Public Health England

Protecting and improving the nation's health

Psychosis Data Report

Describing variation in numbers of people with psychosis and their access to care in England

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Published September 2016
PHE publications gateway number: 2016292

Corporate member of
Plain English Campaign
Committed to clearer
communication
339

Contents

Glossary of terms

APMS: Adult Psychiatric Morbidity Survey. A general population survey of psychiatric morbidity among adults aged 16 and over living in private households in England. The last survey was carried out in 2014 by the National Centre for Social Research (NatCen) commissioned by NHS Digital and published September 2016.

ARMS: At Risk Mental State. Typically, before an episode of psychosis, many people will experience a relatively long period of symptoms, which is described as having ARMS. This may include:

- a more extended period of attenuated (less severe) psychotic symptoms; or
- an episode of psychosis lasting less than seven days; or
- an extended period of very poor social and cognitive functioning (perhaps accompanied by unusual behaviour including withdrawal from school or friends and family) in the context of a family history of psychosis.

Cardiometabolic assessments: A set of physical health assessments aimed at preventing cardiovascular disease and diabetes. The assessments cover in general six areas: smoking status, lifestyle including exercise and diet, body mass index, blood glucose, blood lipids and blood pressure.

CBT: Cognitive Behavioural Therapy. This is a talking therapy that can help manage mental health problems. It helps by changing the way people think about themselves, other people and the world and how what they do, affects their thoughts and feelings. It focuses on current problems and difficulties and looks for ways to improve a person's current state of mind.

CPA: The Care Programme Approach. A system of intensive case management for those with complex needs.

EIP: Early Intervention in Psychosis services. These services should provide a full range of psychological, psychosocial, pharmacological and other interventions shown to be effective in NICE guidelines and quality standards, including support for families and carers. Effective and integrated approaches address the social and wider needs of people with psychosis to help them live full, hopeful and productive lives.

First episode psychosis: this term is used to describe the first time a person experiences a combination of symptoms known as psychosis. Each person will have a unique experience and combination of symptoms. Core clinical symptoms are usually divided into 'positive symptoms', so called because they are added experiences, including hallucinations (perception in the absence of any stimulus) and delusions (fixed or falsely held beliefs), and 'negative symptoms', so called because something is

reduced (such as emotional apathy, lack of drive, poverty of speech, social withdrawal and self-neglect). A range of common mental health problems (including anxiety and depression) and coexisting substance misuse may also be present.

HSCIC: Health and Social Care Information Centre. From August 2016 known as NHS Digital (NHSD). A trusted national provider of high quality information, data and IT systems for health and social care.

MHLDDS: Mental Health and Learning Disabilities Data Set. Contained record level data about the care of adults who are in contact with mental health and learning disabilities services. From January 2016 it was replaced by the MHSDS.

MHSDS: The Mental Health Services Data Set. A patient level dataset which delivers robust, comprehensive, nationally consistent and comparable person-based information for children, young people and adults who are in contact with mental health services. It covers services provided in hospitals, outpatient clinics and in the community. The data set can be used to inform service improvements and monitor service performance, clinical interventions, patient experience and treatment outcomes.

NHSD: NHS Digital. Formerly known as the Health and Social Care Information Centre. A trusted national provider of high quality information, data and IT systems for health and social care.

NMHDNIN: National Mental Health Dementia and Neurology Intelligence Network. Analyses information and data and turns it into timely, meaningful health intelligence for commissions, policy makers, clinicians and health professionals to improve services, outcomes and reduce the negative impact of mental health, dementia and neurology problems. The NMHIN refers to the mental health side of the network.

NICE: National Institute for Health and Care Excellence, whose role it is to improve outcomes for people using the NHS and other public health and social care services by producing evidence-based guidelines and advice and developing quality standards and performance metrics.

Psychosis: Psychosis is characterised by hallucinations, delusions and a disturbed relationship with reality, and can cause considerable distress and disability for the person and their family or carers. A diagnosis of schizophrenia, bipolar disorder, psychotic depression or other less common psychotic disorders will usually be made, although it can take months or even years for a final diagnosis.

SMI: Severe Mental Illness. In this report it generally covers a collection of conditions: schizophrenia, bipolar affective disorder and other psychosis.

About the National Mental Health Intelligence Network

The NMHIN is part of Public Health England's (PHE) National Mental Health, Dementia and Neurology Intelligence Network (NMHDNIN).

The purpose of the NMHDNIN is to:

- develop relevant, timely and authoritative intelligence tools and resources
- take a strategic lead across the system on the innovative development of information for improvement, embedding our intelligence tools and products in local systems
- develop strong partnerships with key stakeholders and the academic, commercial and voluntary sectors – with the aim of continually driving up standards in intelligence products aimed at improving population health and reducing health inequalities

The intelligence resources and tools produced by the NMHIN can be found on the network's website. There is also an SMI profile which can be found on fingertips, together with a suite of other profiles relating adult and children's mental health, suicide and crisis. All profiles are updated routinely and the SMI profile will be developed to take into account measures reported in this report.

Executive summary

Psychosis is one of the most life-impacting conditions in healthcare and arguably the most significant in mental health in terms of poorest lifelong outcomes, greatest variation in access to evidence-based care and highest resultant costs. The 'Five Year Forward View for Mental Health' has made the case for transforming mental health care in England, and 'Implementing the Five Year Forward View for Mental Health' drives forward delivery of this programme including enhanced action on Early Intervention in Psychosis (EIP) access and wait standards. This report aligns with ambitions within these documents, aiming to assist in the move towards improved access to quality care for people at risk of, or living with psychosis. It also seeks to encourage continuous quality improvement through better data collection and reporting of information on mental health to service users, clinical teams and the wider health and social care system.

A range of sources are used within the report, including data relating to primary care, but it particularly draws upon the last monthly data from the MHLDDS, published by the HSCIC in November 2015.

The report describes variation in England under four headings, these and the key findings under them are:

Number of people with psychosis

Investigating inequalities and the variation in the number of people with psychosis is necessary to understand local need and to develop appropriate health strategies and effective services:

- the three measures of incidence and prevalence presented show a similar pattern of geographical variation, with inner city and more deprived areas being associated with higher numbers of people with psychosis. The magnitude of difference varies significantly between the datasets
- the data shows that more men than women have psychosis. Between the ages of 18 and 59 years, higher numbers of men have psychosis, while for ages 60 years and over, higher numbers of women have psychosis. It was found that higher proportions of people from black and minority ethnic groups in contact with secondary mental health services were assigned to the psychosis supra-cluster
- there is variation in estimates of incidence and prevalence of psychosis between different sources. Consideration should be given to how the use of different data sources could contribute to more accurate estimates of incidence and prevalence

Predisposing factors and prevention

Routine data is not available to reliably define variation in levels of predisposing factors and to measure outcomes of prevention interventions for psychosis, but evidence is available to direct best practice. Metrics which can reliably define levels of risk and protective factors and intervention outcomes will be developed over time. In addition the Prevention Concordat Programme for Better Mental Health will support local and national action around the prevention of mental illness, including psychosis, through supporting local areas to put in place a detailed mental health Joint Strategic Needs Assessment (JSNA) and to develop a joint mental health prevention plan.

Access to and quality of commissioned services

Despite there being NICE guidelines and Quality Standards for psychosis since 2002 too few people with psychosis are supported in the evidence-based way, and there is major variation in reported quality of clinical care and support provided:

- prior to the introduction of the access and waits standard, EIP audit data from 2014 shows that 33% of patients with first episode or suspected psychosis were allocated to, and engaged by, an EIP care co-ordinator within two weeks of referral, range 4% to 82%.
- EIP audit data from 2014 and the national Audit of Schizophrenia (2014) found 41% of service users with first episode, or suspected psychosis, and 39% of service users with schizophrenia, had been offered cognitive behavioural therapy (CBT) for psychosis
- there is great variation in reported clinical commissioning group (CCG) level access to appropriate care for people with psychosis, eg the proportion of people with psychosis on the Care Programme Approach (CPA) ranges from 3.8% to 94.5%, and the proportion of people with psychosis who have a crisis plan in place ranges from 0.3% to 85.7%
- employment and safe accommodation are important factors for aiding recovery. It was found that the proportion of people with psychosis in employment was 5.8% (range 1% - 18.5%) compared to 40.6% in the population with a mental health condition. NICE quality standards state that adults with psychosis or schizophrenia who wish to find, or return to work, are offered supported employment programmes. It was found that the proportion of people with schizophrenia who wanted to work and were getting help to find work was 48% with 63% of EIP patients looking for work were offered supported employment programmes

Improving the physical health of people with psychosis and reducing premature mortality

People with severe mental illness (SMI), such as psychosis are at increased risk of poor physical health and die on average 15 to 20 years earlier than the general population. The main causes of premature death are from chronic physical conditions such as coronary heart disease, type 2 diabetes and respiratory disease. These conditions are associated with modifiable risk factors and can be preventable:

- data from 2014/15 shows that monitoring of physical health and access to preventative treatment for people with SMI varies considerably. In primary care (CCG), the proportion of people with SMI receiving the complete list of physical health checks ranged from 17.5% to 52.4%. In secondary mental health services, 25% of people with schizophrenia were offered interventions for elevated blood pressure, 53% for abnormal glucose control, 57% for smoking and 76% for weight management.
- people in contact with secondary mental health services aged under 75 have three and a half times the death rate of the general population aged under 75, the rate for this group is higher in all CCGs, ranging from 1.35 to 5.9 times higher
- the major causes of premature mortality for people in contact with secondary mental health services are cancer, cardiovascular, respiratory and liver diseases. Cardiovascular disease has the greatest number of excess deaths (189.3 per 100000), but liver disease has the greatest percentage difference (365.3%)

The report draws attention to the issues around the availability and quality of data on psychosis and the implications of data interpretation in light of these data issues.

This report aims to inform an ongoing process whereby better data can drive better intelligence that helps achieve improved care for those at risk of/or suffering from psychosis.

Data sets that were processed for this document will inform the National Mental Health Intelligence Network's (NMHIN) profiling tools, as will further related metrics as they become available.

Introduction

Why report on data and information relating to psychosis now?

Psychosis is one of the most life-impacting conditions in healthcare, and arguably the most significant in mental health in terms of poorest lifelong outcomes, greatest variation in access to evidence-based care and highest resultant costs. However, people who experience psychosis can and do recover. The time from onset of psychosis to the provision of evidence-based treatment has a significant influence on long-term outcomes. The sooner treatment is started the better the outcome and the lower the overall cost of care[1].

The use of data and intelligence has a vital role to play in ensuring appropriate and timely evidence based care is provided to people with psychosis. This report begins a period where the NMHIN has an increased focus on sharing and interpreting available data on or related to psychosis.

What is the purpose of this report?

This report aims to contribute to the drive for improved access to quality care for people at risk of, or living with psychosis. It also aims to encourage continued improvement in the collection and reporting of data which can help provide a sound basis for planning and providing that care. These ambitions align with the objectives set out in the 'Five Year Forward View for Mental Health'[2] and 'Implementing the Five Year Forward View for Mental Health'[3].

This report mostly presents available data from sources that have been in use for some time. It does this now, in advance of new and more detailed reporting on psychosis, to provide a baseline of what information and intelligence can tell us about people with psychosis in England. The report describes variation across England in the occurrence of people with psychosis and their access to care and support. It is written to help highlight variation and enable local systems to benchmark their data with other areas and use the information to influence their commissioning of services for those at risk of/or suffering from psychosis.

As data on psychosis develops, so will our ability to use it to plan effectively for the needs of our population. Although this report covers the whole care pathway, there are clear gaps, for instance, aiding understanding of prevention and risk reduction requires more detailed focus than is provided here. The report draws attention to gaps in data and issues around the quality and completeness of some data on psychosis.

Evidence-based interventions and improving outcomes

This report aims to be part of a process that uses data to seek to ensure the delivery of evidence-based care as required by population need. NICE has developed guidance[4,5] and associated quality standards[6,7] covering the treatment and management of psychosis and schizophrenia for children and young people and adults. The new Early Intervention in Psychosis (EIP) waiting time standard requires that people experiencing a first episode of psychosis should have access to a NICE-approved care package within two weeks of referral. To deliver the effective, holistic care that achieves the best outcomes requires a service model that brings together teams comprising the right skill mix and care pathways. The NICE quality standard[6] states that services should be commissioned from, and coordinated across, all relevant agencies, encompassing the whole psychosis and schizophrenia care pathway; and that staff assessing patients and delivering care and treatment should have sufficient and appropriate training and competencies to deliver the actions and interventions described in the quality standard. The evidence base on effective implementation of guidelines shows that the prerequisites include: 'board to floor' commitment, skilled operations managers, working with patients and clinicians to streamline pathways, and information and intelligence systems that provide continuous feedback of baseline and improvement standards[8].

Who is this report for?

The report is for policy makers, planners, local commissioners, psychosis care providers, professional bodies and advocacy groups. It aims to inform key policies and commissioned programmes that drive improvement in data quality and availability, and to support those working locally to improve experience and outcomes for those at risk of/or suffering from psychosis.

How is psychosis defined in this report?

Psychosis is characterised by hallucinations, delusions and a disturbed relationship with reality, and can cause considerable distress and disability for the person and their family or carers. A diagnosis of schizophrenia, bipolar disorder, psychotic depression or other less common psychotic disorders will usually be made, although it can take months or even years for a final diagnosis[9].

Notes on the data presented in this report

Information on data sources and measure definitions

Information on the data sources and definition of each of the measures in this report are found in appendix 1. It is recommended that this is referred to when reading the report in order to fully understand the context of each measure.

The complete dataset, covering all CCGs, or local authorities (LA), for each of the measures presented in this report, is made available in a spreadsheet on the MHDNIN's website[102]. The spreadsheet holds the measure metadata and displays the measure value together with its numerator, denominator; lower and upper confidence intervals; and whether the value, when compared with the England average, is significantly lower (dark blue), significantly higher (light blue) or has no significant difference (orange). This is a different breakdown to that shown in the maps, where the data is broken down into quintile groupings.

Different diagnosis groupings

Schizophrenia and psychosis can be difficult to diagnose and require careful assessment over time. Diagnoses of schizophrenia and psychosis can be poorly recorded and reported and, as such, it has not been possible to use metrics consistently.

With the lack of good quality diagnostic coding, data from the MHLDDS used in this report allows people with psychosis to be identified through the use of the Payment by Results (PbR) psychosis supra cluster classification. Appendix 2 contains descriptions of the clusters which make up the psychosis supra cluster.

The metrics from the Quality and Outcomes Framework (QOF)[10] report on people known to primary care with SMI. The physical health check metrics cover people suffering from schizophrenia, bipolar affective disorder and other psychoses. However, the prevalence metric (recorded number of people with SMI) has a wider definition that also includes other patients on lithium therapy.

The NAS[11] surveyed people who have had a diagnosis of either schizophrenia or schizoaffective disorder for at least 12 months.

The Early Intervention in Psychosis Audit[12] (EIP Audit) surveyed all people who had been referred to EIP services who met the following criteria: people who were having first episode or suspected psychosis, at risk mental state, or other condition, but not

experiencing psychotic symptoms due to an organic cause. Full details of the definitions can be found in the audit report[12].

The metric, which measures emergency admissions to hospital, uses data from the Hospital Episode Statistics (HES), which extracts records which have an ICD10 primary diagnosis of psychosis (F20-F29).

