were 7% who had turned down a service in the last 12 months.

Table 9
Treatment received for mental or emotional problems for those with and without a psychotic disorder

%	Probable psychosis	No psychotic disorder
no treatment	15	93
medication only	44	5
counselling or therapy only	1	1
both medication & counselling	39	1

Source: HMSO 2001

Table 10
Services used by those with and without psychotic disorder

%	Probable psychosis	No psychotic disorder
spoken to GP in last year	71	11
outpatient visit in last quarter	28	1
inpatient stay in last quarter	6	0
day care service used in last year	37	1
use of community care service in last year	51	6
turned down a service in last year	7	3

Source: HMSO 2001

Social deprivation
Those with a probable psychosis are even more likely than those with neurosis to have many of the characteristics associated with deprivation. Compared to those with no psychosis, they are:

– three times more likely to be separated or divorced;
  or be living as a lone-parent family unit;

- more than twice as likely to be tenants of the local authority or housing association;
- more likely to have a long term limiting illness; or to belong to a lower social class;
- more than twice as likely to be economically inactive;
- more likely to have no educational qualifications.

(HMSO 2001)

As mentioned above (under 'neuroses'), the populations of Liverpool and Knowsley have especially high proportions of residents with the above characteristics. Residents of the other Merseyside local authorities also have high proportions of some of these characteristics when compared with the national average (see full psychiatric morbidity report for details - Ubido 2004b). A high prevalence of neuroses and psychoses in Liverpool and Knowsley is also indicated by primary care needs index and Mental Illness Needs Index scores – see relevant sections in this report.

3.2 Psychiatric Morbidity

Key points

Prevalence

Age

- The national prevalence rate for neurosis was 1 in 6. Analysed by age, the highest prevalence of neuroses was amongst those aged 50-54
- The national prevalence rate for psychotic disorder was 5 per 1,000, with a concentration of cases amongst those aged 30-44.

Sex

- Prevalence of neuroses was significantly higher amongst women than men, especially in Liverpool (1 in 3).
- In the North West for psychosis, the male rate was 8 and the female rate was 5 per thousand

Geography

- In Liverpool, 1 in 4 people reported neurotic disorder – a significantly higher proportion than the national average of 1 in 6 (1 in 5 in the North West).

Deprivation

- People with neuroses or psychoses are more likely to have characteristics associated with social deprivation.

Ethnic group

- Prevalence of psychosis amongst black people was three times greater than amongst white people..

Treatment and service use

- Large numbers of those with neurotic disorder were receiving no treatment at all (76%).
- There are also large proportions of people who are not accessing services, e.g. 61% of those with neuroses, and 29% of those with psychoses, had not consulted their GP in the last 12 months.

Characteristics of Merseyside PCTs

- Liverpool and Knowsley tend to have more of the social characteristics that are more prevalent amongst people with neurosis and psychosis.
- To a lesser extent, the other local authorities on Merseyside also share some of these characteristics, with higher proportions than the national average of lone parents, long-term limiting illness and people with no qualifications, and lower proportions in employment.

Recommendations

1. Work needs to be done in assessing access to services for women with neuroses, and males with psychoses.
2. Further analysis of psychosis in black and ethnic minority groups and their access to mental health services and primary care needs to be undertaken in Liverpool.
3. The Merseyside PCTs should consider taking part in the next ONS psychiatric morbidity survey, with additional survey work to provide specific estimates for Merseyside, to include ethnic monitoring and access to services.

3.3 Estimates of need

3.3.1 Mental Illness Needs Index (MINI): Mental health care need at secondary care level.

Psychiatric admission rates or prevalences have commonly been used for predicting patterns of psychiatric problems. Glover noted that it is recognised that this method is not ideal, for example not all people who need mental health care get admitted to hospital, and for many levels of mental health problem, care teams vary in their inclination to admit people to hospital (Glover et al 2003). Population based surveys, such as the National Psychiatric Morbidity Survey, do not identify sufficiently large numbers of cases for the development of models such as those used in estimating mental illness in primary care. A Mental Illness Needs Index (MINI) has recently been developed for use in guiding the allocation of mental health care resources for more severe types of mental illness at a small area level (CPMH 2002).

It has been noted that the types of mental health problem commonly associated with use of specialist care show a greater degree of concentration in areas of social deprivation (CPMH 2002). As described in the 'methods' section (section 2.2), the MINI 2 uses the Department of Health's Index of Multiple Deprivation data for 1998. It uses two of the separate deprivation domain scores, rather than the combined index of multiple deprivation. It also incorporates the Office of National Statistics area of residence classification, which is 1991 census based (Glover et al 2003).

MINI 2000 scores
The MINI 2000 is calculated from national figures. A ward with demographic characteristics indicating an admission rate exactly equal to the national average would score 1. So for example Blackbrook in St.Helens has a MINI score of 1.26, which indicates an admission rate 26% above the national average.

Of the nine Merseyside PCTs, North Liverpool (2.33), Central Liverpool (2.31) and Knowsley (2.20) had the highest overall MINI scores (Figure 5). All Merseyside PCTs scored above the national average. Figure 6 to 14 show ward MINI scores for each PCT. Nine wards had MINI scores as high as three or more times the national average – four of these were in Knowsley PCT:

- Vauxhall, Everton, Breckfield (Central Liverpool PCT)
- Melrose (North Liverpool PCT)
- Northwood, Longview, Kirkby Central, Cherryfield (Knowsley PCT)
- Birkenhead (Birkenhead and Wallasey PCT).

The MINI score for Everton was more than four times the national average (4.06). In five PCTs, every single ward had scores higher than the national average. These were Central Liverpool PCT, North Liverpool PCT, South Liverpool PCT, Birkenhead and Wallasey PCT, and South Sefton. In Knowsley, all but one of the wards (Halewood East) scored above the national average.

Figure 5

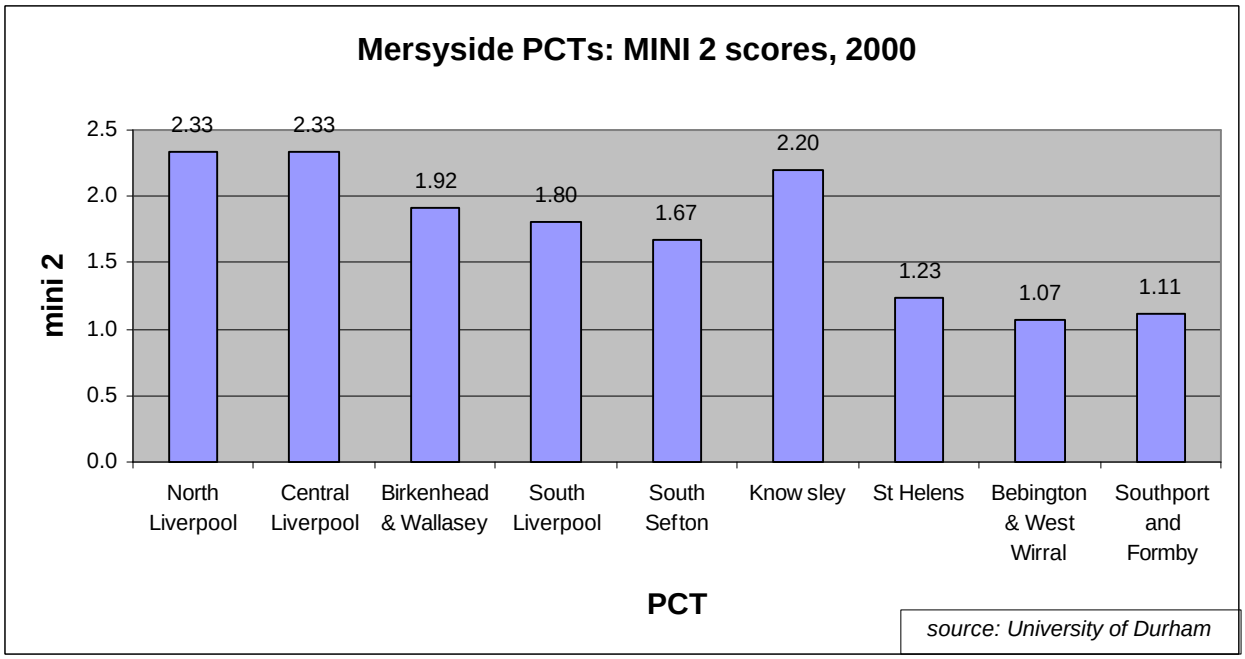


Figure 6

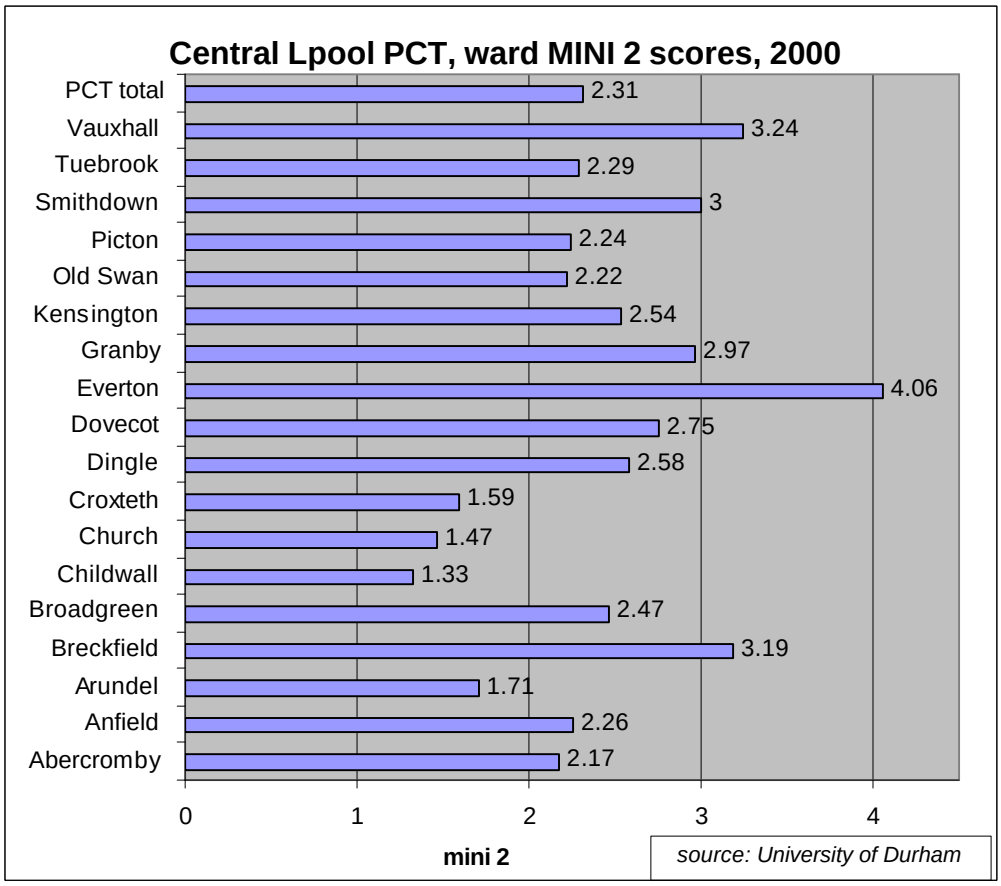


Figure 7

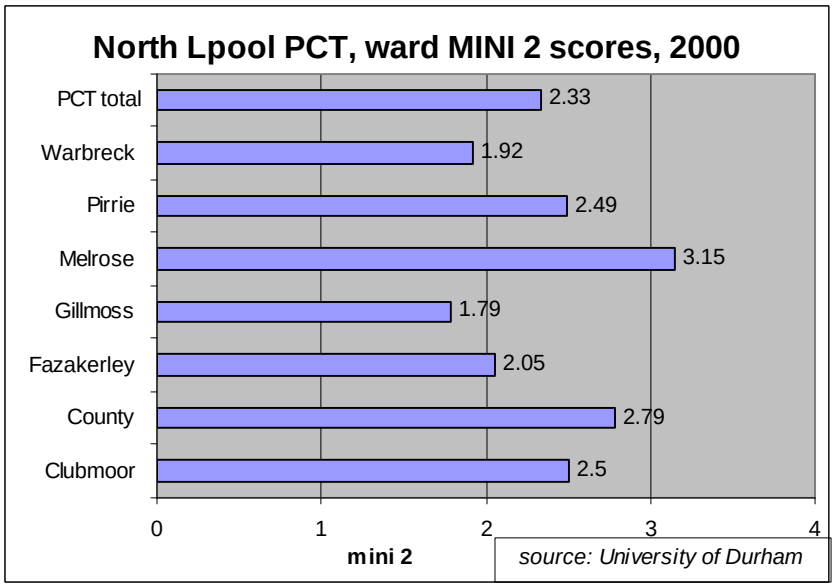


Figure 8

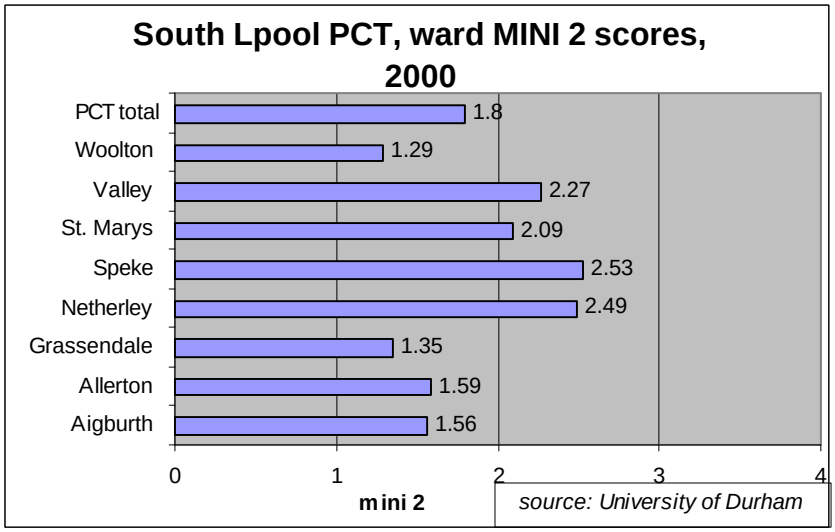


Figure 9

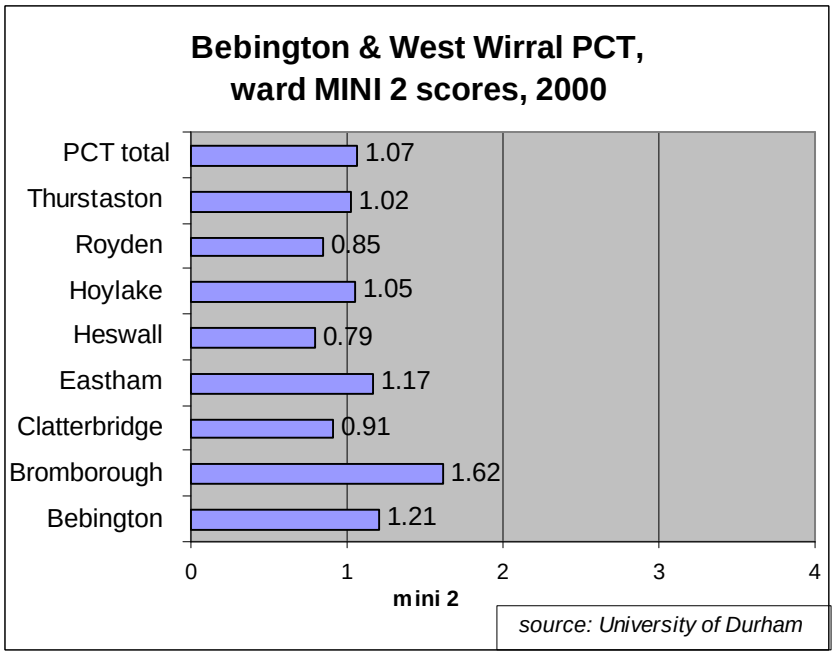


Figure 10

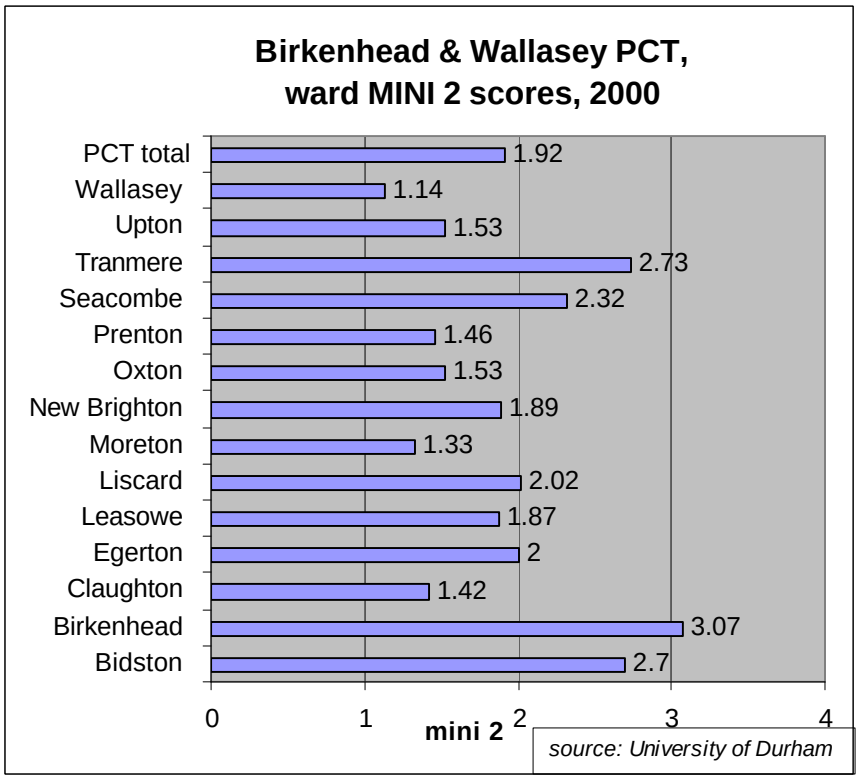


Figure 11

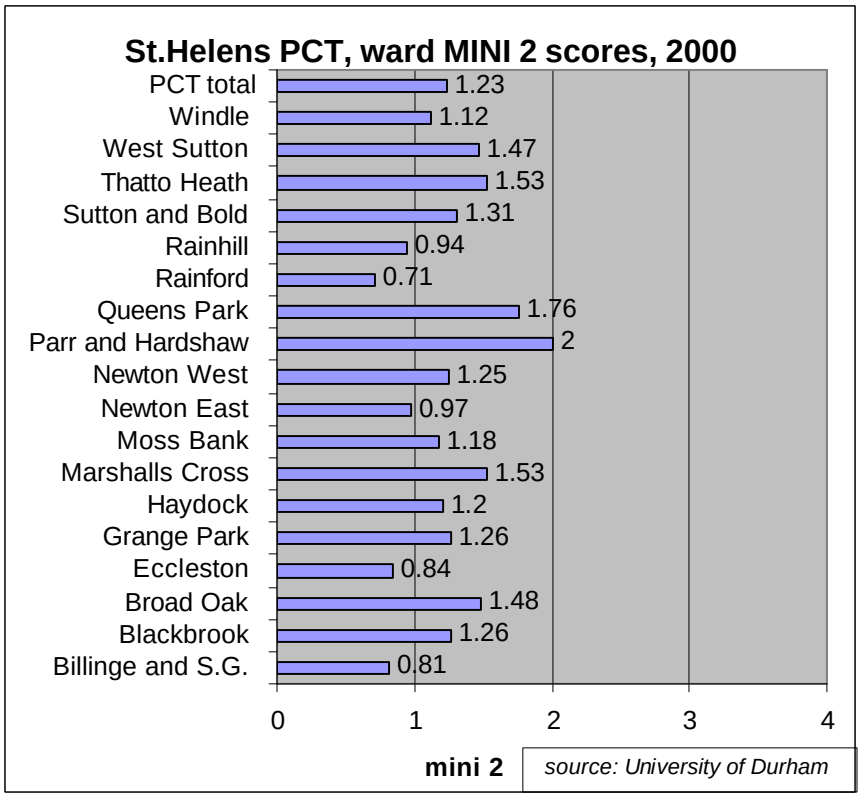


Figure 12

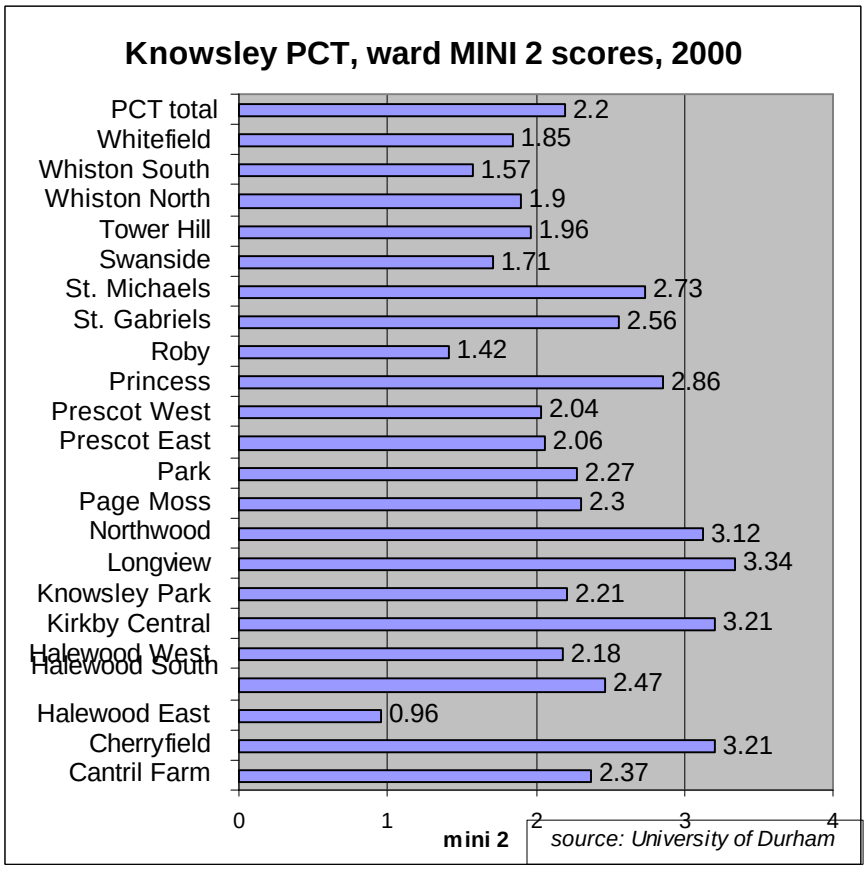


Figure 13

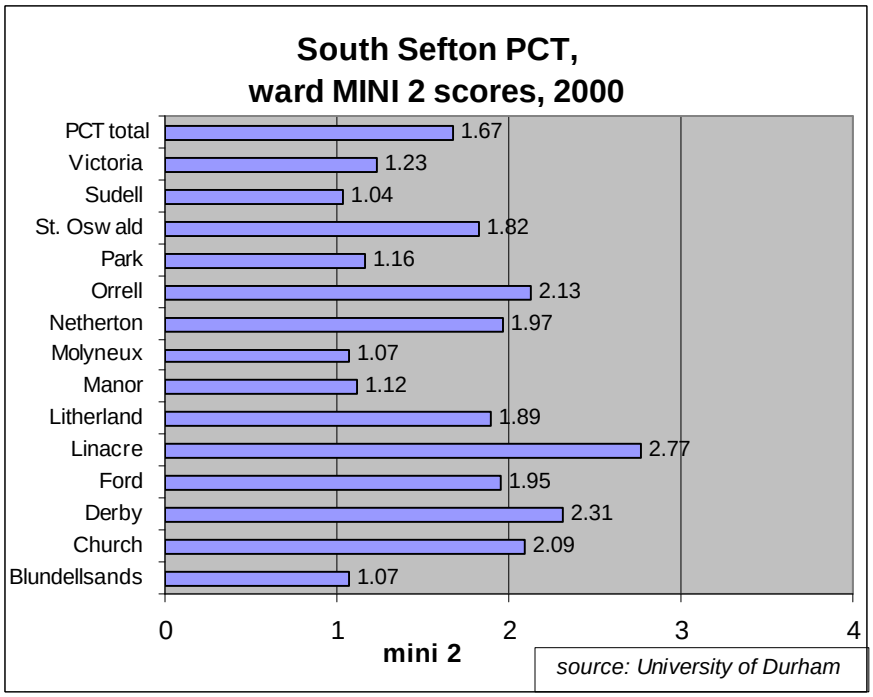
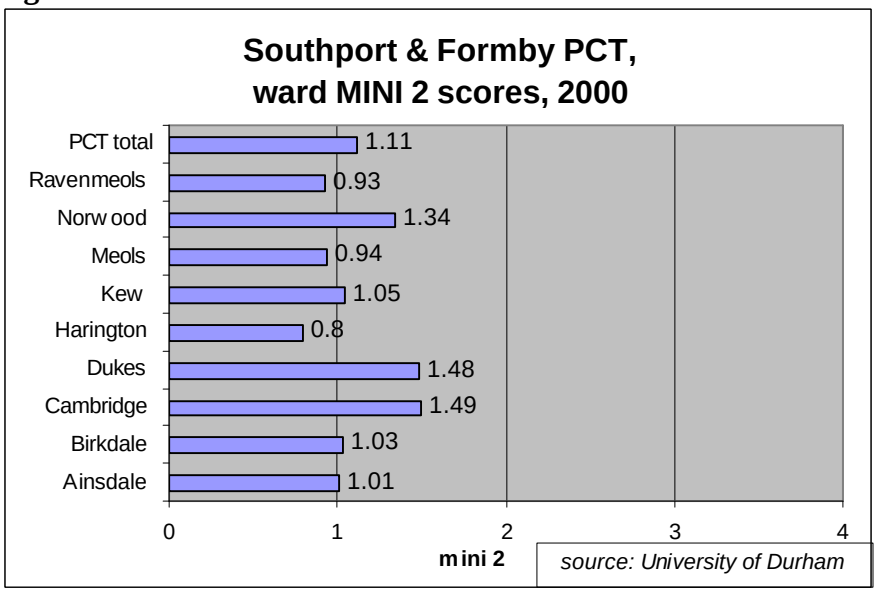


Figure 14



(Full details of the breakdown of MINI 2 score, including estimates of the proportion of the area's secondary care caseload likely to come from each ward, appear in the appendix tables in the supplement to the main report.)

3.3.1 Mental Illness Needs Index (MINI)

Key points

- Of the nine Merseyside PCTs, North Liverpool (2.33), Central Liverpool (2.31) and Knowsley (2.20) had the highest overall MINI scores.
- All Merseyside PCTs scored above the national average.
- At ward level, nine wards had MINI scores as high as three or more times the national average – four of these were in Knowsley PCT.

3.3.2 Local basket data

The London Public Health Observatory has produced a local basket of health inequalities indicators. The basket was released in October 2003, with an initial set of 70 indicators. It contains measures of health status or health outcomes, measures of the determinants of health, measures of access to services and process measures (LPHO 2004). Some of the indicators are socially based, and would be relevant to an assessment of mental health need. The basket was not available at the start of the current audit, so it has not been considered fully here. It should be assessed for inclusion in future mental health equity audits. The Health Equity Action Team (Central Liverpool PCT) could become involved in helping to select the most appropriate social-based indicators for mental health equity audit:

- *% of population claiming benefits* (basket indicator 1.7).

Data available at district and ward level for Merseyside.

- *number of homeless families with children living in temporary accommodation*. (basket indicator 2.1).

Figures available at local authority level via the ODPM website. They are based on local authority returns. Data for Merseyside local authorities is non-existent (apart from Wirral which are nil returns) It is not clear whether this return is mandatory or not. The data refers to a snapshot in time, and it is likely there will be seasonal variation.

- *violent offences recorded per 1000 population.* (basket indicator 4.3)

Data is unavailable below district level - however the violent crime rates per 1,000 population are available for all districts in the North West.

- *age standardised hospital episode rates for neuroses per 100,000 population*.(basket indicator 10.1).

See Section 3.5.10.

- *age standardised hospital episode rates for schizophrenia per 100,000 populaton* (basket indicator 10.2).

See Section 3.5.10.

- *% of teenage mothers participating in education & obtaining qualification at NVQ level 1 or above* (basket indicator 11.4).

This information can only be obtained via the individual Sure Start programmes across Merseyside - contact details via weblink: http://www.surestart.gov.uk/surestartservices/surestartlocalprogrammes/localprogrammes/

- *age standardised mortality rate (direct standardised mortality rate per 100,000 pop) from circulatory disease for those aged under 75* (basket indicator 13.9).

Figures are available now at PCT level (will be released as a Star Rating indicator shortly) for persons <75 years, however if a gender split is required, or data sub PCT level (i.e. ward), this will need a request for analysis on the raw annual registered death extracts in each of the PCTs. This information is

not available 'off the shelf' due to problems with denominators at ONS. As an alternative, SMRs for circulatory disease are available at PCT level by gender.

- *life expectancy at birth* (basket indicator 13.12).
Data is available for Merseyside **PCTs** (not calculated below this level), and district, regional & national comparators.

*(information on basket indicators obtained from **HEAT:** Health Equity Action Team, Central Liverpool PCT).*

3.3.2 Local Basket Data

Key points
The local basket of health inequalities indicators includes some socially-based indicators which would be relevant in the assessment of mental health need.

Recommendations
The basket should be assessed for inclusion in future mental health equity audits, with the Health Equity Action Team (Central Liverpool PCT) becoming involved in helping to select the most appropriate social-based indicators.

3.4 Inputs:
Range of services available and projected investment

3.4.1a Vacancy rate for consultant psychiatrists

Data requested: Twelve month vacancy rate for consultant psychiatrists. Vacancies expressed as % of vacancies plus staff in post (see DOH 2002f). At PCT level, wholetime equivalents (WTE), as at 31/3/03
Data source: Mental Health Trusts

Merseycare NHS Trust
Merseycare reported that their Human Resources department does not have information by PCT.

Adult There were 18.71 consultants in post, and 9 Adult Vacancies (all full time posts) (figure 15 and table 11). This means that there was a 32.5% wte vacancy rate, March 2003 in the Merseycare area.

Elderly Mentally Ill: There were 10 full time posts, 1 currently vacant at Mossley Hill. i.e. there was a 10% wte vacancy rate in March 2003 in the Merseycare area.

Figure 15
Adults: Consultant Psychiatrist Vacancies, Merseycare, March 2003

Windsor	1
Low Secure Unit	1
Park Lodge	2
Arundel House	1
Moss House	1
Aintree	1
Southport	2

Total Adult plus EMI: The total vacancy rate for adult and EMI services was 26.51% (table 11).

Table 11
Consultant psychiatrist vacancy rates, Merseycare NHS Trust, March 2003

	Consultant Psychiatrist vacancies wte	Consultant Psychiatrists in post wte	Consultant vacancy rate wte
Adult	9	18.71	32.5%
EMI	1	9.00	10.0%
total	10	27.71	26.5%

5 Boroughs Partnership NHS Trust
5 Boroughs were unable to obtain data on the number of vacancies, so used the number of locums in post as a proxy measure. They were able to obtain data by PCT. Table 12 shows that vacancy rates in Knowsley PCT were higher than in St.Helens PCT.

St. Helens PCT had 4.64 consultant psychiatrists in post compared to Knowsley's 3.64 (whole-time equivalent). When population differences were taken into account, rates per 10,000 population were almost identical (table 13). It was not possible to

calculate population based rates for the other two Mental Health Trusts, because data was not available by PCT.

Table 12
Consultant psychiatrist vacancy rates,
5 Boroughs Partnership NHS Trust, 16/2/03

	Consultant Psychiatrist locums in post wte	Consultant Psychiatrists in post wte	Estimated consultant vacancy rate wte
St Helens PCT	2.00	4.64	30.1%
Knowsley PCT	4.60	3.64	55.8%

Table 13
Consultant psychiatrists in post,
5 Boroughs Partnership NHS Trust, 16/2/03

	Consultant psychiatrists in post	Rate per 10,000 pop aged 15-64
St.Helens PCT	4.64	0.64
Knowsley PCT	3.64	0.62

Cheshire and Wirral Partnership NHS Trust
Data was not available by PCT. There were no vacancies for consultant psychiatrists in the Wirral (as at March 2003), so the **vacancy rate was 0%.**

3.4.1aVacancy rate for consultant psychiatrists

Key points
Data problems:

- Data was incomplete, not available by PCT in Merseycare and Wirral, and not available as vacancies in 5 Boroughs.

Geography:

- Consultant psychiatrist vacancy rates in St.Helens & Knowsley, especially in Knowsley, were higher than in Merseycare and Wirral. Numbers of consultants per head of the population were similar in Knowsley and St.Helens PCTs (using locums as a proxy for vacancies in 5 Boroughs).
- A high proportion of consultants in Merseycare and 5 Boroughs are locums, which is not cost-effective

Recommendations

1. Data on wte consultants in post and vacancies in each PCT should be made readily available by Mental Health Trust, so that appropriate assessments of equity of provision can be carried out.

3.4.1b. Vacancy rate for mental health nurses.

Data requested: Three month vacancy rate for mental health nurses. Vacancies expressed as % of vacancies plus staff in post (see DOH 2002f). At PCT level at 31st May 2003 wholetime equivalents (WTE).
Data source: Mental Health Trusts

Merseycare NHS Trust
Merseycare Human Resources department say this information is not collected. .

5 Boroughs Partnership NHS Trust
5 Boroughs had no data available on nurse vacancies, only nurses in post (RMNs: Registered Mental Nurses). On 31/3/03, there were 119.02 wte nurses in post in St.Helens PCT, and 83.67 wte in Knowsley PCT. When populations are taken into account, this difference becomes much smaller (table 14).

Table 14
Mental health nurses in post,
5 Boroughs Partnership NHS Trust, March 2003

PCT	RMNs in post	Rate per 10,000 pop aged 15-64
St.Helens	119.02	16.37
Knowsley	83.67	14.17

Cheshire and Wirral Partnership NHS Trust
Wirral were able to provide data by PCT on vacancies, but have no data on nurses in post. In Bebington and West Wirral PCT, there were 4.92 wte qualified RMN vacancies on 31/3/03. In Birkenhead & Wallasey, the figure was 22.50 wte.

3.4.1b Vacancy rate for mental health nurses

Key points
Data problems:
- It was surprising how little information was available on nurses in post and nurse vacancies:
  - there was no data at all available from Merseycare;
  - 5 Boroughs have data on nurses in post, but no data on vacancies;
  - Wirral have data on vacancies, but not nurses in post.

Geography:
- There were slightly more nurses in post per 10,000 population in St.Helens, compared to Knowsley.

Recommendations
1. Data on wte nurse vacancies and nurses in post for each PCT needs to be made readily available by Mental Health Trusts, so that assessments of equity of provision can be carried out.

3.4.2 Community Mental Health Team staffing levels and caseload per head of population

Data requested: Community Mental Health Team establishment per head of population
From LIP stage IV. Ages a.16 – 64, and b.65+.
Data source: University of Durham website (ages 16-64), Mental Health Trusts (ages 65+)

a. Adults
The Centre for Public Mental Health at the University of Durham runs the annual national Adult Mental Health Service Mapping for the Department of Health. This forms part of the annual monitoring of the progress in implementing the National Service Framework (NSF) for Mental Health. Each NSF Local Implementation Team are asked to report all the services available to the population they serve, including Community Mental Health Teams (CMHTs).

Data was not presented as CMHTs per head of population, but as caseload per 100,000 population. The most recent complete data for CMHTs was September 2003 (as at November 2004). Central Liverpool and St.Helens PCTs had the largest caseloads (table 15). Birkenhead & Wallasey, and Central Liverpool PCTs had the highest staffing levels. Despite having a large caseload, St.Helens PCT had only the fifth highest staffing level (table 15).

All Merseyside PCTs had much larger caseloads per 100,000 population compared to the national rate – in North Liverpool, St.Helens, Knowsley and Southport & Formby PCTs, the rate is more than double the national figure.

Table 15
Community Mental Health Team caseload and staffing levels. Merseyside PCTs, September 2003.

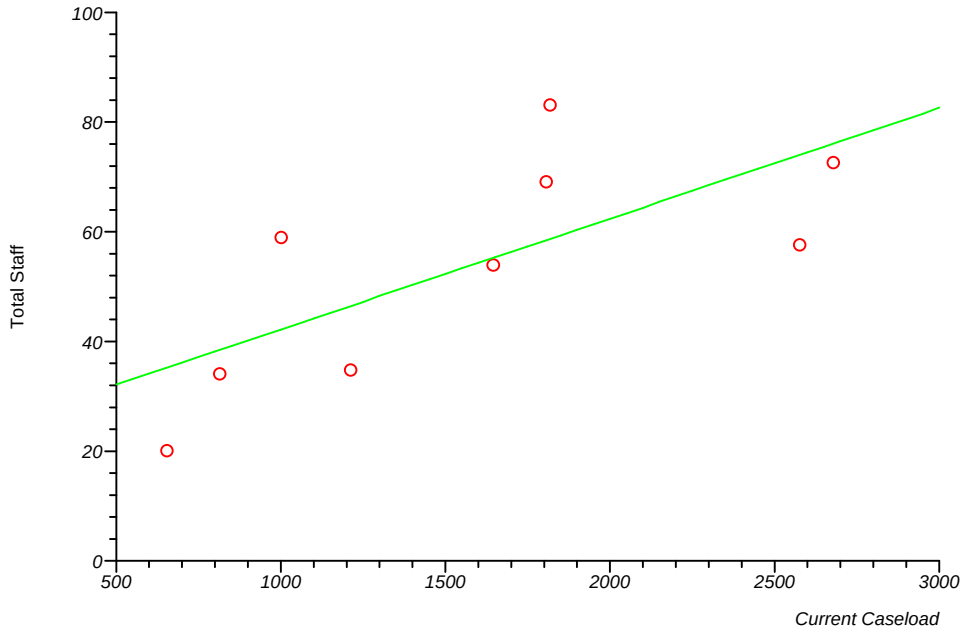
PCT	Number of Services	Current Caseload	Caseload per 100k pop	Caseload per staff	Total Staff
Bebington And West Wirral PCT	2	813	1195.59	23.84	34.10
Birkenhead And Wallasey PCT	4	1817	1593.86	21.87	83.09
Central Liverpool PCT	3	2677	1772.85	36.80	72.75
Knowsley PCT	3	1805	2028.09	26.08	69.20
North Liverpool PCT	2	1645	2696.72	30.46	54.00
South Liverpool PCT	1	652	1124.14	32.44	20.10
South Sefton PCT	2	999	1009.09	16.93	59.00
Southport And Formby PCT	1	1210	1861.54	34.81	34.76
St Helens PCT	3	2575	2384.26	44.70	57.60
England	827	309893	887.21	18.91	16390.72

source: University of Durham, Adult Mental Health Service Mapping

Need/ deprivation:
On Merseyside, those PCTs with the largest caseloads were statistically significantly more likely to have higher CMHT staffing levels (figure 16). This would suggest that the distribution of staffing levels is according to need. However, if deprivation level is taken as an indicator of need, it would appear that caseloads do not reflect actual need. This is suggested by the weak correlation between deprivation level and caseloads per 100,000 population (r=0.34, not significant). The indication is that those from deprived areas do not have fair access to the CMHT service.

Ideally, analysis of the effects of deprivation would take place at a smaller geographical level, because there will be large variations in deprivation within PCTs. But at present, PCT level data is the smallest geographical level available.

Figure 16
Community Mental Health Teams, caseload and staffing levels.
Merseyside PCTs, September 2003.

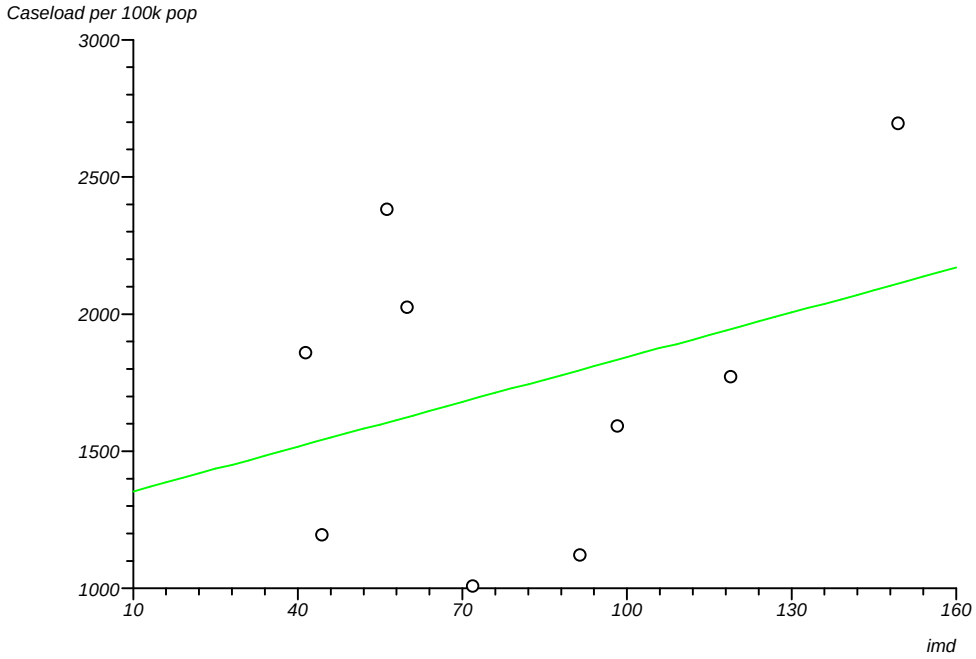


(r=0.70, p<0.05)
source: University of Durham, Adult Mental Health Service Mapping

Although PCTs with larger caseloads generally had more staff, there were still large differences between PCTs in caseload per staff. Only South Sefton PCT had a lower proportion of caseload per staff than the national average. St.Helens and Central Liverpool PCT were double the national average. There was no correlation between caseload per staff and deprivation (r=0.01).

Ethnic group:
If data on the ethnic group of staff was made available, this would be useful in suggesting how culturally sensitive services are likely to be.

Figure 17
Community Mental Health Teams, caseload per 100k population and deprivation (IMD). Merseyside PCTs, September 2003.



(r=0.34, not significant)
source: University of Durham, Adult Mental Health Service Mapping

b. Ages 65+:
There was little data available on service provision for those aged 65+.

Merseycare NHS Trust
Merseycare NHS Trust could provide data on 'Mental Health Team establishments as per head of population ages 16-64', September 2002, but not for ages 65+.

5 Boroughs NHS Trust
5 Boroughs Partnership NHS Trust reported 1 CMHT for older people, as shown in table 16

Table 16
CMHT provision in 5 Boroughs Partnership NHS Trust, Feb/March 2003

Description	PCT	Adult	Older Persons	Joint adult & older persons
No of CMHTs	St Helens	3	1	
Crisis Resolution/Home Treatment team	St Helens			1
CMHTs	Knowsley	4	1	
Crisis Resolution/Home Treatment team	Knowsley			1
Assertive outreach	Knowsley			1

3.4.2 CMHT staffing levels and caseload per head of population

Key points

Data problems

- There was no data available on CMHT per head of population – only caseloads per 100k population.
- The most recent complete data available was for September 2003.

Age

- There is very little information available on CMHT provision for those aged over 65.

Geography

- Only South Sefton PCT had a lower proportion of caseload per staff than the national average. St.Helens and Central Liverpool PCT were double the national average.
- All Merseyside PCTs have much larger caseloads per 100k population than the national average – four were double the national figure.

Deprivation/ need

- Distribution of staffing levels appeared to follow need, with higher staffing levels for higher caseloads ($r=0.70$, $p<0.05$).
- If deprivation is used as an indicator of need, then caseloads do not reflect actual need, suggesting unmet need in deprived PCTs.

Ethnic group

- There is no data on ethnic group of staff

Recommendations

1. *Data:*
    a. The University of Durham Centre for Public Mental Health should consider making data available in the form of CMHT per head of population.
    b. Mental health Trusts should provide up to date complete information on CMHT activity, caseload per head of population, and wte staff. Activity information should be broken down by age, sex, ethnic group and postcode.
    c. Mental Health Trusts should record ethnic group of staff, to help suggest how culturally sensitive services are likely to be, particularly in areas where there is a larger ethnic minority population.
2. Further work is required to examine equity of access to CMHTs, particularly in areas of deprivation – this requires complete data to be made available across the Mental Health Trust catchment area.
3. All Merseyside PCTs need to ensure increased staffing levels to reach the national average, especially St.Helens and Central Liverpool.
4. The high caseload per staff level in St.Helens PCT requires further investigation.
5. Further work is required to explore accessibility of CMHTs to the population aged 65+.