Data quality of sources used

A number of data sources used in the report have shortfalls around data completeness and data quality. They are used because no other data is available which can describe variation in psychosis incidence, prevalence or quality of care. The known data completeness and quality issues to be considered when interpreting the findings are:

- the November 2015 currency and payment (CaP) data from the MHLDDS13 shows the number of people in contact with mental health services at that time as around 965 000. Of these, 665 000 were in scope with 85% (562 000) being assigned to a cluster; this ranged from 2.3% to 98%. Where CCGs had less than 50% of people in scope assigned to a care cluster, they have been excluded from being reported:

  Bedfordshire (2.3%)   Oxfordshire (30.4%)   Vale Royal (46.8%)
  Milton Keynes (3.7%)   Aylesbury Vale (31.7%)   North West Surrey (47.2%)
  Luton (5.4%)   Chiltern (34.9%)   Eastern Cheshire (48.0%)
  Portsmouth (8.2%)   Nene (44.0%)

  Appendix 2 covers the definition of in scope services, as used for the CaP data, November 2015. However, it is known that there is local variation in how services apply this definition.

  Data is suppressed if counts are less than five and all data is rounded to the nearest five. Numbers may not reflect true counts of cases with psychosis due to reasons such as incomplete data recording. All reported low values should therefore be treated with caution.

- the NAS[11] is an initiative of the Royal College of Psychiatrists Centre for Quality Improvement (CCQI), which is commissioned by NHS England (NHSE) and managed through the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programmes. This collected data from 64 mental health provider trusts, on a randomly selected population of 100 people with schizophrenia across all stages of the pathway – 84% of trusts returned data for at least 73 cases. Questionnaires were also

distributed to service users and their carers – there was a response rate of 26% for service users and 19% for carers

- the EIP Audit[12], commissioned by HQIP on behalf of NHSE, collected retrospective data on a sample of up to 100 patients accepted onto the caseload of EIP services between 30/06/2014 and 31/12/2014 and the treatment they received over the following six months. Also provided was service level information for each EIP team. 55 out of 66 providers participated and submitted data on 144 EIP teams. 54 providers and 135 EIP teams submitted usable data on 2,761 patients for the patient level audit

- metrics using data from the GP Extraction Service (GPES)[14,15] are accompanied at national and CCG level, by a data completeness banding. This reports on the percentage of the population registered with a GP practice whose data was extracted. Where this was less than 50% of the total registered population of the CCG, the indicator values were suppressed

Warranted and unwarranted variation

Variations in the data presented within this report may be due to a number of different reasons, some of which can be described as warranted and some unwarranted.

Warranted variation is where observed variation is due to accepted reasons. An example of warranted variation in this report could be the differences in the number of people identified with or estimated to have psychosis due to variation in recognised demographic and socio-economic factors.

Unwarranted variation reflects limitations within the health and social care system which become apparent in differences in the level and quality of treatment and care received. An example of unwarranted variation in this report could be the difference in delivery of interventions to help reduce the impact of physical health problems.

When assessing the nature of the variation of the measures in this report, it is important to keep in mind the quality of the data being used, variation seen could be due to data quality issues rather than the nature or quality of care being delivered.

Range within which the middle 60% of the values lie

Within the commentary accompanying the presentation of maps, the total range within which CCG values fall is reported, together with a range within which the middle 60% of CCG values lie. This latter range represents the range which spans the 'middle' 60% of the data set. It cuts out the highest 20% and lowest 20% of data values, so eliminating outlying values at the top and bottom of the range.

Number of people with psychosis

Context

Investigating variation in the occurrence of new cases of psychosis (incidence) and the number of people with ongoing psychosis (prevalence) is necessary to understand and develop appropriate prevention, health and care strategies and effective services to meet local need. The use of the measures have different purposes; understanding the level of new cases of psychosis is key for planning prevention and EIP services, while understanding current cases can help the planning of longer term supporting and management services.

Identifying differences in numbers of people with psychosis between demographic and social groups will show where strategies and services need to address health inequalities and provide services designed to meet those differing needs.

Metrics

It is not currently possible to report true counts of cases of psychosis or people living with psychosis. Dataset limitations restrict how much can be said on the inequality aspect of how psychosis affects different parts of society.

The 'Adult Psychiatric Morbidity Survey 2014', published in September 2016[16], includes a chapter on psychosis. It includes an estimated prevalence of psychotic disorder in the last year in England of 0.7% of adults aged 16 and over. This is higher than the estimate from the 2007 survey (0.4%) and the report includes the commentary 'while statistical tests indicate that this might be a significant increase, these figures are also consistent with a continued trend of broad stability in rates of psychosis. Any conclusions about trends should be treated with caution considering the numbers of confirmed cases were low (23 in 2007; 26 in 2014)'. Although low numbers of identified cases restricts subgroup analysis, from consideration of the 2007 and 2014 cases together, the report highlights higher prevalence of psychosis among black men, people who are economically inactive and people living alone.

Data from the APMS report cannot yet be used to help estimate local variation in numbers of people with psychosis. In the absence of local measures of incidence and prevalence of psychosis, estimates can be developed through the use of mathematical modelling. However, estimating at local level is difficult and is unlikely to be accurate; prevalence surveys are difficult to design and undertake as a result of psychosis having a low prevalence in the general population, the nature of psychosis influences people's participation and household surveys will miss the higher prevalence of psychosis among those who are homeless, resident in temporary accommodation or in prison[16].

The data used in this report to show geographical variation in new cases of psychosis is based on a modelled estimate[17]. The estimated incidence for England reported in NICE guidance[4] and the NHSE 'Implementing the Early Intervention in Psychosis Access and Waiting Time Standard guidance'[18] (31.7 per 100000) is based on best available empirical evidence which is different to the modelled estimate England figure used in this report (24.2 per 100 000).

The measures on prevalence of psychosis use data from the QOF SMI registers and the MHLDDS, so are measures of treated prevalence (counts of contacts with services) and not true prevalence.

Whilst these measures of incidence and prevalence may not be accurate, used pragmatically and in conjunction with local knowledge, they offer a basis on which to plan.

When assessing social inequalities in the number of people with psychosis, the following three data sources are used: the CCG prevalence measure (MHLDDS data), the CCG deprivation score from the English indices of deprivation (2015)[19] and the Health and Social Care Information Centre (HSCIC) (now NHS Digital (NHSD) Mental Health Bulletin: Annual Statistics 2014-15[20], which reports on the number of people assigned to the psychosis supra cluster by age, gender and ethnic group.

Detailed information on the data source and definition of each measure can be found in appendix 1 and in the data document which accompanies this report and which can be found on the MHDNIN's website[102].

Estimated number of new cases of psychosis 16-64 years (2011 based, published 2014)

Map 1: New cases of psychosis

Estimated number of new cases of psychosis; Incidence per local population

- 0.00 - 17.796
- 17.797 - 18.484
- 18.485 - 20.336
- 20.337 - 26.834
- 26.835 - 69.360

England value 24.24 Incidence per local population

London

1:3,212,639

0   40   80   160 km

Mental Health Intelligence Network

Contains Ordnance Survey data © Crown copyright and database right 2016. Contains National Statistics data © Crown copyright and database right 201
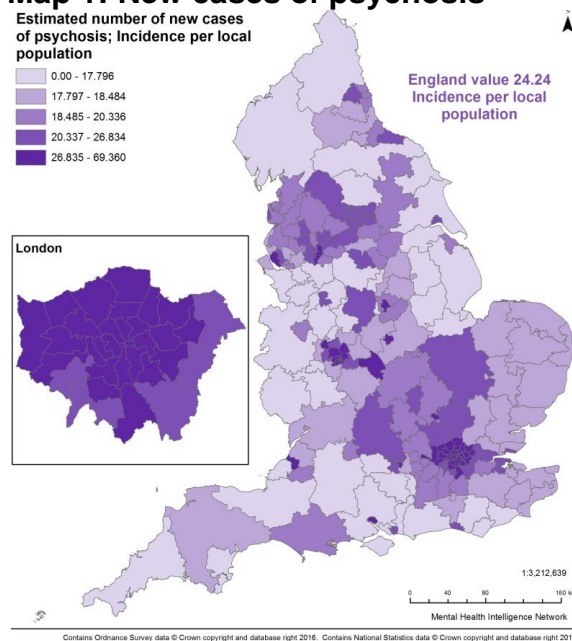
Table 1: Highest and lowest 10 CCGs – estimated new cases of psychosis

CCGs with highest incidence	Number per 100 000	CCGs with lowest incidence	Number per 100 000
City and Hackney	69.36	East Riding of Yorkshire	15.73
Newham	67.98	Northumberland	15.85
Tower Hamlets	59.63	Kernow	16.02
Lambeth	52.44	Isle of Wight	16.09
Islington	52.23	Somerset	16.19
Southwark	50.58	Cumbria	16.28
Haringey	49.58	North Somerset	16.33
Lewisham	48.61	Shropshire	16.34
Waltham Forest	48.26	Scarborough & Ryedale	16.41
Brent	44.93	Harrogate & Rural District	16.42

Size of variation

- for CCGs in England, the estimated number of new cases of psychosis ranges from 15.7 to 69.4 per 100 000 population aged 16-64 years
- the average for England is 24.2 new cases per 100 000 population
- the range within which the middle 60% of CCGs lie is 17.8 to 26.8. Most CCGs have a rate of new cases similar to England, however, the spread in variation increases among the CCGs with higher estimates of new cases
- higher numbers of new cases occur across the densely populated areas and cities of the North East, North West, Yorkshire, Midlands and London
- 17 of 209 CCGs had significantly lower estimated numbers of new cases than the England average and 31 had a significantly higher estimated number

Recorded number of people with severe mental illness all ages (people on GP SMI registers 2014/15)
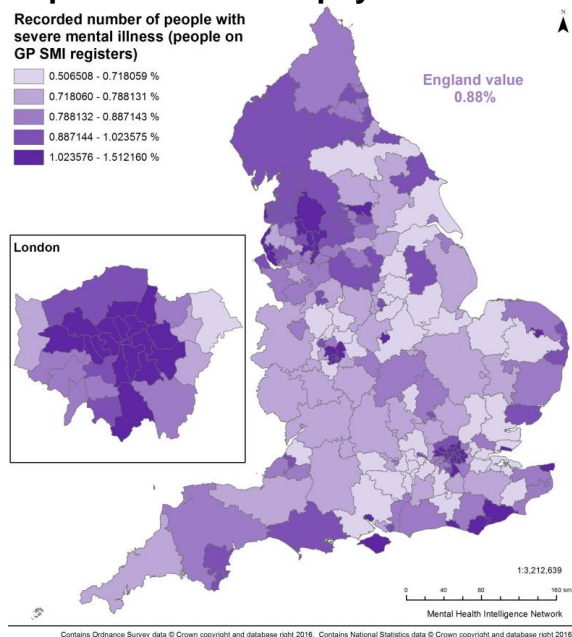
Map 2: Number with psychosis

Recorded number of people with severe mental illness (people on GP SMI registers)

- 0.506508 - 0.718059 %
- 0.718060 - 0.788131 %
- 0.788132 - 0.887143 %
- 0.887144 - 1.023575 %
- 1.023576 - 1.512160 %

England value 0.88%

London

1:3,212,639

0 40 80 160 km

Mental Health Intelligence Network

Contains Ordnance Survey data © Crown copyright and database right 2016. Contains National Statistics data © Crown copyright and database right 2016.

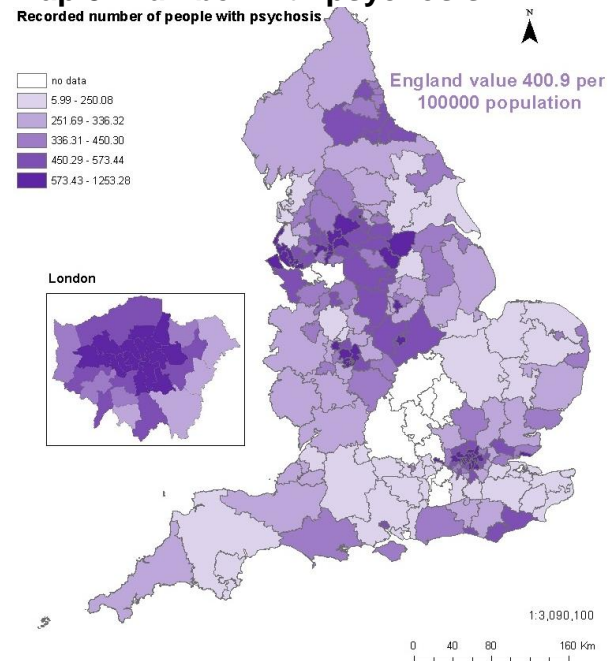**Table 2: Highest and lowest 10 CCGs – recorded number with SMI**

CCGs with highest percentage of people recorded on SMI register	%	CCGs with lowest percentage of people recorded on SMI register	%
West London	1.51	Wokingham	0.51
Islington	1.50	Surrey Heath	0.54
Camden	1.39	South Gloucestershire	0.55
Blackpool	1.38	East Staffordshire	0.59
City and Hackney	1.36	South Lincolnshire	0.61
Tower Hamlets	1.32	Castle Point & Rochford	0.61
Hammersmith & Fulham	1.31	Bracknell and Ascot	0.61
Lambeth	1.29	Cannock Chase	0.62
Central London (Westminster)	1.29	Warwickshire North	0.62
Liverpool	1.29	South West Lincolnshire	0.62

Size of variation

- for CCGs in England, the percentage of people recorded on GP SMI registers ranges from 0.5% (507 per 100 000) to 1.5% (1512 per 100 000)
- the range within which the middle 60% of CCGs lie is from 0.7% (718 per 100 000) to 1% (1024 per 100 000)
- the average for England is 0.9% (881 per 100 000)
- there were 107 out of 209 CCGs which had significantly lower percentage of people recorded on GP SMI registers than the England average and 67 which had significantly higher percentage on SMI registers than England

Recorded number of people with psychosis 16+ years (people assigned to psychosis supra cluster, snapshot November 2015)

Map 3: Number with psychosis

Recorded number of people with psychosis

no data
5.99 - 250.08
251.69 - 336.32
336.31 - 450.30
450.29 - 573.44
573.43 - 1253.28

England value 400.9 per 100000 population

London

1:3,090,100

0 40 80 160 Km

Contains Ordnance Survey data © Crown copyright and database right 2016.
Contains National Statistics data © Crown copyright and database right 2016.

Table 3: Highest and lowest 10 CCGs – recorded number with psychosis

CCGs with highest proportions of people assigned to the psychosis supra cluster	Number per 100 000	CCGs with lowest proportions of people assigned to the psychosis supra cluster	Number per 100 000
Liverpool	1253.3	North East Hampshire & Farnham	6.0
Leicester City	1210.4	Surrey Downs	17.4
Central Manchester	1091.9	East Surrey	20.8
Birmingham South and Central	1043.2	Medway	41.2
North Manchester	1041.2	Dartford, Gravesham & Swanley	41.6
Bradford City	1037.0	West Kent	50.3
Southport and Formby	985.0	Swale	50.8
Camden	934.8	Ashford	66.4
South Sefton	902.4	South Kent Coast	71.0
South Manchester	886.6	Canterbury & Coastal	105.1

Size of variation
- for CCGs in England the rate of people assigned to a psychosis supra cluster ranges from 6.0 to 1253.3 per 100 000 population 16 years and over
- the range within which the middle 60% of CCGs lie is from 251.4 to 574.1 per 100 000 population
- the average for England is 400.9 per 100 000 population
- there were 92 CCGs which had significantly lower proportions of people assigned to a psychosis cluster than the England average and 79 which had significantly higher proportions assigned to a psychosis cluster
- three CCGs had counts of less than five so no value is calculated: Corby, Surrey Heath and Guildford and Waverley

Assessing Inequalities: Recorded number of people with psychosis (assigned to psychosis supra cluster) and socio-economic deprivation; and inequalities by age, gender and ethnic group (Mental Health Bulletin: Annual Stats 2014/15)

Chart 1: Number of people assigned to psychosis supra cluster by age and gender at the end of the year 2014/15
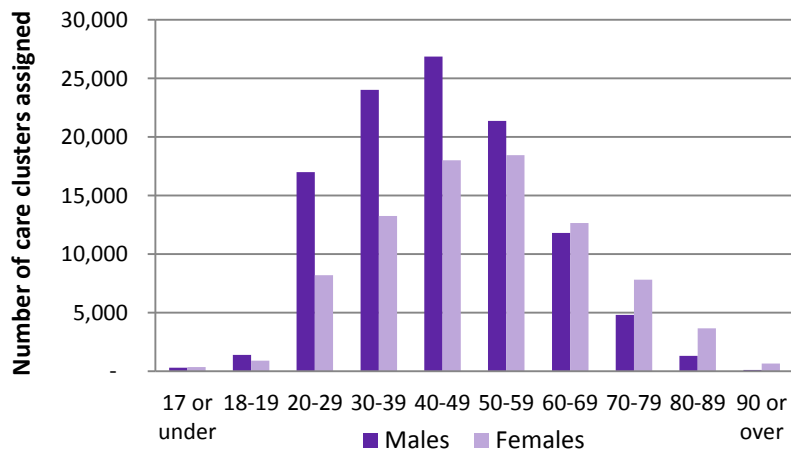
Chart 2: Deprivation and estimated numbers of people with psychosis (people assigned to the psychosis supra cluster)
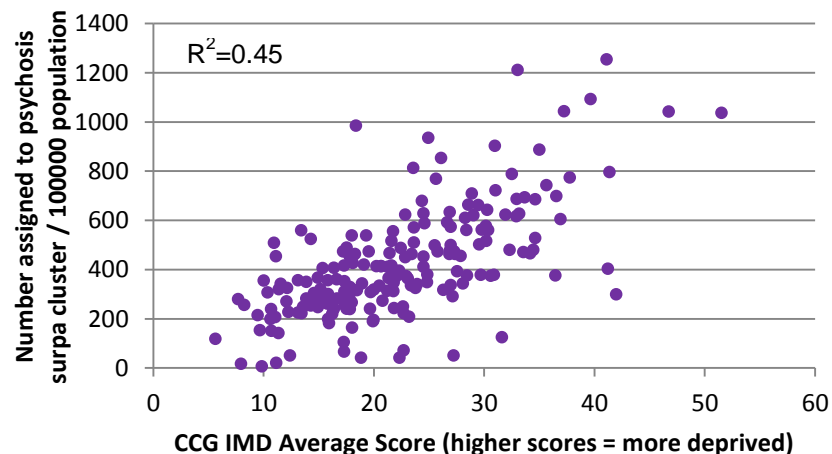

R^2=0.45

Table 4: Number of people assigned to psychosis supra cluster by ethnic group

Ethnic Group	Total number assigned to psychosis supra cluster	Total number assigned to a care cluster	% of ethnic group assigned to psychosis supra cluster
White	143026	544682	26%
Asian or Asian British	16249	29773	55%
Black or Black British	17822	25006	71%
Mixed groups	4341	8332	52%
Other ethnic group	5066	12499	41%

Assessing inequalities: key points from those assigned to the psychosis supra cluster

- overall more males than females are assigned to the psychosis supra cluster, and specifically more males between the ages of 15 and 59, and more females aged 60 and over are assigned to the psychosis supra cluster
- for males the age group with the highest numbers assigned to the psychosis supra cluster was 30 to 49, for females it was 40 to 59
- there is an association between increasing deprivation and increasing numbers of people assigned to the psychosis supra cluster (R^2=0.45)
- there are large differences between ethnic groups in the proportions of people in touch with secondary mental health services assigned to the psychosis supra cluster, for instance table four shows that around a quarter of people identified as White are assigned to the psychosis supra cluster whereas the proportion rises to more than 70% for those identified as Black or Black British.

Discussion of findings

Gaps in data and data quality concerns

As service planning for those with or at risk of psychosis should be based on estimates of prevalence and incidence of psychosis and contacts with services, it is important that these metrics are accurate. National estimates of psychosis based on a household survey may miss important populations or under report prevalence[16], and there are no known recent robust estimates of local numbers of people with psychosis. The service contacts reported here are not wholly based on diagnosis of psychosis and the reported variation across the country for one measure suggests there may be value in reviewing data collection and reporting methodology.

Variation in numbers of people with psychosis

The three metrics included report on similar but different populations. However, there is consistent reporting of local variation between them. All three report higher rates of psychosis (or SMI) in urban inner city areas and lower rates in more rural and sparsely populated areas. However, looking in more detail, the incidence measure and the SMI QOF prevalence measure report the highest rates in London, where as the CaP psychosis supra cluster measure suggests the highest rates in North West and Central England cities such as Manchester, Liverpool, Bradford, Birmingham and Leicester. This illustrates the importance of assessing results from more than one data source to take into account variation caused by different measurement methods.

Demographic and social-economic inequalities in people with psychosis

In the general population, first episode psychosis occurs most commonly between late teens and late twenties, with more than three quarters of men and two thirds of women

experiencing their first episode before the age of 35[21]. This means that areas serving younger populations may have higher rates of psychosis. Higher rates within the general population have also been found amongst migrants and people from Black Caribbean and Black African ethnic groups[22].

Factors likely to contribute to variation in numbers of people with psychosis

Geographical variation in prevalence and incidence of psychosis is likely to be linked to the nature of the development of psychosis and its association with poverty and access to life chance opportunities. This will affect the range of areas people with psychosis are able to live in or move into. The data indicates that larger inner cities tend to have higher incidence and prevalence of psychosis. There is evidence[22] linking the onset of psychotic disorders with the social environment, such as: inner city living, deprivation, population density, social fragmentation and ethnic density; and individual life experiences such as: childhood adversity and abuse, early experience of alcohol or substance use and abuse, discrimination and adult social disadvantage. Many of these factors are characteristics which can define urban areas and deprived neighbourhoods. The distribution of these factors will therefore influence the patterns of variation in psychosis seen across the country.

Data, survey and methodological factors

Due to the absence of data which allows reporting of true counts of incidence and prevalence, and the resulting use of modelled estimates, there are data and methodological factors which influence the counting and estimation processes:

- data recording completeness on information systems
- variation in interpretation of the definitions of psychoses in QOF and MHLDDS. For instance there is 3 fold variation in CCG level reporting for the QOF SMI register, whereas there is 200 fold variation in those allocated to the MHLDDS psychosis supra cluster. The supra cluster is unable to identify one off episodes of psychosis in terms of trauma, drug use; remitting and continuous and long term psychosis
- the use of different diagnostic categories and condition assessment methods to identify people with psychosis
- type of survey used to identify people with psychosis (eg household v case-finding using registers in primary and secondary care)
- different reference periods (eg point in time, annual, lifetime)
- reliability of method: reluctance of people with psychosis to take part in a household survey and sample sizes being too small
- the way survey sampling take account of influencing factors such as higher risk populations (eg children in care, transient populations, people in institutions).

Estimates of prevalence – a wider comparison

Estimates of prevalence rates for psychotic disorders, particularly when including countries other than the UK, show sizeable variation (see appendix 3). For example, the Adult Psychiatric Morbidity Survey (APMS) (annual prevalence) reports a figure for England of 7.00 per 1000, which broadly aligns with an English study systematic review (annual prevalence 4.10 per 1000)[22]. However, a Swedish study of health records[23] (annual estimate) reports 6.7 per 1000, and a Finnish study of a population survey[24] (lifetime prevalence) reports 34.6 per 1000 for all psychosis when the non-responder group is included. This emphasises the complexities of calculating prevalence accurately and also the importance of prevalence type (point, period, lifetime) and study methodology when estimating the numbers of people with psychosis in an area.

Recommendations

There may be benefit in further consideration of how to estimate prevalence of psychosis in England and variation between areas. Household surveys may underestimate prevalence of psychosis in the population and consideration should be given to how different data sources could contribute to more accurate estimates. For example the use of psychosis registers like those available in Scandinavia linked to a national audit of psychosis, and the use of clinical data sets such as the Clinical Practice Research Datalink (CPRD)[25], The Health Improvement Network database (THIN)[26] and Clinical Record Interactive Search (CRIS)[27]. Primary care data collections such as GPES should also be investigated as a data source that could enable the identification of people with psychosis from which estimates of prevalence of psychosis could be derived.

There would be benefit in working to ensure definitions of incidence and prevalence of psychosis and SMI in community populations, primary care, specialist mental health and drug and alcohol services, are consistent. There needs to be clarity on what to include, eg substance misuse induced psychoses, and exclude, eg those with bipolar disorder episodes who do not have psychotic symptoms, and where possible psychosis should be disaggregated from SMI.

Psychosis incidence and prevalence should be included in each local area's JSNA, which looks at local health need to inform the commissioning of health, wellbeing and social care services within local authority areas and underpins health and wellbeing strategies. The MHDNIN profiling tools should be promoted to aid JSNA development.

Predisposing factors and prevention

Context

Inequality underlies many risk factors for mental illness, including psychosis, and needs to be addressed through the wider determinants of health. Mental illness can further increase inequality, which can be prevented through early access to evidence-based interventions and support.

Most mental illness arises before adulthood and is a risk factor for adult mental illness. Both prevention and early treatment can reduce a range of associated impacts across the life course. Understanding the occurrence of predisposing factors allows prevention measures and the planning of services and interventions to be targeted to reach areas and population groups in most need.

Predisposing factors

There are a number of predisposing factors which can influence the chances of experiencing a psychotic episode. Family history of schizophrenia is a significant risk factor, with an approximate lifetime incidence of 6-17% for a first degree relative[28]. However, the resilience of individuals and the balance of adverse and protective life events and social and economic factors will influence whether this genetic risk translates into psychosis.

Life events and social factors

Examples of life events which have been shown to increase the risk of experiencing a psychotic episode are:

- adverse childhood experiences (ACE), for example, child abuse, which includes: physical, emotional, sexual abuse, bullying and neglect[22,29]
- stressful life events such as death of a parent, family conflict, domestic violence

Although single severe stress events can carry risk, there is an increased risk of developing psychosis with multiple events, and events which are associated with chronic adversity carry the greatest risk[30].

Examples of social and economic factors shown to be associated with psychosis:

- early experience of alcohol abuse[22]

- heavy abuse of drugs including skunk, other forms of cannabis, kat and amphetamines[22,31,32]
- neighbourhood factors: the incidence of schizophrenia varies significantly from place to place depending on characteristics of places such as population age, sex, ethnicity; density[22]
- economic environment: deprivation[22]
- social environment: social capital and social fragmentation[22]

At risk mental state

Often psychoses are preceded by a phase known as 'at risk mental state' (ARMS). NICE Clinical Guidance[4] and the Melbourne Criteria[33] state an individual is considered at risk of developing psychosis if they are: distressed, suffering a decline in social function and have:

- transient or attenuated psychotic symptoms or
- other experiences or behaviour suggestive of possible psychosis or
- a first-degree relative with psychosis or schizophrenia

It is estimated that the median prevalence rate for subclinical psychotic experiences in the general population is 5%[34]. The proportion of people with ARMS who develop a psychotic episode is 18% after six months, 22% after one year, 29% after two years and 36% after three years[35]. French and Morrison[36] and French et al.[37] show how the provision of ARMS processes and services lead to the detection and prevention of onset of psychosis.

Prevention

With knowledge of psychosis predisposing factors, there are opportunities for prevention at three levels:

- primary prevention: addressing the wider determinants of health at population level in order to prevent psychosis from developing
- secondary prevention: early identification of ARMS and early intervention to prevent the development of a psychotic episode
- tertiary prevention: treating and supporting people with developed psychosis to aid recovery and prevent or reduce the risk of recurrence

Primary prevention

Early childhood experiences have been found to have a lasting impact upon a child's mental health[38], and 75% of mental health problems in adult life (excluding dementia) start by the age of 18[39]. As such, initiating improvements in the mental health and

wellbeing of children and young people, could deliver mental health improvement across the whole life course. Early intervention can prevent young people falling into crisis and later avoid expensive and longer term interventions in adulthood.

Addressing mental health issues of children and young people could be seen as an important aspect of primary prevention. Having identified populations at risk, primary prevention is possible through childhood, school[40,41] and parenting interventions, which are known to be effective in reducing mental health problems and promoting resilience[41].

Other interventions which tackle wider determinants of health, such as support in reducing alcohol and drugs and help into education, employment and stable accommodation, are also important in primary prevention.

Tackling stigma is another aspect of primary prevention. There may be reluctance in seeking help early, when psychosis is developing, for fear of being set apart from peers, suffering prejudice and discrimination and for fear of coercion and hospitalisation.

Secondary and tertiary prevention

Early identification of ARMS and early intervention to prevent the development of a psychotic episode can be significantly cost effective to public services through reducing loss of employment and diminished quality of life for the patient and family[42]. Effective interventions to prevent or delay transition from ARMS to psychosis are needed to address the significant personal, social, and financial costs associated with the development of psychosis. Evidence suggests that early treatment with CBT may prevent ARMS from developing into first episode psychosis[43,44].

People experiencing first episode psychosis should have consistent early access within two weeks of onset to a range of evidence-based biological, psychological and social and biological interventions as recommended by NICE guidelines and quality standards for psychosis and schizophrenia[4,5,6,7]. Family interventions for existing psychosis have consistently demonstrated an ability to reduce relapse rates[45,46]. CBT for psychosis has been shown to be effective in reducing the number of hospitalisations, bed day and crisis contacts, there is also a strong indication that it reduces symptomatology and has a positive effect on social functioning[47,48]. In the short and long-term supported employment appears to improve employment outcomes, functioning and quality of life[4].

As part of delivering the recommendations in 'The Five Year Forward View for Mental Health'[2], PHE is working with partners to develop a national Prevention Concordat Programme for Better Mental Health, which will be launched in 2017. The programme will focus on galvanising local and national action around the prevention of mental

distress and mental illness, including psychosis. It will include developing resources to support local areas to understand the mental health needs of their population through an improved mental health needs assessment toolkit and commission the right mix of provision to meet local needs, which will be supported by updated information about the return on investment of various mental ill health prevention programmes. The work will complement the work of the suicide and self-harm prevention strategy and will take account of this psychosis data report.

Gaps in data and data quality concerns

Data is available to identify crude levels of population level risk factors such as ACE, for example: looked after children[49], children in need due to abuse, neglect or family dysfunction and children on the child protection register[50], and the use of drugs and alcohol in children[51] and adults[52]. However, it is not known if these metrics can reliably measure the true levels of population psychosis predisposing factors. Further assessment will be made into their possible inclusion in a future report.

The NICE quality standards[6] propose structure, process and outcome measures to monitor each of the eight quality standards covering the treatment and management of psychosis and schizophrenia. Currently, audits are relied upon to allow monitoring of secondary and tertiary prevention processes and interventions: examples of these include the Early Intervention in Psychosis Audit (2016)[12], National Schizophrenia Audits (2011/12, 2013/14, 2015/17)[11] and Commissioning for Quality and Innovation payment framework (2014/15, 2015/16, 2016/17)[53]. Future routine data collection and reporting will need to improve to allow more routine monitoring to take place.

Recommendations

There will be benefit in further consideration of metrics that help measure variation in predisposing risk and protective factors of psychosis and which assess the implementation and effectiveness of prevention interventions. Any metrics developed to consider variation should be presented within NMHIN products and profiling tools.

Access to, and quality of, commissioned services

Context

The impact of psychoses in specialist mental health care

The 2014/15 HSCIC 'Mental Health Bulletin: Annual Statistics'[20], published in October 2015, reported that 1.8 million people in England used mental health services in the year. The November 2015 CaP data from the MHLDDS[13] shows that around 965000 people were in contact with mental health services at that point in time. Of these, 562000 were assigned to a cluster, with 176 000 in the psychosis supra cluster, indicating that of people assigned to a cluster, one third were assigned to the psychosis supra cluster. In a review of mental health care, it was found that 65% of adult acute occupied bed days were taken by services users experiencing psychosis[54], varying with bed type, with psychiatric intensive care units being highest. In perinatal units, 30% of presentations were for psychosis[55] and 70% of patients discharged from medium secure forensic psychiatry services were diagnosed with psychosis[56].