3.4.3 Wholetime equivalent psychologists and psychiatrists

Data requested: Wholetime equivalent psychologists and psychiatrists. From LIP Stage IV (Durham Service Mapping Data).
Data source: University of Durham website (ages 16-64), Mental Health Trusts (ages 65+)

The University of Durham Adult Mental Health Service data (described in the previous section) includes data on workforces. The most recent data from Durham to include population bases is 2002.

Figure 18 and Table 17 illustrate the variation between PCTs in numbers of CMHT members per 1,000 population in 2002. Proportions of doctors ranged from 5.1 per 1,000 in Birkenhead & Wallasey, to 0.6 in North Liverpool PCT. Birkenhead & Wallasey had the second highest proportion of psychologists (1.1) compared to only 0.1 in North Liverpool.

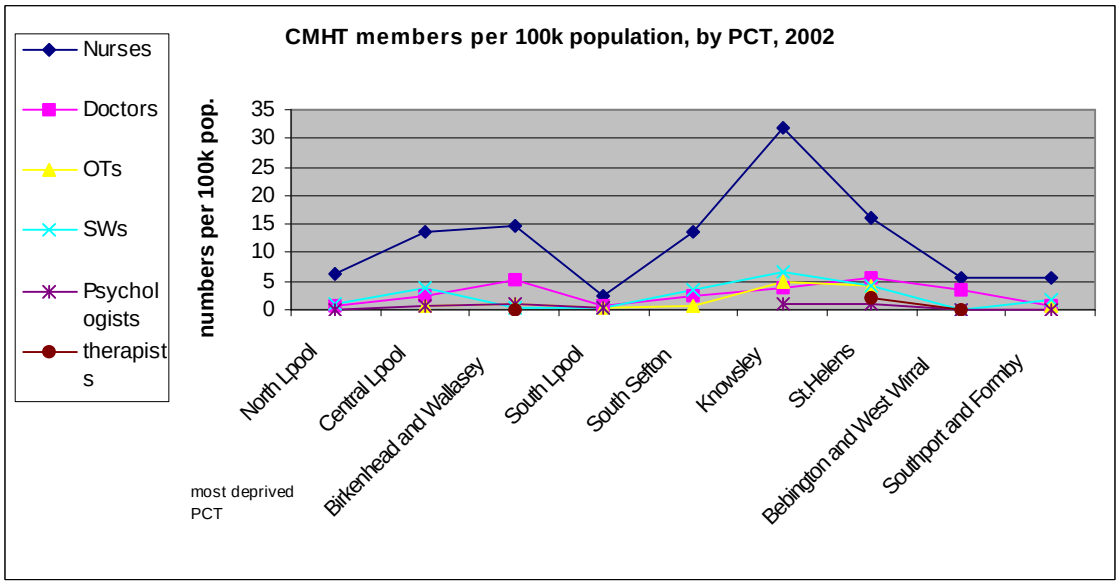
Data on other staff was also available. Knowsley had the highest proportion of nurses, with around twice as many as St.Helens, South Sefton, Birkenhead and Wallasey, and Central Liverpool. It had around five times as many nurses per thousand population compared to the remaining PCTs. Knowsley and St.Helens had a much higher proportion of occupational therapists than the other PCTs.

There are a number of gaps in the Table 17 where data is missing. North Liverpool PCT has 3 missing values. St.Helens PCT managed to submit a full set of data. There would seem to be a problem with collecting data on numbers of therapists per 1, 000 population, where 6 out of 9 values are missing.

Deprivation:
There were no statistically significant correlations with deprivation on any of the items in table 17. The most deprived PCT, North Liverpool, actually had the smallest proportion of CMHT doctors.

Ethnic group:
Mental Health Trusts should record ethnic group of staff, to help suggest how culturally sensitive services are likely to be, particularly in areas where there is a larger ethnic minority population

Figure 18



see table for values. Data source: University of Durham Centre for Public Mental Health

3.4.3 Wholetime equivalent psychologists and psychiatrists

Key points

Data problems

- There were no recent population related data available on the University of Durham CPMH website.

Geography

- There were large variations in 2002 between PCTs in proportions of doctors and other CMHT staff per 100k population.

Deprivation

- In 2002, the most deprived PCT, North Liverpool, had the smallest proportion of CMHT doctors.
- There were no significant correlations between proportions of doctors or other staff and deprivation.

Ethnic group

- There is no data on ethnic group of psychiatrists or psychologists.

Recommendations

1. *Data:*
    a. More complete and current population based data is required, so that any inequities in the distribution of staff can be recognised and acted upon.
    b. The recording of ethnic group of psychiatrists and psychologists should be considered, to help suggest how culturally sensitive services are likely to be, particularly in areas where there is a larger ethnic minority population.

Table 17
Community Mental Health Teams (drawn from CPMH website, Durham: service mapping data, 2002)

Mersey deprivation rank*	PCT	Current caseload: (numbers)	Totals per 100k pop.							
			Current Caseload	Referrals within first quarter year	Nurses	Doctors	OTs	SWs	Psychologists	Therapists
1	North Lpool	557	188	Incomplete	6.2	0.6		1	0.1	
2	Central Lpool	3122	1055	206.9	13.8	2.6	0.8	3.7	0.8	
3	Birkenhead and Wallasey	1507	770	Incomplete	14.7	5.1	1	0.4	1.1	0.1
4	South Lpool	1087	367	Incomplete	2.5	0.7	0.4	0.3	0.4	
5	South Sefton	672	395	129.3	13.6	2.4	0.6	3.6		
6	Knowsley	623	627	365.4	31.8	4	5	6.5	1.2	
7	St.Helens	1939	1606	457.2	16.1	5.6	4.3	4.1	0.9	2.2
8	Bebington and West Wirral	657	336	75.6	5.7	3.4		0.1	0.1	0.1
9	Southport and Formby	360	212	302.7	5.6	0.7	0.6	1.8	0.1	
Correlation with deprivation rank (none significant)			-0.01	0.17	0.03	0.17	0.33	0.12	-0.18	0.33

* In order of mean weighted rank deprivation, 1 = most deprived. From IMD scores compiled by NWPHO.

3.4.4 Other service mapping data

Service mapping data for CMHTs, and for wholetime equivalent psychiatrists and psychologists, was detailed in the previous two sections. This section reproduces the other sets of data available in the University of Durham's adult mental health service mapping database. For each service, the time period with the most recent complete data at PCT level has been considered here. There were some sets of data available from the service mapping website, such as day hospital attendance, which were not included here because data was incomplete.

Assertive outreach

Central Liverpool has a much bigger assertive outreach caseload per 100,000 population - more than twice as high as the other PCTs (table 18). On Merseyside, as nationally, the caseload is below the 12 service users per staff that is mentioned in the definition of assertive outreach teams (University of Durham 2004). The caseload per care staff ranges from 2.4 in Knowsley to 10 in South Sefton and Southport & Formby PCTs (table 18). Assertive outreach teams are in the early stages of development, so it is difficult to comment on caseload at present.

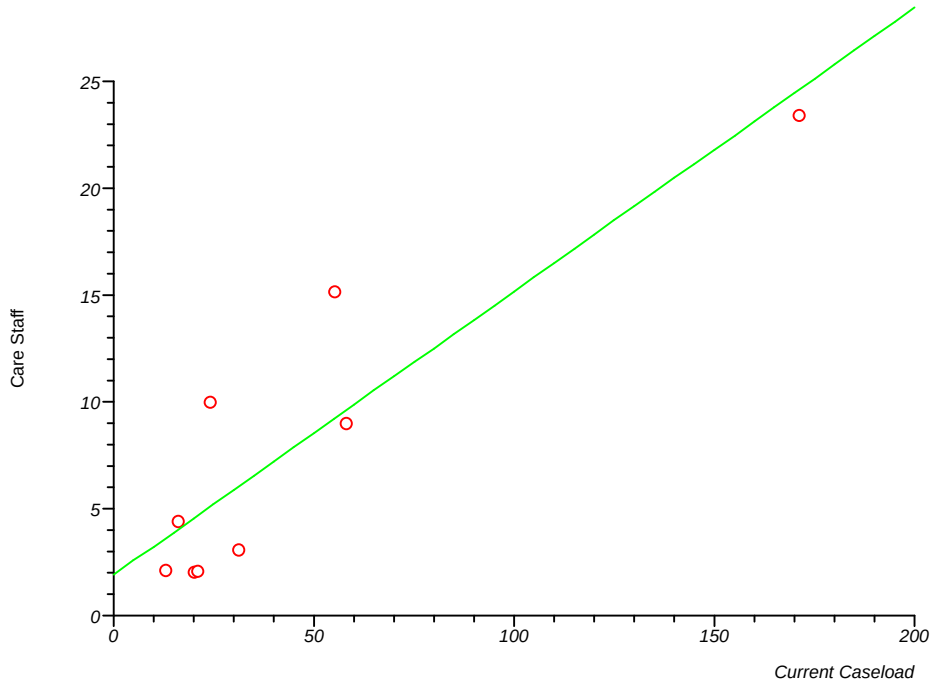
Table 18
Assertive Outreach Teams, caseload and staff.
Merseyside PCTs, March 2004

PCT	Number of Services	Care Staff	Current Caseload	Caseload per Care Staff	Caseload per 100k pop
Bebington And West Wirral PCT	1	4.42	16	3.62	23.53
Birkenhead And Wallasey PCT	1	15.18	55	3.62	48.25
Central Liverpool PCT	3	23.40	171	7.31	113.25
Knowsley PCT	1	10.00	24	2.40	26.97
North Liverpool PCT	3	2.06	20	9.69	32.79
South Liverpool PCT	3	2.13	13	6.10	22.41
South Sefton PCT	-	3.10	31	10.00	31.31
Southport And Formby PCT	-	2.10	21	10.00	32.31
St Helens PCT	1	9.00	58	6.44	53.70
England	259	2128.97	11741	5.51	33.44

source: University of Durham, Adult Mental Health Service Mapping

*Need***:** At PCT level, the distribution of assertive outreach team staff appears to follow demand according to caseload, showing a statistically significant correlation (figure 19). However, if deprivation is taken as an indicator of need, then there would appear to be some inequity. As with CMHT distribution in the previous section, there is only a weak correlation between deprivation level and caseload per 100,000 population (r=0.38, not significant). This indicates that people in deprived areas have reduced access to the assertive outreach service.

Figure 19
Assertive Outreach Teams, caseload and care staff.
Merseyside PCTs, March 2004



(r=0.90, p<0.01)
source: University of Durham, Adult Mental Health Service Mapping

Crisis resolution teams
The 3 Liverpool PCTs reported no crisis resolution teams. For the other PCTs, data on caseloads and staff was patchy, so was not included here (March 2004).

Early intervention teams
There were reported to be no early intervention teams amongst the 9 Merseyside PCTs (March 2004).

A&E Mental Health Liaison Services
There is increasing access to a rapid assessment service for people with mental health problems who use an A&E department. The number of A&E mental health liaison services reported has risen over the last 2 years. In Merseyside, with the exception of Southport & Formby, each PCT reported 1 A&E liaison service (September 2004). There is some variation in the workload of the service, with some services providing a service throughout the district general hospital, and others only in A&E (University of Durham 2004).

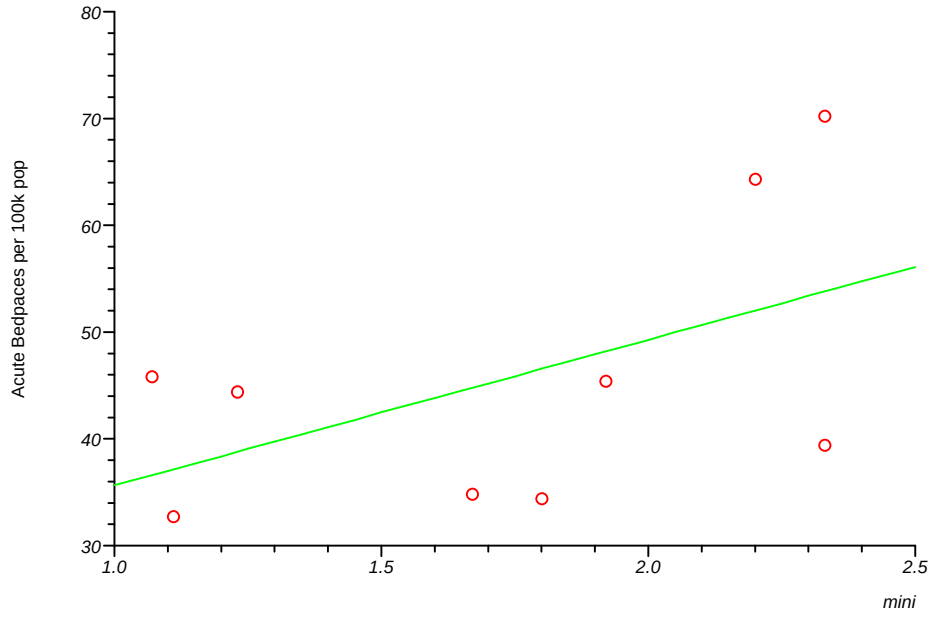
Acute in-patient bedspaces
All the Merseyside PCTs had more acute in-patient bedspaces per 100,000 population than nationally. Central Liverpool and Knowsley PCTs had twice as many as the national average (table 19).

The MINI (mental illness needs index) is a measure of mental health need at secondary care level (see methods section and section 3.3). There was a positive, but not statistically significant association between the MINI and the acute bedspaces available per 100,000 population (figure 20). This suggests that there is still some way to go in matching service provision to need.

Table 19
Acute bedspaces. Merseyside PCTs, March 2004

PCT	Acute In-Patient Bedspaces	Acute Bedpaces per 100k pop
Bebington And West Wirral PCT	31	45.87
Birkenhead And Wallasey PCT	52	45.44
Central Liverpool PCT	106	70.22
Knowsley PCT	57	64.31
North Liverpool PCT	24	39.40
South Liverpool PCT	20	34.40
South Sefton PCT	34	34.83
Southport And Formby PCT	21	32.72
St Helens PCT	48	44.44
England	10913	31.08

Figure 20
Acute bedspaces per 100,000 population, by MINI score. Merseyside PCTs, March 2004



(r=0.52, not significant) *source: University of Durham, Adult Mental Health Service Mapping*

Psychological therapy services

There were large variations between PCTs in the rate of annual referrals to psychotherapy services, ranging from 15.52 in South Liverpool, to as many as 1,632.46 in Birkenhead & Wallasey (rate per 100,000, table 20).

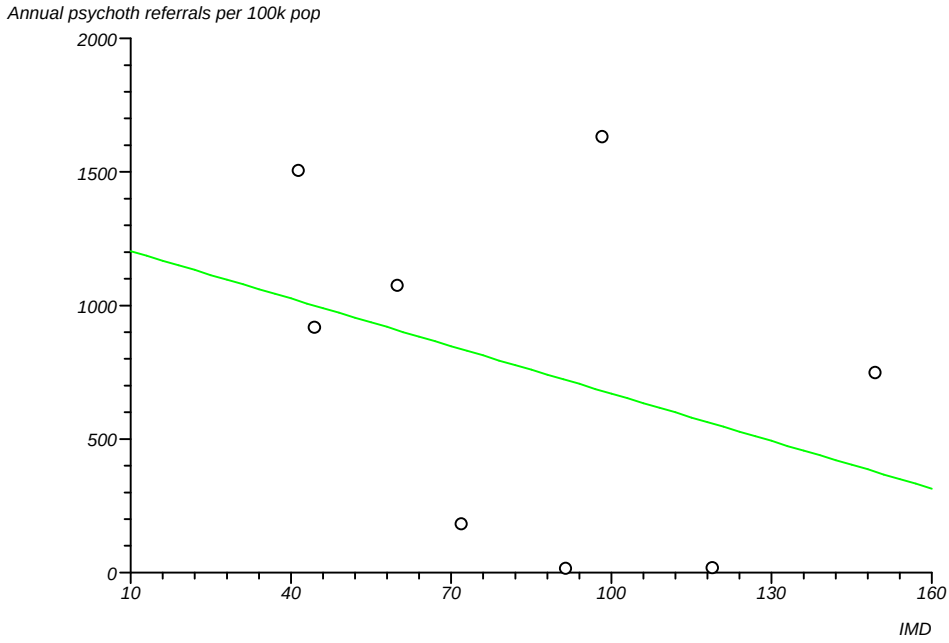
Table 20
Psychotherapy and Counselling Services.
Merseyside PCTs, March 2004.

PCT	Total Services (some operate in more than one setting)	Referrals per Year	Annual Referrals per 100k pop
Bebington And West Wirral PCT	3	625	919.12
Birkenhead And Wallasey PCT	3	1861	1632.46
Central Liverpool PCT	6	30	19.87
Knowsley PCT	3	958	1076.40
North Liverpool PCT	6	457	749.18
South Liverpool PCT	6	9	15.52
South Sefton PCT	3	180	181.82
Southport And Formby PCT	3	979	1506.15
St Helens PCT	1	-	-
England	400	79254	225.73

source: University of Durham, Adult Mental Health Service Mapping

There was a negative, non-significant correlation between the rate of referrals and the deprivation of Merseyside PCTs (as measured by the DETR Index of Multiple Deprivation – see methods section) (figure 21). If this paints a true picture, then the accessibility of psychotherapy services for those in deprived areas will need to be greatly improved. However, the large differences between PCT rates would suggest that the reliability of the data needs checking before any firm conclusions can be drawn.

Figure 21
Psychotherapy referrals per 100,000 population, by deprivation (IMD).
Merseyside PCTs, March 2004.



(r= -0.35, not significant)
source: University of Durham, Adult Mental Health Service Mapping

Day services

With the exception of Southport & Formby PCT, all Merseyside PCTs have higher attendance rates for day services than the national average. Attendance rates vary, and are twice as high in St.Helens and South Liverpool than in the other PCTs. There is high provision of day centres in Liverpool PCTs, but relatively low attendance rates in Central and North Liverpool (table 21).

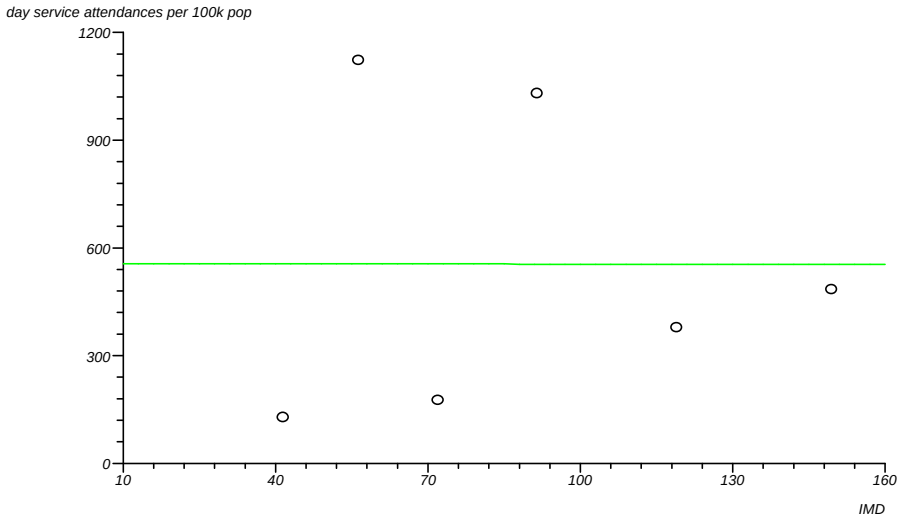
Table 21
Day centre availability and attendance,
Merseyside PCTs, March 2004.

PCT	Day Centres/ Resource Centres	Attendances	Attendances per 100k pop
Bebington And West Wirral PCT	3	-	-
Birkenhead And Wallasey PCT	3	-	-
Central Liverpool PCT	18	575	380.79
Knowsley PCT	-	-	-
North Liverpool PCT	18	296	485.25
South Liverpool PCT	18	599	1032.76
South Sefton PCT	2	177	178.79
Southport And Formby PCT	2	84	129.23
St Helens Pct	4	1213	1123.15
England	714	58314	166.09

source: University of Durham, Adult Mental Health Service Mapping

Of the 6 PCTs for which data was available, there was no association between day centre attendance and deprivation (r = -0.002) (figure 22). Once a full set of data becomes available for each PCT, access to day care for those from deprived areas can be more closely examined.

Figure 22
Day centre attendance by deprivation (IMD).
Merseyside PCTs, March 2004.



(r= -0.002, not significant)
source: University of Durham, Adult Mental Health Service Mapping

3.4.4 Other service mapping data

Key points

Data problems

- Large differences between PCT rates, e.g. for psychotherapy, would suggest that the reliability of the data needs checking before any firm conclusions can be drawn.
- Data was not always available for each PCT.

Geography

Assertive outreach:

- The Central Liverpool caseload per 100,000 population is more than twice as high as the other Merseyside PCTs (March 2004).
- On Merseyside, as nationally, the picture is below the recommended 12 service users per staff.
- The caseload per care staff ranges from 2.4 in Knowsley to 10 in South Sefton and Southport & Formby PCTs.

Other services:

- The 3 Liverpool PCTs reported no crisis resolution teams (March 2004). For the other PCTs, data on caseloads and staff was patchy.
- There were reported to be no early intervention teams amongst the 9 Merseyside PCTs.
- In Merseyside, with the exception of Southport & Formby, each PCT reported 1 A&E liaison service.
- All the Merseyside PCTs had more acute in-patient bedspaces per 100,000 population than nationally. Central Liverpool and Knowsley PCTs had twice as many as the national average.
- There were large variations between PCTs in the rate of annual referrals to psychotherapy services, ranging from 15.52 in South Liverpool, to as many as 1,632.46 in Birkenhead & Wallasey (rate per 100,000).
- With the exception of Southport & Formby PCT, all Merseyside PCTs have higher attendance rates for day services than the national average.
- Day service attendance rates vary, and are twice as high in St.Helens and South Liverpool than in the other PCTs.

Deprivation/ need

Assertive outreach:

- At PCT level, the distribution of assertive outreach team staff appears to follow demand according to caseload, showing a significant correlation.
- However, if deprivation is taken as an indicator of need, then there would appear to be some inequity, with a weak correlation between caseload per 100k and deprivation

Other services:

- There was a positive, but not significant association between the MINI and the acute bedspaces available per 100,000 population (r=0.52). This suggests that there is still some way to go in matching service provision to need.
- There was a negative, non-significant correlation between the rate of psychotherapy referrals and the deprivation of Merseyside PCTs.

continued

continued

Recommendations

1. *Data:*
    a. Mental Health Trusts need to ensure complete and up to date LIP service mapping data sets are available so that equity of access can be further assessed, and effective monitoring of service provision in relation to need can be undertaken.
2. The large variations between PCTs in service provision do not appear to bear any relationship to need or deprivation. This needs to be investigated further by Mental Health Trusts and PCTs. The large differences between PCT rates for psychotherapy referrals would suggest that the reliability of the data needs checking before any firm conclusions can be drawn. Access to psychotherapy should be prioritised.
3. A joint review of acute bedspaces according to need should be undertaken within all Mental Health Trusts.

3.4.5 Self assessment of service provision

Data source: Mental Health Strategies, for the Mental Health Group, Manchester.

The national service framework for mental health (NSF) was launched by the government in 1999 (see introduction). It sets out how health and social services will be planned, delivered and monitored until 2009. Local implementation plans (LIPS) identify milestones. Local Implementation Teams (LITs) are involved in implementing and assessing the mental health NSF.

Service provision: Self assessment by LITs
As part of the assessment process, LITs are required to complete a self assessment framework relating to 41 indicators, arranged into 6 groups. For each indicator, they are asked to score red, amber or green. Red would suggest that services are not being provided according to required standards. For example, for the *'assertive outreach'* indicator:

Red:	There is no service available which meets the Policy Implementation Guide definition of 'assertive outreach'.
Amber:	There is some level of assertive outreach provided which meets the Policy Implementation Guide criteria- but is provided only at a level which is in-sufficient to meet local needs.
Green:	There is an assertive outreach service available which meets fully the Policy Implementation Guide definition, and which is provided at a level which is sufficient to meet local needs.

The Mental Health Strategies for the Mental Health Group, Manchester, compiled data for all the LITs in the North West. The following is a summary of data they collected from the Merseyside LITs; Knowsley, Liverpool, St.Helens, Sefton and Wirral for 2002.

Performance on individual indicators.
Table 22 gives the self assessment scores for each indicator for 2002. Of the 21 indicators listed, Liverpool (8), and St.Helens (7) have most reds, Knowsley has most greens (6) with the rest all having 4 or 5 greens. There are no great differences between indicator scores for the 2 ONS cluster areas found in Merseyside.

ONS Cluster comparison
The Office of National Statistics (ONS) allocates all local authorities and health authorities to one of seven 'family groups', or areas with broadly similar population characteristics. St.Helens, Liverpool and Knowsley belong to the '*mining, manufacturing and industry*' ONS cluster. Sefton and Wirral belong to the '*services*' cluster.

Mental Health Strategies have produced graphs plotting in percentage terms the difference between the LIT rating for each indicator, and that of its ONS cluster. In 2002, the St.Helens and Liverpool LITs on the whole performed worse than the average for their ONS cluster. Knowsley, Sefton and Wirral performed better than average. St.Helens LIT scored more than 50% worse than average on 6 indicators, and in Liverpool LIT, 5 indicators were more than 50% worse than average.

Table 22

LIT Self assessment scores 2002

3 = GREEN 2 = AMBER 1 = RED

	St. Helens. LIT	Liver pool LIT	Sefton LIT	Knowsley LIT	Wirral LIT	England
Key services						
Assertive outreach	1	3	2	2	2	2.1
Crisis resolution	1	2	2	2	2	1.4
Early intervention in psychosis	1	1	2	2	2	1.3
Secure places	2	2	2	2	2	2.0
Black & minority ethnic people's services	1	1	2	3	2	2
Care planning						
CPA - Comprehensive	2	2	2	2	2	2.1
CPA - Carers' Plans	1	1	3	1	1	1.6
Transition protocols	2	1	2	3	2	2.0
Local planning						
Planning Process	2	3	3	3	3	2.4
Service integration						
Provision - CMHTs	3	1	3	3	3	2.3
Underpinning programmes						
Recruitment and retention	2	1	1	2	2	1.9
Workforce planning	1	1	1	2	1	1.9
Education and training	2	2	2	2	2	2.2
Representative workforce	2	2	2	2	2	2.0
Links to LIS	2	2	2	2	2	2.5
Integrated MHER	1	2	1	1	1	1.7
Local Directory	3	3	3	3	3	2.6
Funding	2	2	2	2	2	1.7
Other priorities						
Single sex accommodation	3	1	1	1	1	1.9
Mental health promotion	3	3	3	3	3	2.8
Specialist services	2	2	2	2	2	2.1

N.B. *includes scores for the 20 indicators that remained unchanged from 2001, plus the black & minority ethnic people's services indicator.*

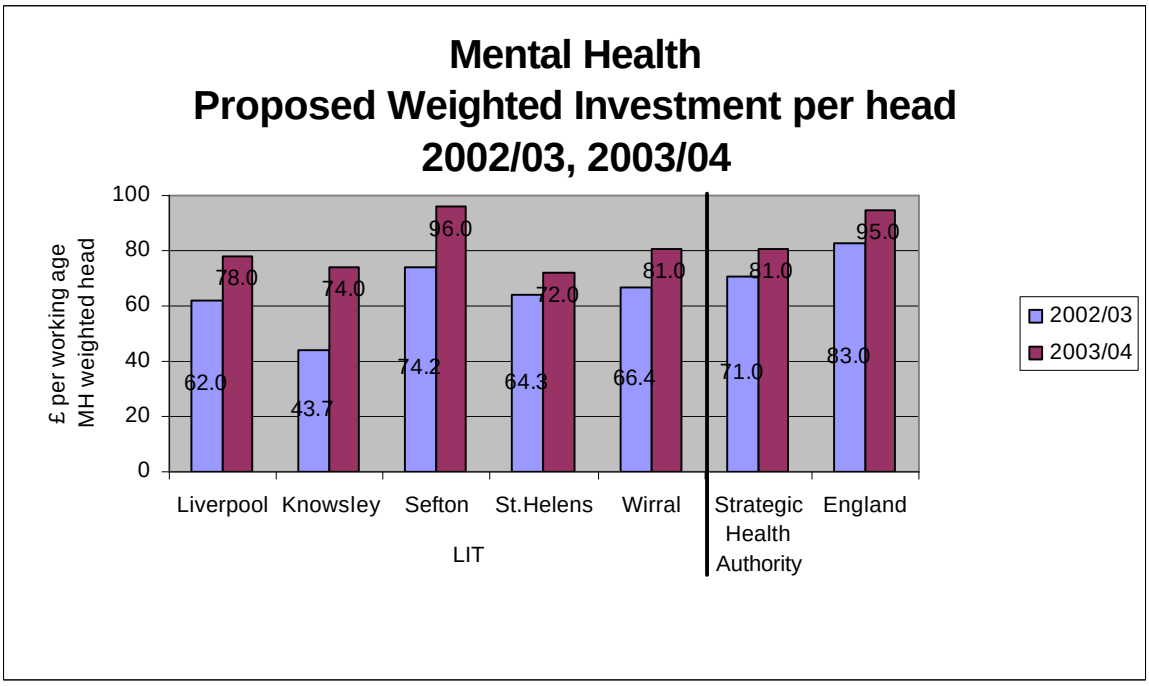
Source: Mental Health Strategies

3.4.6 Planned investment in mental health

Data requested: Adjusted cost of local specialist mental health services. At PCT level from LIP Stage IV
Data source: Mental Health Strategies, for the Mental Health Group, Manchester.

There was no readily available data on costs of mental health services – only planned investment. In a financial mapping exercise, LITs compiled details of their planned investment in adult mental health for the current financial year (2002/3, LIP Stage 4). A report for each individual LIT area was produced by Mental Health Strategies. The report included an assessment of the overall weighted investment per head of the LITs population. Figure 23 gives the results for the Merseyside LIT areas. Data for 2003/04 was also obtained. Unfortunately, the data is not available by PCT, because Mental Health Strategies did not have PCT weighted populations, so could not do the calculations. They may consider providing PCT data in future.

Figure 23



Source: Mental Health Strategies

The weightings are for psychiatric morbidity.
Population figures are weighted working age adult populations.
Note that figures exclude indirect costs, capital charges and overheads.

In 2002/03, all Merseyside LITs fell well below national levels of planned spending on mental health. Only Sefton predicted spending more than the average for Cheshire and Merseyside Strategic Health Authority (SHA). Knowsley has the smallest planned investment, at just over half that of the national average per head of population (figure 23).

By 2003/04, the situation had improved, especially in Knowsley. Proposed investemnt in Sefton was actually above the national average. However, St.Helens, Knowsley and Liverpool were all below the SHA average, and with Wirral, were all still well below the national planned investment levels.

'Fair shares': LIT poulation figures are weighted for psychiatric morbidity. They were used to calculate the amount of investment required to bring each LIT into line with the SHA and national spending levels (2003/04, table 23). Liverpool LIT would require more than £7 ½ million pounds to achieve equality with national levels of investment per head. Liverpool, St.Helens and Knowsley LITs would need more than £1 million each simply to reach the average Cheshire and Merseyside SHA investment. Only Sefton LIT compared favourably with SHA and national investment.

Table 23
Amount of investment required to achieve fair shares, compared to Strategic Health Authority, and England, 2003/04.

LIT	Compared to SHA	Compared to England
Liverpool	+ £1,346,184	+ £7,628,376
St.Helens	+ £1,255,644	+ £3,208,868
Knowsley	+ £1,032,899	+ £3,098,697
Wirral	£0	+ £3,008,068
Sefton	- £2,736,780	- £182,452

Source: Mental Health Strategies

3.4.6 Planned investment in mental health

Key points

Data problems

- Data is only available at LIT, and not PCT level.
- There is no data on the breakdown of funding between hospital and community services.

Geography

- Liverpool, Knowlsey and St.Helens LITs would require more than £1 million each to reach the average SHA investment levels. In each Merseyside LIT except Sefton, between £3 million and £7 million would be needed to achieve equality with national investment.

Recommendations

1. *Data:*
    a. The production of data at PCT level as well as LIT level would help to identify specific areas of inequality in the distribution of investment.
    b. Data on the breakdown of funding between specific mental health service provision, (e.g. CMHTs, crisis resolution teams, inpatient care) would be useful in further pinpointing where inequalities in distribution lie.
2. Merseyside PCTs should review spending on mental health services with a view to increasing investment, to enable redistribution according to need amongst LITs.

3.5 Outputs: Measures of use of services

3.5.1 Benzodiazepine prescribing

Data requested: Prescribing rates for drugs acting on benzodiazepine receptors (age and sex standardised). Units to be ADQ's/StarPu. At PCT level and also at GP practice level using the PPA code for senior partner.
Data source: PCTs

Benzodiazepines are used for the treatment of anxiety. They include sleeping tablets and tranquillisers (hypnotics and anxiolytics). Benzodiazepine prescribing is of special interest because of the dependence issue – it is now known that benzodiazepines should only be used for very short periods of time (2 to 4 weeks), and only for severe cases of anxiety and insomnia (Meek 2004, Worcestershire Health Authority 1998, South East Hampshire Health Authority 2001). Benzodiazepine prescribing is one of the three high level performance indicators identified by the DoH that relate to mental health:

> *'… indicating effective delivery of appropriate healthcare. Attempts to measure the level of detection of, and appropriate prescribing for, mental health conditions in primary care. There is a broad consensus that prescribing of benzodiazepines should be kept to a minimum'*
>
> (DoH July 2000).

> *'Prescribing of benzodiazepines should be kept to a minimum and prescribed for a limited period of time for any one individual in a limited number of circumstances. Prescribing rates should be falling to reflect a reduction in inappropriate prescribing'.*
>
> (CHI 2003a)

Problems

- It has been pointed out that GPs are judged on the quantities of benzodiazepines prescribed, that 'a low level is good and a high level is bad' – but that these measures do not take into account who the drugs are prescribed for, for how long, and for what condition (Worcestershire Health Authority 1998).

- Anxiety can mask underlying depression, which is more appropriately treated with anti-depressants (South East Hampshire Health Authority 2001).

- GPs may prescribe more than one month's supply of medicine on one prescription, so prescription rates are not always good proxies for prevalence of mental illness in the population (Hertfordshire Health Authority, 2001).

- Because of the way the data is analysed, it was not possible to consider inequalities relating to *age and sex*. There are likely to be important differences in prescribing patterns amongst different age and sex groups. For example, a recent study found that the proportion of the population receiving medication for depression is two and a half times higher among women than men, with the

prevalence of treated anxiety showing a similar large differential between the sexes (Moser 2001).

-

Age & sex weighted averages: ADQs/ Star Pu
Older people are more likely to consult their GP and require medication. A measure has been developed by the Prescribing Support Unit to compare the prescribing of drugs by practice whilst taking into account the demography of patients on the practice list. A weighting is applied, based on the therapeutic group, to the practice list broken down by age and sex. The resulting measure is 'ADQs/ Star Pu'. This stands for the total number of Average Daily Quantities per item-based Specific Therapeutic group, Age, Sex Related Prescribing Unit. 'Average Daily Quantities' are purely a comparative statistical measure that takes account of the strength and pack size of the drugs being issued. They are not recommended doses, but are analytical units produced in order to compare more accurately the volume of prescribing of primary care practitioners (O'Hare 2004, Taylor 2002).

PCT
Data was received from the pharmacy units in each Merseyside PCT. Figure 24 shows the prescribing averages for drugs acting on benzodiazepine receptors in the nine Merseyside PCTs. There is clearly a large amount of variation that cannot be explained by the age/sex characteristics of the population.

Deprivation
At PCT level, there was no statistically significant correlation between the prescribing of drugs acting on benzodiazepine receptors and deprivation (*deprivation measure was Index of Multiple Deprivation 2000 – see notes on IMD in Introduction*).

Geography and trends
There was some variation between PCTs, with North Liverpool PCT having the lowest average at 9.68, and Southport & Formby with the highest, at 13.67 (2002-2003).

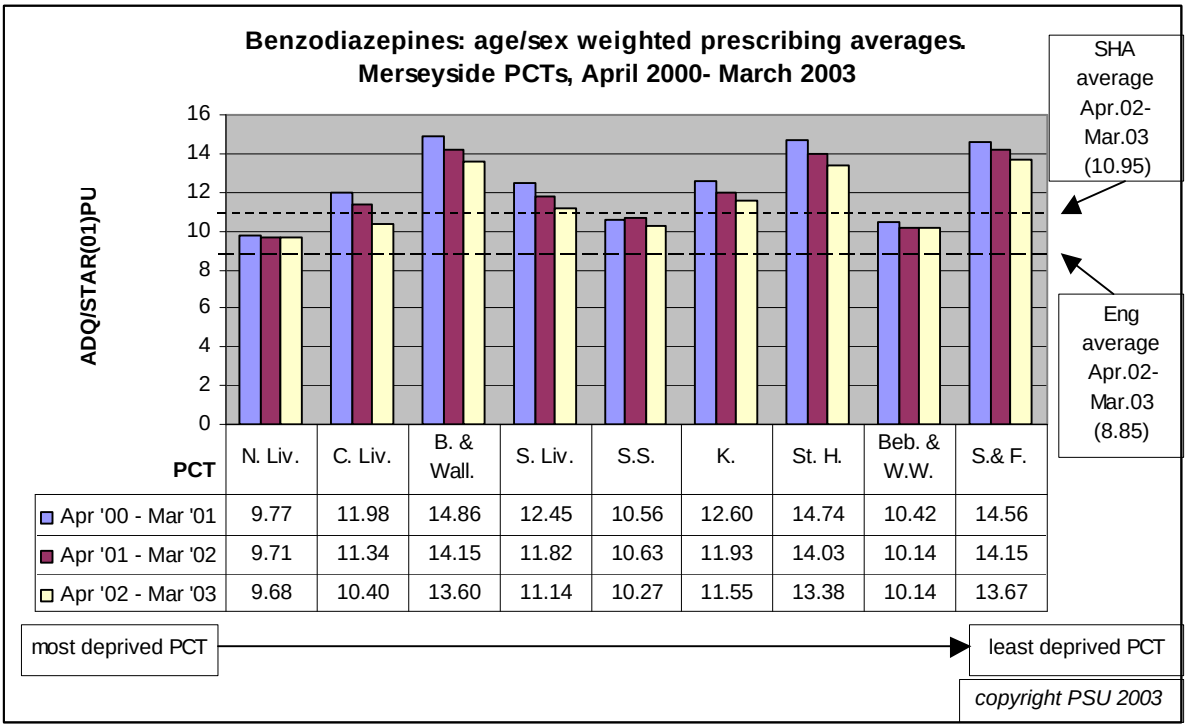
The overall trend is for a slight decrease in averages in all PCTs over the last three years. Averages in 2002-03 were significantly lower than in 2000-01 (*analysis of variance, Tukey multiple comparisons, $p<0.0001$*). Those PCTs with lower prescribing averages had less of a decrease than the high prescribers.

Figure 1 shows that in 2002-03, five of the nine Merseyside PCTs had prescribing averages above the Cheshire and Merseyside Strategic Health Authority average of 10.95 (Birkenhead & Wallasey, South Liverpool, Knowsley, St.Helens and Southport & Formby). All were above the national average of 8.85 (all were significantly higher, $p<0.05$, with the exception of North Liverpool).

The DoH produces data on this indicator at district level. The differences shown in Figure 1 between PCTs in the same district show how important it is to analyse data at the

smallest level possible, - at least by PCT. For example, averages in Birkenhead and Wallasey were much higher than in Bebington & West Wirral.

Figure 24



data source: Knowsley PCT
KEY: PCTs in full; North Liverpool, Central Liverpool, Birkenhead & Wallasey, South Liverpool, Knowsley, St.Helens, Bebington & West Wirral, Southport & Formby.
N.B. STAR_Pus were calculated in 2001, ADQs for variable years

Need

There are no up to date reliable proxies for need at primary care level. It is possible to apply the prevalence of neurotic disorder found in the recent national morbidity survey to PCT populations, but this would not take into account the different age/sex and social compositions of local populations (see section on morbidity). The primary care needs index does take these factors into account, but is now out of date, being based on the 1991 census (see 'primary care needs index' section). Using the old index, there was no correlation between primary care needs index scores for PCTs and their prescribing averages for benzodiazepines, but because of the different time periods being compared, no firm conclusions can be drawn. There needs to be a development of this index, so that, like the MINI 2, it can be updated regularly. The index was available by ward – in future, the possibility of linking it to practice level data should be explored.

General Practice

Deprivation

For most of the indicators gathered for the equity audit, the lowest geographical level available has been PCT. This is a problem when looking for relationships with

deprivation, because the PCT is big enough to hide quite large pockets of deprivation. Prescribing data was one of the few indicators available at a smaller geographical level - by general practice.

Deprivation at practice level was measured by the Low Income Scheme Index (LISI). A high LISI score indicates a high level of deprivation. The LISI is the cost of prescriptions in a practice that are exempt on the grounds of low income as a percentage of the cost of all prescriptions (see 'Methods' section for further details and discussion). The LISI appears to be the best currently available measure of deprivation at practice level, despite it's drawbacks (see discussion in 'Methods' section). An alternative indicator of deprivation might be whether the practice receives deprivation payments.

Whilst PCT level analysis revealed no correlation with deprivation, at practice level, there were some statistically significant correlations. In 7 of the 9 PCTs, there were correlations between benzodiazepine prescribing and deprivation. In Central Liverpool, South Sefton and Birkenhead & Wallasey PCTs, the correlations were significant (see figures 25 to 33 for *r* and *p* values), with some of the more deprived practices having higher levels of prescribing.

There were two practices in Central Liverpool and one in Birkenhead & Wallasey with very high prescribing levels (above 40 ADQs per STARPu), all with higher than average LISI scores, which requires further investigation.

Geography
Practices in Knowsley, Central Liverpool and Birkenhead & Wallasey PCTs had the widest variations in prescribing, with averages broadly scattered between 2 to 40 ADQs per STARPu (2 practices in Central Liverpool were above 50). The majority of practices fell between 5 and 30 ADQs per STARPu. Bebington & West Wirral had the least variation between practices (between 5 and 16 ADQs per STARPu).

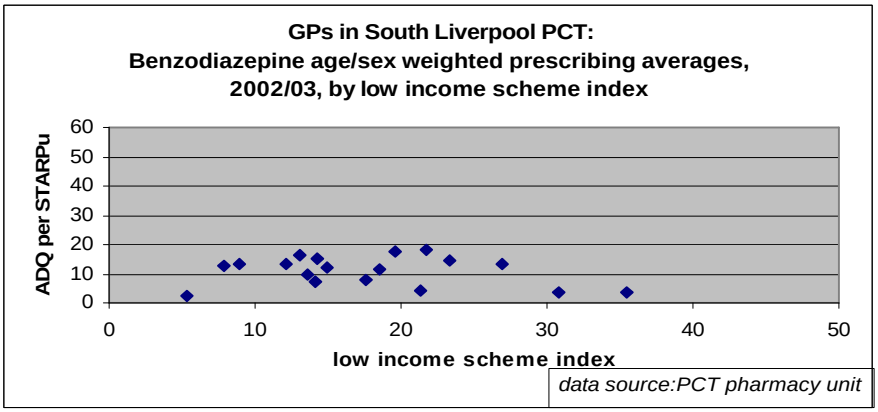
Ethnic group
There was no breakdown of data available by ethnic group.

Discussion
Deprivation will not be the only factor explaining variations in prescribing averages. In six of the PCTs, there was no statistically significant correlation with deprivation. Other factors influencing prescribing averages could include the clinical variations between GPs, or the characteristics of the practice, e.g. whether or not there is a community mental health team up and running; whether the practice is single-handed or a training practice; has links with the local psychiatric unit; or the age of the GPs involved. Confidentiality restrictions meant that individual practices could not be identified. In future, it may be possible to attach codes for these and other characteristics to the practice code, so they can be considered in analysis.

Local equity audits: PCT prescribing support teams inform practices of their scores and their comparison with other practices and the PCT in the data sent to them quarterly (O'Hare 2004). It would be useful for practices to become involved in commenting on how variations between practices can be interpreted and what action is needed. PCTs could organise local audits to carry out this work. There needs to be some consideration of the role of the PCTs in supporting GPs in trying to reduce prescribing. GPs need to be aware of alternatives, e.g. social support services, and guidelines on the management of anxiety and depression. An audit should attempt to include the patients' perspective, and consider the role of pharmacists in promoting the safe use of the drugs. PCT pharmacy units could be involved in discussing what other groups of data might be useful in an equity audit, e.g. numbers of people on prescriptions for multiple mental health drugs.

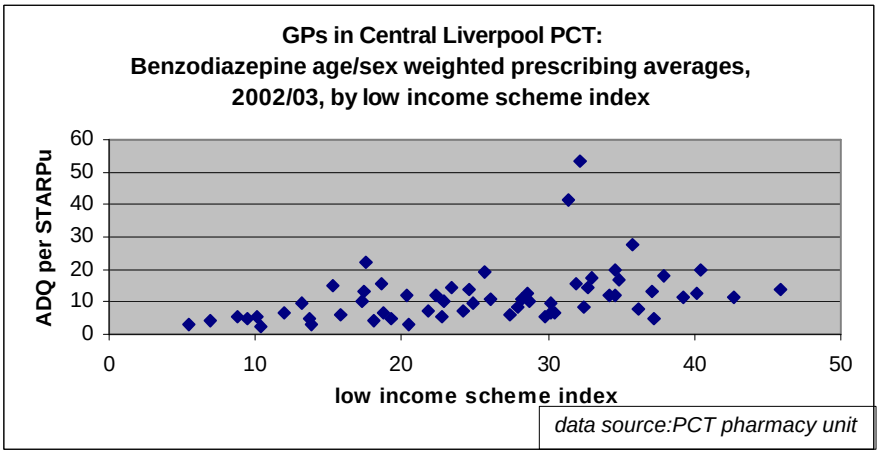
For figures 25 to 33, STAR Pus were calculated for 2001, ADQs for 2002-03

Figure 25



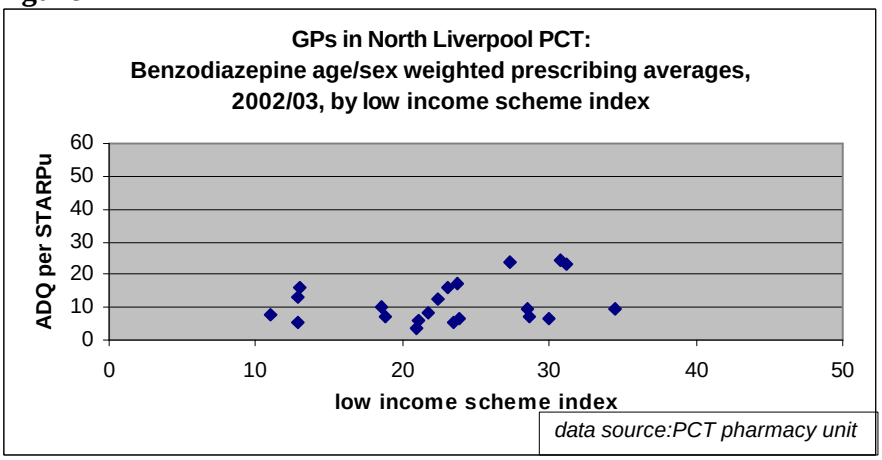
No significant correlation (Pearson's correlation -0.21).

Figure 26



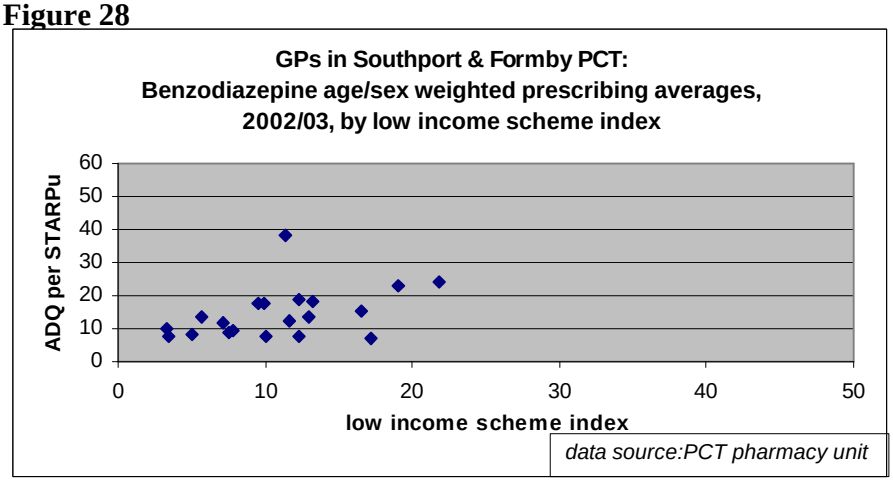
Significant correlation *(Pearson's correlation 0.41, p< 0.01).*

Figure 27



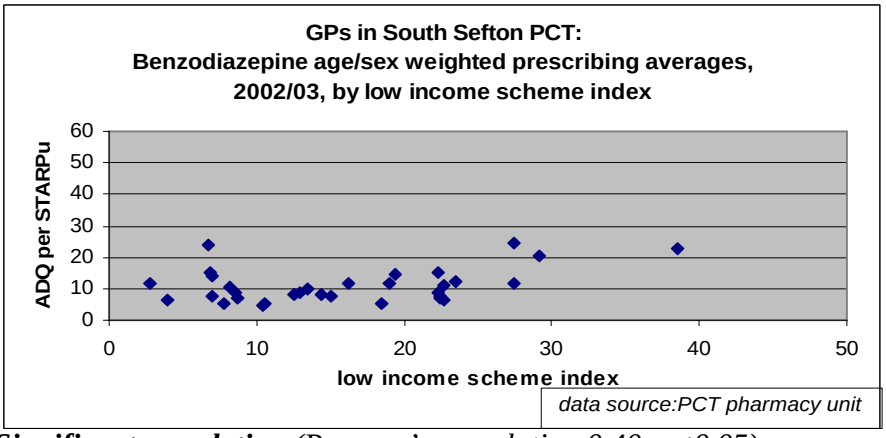
No significant correlation (Pearson's correlation 0.3)

Figure 28



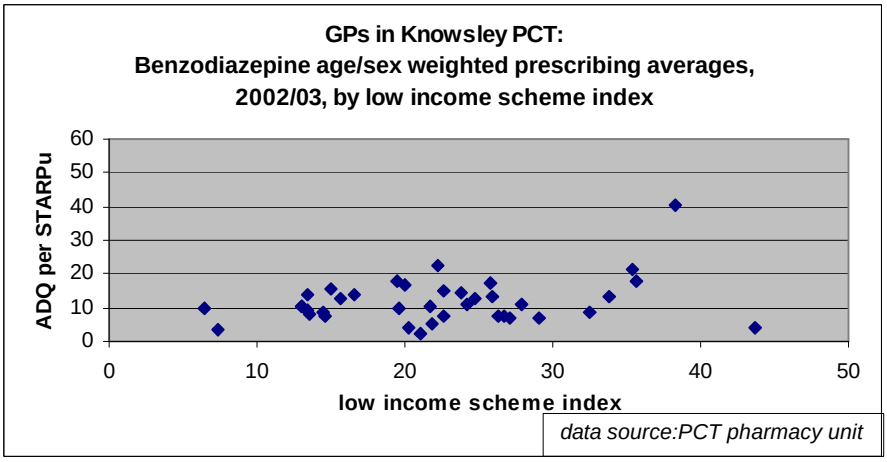
No significant correlation (Pearson's correlation 0.44)

Figure 29



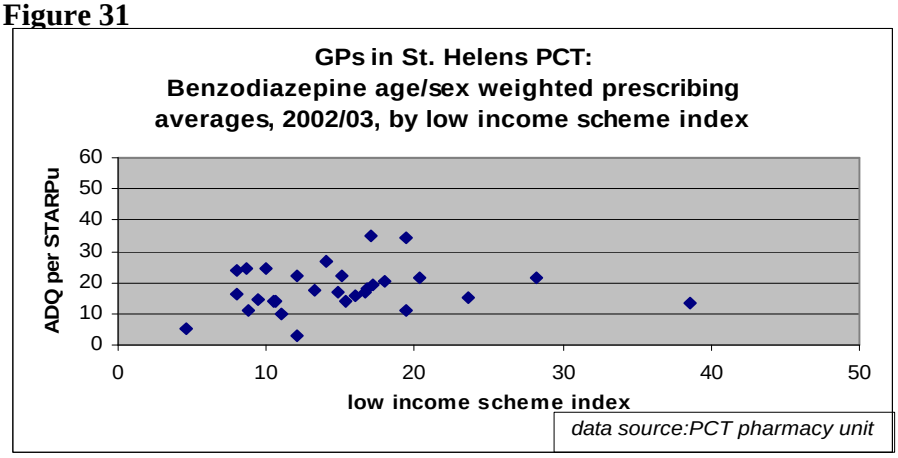
Significant correlation *(Pearson's correlation 0.40, p<0.05)*

Figure 30



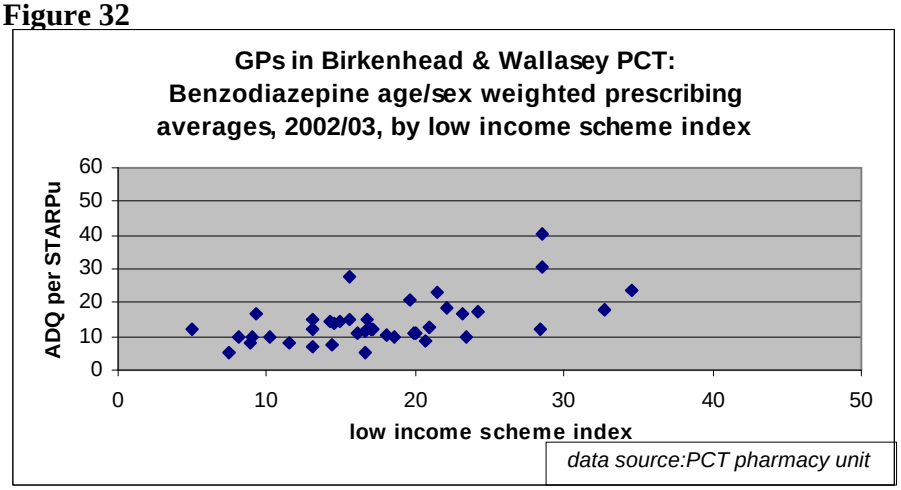
No significant correlation (Pearson's correlation 0.31)

Figure 31



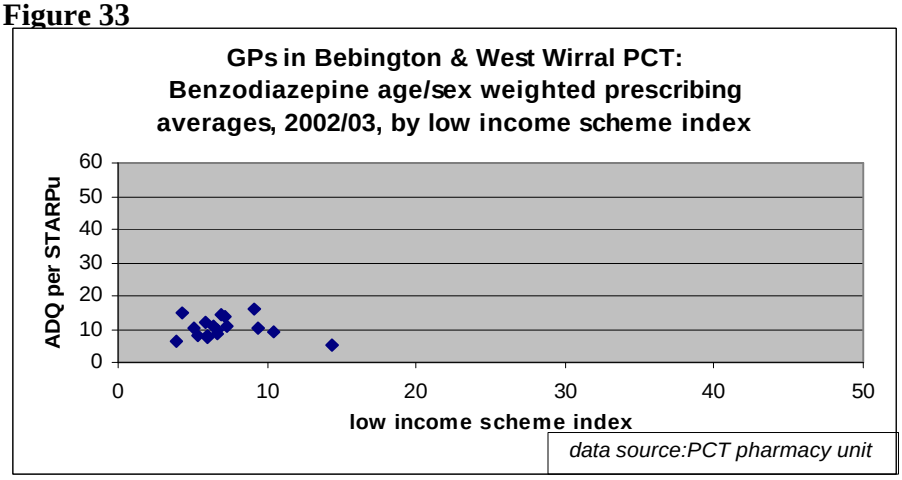
No significant correlation (Pearson's correlation 0.14)

Figure 32



Significant *correlation (Pearson's correlation 0.55, p< 0.01)*

Figure 33



No significant correlation (Pearson's correlation -0.17)

3.5.1 Benzodiazepine prescribing

Key points

Age & sex

- Because of the way the data is analysed, it was not possible to consider inequalities relating to age and sex.

Geography

- Although decreasing, prescribing averages of benzodiazepines in Merseyside are still higher than the national average, and in five PCTs , they were above the strategic health authority (SHA) average (four significantly so).

- There was some variation between PCTs, and large variations within PCTs, with more than 5–fold variations between practices (with the exception of Bebington & West Wirral).

Deprivation:

- There were significant correlations with deprivation at practice level in three of the nine PCTs, with the more deprived practices likely to have higher levels of prescribing.

- Other factors explaining the large variations in prescribing averages could include the clinical variations between GPs, or the characteristics of the practice.

Ethnic group

- There was no data available by ethnic group.

Recommendations

1. *Data:*
    a. Information should be made available on the characteristics of practices, e.g. whether or not there is access to counselling or to graduate workers etc. This would assist further analysis of factors affecting variations in prescribing habits.
    b. There needs to be some consideration of how age, sex and ethnic group can be considered separately, and what other sets of pharmacy data might be made available.
2. Using the additional data outlined in the previous two points, there should be further analysis in the form of local audits undertaken in PCTs, to review the reasons for variations in prescribing. This would identify specific practices that need to be targeted and supported in reducing prescribing, with prescribing guidelines and access to alternative treatments, such as psychological therapies and social support. For example, it is likely that practices in more deprived areas may need extra support to reduce prescribing.

3.5.2 Atypical antipsychotic prescribing

Data requested: Prescribing of atypical antipsychotics as a proportion of all antipsychotics units. Data to be extracted for each year for comparisons over time. At PCT level.

Data source: PCTs

The term 'atypical antipsychotics' refers to the newer drugs used to treat schizophrenia, for example clozapine. These drugs are more costly than drugs used traditionally, but they have reduced side effects. The NSF provides some guidance on the use of atypical antipsychotics, stating that all service users should be assessed for and receive new antipsychotics where indicated. The new atypical antipsychotics are now the drugs of choice for schizophrenia, and need to be considered as first-line treatments (NICE 2002, Hayhurst et al, 2003). The quantity of atypicals prescribed is measured as part of the performance management of PCTs:

> *'Prescribing of antipsychotics is identified in MHNSF standards 4 and 5 on effective services for people with severe mental illness as an indicator of performance. NICE Guidelines recommend prescribing of the new atypical antipsychotics as more effective and with fewer side effects. The proportion of atypical antipsychotics as a proportion of all antipsychotics should be rising'.*
>
> *(CHI 2003a)*

There has been some discussion of the 'postcode lottery' effect. Hayhurst et al (2003) found a 9-fold variation in the per capita use of new atypicals in primary care. A recent study of secondary care found a 34-fold variation between NHS Trusts in rates of prescribing clozapine, one of the new atypicals (Purcell and Lewis 2000). Individual practitioner preferences and prescribing skills still count for a great deal, especially in secondary care, where most atypical prescribing is initiated. Local population need appears to account for only a quarter of the variance in per capita antipsychotic spending. Relative underspends occur more frequently in areas of greater need, so that relatively expensive new treatments will be least available where they are most needed (Hayhurst et al, 2003).

It has been pointed out that mental health must figure more highly in primary care budget priorities (Rathfelder, 2004). It is known for patients discharged from hospital, including those diagnosed with schizophrenia, to have requests for atypical medication rejected on financial grounds. Rathfelder states that anyone experiencing mental health problems should be able to have the drug of their choice, and monetary concerns should not be placed ahead of clear clinical needs, thereby compromising treatment.

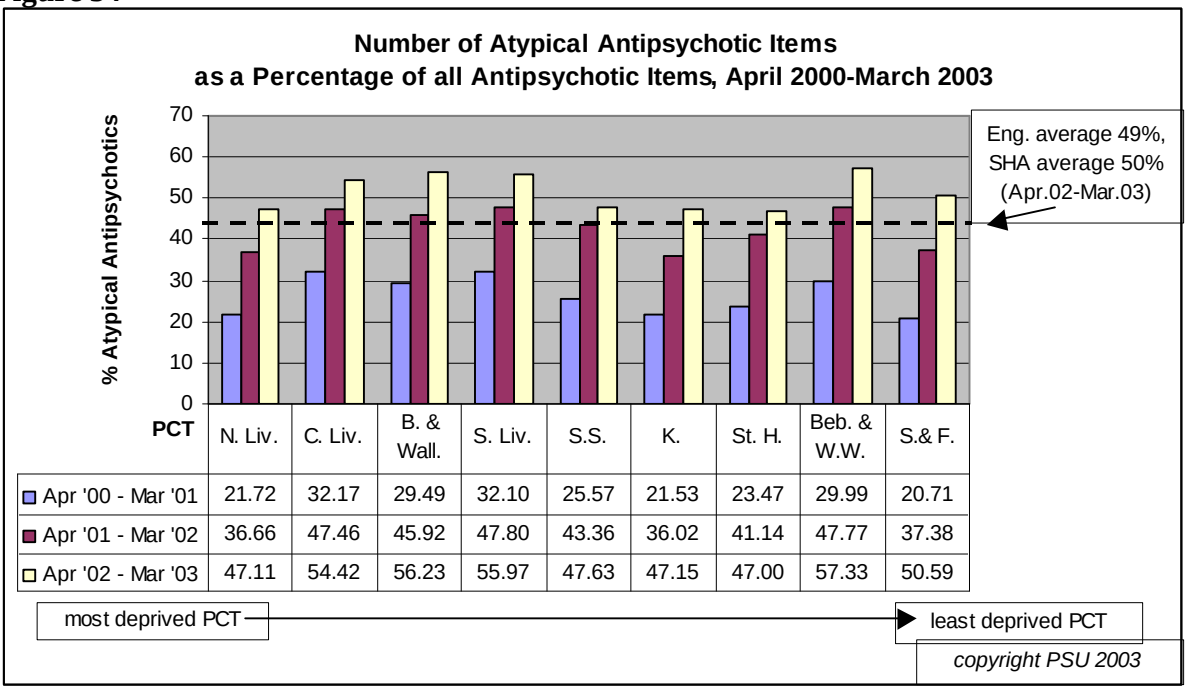
PCT data

Unlike data on benzodiazepine prescribing, antipsychotic data is not weighted in any way. Antipsychotic prescribing is measured by items, rather than ADQs.

Figure 34 shows that there is very little variation between PCTs in Merseyside. Rates of prescribing of atypicals as a proportion of all antipsychotics in all PCTs increased sharply between 2000/01 to 2001/02, and continued to increase, although less dramatically, in 2002/03. In North Liverpool, Knowsley, St.Helens and Southport & Formby, proportions have more than doubled during the three year period.

Despite these increases, in 2002/03, four PCTs had lower levels of prescribing compared to England and to Cheshire and Merseyside Strategic Health Authority (North Liverpool, South Sefton, Knowsley and St.Helens). The first three of these PCTs include patients mainly from the area covered by Merseycare NHS Trust, and St.Helens patients fall under the 5 Boroughs Partnership Trust area. The 2 Wirral PCTs, whose patients would have had their treatment initiated with Cheshire and Wirral Partnership NHS Trust, were both above national and SHA averages.

Figure 34



KEY: PCTs in full; North Liverpool, Central Liverpool, Birkenhead & Wallasey, South Liverpool, Knowsley, St.Helens, Bebington & West Wirral, Southport & Formby.

Deprivation

There was a very weak positive correlation between prescribing of atypicals and deprivation, as measured by the DETR index (r=0.21). As the prevalence of schizophrenia is closely linked to deprivation (see 'Morbidity' section), it should follow that areas of higher deprivation should have had higher proportions of atypicals prescribed, in order to redress their higher morbidity levels. As suggested in the literature (*see 3rd paragraph, this section, Hayhurst et al, 2003)*, it would appear that the distribution of atypical antipsychotics does not follow the distribution of need.

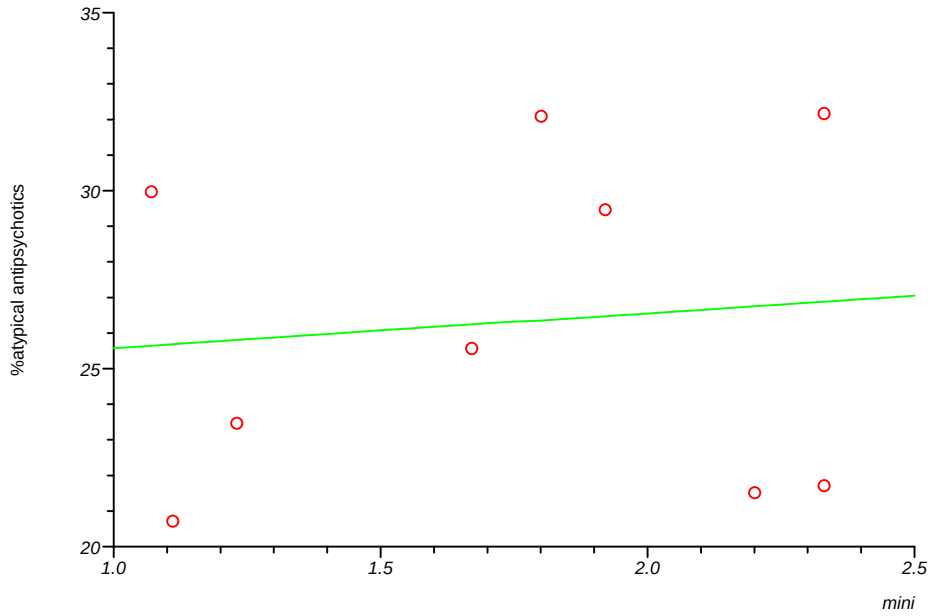
Need

The mental illness needs index (MINI 2) was used as an estimate of the prevalence of psychoses (which include schizophrenia – see section on MINI). Amongst PCTs, there was almost zero (r=0.1) correlation between estimated prevalence of psychoses and the prescribing of atypicals (Figure 35). Again, it should be the case that areas of greatest need should have the highest proportions of atypical prescribing.

The lack of correlations here would suggest that progress is not as it should be in deprived areas, and in areas with the greatest mental health needs. There is a need for further analysis at local level to gain a greater understanding of the relationships between the different factors involved.

Figure 35

Percentage atypical antipsychotics, by mental illness needs index (MINI). Merseyside PCTs, 2002/03 (r=0.1)



source: PCT Pharmacy Units, and University of Durham (MINI)

General Practice.

Figures 36 to44 show the pattern of prescribing of atypical antipsychotics amongst practices in the Merseyside PCTs. Numbers of prescriptions at practice level may be quite small, so data should be treated with caution.

Deprivation

Deprivation was measured using the low income scheme index – (see 'Methods' section). There was no statistically significant correlation between practice prescribing and deprivation within any of the PCTs. As between PCTs, it would appear that amongst practices, the distribution of atypicals does not follow the distribution of need

Need
The MINI 2 is available at ward level, but not by practice, so that LISI deprivation scores remain the best available indicator of need at practice level.

Geography
Although not appearing to follow need, there is considerable variance in prescribing of atypicals between practices, especially within Central Liverpool, South Sefton, Knowsley, St.Helens and Birkenhead & Wallasey PCTs. This confirms the findings in the literature, mentioned at the start of this section (Hayhurst et al, 2003, Purcell and Lewis 2000). In Birkenhead & Wallasey, proportions vary from 17.5% to 88.6%. The source of much of this variance is the prescribing habits of hospital psychiatrists, because much of the prescribing of atypicals is initiated in secondary care, rather than by GPs (Hayhurst et al, 2003, Purcell and Lewis 2000).

There is less variation in prescribing habits in practices in Southport & Formby and Bebington & West Wirral, compared with the other PCTs.

There are three practices in Knowsley, four in St.Helens, one in South Sefton and one in Birkenhead & Wallasey with very low levels of prescribing, (below 25%).

Discussion
As with benzodiazepine prescribing, it would be useful for practices to meet together and discuss how they compare with other practices, commenting on how results can be interpreted and what action is needed. This could take the form of a local PCT-wide audit, in which hospital psychiatrists should also be involved. The influence of other factors could then be considered, e.g. the possibility that areas with low proportions of people on atypical antipsychotics could include more people with long-term psychosis who are themselves reluctant to change, or their GP/psychiatrist is reluctant to change their medication. The local audit should include a consideration of the NICE guidelines on this topic (NICE 2002).

The NICE guidelines recommend use of atypical antipsychotics, but do not consider the cost implications of this advice. These drugs are more expensive than the traditional antipsychotics, which could make it difficult for Mental Health Trusts to implement the guidelines.

There were no significant correlations between the proportion of atypical antipsychotics prescribed, and the low income scheme index.

Figure 36

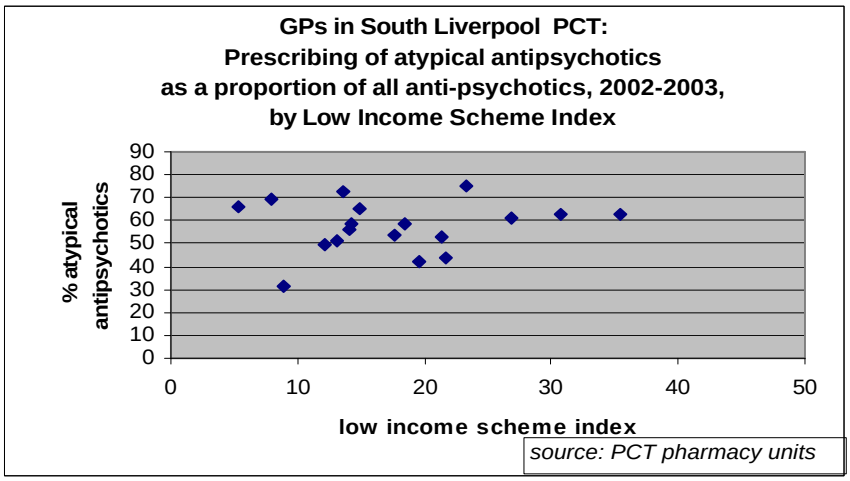


Figure 37

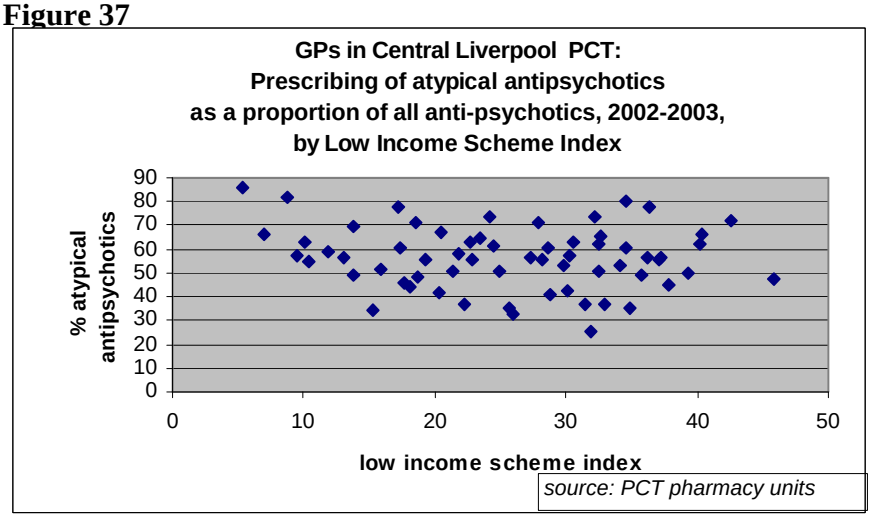


Figure 38

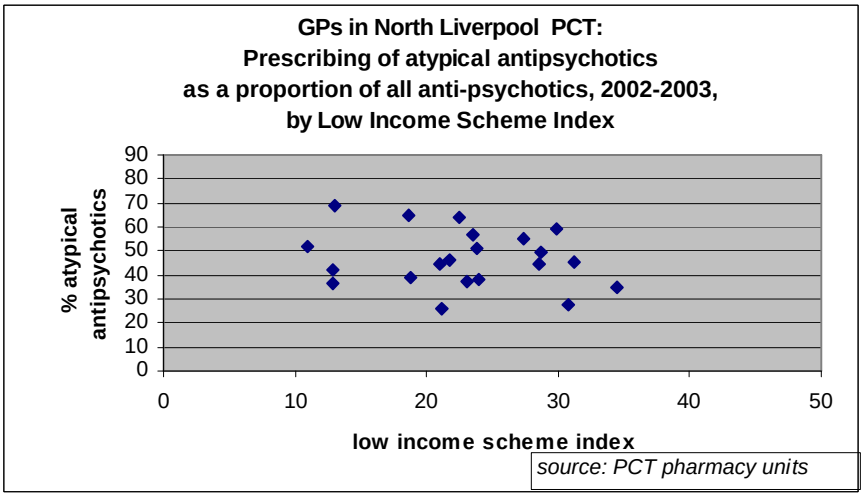


Figure 39

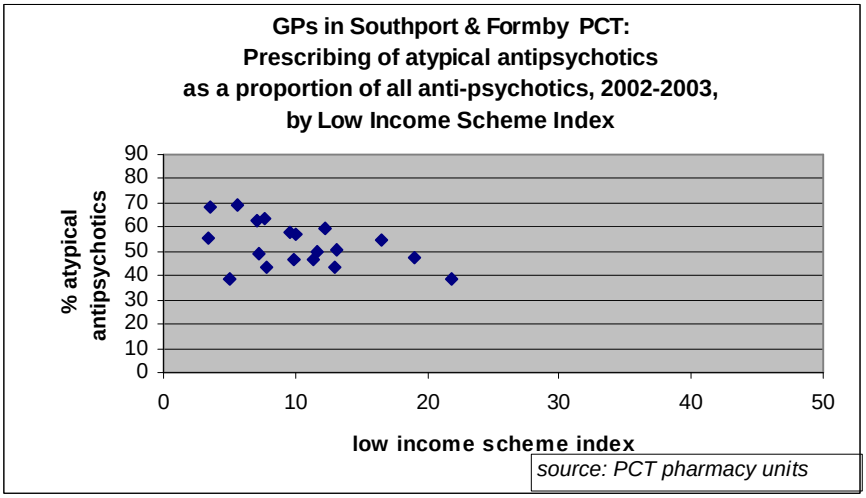


Figure 40

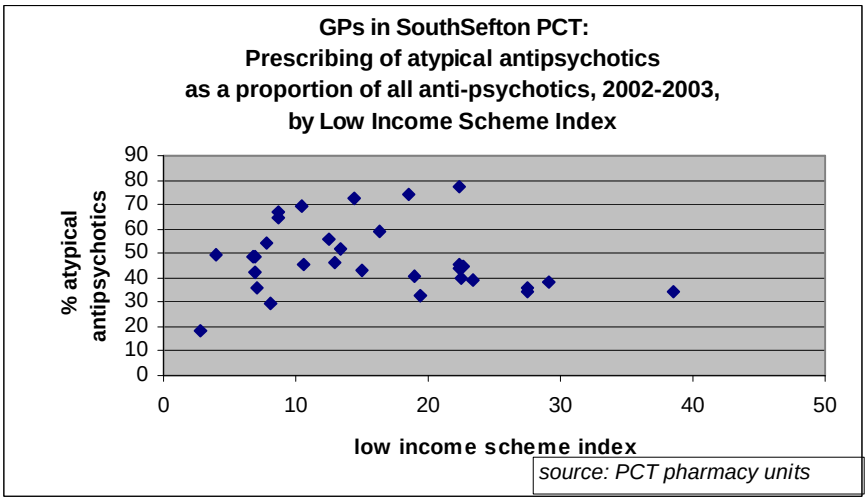


Figure 41

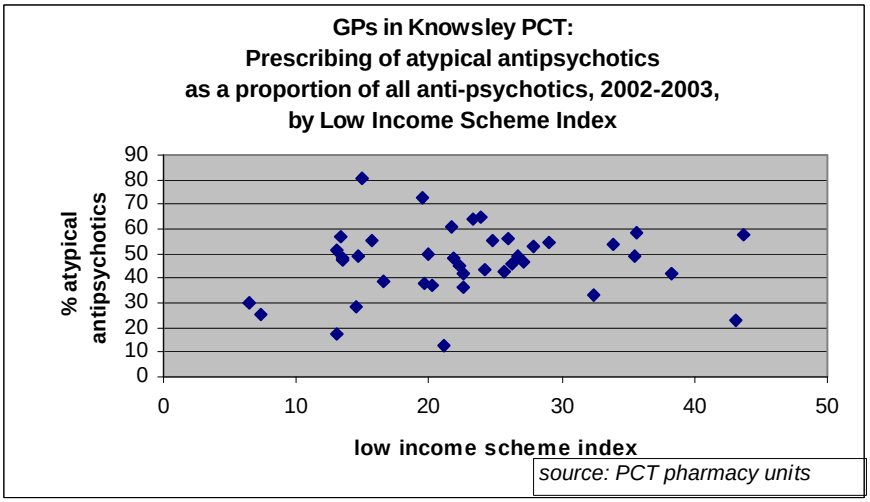


Figure 42

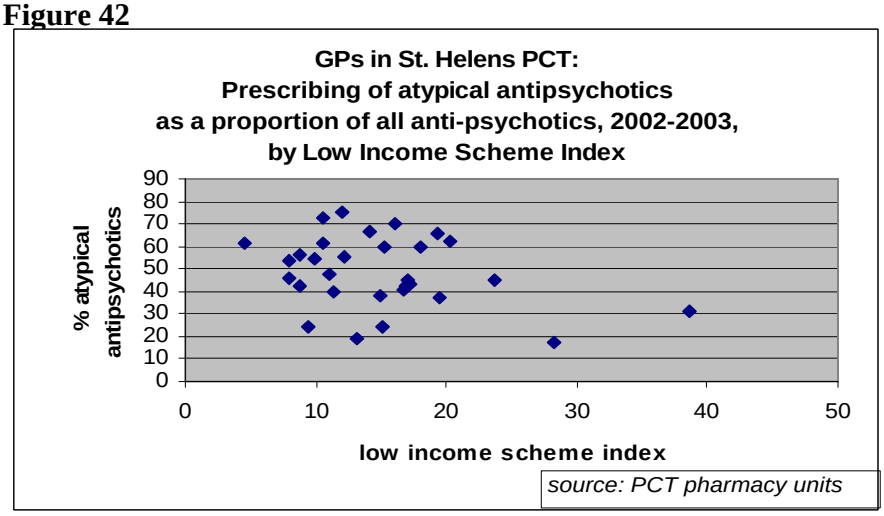


Figure 43

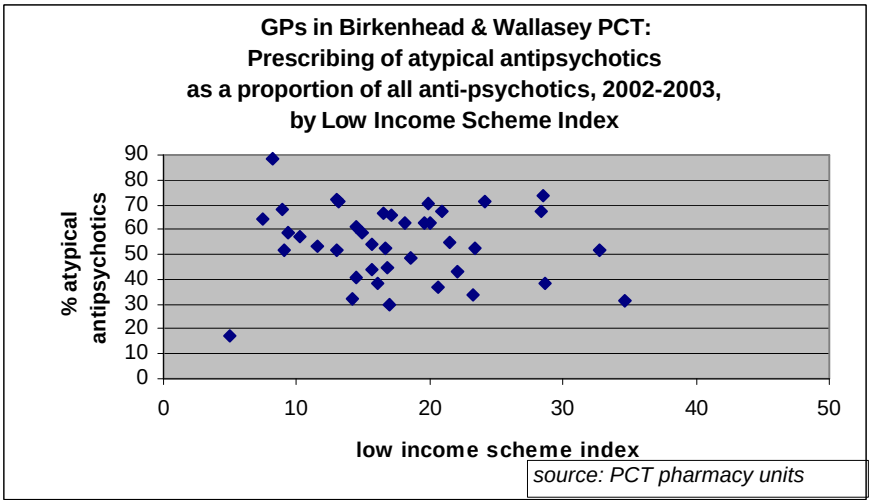
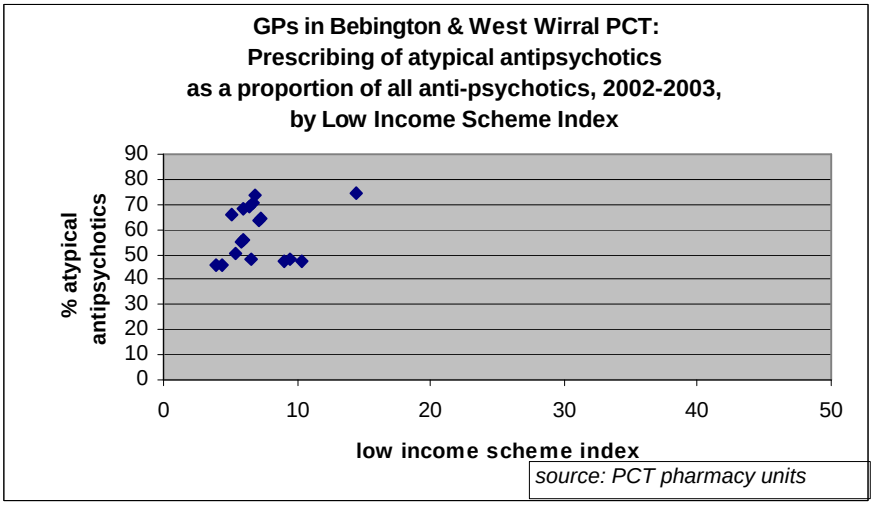


Figure 44



3.5.2 Atypical antipsychotic prescribing

Key points

Age sex.

- Because of the way the data is analysed, it was not possible to consider inequalities relating to age and sex.

Geography

- Rates of prescribing of atypicals as a proportion of all antipsychotics in all PCTs increased sharply between 2000/01 and 2002/03.

- There is very little variation in prescribing of atypicals between PCTs in Merseyside. There is considerable variance between practices, especially within Central Liverpool, South Sefton, Knowsley, St.Helens and Birkenhead & Wallasey PCTs. For example, in Birkenhead & Wallasey, proportions vary from 17.5% to 88.6%.

- In 2002/03, four PCTs had lower levels of prescribing compared to England and to the SHA. This is especially an issue for Merseycare NHS Trust (with North Liverpool, South Sefton, and Knowsley PCTs below average) and 5 Boroughs Partnership NHS Trust (with Knowsley and St.Helens PCTs below average).

Deprivation/ need

- There was no significant correlation between prescribing of atypicals and deprivation, at PCT or practice level. It would appear that the distribution of atypical antipsychotics does not follow the distribution of need.

- There was almost zero correlation between estimated prevalence of psychoses and the prescribing of atypicals. Again, it should be the case that areas of greatest need should have the highest proportions of atypical prescribing.

Ethnic group

- There was no data available by ethnic group

Recommendations

1. *Data:*
    a. There needs to be some consideration about how age, sex and ethnic group can be considered separately, and what other sets of pharmacy data might be made available.
2. Local audits should be undertaken involving primary and secondary care clinicians and pharmacists, to examine the factors involved in variations in prescribing patterns within PCTs (especially with regard to patients from Merseycare NHS Trust). The Merseyside audit has shown that people in deprived areas need more equitable access to the new atypical antipsychotic medication. Local audits should explore this further.

3.5.3 GP referrals to Community Mental Health Teams (CMHTs).

Data requested: Referrals by GP practices to Community Mental Health Teams (CMHTs). Including gender, ethnicity, by PCT and practice, ages 16-64 and 65+, April 2002/March 2003.
Data source: Mental Health Trusts

It was expected that data on referrals by GPs to CMHTs might be incomplete, because not all CMHTs would have been up and running at the time. No data was available from Merseycare, because referrals were not collected on their Patient Administration System (PAS). They stated that where data is collected, it was only a manual paper record. Wirral were also unable to supply any data.

5 Boroughs Partnership Trust
5 Boroughs provided the data as requested. Data was also supplied by locality, which can be grouped into PCTs (see box 5)

Box 5
Localities in St. Helens & Knowsley PCT:
- *St.Helens PCT*: St. Helens North, St. Helens South and Newton & Haydock.
- *Knowsley PCT*: Central Knowsley, South Knowsley and Kirkby.

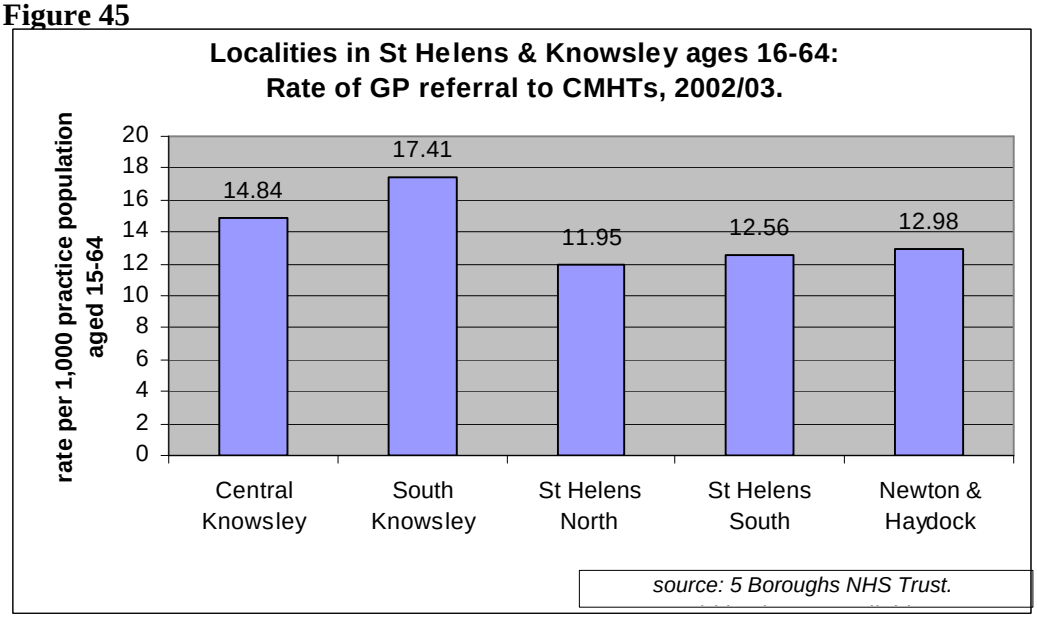
Data for Kirkby was missing, because most people living in Kirkby would be referred to Merseycare NHS Trust rather than 5 Boroughs. It is possible that GPs elsewhere in Knowsley and St. Helens refer patients to Merseycare or other mental health trusts – comparable data from Merseycare is needed so that accurate PCT rates can be calculated.

Referral data was for the age range 16-64 and 65+. The practice population data used to calculate rates was for the slightly different age range of 15-64 and ages 65+.

Ethnic group
Data was provided by ethnic group, but this tended to be either 'British' or 'not stated', with only the very occasional individual recorded as e.g. Irish or African. Ethnic group was therefore not included in the analysis here. The system of recording ethnic group needs checking – it could be that people from ethnic minority groups tend to be recorded as 'not stated'.

Localities
Figure 45 shows rates of referral by GPs to CMHTs, ages 16-64, 2002/03. Rates in the localities of St. Helens PCT were fairly similar at around 12 per thousand. Rates in Knowsley were higher, especially in South Knowsley, where they were 17.41 per thousand. Actual numbers were 588 in the localities of Knowsley (excluding Kirkby) and 1818 in St Helens localities.

Figure 45

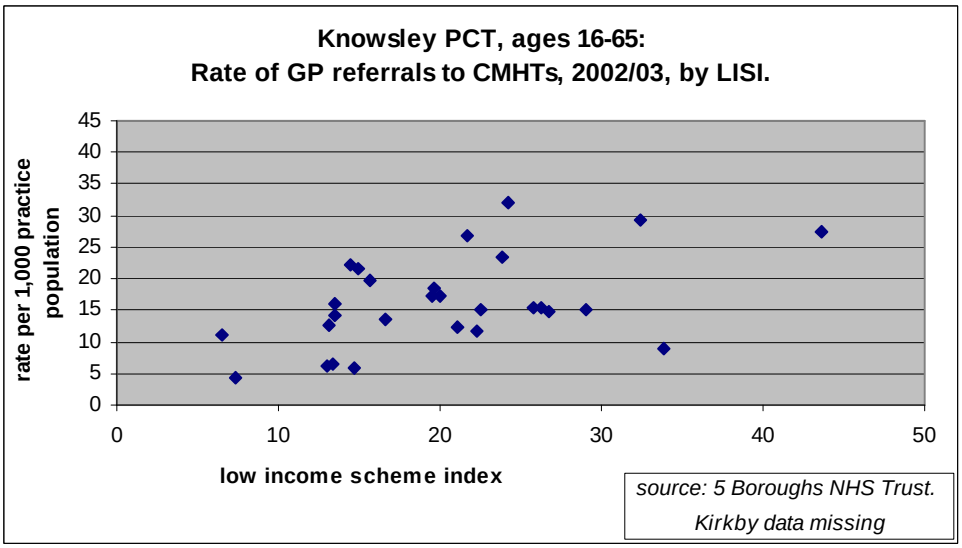


Note: includes referrals by GPs within St. Helens & Knowsley PCTs, to 5 Boroughs NHS Trust only. Some GPs will refer to other mental health trusts. Kirkby data not available.