Implementing high-quality care

It is important that the quality of care delivered offers the greatest effectiveness and highest standards to achieve the best rates of improved outcomes and return on investment. The NICE quality standard QS80[6] includes eight quality statements designed to enable measureable quality improvements in the treatment and management of psychosis and schizophrenia, they are:

1   Adults with a first episode of psychosis start treatment in early intervention in psychosis services within two weeks of referral
2   Adults with psychosis or schizophrenia are offered CBT for psychosis
3   Family members of adults with psychosis or schizophrenia are offered family intervention
4   Adults with schizophrenia that have not responded adequately to treatment with at least two antipsychotic drugs are offered clozapine
5   Adults with psychosis or schizophrenia who wish to find or return to work are offered supported employment programmes
6   Adults with psychosis or schizophrenia have specific comprehensive physical health assessments
7   Adults with psychosis or schizophrenia are offered combined healthy eating and physical activity programmes and are helped to stop smoking

8   Carers of adults with psychosis or schizophrenia are offered carer-focused education and support programmes

'Implementing the Five Year Forward View for Mental Health'[3], published by the NHS England in association with partners in July 2016 makes the delivery commitment that by 2020/21, adult community mental health services will provide timely access to evidence-based, person-centred care, which is focused on recovery and integrated with primary and social care, and other sectors. This will deliver:

- at least 60% of people with first episode psychosis starting treatment with a NICE-recommended package of care with a specialist EIP service within two weeks of referral
- a reduction in premature mortality of people living with SMI; and 280,000 more people having their physical health needs met by increasing early detection and expanding access to evidence-based physical care assessment and intervention each year
- a doubling in access to individual placement and support (IPS), enabling people with severe mental illness to find and retain employment
- increased access to psychological therapies for people with psychosis, bipolar disorder and personality disorder

Early intervention in psychosis

The NICE quality standard QS80[6] states: "Early Intervention in Psychosis services can improve clinical and service outcomes, such as admission rates, symptoms and relapse, for people with a first episode of psychosis." NICE also found these services reduce the likelihood of being detained under the Mental Health Act. Another study found people under the care of an EIP service were more likely to be in employment than those in traditional care (35% compared with 12%) and were at reduced risk of suicide (from around 15% to 1%)[57].

Early intervention for first episode psychosis has been shown to be significantly cost effective in terms of the reduction in the use of crisis and inpatient services, improved employment outcomes and reduction in risk of admission to hospital. In the short and longer-term there are estimated net cost savings of £7972 per person after the first four years and £6780 per person in the next four to 10 years, if full EIP provisions are provided. Over a 10-year period this would result in £15 of costs saved for every £1 invested in EIP services[18].

Currently, it is known that not all people experiencing first episode psychosis, or who are at high risk of first episode of psychosis, are receiving the right care at the right time[12]. There can be long delays in accessing the full range of NICE-recommended

interventions including, physical health care interventions, psychological therapy and employment support.

In October 2014, NHSE and the Department of Health (DH) jointly published 'Achieving better access to mental health service by 2020'[58], which set the access and waiting time standard for EIP that, from 1 April 2016, more than 50% of people experiencing first episode of psychosis will be treated with a NICE approved care package within two weeks of referral. In response to the recommendation of 'The Five Year Forward View for Mental Health'[2], NHSE has made a commitment that by 2020/21 the standard will be extended to reach at least 60% of people experiencing first episode psychosis.

The standard is targeted at people aged 14-65, but EIP services may also be clinically appropriate for people outside this age range. The standard has two elements, both of which have to be met for it to be deemed to have been achieved. They are:

- a maximum wait of two weeks from referral to start of treatment
- treatment delivered in accordance with NICE guidelines and quality standards for psychosis and schizophrenia in children and young people (CG155)[5], (QS102)[7] and adults (CG178)[4], (QS180)[6]

NHSE has published a comprehensive guide to support local commissioners and providers in implementing the standard[12] and a technical guide which provides access and waiting time indicators and confirms the data required to allow measurement from the MHSDS.

The new MHSDS will make monitoring the EIP access and waiting time standards possible from routinely collected data. In April 2016, NHSD[59] published experimental statistics on waiting times, and in May 2016 published the first set of quarterly waiting time reports. The data from the MHSDS is not yet robust, and for a period is accompanied by an NHSE Unify2 interim data collection, first published in April 2016. This is intended to fill the gap in coverage and be used for local assurance on the access and waiting time standard.

In preparation for implementation of the new EIP access and waiting time standard, the Health Quality Improvement Partnership (HQIP) commissioned the Royal College of Psychiatrists Centre for Quality Improvement (CCQI) to undertake an audit of EIP[12] services to establish a baseline position regarding services' ability to provide timely access to the full range of interventions recommended by NICE in line with local demand. All NHS mental health providers in England with a specialist EIP service were expected to take part. Providers were asked to submit retrospective data on a sample of up to 100 patients accepted onto the caseload of EIP services in the six-month period 30/06/2014 to 31/12/2014 and the treatment they received over the following six months.

Crisis and acute care

The 'Care Quality Commission Right Here Right Now' report[60] reviewed the experience of people during a mental health crisis and the response they received from services. The report found variation and inconsistency in the quality of care given. The Crisis Care Concordat[61], formed to drive improvement in the crisis care that people received, describes what people experiencing a mental health crisis should be able to expect of public services (health, local authority and criminal justice) that respond to their needs around:

- access to support and prevention before crisis point
- urgent and emergency access to crisis care
- the right quality of treatment and care when in crisis
- recovery and staying well and preventing further crises

The Independent Commission on Acute Adult Psychiatric Care (CRISP)[62], established to address issues in adult acute mental health care in England, stated that people with mental health problems should have the same rapid access to high-quality care as people with physical health problems. Amongst its proposed targets for improvement was a maximum wait of four hours for admission to an acute psychiatric ward, or acceptance for home-based treatment, following assessment. It also recommended that the collection, quality and use of data are improved and a single set of easy-to-understand and measurable quality standards for acute psychiatric wards are developed with the involvement of patients and carers.

Delivering the expansion of crisis resolution and home treatment teams (CRHTTs) is critical to alleviate the suffering of individuals in crisis and to alleviate pressure on acute in-patient mental health care and tackle inappropriate and expensive acute out-of-area placements. 'Implementing the Five Year Forward View for Mental Health'[3] makes the commitment that by 2020/21, all areas will provide CRHTTs that are resourced to operate in line with recognised best practice – delivering a 24/7 community-based crisis response and intensive home treatment as an alternative to acute in-patient admissions. There is a further commitment that inappropriate out-of-area treatments (OATs) for acute mental health care should be eliminated in all areas by 2020/21.

Promoting recovery

In order to promote recovery, care provision and treatment are required to be collaborative, recovery-focused and personalised. The CPA is a system of intensive case management for those with complex needs. People who need CPA support should be involved in the assessment of their own needs and in the development of the plan to meet those needs. To promote recovery, NICE recommends[4] a care coordinator should lead the co-ordination of care planning, treatment delivery and routine review of

intervention outcomes and service user satisfaction. Research[63] has shown that there are significant differences across England and Wales in the levels of access to CPA and experiences of care planning.

Housing and employment are important factors in the recovery process. 'The Five Year Forward View for Mental Health'[2] highlights the importance of stable employment and housing in contributing to good mental health. A settled home is important for good mental health, however, people with mental health problems are less likely to be home owners and far more likely to live in unstable environments[64]. It is estimated that just 5-15% of people with schizophrenia are in employment and people with SMI are six to seven times more likely to be unemployed than the general population[6].

Metrics

At present there is no reliable data reporting available which can be used to routinely assess the level of access or quality of services and adherence to NICE guidance and quality standards. With the implementation of the MHSDS in January 2016, data collection processes are in place that will support the monitoring of evidence-based clinical practice. As data completeness and quality improves the MHSDS will be used to routinely record waiting times for treatment, clinical interventions accessed and clinician and patient reported outcomes.

Some of the metrics used within this section of the report are limited and in some cases calculated using data with quality issues in terms of completeness and recording methods, but they are the best currently available.

Many of the metrics reported are taken from the November 2015 CaP[13] monthly report published by NHS Digital, the last reporting period covered using data from the MHLDDS. This dataset allows data to be investigated by psychosis supra cluster. This means case numbers of people with psychosis and some metrics on the quality of care they receive can be presented.

Results from the second round of the NAS 2014[11] and the 2016 EIP Audit[12] are also included. The NAS covers assessment of standards of care planning and crisis planning, shared decision making and optimal prescribing for medication, whether CBT and family interventions are offered, and for those who wanted to work, whether help was received to find a job. The NAS also covers carers' views and their input to the care planning process. The 2016 EIP audit (based on the last six months of 2014) reports on the level of access to the full range of interventions recommended by NICE with particular emphasis on: early access, psychological therapies, physical health, family intervention and supported employment programmes. Detailed information on the data source and definition of each measure can be found in appendix 1 and the data document which accompanies this report.

People with psychosis in specialist mental health services who are on CPA 16+ years (snapshot November 2015)

Map 4: People with psychosis on CPA

People with psychosis on CPA

| no value |
| 3.77 - 34.90 |
| 34.91 - 46.60 |
| 46.61 - 57.44 |
| 57.45 - 69.27 |
| 69.28 - 94.44 |

England value = 51.8%

London

1:3,033,842

0   40   80   160 Km

Contains Ordnance Survey data © Crown copyright and database right 2016.
Contains National Statistics data © Crown copyright and database right 2016.
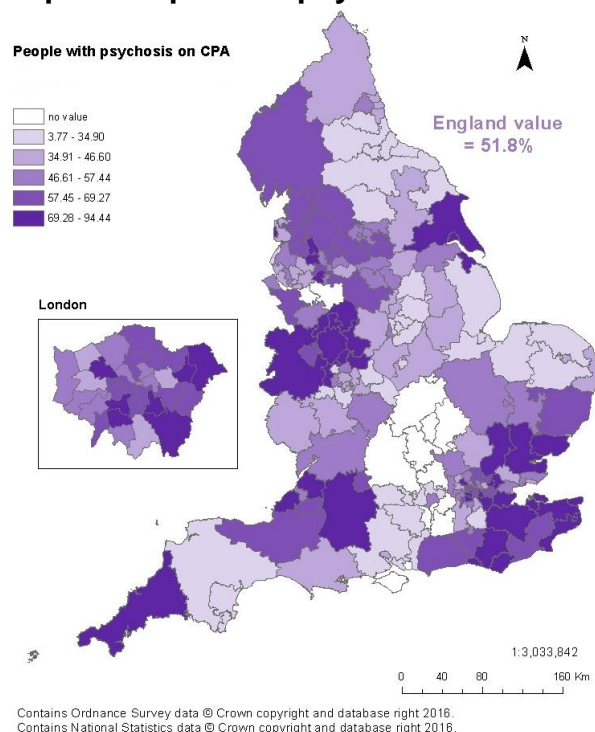
Table 5: Highest and lowest 10 CCGs – people with psychosis on CPA

CCGs with highest proportion of people assigned to the psychosis supra cluster on CPA	%	CCGs with lowest proportion of people assigned to the psychosis supra cluster on CPA	%
Medway	94.5	North Hampshire	3.8
Cannock Chase	94.3	North Durham	8.9
East Staffordshire	92.6	Fareham & Gosport	9.9
Wiltshire	92.5	Nottingham West	12.8
Eastbourne, Hailsham & Seaford	91.4	South Devon & Torbay	12.9
South East Staffordshire & Seisdon Peninsula	91.4	South Eastern Hampshire	14.5
West Essex	90.1	Windsor, Ascot & Maidenhead	16.3
Mid Essex	89.8	Newark & Sherwood	16.4
Stafford & Surrounds	89.5	West Norfolk	16.7
Thanet	89.3	Harrogate & Rural District	17.7

Size of variation

- for CCGs in England, people assigned to a psychosis supra cluster who are on CPA ranges from 3.8% to 94.4%
- the range within which the middle 60% of CCGs lie is 35.0% to 68.7%. The average for England is 51.8%
- there were 82 CCGs which had significantly lower percentages of people assigned to a psychosis supra cluster on CPA than the England average and 85 which had significantly higher percentages
- 4 CCGs had counts below 5, so no value is calculated (Corby, Guildford and Waverley, Surrey Heath, Isle of Wight)
- nationally, 83% of people assigned to the psychosis supra cluster were on CPA for 12 months had a CPA review This ranged from 11% to 100% across all CCGs

People with (SMI) in primary care with a comprehensive care plan – all ages (2014/15)

Map 5: People with SMI with a comprehensive care plan

People with SMI with a comprehensive care plan

54.94 - 73.53
73.54 - 76.58
76.59 - 78.68
78.69 - 81.24
81.25 - 87.34

England value 77.2%

London

1:3,182,220

0   45   90   180 Km

Contains Ordnance Survey data © Crown copyright and database right 2016.   Contains National Statistics data © Crown copyright and database right 2016.
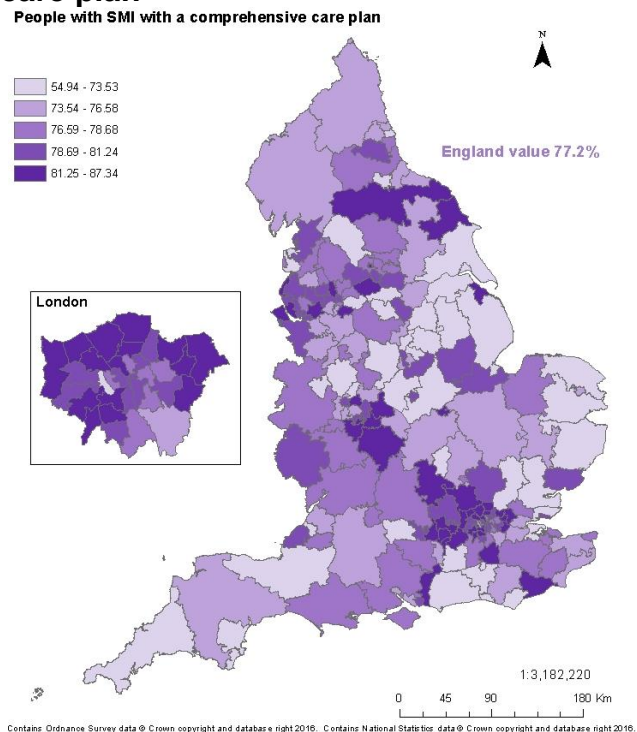
Table 6: Highest and lowest 10 CCGs – people with SMI with a comprehensive care plan

CCGs with highest proportion of people with SMI with a care plan	%	CCGs with lowest proportion of people with SMI with a care plan	%
Corby	87.3	Somerset	54.9
Walsall	86.8	Bassetlaw	55.0
North East Lincolnshire	85.4	Lincolnshire East	61.5
Richmond	85.1	Newark and Sherwood	65.2
Bury	85.1	East Leicestershire and Rutland	65.8
Bracknell and Ascot	85.0	North Norfolk	66.4
Barking and Dagenham	84.5	Stafford and Surrounds	66.8
Redbridge	84.5	Coastal West Sussex	66.8
Barnet	84.3	West Leicestershire	67.3
Aylesbury	84.3	Milton Keynes	67.3

Size of variation

- for CCGs in England people with SMI with a comprehensive care plan ranges from 54.9% to 87.3%
- the range within which the middle 60% of CCGs lie is from 73.7% to 81.2%
- the average for England is 77.2%
- there were 61 CCGs which had significantly lower percentages of people with SMI with a comprehensive care plan than the England average and 71 which had a significantly higher percentage

People with psychosis in specialist mental health services with a crisis plan in place 16+ years (snapshot November 2015)

Table 7: Highest and lowest 10 CCGs – people with psychosis with a crisis plan in place