Practices

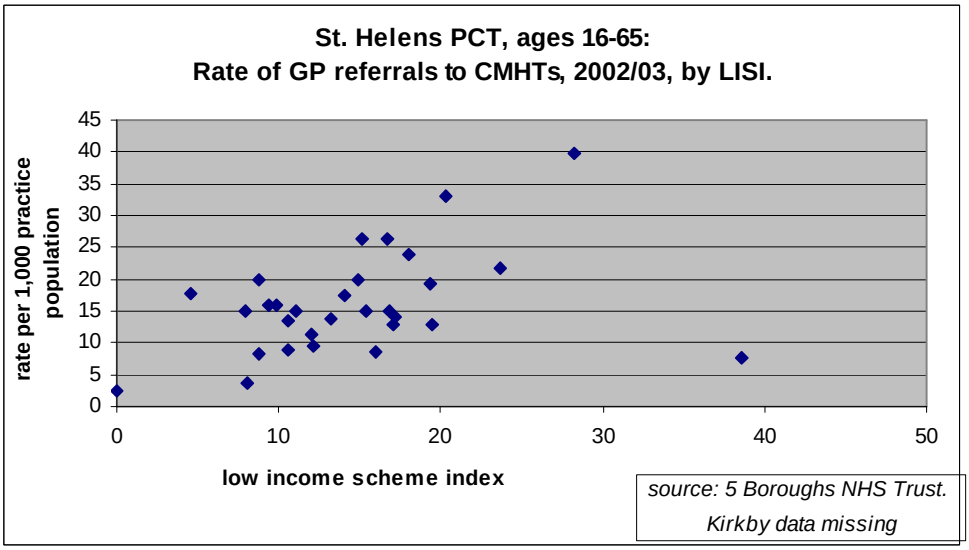
The data was provided by practice code. Figures 46 and 47 show scatter plots of rates of referral for each practice in Knowsley and St.Helens PCTs, by LISI (low income scheme index – see methods section). There are large variations between practices, ranging from 2 to 39 per thousand practice population. The spread of rates is similar in the two PCTs.

Figure 46



Note: includes referrals by GPs within Knowsley PCT, to 5 Boroughs NHS Trust only. Some GPs will refer to other mental health trusts. Kirkby data not available.
Significant correlation with deprivation (LISI) = 0.48, p<0.01

Figure 47

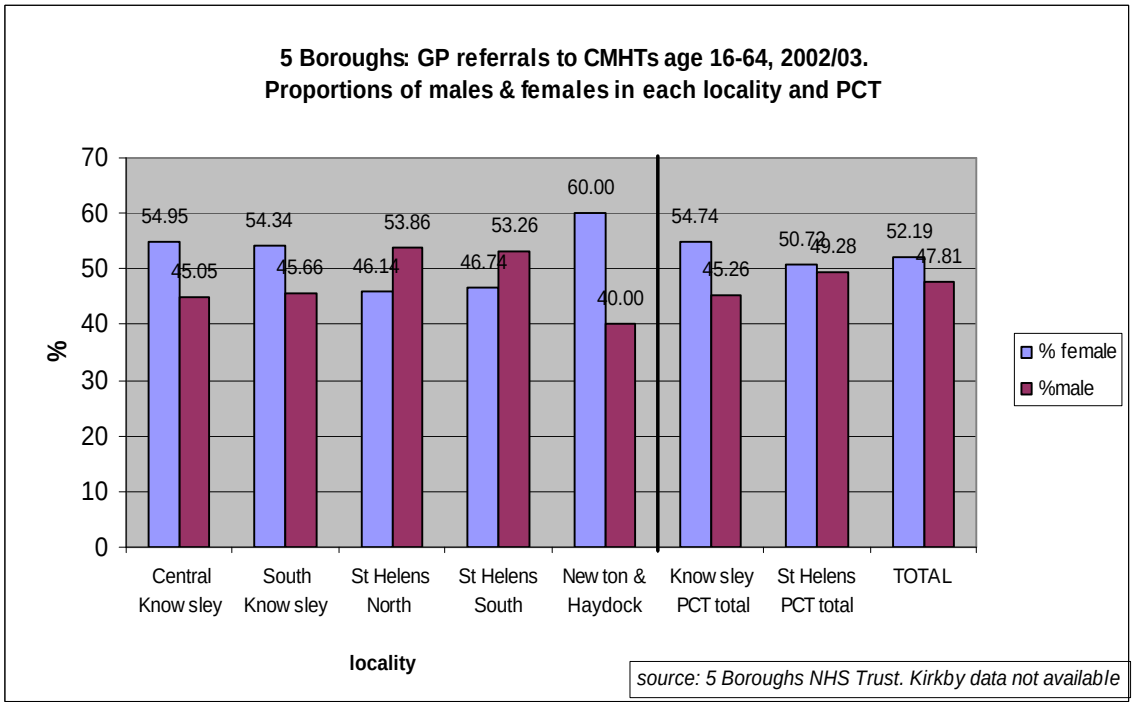


Note: includes referrals by GPs within St. Helens PCT, to 5 Boroughs NHS Trust only. Some GPs will refer to other mental health trusts. Kirkby data not available.
Significant correlation with deprivation (LISI)=0.39 p<0.05.

Age/Sex
Figure 48 shows proportions of male and female referrals to CMHTs in 5 Boroughs Trust amongst localities and PCTs in St. Helens & Knowsley, 2002/03, ages 16-64. In total, referrals were more likely to be female. In St Helens North and South, there were more males.

In Knowsley and in St.Helens PCTs, there were greater proportions of females referred to CMHTs than there were referred to psychiatrists (see next section). Table 24 shows that the distribution between the sexes amongst the 2 PCTs is similar if rates are calculated, using PCT resident populations as a proxy for the sum of practice populations *(resident PCT populations are slightly different to the total practice populations for each PCT, as some practice patients will reside outside the PCT).*

Figure 48



Note: includes referrals by GPs within St. Helens & Knowsley PCTs, to 5 Boroughs NHS Trust only. Some GPs will refer to other mental health trusts.

Table 24
Rate of referral of the practice population to CMHTs, by sex, ages 16-64, 2002/03
(Rate per 1,000 of PCT resident population)

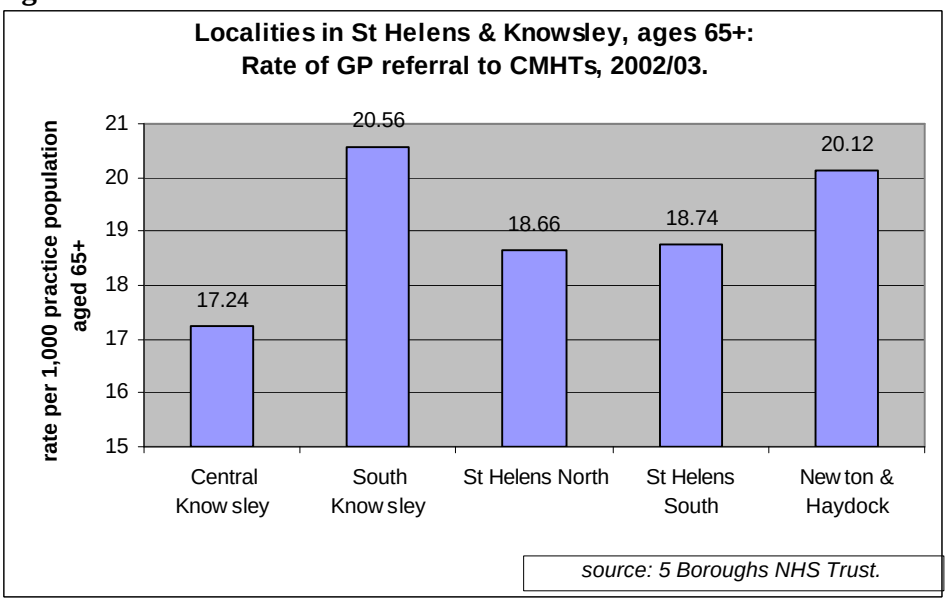
	male	female
Knowsley PCT*	10.34	13.75
St. Helens PCT	16.90	17.93

*underestimate, because data for Kirkby is missing

Age:
Figure 49 shows that rates of referral amongst those aged 65+ were higher than those aged 16-64 (see figure 45). Actual numbers were 307 in Knowsley localities and 569 in St.Helens localities. For both under and over 65s, rates in South Knowsley were higher than elsewhere.

As would be expected with females living longer than males, there were far more females than males referred amongst those aged 65+, ranging from 59.80% in Central Knowsley to 75.54% in Newton & Haydock.

Figure 49



Note: includes referrals by GPs within St Helens PCT, to 5 Boroughs NHS Trust only. Some GPs will refer to other mental health trusts. Kirkby data not available.

Deprivation

Practice LISI scores were used as an indicator of deprivation. In contrast to rates of referral to psychiatrists (see next section), there were statistically significant correlations between rate of referral to CMHT and deprivation amongst those aged 16-65 (Box 6). There was no correlation amongst those aged 65+. Referrals to psychiatrists involved smaller numbers, which is possibly why there was no statistically significant correlation.

Box 6:
Correlation between rate of referral to CMHT and deprivation, ages 16-64.

Knowsley PCT; correlation = 0.48 $p<0.01$
St Helens PCT: correlation = 0.39 $p<0.05$

This supports the suggestion of a link between greater use of community mental health services and higher levels of deprivation found by Buckingham and Freeman (1997). Similarly, Soomro et al (2002) found that GP referral rates to community mental health teams, and in-patient admission rates, both showed a positive correlation with the Jarman index of deprivation. Although they found a 40-fold variation in GP referral rates to community mental health teams, the association with deprivation was not strong. Soomro et al felt that the most important factor is likely to be the clinical practice of the GP. They suggested that the large variation in clinical practice probably masks an association between deprivation and psychiatric morbidity at community service level, particularly for referrals without psychoses.

Variations in clinical practice need exploring, with an examination of quality standards. For example it could be that the practices with high rates of referral are more likely to be single-handed, with less time than larger practices.

3.5.3 GP referrals to CMHTs

Key points

Data problems

- Only 5 Boroughs Trust were able to supply data

Age

- Amongst those aged 65+, there were higher rates, and more variation between localities and between practices. For both under and over 65s, rates in South Knowsley were higher than elsewhere.

Sex

- In both PCTs, referrals were more likely to be female.

Geography

- Rates in the localities for which data was available were fairly similar, between 12 to 17.5 per 1,000 (ages 16-64).

- There were large variations between practices, between 2 to 39 per thousand (ages 16-64). This can be partly explained by differences in levels of deprivation, but the most important factor is likely to be the clinical practice of the GP.

Deprivation

- There were significant correlations between rates of referral and level of deprivation in practices in Knowsley and St Helens (ages 16-64).

Ethnic group

- There was only limited data available on ethnic group

Recommendations

1. *Data:*
    a. All Mental Health Trusts should provide accurate and complete data on GP referrals to CMHTS.
    b. The system of recording ethnic group should be reviewed, e.g. it could be that people from ethnic minority groups tend to be recorded as ‘not stated’.
2. A comprehensive review of GP referrals to CMHTs should be undertaken, to include analysis of primary care support, e.g. access to counselling, graduate workers and primary care mental health teams.

3.5.4 GP referrals to psychiatrists.

Data requested: Referrals by GP practices to psychiatrists. Including gender, ethnicity, by PCT and practice, ages 16-64 and 65+, April 2002/March 2003.
Data source: Mental Health Trusts

Merseycare and 5 Boroughs used different definitions relating to this data. Merseycare reported that they could provide data on referrals to the service as a whole, but not separately to CMHTs or psychiatrists. 5 Boroughs reported that all their referrals go through the CMHT, and that they can identify which then go on to a consultant psychiatrist. With 5 Boroughs' data, referrals included here would also have been part of the data recorded in the previous section as referrals to the CMHT.

Again, Merseycare could only provide data for the old NMCT service areas. There was no data at all from Wirral.

5 Boroughs
5 Boroughs had a problem with missing data for older people – data had been recorded manually, but not on the PAS system – so there is no data for ages 65+ for this indicator. Data was not available by ethnic group.

PCTs
In Knowsley PCT, the overall rate of referral to psychiatrists was 4.4 per 1,000, more than twice the rate of 2.0 in St.Helens PCT (2002/3, ages 16-64; statistically significant difference, p=<0.05). Actual numbers were 425 in Knowsley, and 232 in St.Helens.

Unlike referrals to CMHTs, data on referrals to psychiatrists was not made available by locality.

It is possible that if complete data from Merseycare were available, it would reveal an even higher rate of referral in Knowsley. This is because in parts of Knowsley, especially Kirkby, referrals may be made to Merseycare NHS Trust rather than 5 Boroughs.

Age:
There was no data available for ages 65+.

Sex:
In Knowsley, 50% of referrals were female, compared with 41% in St.Helens PCT. As shown in the previous section, referrals to CMHTs were more likely to be female in both PCTs. PCT resident population data (from NWPHO) has been used as a proxy for the sum of practice populations for this age group. Table 25 shows that this gives a similar distribution to that given using percentages. *(Resident PCT populations are slightly different to the total practice populations for each PCT, as some practice patients will reside outside the PCT).*

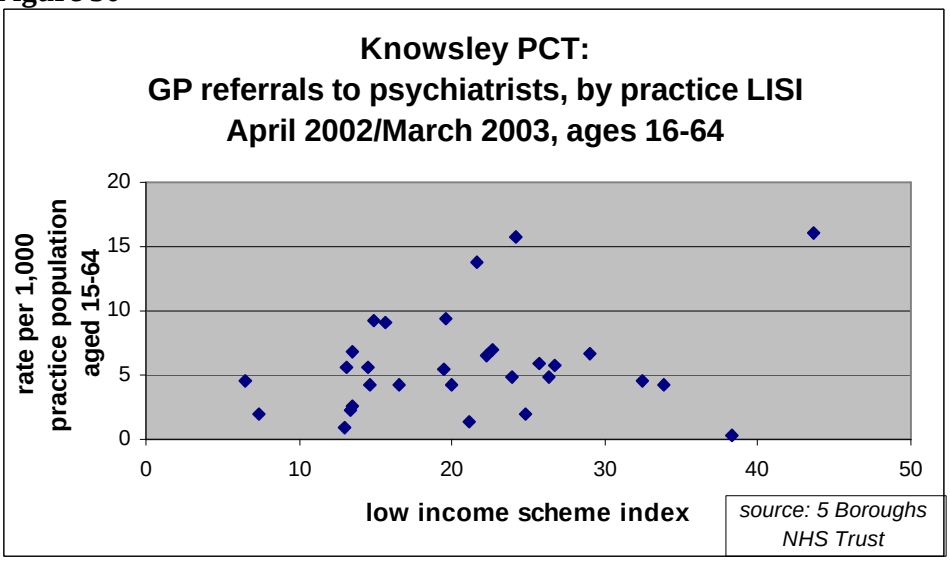
Table 25
Rate of referral of the practice population to consultant psychiatrists by sex, ages 16-64.
(Rate per 1,000 of PCT resident population aged 15-64)

	male	Female
Knowsley PCT*	4.23	4.63
St.Helens PCT	1.65	2.40

*underestimate, because data for Kirkby missing

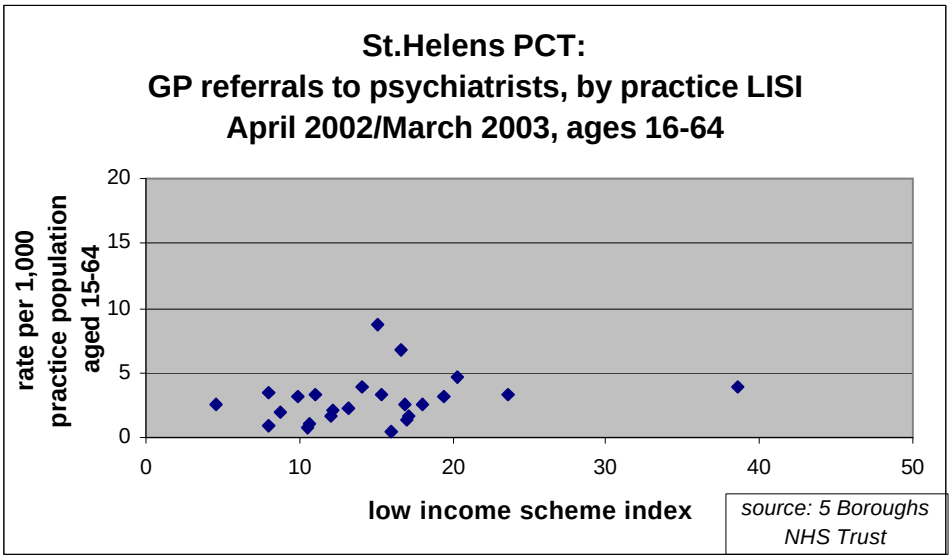
Practices
Within both St.Helens and Knowsley PCTs, there are some statistically significant differences between practices in rates of referral, where those with the highest rates are statistically significantly higher than those with the lowest rates (p=<0.05). There is more variation in rates of referral between practices in Knowsley (Figure 50), compared with St.Helens (Figure 51). There are 3 practices in Knowsley with unusually high rates of referral – one of which also has the highest LISI in the PCT (low income scheme index – see methods section for details of LISI). Numbers were too small for analysis by sex at practice level.

Figure 50



Total PCT rate = 5.49 per thousand (excluding the 8 practices for which there was no referral data)
Note: includes referrals by GPs within Knowsley PCT, to 5 Boroughs NHS Trust only. Some GPs will refer to other mental health trusts. There was no correlation with deprivation (LISI).

Figure 51



Total PCT rate = 2.47 per thousand (excluding the 8 practices for which there was no referral data)

Note: includes referrals by practices within St.Helens PCT, to 5 Boroughs NHS Trust only. Some GPs will refer to other mental health trusts. There was no correlation with deprivation (LISI).

Deprivation:
In contrast to referrals to CMHTs, there is no statistically significant correlation between rates of referral to psychiatrists and deprivation, as measured by the LISI score, in either PCT. As deprivation is an indicator of mental health need, improved access to psychiatrists by those in deprived areas is required.

As the link with deprivation is not strong, the most important factor explaining variations between practices is likely to be the clinical practice of the GP. It is possible that some GPs have inferior access to psychiatrists. Or perhaps some are more reluctant to engage with other services for some reason. As Soomro et al (2002) pointed out, it is likely that variations in clinical practice mask an association between deprivation and psychiatric morbidity at community level, particularly for neuroses. These issues, and reasons for the variation within PCTs, need further exploration. An analysis of referrals by diagnostic category would help to clarify the picture.

Merseycare: Referrals to Adult Mental Health Services and EMI

Merseycare could only provide data on referrals to adult mental health services or EMI as a whole. During 2002/03, there were 1,577 referrals to adult mental health services in the old NMCT area of Merseycare, 45.7% of which were female. Of the 2,557 referrals to the EMI service, 68.4% were females.

Ethnic group

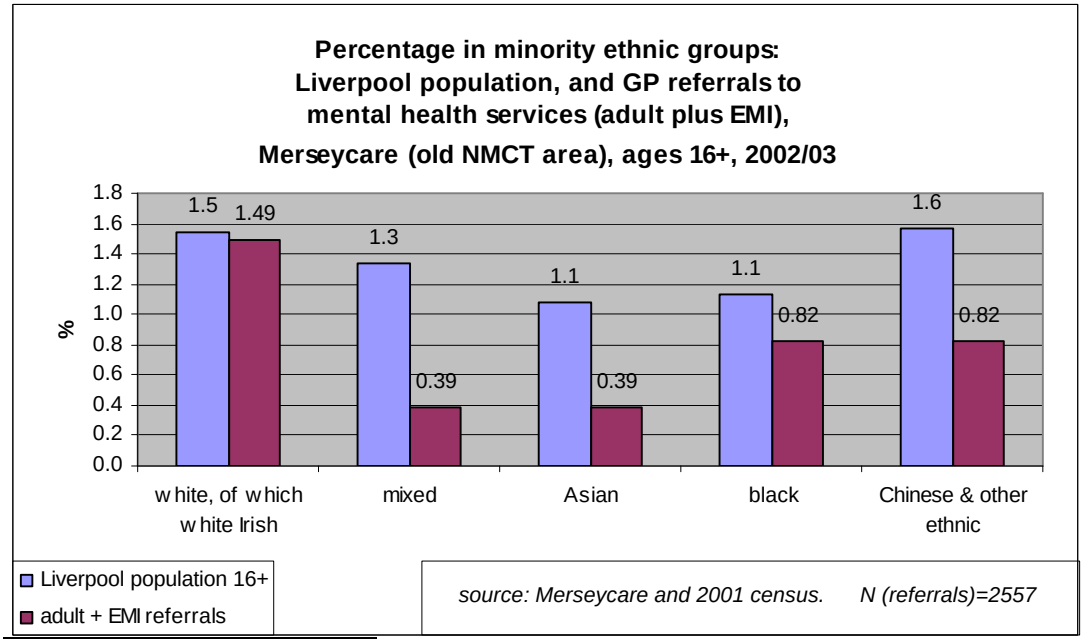
As with some of the other data from Merseycare, data for parts of north Liverpool and Sefton were missing, because the computer system was still operating using the old NMCT area. Figure 52 shows that in each ethnic minority group (except Irish), there were fewer people referred by GPs to mental health services than would be expected from the population breakdown in Liverpool[1]. There could be problems of access to primary care for these groups, which for some means that they are more likely to develop acute mental health problems, as suggested by the higher proportions of black people being held under section of the Mental Health Act (see Section 3.5.11).

It is recognised that a number of people, notably from African and Caribbean communities, reach crisis point before accessing help and/or access mental health services via the criminal justice system (Friedli 2003). African and Caribbean patients are less likely to have seen their GP prior to psychiatric contact (Reid-Galloway 2001). For those who do see their GP, low recognition by the GP of mental disorders remains the greatest barrier to care, especially for African Caribbeans (Shaw et al 1999).

Early intervention, mental health promotion, alternative models of understanding and alternative therapies have been suggested as priorities which would help to address the situation. These would complement the broader strategy of tackling racism (Friedli 2003). Early intervention teams could be used to help this population group.

The situation is different for the Irish, who are more likely to be held under section (see section 3.5.11), but appear to face no inequities in being referred by GPs to mental health services, or in being placed on CPA (see section 3.5.12).

Figure 52



[1] *Some of those referred to adult & EMI services with Merseycare were from outside Liverpool. There will be some Liverpool residents missing, mainly from north Liverpool, because of Merseycare's incomplete data.*

3.5.4 GP referrals to psychiatrists

Key points

Data problems

- There was no data available from Merseycare or Cheshire & Wirral Partnership NHS Trusts. Merseycare could provide data only on 'referrals to mental health services'.

Age/sex

- There was no data available by age. There were equal proportions of males and females referred in Knowsley, and more males than females in St. Helens.

Geography

- People registered with GPs in Knowsley PCT are twice as likely as those in St.Helens PCT to be referred to a consultant psychiatrist (ages 16-64).

- There were also statistically significant variations within PCTs (between practices) in rates of referral, especially in Knowsley PCT.

Deprivation

- Deprivation is an indicator of mental health need, and yet there was no correlation between rate of referral to psychiatrists and practice deprivation. Variations are likely to be due to clinical practice.

Ethnic group

- Data was not available by ethnic group

***Merseycare (old NMCT area): Referrals to mental health services*:**

Sex

- There were larger proportions of males than females referred amongst those aged 16-64.

Ethnic group

- There are fewer referrals of people from minority ethnic groups than would be expected, suggesting problems in access to primary care. People from such groups may therefore be more likely to develop acute mental health problems, as suggested by the higher proportions of Black people held under section of the Mental Health Act.

Recommendations

1. *Data:*
    a. Data on referrals to psychiatrists by practices should be readily available from each Mental Health Trust.
    b. Definitions and methods of recording referrals should be standardised across all Mental Health Trusts.
2. Equity of access to consultant psychiatrists by those from more deprived areas needs to be improved. A review of referrals to psychiatrists and reasons for variation within and between PCTs should be undertaken. This should include analysis by diagnosis, age, sex, ethnic group and deprivation.
3. Reasons for inequity of access by people from ethnic minority groups to primary and secondary care services, and referral patterns of GPs, need further exploration.

3.5.5 GP referrals to clinical psychology

Data requested: Number of referrals by GP practices to clinical psychology services for 2002/3. Including gender/ethnicity, by PCT and by practice, ages 16 – 64 and 65+.
Data source: 5 Boroughs Partnership NHS Trust

Merseycare and Wirral
Merseycare reported that psychology information was not available from any Patient Administration System across their Trust. There was no data available from Wirral.

5 Boroughs
5 Boroughs were able to supply the data as requested. Data was provided by ethnic group, but this tended to be either 'British' or 'not stated', so was therefore not included in the analysis here. This could reflect the fact that there is a small ethnic minority population in the 5 Boroughs area.

As access to counselling or psychotherapy amongst black people is a recognised problem (see literature review), it is important to gather full ethnic coding data on this indicator. This will be especially important in Merseycare, once data becomes available, with its larger ethnic minority population.

5 Boroughs explained that the psychological therapies service in St Helens & Knowsley is a tertiary service, and that with the exception of Kirkby, referrals go via the Community Mental Health Team.

Locality
Data was provided by locality (see box 7). Numbers were too small for analysis by practice - ranging from 58 referrals in the locality of Central Knowsley, to 4 in Newton & Haydock. Figure 53 shows that in 4 localities, rates were similar, at around 1 per 1,000. In Kirkby and Newton & Haydock, rates were very low. It is possible that there may be a problem with the data – data quality will need checking if this indicator is to be considered for future equity audits. Another possibility is that there was no service available for GPs in Newton & Haydock to refer to. There may be problems with long waiting times for first appointments, which would discourage GPs from making referrals.

Box 7
Localities in St. Helens & Knowsley PCT:
- *St.Helens PCT*: St. Helens North, St. Helens South and Newton & Haydock.
- *Knowsley PCT*: Central Knowsley, South Knowsley and Kirkby.

Compared to GP rates of referral to psychology, referrals to psychiatry were twice as high in St.Helens PCT, and four times as high in Knowsley PCT (see section 3.5.4).

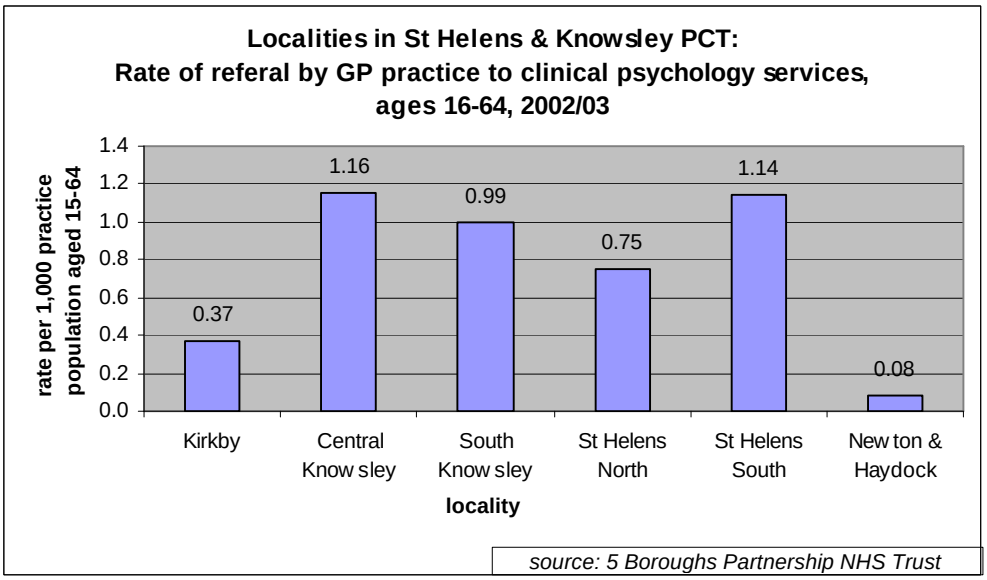
Age/sex
Amongst those aged 16-64, the majority of referrals (83%) were female. Numbers were too small for analysis by sex at locality level. Amongst those aged 65+, there were only 9 female referrals and 2 male referrals during 2002/03.

Males are less likely than females to have neurotic disorder, but not enough to justify such a wide difference in access to psychology services. Men also have high rates of suicide compared to women (see sections on psychiatric morbidity and suicide). Males may be more reluctant to seek psychological help, and GPs may be less likely to think of referring male patients to psychology. Psychology services need to be made more accessible to males.

The same kind of factors could explain why so few people aged 65+ are referred to psychology. Access to psychology services for older people needs to be improved.

Deprivation
It was not possible to carry out any analysis by deprivation of PCT (because data was only available for 2 PCTs), or practice (due to small numbers).

Figure 53



3.5.5 GP referrals to clinical psychology

Key points

Data problems

- Merseycare and Cheshire & Wirral Partnership NHS Trusts were unable to provide any data.

Age

- There was a lack of access for older people, with only a handful of referrals of those aged 65+.

Sex

- 4 in 5 referrals were female.

Geography

- With the exception of Kirkby and Newton & Haydock, the rate of referral was around 1 per 1,000 aged 16-64.

Deprivation/ need

- It was not possible to carry out any analysis by deprivation of PCT (because data was only available for 2 PCTs), or practice (due to small numbers).
- There were less than half as many referrals to psychology, compared to psychiatry.

Ethnic group

- Ethnic group coding appeared limited.

Recommendations

1. *Data*
    a. As a key NSF indicator, this data should be readily available from each Mental Health Trust, and checked for quality. It is important that full ethnic coding be included.
    b. Data on waiting times for first appointments should be made available and would help to identify barriers to accessing psychology services.
2. Analysis by deprivation should be carried out when data becomes available by PCT for each Mental Health Trust.
3. Further work should be undertaken in Newton & Haydock and Kirkby exploring the reasons for the low rates of referrals by GPs to clinical psychology.
4. The general finding of reduced access to clinical psychology by males and those aged 65+ should be further explored.

3.5.6 First attendances at clinical psychology services

Data requested: Number of first attendances at clinical psychology services April 2002/March 2003.
By PCT and by practice, include gender/ethnicity, ages 16 – 64 and 65+.
Data source: 5 Boroughs Partnership NHS Trust

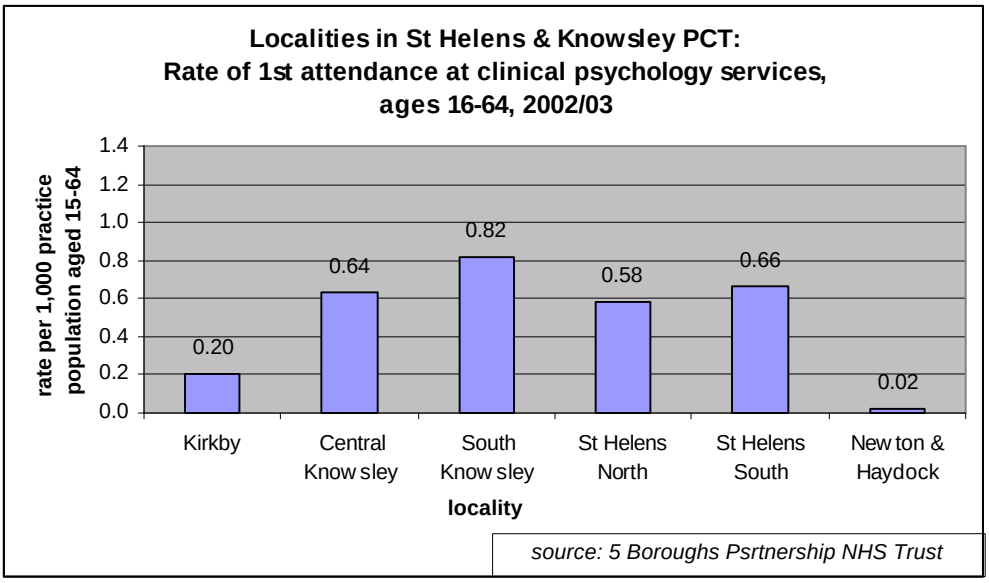
Merseycare & Wirral
Merseycare reported that psychology data is not held on any Patient Administration System across the Trust. There was no data available from Wirral.

5 Boroughs
5 Boroughs provided data on first attendances at psychology services in the same format as referrals to psychology services, with only limited ethnic coding (see previous section).

Locality
Again, numbers were too small for analysis by practice. During 2002/03, a total of 32 people from Central Knowsley, 32 from St. Helens South, and only 1 from Newton & Haydock, attended clinical psychology services. Rates of attendance were lower than rates of GP referral (see previous section) in each locality – attendances were nearly half rates of referral in Central Knowsley and St.Helens South. As with rates of referral, rates of attendance were low in Kirkby and Newton & Haydock (figure 54) – so low in Newton & Haydock that it would suggest that data quality needs to be checked.

It could be that long waiting times for first appointments play a part in reducing the number of people referred who eventually attend the psychology service. The reasons for the shortfall in numbers attending compared to numbers referred need to be investigated and acted upon.

Figure 54



Age/sex
As with referrals to the service, 4 out of every 5 attendees was female. There were only 5 people aged 65+ attending clinical psychology services (4 female and 1 male) - all from St. Helens. As described in the previous section, there are likely to be various factors behind the lack of access to psychology by males and older people. Although there are more females than males with neuroses, those that do have neuroses are far less likely to have access to psychological services (there are 194 per thousand females and 135 per thousand males with neuroses, according to the psychiatric morbidity survey, HMSO 2001 – see section 3.2).

Deprivation
It was not possible to carry out any analysis by deprivation of PCT (because data was only available for 2 PCTs), or practice (due to small numbers).

3.5.6 First attendances at clinical psychology services

Key points

Data problems

- Merseycare and Cheshire & Wirral Partnership NHS Trusts were unable to provide any data.
- Unexplainably low rates in Newton & Haydock and amongst ages 65+ suggest that data quality needs to be checked

Age

- There were only a handful of attendances amongst those aged 65+.

Sex

- 4 in 5 attendees were female.

Geography/ need

- Rates of attendance were lower than rates of referral (previous section) in each locality amongst those aged 16-64. – Attendances were nearly half rates of referral in Central Knowsley and St.Helens South.

Deprivation/ ethnic group

- Analysis by ethnic group and deprivation was not possible.

Recommendations

1. *Data:*
    a. Data needs to be made available from each Mental Health Trust.
    b. The quality of data needs checking.
    c. It is important that full ethnic coding be included.
    d. Data on waiting times for first appointments would help to identify barriers to psychology services.
2. Analysis by deprivation should be carried out when data for each PCT becomes available.
3. The reasons for the shortfall in numbers attending, compared to numbers referred by GPs, need to be investigated and acted upon.
4. Further work needs to be undertaken to explore the apparent lack of access to psychology services by males and those aged 65+.

3.5.7 Total attendances for psychiatry and psychology

Data requested: Total number of attendances in April 2002/March 2003. By PCT and practice, including age/gender/ethnicity.
a. Psychiatry
b. Psychology

Data source: Merseycare and 5 Boroughs Partnership NHS Trusts

Availability of data:

- ***Cheshire and Wirral Partnership NHS Trust:*** There was no data available from Wirral.
- ***Merseycare NHS Trust:*** Information was only available for psychiatry, and not psychology, and was not coded by ethnic group.
- ***5 Boroughs Partnership NHS Trust****:* Data was available for both psychiatry and psychology, but not by ethnic group.

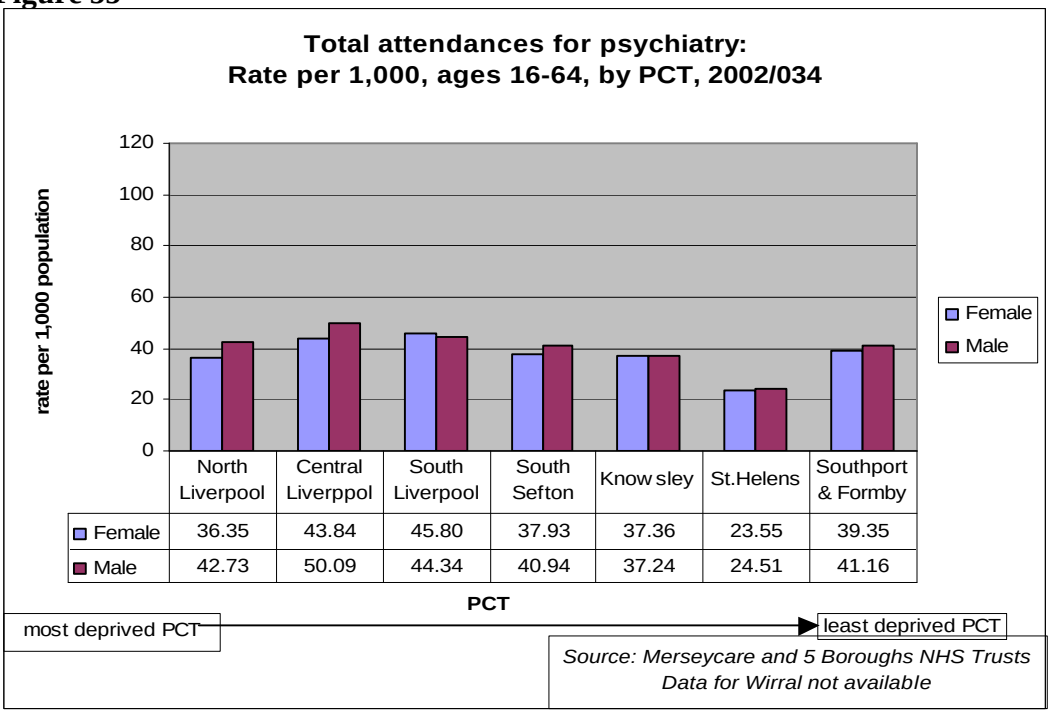
Rates of total attendance will indicate total demand on the service - numbers will include multiple attendances by one individual.

a. Total attendances for psychiatry
5 Boroughs and Merseycare.

Age/sex

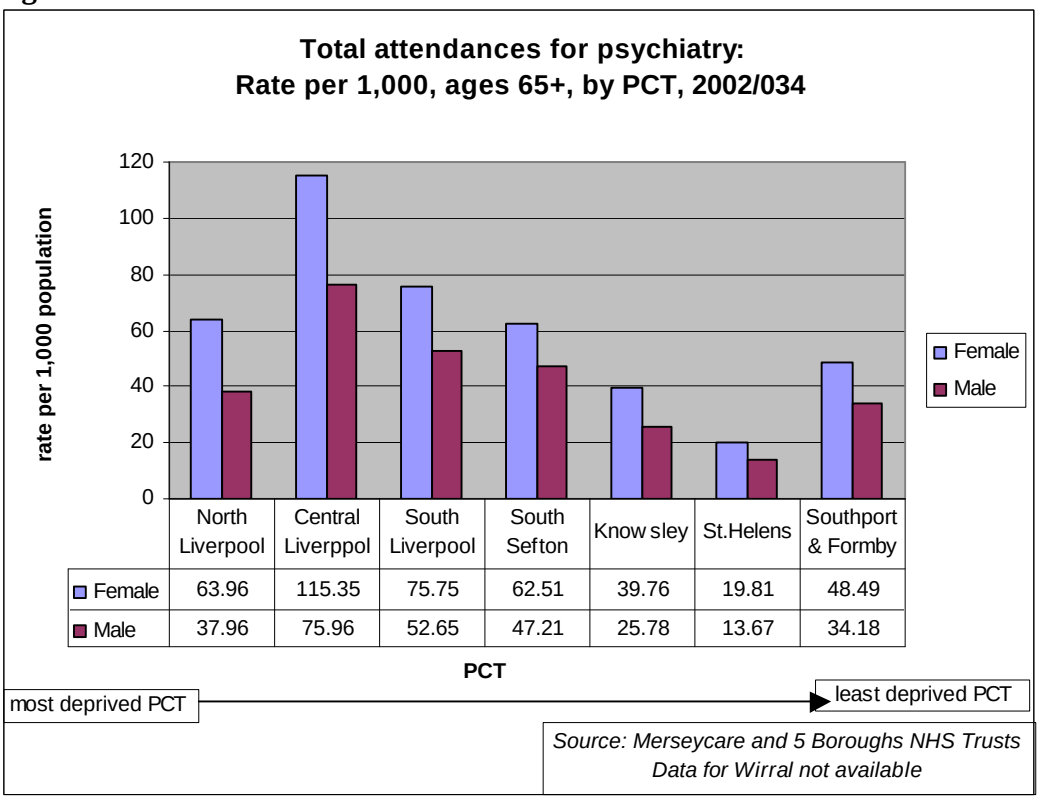
Amongst those aged 16-64, rates of total attendance were fairly similar between males and females, although slightly higher for males (figure 55). There was little difference between PCTs, although St.Helens PCT did have low rates (as was the case with outpatient first attendances – see section 3.5.8).

Figure 55



Rates of total attendance were much higher in females than males amongst those aged 65+ (figure 56). As with outpatient first attendances (see section 3.5.8), rates were more variable between PCTs for this age group. There were high rates in South Sefton and the Liverpool PCTs (especially females in Central Liverpool) and low rates on St.Helens.

Figure 56



Although correlations were not statistically significant, there was a tendency for PCTs with higher total attendances for psychiatry, such as South Liverpool, to have lower hospital episode ratios for neurosis, especially amongst females, and vice versa (r = - 0.54 for females) (see Section 3.5.10: Hospital Admissions).

General Practice

As with outpatient first attendances, it was possible to combine data from the two Mental Health Trusts to calculate practice rates. Although there was little variation in rates of total attendance between PCTs, analysis at practice level revealed large variations. For example, the majority of rates in the 3 Liverpool PCTs, Knowsley and South Sefton ranged from 9 to 79 per 1,000 amongst ages 16-64. There was one practice in Central Liverpool PCT with a very high rate (163.94). There was generally less variation between practices in Southport & Formby and St. Helens PCTs.

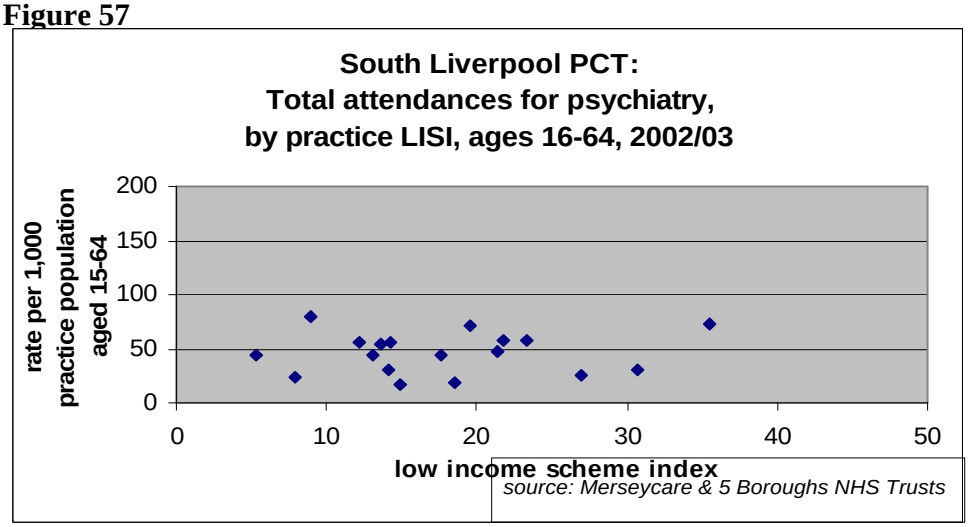
Deprivation

Deprivation at practice level was assessed using the low income scheme index (LISI - see methods section 2.2). Figures 57 to 63 show total outpatient attendances for

psychiatry by LISI amongst practices in each PCT, ages 16-64. There were positive correlations in all 7 of the PCTs for which data was available. In 4 of these, the correlation was significant *(Central Liverpool r =0.3 ; North Liverpool r =0.48; South Sefton r =0.56; Southport & Formby r = 0.66. All at p<0.05)*. The stronger correlations for total attendances compared with 1st attendances (see section 3.5.8) could suggest that those from deprived backgrounds are more likely to have repeated, rather than 'one-off' attendances.