CCGs with highest proportion of people assigned to the psychosis supra cluster with a crisis plan	%	CCGs with lowest proportion of people assigned to the psychosis supra cluster with a crisis plan	%
North East Lincolnshire	85.7	East & North Hertfordshire	0.3
Hambleton, Richmondshire & Whitby	84.3	Herts Valleys	0.3
Durham Dales, Easington & Sedgefield	82.3	South Manchester	0.4
West Essex	81.7	Liverpool	0.5
Tameside & Glossop	81.2	South Warwickshire	0.7
South Tees	79.8	Cumbria	0.8
Haringey	79.3	Bradford City	0.8
Warrington	78.3	Bexley	0.9
Blackpool	78.3	South East Staffordshire & Seisdon Peninsula	1.0
East Lancashire	77.6	Redditch & Bromsgrove	1.1

Size of variation
- for CCGs in England people assigned to a psychosis supra cluster with a crisis plan ranges from 0.3% to 85.7%
- the range within which the middle 60% of CCGs lie is from 5.7% to 69.1%
- the average for England is 30.1%
- there were 57 CCGs which had significantly lower percentages of people assigned to a psychosis supra cluster with a crisis plan than the England average and 76 which had significantly higher percentages assigned to a psychosis supra cluster with a crisis plan than England
- 56 CCGs had counts below 5, so no indicator value could be calculated

People with psychosis admitted to hospital in an emergency 15 – 74 years (Hospital Episode Statistics (HES) 2013/14)

Table 8: Highest and lowest 10 CCGs – people with psychosis admitted to hospital in an emergency

CCGs with lowest rate of people with psychosis admitted to hospital in an emergency	DSR/100 000	CCGs with highest rate of people with psychosis admitted to hospital in an emergency	DSR/100 000
Wiltshire	4.7	Newham	133.5
South Gloucestershire	4.8	Blackburn with Darwen	125.0
North East Lincolnshire	5.0	City and Hackney	121.4
Chiltern	5.1	Luton	110.1
Nene	5.2	Central Manchester	107.8
Mid Essex	5.7	Blackpool	103.7
Cannock Chase	6.2	North Manchester	97.3
North & West Reading	6.8	Halton	94.9
Bracknell and Ascot	7.1	Heywood, Middleton and Rochdale	92.1
Redditch and Bromsgrove	7.6	East Lancashire	86.6

Size of variation

- for CCGs in England the rate of people with psychosis admitted to hospital in an emergency ranges from 4.7 per 10 000 population to 133.5 per 100000 population
- the range within which the middle 60% of CCGs lie is from 15.1 per 100 000 population to 58.3 per 100 000 population
- the average for England is 35.8 per 100000 population
- there were 86 CCGs which had significantly lower rates of people with psychosis admitted to hospital in an emergency than the England average and 60 which had significantly higher rates
- 5 CCGs had counts of 5 and below, so no indicator value could be calculated (NHS Corby, NHS Crawley, NHS Newbury and District, NHS South East Staffordshire and Seisdon Peninsula, NHS North & West Reading)

People with psychosis in specialist mental health services in employment 18-69 years (2014/15)
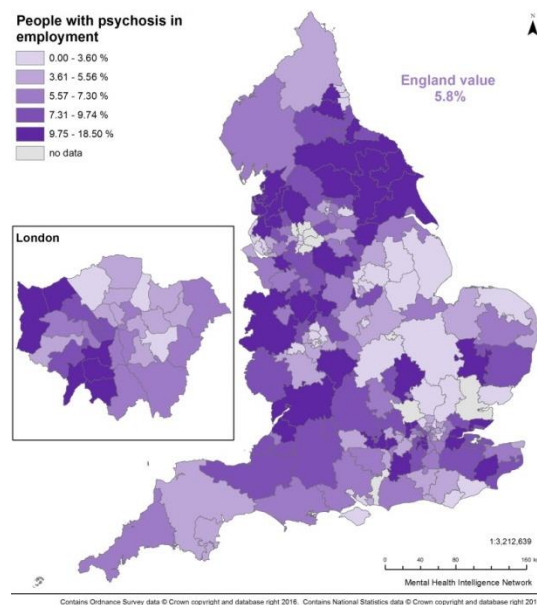
Map 6: People with psychosis in employment

Table 9: Highest and lowest 10 CCGs – people with psychosis in employment

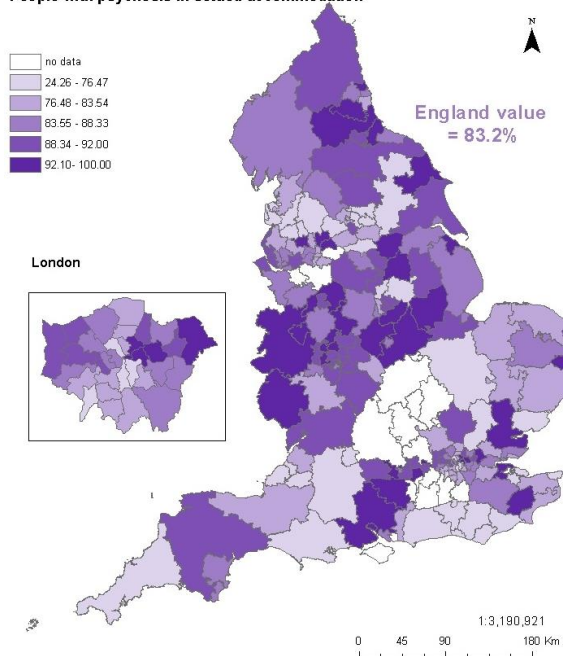| CCGs with highest % of people with psychosis in employment	%	CCGs with lowest % of people with psychosis in employment	%
Hambleton, Richmondshire & Whitby	18.5	North East Essex	1.0
Wokingham	17.2	Southampton	1.0
Bracknell & Ascot	17.2	Leicester City	1.4
Chorley & South Ribble	16.0	East and North Herfordshire	1.5
South Gloucestershire	15.9	Liverpool	1.7
Castle Point & Rochford	15.7	Sunderland	1.7
Harrow	13.7	Mansfield and Ashfield	1.8
East Staffordshire	13.6	South Tyneside	2.1
Fylde & Wyre	13.2	Newark and Sherwood	2.2
Sutton	12.8	South Sefton	2.2

Size of variation

- for CCGs in England people with psychosis in employment ranges from 1% to 18.5%
- the range within which the middle 60% of CCGs lie is from 3.6% to 9.8%
- the average for England is 5.8%. Compared to 40.6%* of people with any mental health problem, 65.2%* of people with any poor health condition, and 73.9%* of the general population
- there were 43 CCGs which had significantly lower percentages of people with psychosis in employment than the England average and 59 which had significantly higher percentages of people with psychosis in employment
- 9 CCGs had counts below 5, so no indicator value could be calculated

* Source: Annual Population Survey/Labour Force Survey

People with psychosis in specialist mental health services in settled accommodation 16+ years (snapshot November 2015)

Map 7: People with psychosis in settled accommodation

People with psychosis in settled accommodation

no data
24.26 - 76.47
76.48 - 83.54
83.55 - 88.33
88.34 - 92.00
92.10 - 100.00

England value = 83.2%

London

1:3,190,921

0   45   90   180 Km

Contains Ordnance Survey data © Crown copyright and database right 2016.
Contains National Statistics data © Crown copyright and database right 2016.

Table 10: Highest and lowest 10 CCGs – people with psychosis in settled accommodation

CCGs with highest % of people with psychosis in settled accommodation	%
Rushcliffe	100
Oldham	100
Mid Essex	100
Medway	100
Heywood, Middleton & Rochdale	100
Ashford	100
Scarborough & Ryedale	96.6
Bracknell & Ascot	96.2
North Hampshire	95.8
North Staffordshire	95.5

CCGs with lowest % of people with psychosis in settled accommodation	%
Brighton & Hove	24.3
High Weald Lewes Havens	38.8
North East Essex	41.7
Hastings & Rother	47.9
Eastbourne, Hailsham & Seaford	48.9
Leeds South & East	54.6
Leeds West	55.3
Bristol	56.0
Vale of York	57.1
Kingston	60.0

Size of variation

- for CCGs in England people with psychosis in settled accommodation ranges from 24.3% to 100%
- the range within which the middle 60% of CCGs lie is from 76.5% to 92.0% – the average for England is 83.2%.
- there were 48 CCGs which had significantly lower percentages of people with psychosis in settled accommodation than the England average and 83 which had significantly higher percentages of people with psychosis in settled accommodation
- 8 CCGs had counts below 5, so no indicator value could be calculated

38

Table 11: Selected service quality results in 2014 from the EIP Audit (2016)

Audit	Quality measure	%	% range across provider
Patient level audit	Patients with a first episode of psychosis start treatment in EIP within 2 weeks of referral	33	4 - 82
	Patients with first episode or suspected psychosis are offered CBT for psychosis	41	0 - 88
	Family intervention is offered to those in contact with their families	31	0 - 100
	Patients looking for work are offered supported employment programmes	63	0 - 100

Table 12: Selected service quality results from the Second National Audit of Schizophrenia (2014)

Survey	Quality measure	%	% range across Trusts
Case record audit	Service users have a current care plan	95	68 - 100
	CBT has been offered to service users	39	14 - 67
	Family intervention have been offered to service users	19	1 - 44
	No antipsychotic medication prescribed	3	0 - 12
	More than one antipsychotic medication being prescribed (excluding clozapine)	11 (71% had documented rationale)	1 - 24
Service user survey	Service users who were given written or online information about medication in a format they could understand	39	18 - 57
	Service users who reported their views had been taken into account when deciding which medication to prescribe	71	58 - 100
	Service users who reported they have a mental health services number to call in an emergency	74	54 - 93
	Service users looking for work who reported they were getting help to find work	48	7 - 100
	Service users who were very satisfied with the care they received	88	77 - 100
Carer survey	Carers who were satisfied with the support and information they have been provided with	79	56 - 94

Discussion of findings

Gaps in data and data quality concerns

Current routinely available data leaves the picture of service quality provided to people with psychosis incomplete. It was not possible to include meaningful metrics on prescribing of anti-psychotic medication or support for carers, only audit data on access to a range of care has been included, and nothing on uptake or outcome, and the variation in reporting of some metrics included here leave questions about consistency of data collection. For example, how well the CaP psychosis supra cluster data reflects the actual picture of care appears to warrant investigation considering the CCG level reported variation, eg the proportion of people with psychosis on CPA ranges from 3.8 to 94.5%, and the proportion of people with psychosis with a crisis plan in place ranges from 0.3 to 85.7%. These figures may correctly reflect variation but appear worthy of investigation, particularly as those CCGs with less than 50% of patients in scope being allocated to PbR cluster were excluded from the data set.

Measuring delivery of high-quality care

Data suggests that, despite there being excellent NICE guidelines and NICE Quality Standards for psychoses since 2002, too few people with psychosis are supported in the evidence-based way they have the right to expect and there is major variation in the reported quality of clinical care provided, and the use of effective service team models.

Although this is a consistent finding as demonstrated by the NAS and EIP audit reported here, the true level of variation cannot yet be assessed due to the limitations of the data. The implementation of funded initiatives to improve care provision and routine data collection through MHSDS will address this.

Intelligence reaching care providers

The use of data and intelligence is fundamental to implementing evidence-based guidelines, and improving quality standards without variation. Wagner's chronic disease model[8] has proven that case management and intensive case management systems which promote: activated patients and families, clinician decision support systems with live feedback and support to patients, clinicians and clinical teams, make for improvement.

The recent NHSE digital maturity assessment[65] found that few clinical teams get the live feedback of data that would enable them to constantly assess standards of care and outcomes achieved. Without this, their ability to drive continuous quality improvement is impaired. The Government's review into NHS information technology systems: 'Making IT work: harnessing the power of health IT to improve care in England'[66], will make recommendations considering the impact and potential of digital systems on clinical

workflows and on the relationship between patients and their clinicians and carers. The head of the review, Dr Robert Wachter states that the purpose of digitisation is to "improve quality, safety, efficiency and the patient's experience" and that "interoperability [should be] built into systems early", and that there should be a user centered design with an essential role for clinicians in the process of successfully implementing IT systems[67].

Referral to treatment waiting times

Results from the EIP audit show that 33% of people accepted onto the caseload of the EIP services for first episode or suspected psychosis had been allocated and engaged within two weeks; there is major variation between services (4% - 82%). It is important to note that the audit data is retrospective, referring to patients accepted onto caseload between 30 June and 31 December 2014 and reporting treatment six months after this. The access and waiting times standard, which requires more than 50% of patients experiencing first episode psychosis to commence a NICE-recommended package of care within two weeks of referral, is expected from 1 April 2016. The results of the audit therefore only illustrate where providers were in 2014, in terms of access to treatment and waiting times.

Care planning

This report demonstrates a major variation in the level of access to care planning. The proportion of people with psychosis in specialist care on CPA, ranges between 3.8% to 94.4% (England average 51.8%); whereas primary care data indicates that 77.2% of people with SMI have a comprehensive care plan (range 54.9% to 87.3%).

Employment status

Data suggests that only 5.5% of people with psychosis in contact with specialist care are in employment. No CCG records a figure above 18.5% and the variation is considerable. While the NAS (2014) shows that 48% of people are getting help to find work and the EIP audit (2016) shows that 63% of people were offered a supported employment programme. This report has not considered whether these figures are influenced by overall employment in the CCG area, the wider social determinants of mental illness, or other factors such as the level of educational achievement or language spoken.

Recommendations

Addressing data quality

As much as data quality remains a major issue in mental health it is expected that this will be significantly addressed through data collection and reporting of MHSDS. A key recommendation that sits alongside this work is to maximize the benefits of digital capabilities to significantly simplify data collection and clearly specify the process of data entry, analysis and the governance of interpretation, and to also ensure that statistical reports draw upon related academic and research findings.

Repeat episodes of crisis

It is essential that levels of repeat crisis episodes, relapses, readmissions, and repeat detention rates and their triggers are recorded in the future, to better determine if there are people who would benefit from intensive and targeted secondary prevention, to plan secondary and tertiary prevention and inform local JSNAs and Crisis Concordat plans.

Areas for further investigation

A number of areas of investigation have been identified for when the data quality and completeness improves from the MHSDS. They include:

- CPA: investigate if there is a relationship between proportion of people with psychosis on CPA and the prevalence of psychosis overall
- emergency admission rates: investigate the relationship between emergency admission rates for psychosis and overall prevalence of psychosis; also investigate the relationships between emergency admissions and proportion of people with a crisis plan in place
- stable accommodation: understand if variation in numbers in stable accommodation is influenced by severity of psychosis, for example, are people with less severe and managing their psychosis, more likely to be in stable accommodation
- stable accommodation: investigate the influence of the wider social determinants on reported stable accommodation rates, eg availability of supported housing
- employment: investigate the influence of overall employment rates, wider social determinants, educational achievement and language spoken, to better understand the reasons for variation in employment rates for people with psychosis

Improving the physical health of people with psychosis and reducing premature mortality

Context

People with mental health problems such as psychosis are at increased risk of poor physical health, and die on average 15 to 20 years earlier than the general population[68,69]. The causes of premature death are mainly from chronic physical conditions such as coronary heart disease[70], type 2 diabetes[71] and respiratory diseases. These physical conditions are associated with modifiable risk factors such as smoking[72], obesity and high blood pressure, and are also associated with side effects of psychiatric medication. However, they are seen as preventable with comprehensive assessment, treatment and recommended safe monitoring of physical health and the side effects of medication.

Best practice

The NICE quality standard QS80[6] includes quality statement six: assessing physical health. This requires evidence of local arrangements to ensure adults with psychosis or schizophrenia receive compressive physical health assessments on a regular basis, with a focus on cardiovascular disease risk assessment. There are six advised cardiometabolic assessments: family history, smoking, body mass index (BMI), blood glucose, blood lipids and blood pressure. NICE guidelines CG178[4] includes recommendations on continuing to check for physical health problems and covers relevant guidance on treatment of those identified as being obese, having high blood pressure, abnormal lipid levels, having diabetes or cardiovascular disease.

There are opportunities to help people improve their physical health in both inpatient and community settings, 'Improving the physical health of people with mental health problems: actions for mental health nurses'[73] assists in the identification of key risk factors which affect the physical health of people with mental health problems and gives examples of good practice in how to improve health outcomes. The more recent physical health CQUIN Lester tool guides the assessments and treatments of people with SMI[74] and has been digitalised into an electronic care records template (the Bradford template) for use in primary care and specialist mental health trusts setting[75]. NHSE's 'Improving the physical health of people with serious mental illness: a practical toolkit'[76] has been designed to help improve physical health of patients with SMI, through looking at different approaches to implementing the Lester screening tool. Four successful improvement fast track pilot programmes have shown that effective implementation strategies are dependent on the use of information. In each a critical

success factor was the use of baseline assessment and continuous data feedback to individual clinicians and clinical teams so that they could compare and improve their standards.

Other reports and guidance that help improve physical health of those with SMI have been published by the King's Fund[77], Action on Smoking and Health (ASH)[78] and the 'Five Year Forward View for Mental Health'[2].

Metrics

In this report, variation on the uptake of physical checks across England is shown using measures from: the CCG Outcome Indicator Set, EIP audit, NAS and QOF. Although the indicators cannot be compared directly, used together they give a broad picture of variation across CCGs and for England over time.

Variation in premature mortality is shown using the Public Health Outcomes Framework (PHOF) indicator: Excess under-75 mortality rate in adults with serious mental illness[79]. The indicator is the ratio (expressed as a percentage) of the observed number of deaths in adults in contact with secondary mental health services, compared to the expected number of deaths in that population based on mortality rates in the general population. The indicator is calculated by NHSD and detailed methodology of the calculation of the indicator can be found on the NHSD Indicator Portal website[80].

Detailed information on the data source and definition of each measure can be found in appendix 1 and the data document which accompanies this report on the NMHDNIN's website[102].

People with severe mental illness who have received the complete list of primary care physical healthchecks* 2014/15

* BMI, blood pressure, ratio of cholesterol:hdl, blood glucose or HbA1c, alcohol consumption and smoking status

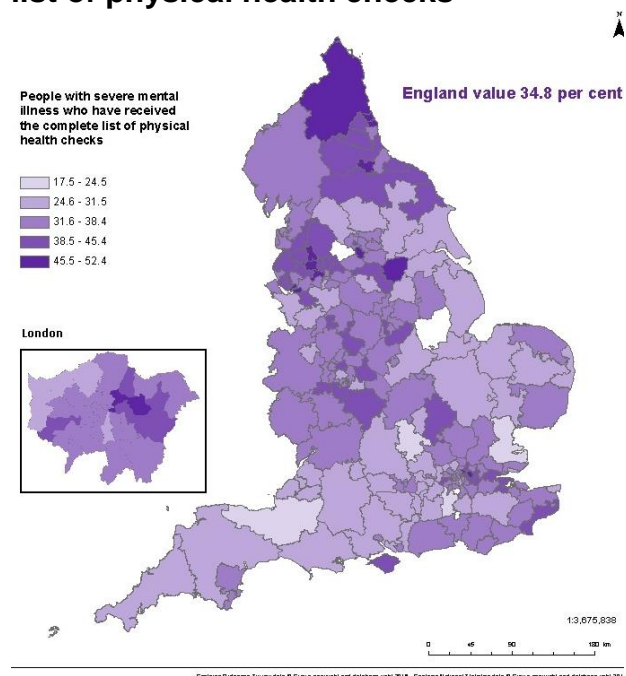**Map 8: People with SMI receiving complete list of physical health checks**

People with severe mental illness who have received the complete list of physical health checks

17.5 - 24.5
24.6 - 31.5
31.6 - 38.4
38.5 - 45.4
45.5 - 52.4

London

England value 34.8 per cent

1:3,675,838

Table 13: Highest and lowest 10 CCGs – people with SMI receiving complete list of physical health checks

CCGs with highest physical health check rates	%	CCGs with lowest physical health check rates	%
Halton	52.4	Surrey Downs	17.5
Salford	52.1	Somerset	18.8
Doncaster	50.2	Mid Essex	23.9
Blackburn with Darwen	49.1	Aylesbury Vale	24.0
City and Hackney	49.0	Guildford and Waverley	24.5
Newham	48.7	East Surrey	25.0
Bolton	47.4	Lambeth	25.5
North Tyneside	47.2	West Hampshire	25.5
Northumberland	47.2	East Riding of Yorkshire	25.7
South Tyneside	46.3	Dorset	26.0

Size of variation

- for CCGs in England people who have received the complete list of physical health checks ranges from 17.5% to 52.4%
- the range within which the middle 60% of CCGs lie is from 30.3% to 39.5%
- the average for England is 34.8%
- there were 73 CCGs which had significantly lower percentages and 60 CCGs which had significantly higher percentages of people who received the complete list of health checks than the England average
- no data was available for six CCGs due to data completeness being too poor to report: Calderdale, South West Lincolnshire, North East Essex, Sutton, Brighton and Hove and Crawley

Table 14: Physical healthchecks in people with severe mental illness: England level NAS, EIP audit, QOF and GPES

- there is little change between NAS 2011 and 2013 in % of service users who had monitoring of physical health risk factors recorded in case notes. Similar % are found in the EIP audit where patients were offered screening for smoking, BMI and blood pressure
- % of people with SMI on GP registers (QOF) who had a record of physical health checks are generally higher than the results from the NAS & EIP audits
- only 33% of service users in the 2013 NAS and 22% of service users in the EIP audit had a record of all cardiometabolic* factors being monitored. In 2013/14 53% of people on GP registers (GPES) had a record of all cardiometabolic** factors being monitored. In 2014/15 it was 35%

Data source	NAS 2011 Trusts (%)	NAS 2013 Trusts (%)	EIP 2014 Audit (%)	QOF 11/12 CCGs (%)	QOF 13/14 CCGs (%)	QOF 14/15 CCGs (%)	GPES 13/14 CCGs (%)	GPES 14/15 CCGs (%)
Monitoring of physical health risk factors								
Smoking	88	89	85	-	-	-	-	-
BMI	51	52	52	79	79	-	-	-
Glucose/Glucose or HbA1c	50	57	40	65	75	-	-	-
Lipids/Cholesterol:hdl ratio	47	57	37	72	68	-	-	-
Blood Pressure	56	61	53	84	83	81	-	-
Alcohol consumption	69	70	88	79	79	80	-	-
All cardiometabolic factors*	29	33	22	-	-	-	-	-
All cardiometabolic factors and alcohol**	-	-	-	-	-	-	53	35
Interventions offered								
Smoking	59	57	57	-	-	-	-	-
BMI> or = 25kg/m^2 /over weight	71	76	52	-	-	-	-	-
Abnormal glucose control	36	53	-	-	-	-	-	-
Elevated blood pressure	25	25	34	-	-	-	-	-
Alcohol misuse	74	72	78	-	-	-	-	-

* BMI, blood pressure, lipids, glucose control and smoking (family history excluded)

** BMI, blood pressure, total cholesterol:hdl, blood glucose or HbA1c, smoking status and alcohol consumption

- there is little change between NAS 2011 and 2013 in % of services users who had interventions offered. A higher % of service users were offered interventions for alcohol misuse and high BMI. A similar % were found in the EIP audit for smoking and alcohol use, but a higher % received interventions for elevated blood pressure and a lower % received interventions for BMI, than in the NAS

People with severe mental illness who are current smokers 18+ years 2014/15 (GPES)
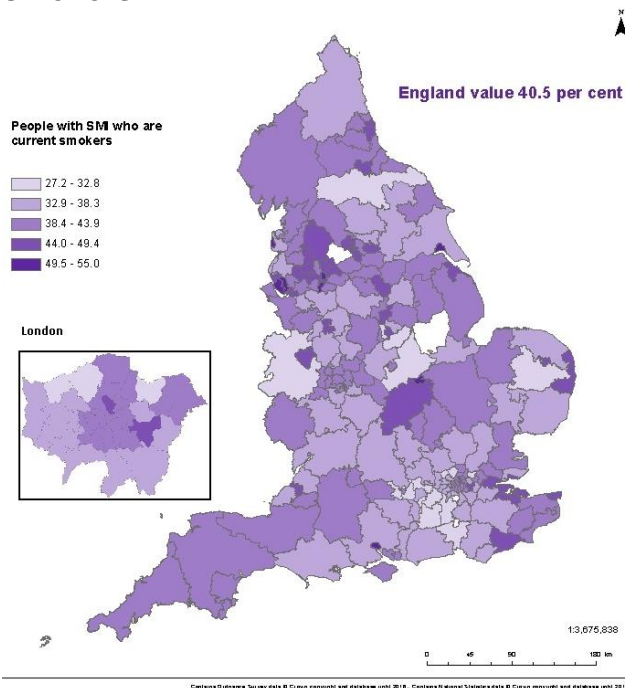
Map 9: People with SMI who are current smokers

People with SMI who are current smokers

- 27.2 - 32.8
- 32.9 - 38.3
- 38.4 - 43.9
- 44.0 - 49.4
- 49.5 - 55.0

England value 40.5 per cent

London

1:3,675,838

0   45   90   180 km

Contains Ordnance Survey data © Crown copyright and database right 2016. Contains National Statistics data © Crown copyright and database right 201

Table 15: Highest and lowest 10 CCGs – people with SMI who are current smokers

CCGs with highest % of smokers	%	CCGs with lowest % of smokers	%
Corby	55.0	Harrow	27.2
North Manchester	52.4	Hambleton, Richmondshire & Whitby	29.9
Hull	52.3	Surrey Downs	29.9
South Manchester	51.9	Redbridge	30.4
Southampton	51.3	Nottingham West	30.6
Liverpool	50.9	Windsor, Ascot & Maidenhead	30.6
Knowsley	50.6	Barnet	30.8
Blackpool	50.0	Surrey Heath	30.9
Central Manchester	49.3	Wokingham	31.2
Salford	48.7	East Leicestershire & Rutland	31.9

Size of variation

- for CCGs in England people with SMI who currently smoke ranges from 27.2% to 55.0% of the adult population
- the range within which the middle 60% of CCGs lie is from 36.2% to 44.3%
- the average for England is 40.5%
- there were 69 CCGs which had significantly lower % of people with SMI recorded as currently smoking than the England average and 55 CCGs which had significantly higher % of people with SMI who currently smoke
- no data was available for six CCGs due to data completeness being too poor to report: Calderdale, South West Lincolnshire, North East Essex, Sutton, Brighton and Hove and Crawley

47

People with severe mental illness who are current smokers 2014/15 (GPES) cross-referenced with GP practice general population current smokers 2014/15 (QOF)

Map 10: People with SMI who are current smokers
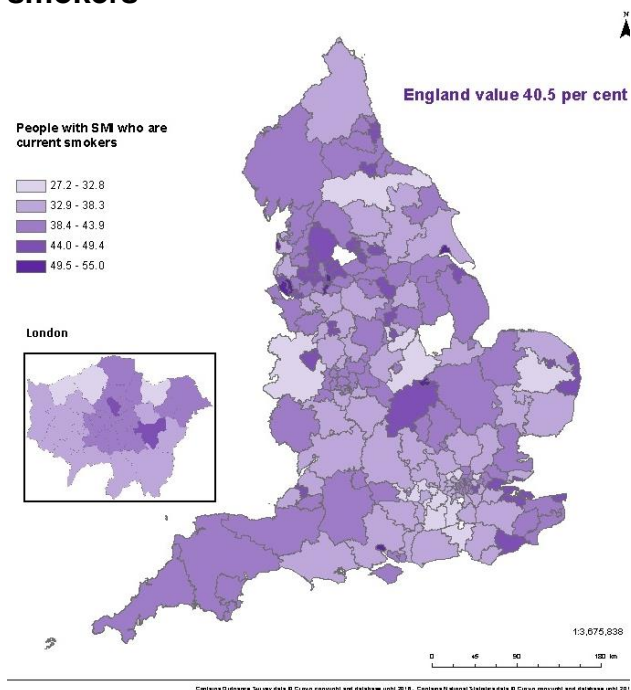
Map 11: GP practice general population who are current smokers
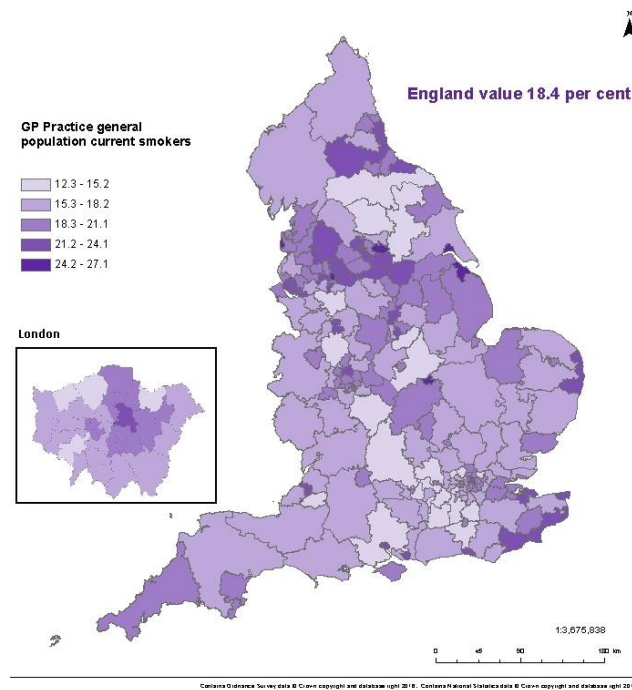
- over twice as many people with SMI smoke (40.5%, range 27.2% – 55.0%) than people in the general population (18.4%, range 12.3% - 27.1%)
- some CCGs show higher smoking prevalence rates within both the SMI population and general practice population

People with severe mental illness who were exempt from physical health checks all ages 2013/14* (QOF)

* BMI, blood pressure, ratio of cholesterol:hdl, blood glucose of HbA1c, alcohol consumption and smoking status