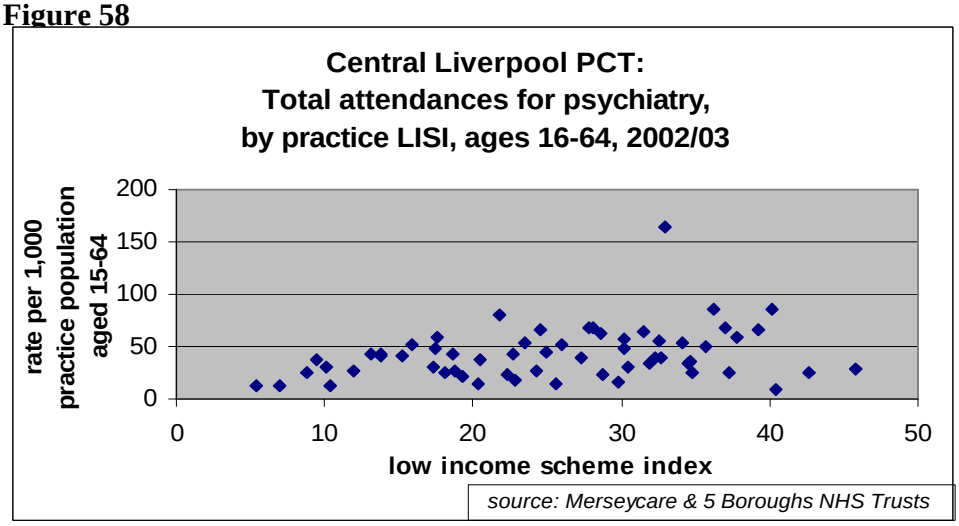
Amongst those aged 65+, there were positive correlations between total attendances and deprivation in 6 out of 7 PCTs (i.e. all except South Liverpool). The correlation was statistically significant in Knowsley (*r=0.34, p<0.05*).

Figure 57



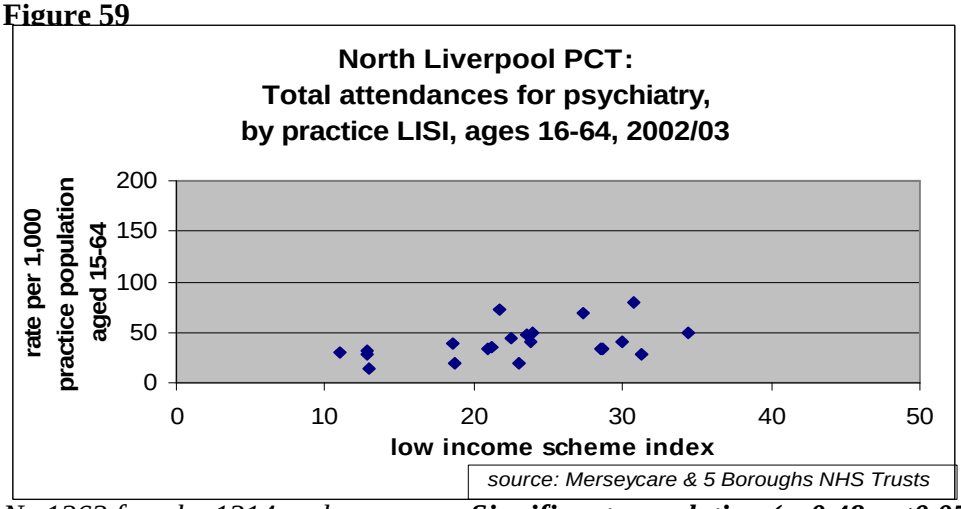
N=1500 female, 1326 male *No significant correlation (r=0.07)*

Figure 58



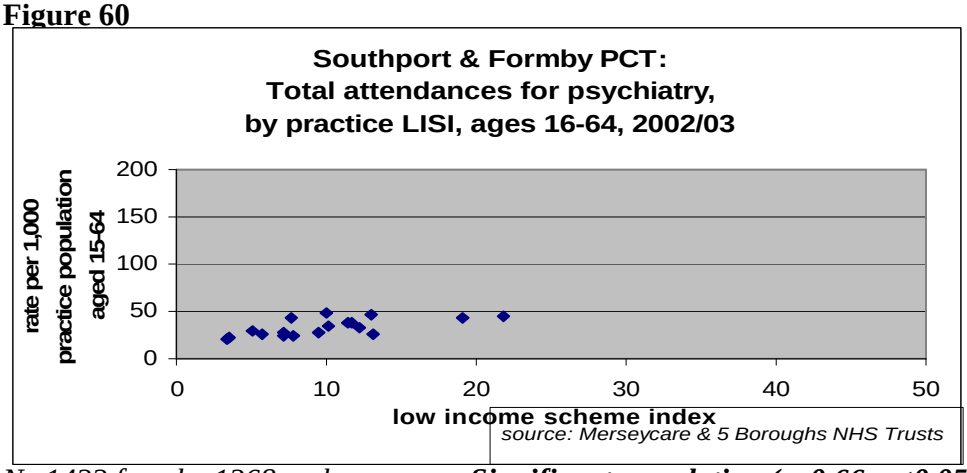
N= 3637 female, 3922 male ***Significant correlation (r=0.30, p<0.05)***

Figure 59



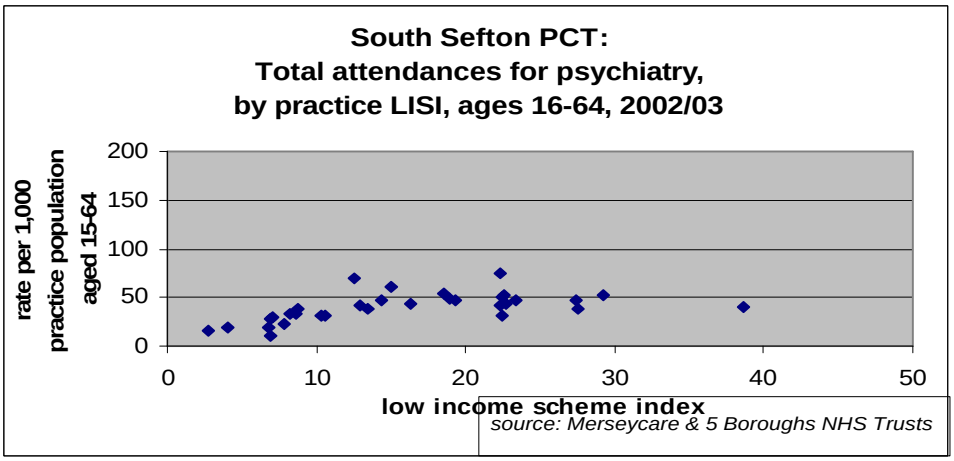
N=1262 female, 1314 male ***Significant correlation (r=0.48, p<0.05)***

Figure 60



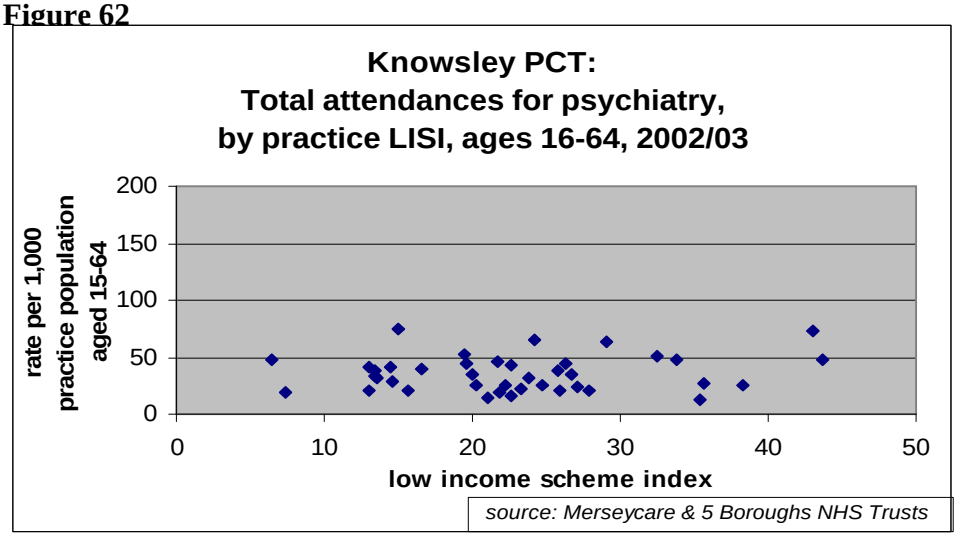
N=1422 female, 1368 male ***Significant correlation (r=0.66, p<0.05)***

Figure 61



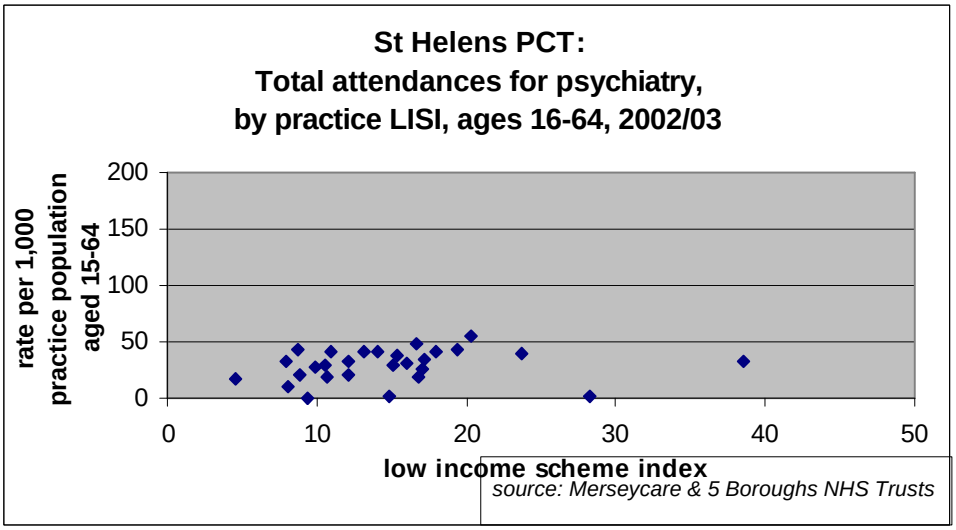
N=2092 female, 2144 male ***Significant correlation (r=0.56, p<0.05)***

Figure 62



N=1822 female, 1706 male *No significant correlation (r=0.14)*

Figure 63



N=1374 female, 1388 male *No significant correlation (r=0.14)*

b. Total attendances for psychology

5 Boroughs NHS Partnership Trust

Data on total attendances for psychology was not available from Merseycare or Cheshire and Wirral Partnership Trusts.

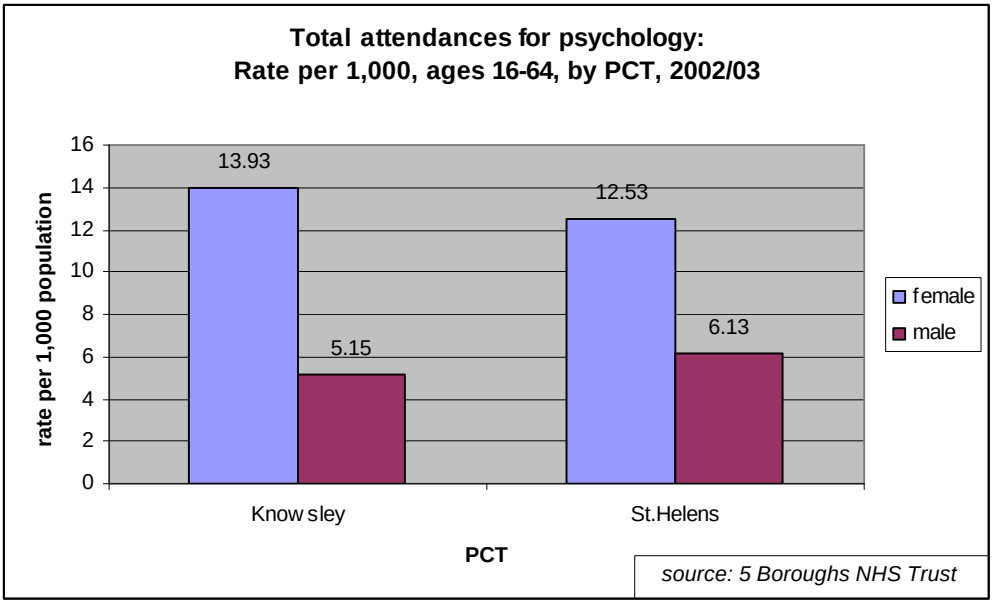
Age/sex

There were more than twice as many female than male attendances for psychology during 2002/03, amongst those aged 16-64 in St.Helens and Knowsley PCTs (5 Boroughs Trust data, figure 64). This is in contrast to attendances for psychiatry, which were distributed fairly evenly between the sexes (see 'a' above).

Amongst females, there were half as many attendances for psychology compared to psychiatry in Knowsley and St.Helens PCTs (ages 16-64). There were less than a quarter amongst males.

There were very few total attendances amongst those aged 65+ - only 1 in Knowsley, and 28 in St.Helens. In contrast to those aged 16-64, the majority of attendees aged 65+ were male (24 males; 82.76%). Nineteen of these were all at the same practice – suggesting that there was one male with multiple attendances.

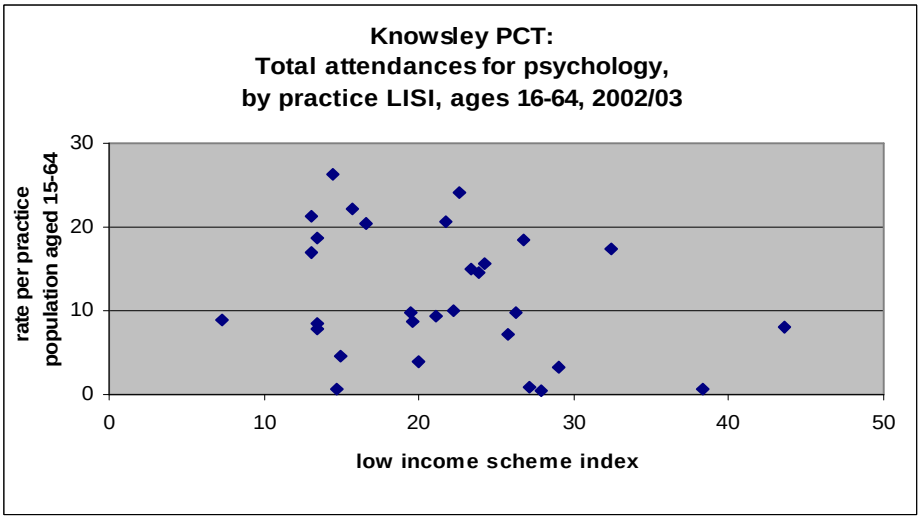
Figure 64



General Practice
There were 10 practices in Knowsley and 4 in St Helens PCT where none of the practice population were attending psychology services. There were 4 practices with over 100 attendances during 2002/03. The full range is illustrated as rates per 1,000 practice population, in figures 65 and 66.

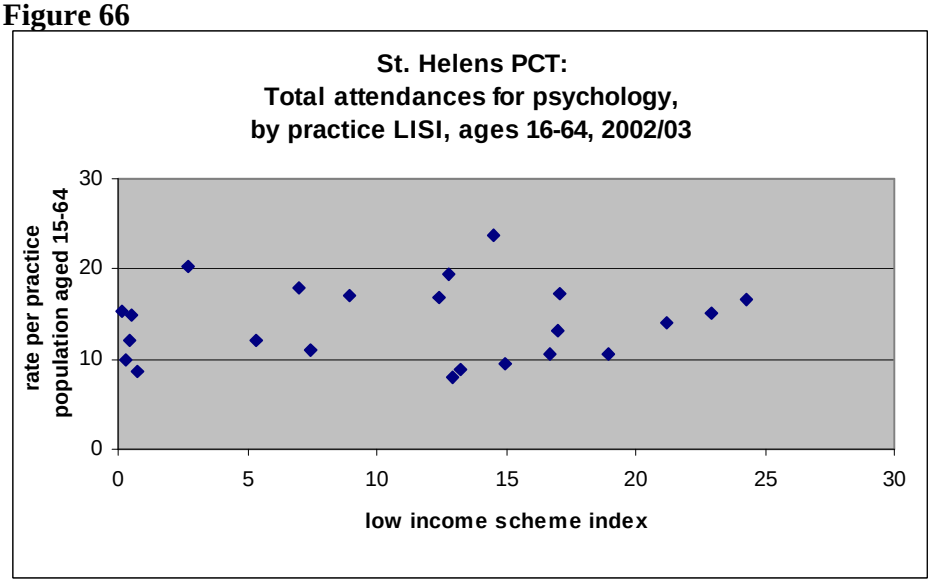
Deprivation
There was no significant correlation between total attendances and deprivation amongst practices in Knowsley or St.Helens PCTs

Figure 65



N=938 *No significant correlation*

Figure 66



N=1078 *No significant correlation*

3.5.7 Total attendances for psychiatry and psychology

Key points

Psychiatry:

Data problems

- There was no data available for Wirral.
- There was no data available on ethnic group for this indicator.

Age/ sex

- There was little difference between male and female rates for those aged 16-64.
- Amongst those aged 65+, rates amongst females were higher, especially in Central Liverpool PCT.

Geography

- There was little variation in total attendance rates between PCTs, but large variations at practice level, ranging from 1 to 75 per 1,000 (ages 16-64).
- Amongst those aged 65+, there was more variation between PCTs, with high rates in the Liverpool PCTs and South Sefton PCT, and low rates in St.Helens.

Deprivation/ need

- There were positive correlations with deprivation in all 7 PCTs, which were statistically significant in Central and North Liverpool PCTs, South Sefton, and Southport & Formby PCTs (ages 16-64).
- There was a tendency for PCTs with higher total outpatient attendances to have lower hospital episode ratios for neurosis, and vice versa (although not statistically significant).

Psychology:

Data problems

- Data on psychology attendances was not available from Merseycare NHS Trust or from Wirral.
- Data was not available by ethnic group

Age

- Amongst those aged 65+, there were only 29 recorded total attendances in the whole of St.Helens and Knowlsey.

Sex

- There were more than twice as many female than male attendances (ages 16-64).
- Amongst females, there were half as many attendances for psychology compared to psychiatry in Knowsley and St.Helens PCTs (ages 16-64). There were less than a quarter amongst males.

Geography

- There were similar rates between Knowsley and St.Helens PCTs, but much variation between practices within the PCTs, ranging from 0 to 26 per thousand (ages 16-64).

Deprivation

- There was no significant correlation with deprivation.

continued

continued

Recommendations

1. *Data:*
    a. Data should be made available for psychology referrals.
    b. All data should be available by ethnic group,
2. The stronger correlations with deprivation for total attendances compared with 1st attendances for psychiatry (see section 3.5.8) suggest that those from deprived backgrounds are more likely to have repeated, rather than 'one-off' attendances. This requires further investigation.
3. Further analysis of apparent inequities in access should be undertaken, to ensure that more people from deprived areas, males, and people aged 65+, have access to psychological services
4. Variations between practices need investigating, to ensure that all patients who could benefit from psychiatry and psychology services have an equal chance of receiving them. This should include analysis by age, sex, geography, deprivation and ethnic status. The relationships between deprivation, need, hospital episodes and access to community based services need to be explored further.

3.5.8 Mental illness outpatient first attendances

Data requested: Mental illness outpatient first attendances, include gender/ethnicity. April 2002/March 2003.SAFF Line Number 5302.By PCT and by practice, ages 16 – 64, and 65+

Data source: Mental Health Trusts

Merseycare NHS Trust stated that they used the outpatient department common data set (OPD CDS) to supply this indicator. They reported that ethnicity was not available as it is not mandatory in the data set. Activity for psychotherapy is missing too as the data is not held on the patient administration system (PAS). This means that comparisons of PCTs should be treated with caution, because 5 Boroughs data will include psychotherapy. Data was available for a larger part of the Merseycare area than the old NMCT area. This made it possible to combine data from Merseycare and 5 Boroughs Trusts to calculate PCT rates. However, data was clearly incomplete for Southport & Formby PCT ages 65+, with only a handful of recorded attendances.

5 Boroughs Trust were able to supply the data as requested, but not by ethnic group. Wirral provided limited data.

Age/sex
Amongst those aged 16-64, rates of outpatient first attendance were similar in each PCT, at around 4 or 5 per thousand, except for St.Helens PCT, where rates were less than half those elsewhere (despite Merseycare data not including psychotherapy attendances). Rates were consistently slightly higher amongst males (Figure 67). (The note at the bottom of each of figures 69 to 75 gives the actual number of referrals for 2002/03 for each PCT)[2].

Rates were much more variable between PCTs for those aged 65+ (Figure 68). They were very high amongst males in Central and South Liverpool PCTs, and very low in St. Helens PCT.

Further breakdown of the data, such as diagnostic category (psychoses or neuroses) and age group, would assist in the interpretation of variations in attendance rates. Low rates could reflect problems with access, e.g. long waiting times for first appointments. It is possible that the low rates in St.Helens PCT could be related to the problems documented earlier regarding referrals to psychiatrists (Section 3.5.4), where data for older people had been recorded manually, but not on the PAS system – so could not be included. However, if this was the case, it should affect the rates in Knowsley PCT too. Also, rates amongst those aged 16-64 were low in St.Helens. There may be a problem with the original data, as rates amongst those aged 65+ in North Liverpool PCT were also very low, and the very high male rates ages 65+ in Central and South Liverpool PCTs were surprising. Data

[2] *Practice population data was not available for each PCT by sex for these age groups. The population data used to calculate rates was PCT resident population (from NWPHO), which will be slightly different to the total practice populations for each PCT, as some practice patients will reside outside the PCT.*

needs to be checked by the Mental Health Trusts. For those PCTs with low rates, it is possible that there are mental health facilities which are not being captured by the data systems, e.g. possibly the Hesketh Centre in Southport & Formby. It is also possible that older people may be referred to psychiatric geriatricians, so would not be counted here.

Figure 67

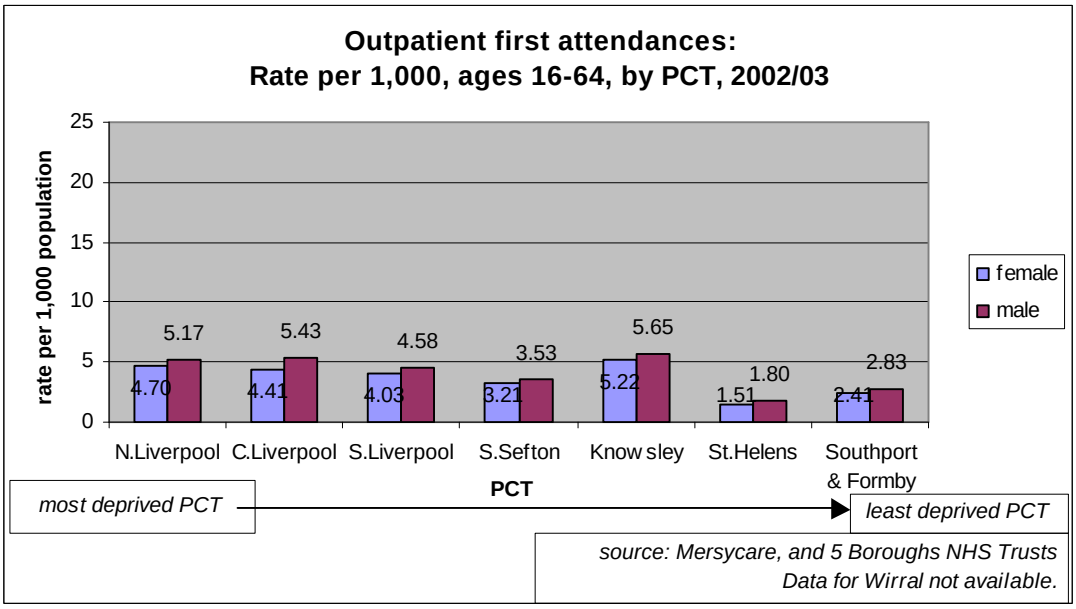
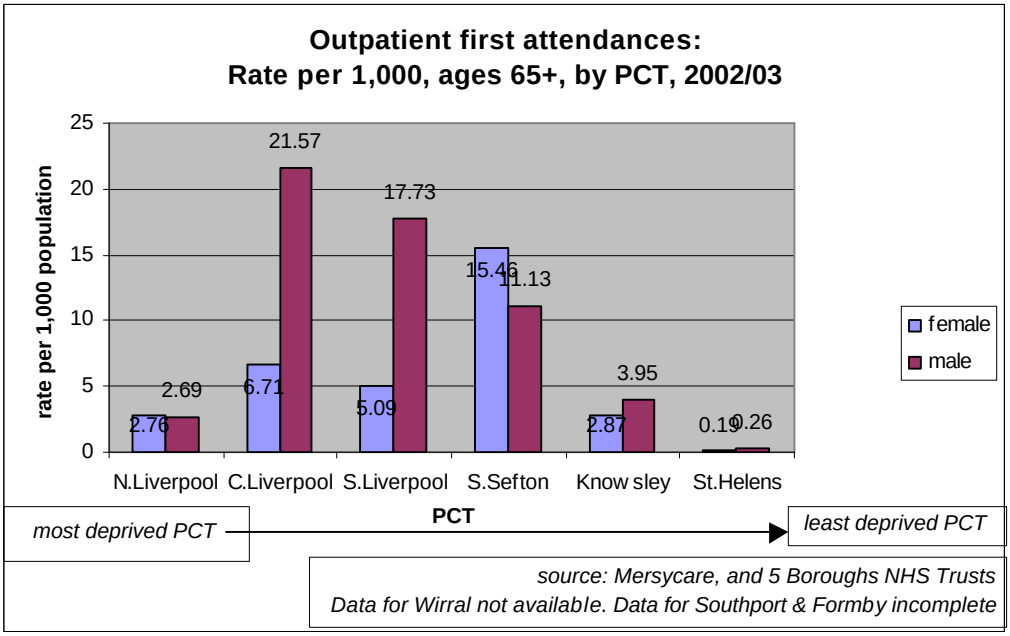


Figure 68



General practice
Merseycare and 5 Boroughs supplied data by practice code for the whole of their areas. This made it possible to combine data, so that e.g. people from Knowsley (a 5 Boroughs area) who attend outpatients in Merseycare Trust could be included in the calculations. The rates for the combined mental health trust data were calculated per 1,000 of the practice populations, ages 16-64, and are presented in Figures 69 to 75. Numbers were too small for analysis of ages 65+ at practice level.

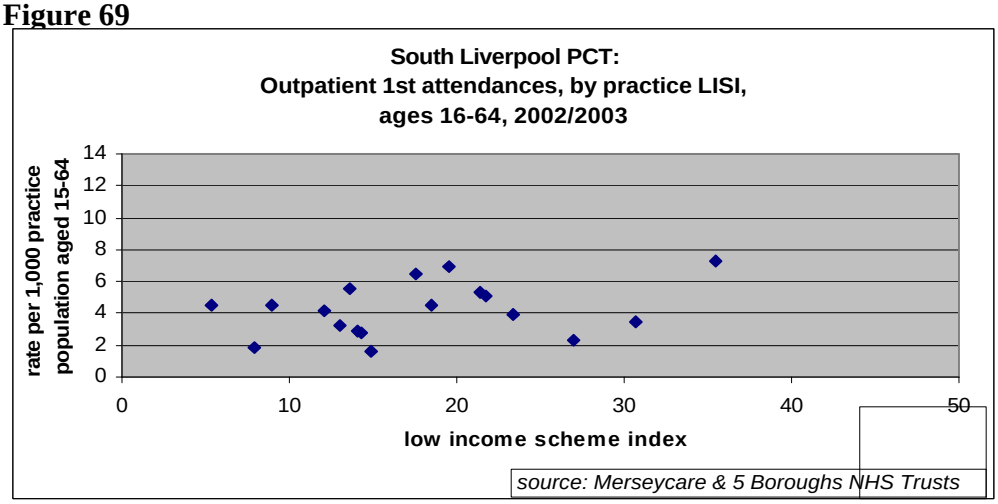
Although there were small differences between PCTs, there were some statistically significant differences between practices in rate of outpatient first attendance. In each PCT, practices with the highest rates are statistically significantly higher than those with the lowest rates ($p=<0.05$). Variations are most extreme within Knowsley, Central Liverpool and North Liverpool PCTs. There was a 24-fold variation between practices in Knowsley PCT, from 0.4 to 12.3 per 1,000 practice population. There was least variation in Southport & Formby and St. Helens PCTs, but there were still some statistically significant differences.

Deprivation
There is some evidence to suggest that non-attenders at outpatient clinics are more likely to be in lower social classes (Goddard and Smith 2001). In future, it would be useful to collect data on the characteristics of those missing appointments, such as how long they had had to wait. There could be a need for more 'drop-in' facilities, as recommended by Boerstler and deFigueiredo (2003).

An analysis of deprivation in the outpatient data received from Merseycare and 5 Boroughs NHS Trusts revealed positive correlations between outpatient attendance and deprivation in the 7 PCTs for which data was available (figures 69 to 75). However the correlation was statistically significant in only 2 of the 7 PCTs (South Sefton, $r=0.47$, $p<0.05$; and Knowsley, $r=0.37$, $p<0.05$).

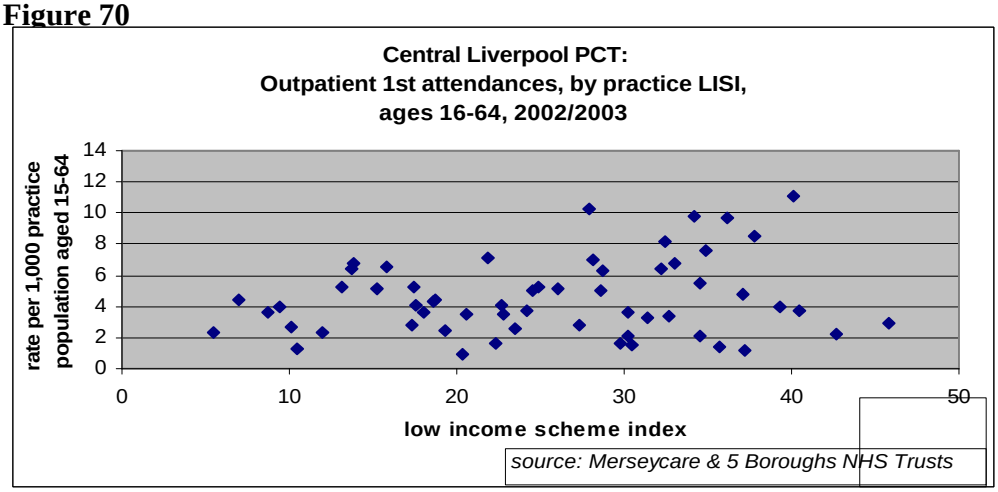
As pointed out in previous sections, it is likely that variations in clinical practice mask a strong association between deprivation and psychiatric morbidity at community level, particularly for neuroses (see sections 3.5.3 and 3.5.4 – referrals to CMHTs and psychiatrists, and Soomro et al 2002). These issues, and reasons for the variation within PCTs, need further exploration. An analysis of referrals by diagnostic category would help to clarify the picture.

Figure 69



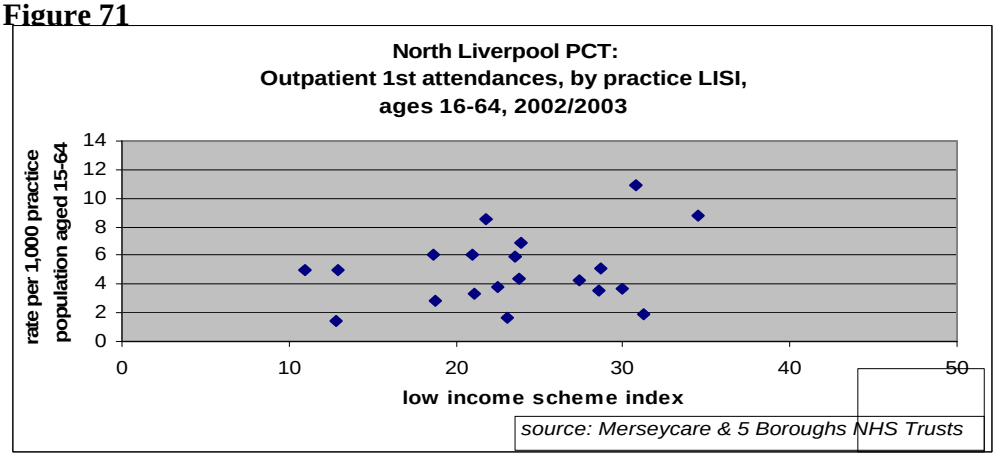
N=269 *No significant correlation (r=0.08)*

Figure 70



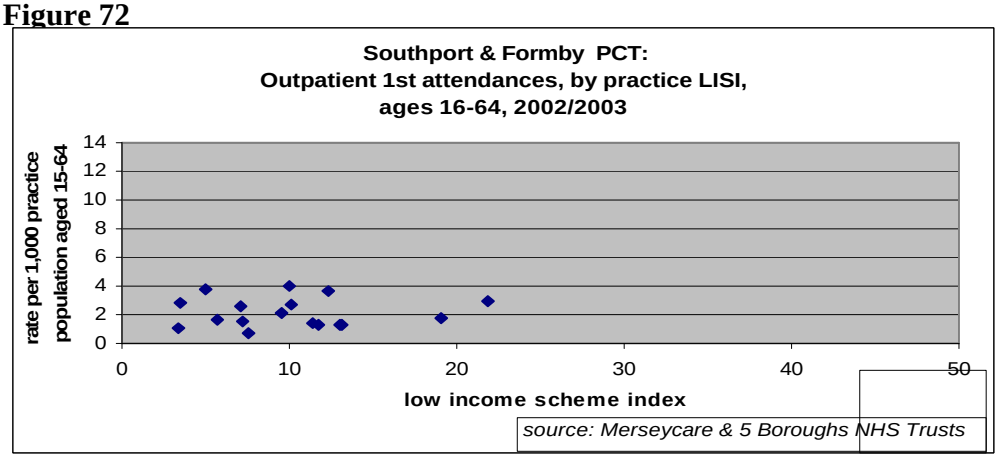
N=790 *No significant correlation (r=0.20)*

Figure 71



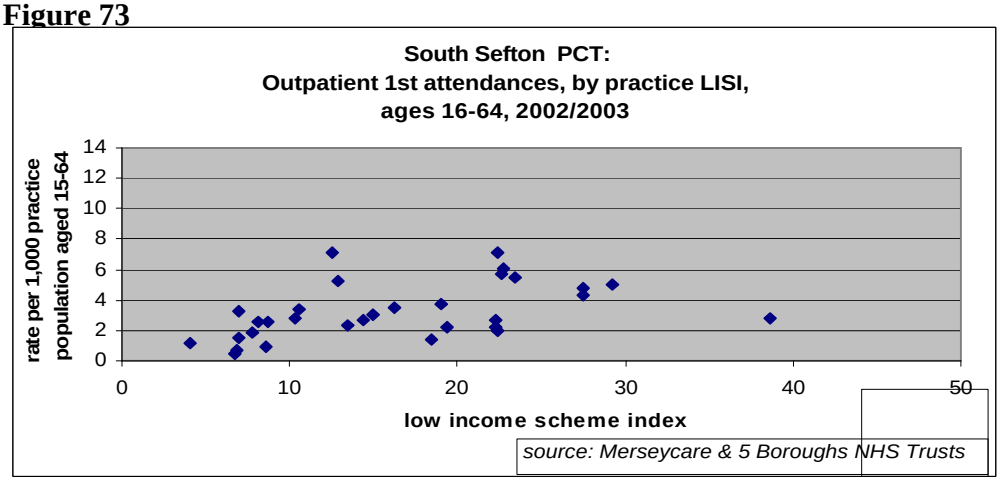
N=322 *No significant correlation (r=0.28)*

Figure 72



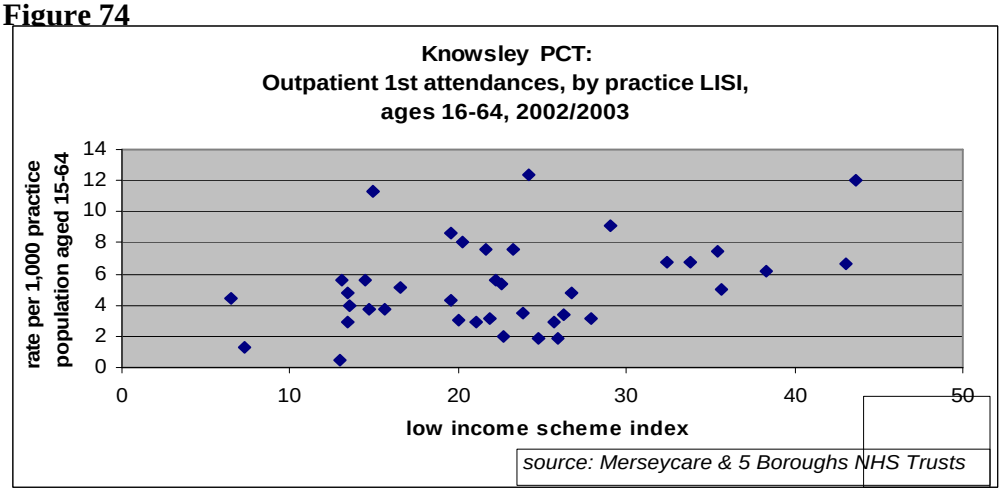
N=148 *No significant correlation (r=0.03)*

Figure 73



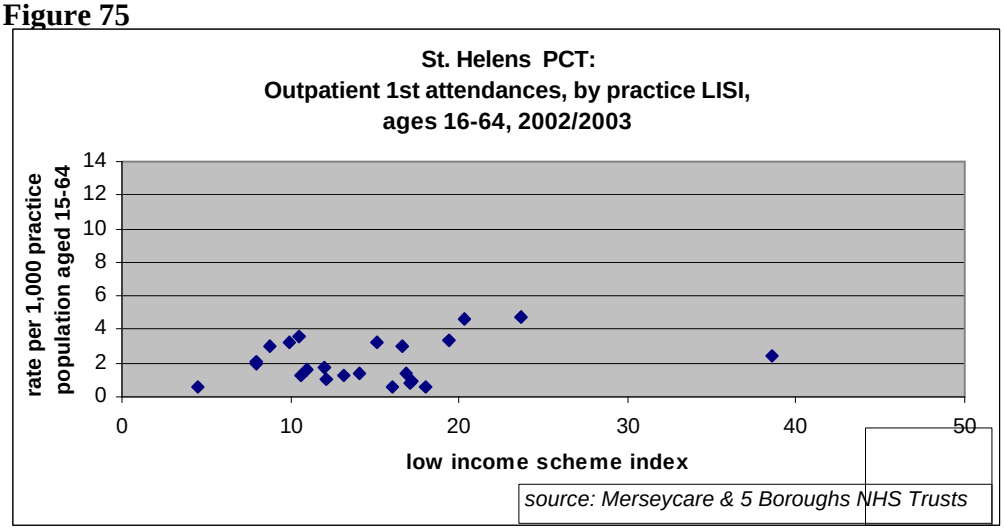
N=359 ***Significant correlation (r=0.47, p<0.05)***

Figure 74



N=522 ***Significant correlation (r=0.37, p<0.05)***

Figure 75



N=190 *No significant correlation (r=0.25)*

Wirral

For the Merseyside Mental Health Equity Audit, Wirral were only able to provide a total figure for each PCT, not broken down by age, sex or practice (Table 26). Rates were slightly higher in Birkenhead & Wallasey PCT, and were similar to those for other PCTs (figures 67 and 68).

Table 26
Wirral: Outpatient first attendances, all ages, 2002/03

	Population 15+, m+f	No. of f referrals	rate per 1,000
Birkenhead & Wallasey	154,400	659	4.27
Bebington & West Wirral	97,854	329	3.36

all ages, male plus female

The Wirral Mental Health Equity Audit (Harwood and Nzuobontane 2002) analysed number of attendances at psychiatric outpatient appointments: Higher rates of attendance were found in wards in and around Birkenhead. There was a weak correlation between crude rate of attendance and deprivation (Harwood and Nzuobontane, 2002).

They found that wards with low rates of acute psychiatric admission had high rates of psychiatric outpatient attendances, and vice versa.

3.5.8 Mental illness outpatient first attendances

Key points

Data problems

- There was no data available for Wirral, and Merseycare NHS Trust data did not include psychotherapy.
- Ethnic group was not available in this dataset.
- Data appeared to be missing for Southport & Formby, North Liverpool and St.Helens PCTs.

Age

- Amongst those aged 15-64, rates of outpatient first attendance were similar in each PCT, except for St.Helens PCT, where rates were less than half those elsewhere.
- Rates were more variable at PCT level for those aged 65+.

Sex

- In both age groups, rates were consistently higher amongst males – especially amongst those aged 65+ (except for South Sefton PCT ages 65+).

Geography

- There were some statistically significant variations in rates between practices, especially in Knowsley PCT, where there was a 24-fold variation (ages 16-64).

Deprivation

- In 2 of the 7 PCTs, there was a significant correlation between outpatient attendance rates and practice deprivation scores.
- There is some evidence to suggest that non-attenders at outpatient clinics are more likely to be in lower social classes (Goddard and Smith 2001).

Recommendations

1. *Data:*
    a. A full set of data should be available from each Mental Health Trust.
    b. There should be agreed definitions between Mental Health Trusts on what is included in this dataset (e.g. psychotherapy).
    c. Data quality, especially for the over 65s, needs to be checked.
    d. The recording of ethnic group should be mandatory in this dataset.
2. Low rates, especially amongst those aged 16-64 in St.Helens, need further investigation – possible explanations include poor data quality, or lack of access to services.
3. The large variations in rates between PCTs amongst those over 65, and between practices for all ages, need further exploration. Further work should explore the differences between high-referring and low-referring practices, including links to deprivation.
4. It would be useful to collect data on the characteristics of those missing appointments, such as how long they had had to wait for their first appointment.

3.5.9 Occupied Bed Days

Data requested: Number of occupied bed days between 1 April 2002 and 31 March 2003 for patients with mental illness.
Occupied bed days are calculated as the date of discharge (or the last day of the financial year of the patient still occupies a bed) minus the date of admission (or the last day of the previous financial year if the patient was admitted before the start of the year). If a patient is admitted and discharged the same day the number of occupied bed days is zero.
Data source: Mental Health Trusts

It was anticipated that data on occupied bed days, showing how much time patients spend in hospital, could be examined alongside other indicators. For example, it could be that longer stays in hospital are linked to lower levels of community support. Or shorter stays, perhaps due to pressure on hospital beds, could be linked to high readmission rates. However, problems with definitions and data quality meant that it was not possible to explore such links.

Merseycare NHS Trust:
Merseycare were unable to obtain data on occupied bed days – they could only provide data on 'patient days'. These were defined as the count of days in an FCE (Finished Consultant Episode) i.e. from the date of the start of the episode to the end date of the episode. Patient days do not include day patients, but could include day cases (although there are none at Merseycare). They informed us that they have had to use the APC CDS to compile information for this indicator. The reason they couldn't calculate occupied bed days was that they can only supply data for finished consultant episodes and not unfinished episodes at the end of the year.

Table 27 is a summary of the data from Merseycare. The relatively high figure for Knowsley PCT is surprising, because in Knowsley, only residents of Kirkby would fall under the Merseycare area. The quality of the data needs investigating.

Table 27
Patient Days. Adult and EMI Inpatients, April 2002-March 2003. Merseycare NHS Trust

PCT	Patient Days
North Liverpool	11,065
Central Liverpool	33,517
South Liverpool	9,800
St.Helens	186
Knowsley	5,111
South Sefton	15,583
Southport & Formby	687
other PCTs (outside Merseyside)	277
total	76,226

5 Boroughs Partnership NHS Trust
5 Boroughs provided data on occupied bed days, as follows:

Table 28
Sum of Occupied Bed Days, April 2002-March 2003,
5 Boroughs Partnership NHS Trust

PCT	Mental Illness Acute	Old Age Psychiatry	Grand Total
St Helens	19,288	9,873	29,161
Knowsley	15,489	2,985	18,474
Birkenhead & Wallasey	15		15
Liverpool Central	239	60	299
Liverpool North	85		85
Liverpool South	989	319	1,308
South Sefton	35		35
other PCTs (outside Merseyside)	1,036	662	1,698
total	37,176	13,899	51,075

Cheshire and Wirral Partnership NHS Trust.
No data available.

Data on acute in-patient bedspaces was available on the University of Durham service mapping website, and is presented in section 3.4.4.

Discussion
It was intended to combine data across the Mental Health Trusts by each PCT, and work out population based rates. But because different definitions were used by the Mental Health Trusts, and there was no data available from Cheshire & Wirral Partnership NHS Trust, then this was not possible. Mental Health Trusts need to work together with PCTs to develop a meaningful definition of occupied bed days. There may be complementary definitions that could also be developed, e.g. the proportion of beds occupied to those not occupied, to give an indication of the pressure on beds.