Map 12: People with SMI who were exempt from physical health checks
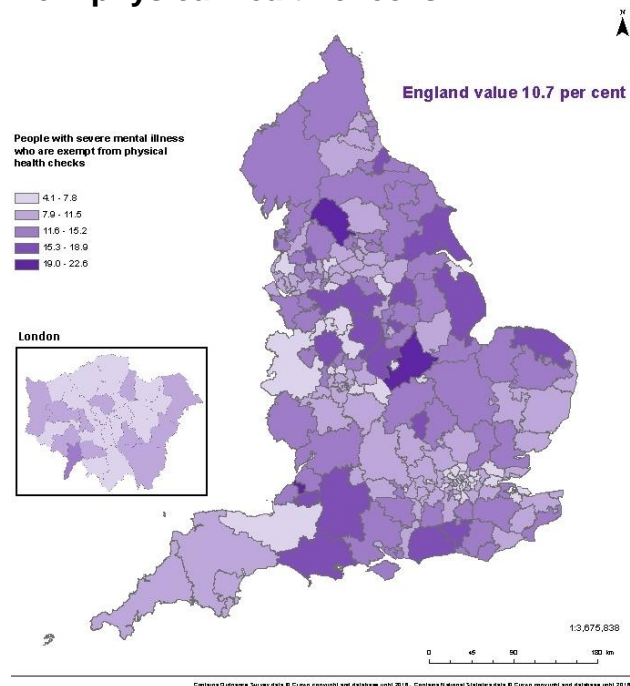
Table 16: Highest and lowest 10 CCGs – people with SMI who were exempt from physical health checks
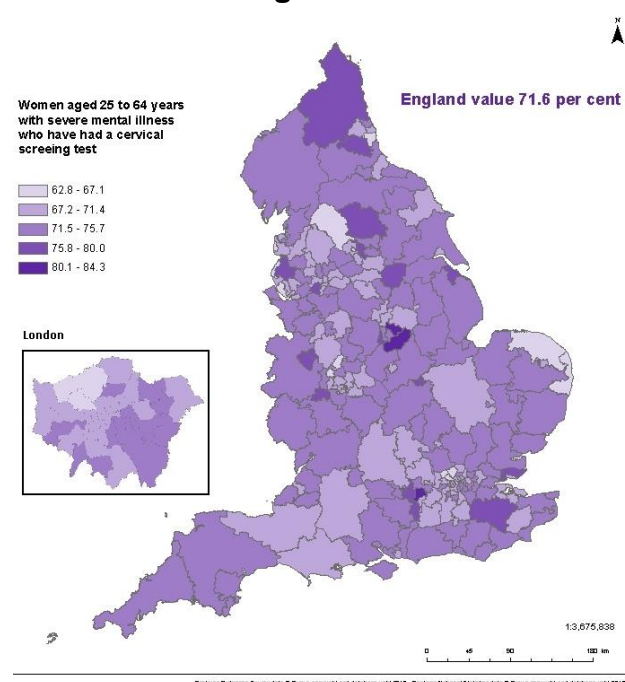
CCGs with highest exemption rates	%
East Leicestershire and Rutland	22.6
Airedale, Wharfedale and Craven	20.1
Bristol	19.8
North Derbyshire	18.8
Bassetlaw	18.1
Blackpool	17.7
Southern Derbyshire	17.6
Stafford and Surrounds	17.5
Blackburn with Darwen	17.4
North Norfolk	17.4

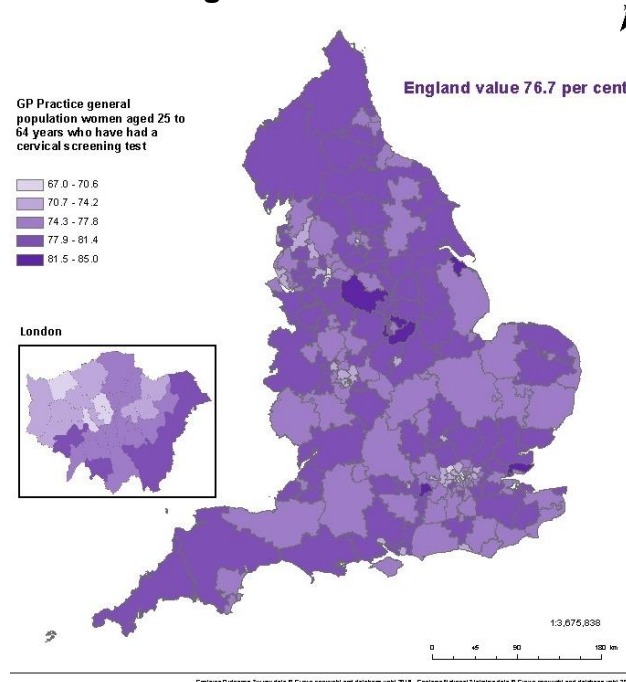| CCGs with lowest exemption rates	%
Slough	4.1
Sutton	4.6
Enfield	4.8
Walsall	4.8
Greenwich	5.1
Brent	5.3
West London	5.4
Redbridge	5.5
Central London	5.5
Southwark	5.8

Size of variation

- for CCGs in England people who were exempt from health checks ranges from 4.1 % to 22.6%
- the range within which the middle 60% of CCGs lie is from 7.9% to 13.5%
- the average for England is 10.7%
- there were 84 CCGs which had significantly lower percentages of people who were exempt from health checks than the England average 82 and which had significantly higher percentages of people who were exempt from health checks

Women aged 25 to 64 years with severe mental illness who have had a cervical screening test: comparison with general GP practice population (2014/15) (QOF)

Map 13: Women with SMI who have had a cervical screening test

Women aged 25 to 64 years with severe mental illness who have had a cervical screening test

- 62.8 - 67.1
- 67.2 - 71.4
- 71.5 - 75.7
- 75.8 - 80.0
- 80.1 - 84.3

London

England value 71.6 per cent

1:3,675,838

Map 14: Women in the GP practice general population who have had a cervical screening test

GP Practice general population women aged 25 to 64 years who have had a cervical screening test

- 67.0 - 70.6
- 70.7 - 74.2
- 74.3 - 77.8
- 77.9 - 81.4
- 81.5 - 85.0

London

England value 76.7 per cent

1:3,675,838

Size of variation

- 5% fewer women with SMI have had a cervical screening test than women in the general population
- 94% of CCGs have fewer women with SMI having had a cervical screening test than the general population, the range of the percentage difference is from 14.1% to 0.9%
- The ten CCGs where the difference is greatest are:
  Airedale, Wharfedale & Craven (14.1%), North Norfolk (11.5%), Ashford (11.4%), Southport and Formby (11.0%), Swale (10.7%), Newark and Sherwood (10.6%), Cannock Chase (10.5%), Scarborough & Ryedale (10.2%), Sunderland (10.0%), Mansfield and Ashfield (9.9%)

Excess premature mortality for people with severe mental illness 18-74 years (2013/14)

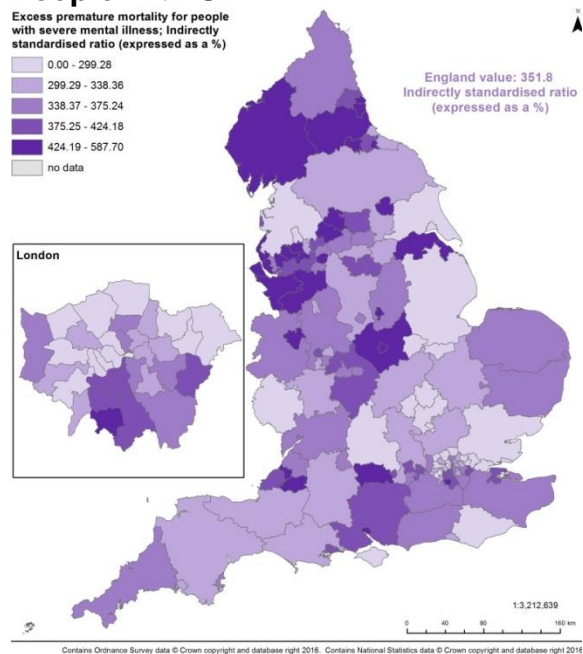**Map 15: Excess premature mortality for People with SMI**

Excess premature mortality for people with severe mental illness; Indirectly standardised ratio (expressed as a %)

- 0.00 - 299.28
- 299.29 - 338.36
- 338.37 - 375.24
- 375.25 - 424.18
- 424.19 - 587.70
- no data

England value: 351.8
Indirectly standardised ratio (expressed as a %)

London

1:3,212,639

0   40   80   160 km

Contains Ordnance Survey data © Crown copyright and database right 2016. Contains National Statistics data © Crown copyright and database right 2016

Table 17: Highest and lowest 10 LAs – excess premature mortality for people with SMI

LAs with highest excess premature mortality rates	
Wirral	587.7
Darlington	545.6
Telford & Wrekin	528.4
South Tyneside	526.0
Middlesbrough	523.7
Salford	512.7
Liverpool	503.8
Calderdale	488.7
County Durham	485.4
North East Lincolnshire	481.3

| LAs with lowest excess premature mortality rates	
Isle of Wight	135.4
Bedford	173.5
Richmond on Thames	198.0
Southend-on-Sea	213.3
Central Bedfordshire	215.3
Thurrock	233.8
Lincolnshire	246.1
City of Kingston upon Hull	247.9
Blackburn with Darwen	256.8
Redbridge	259.2

Size of variation

- for local authorities in England excess premature mortality SMR for people with SMI ranges from 135.4 to 587.7 – the average for England is 351.8
- the range within which the middle 60% of local authorities lie is from 299.3 to 424.2
- there were 22 local authorities which had significantly lower excess premature mortality for people with SMI than the England average and 28 which had significantly higher
- excess premature mortality is higher in males (357.6) than females (343.7)
- people aged 30 – 39 years have highest rates of premature mortality

Chart 3: Excess premature mortality by age group
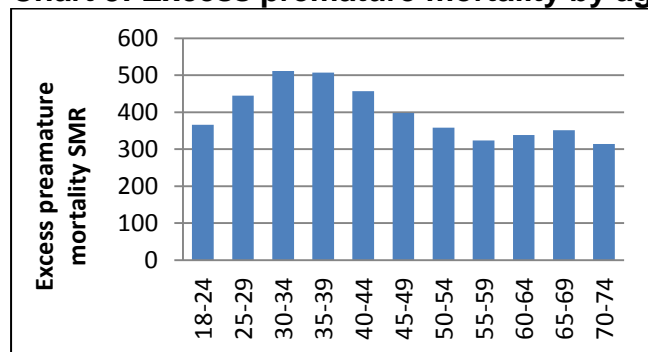
Contributory factors to excess premature mortality for people with severe mental illness (2013/14)

Chart 4: Comparison of premature mortality rates of most common causes of death between the general population and population in contact with secondary mental health services
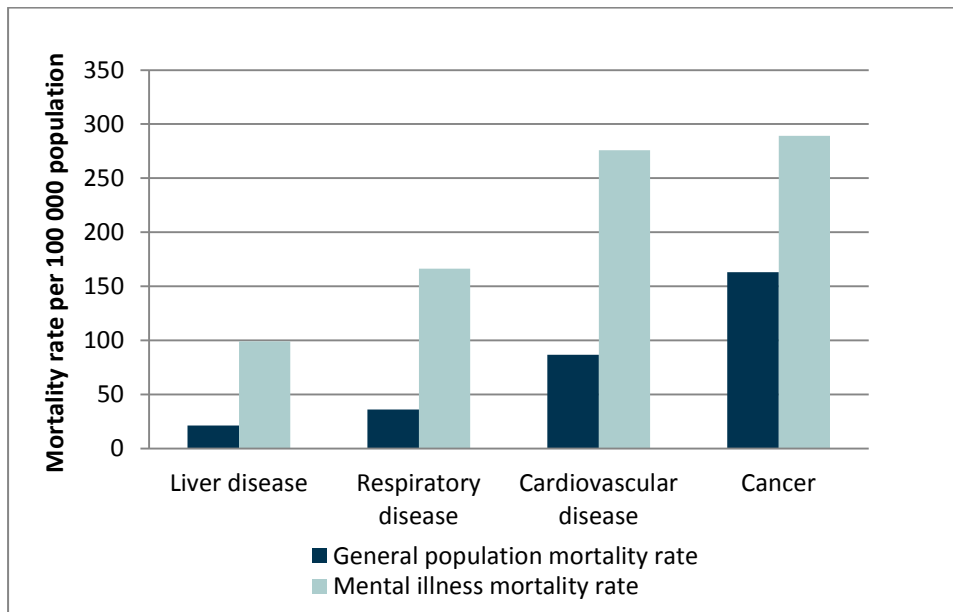
Source: NHS Digital NHS Outcomes Framework – Indicator 1.5i

Table 18: Comparing inequalities in premature mortality rates between general population and population in contact with secondary mental health services by condition

Condition	Absolute measure of inequality in premature death rate	Relative measure of inequality in premature death
Cancer	126.3	77.5%
Cardiovascular disease	189.3	218.8%
Respiratory disease	130.4	363.2%
Liver disease	77.8	365.3%

Size of variation

- people in contact with mental health services have nearly five times the death rate of the general population for respiratory and liver disease, three times the death rate for cardiovascular disease and nearly twice the death rate for cancer
- cardiovascular disease has the greatest difference in premature mortality rates between those in contact with mental health services and the general population (189.3 per 100 000), liver disease has the greatest % difference (365.3%)
- although the relative difference in liver disease death rates is highest, closing the absolute difference in cardiovascular disease death rates would lead to a greater reduction in premature mortality

Discussion of findings

Gaps in data and data quality concerns

Routine primary care data sources are available which report on the monitoring of physical health checks, for example, QOF and GPES, but there are some issues with these:

- there is no data routinely available around physical health checks and their treatment and monitoring, for people with psychosis; the broad definition of severe mental illness is used (schizophrenia, bipolar disorder or other psychoses)
- QOF data is aggregate and therefore limits detailed interpretation
- the QOF stopped reporting the recording of cholesterol, glucose and BMI cardio metabolic tests for those with SMI
- not all GP Practices submit complete data to the GPES
- not all people with psychosis will be registered to a GP practice

Currently there are no sources which make data routinely available on patients who are offered relevant interventions for their physical health, such as combined healthy eating and physical activity programmes; and behaviour change programmes, to help to stop smoking and alter behaviours in relation to drugs and alcohol.

To gain a picture of the extent of NICE compliance, data from audits and research studies[81] have to be used. In this report data from the NAS (2013/14)[11],and the National EIP Audit (2016)[12] have been used. Other sources of data are the NHSE CQUIN (2015/16) and privately held audits for example: Prescribing Observatory for Mental Health[82].

Physical health checks

Reasons for variation between CCGs may include factors such as the extent of provision of pro-active outreach, enhanced services models in primary care and clinical champions providing appropriate education for the workforce in areas. Examples of effective intervention include the CCG mental health leadership programme[83], University College London (UCL) Partners practice nurse master classes[84] and training through the Charlie Waller Memorial Trust[85]. Providing education has some impact on the level of screening but participants in training cite lack of time to deal with this vulnerable group[86].

To fully understand the impact of modifiable risk factors it is important to understand the variation in access to screening for those with SMI. Consideration of equity prompts comparison of physical health checks for people with SMI, with checks provided for

people with diabetes, chronic obstructive pulmonary disease, cardiovascular disease and learning disabilities. Routine publicly available data is limited, but QOF data allows the direct comparison of access to cervical screening, this data suggests there are lower access rates among those women on the SMI register when compared with the general practice population. A local audit comparing SMI and diabetes patients also showed the percentage of patients who received medical checks (body mass index, blood pressure, blood glucose and cholesterol) in the previous 12 months, was much higher among patients with diabetes than those with SMI[87]. A national survey of checks carried out in the previous 15 months using QOF data also showed a difference[88].

It is not yet possible to routinely assess if uptake of screening or appropriate physical health interventions are linked to the person having a carer, being on CPA, or having had a thorough physical health assessment. Supporting patients with SMI in primary care with behaviour change is currently being researched[89].

Interventions offered, taken up and outcome

Post-health assessment, the NAS and EIP audits showed mixed levels of interventions offered for smoking, alcohol misuse, being overweight, having abnormal glucose and elevated blood pressure. This replicates international studies in inpatient settings. It was found that of people with schizophrenia who had been assessed, only 60% with diabetes, 28% with hypertension and 14% with dyslipidaemia received medical treatment[90]. In England an audit of five primary care centres showed that only 13% of people with SMI received diet advice and 14% received exercise advice[87]. The learning disabilities 'reasonable adjustment'[91] model is effective and is an example of a system which could be introduced to ensure equitable care provision for people with SMI.

There is no routine data on uptake of smoking cessation services among people with SMI. However, Hardy (2016)[92] found that people with SMI had a high incidence of disengagement with the smoking cessation services. This could be due to the advisers' lack of knowledge regarding mental illness and/or the fact that cessation services assume all participants are at the preparation or action stage and are therefore able to take on all the advice given.

There is no data routinely available which can be used to assess if rates of health assessments offered lead to an increase in treatment, and where treatments are offered, no data is available to monitor their effectiveness and if they lead to improved outcomes for patients.

Recommendations

Physical health checks

The data reported provides an understanding of the numbers of people with SMI and psychosis in receipt of health checks but does not help in the routine assessment of how many people are offered an intervention, whether they take it up, or its impact. This needs to be addressed and can be explored through datasets such as CPRD or THIN.