3.5.9 Occupied Bed Days

Key points

Data problems

- There were problems with interpretation due to different definitions being used by different Mental Health Trusts.
- Data quality needs investigating, as there were some unexpected and unexplainable differences between PCTs.

Recommendations

1. *Data:*
   a. Data quality should be investigated and improved in discussion with the three Mental Health Trusts.
   b. Mental Health Trusts need to work together with PCTs to develop a meaningful definition of occupied bed days. There may be complementary definitions that could also be developed.
2. Leave beds should also be included in future analysis, together with total number of beds per head of population.

3.5.10 Hospital Admissions

Data requested: Standardised hospital admission rates, for all appropriate ICD10 codes
Data source: North West Public Health Observatory

Hospital admission data was not available. Data on finished consultant hospital episodes was made available by the North West Public Health Observatory. The data covered the period 2000/01-2001/02, for episodes for all mental illness (ICD10: F00-F99); schizophrenia (ICD10: F20); and neurosis (ICD10: F40-48). Crude episode rates, and indirectly standardised episode ratios (SERs) were calculated, using census 2001 populations. Ratios were standardised against the population of England (SER=100).

Data problems:

- Data was delivered for all hospital episodes, not admissions.
- Data was not provided by age group, as numbers were too small. It was therefore not possible to produce directly standardised ratios. National data was used to calculate indirect standardised ratios.
- Data was not available for adults and EMI separately, but for the combined age group 15-74.
- Ratios have not yet been calculated by sex.
- Data is not available by ethnic group.
- Numbers over a two year period were too small for analysis by ward.
- 2002/2003 data was not available, because that year's data was only just in the process of being released (NWPHO Feb 2004).
- The systematic coding of psychiatric diagnoses by consultants is known to be weak and if coded at all is often represented by an 'unspecified code' (NWPHO , Feb 2004).
- There are quirks concerning these data such as some of the diagnoses not being included within the *'primary diagnoses'* as in the majority of illnesses, instead using a asterisk and code within the *'secondary diagnosis'* fields (NWPHO , Feb 2004).

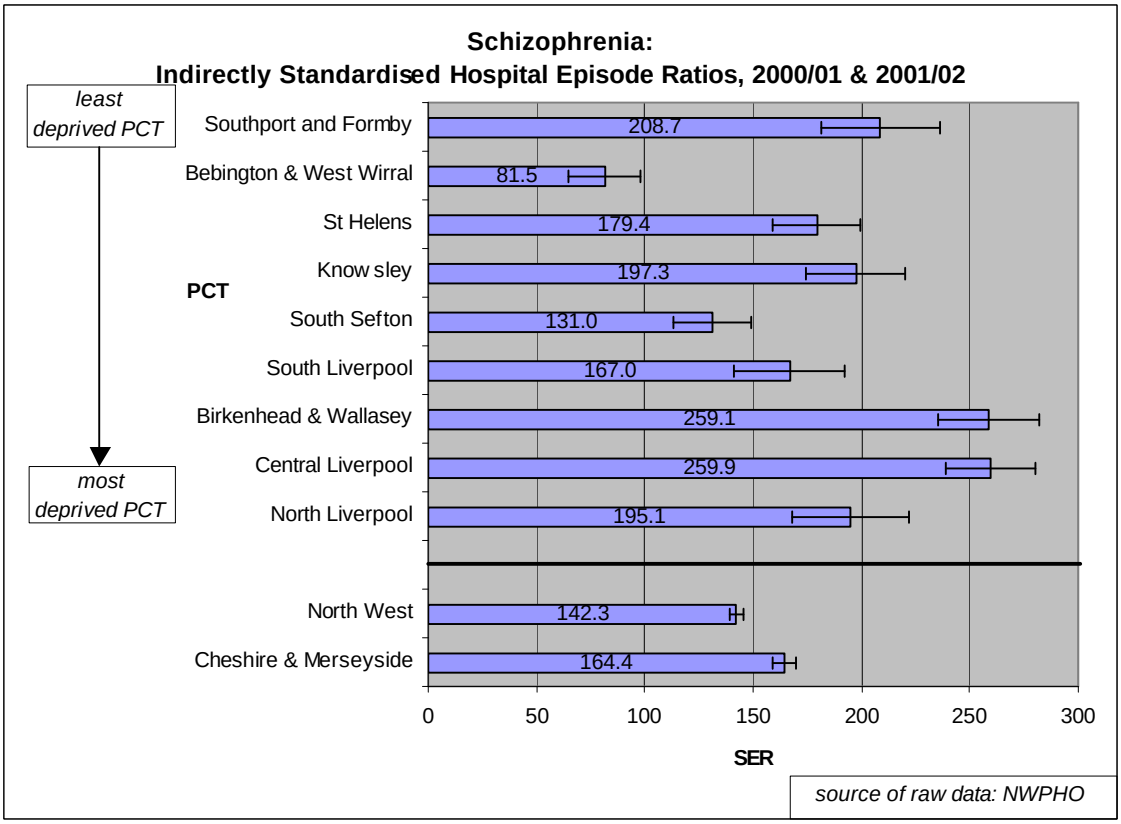
Geography
Schizophrenia: Figure 76 shows that for schizophrenia, there were statistically significant variations between PCTs in SERs. Six of the Merseyside PCTs had significantly higher SERs than the North West region. In Central Liverpool, Birkenhead & Wallasey, Southport & Formby and Knowsley PCTs, SERs were also significantly higher than Cheshire & Merseyside SHA. Bebington & West Wirral PCT had a significantly lower SER than all the other PCTs on Merseyside, and the SHA and North West region.

Neuroses: Only Birkenhead & Wallasey PCT had an SER for neurosis statistically significantly higher than the SHA or North West. SERs in South Liverpool and Southport

& Formby PCTs were significantly lower than in the SHA or North West. There were some statistically significant differences between PCTs (figure 77).

The Wirral Mental Health Equity Audit (Harwood and Nzuobontane 2002) found large variations between electoral wards in hospital admissions to acute psychiatric care. Birkenhead and Tranmere wards had admission rates twice those of England. Heswall, Royden, Thurstaston and Wallasey wards had admission rates half those of England.

Figure 76

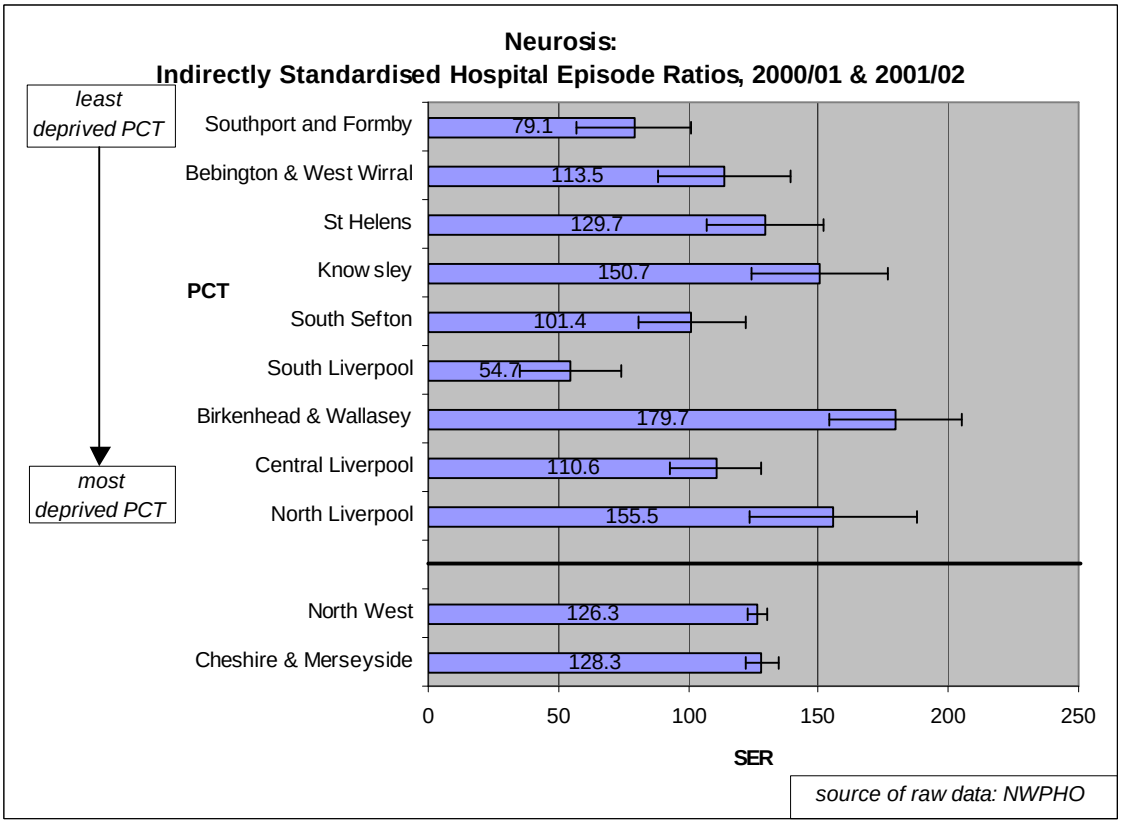


Deprivation

There were no statistically significant correlations with the index of multiple deprivation (IMD) or the mental illness needs index (MINI 2) for SERs of neurosis or schizophrenia. Correlations were stronger for schizophrenia (IMD r=0.47) than neurosis (IMD r=0.31), but not significant.

There are more differences in deprivation levels within than between PCTs (see section 2.2). It is likely that if analysis was carried out at ward level, then there would have been some statistically significant correlations with deprivation or the MINI. In the Wirral mental health equity audit, a strong correlation was reported between deprivation and crude acute psychiatric admission at ward level (Harwood and Nzuobontane 2002).

Figure 77



With SERs for schizophrenia, there were positive, but not statistically significant, correlations with total outpatient attendances for males and females (section 3.5.7). However with SERs for neurosis, the correlations were negative, so that PCTs with high total outpatient attendances (especially females) tended to have lower SERs (r = -0.54 for female attendances, but not statistically significant) – e.g. in South Liverpool. The Wirral equity audit similarly found that wards with low rates of acute psychiatric admission had high rates of psychiatric outpatient attendances, and vice versa (Harwood and Nzuobontane 2002).

As mentioned in the literature review (section 1), the associations with deprivation and need are complex. High admission rates may indicate high overall levels of need. They may also suggest a lack of capacity in primary and community based mental health services to manage and contain mental health problems in the community. They can also be related to ease of access to services, and to variations in the diagnosis of mental illness (Pidd and Newbigging 2002).

Full tables with actual numbers and crude rates can be found in the supplement to the main report.

In future, the NWPHO has said that they may be able to provide hospital admissions data for mental illness in their HES analytical service. In addition, the Liverpool PCTs have

indicated that they could supply data on 'mental health service use' for each PCT in Merseyside, by age and sex. These possibilities should be explored.

3.5.10 Hospital Admissions

Key points

Data problems

- Data was not available for admissions, only episodes
- Rates were not calculated by age, sex or ward level.
- Problems with coding mean that SERs may not be accurate.

Geography

- Birkenhead & Wallasey PCT had significantly higher SERs for schizophrenia and neurosis than the SHA or North West.
- A further 3 Merseyside PCTs have SERs for schizophrenia significantly higher than the SHA.

Deprivation/ need

- There were no significant correlations with either deprivation or the mental illness needs index.
- There was a tendency for PCTs with higher total outpatient attendances to have lower SERs for neurosis, and vice versa (although not statistically significant).

Recommendations

1. *Data*:
    a. The possibility of obtaining hospital admissions data for mental illness from the NWPHO HES analytical service, and 'mental health service use' from the PCTs, should be followed up.
    b. Data should be presented by age and sex, and ideally by ethnic group, for the lowest geographical level possible, using combined years if necessary.
    c. Solutions to the problems with coding need to be explored.
    d. The possibility of exploring relationships between deprivation, need, hospital episodes and access to community based services at a smaller geographical level than PCT should be considered.
2. The high levels of hospital episodes for schizophrenia are of particular concern on Merseyside. Further analysis should be undertaken to explore the reasons for this.

3.5.11 Detentions under Section of the Mental Health Act

Data requested: Number of people sectioned Under the Mental Health Act 1983, by PCT, age, gender, and ethnicity.
Data source: Mental Health Trusts

Definitions
Data was collected from Mental Health Trusts on the numbers of people held under section of the Mental Health Act 1983. This included formal admissions, and detentions after admission to hospital. The relevant sections of the Mental Health Act were in Part II, sections 2, 3 4 and 5 (not 135 and 136, as these sections are usually used by the police to take someone into a place of safety to see if they need to go on a full section – and not part III sections, which are related to criminal proceedings). Re-grades from one section to another, and transfers from another mental health trust, were not included.[3]

Data collection problems

- *Geography and deprivation*: For the Merseyside Equity Profile, it was hoped to obtain data on sections by ward, or at least PCT, so that an analysis of any links with geography and deprivation and needs indicators could be undertaken. However, although Merseycare Trust were able to supply data by PCT, they could only supply by the first part of post code, and not ward. Five Boroughs Trust were unable to provide data by PCT or ward. They could supply the first 3 digits of the postcode, but warned that around 10% of patients don't have a postcode. They supplied data by CMHT eg. Knowsley Central, Knowsley South etc. However, if a client lives in Knowsley but has a St.Helens GP then the client would come under the CMHT, and not the GP's PCT. For the audit, data is required linked to the GP and PCT.

- *Missing data:* Data on numbers of sections in the Merseycare NHS Trust was only available for the old North Mersey Community Trust (NMCT) area. This means that data for Aintree Hospitals and West Lancashire is missing, as they have not yet been included in the computer system. This is a problem when assessing parts of North Liverpool and Sefton, parts of which are deprived areas, and therefore likely to have significant mental health need. Aintree Hospitals did have some data on their self-built database (see Appendix 3 in the supplement to the main report). Data here was not available by PCT, and only by broad age groups. They reported that by December 2004, all parts of the Trust should be on-line.

- *DoH statistics:* Complete statistics on annual detentions by PCT are not yet available from the Department of Health. Data is available for mental health trusts

[3] Transfers: in future, it should be clarified that transfers *in* (e.g. from 5Boroughs to Merseycare) should not be included, but transfers *out* should be – otherwise some individuals would not be counted at all. Re-grades: Sections 5.2 & 5.4 are holding powers, and should soon be followed by either re-grade to a full section, or change to informal status. However, in practice, patients may be held too long, or have the holding power extended.

for a 'point in time' (March 31st, annually) – but not by age or ethnic group. Numbers include those held in high security psychiatric hospitals (under part III of the Act), which could exaggerate the picture on Merseyside, because of the existence of a large high security hospital at Ashworth. The breakdown of nationally available statistics is not detailed enough to be useful for a local equity audit.

- *Social services* in Liverpool were approached with a request for numbers of people held under section, but they rely on Merseycare Trust to provide them with their data.

- *Rates:* It had been hoped to combine data for the three Mental Health Trusts and calculate rates for PCT populations, and to look at the data by age sex and ethnic group across the whole of Merseyside. But missing data from Merseycare meant that this was not possible. For some PCTs, data was more complete, and population rates were calculated (see table 30).

- *Trends:* Data was only available for 2002/03. In future, it should be possible to monitor trends in sectioning.

England

In England, the rate of detentions in NHS hospitals under the Act in 2002-03 was 91 per 100,000 population. As at March 2003, nearly twice as many males (65.4%) as females (34.6%) were detained (DoH 2003b). These statistics include detentions under Part III of the Act (i.e. relating to criminal proceedings), which probably explains the larger proportion of men being held.

Merseycare NHS Trust

The missing data for Aintree Hospitals and West Lancashire would include parts of north Liverpool and Sefton, which include deprived areas, likely to have large mental health needs.

Between April 2002 and March 2003, there were 381 people under section with Merseycare in the old NMCT area. Most (83%) were resident in Central or South Liverpool PCT areas.

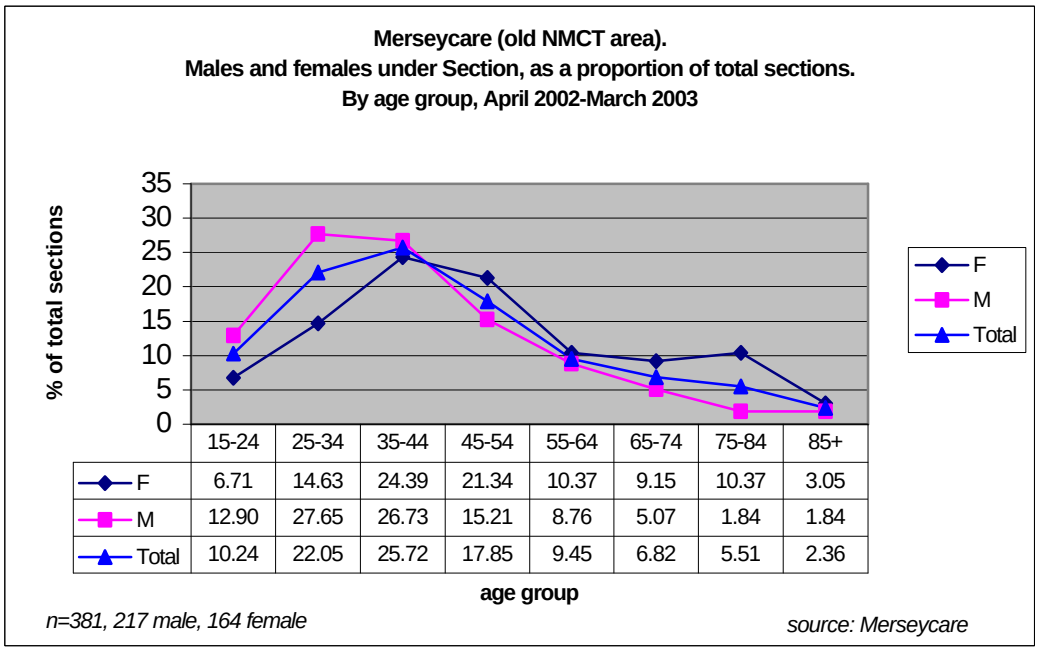
Age / sex

Of the 381 people being held under section, 57% were male, and 43% female. Most were aged between 25-54 (see figure 78). When the data from Aintree Hospitals was added (see Appendix 3 in the supplement to the main report – serving the population of Sefton and surrounding areas), then the difference between males and females reduced to 53% males (355) and 47% females (315).

Males are sectioned at a younger age than females, especially those aged 15-34, where the proportion of male sections is twice as high as the proportion of female sections (12.9% of male sections occur at ages 15-24, and 27.65% at ages 25-34, compared to 6.71% and 14.63% in females respectively). This corresponds with the findings of the South Humber mental health equity audit, where there was a clear peak in section rates for men in their early 20s (South Humber 2001).

Females are more likely than men to be sectioned when they are older, especially those aged 75-84, where the proportion of all females under section is five times higher than in men. This was also similar to the findings in South Humber. There are higher proportions of women aged 75+ than men in PCT populations, but as differences are much less than 5 times, this can only partly explain the higher proportions of sections amongst older women (e.g. in Birkenhead & Wallasey PCT, 10% of women were aged 75+, compared to 6% of men, 2002). Prevalence of psychotic disorder is higher amongst men than women in those aged 75+ (see section on psychiatric morbidity) – it is likely that sectioning of these older women is related to dementia. This would indicate that support services in the community for older women need to be reviewed.

Figure 78



	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
F	6.71	14.63	24.39	21.34	10.37	9.15	10.37	3.05
M	12.90	27.65	26.73	15.21	8.76	5.07	1.84	1.84
Total	10.24	22.05	25.72	17.85	9.45	6.82	5.51	2.36

Ethnic group

Merseycare was the only mental health trust to provide data on ethnicity using a full range of ethnic groupings. However, in 1 in 5 cases, ethnic group was not known (table 29).

Of the 381 people under Section in the old NMCT area of Merseycare Trust, the proportions of people from ethnic minorities were greater than those in the population of

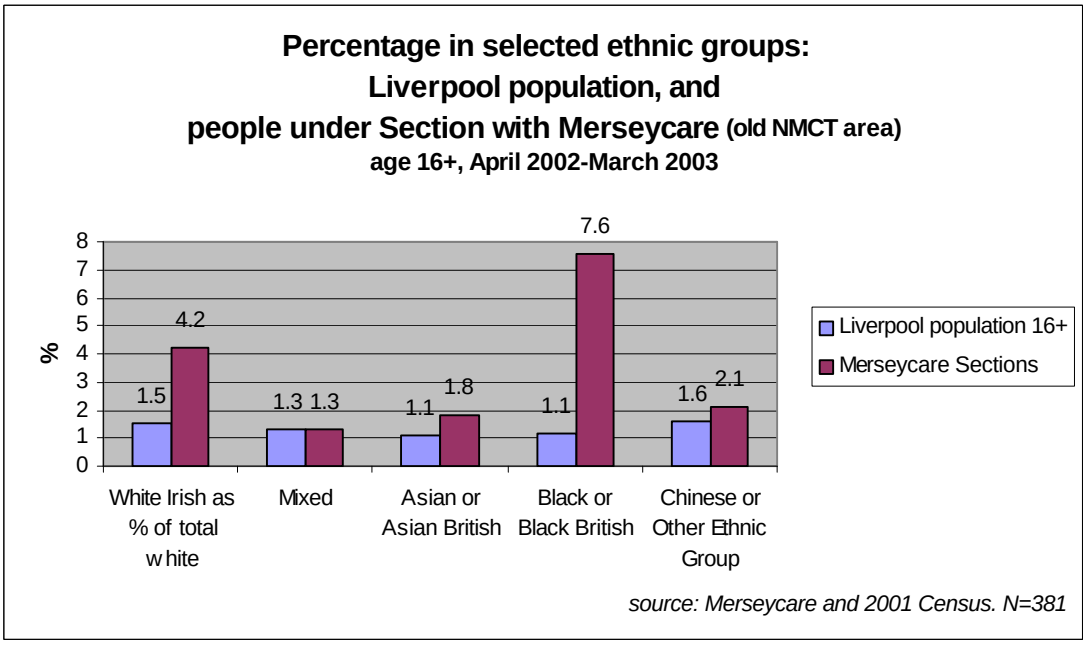
Liverpool (figure 79and table 29 – with the exception of those of mixed race, where the proportions were similar)[4].

The differences were most pronounced amongst Black and Irish people. There were six times as many Black people under section than would be expected from the population structure, and nearly three times as many Irish. This is also twice as high as would be expected from estimates using the National Psychiatric Morbidity Survey (HMSO 2001). The survey suggested that prevalence of psychosis amongst Black people is three times greater than amongst White people (see section on psychiatric morbidity).

If data from Aintree Hospitals is included (i.e. covering residents from Sefton and surrounding areas – see Appendix 3 in the supplement to the main report, table 2), then the proportions of Black people under section fall to 4.9%. This is still much more than would be expected when compared to the ethnic composition of the populations of Liverpool and Sefton, where proportions of Black people are 1.2% in Liverpool (see table 29) and 0.2% in Sefton. Unfortunately, data from Aintree Hospitals was not available by PCT, and only in broad age bands, so could not be considered in other analyses.

It is possible that there are more young males in the Black and Irish population. If so, then it could be that some of the difference in sectioning is due to the age/sex structure of the ethnic minority population. However, even if this were the case, it would only explain a small part of the difference.

Figure 79



[4] *Some of those under section with Merseycare were from outside Liverpool. Some Liverpool residents under section will be missing because of incomplete data from Merseycare.*

The findings of the audit confirm that inequities reported in the literature are reproduced in the Merseycare area. Studies have shown that Black people are up to six times more likely to be detained under section of the Mental Health Act, with Black women faring particularly badly – (18% held under section, compared with only 2% of their White counterparts), (Koffman et al 1997, Burnett et al 1999, Reid-Galloway 2001, MIND 2000b, Audini and Lelliot 2002). People from the Irish Republic have the highest rates of admission to psychiatric hospitals in England. They are more than twice as likely to be hospitalised for mental distress then their native-born counterparts (MIND 2000b).

Table 29
Percentage in ethnic groups:
Liverpool population and people under section with Merseycare (old NCMT area: all ages, April 2002 to March 2003).

%	Liverpool population	Merseycare Sections
White	94.9	68.2
of which Irish	1.5	4.2
Mixed	1.3	1.3
Asian or Asian British	1.1	1.8
Black or Black British	1.1	7.6
Chinese or Other Ethnic Group	1.6	2.1
not known	-	19

Various explanations have been put forward for these differences, including:

- different types of schizophrenia in the black population;
- different perceptions of health services by black patients;
- the police and health professionals treating mentally ill black people differently.
- later presentation to the psychiatric services. Negative views or experiences of psychiatry may lead to black people delaying seeking help.

(Davies et al 1996, Reid-Galloway 2001, Friedli 2003 (See literature review for further discussion of these issues).

The low proportions of black people being referred by their GPs to mental health services (reported in section 3.5.4) suggests that there are problems of access to primary care for these groups. For some, this will mean that they are more likely to develop acute mental health problems, as suggested by the higher proportions of black people being held under section of the Mental Health Act. Mental Health Trusts need to explore these issues in more detail to ensure that they are complying with the quality standards laid down by the Mental Health Act Commission.

Deprivation
Because of the incompleteness of the data, it was not possible to look at associations between deprivation and rates of sectioning. A mental health equity profile carried out in South Humber analysed the links between deprivation and rates of sectioning, using the

ward level DETR Index of Multiple Deprivation. They found a statistically significant positive association between deprivation and mental health sectioning (correlation coefficient of 0.85). Further analysis by Primary Health Care Team showed that ranking of PHCTs by rate of sectioning broadly followed their ranking by deprivation. (South Humber 2001).

Five Boroughs NHS Trust

Five Boroughs NHS Trust caters mainly for the populations of St.Helens and Central and South Knowsley. North Knowsley (Kirkby) is served mainly by Merseycare NHS Trust

Unlike in Merseycare, 5 Borough holds patients under sections 135 and 136. Because these sections were not counted in the audit, and neither were re-grades, then some data may be missing – i.e. patients held on a 135/6 section and then regraded to a full section. The Mental Health Trust are working on this problem, which will hopefully be resolved for future audits.

In Five Boroughs Trust, there were 170 people being held under Section of the Mental Health Act between April 2002 and March 2003. This was less than half the number of sections in the other two Mental Health Trusts. Although 5 Boroughs has a smaller population base than the other 2 Mental Health Trusts, this needs investigating, - it could partly be due to the missing data regarding re-grades from sections 135/6. Most people were residents of either St.Helens or Knowsley PCT areas.

Age / sex

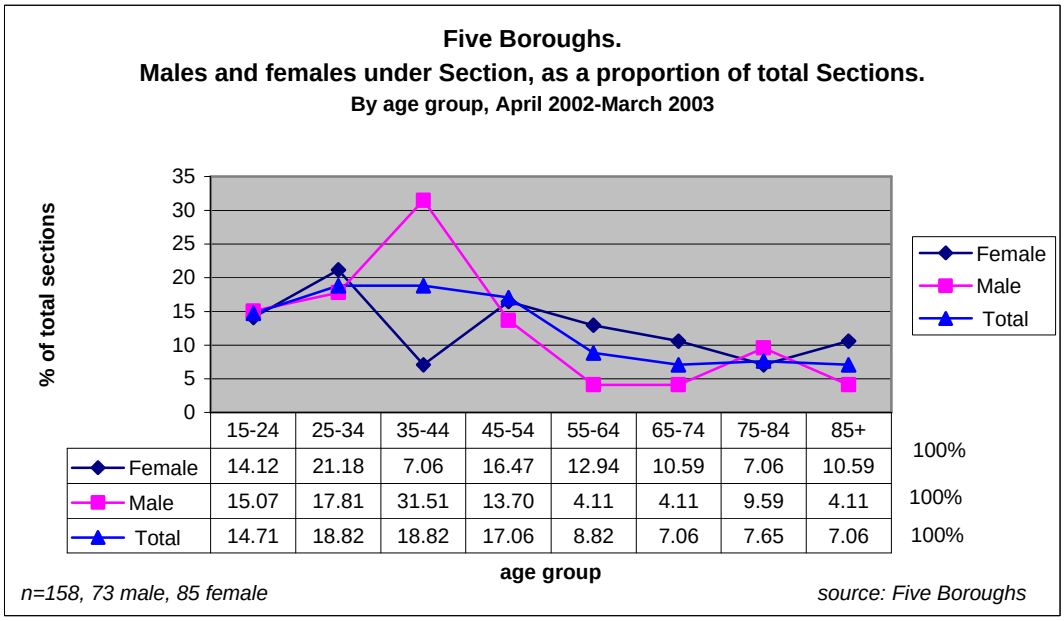
Unlike nationally and in Merseycare, there were more females than males held under section in Five Boroughs, - where 53.8% (85) were female and 46.2% (73) were male (Figure 80). This would suggest that the provision of services sensitive to the needs of women needs to be assessed.

Age: Sections in all three Mental Health Trusts followed a similar pattern, with proportions peaking amongst those aged 25-44 and then dropping off in subsequent age groups (with the exception of females aged 35-44 in Five Boroughs). In Five Boroughs, those in the youngest age group, 15-24, were more likely to be sectioned compared to Merseycare. In Merseycare, there were a smaller proportion of sections amongst ages 65+ than in Five Boroughs. These differences could reflect population differences – for example there may be more young people in the population served by Merseycare. It was not possible to calculate population-based rates of sectioning, due to incomplete data from Merseycare

Sex: In Five Boroughs, one in five female sections were amongst women aged 25-34. In Merseycare, one in four women sectioned were aged 35-44. In both Mental Health Trusts, in the age groups 55+, females were more likely than males to be under section (with the slight exception in Five Boroughs of those aged 75-84). Again, this could be partly due to population differences, with females having a greater life expectancy.

In Five Boroughs, there were an unusually high proportion of males sectioned aged 35-44, and an unusually low proportion of females.

Figure 80



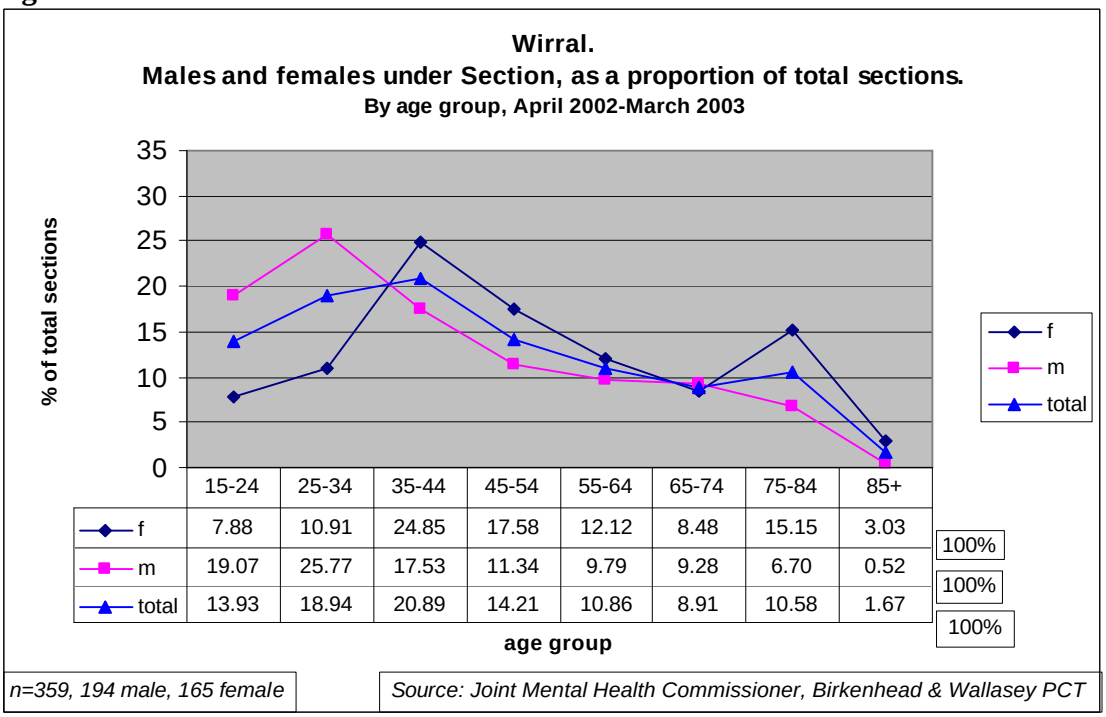
Cheshire and Wirral Partnership NHS Trust

Due to problems in communication, it was not possible to confirm that data relating to the Wirral did not include transfers from other mental health trusts, or re-grades from one section to another. Data was not available by PCT – only for the whole of the Wirral. It is not clear whether data includes residents from outside the Wirral. Data was available by age and sex.

Age/ sex

Of all those being held under section in Wirral, 54% (194) were male, and 46% (165) were female. There were higher proportions of young men aged 15-24 under section in Wirral compared to the other two Mental Health Trusts (figure 81). As in Merseycare, there were more than twice as many young men compared to women aged 15-34 under section. Proportions of females under section aged 75-84 (15.15%) were much higher than in Merseycare (10.37%) and 5 Boroughs (6.9%). They were also twice as high as the proportion of men. There needs to be a review of the appropriateness of support services in meeting the needs of older females on the Wirral.

Figure 81



*N.B. unlike data for Merseycare and 5 Boroughs, Wirral data **may** include transfers and re-grades – it was not possible to clarify this with those who supplied the data*

Combined data

For some PCTs, data was more complete, so that numbers detained with different mental health trusts could be combined and population rates could be calculated. For example, 255 residents of Central Liverpool PCT were detained under section either with Merseycare or with 5 Boroughs NHS Trusts, at a rate of 130.86 per 100,000 population (table 30). This rate is high when compared to the national rate of 91 per hundred thousand (2002-03). The rate for Central Liverpool is likely to be an underestimate, if some were detained at Aintree Hospitals, and so were not included in the Merseycare data. It would be expected that the national rate would be higher, because it includes those detained in high security hospitals – the rates for Merseyside PCTs do not.

The high rate in Wirral (143.11 per 100,000) could be due to problems with the data (see table note). Rates in St.Helens and Knowsley appear low. St.Helens & Knowsley data is based on the CMHT (community mental health team) which the client is under, rather than their PCT – so for example there maybe some St.Helens PCT residents who come under a Knowsley CMHT, who would be counted as Knowsley in the data shown in table 30.

Due to data quality issues, it is not possible to carry out significance tests or to draw any firm conclusions using combined data.

Table 30
Rates of Sections under the Mental Health Act for selected PCTs, 2002-03

	No. of sections 2002/03	Total pop	Rate per 100,000
Central Liverpool PCT (Merseycare + 5Bs)	255	194,864	130.86
South Liverpool PCT (Merseycare + 5Bs)	69	80,727	85.47
St.Helens PCT (5Bs + Merseycare)	75	142,621	52.59
Knowsley PCT (5Bs + Merseycare)	78	118,554	65.79
Wirral PCTs (Wirral Trust + Merseycare)	361	252,254	143.11

N.B. Wirral data may include residents outside Wirral – and may be an inflated figure, if transfers and re-grades were included. Central & South Liverpool could be underestimates, if some were detained at Aintree Hospitals, and so were not included in the Merseycare data.

3.5.11 Detentions under Section of the Mental Health Act

Key points

Data quality:

- There were problems with missing data from Merseycare Mental Health Trust, and unclear definitions with Wirral data.
- Definitions of sections were unclear.

Age and sex:

- In Merseycare and Cheshire & Wirral Mental Health Trusts, there were more males than females being held under section.
- Sections in all three Trusts generally followed a similar pattern, with proportions peaking amongst those aged 25-44 and then dropping off in subsequent age groups.
- In Merseycare and Wirral, males are sectioned at a younger age than females, especially those aged 15-34, where the proportion of male sections is twice as high as the proportion of female sections.
- Females are more likely than males to be sectioned from the age of 44 upwards – especially amongst those aged 75-84 in Merseycare Mental Health Trust, where the proportion of all females under section is five times higher than in males.
- Some of these differences could reflect population differences.

Ethnic group:

- In Merseycare Mental Health Trust, there were six times as many Black people and more than three times as many Irish people under section than would be expected.
- There was no data by ethnic group from the other 2 trusts.

Recommendations

1. *Data:*
    a. Data quality should be improved, so that future audits can calculate population rates for PCTs, and comparisons with deprivation and need indicators can be made.
    b. There needs to be agreement on a clear definition of which sections of the Act should be included.
    c. Data in each Mental Health Trust should be coded for ethnic group
2. Mental Health Trusts need to explore ethnic differences in more detail to ensure that they are complying with the quality standards laid down by the Mental Health Act Commission.

3.5.12 Enhanced and Standard Care Programme Approach

Data requested: Number of people on Enhanced and Standard CPA (care programme approach) per head of population registered with a GP - by PCT, sex, ethnic group, and ages 16-64 and 65+.

Data Source: Mental Health Trusts

Care Programme Approach (CPA)

CPA is the framework for providing care for all mental health service users. Following an initial assessment, each service user is allocated to one of two levels of CPA. Those on Standard CPA require low-key support, being more able to self-manage their mental health problems, and pose little danger to themselves or others. Those on Enhanced CPA are likely to require more frequent and intensive interventions, and are more likely to present a significant risk to themselves or others. Enhanced CPA rates are considered a reasonable approximation of the number of people in a locality with the most serious health needs which will not necessarily mean inpatient care (McCrone and Jacobson 2004).

Data collection problems

- '*Point in time'*: For all three Mental Health Trusts, limitations of their information systems meant that they could only get this data on an "as at today" basis. If data was needed for a specific date, they would need this date in advance in order to actually produce the figures on that date. Wirral data was not available by PCT. Ideally, the 'point in time' would have been the same for each of the three mental health trusts. The data we received from Merseycare and 5 Boroughs were for dates fairly close together (September/October 2003), but delays in getting data from Wirral meant that their data was for a much later point in time (early 2004).

- *Missing Merseycare data*: Again, data from Merseycare NHS Trust was only available for the old North Mersey Community Trust (NMCT) area. Data for Aintree Hospitals and West Lancashire is missing, as they have not yet been included in the computer system.

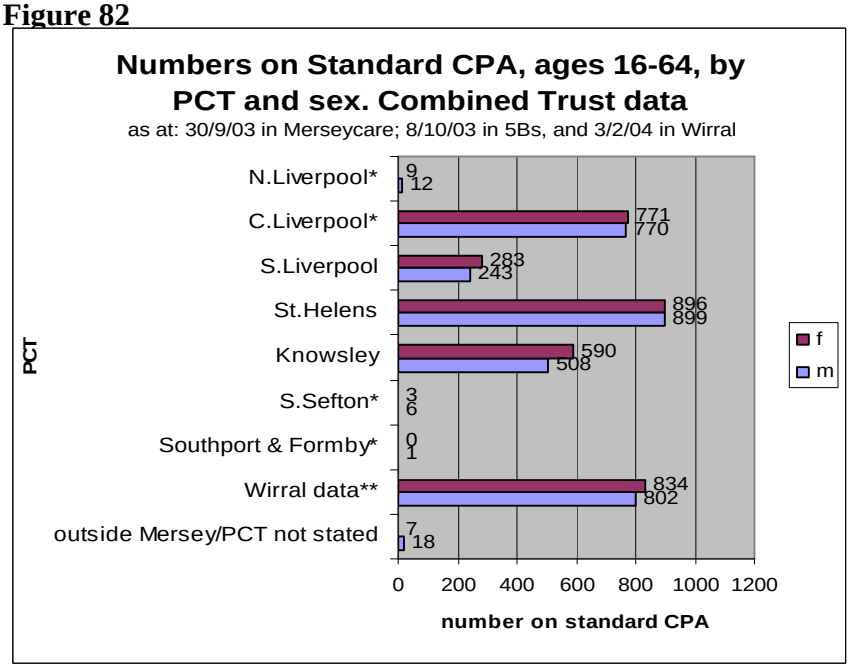
- *Wirral data* was not available by PCT, and the age groupings were different to those used by the other two Mental Health Trusts.

- *Ethnic group*: Merseycare was the only mental health trust to be able to provide meaningful data by ethnic group. Even then, in more than 1 in 4 cases, ethnic group was not stated.

Ages 16-64

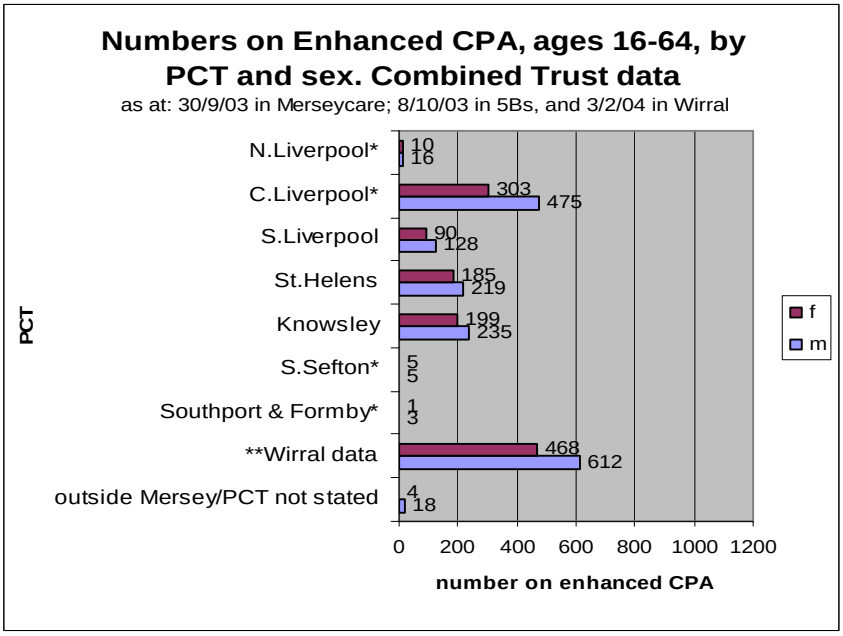
Figures 82 and 83 show the numbers of adults aged 16-64 on Standard and Enhanced CPA. Because there was so much missing data (see figure notes), it was not possible to calculate population rates.

Figure 82



** data from the old North Mersey Community Trust (NMCT) area, i.e. north Merseycare, is missing*
***Wirral data - PCT not specified, and age groups are different (20-60 & over 60).*
data includes 142 people over 65, waiting to be transferred to EMI

Figure 83



** data from the old North Mersey Community Trust (NMCT) area, i.e. north Merseycare, is missing*
***Wirral data - PCT not specified, and age groups are different (20-60 & over 60).*
data includes 85 people over 65, waiting to be transferred to EMI

Numbers of men and women on Standard CPA were fairly similar in Central Liverpool and St.Helens PCTs. In South Liverpool, Knowsley and Wirral, there were slightly more women than men.

As would be expected, each PCT had fewer people on Enhanced CPA. There were more males than females on Enhanced CPA, and differences between the sexes were more pronounced than with Standard CPA. This was especially so in Central Liverpool PCT, where 61% were male (39% female) South Liverpool (59% male, 41% female) and Wirral (57% male, 43% female). This is opposite to the findings of the South Humber mental health equity audit, where gender differences were small and slightly in favour of women at the enhanced CPA level. A 25% difference in favour of women was found in the prevalence of standard CPA. They suggested that the higher mental health morbidity found in women probably explains this variation South Humber 2001).

Wirral had the highest total on Enhanced CPA (despite the age band used being narrower – but their data may have included some people from outside Wirral).

Ages 65 plus
Figures 84 and 85 show numbers on Standard and Enhanced CPA aged 65 and over. There are generally more females than males on CPA in this age group, which would partly be explained by population differences.

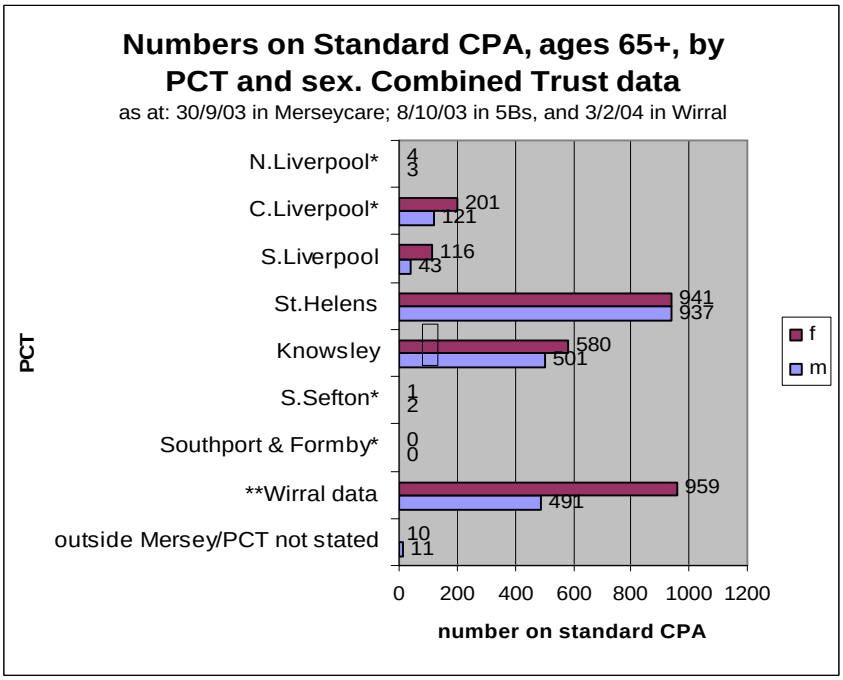
In Central and South Liverpool PCTs, and amongst males in Wirral, there are more than twice as many people aged 16-64 on Standard CPA compared with those aged 65 plus. In St.Helens, and amongst females in Wirral, there are more people aged 65 plus on Standard CPA. (Although note that Wirral data includes ages 60 plus). In Knowsley, numbers are similar.

Numbers of people aged 65 plus who are on Enhanced CPA are much smaller (Wirral data includes ages 60 plus).

Deprivation
Incomplete data meant that analysis was not possible.

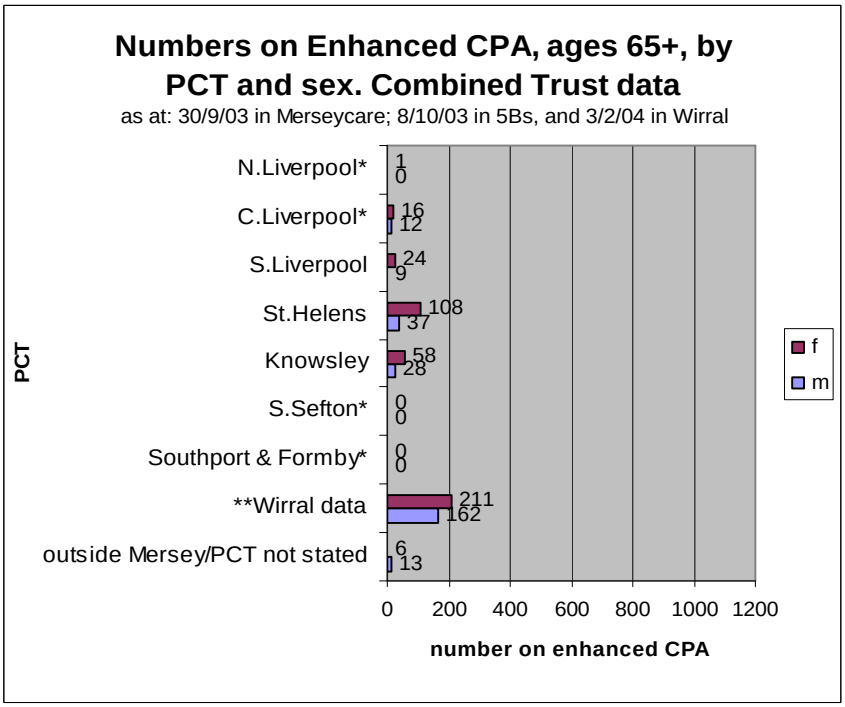
Ethnic group
Merseycare was the only mental health trust to provide data on ethnicity using a full range of ethnic groupings. However, there were still many cases where ethnic group was not known – 1 in 3 of those on Standard CPA, and almost 1 in 4 of those on Enhanced CPA (i.e. 35.34% of those on Standard CPA, and 23.80% of those on Enhanced CPA).

Figure 84



** data from the old North Mersey Community Trust (NMCT) area, i.e. north Merseycare, is missing*
***Wirral data - PCT not specified, and age groups are different (20-60 & over 60)*
data includes 18 patients aged under 65 who are pre-senile

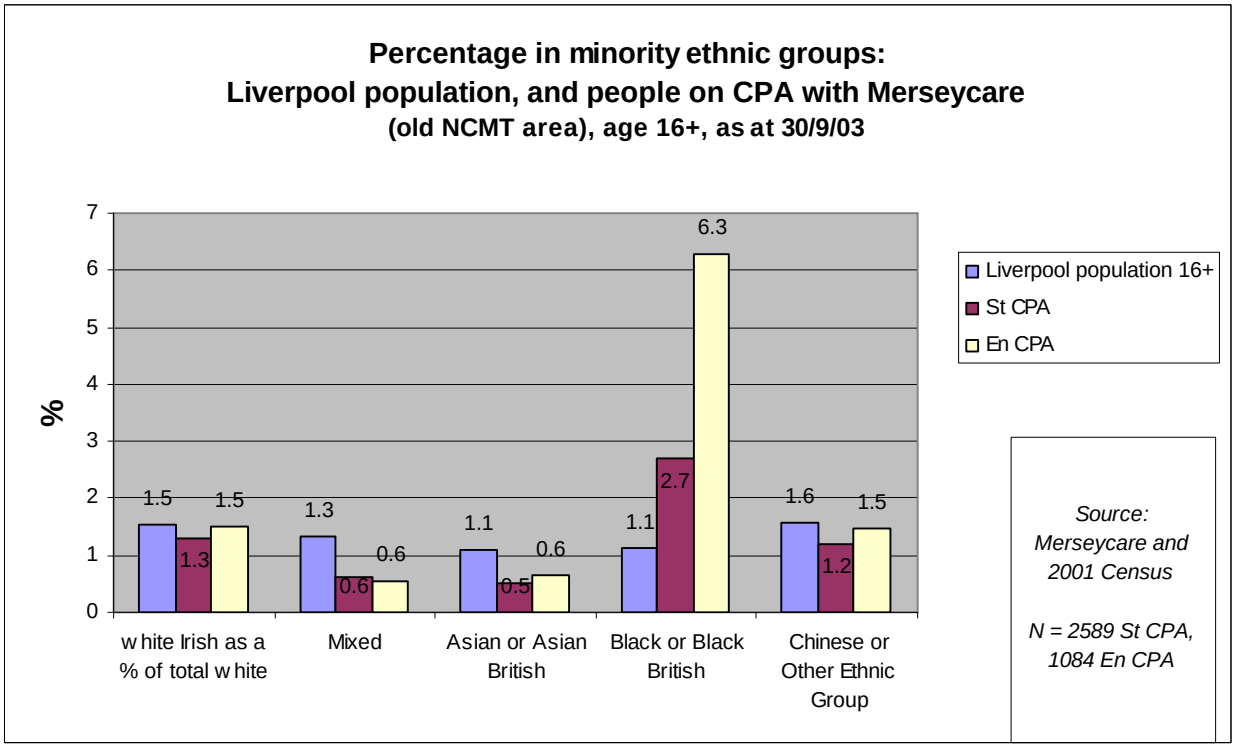
Figure 85



** data from the old North Mersey Community Trust (NMCT) area, i.e. north Merseycare, is missing*
***Wirral data - PCT not specified, and age groups are different (20-60 & over 60)*

Figure 86 shows the proportions of people in different ethnic groups in the population of Liverpool. When compared to the population breakdown, there are higher proportions of black people on CPA with Merseycare than might be expected[5]. This is especially the case with those on Enhanced CPA. There are more than twice as many Black people on Standard CPA, and nearly six times as many on Enhanced CPA than would be expected. As with the data on people held under section of the Mental Health Act (see section 3.5.11), this finding confirms that inequities relating to black people reported in the literature are reproduced in the Merseycare area. For example, Hatloy (2002) reported that African-Caribbean people, are over-represented within psychiatric hospitals.

Figure 86



Proportions of Irish people on CPA are similar to the proportions of Irish people in the local population. There are around half as many Asian people and people of mixed race on Standard or Enhanced CPA than might be expected, and slightly fewer Chinese people. It is possible that there may be problems in accessing mental health services for some of these groups. For example, MIND reported that the treated prevalence rates for mental distress within the Chinese population of Britain are less than 50% of the rates for the White population (MIND 2000b). MIND suggest that Chinese people may not use mental health services because they are more likely to feel stigma attached to mental health problems.

[5] *Some of those on CPA with Merseycare were from outside Liverpool. Also, some Liverpool residents were missing, mainly from north Liverpool, because of incomplete data from Merseycare.*

3.5.12 Enhanced and Standard Care Programme Approach

Key Points

Data quality:

- Data was available only for a 'point in time'.
- Missing data from Merseycare was a problem – hopefully the situation will improve by 2005, when the whole Trust will be on-line, and then population-based rates by PCT can be calculated.
- Data between Trusts needs to be comparable – at present, Wirral cannot provide data for comparable age groups to the other 2 Trusts on Merseyside, or by PCT.
- All Trusts need to be able to provide data by a full range of ethnic codes. Only Merseycare does this at present, but even then, in at least 1 in 4 cases, ethnic group is 'not known'.

Age and sex

- Amongst the under 65s, there are slightly more women than men on Standard CPA, and more men than women on Enhanced CPA.
- In St.Helens PCT, there are more people aged over 65 on Standard CPA than there are aged 16-64. In Central and South Liverpool PCTs, the opposite is true.

Deprivation

- Incomplete data meant that analysis by deprivation was not possible.

Ethnicity

- There are higher proportions of Black people on CPA with Merseycare compared with proportions in the population;
  - there are more than twice as many Black people on Standard CPA,
  - and more than 5 times as many on Enhanced CPA than would be expected.
- There are around half as many Asian and people of mixed race on Standard or Enhanced CPA than might be expected, and slightly fewer Chinese people.

Recommendations

1. *Data:*
   a. Mental Health Trusts should gather CPA data annually, rather than simply for a 'point in time'.
   b. Mental Health Trusts should work together to ensure that data is comparable.
   c. Ethnic coding needs to be improved.
   d. Once complete data is available from all Mental Health Trusts, then population-based rates by PCT should be calculated.
2. Issues around ethnic differences require further exploration, e.g. large proportions of black people on CPA, and smaller proportions of other ethnic minorities, possibly suggesting inadequate access to care

3.6 Outcomes: Measures of the effectiveness of services

3.6.1 Psychiatric readmissions

Data requested:
a. Number of patients aged 16-64 who were re-admitted to the care of a psychiatric specialist within 90 days of discharge. April 2001/March 2003.
SAFF Line Number 5316. At PCT level on an annual basis.

b. Number of patients aged 65+ who were re-admitted to the care of a psychiatric specialist within 90 days of discharge. April 2001/March 2003

Data sources: a. PCTs.
b. North West Public Health Observatory (NWPHO)

Emergency psychiatric readmissions within 90 days of discharge, as a percentage of all those discharged, is one of the three high level performance indicators identified by the DoH that relate to mental health:

'……indicating health outcomes of NHS healthcare. Although readmissions occur for a variety of reasons, a high emergency readmission rate may suggest that the level of mental health support provided in the community is inadequate'

(DoHc 2002)

The indicator relates to the Mental Health National Service Framework standard 4: to ensure that each person with severe mental illness receives the range of mental health services they need; that crises are anticipated or prevented where possible; to ensure prompt and effective help if a crisis does occur; and timely access to an appropriate and safe mental health place or hospital bed, including a secure bed, as close to home as possible (CHI, 2003a&b).

National data
Nationally, there has been a steady decrease in the rate of readmissions of those aged 16-64, from 14.3% in 1997-8, to 12.7% in 2001-2. This still failed to reach the DoH target of 12.3% for 2001-2, with the DoH stating that 'good performance is generally low' (DoH 2004).

Data on those aged under 65 was available from PCTs. It was hoped to obtain data on those aged 65+ from the NWPHO – but this was not possible. Various problems with the data are outlined in box 8.

By PCT
Most PCTs were able to supply data by age and sex, yearly, from 2000/01 to 2002/03. Data was not available by age/sex or for previous years from the Wirral. They were able to supply only one figure, for all ages, for 2002/03. Data for 2000/01 was not available for St.Helens and Knowsley PCTs.

Box 8: Problems with the data

Interpretation: does 'low % =good'? Readmission is not necessarily a bad thing. Being dealt with in the community may involve a spell back in hospital. Although the availability of crisis teams etc. in the community may help to avoid some admissions, in some cases, because the team members are in more regular contact with the patient, they may intervene through an admission to prevent serious risk (DoH 2004).

Data quality: It was pointed out by Knowsley PCT information department that data quality for this indicator is low. PCTs rely on getting the data from their main mental health providers, therefore the majority of the time they either get some information and have to estimate for other Trusts, or they don't get any information at all. Numbers would be too small for an analysis by practice.

Data was not available by ward, and was not available by age/sex/previous years for the Wirral. The smallest geographical area available for analysis was PCT.

Ages 65+: The NWPHO reported that, at present, there are several the supplement to the main difficulties in providing data. For example coding by psychiatric consultants is know to be weak; there is a problem tracking patients between years; and sometimes 'discharges' are purely administrative, because the status of the organisation hosting the patient has changed. This means that at present, the methodology suggested by the Commission for Health Improvement cannot be used. The NWPHO are in the process of discussing with the other Public Health Observatories the best way around these and other the supplement to the main difficulties.

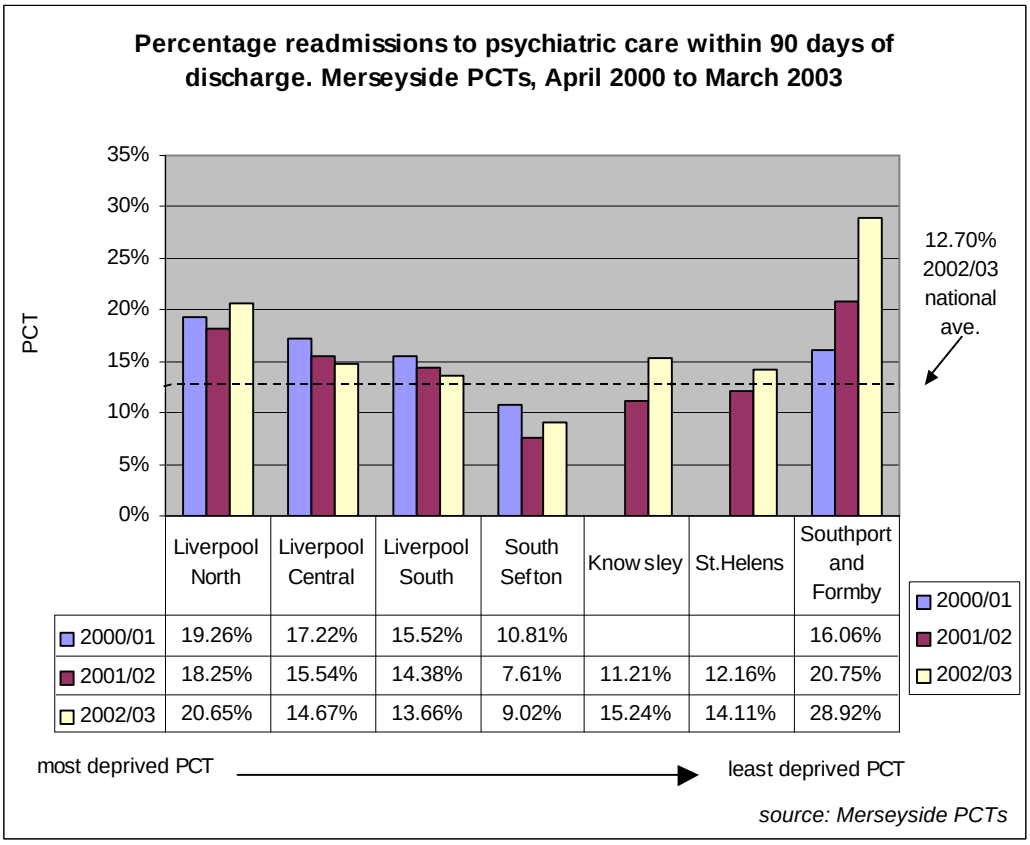
Definition: The NWPHO identified several problems of definition (see previous paragraph). In addition, there is a need in each hospital for a clear differentiation between 'planned' re-admission and 'emergency' readmission (DoH 2004).

N.B. Recent data was supplied by Liverpool PCTs just before this report was released. Numbers of readmisions for 2002/03 do not tally with those we were originally given - the numbers of discharges were the same, but numbers of readmissions are smaller.

During the two-year period from 2001/02 to 2002/03, there was a rise in the proportion of readmissions in five of the seven Merseyside PCTs. There were large variations between PCTs – with proportions of readmissions very low in South Sefton, and three times higher in Southport & Formby PCTs (Figure 87). The Southport & Formby figures are so high, it is possible that there is a problem with the data (actual numbers doubled from 44 in 2000/01, to 83 in 2002/03, -see Appendix 4 in the supplement to the main report). However, it is possible that there **is** a particular problem with readmissions in Southport & Formby, as suggested by their high rate of hospital episodes for schizophrenia. Southport & Formby has the 3rd highest standardised episode ratio for schizophrenia amongst Merseyside PCTs (see section 3.5.10 on hospital episode statistics).

Six of the seven PCTs had proportions of readmissions above the national average (figure 87). According to DoH thresholds (Box 9), proportions for 2002/03 were below the national target in Central Liverpool Knowsley and Birkenhead & Wallasey (2003/04) PCTs, and statistically significantly below the target in North Liverpool and Southport & Formby PCTs. Only in South Sefton PCT were proportions above the DoH target.

Figure 87



	Liverpool North	Liverpool Central	Liverpool South	South Sefton	Knowsley	St.Helens	Southport and Formby
2000/01	19.26%	17.22%	15.52%	10.81%			16.06%
2001/02	18.25%	15.54%	14.38%	7.61%	11.21%	12.16%	20.75%
2002/03	20.65%	14.67%	13.66%	9.02%	15.24%	14.11%	28.92%

Wirral data was only available for the period April 03 – March '04:
Bebington & West Wirral PCT: 13.8%
Birkenhead & Wallasey PCT: 14.6%.
The Wirral mental health equity audit found the rate in 2001-02 was 18% on the Wirral, and 20% in Birkenhead & Wallasey (Harwood and Nzuobontane 2002).

Deprivation:
There was no correlation with PCT deprivation scores (r=-0.11, 2002/3 data). However, it is always possible that other factors could mask any links there may be with deprivation – for example, the high scores in Southport and Formby: If Southport & Formby was excluded, then the correlation

Box 9
DoH thresholds for the performance rating system – readmissions

Significantly above average:	<6.4%
Above average:	9.6% - 6.4%
Average:	14.4% - 9.6%
Below average:	17.9% - 14.4%
Significantly below average:	>17.9%

Merseycare NHS Trust, June 2003

became strong, with r=0.67 – but still not significant. For 2001/02, there was a significant correlation when Southport & Formby was excluded (r=0,83, $p<0.05$). This would suggest that support services for people living in deprived areas are not sufficient or appropriate.

Need:
The MINI 2 gives an estimate of the relative prevalence of mental illness in secondary care (see earlier Section on 'Deprivation and Needs Indicators'). Amongst PCTs, there was a slight negative correlation between percentage readmissions and the MINI 2 (r= - 0.28). As with the deprivation indicator, if Southport & Formby PCT (with its unusually high percentages) was excluded, the correlation became positive (r=0.55) but still not statistically significant (not significant for 2001/02 either). It would have been expected that areas of high mental illness need would have high proportions of readmissions.

It is possible that there are greater variations within PCTs than between PCTs. There is a need for analysis of data at a smaller geographical level than PCT in order to obtain a clearer picture of the relationships between readmissions, need and deprivation. Data could be grouped together over a period of time to overcome the problem of small numbers.

Sex:
Numbers were very small, so data for the 3 years was combined for analysis by age and sex. In 5 of the 7 PCTs, there were more females than males being re-admitted during the three- year period 2000-03 (Figures 88 to 94). In the other 2 PCTs - South and Central Liverpool - the difference between males and females was very small.

Age:
When analysed by age, it became apparent that the higher female rates were mostly in age groups over 25. Amongst those aged 16-24, in 5 of the 7 PCTs, there were more males re-admitted (PCTs in Sefton and Liverpool). - In North Liverpool PCT, there were twice as many readmissions amongst males than females aged 16-24. In South Liverpool, there were no readmissions of females in this age group, and 6 male readmissions.

Females are more likely than males to be admitted to hospital with neurosis (DoH 2003a). There are statistically significantly greater proportions of women with neurotic disorder compared to men (HMSO 2001). The greater proportion of readmissions amongst women compared to men would suggest that support services need to become more sensitive to the needs of women, especially those aged over 25. Perhaps women are being discharged too early into the environment that contributed to their depression. There should also be a focus on the needs of young men with regard to readmissions.

Figure 88

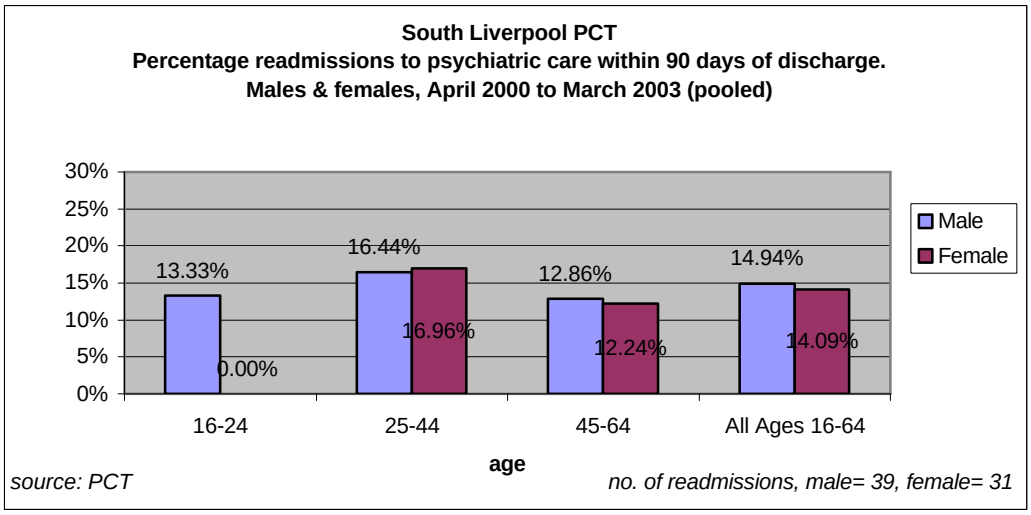


Figure 89

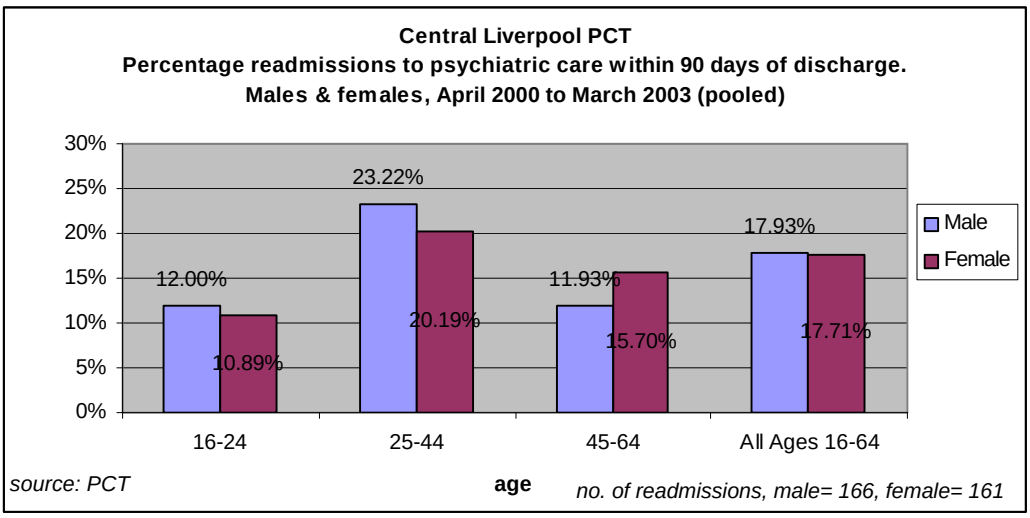


Figure 90

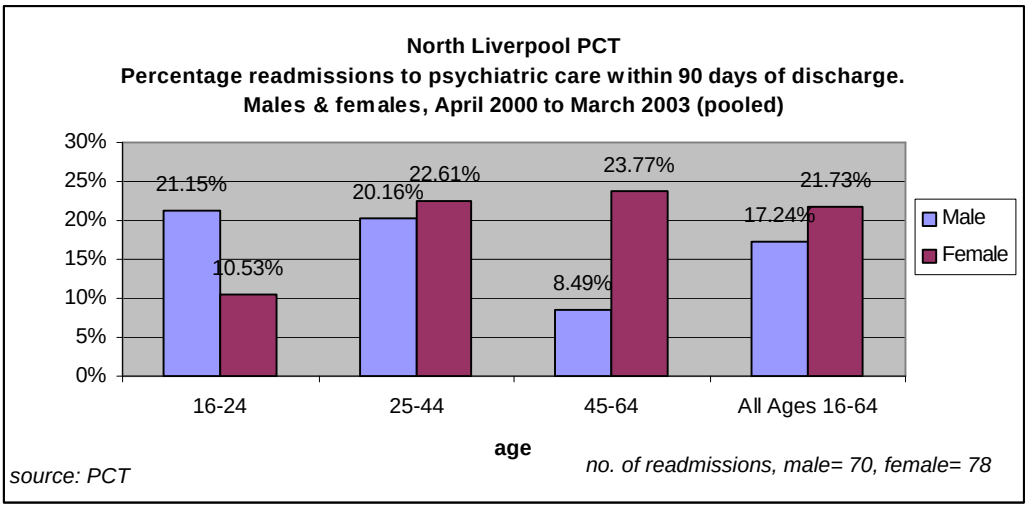


Figure 91

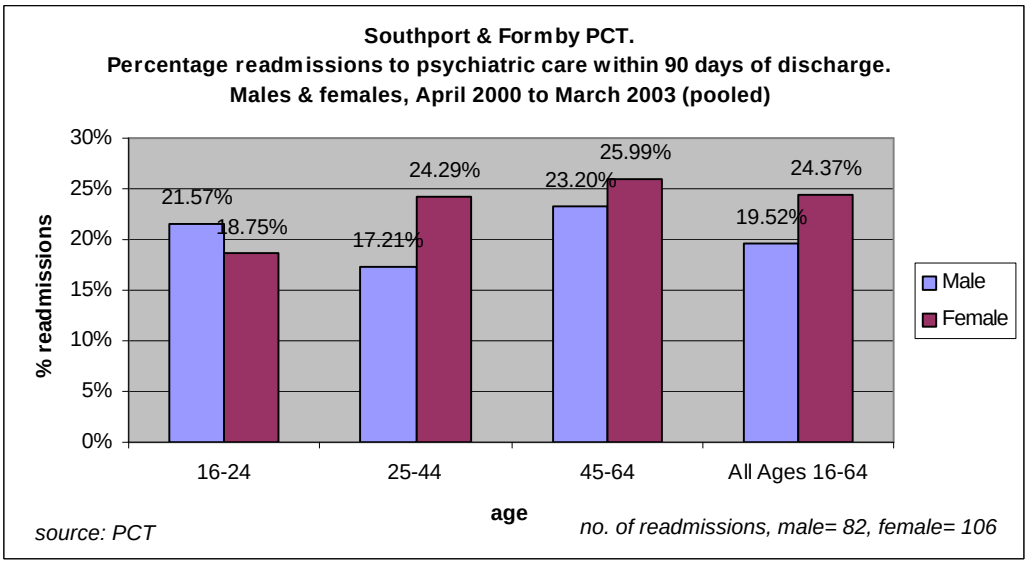


Figure 92

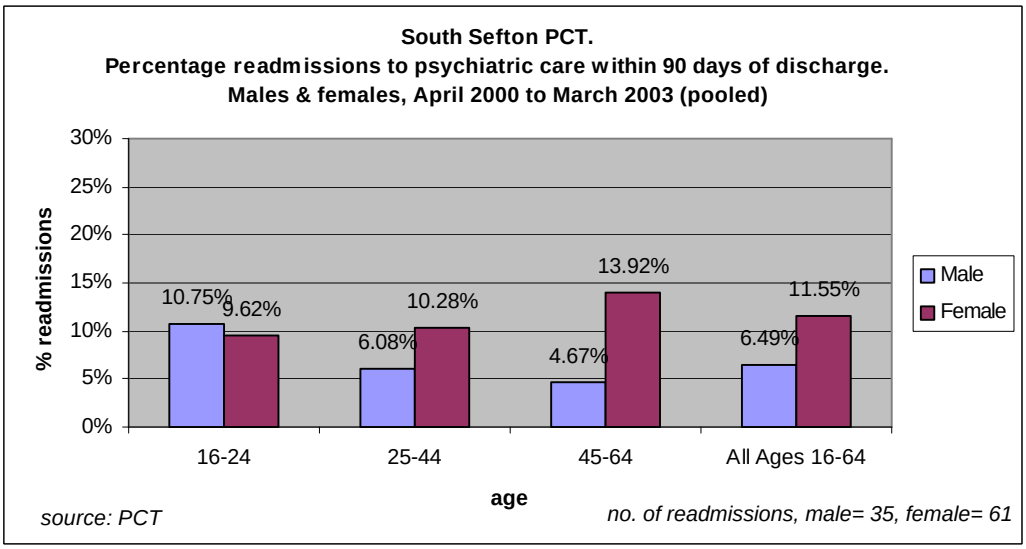


Figure 93

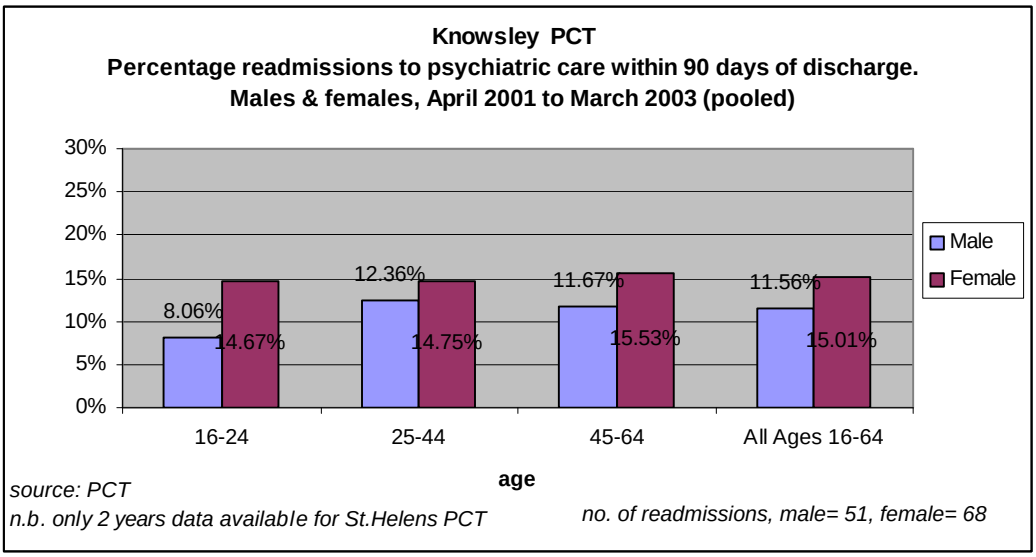
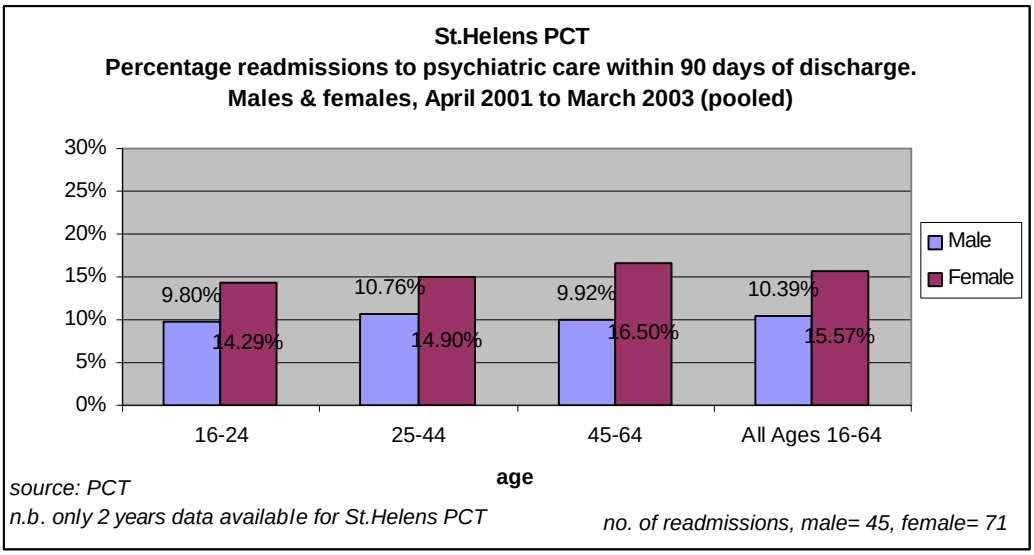


Figure 94

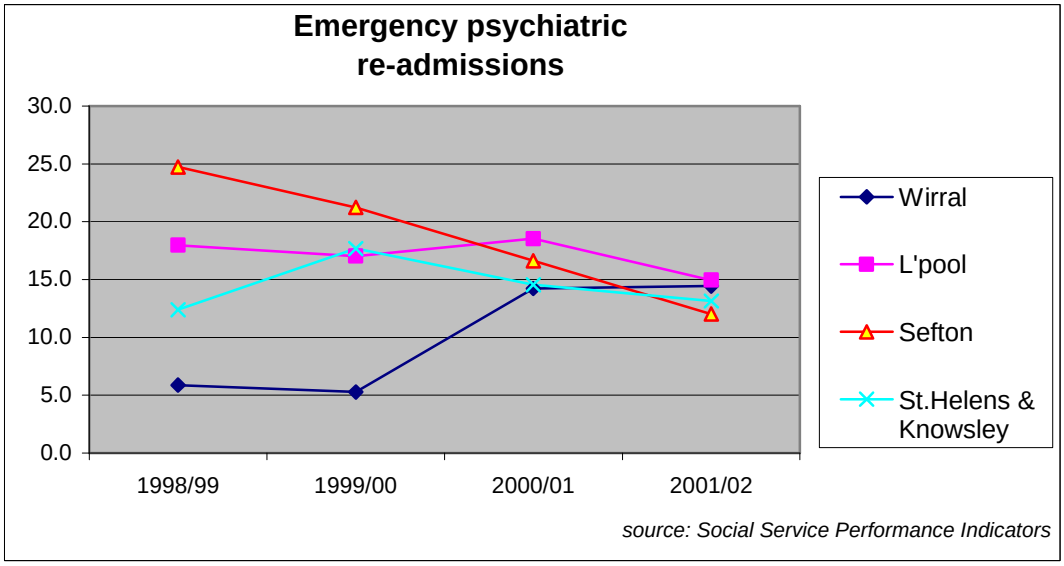


Bebington & West Wirral PCT
13.8% were readmitted within 90 days of discharge (April 03 – March '04)
There was no data available for previous years, or by age/sex.

Birkenhead & Wallasey PCT
14.6% were readmitted within 90 days of discharge (April 03 – March '04)
Again, there was no data available for previous years, or by age/sex.

The personal social services (PSS) performance indicators are available for local authority areas. Figure 95 shows emergency readmission rates over a 4-year period. In 1988/89, there were large differences between areas. By 2001/02, values had converged so that all were fairly similar. All but Sefton were higher than the national score of 12.7 in 2001/02. This contradicts some of the PCT data (figure 87) in which St.Helens and Knowsley PCTs had rates lower than the national average (2001/02). The low PSS rate for Sefton (figure 95) conceals a very high rate in Southport & Formby PCT, and a very low rate in South Sefton (figure 87). It would appear that there is a problem with the reliability of the PCT and PSS datasets, which needs investigating..

Figure 95
PSS Performance Indicators:
Emergency psychiatric readmission rate

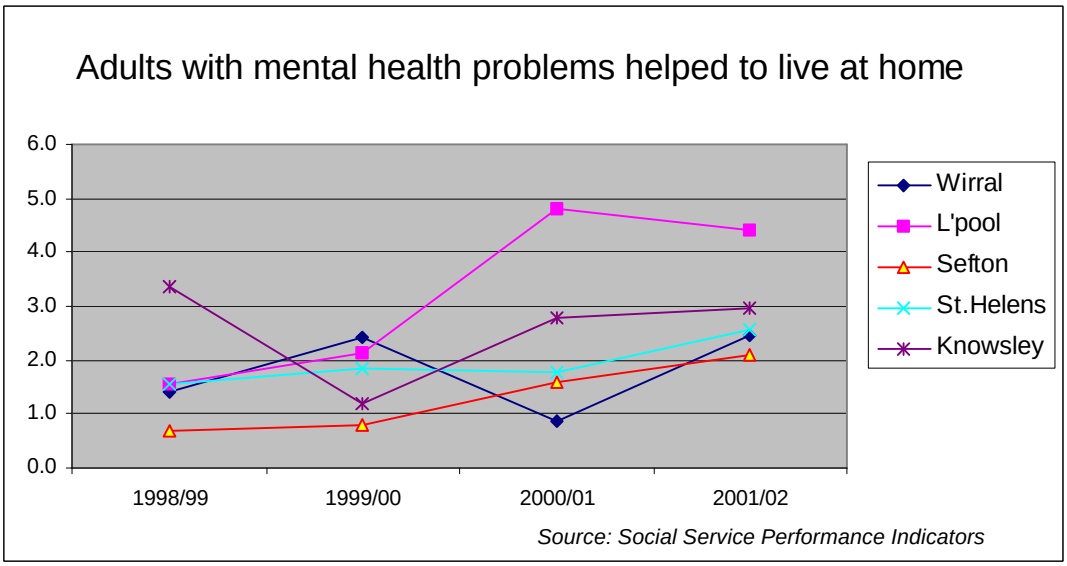


Definition: emergency psychiatric readmissions within 90 days of hospital discharge as a percentage of people aged 16-64 discharged from the care of a psychiatric specialist.

The DoH has advised that readmissions be considered along with data on adults with mental health problems helped to live at home. This indicator is included in the personal social services (PSS) performance indicators. During 2001-2, as shown in figure 96, Liverpool was well above the national average of adults with mental health problems helped to live at home. The remaining local authorities were below average. Compared to Sefton, Liverpool helped more than twice as many adults with mental health problems to live at home, according to these indicators.

Even though Liverpool helped proportionately more adults with mental health problems to live at home, Liverpool North and Central PCTs had the second and third highest rates amongst Merseyside PCTs of re-admission to hospital (figure 87, 2001/02). This could suggest that there are problems with the policy of encouraging more people to live at home. However, the problem of PCT and PSS data reliability needs addressing before any firm conclusions can be reached.

Figure 96
PSS Performance Indicator:



Definition: adults with mental health problems helped to live at home per 1,000 population aged 18-64.

3.6.1 Psychiatric readmissions

Key points

Data problems

- There are various problems with data quality and availability
- There was no data available for ages 65+.
- Data from Personal Social Services did not correspond with PCT data.

Age/ sex

- More females than males were re-admitted amongst those age 25+. Females are most likely to have a diagnosis of depression or anxiety.
- Amongst those aged 16-24, in 5 of the 7 PCTs (in Sefton and Liverpool), there were more males re-admitted. - In North Liverpool PCT, there were twice as many readmissions amongst males than females aged 16-24.

Geography

- Proportions of readmissions rose in five of the seven Merseyside PCTs, from 2001/02 to 2002/03.
- Six of the seven PCTs had proportions of readmissions above the national average. North Liverpool and Southport & Formby PCTs were significantly under the DoH target. This could suggest that there are problems with the support provided for people in the community.
- According to social services data, variations between districts are reducing.
- Even though Liverpool helps proportionately more adults with mental health problems to live at home, Liverpool North and Central PCTs had the second and third highest rates amongst Merseyside PCTs of re-admission to hospital. Either there are problems with the policy, or the data is unreliable.

Deprivation

- There was a strong correlation with deprivation when suspect data was removed.

Recommendations

1. *Data:*
    a. As a high level performance indicator, the lack of availability of complete and accurate up to date information on this indicator needs to be addressed by all three Mental Health Trusts.
2. There needs to be further analysis to determine whether high readmissions are due to problems with support in the community, or to poor data quality, or other factors. This should include an examination of the appropriateness of support services for areas and groups with high proportions of readmissions:
    - females aged 25+
    - males aged under 25 (especially in North Liverpool PCT)
    - areas of deprivation

3.6.2 Accident and Emergency episodes of deliberate self-harm.

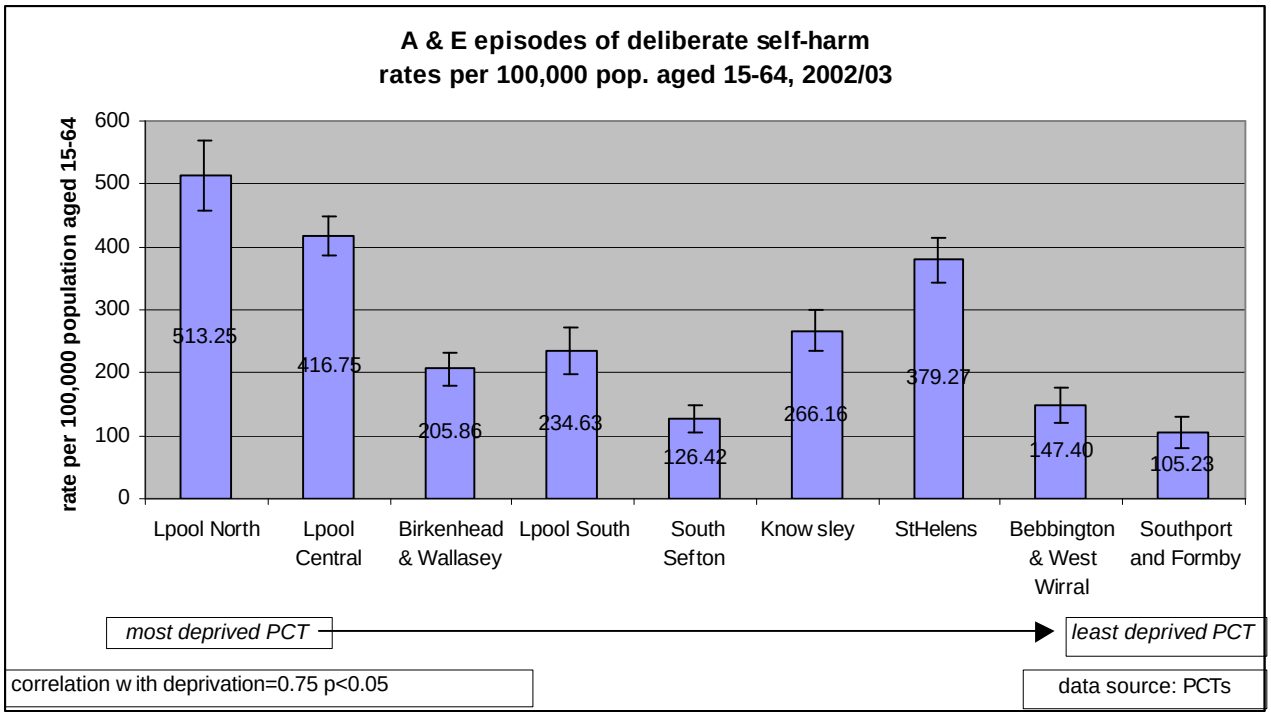
Data requested: Number of A&E episodes of deliberate self-harm. SAFF Line Number 5501.At PCT level for April 2002 to March 2003
Data source: PCTs

The emergency department provides the main services for people who self-harm (NICE 2004). PCTs reported that A&E data on self-harm may be poor for a number of reasons:

- some of the data is based on estimations;
- there may be differences between emergency departments in the definition of what constitutes self-harm;
- this data has only recently started to be collected, so there is no previous years' data.

As with data on suicides and readmissions (see relevant sections), rates per 100,000 population have been calculated here, for each PCT. Because of the necessity of estimates being used and of small numbers, the PCTs were not able to break down the data by age and sex. Figure 97 shows rates by PCT for the period 2002-03.

Figure 97



There was considerable variation between PCTs - the rate in North Liverpool PCT (513.25) was nearly five times higher than the rate in Southport & Formby PCT (105.23). Liverpool Central and St.Helens PCTs also had high rates. Rates in these three PCTs were statistically significantly higher than the other six PCTs (p=<0.05). Actual numbers ranged from 672 in Central Liverpool PCT to 73 in Southport & Formby PCT (see

Appendix 5 in the supplement to the main report). Numbers were high when compared to the other outcome measures available – those of readmissions to hospital, and suicide (see relevant sections). With the exception of Southport & Formby PCT, there were between four and six times as many people presenting to A&E with self-harm than there were readmissions to hospital (Merseyside PCTs, 2002/03).

Data quality issues would suggest that any interpretation should be treated with caution – it is possible that high rates simply mean more accurate data collection. Once more reliable data is available, it will be possible to make recommendations on where there is most need for support services, e.g. increasing the provision of mental health nurse support in the A&E department. At present, in Merseyside, with the exception of Southport & Formby, each PCT reported 1 A&E liaison service (as at September '04, University of Durham 2004). There is some variation on the workload of the service, as some services will be wider, in providing a service throughout the district general hospital (University of Durham 2004).

It is possible that those who attend A&E are the 'tip of the iceberg', - that there are many more people who self-harm who make no contact with health services. There is a need to consider what preventive work needs to be done in this area.

Deprivation:
Rates were significantly correlated with deprivation levels, as measured by the IMD 2000, with the most deprived PCTs having the highest rates (correlation = 0.74, $p<0.05$) (*see notes on Index of Multiple Deprivation in the Introduction).*

MINI:
There was a positive, but not statistically significant correlation with the MINI (a measure of psychiatric need at secondary care level - see notes in Introduction) (correlation=0.62).

Availability of community services:
Data on the numbers of community mental health team (CMHT) doctors and nurses per 100,000 population for 2002 was available from the Durham service mapping website. There was no correlation between the availability of CMHT staff and the rate of A&E episodes of self-harm (see section 3.5.3). It was not possible to analyse data according to the availability of crisis resolution teams, or assertive outreach teams, because data was mostly incomplete for this time period. If the exercise was to be repeated now, with more recent A&E data, it would be possible to analyse links with data on community mental health service availability, which is now more complete.

Suicide
The links with suicide data could be further explored. For example, it was noted that although St.Helens PCT had the lowest suicide rate for 2000-02, it had the third highest rate of self-harm amongst PCTs in Merseyside (2002-03) ~ (see section 3.6.4 on 'Suicide'). Birkenhead & Wallasey PCT had the highest suicide rate, but a relatively low rate of self-harm over the same time periods. The relationship does not hold generally –

there was no correlation between A&E episodes of self-harm and suicide at PCT level (r=0.16). Further analysis could take place when data for comparable time periods becomes available.

Of those under the care of mental health services who committed suicide, between 64% and 71% had a history of self-harm. 5 Boroughs Partnership NHS Trust, of which the borough of St.Helens and Knowsley is a part, had the highest percentage (71%) – (see section 3.6.3). There is a need for more careful monitoring of people who self-harm, with improved access to support services.

3.6.2 Accident and Emergency episodes of deliberate self-harm

Key points

Data problems

- Data quality is likely to be poor, being based partly on estimations.
- There may be differences in the definition of self-harm.

Geography

- There was considerable variation between PCTs - the rate in North Liverpool PCT (513.25) was nearly five times higher than the rate in Southport & Formby PCT

Deprivation/ need

- Rates were significantly correlated with deprivation levels.
- Self-harm affects relatively large numbers of people when considered alongside other outcome measures such as readmission to hospital and suicide.
- In some PCTs, there appeared to be inverse associations with levels of suicide.
- Of those known to the mental health services who commit suicide, over 2/3 have a history of self-harm (related point from section 3.6.3).

Recommendations

1. *Data:*
    1. PCTs should work with A&E departments to develop reliable methods of collecting data, and shared definitions of self-harm.
    2. This would enable comparisons to be made with SHA and national level data.
2. Further audit work should include access to mental health specialist consultants, staff attitudes, frequency of self-harm, etc. The links between the availability of crisis resolution and assertive outreach teams, and A&E episodes of self-harm should also be examined.

3.6.3 Suicide among people under care.

Data requested: Proportion of people under care of mental health services in the past year (i.e. on Care Programme Approach) committing suicide.
Data Source: NCI (National Confidential Inquiry into Suicide and Homicide by People with Mental Illness, University of Manchester)

Data was available by Mental Health Trust, but not by PCT. Data for 5 Boroughs Partnership NHS Trust includes the whole of the Trust area, of which St. Helens and Knowsley is one borough. Cheshire and Wirral Partnership NHS Trust data includes west, east and mid Cheshire, in addition to Wirral. Data for Wirral only cannot be separated.

The data comprises deaths occurring between 01/04/1996 and 31/03/2002, based on the date of registration of death. As is conventional in suicide research, all cases with coroners' verdicts of suicide or open verdict (excluding probable homicides) were included.

Figure 98 shows that between 1996 and 2002, in Merseycare and Cheshire & Wirral NHS Trusts, 1 in 4 people who committed suicide had been under the care of mental health services in the past year. This was similar to the national average. In 5 Boroughs Partnership NHS Trust, where there were the highest number of suicides (table 31), there were fewer – around 1 in 5 – who had been in contact with mental health services in the previous year. In the St.Helens and Knowlsey area of 5 Boroughs, there were only 18%. It was not possible to provide any breakdown of data for Wirral only.

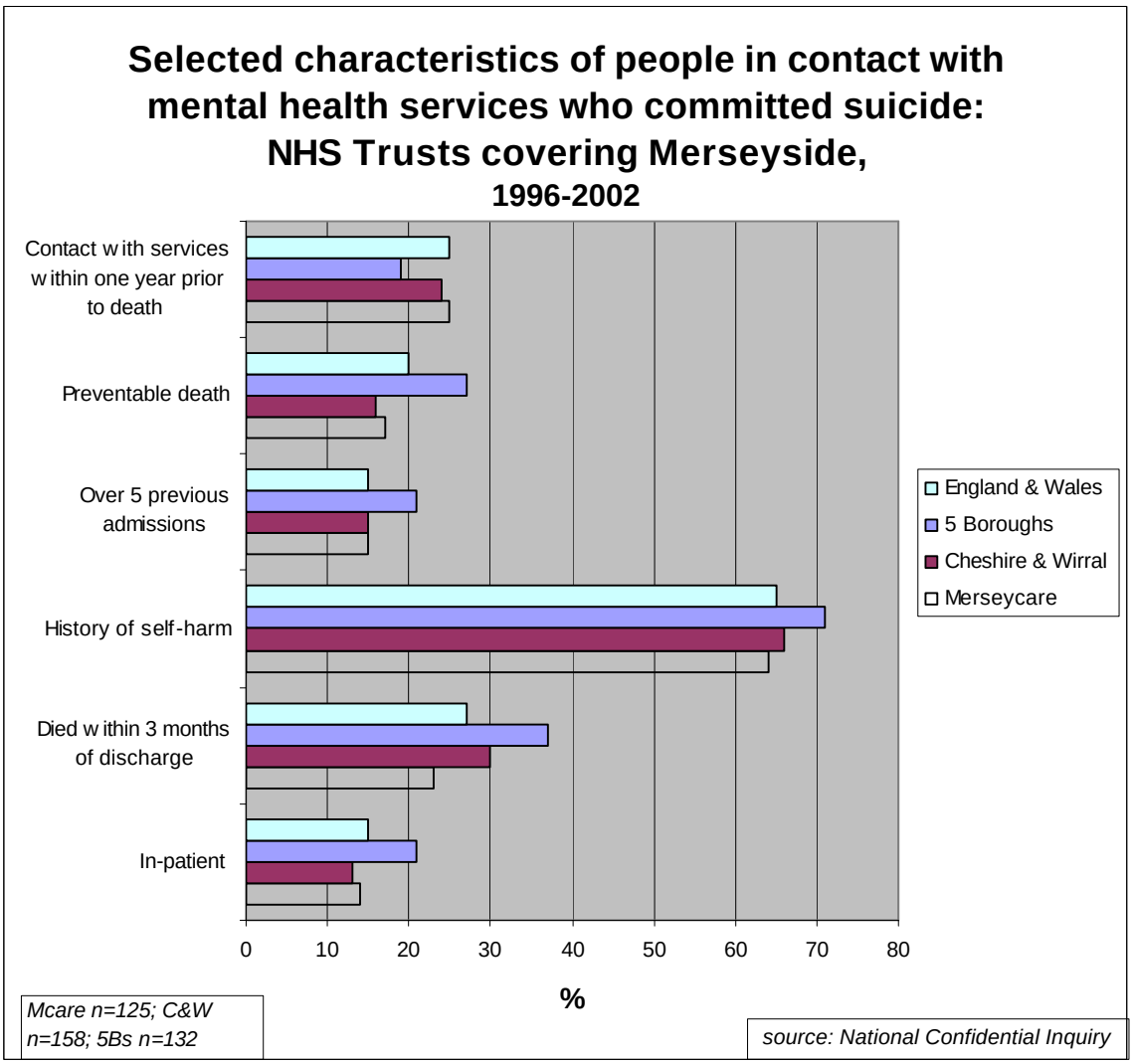
The NCI provided additional details on those in contact with services who committed suicide. Because of small numbers, there was no further breakdown of data available for St.Helens and Knowsley. Full details are given in table 31. Selected variables are considered here:

Age: those committing suicide between 1996 and 2002 were younger in Merseycare (median age 39) compared to the other two mental health trusts (45 in Cheshire & Wirral, 44 in 5 Boroughs).

Sex: The sex breakdown was very similar in the three mental health trusts, with around 70% males. This was slightly higher than the national average of 67%) (table 31).

In-patients or recently discharged: Over one-third were either an in-patient at the time of death, or died within 3 months of discharge (over ½ in 5 Boroughs). This requires urgent attention, with an exploration of the factors behind such high proportions. For example, of those who were in-patients, it would be useful to know how many were on leave, or had gone missing.

Figure 98



- *see table 31 for data values;*
- *in 5 Boroughs, % who died within 3 months of discharge was statistically significantly more than nationally, p<0.01);*
- *for 'contact with services prior to death', Mcare n=126; C&W n=159; 5Bs n=134*

MD Review: There were proportionately fewer in Cheshire & Wirral who had a regular multi-disciplinary review under CPA before death (37%), compared to the other two mental health trusts, and the national figure (table 31).

Primary diagnosis: In each mental health trust, the most common primary diagnosis was affective disorder. There were more deaths of people with schizophrenia in Merseycare than in the other two mental health trusts and nationally (the difference between Merseycare and England & Wales was statistically significant, $p<0.05$).

The only deaths of those with a primary diagnosis of drug dependence were in Merseycare. In Cheshire & Wirral, there were statistically significantly more people with

a primary diagnosis of alcohol dependence compared to England & Wales ($p<0.01$) (table 31).

Some of the differences, e.g. in percentages with personality disorders, could be due to differences in coding.

History of self-harm: In all three Mental Health Trusts, over two-thirds of those committing suicide had a history of self-harm. Such a high proportion is a cause for concern. It would indicate that there is a need for more careful monitoring of people who self-harm, with controlled leave, and improved access to support services.

Alcohol and drug misuse: Service provision tends to focus on those with drug problems rather than alcohol problems. However, it would appear that a history of alcohol misuse is a more important factor, featuring in more than 40% of suicides (between 22% and 28% have a history of drug misuse). The improvement of alcohol support services needs consideration.

Last contact with services: almost one half of suicides occurred amongst people whose last contact with services had been up to 7 days before death. This would suggest that risk assessment procedures are inadequate and need reviewing.

Newly diagnosed: 1 in 5 suicides occur amongst people who have received their first diagnosis under 12 months earlier. This would suggest that there is a need for more support for families very early on, with the early intervention service having an important role here.

5 Boroughs Trust had higher proportions than the other two mental health trusts, and the national average, on the following:

- % who were in-patients at the time of death (21%);
- % who died within 3 months of discharge (37% - statistically significantly more than the nationally, $p<0.01$);
- % with a history of deliberate self-harm (71%);
- % with over 5 previous psychiatric in-patient admissions 21%);
- % of suicides thought to be preventable by the patient's mental health team (27%).

(Figure 98 and table 31)

Table 31
National Confidential Inquiry suicide data.

April 1996 – March 2002 *Based on date of notification of death*	**Merseycare NHS Trust**	**Cheshire & Wirral Partnership NHS Trust**	**5 Boroughs Partnership NHS Trust**	**England & Wales**
Number of suicides and probable suicides	510	656	701 *(83 St.Helens & Knowsley)*	30755
Number in contact with mental health services within one year prior to death	126 (25%)	159 (24%)	134 (19%) *(18% St.Helens & Knowsley)*	7749 (25%)
Data available on those in contact with services in Mental Health Trust (Percentages given are valid percentages) **TOTAL**	**125**	**158**	**132** *(27 St.Helens & Knowsley)*	**7575**
Age (median age, with range shown in brackets)	39 (19-83)	45 (17-93)	44 (21-94)	41 (13-95)
Sex Male	87 (70%)	109 (69%)	92 (70%)	5048 (67%)
Female	38 (30%)	49 (31%)	40 (30%)	2527 (33%)
In-patient at time of death	17 (14%)	21 (13%)	27 (21%)	1166 (15%)
Died within 3 months of discharge from in-patient care	25 (23%)	41 (30%)	38 (37%)**	1693 (27%)
Non-compliant with drug treatment during the month before death	22 (22%)	25 (18%)	21 (19%)	1376 (21%)
Regular multi-disciplinary review under CPA	54 (44%)	58 (37%)	58 (45%)	3302 (44%)
Primary diagnosis				
Schizophrenia & other delusional disorders	34 (28%)*	24 (15%)	26 (20%)	1474 (20%)
Affective disorders	46 (38%)	69 (44%)	55 (43%)	3305 (44%)
Alcohol dependence	12 (10%)	25 (16%)**	18 (14%)	694 (9%)
Drug dependence	8 (7%)			
Personality disorder	5 (4%)*	15 (10%)	11 (9%)	732 (10%)
Other	15 (13%)	24 (15%)	19 (15%)	1288 (17%)
History of deliberate self-harm	79 (64%)	102 (66%)	91 (71%)	4879 (65%)
History of violence	19 (16%)	34 (22%)	28 (22%)	1468 (20%)
History of alcohol misuse	54 (44%)	64 (41%)	54 (42%)	3045 (41%)
History of drug misuse	35 (28%)	40 (26%)	28 (22%)	2148 (29%)

Last contact with services				
Within 24 hours prior to death	20 (16%)	25 (16%)	22 (18%)	1424 (19%)
Between 1-7 days before death	32 (26%)	44 (29%)	33 (26%)	2173 (29%)
Period between onset of primary diagnostic disorder and death under 12 months	24 (20%)	31 (20%)	25 (19%)	1525 (21%)
Over 5 previous psychiatric in-patient admissions	17 (15%)	23 (15%)	26 (21%)	1097 (15%)
Suicide thought to be preventable by patient's mental health team	17 (17%)	23 (16%)	30 (27%)	1343 (20%)

*Those marked are statistically significantly different from national data, * *=p<0.01, *=p<0.05*

Source: NCI

(National Confidential Inquiry into Suicide and Homicide by People with Mental Illness, University of Manchester)

3.6.3 Suicide among people under care.

Key points

Data problems

- Some of the variation in primary diagnosis could be due to differences in coding.

Sex

- Of those under the care of mental health services committing suicide, around 70% were men.

Geography/ need

- In Merseycare and Cheshire & Wirral Trusts, 1 in 4 people who committed suicide had been under the care of mental health services in the past year. There were fewer in 5 Boroughs (1 in 5)
- There were higher proportions of deaths amongst people with schizophrenia in Merseycare than in the other two trusts, and significantly more than nationally.
- In Cheshire & Wirral, there were significantly more people with a primary diagnosis of alcohol dependence compared to England & Wales.
- Over one-third were either an in-patient at the time of death, or died within 3 months of discharge (over ½ in 5 Boroughs).
- In all 3 trusts, over two-thirds of those committing suicide had a history of self-harm.
- A history of alcohol misuse is a more important factor in suicide than drug misuse.
- Almost one half of suicides occurred amongst people whose last contact with services had been up to 7 days before death.
- 1 in 5 suicides occur amongst people who have been recently diagnosed with a mental health problem.
- There is particular cause for concern in 5 Boroughs, which has higher proportions than the other 2 trusts, and the national average, on several of the variables.

Recommendations

1. There is a need for local suicide audit to examine the issues in more detail, e.g. the fact that 75% of those who commit suicide are not in touch with mental health services.
2. The high proportion of suicides amongst people in contact with services in the last week would suggest that risk assessment procedures are inadequate and need reviewing. This should form part of adverse incident reviews.
3. Suicides amongst in-patients, or those very recently discharged, requires urgent exploration, with an exploration of the factors behind such high proportions.
4. The possibility that there are variations in the coding of primary diagnosis should be considered.
5. There is a need for more careful monitoring of people who self-harm, with controlled leave, and improved access to support services.
6. Within suicide audit, the role of alcohol and substance misuse, and access to appropriate services should be explored.
7. There is a need for more support for families of people newly diagnosed with a mental illness, with the early intervention service having an important role.
8. Special attention to these issues is required in the 5 Boroughs Mental Health Trust area, which compares less favourably to the national average and to the other 2 Mental Health Trusts (e.g. the Trust has a significantly higher proportion of suicides within 3 months of discharge from in-patient care). *N.B.the situation in the borough of St.Helens & Knowsley may be different to that in the wider Trust area*.

3.6.4 Suicide and injury undetermined.

Data requested: Mortality from suicide and injury undetermined. At PCT level. Overall numbers. SMR's by gender for 3 year time periods.
Data source: PCT Information Units, Department of Health Compendium of Clinical and Health Indicators 2002, and North West Public Health Team (Manchester).

Background:
Suicide rates are one of the specified indicators used to monitor progress under the National Service Framework (NSF) for Mental Health. They have also been selected as one of the three high-level performance indicators that relate to mental health, as specified by the NHS Executive in February 2002 (DoH 2002c).

The nine PCTs on Merseyside have collaborated with each other to each calculate rates for the three year period 2000-02. A more detailed report on suicide in Merseyside was produced by the mental health equity audit Steering Group earlier in 2004 (Ubido 2004a). A summary of the report is presented here, together with some recent data produced by the North West Public Health Team (Hennell 2004). A copy of the full report is available from Liverpool Public Health Observatory.

Trends:
The government's target is to reduce suicide rates by at least one-fifth by 2010. However, mortality rates from suicide and injury undetermined were higher in 2001-03 than in 1995-97 in each Mersey district, for males and females (figures 99 & 100). More recently, since 1999-01, levels in Liverpool have declined.

Geography:
There were some statistically significant differences between Merseyside PCTs in mortality rates from suicide and injury undetermined. Rates ranged from 5.80 in St.Helens, to 15.24 in Birkenhead and Wallasey (2000-02). At district level, 3 of the 4 Mersey districts had rates higher than England (9.37), with rates in Liverpool (15.14) and Wirral (12.95) significantly higher (1999 & 2001).

Amongst PCTs, the highest rates in Merseyside were found amongst males in Birkenhead and Wallasey PCT (26.6) and Central Liverpool PCT (19.27) (2000-02) (figure 101). (See the supplement to the main report, or 'Ubido 2004a', for actual numbers and rates with confidence intervals for each PCT).

Age/sex:
Although males and those aged 15-54 had high rates, there were parts of Merseyside where older people and females are at high risk. For example in St.Helens in 2001-03, the rate was highest amongst those aged 75+ (figure 102).

The rates for females in Liverpool and Wirral in 2001-03 were higher than in the other Mersey districts (figure 100), but the difference was not statistically significant.

Figure 99 *(source: Hennell 2004)*

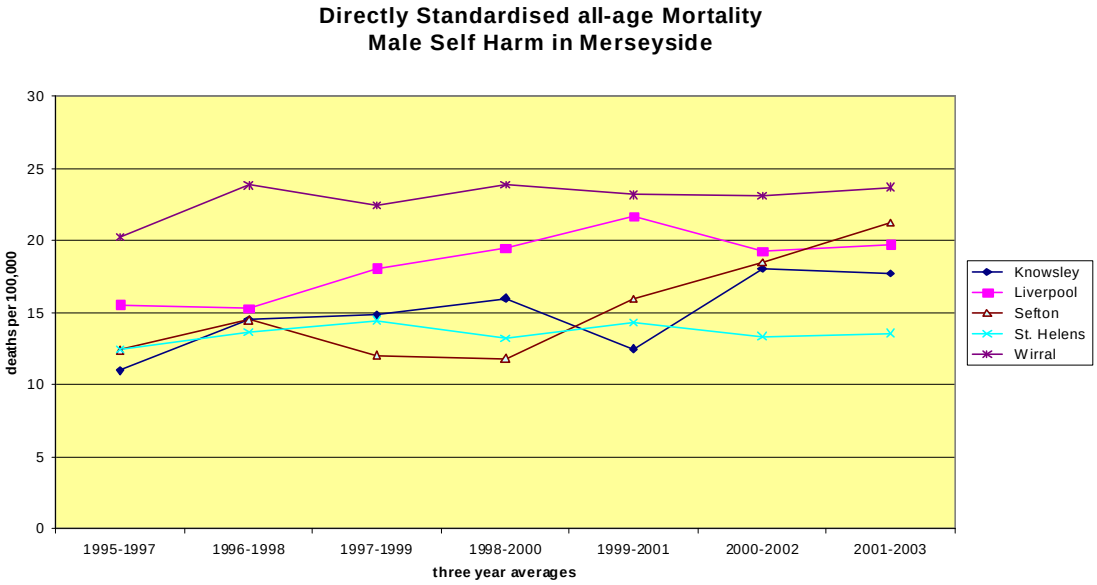
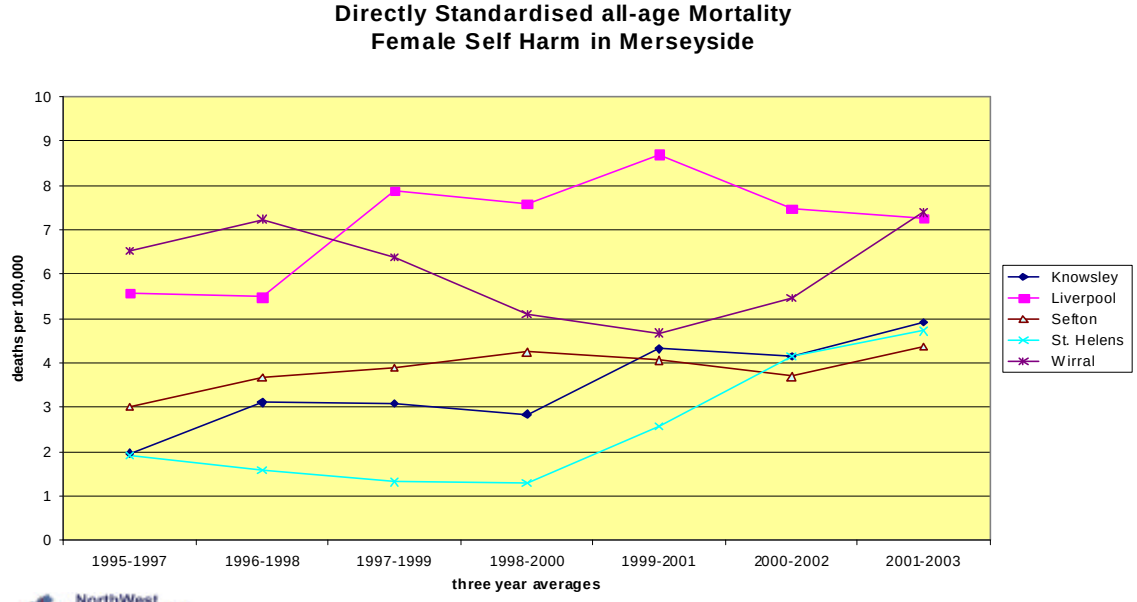


Figure 100 *(source: Hennell 2004)*



At PCT level, with the exception of North Liverpool PCT, male rates were statistically significantly higher than female rates, - almost seven times higher in South Sefton PCT (2000-02) (figure 101).

Deprivation:
Female rates showed a highly statistically significant correlation with deprivation (Pearson Correlation 0.82, p=<0.01, 2000-02). This is illustrated in figure 101, where PCTs are listed in order of deprivation. For males, the correlation with deprivation was weak (Pearson Correlation 0.27).

Mode of death and place of occurrence:
The North West Public Health Team have compiled statistics on modes and place of occurrence of deaths by self-harm in Cheshire and Merseyside (Hennell 2003). These statistics are based on very small numbers, so should be interpreted with caution:

Mode of death:

- In 2000-02, the proportion of deaths by poisoning and drugs was much greater in North Liverpool PCT (more than 50% of all deaths by self-harm) than in any other PCT in Cheshire and Merseyside.
- St.Helens, Birkenhead & Wallasey, and Bebington & West Wirral PCTs all had high proportions of deaths by drowning, compared to the rest of Merseyside.
- Southport and Formby PCT had the highest proportion of deaths by moving vehicle in Cheshire and Merseyside, and relatively fewest deaths by poisoning and drugs.

(see full suicide report for chart with full details, Ubido 2004a)

Place of occurrence:

- In Cheshire and Merseyside, South Liverpool, Central Liverpool and Knowsley PCTs had the highest proportions of deaths by self-harm at home. In South Liverpool, this was more than 80%.
- South Sefton, Southport & Formby and St.Helens PCTs had the highest proportion of deaths by self-harm on the road.
- The highest proportion of deaths in a sports facility were found in South Liverpool, where there were no road deaths.
- In Bebington and West Wirral and Birkenhead & Wallasey, the proportions of deaths in residential/prison settings were the highest in Cheshire & Merseyside.
- St.Helens (with Cheshire West) had the highest proportion of deaths on trade premises

(see full suicide report for chart with full details, Ubido 2004a)

Recently released updates to this data are not yet available by PCT, but initial analysis of district data would suggest that the differences observed above still hold, except that there were now no deaths by drowning in St.Helens.

Ethnic group
There is no data available on suicide and ethnic group. There are moves to ensure coroners begin to record ethnicity.

3.6.4 Suicide and injury undetermined

Key points

Age/sex

- Although males and those aged 15-54 had high rates, there were parts of Merseyside where older people (St.Helens) and females (Liverpool and Wirral) are at high risk.
- With the exception of North Liverpool PCT, male rates were significantly higher than female rates, - almost seven times higher in South Sefton PCT (2000-02).

Geography

- In each Mersey district, suicide levels were higher in 2001-03 than they were in 1995-97.
- There were large variations between PCTs, ranging from 5.80 in St.Helens, to 15.24 in Birkenhead & Wallasey (2000-02).
- There were variations between PCTs in mode of death and place pf occurrence.

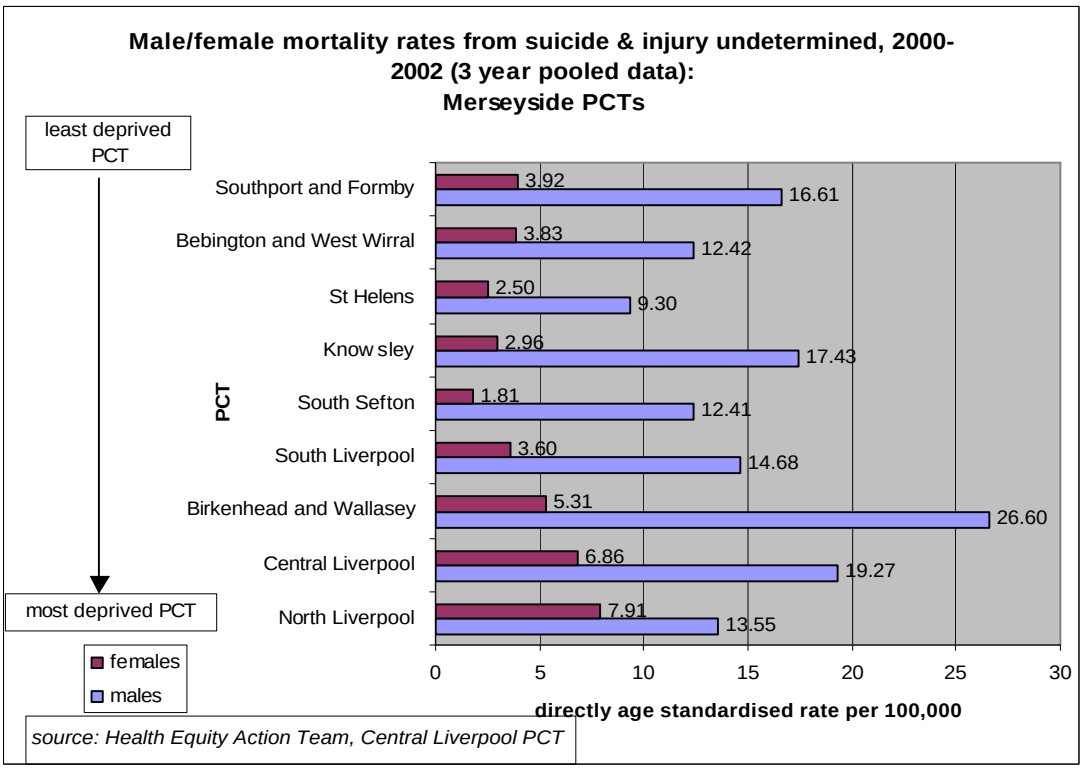
Deprivation

- Female rates showed a highly significant correlation with deprivation (Pearson Correlation 0.82, p=<0.01, 2000-02).

Recommendations

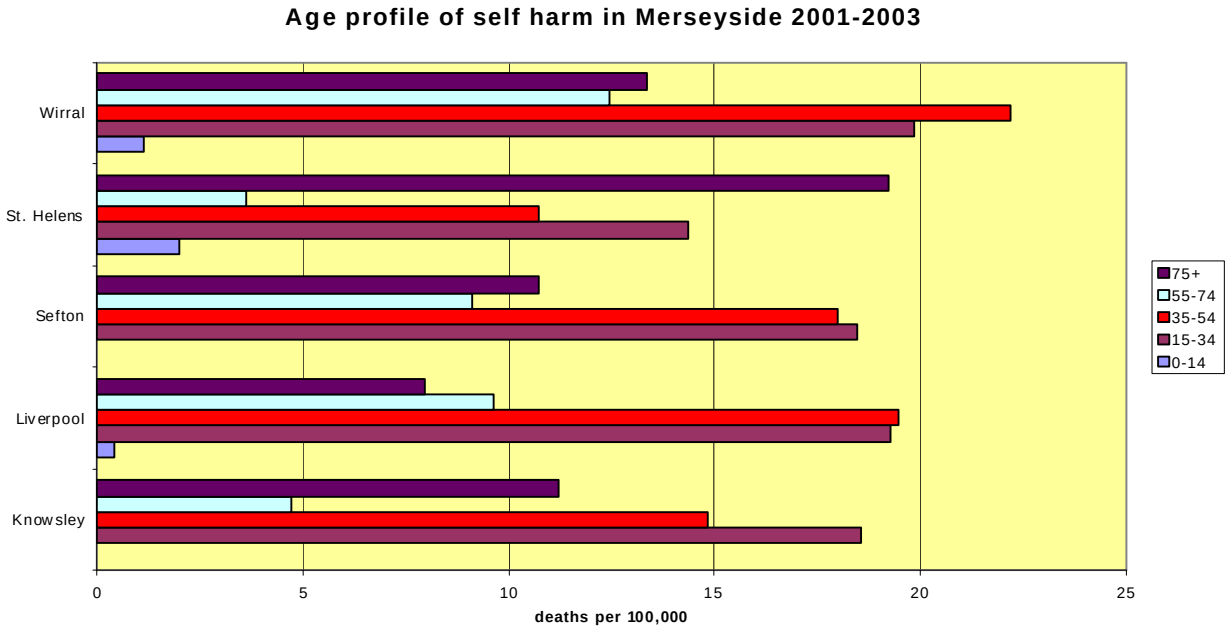
1. Data should be made available by ethnic group.
2. Suicide levels need continued monitoring at PCT level, so that trends can be identified.
3. Each PCT needs to tailor its preventive work to suit the particular needs of its area, e.g. there needs to be a focus of attention on work with young males and with females in Liverpool.
4. Individual PCTs need to examine the most common mode and place of occurrence of death specific to their area, with special consideration given to these when developing action plans. The combination of several years' data would help to overcome the problem of small numbers here. This should form part of suicide audit.

Figure 101



See the supplement to the main report, or 'Ubido 2004a', for actual numbers, and rates with confidence intervals

Figure 102 *(source: Hennell 2004). N.B –no data available by age group at PCT level*



Section 4.
Discussion

This is the first time such work has been attempted, and has involved exploring the feasibility of mental health equity audit. It should be regarded as a baseline study, which future audits can modify, or add to and improve upon. Most of the data collected covers a 3 year time period ending in April 2003.

Data issues
5 Boroughs Partnership NHS Trust and the Merseyside PCTs were able to supply most of the data that was requested of them (see table 3). Merseycare NHS Trust was also very cooperative, but limitations in their data collection systems meant that much of the data they supplied was incomplete. The biggest problem was that the north part of their area had not yet been included in their computer system. Very little data was made available by Cheshire & Wirral Partnership NHS Trust.

Of the data that was supplied, there were various problems with quality, e.g.:

- Even though '*Readmissions to hospital'* is one of the 3 high level performance indicators, estimations were often used by PCTs to fill in gaps in data, and there were problems with definition.
- With '*A&E episodes of self-harm'*, again data was based on estimations, with problems of definition.
- Data on *Care Programme Approach*, a very important indicator, was extremely limited, being available only for a 'point in time', and not comparable between trusts.
- Different Mental Health Trusts used different definitions when counting *sections under the Mental Health Act*.
- This was also the case with '*occupied bed days'*.

There were only four indicators for which information on ethnic group was available, and even then, this was not always complete.

Despite various problems, including delays in receiving data, different definitions being used and other data being incomplete or unavailable, the profile has nevertheless highlighted some of the inequities in access to, and provision of mental health services for residents of Merseyside.

Findings
Age/ sex: Data was not always available by age. The over 65s appeared to have reduced access to psychology services, but data quality for this age group was often poor. Issues relating to males include lack of access to psychology services and high suicide levels.
Geography: There were large variations between PCTs and practices in many of the indicators. These variations did not generally appear to follow deprivation or other indicators of need. Where comparative data was available, Merseyside PCTs compared less favourably to the national picture in most cases.

Deprivation: If deprivation is taken as an indicator of need, then there would appear to be inequities in access to services, as measured by e.g. staffing levels, or access to recommended drugs. The clinical practice of the GP is often more important in determining access to services, with wide variations between practices on many indicators.
Ethnic group: There are problems of access to primary care for ethnic minority groups, which for some means that they are more likely to develop acute mental health problems.

With the exception of Sefton, Merseyside LITs are under-funded when compared to SHA and national levels of planned investment. They are therefore going to face difficulties in developing community-based mental health services. Investment in community based services is needed to bring Merseyside PCTs up to national standards of service input, output and outcome measures.

Future work
The audit has limited itself to 'readily available' measures, in a first attempt at exploring the feasibility of mental health equity audit. The audit does not cover access to mental health care for disabled people and socially excluded groups, such as homeless people, refugees, and people with substance misuse problems. Such data was not readily available. For this reason, it was also not possible to include service users' and NHS staff perspectives on access to services. Service provision in the voluntary sector, e.g. MIND, was not considered. In future, there could be consideration of how these important areas could be incorporated into an equity audit. For example, special surveys would help to highlight inequalities faced by disabled people.

A broader audit could be considered in future, including an audit of what preventive /health promotion work there is and where the gaps are (e.g. the accessibility of counsellors in schools) – according to NSF guidelines.

The Mental Health Minimum Data Set (MHMDS) has been introduced recently, aiming to provide data about individual cases, including packages of care and outcome assessments. It is derived from data already collected for a range of current central returns. Mental Health Trusts are expected to extract data from the systems in which they are collected locally, using specially provided software. In theory, as Trusts begin to complete their MHMDSs, these should provide a rich source of data, available at ward level, on a wide range of indicators (DoH 2001). However, initial discussions with the Trusts suggest that at present, its usefulness is limited.

The possibility of joint working between PCT and PSS information departments, or even the formation of a joint unit, should be considered. This would include the analysis of data on readmissions, adults with mental health problems helped to live at home; and people under section of the Mental Health Act

Next steps
Members of the Mental Health Trusts should be re-invited onto the Steering Group. Other mental health related representatives could also be invited (e.g. service users, Mental

Health Strategies, LIT representatives, PCT pharmacy managers, Local Authority and social service representatives, and Mental Health Trust IT managers). Partners should be up to Chief Executive level in their organisation.

A smaller number of indicators for further analysis would be more manageable. The extended Steering Group for the next stage of the audit should consider which indicators to include in future. As a priority, they should review data quality, ensuring that there is agreement on clear data definitions and that much more complete data is collected. This was also the conclusion reached by a project in London using mental health activity data (McCrone and Jacobson 2004).

This equity audit has made some recommendations for action, and is therefore at the end of stage 2 in the audit cycle (figure 1). However, for many of the indicators, the equity profile needs to be repeated once data issues have been addressed. To complete the cycle, these recommendations will need to be considered, modified and acted upon, and then monitored by the Steering Group.

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Appendix 1 Equity analysis: summary of results

Equity analysis Indicator	Age	Sex	Deprivation	Geography	Ethnic group
Morbidity	Highest prevalence of neuroses in ages 45-49, and psychoses in ages 30-44.	Statistically significantly higher levels of neuroses amongst women. Higher rates of psychoses amongst men.	People with neuroses & psychoses more likely to have characteristics associated with deprivation	Prevalence in the North West is higher than nationally.	Black people 3 times more likely to have psychoses
RANGE OF SERVICES AVAILABLE AND PROJECTED INVESTMENT					
Vacancy rates, consultant psychiatrists and mental health nurses	Not applicable	Not applicable	Data not available by PCT	Analysis not possible, as no PCT data.	Not applicable
CMHTs per head of population	Little data available on service provision for ages 65	Not applicable	PCT level: No correlation of caseload with deprivation (suggests unmet need)	Low staffing level relative to caseload in St.Helens PCT . All Merseyside PCTs have higher caseloads per 100k population than nationally.	Not applicable
Wte psychologist & psychiatrists	No data available on age/sex of psychologists/psychiatrists		PCT level: No correlation with deprivation. Most deprived PCT had smallest proportion of doctors per 100k population	Large variations between PCTs in proportions of doctors and other CMHT staff per 100k population.	Data on ethnic group of staff not available

Equity analysis Indicator	Age	Sex	Deprivation	Geography	Ethnic group
Other service mapping data (assertive outreach given here)	No data available on age/sex of staff		PCT level: Assertive outreach staff per 100k pop – no correlation with deprivation	Large variations between PCTs in caseloads per 100k population, and caseloads per care staff.	Data on ethnic group of staff not available
Self-assessment of service provision	No self-assessment according to age/sex of population served		Not part of self-assessment	2002: Lpool & St.Helens had most reds ('no service'). Knowsley had most greens ('full service').	Data on ethnic group of staff not available
Cost of mental health services	No data according to age/sex of population served.		Data only available at district level	Liverpool, Knowsley, St.Helens & Wirral LITs all well short of national proposed investment. 1st 3 also below SHA levels.	Not applicable
OUTPUTS: MEASURES OF USE OF SERVICES					
Benzodiazepine prescribing	Data not available with age/sex breakdown	Data not available with age/sex breakdown	Practice level data: Statistically significant correlations in 3 PCTs – higher prescribing in more deprived practices. But main factor behind variations in prescribing would appear to be variations in clinical practice.	More than 5-fold variation between practices. Less variation between PCTs. All higher than England, 5 higher than SHA.	Data not available

Equity analysis Indicator	Age	Sex	Deprivation	Geography	Ethnic group
Atypical antipsychotic prescribing	Data not available with age/sex breakdown	Data not available with age/sex breakdown	Practice level data: No significant correlations at practice or PCT level – i.e. distribution does not follow need?	Little variation between PCTs, but large variations between practices. 4 PCTs lower than England & SHA	Data not available
GP referrals to CMHTs	Rates of referral higher amongst ages 65+, and more variation between PCTs and localities for this age group	Referrals more likely to be female	Practice level data: Statistically significant correlations between rate of referral and level of deprivation in practices in Knowsley & St.Helens (age 16-64) (no data for other 2 mental health trusts)	Data for 5Bs Trust only – rates similar between localities within the 5Bs area (16-64) – more variation in ages 65+	Data not available
GP referrals to psychiatrists	Data not available for age 65+	Equal proportions of males and females referred in Knowsley – more males than females in St.Helens	Practice level data: No significant correlations – suggests unmet need.	Data for 5Bs Trust only – Knowsley twice as likely to be referred than St.Helens. Also large variations within PCTs.	Data on referrals to 'mental health services' only (Merseycare). - - Fewer referrals of people from minority ethnic groups than would be expected.
GP referrals to clinical psychology	Only a handful of referrals ages 65+	4 in 5 referrals female	Analysis not possible (only 2 PCTs - & small numbers)	Variations between localities – low rates in Newton & Haydock, and Kirkby.	Data not available

Equity analysis Indicator	Age	Sex	Deprivation	Geography	Ethnic group
Clinical psychology first attendances	Only a handful of referrals ages 65+	4 in 5 referrals were female	Analysis not possible (only 2 PCTs - & small numbers)	Attendances nearly ½ rates of referral in Central Knowsley & St.Helens South.	No data available
Total attendances for psychiatry & psychology	16-64 – little variation between PCTs and little difference between male & female. Ages 65+, large variations between PCTs & rates amongst females were higher (Psychiatry).Only a handful of 65+ attendances for psychology.	Psychiatry: little difference between male & female ages 16-64.Rates amongst females were higher in ages 65+. Psychology: twice as many female than male (16-64)	Practice level data: Psychiatry: statistically significant correlations in 4 PCTs. Psychology: no correlation.	Little variation between PCTs (ages 16-64), more variation ages 65+. Large variations within PCTs	No data available
Mental illness outpatient first attendances	Rates generally higher and more variable for those aged 65+	Rates higher amongst males (especially 65+)	Practice level data: Statistically significant correlation in 2 of the 7 PCTs	Little variation between PCTs for ages 16-64 – wide variations ages 65+. Very large variations between practices within each PCT (especially Knowsley)	Data not available
Occupied bed days	No meaningful data available			Some unexpected and unexplainable differences between PCTs	Data not available

Equity analysis Indicator	Age	Sex	Deprivation	Geography	Ethnic group
Hospital episodes	Raw data not provided by age group, only for total ages 15-74	Raw data is available, but ratios not yet calculated by sex	No statistically significant correlations at PCT level. Ward level data not available.	*Schizophrenia*: 6 PCTs statistically significantly higher than N.West; Bebb. & W.W. sig. lower. *Neurosis*: only Birkenhead &W. PCT sig. higher than N.West; 2 PCTs sig. lower.	Data not available
Sections under the Mental Health Act	Mostly amongst ages 25-44	More males than females. Males sectioned at younger age than females	Incomplete data meant analysis not possible		6x as many black people and more than 3x as many Irish people than would be expected held under section..
Numbers on CPA	St.Helens PCT: more over 65s than ages 16-64 on standard CPA. Central & South Liverpool PCTs – opposite.	Similar numbers of men & women on standard CPA. More men than women on enhanced CPA	Incomplete data meant analysis not possible		Higher proportions of black (5x on EnCPA) and Irish than expected. Fewer Asian, mixed race & Chinese than expected

Equity analysis Indicator	Age	Sex	Deprivation	Geography	Ethnic group
OUTCOMES: MEASURES OF THE EFFECTIVENESS OF SERVICES					
Readmissions within 90 days of discharge	Young people 16-24- more males readmitted (especially N.Liverpool PCT) No data for ages 65+	More females than males re-admitted amongst 25+	PCT level data: Correlation with deprivation	All but 1 PCT above England – N.Liverpool and Southport & F PCTs statistically significantly under DoH target	Data not available
A&E episodes of deliberate self-harm	Data not available by age/sex		PCT level data: Statistically significant correlation with deprivation	Statistically significant variations between PCTs (N. Liverpool 5x higher than Southport & Formby PCT)	Data not available
Suicide among people under care	Median age around 39 to 45	Around 70% males in all 3 mental health trusts	Data not available	5 Boroughs had higher proportions than other 2 mental health trusts, & national average, on % who were in-patients at the time of death, & several other indicators	Data not available
Suicide	Young males had high rates, and older people in Wirral.	Male rates statistically significantly higher than female rates (except N Liverpool PCT)	PCT level data: Female rates statistically significantly correlated with deprivation	Large variations between PCTs in rates of death, & in mode of death & place of occurrence. Liverpool & Wirral had statistically significantly higher rates than England	No data available.

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