There are areas which would benefit from being explored to compliment the findings in this report – some aspects of these will provide the basis for a future report:

- a review of models of primary care and collaborative primary/specialist mental health services to assess which effectively support and enable most patients with psychosis to access interventions
- it is known that there are higher smoking rates among those with SMI, and that all mental health trusts are seeking to be smoke free by 2020. There would be value in assessing uptake of smoking cessation services among people with SMI through both primary and specialist care
- assess if NICE and NHSE guidance on supporting the physical health of people with SMI or psychosis are being used and how effective they are
- seek to understand why some areas have higher rates of QOF exceptions and also seek out and share models of good practice in enhanced services and outreach to these harder to reach patients

Self-management and education

All patients with SMI and their families should be offered support to enable them to attend annual health checks and ongoing monitoring and treatment. People with SMI and their carers should also receive education regarding physical health and wellbeing. The DESMOND (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed) programme[101] may be an effective model on which to base this. It focuses on helping patients change their lifestyle so that they can manage their condition and they meet other people with the same diagnosis. The education is delivered by a healthcare professional and a lay instructor who have both been trained. People with newly diagnosed diabetes are routinely referred to this education.

Excess mortality

There is value in understanding excess mortality in more detail, in particular variation in cause, ie is the impact of cancer consistent across the country, or are some areas more effective in ensuring access to service standards apply equally well to those with a SMI?

There may be benefit in further investigation of cause of mortality across the life course. More people with SMI die early, which is notably high among those aged 30-39. If we understand the causal route of this we may be better able to intervene appropriately. Current routine measures of premature mortality are based on people in contact with specialist mental health services. There may be benefit in seeking to understand the impact on people with psychosis. This calculation should include people in contact with primary care.

Conclusion

This report presents available baseline information to help local areas understand the geographic distribution of incidence and prevalence of psychosis, to monitor variation in service quality and to assess standards of care for people with psychosis.

The report has discussed the shortage of data available for the monitoring of NICE care standards up to summer 2016 and the quality of the data which is available. It has also identified the need for improved estimation and modelling methodologies to provide more accurate estimates of incidence and prevalence of psychosis. Where gaps in data are apparent the report draws attention to policy, guidance documents and available evidence that may help local areas plan and deliver services.

Although the report has been produced because the data sets included can add to the understanding of psychosis, importantly, the report also highlights data limitations, and where data collection and reporting needs to improve. For instance, although individuals are included on the QOF SMI register on the basis of clear guidance, the data set is not validated and we therefore cannot be certain of consistency in processes across the country. Gaining routine access to record level primary care data will make a difference to this. It is also important to state that although metrics based on the psychosis supra cluster (from the MHLDDS) adds to the picture, its value is reduced as not all Trusts allocate patients in scope to a care cluster, and local variation suggests there is not a consistent data collection and reporting process across all Trusts.

The report begins to show how data and information can be used for the planning and commissioning of improved care and treatment for people with psychosis, or at risk of developing psychosis. It is hoped that it will provide motivation to help drive the improvement of data collection and data quality and the development of processes for feeding back information and intelligence to the health care system.

Data sets will improve; the new MHSDS started collecting data in January 2016. This allows the collection of smarter data which will allow the monitoring of the access and waits standards and will support the monitoring of evidence-based clinical practice. As completeness and quality improves across all data sets related to mental health it will be possible to use data to routinely monitor clinical interventions, patient experience and treatment outcomes.

This report is the first output from a period of work where the NMHIN will focus on using available data to aid better understanding of psychosis. Data sets that were processed for this document will inform the network's profiling tools, as will further related metrics as they become available. This is part of an ongoing process whereby better data can lead to better intelligence that will help improve care for those experiencing psychosis.

References

1   NHS England (2016). Implementing the Early Intervention in Psychosis Access and Waiting Time Standard: Guidance.
www.england.nhs.uk/mentalhealth/wp-content/uploads/sites/29/2016/04/eip-guidance.pdf

2   The five year forward view for mental health – report from the Mental Health Taskforce (2016).
www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf

3   Implementing the Five Year Forward View for Mental Health. NHS England. (2016)
www.england.nhs.uk/wp-content/uploads/2016/07/fyfv-mh.pdf

4   Psychosis and schizophrenia in adults: prevention and management. NICE guidelines [CG178]: March 2014. www.nice.org.uk/guidance/cg178

5   Psychosis and schizophrenia in children and young people: recognition and management [CG155]: May 2016. www.nice.org.uk/guidance/cg155

6   Psychosis and schizophrenia in adults. NICE quality standard [QS80]: February 2015. www.nice.org.uk/guidance/qs80

7   Bipolar disorder, psychosis and schizophrenia in children and young people. NICE quality standard [QS102]. October 2015.
www.nice.org.uk/guidance/qs102

8   Barr V J et al (2003). The expanded chronic care model: An integration of concepts and strategies from population health promotion and the chronic care model. Healthcare Quarterly, 7(1) November 2003: 73-82.
www.longwoods.com/content/16763#abtauth

9   NHS England (2016). Guidance for reporting against access and waiting time standards: Children and young people with an eating disorder, Early Intervention in Psychosis.
www.england.nhs.uk/mentalhealth/wp-content/uploads/sites/29/2016/02/tech-cyped-eip.pdf

10   Quality and Outcomes Framework://content.digital.nhs.uk/qof

11   National Schizophrenia Audit
www.rcpsych.ac.uk/workinpsychiatry/qualityimprovement/nationalclinicalaudits/nationalschizophreniaaudit.aspx

12   Royal College of Psychiatrists (2016). Report of the Early Intervention in Psychosis audit.
      www.rcpsych.ac.uk/pdf/EIP%20Audit%20National%20Report.pdf

13   Mental Health and Learning Disabilities Statistics reports: Currency and Payment data. //content.digital.nhs.uk/mhldsreports

14   CCG Outcomes Indicator Set indicator 1.12: People with serious mental illness who have received the complete list of physical checks.
      indicators.hscic.gov.uk/webview/

15   CCG Outcomes Indicator Set indicator specification for smoking rates in people with serious mental illness (indicator 1.23).
      indicators.hscic.gov.uk/download/Clinical%20Commissioning%20Group%20Indicators/Specification/CCG_1.23_I01974_S.pdf

16   Mental Health and Wellbeing in England: Adult Psychiatric Morbidity Survey 2014 NHS Digital. //content.digital.nhs.uk/catalogue/PUB21748/apms-2014-full-rpt.pdf

17   PsyMaptic: www.psymaptic.org/

18   NHS England (2016). Implementing the Early Intervention in Psychosis Access and Waiting Time Standard: Guidance.
      www.england.nhs.uk/mentalhealth/wp-content/uploads/sites/29/2016/04/eip-guidance.pdf

19   English Indices of Deprivation 2015. Department for Communities and Local Government.
      www.gov.uk/government/statistics/english-indices-of-deprivation-2015

20   Mental Health Bulletin: Annual Statistics. HSCIC (2014/15). October 2015.
      //content.digital.nhs.uk/catalogue/PUB18808/mhb-1415-ann-rep.pdf

21   Kirkbride et al. (2006). Heterogeneity in incidence rates of schizophrenia and other psychotic syndromes: findings from the 3-centre AeSOP study. Archives of General Psychiatry. 63: 250-58.

22   Kirkbride J et al. (2012) Systematic review of the incidence and prevalence of schizophrenia and other psychoses in England. Department of Health Policy Research Programme.
      www.psychiatry.cam.ac.uk/files/2014/05/Final-report-v1.05-Jan-12.pdf

23   Jorgensen L et al. (2014). Prevalence of psychoses in Stockholm County – A population-based study using comprehensive healthcare registers. Nordic Journal of Psychiatry;68 (1):60-65.

24   Perala J et al. (2007). Lifetime prevalence of psychotic and bipolar I disorders in a general population. JMA Psychiatry; 64(1) 19-28.

25   Clinical Practice Research Datalink. www.cprd.com/intro.asp

26   The Health Improvement Network database (THIN). www.ucl.ac.uk/pcph/research-groups-themes/thin-pub/database

27   Perera G et al. (2016). Cohort profile of the South London and Maudsley NHS Foundation Trust Biomedical Research Centre (SLaM BRC) Case Register: current status and recent enhancement of an Electronic Mental Health Record-derived data resource. BMJ Open 2016;6:e008721.doi:10.1136/bmjopen-2015-008721.

28   Campion J (2013). High Impact Strategic Mental Health Training and Education Programme: Building capacity for improved patient outcomes – improving services, implementing best practice and informing mental health commissioning. Commissioning Support Factsheet: prevalence, causes and treatment of people with psychosis. www.emotionalwellbeing.southcentral.nhs.uk/resources/doc_download/170-factsheet-prevalence-causes-and-treatment-of-psychosis

29   Jonas S, et al (2011) Sexual abuse and psychiatric disorder in England: results from the 2007 Adult Psychiatric Morbidity Survey. Psychological Medicine 41 (4): 709-719

30   Parkinson J (2012) Establishing a core set of national, sustainable mental health indicators for children and young people in Scotland: Final Report. NHS Health Scotland

31   Di Fortis et al (2009) High potency cannabis and the risk of psychosis. British Journal of Psychiatry, 195:488-491.

32   Casadio et al (2011) Cannabis use in young people. The risk for schizophrenia. Neuroscience and Biobehaviour review, 35: 1779-1787

33   The Melbourne criteria: Source: Parker S and Lewis S. (2006) Identification of young people at risk of psychosis. Advances in Psychiatric Treatment. 12, 249-255.

34   Campion et al (2012) European Psychiatric Association (EPA) guidance on prevention of mental disorders. European Psychiatry 27, 68-80.

35   Fusar-Poli et al (2012) Predicting psychosis: meta-analysis of transition outcomes in individuals at high clinical risk. Archives of General Psychiatry 69(3): 220-229

36   French P, Morrison AP. Early detection and cognitive therapy for people at high risk of developing psychosis. Wiley; 2004

37   French P et al. (2010) Early intervention in psychosis: Promoting recovery. Blackwell.

38   NHS Scotland (2012) ,Annual report of the CMO Health in Scotland 2011, Transforming Scotland's Health (Chapter 3). Scottish Government: December 2012

39   NHS England (2015) Future in mind: promoting, protecting and improving our children and young people's mental health and wellbeing. www.gov.uk/government/uploads/system/uploads/attachment_data/file/414024/Childrens_Mental_Health.pdf

40   Mental health and behaviour in schools: departmental advice. Department for Education. 2016. www.gov.uk/government/publications/mental-health-and-behaviour-in-schools--2

41   Promoting children and young people's emotional health and wellbeing: a whole school and college approach. PHE and Children and Young People's Mental Health Coalition. 2016. www.gov.uk/government/uploads/system/uploads/attachment_data/file/414908/Final_EHWB_draft_20_03_15.pdf

42   Mental Health Prevention and Promotion: The economic case. London School of Economics PSSRU, Centre for Mental Health. 2011.

43   Stafford M R, et al. (2013) Early interventions to prevent psychosis: systematic review and meta-analysis. British Medical Journal. 346: f185.

44   Van der Gaag m et al. (2012) Cognitive behavioural therapy for subjects at ultra-high risk for developing psychosis: a randomised controlled clinical trial. Schizophrenia Bulletin. 38: 1180-88

45   Mari JJ, Streiner DL. An overview of family interventions and relapse on schizophrenia: meta-analysis of research findings. Psychol Med. 1994 Aug;24(3):565–78.

46   Pitschel-Walz G, Leucht S, Bäuml J, Kissling W, Engel RR. The effect of family interventions on relapse and rehospitalization in schizophrenia--a metaanalysis. Schizophrenia Bulletin. 2001;27(1):73–92.

47   Bertelsen M et al. (2009) Five-year follow up of a randomised multicentre trial of intensive early intervention vs standard treatment for patients with a first episode of psychotic illness: the OPUS trial. Archives of General Psychiatry. 65: 762-71.

48   Knapp M et al. (2013) Supported employment: cost effectiveness across six European sites. World Psychiatry. 12: 60-68.

49   Looked after children statistics, Department for Education. www.gov.uk/government/collections/statistics-looked-after-children

50   Children in need and child protection statistics, Department for Education.
www.gov.uk/government/collections/statistics-children-in-need

51   What about YOUth Survey Drugs and alcohol use in 15 year olds.
fingertips.phe.org.uk/profile/what-about-youth

52   PHE Local alcohol profiles for England.
fingertips.phe.org.uk/profile/local-alcohol-profiles

53   Commissioning for Quality and Innovation 2016/17 CQUIN. Guidance and
templates.
www.england.nhs.uk/nhs-standard-contract/cquin/cquin-16-17/

54   NHS Benchmarking Network Review of Mental Health Care 2014/15.

55   NHS Benchmarking national perinatal audit 2016 (to be published)

56   Coid J et al. (2007) Patients discharged from medium secure forensic psychiatry services:
reconvictions and risk factors. The British Journal of Psychiatry. 190 (3): 223-229.

57   Rethink Mental Illness (2014). Lost Generation: why young people with psychosis
are being left behind, and what needs to change.
www.rethink.org/media/973932/LOST%20GENERATION%20-
%20Rethink%20Mental%20Illness%20report.pdf

58   Mental Health Services: Achieving better access by 2020.
www.gov.uk/government/publications/mental-health-services-achieving-better-
access-by-2020

59   NHS Digital: Mental Health Services Monthly Statists:
//content.digital.nhs.uk/mhldsreports

60   Right here, right now: Mental health crisis care review. Care Quality Commission.
(2015). www.cqc.org.uk/content/right-here-right-now-mental-health-crisis-care-
review

61   Mental Health Crisis Care Concordat – Improving outcomes for people
experiencing mental health crisis (2014). Department of Health.
www.gov.uk/government/publications/mental-health-crisis-care-agreement

62   Independent Commission on adult acute mental healthcare report: Old Problems,
New Solutions: Improving Acute Psychiatric Care for Adults in England.
www.nhsconfed.org/news/2016/02/independent-commission-led-by-lord-nigel-
crisp-and-supported-by-the-royal-college-of-psychiatrists

63   Simpson A et al (2016). Recovery-focused care planning and coordination in England and Wales: a cross-national mixed methods comparative case study. BMC Psychiatry. 16: 147.
link.springer.com/article/10.1186/s12888-016-0858-x

64   Johnson R, Griffiths C, Nottingham T (2006) At home? Mental health issues arising in social housing. National Institute for Mental Health in England.

65   NHS Digital Maturity Assessment. 2015/16.
www.england.nhs.uk/digitaltechnology/info-revolution/maturity-index/

66   Review of information technology in the NHS, Making IT work: harnessing the power of health IT to improve care in England.
www.gov.uk/government/news/review-of-information-technology-in-nhs

67   The Watchter Review of Health IT: Update and Insights
www.thecommissioningreview.com/article/head-nhs-it-review-says-paperless-service-2020-%E2%80%98not-possible%E2%80%99#.V30Ux8wFpmI.twitter
www.kingsfund.org.uk/sites/files/kf/media/T5_Bob_Wachter.pdf

68   Brown S, Kim M, Mitchell C and Inskip H (2010) Twenty-five year mortality of a community cohort with schizophrenia. British Journal of Psychiatry 196: 116–121;

69   Parks J, Svendsen D, Singer P et al. (2006) Morbidity and mortality in people with serious mental illness, 13th technical report. Alexandria, Virginia: National association of state mental health program directors.

70   Osborn DPJ (2007) Physical activity, dietary habits and coronary heart disease risk factor knowledge amongst people with severe mental illness: a cross-sectional comparative study in primary care. Social Psychiatry and Psychiatric Epidemiology. 42: 787–93.

71   De Hert M, Dekker JM, Wood d et al (2009) cardiovascular disease and diabetes in people with severe mental illness. Position statement from the European Psychiatric Association. European Psychiatry.

72   McManus S, Meltzer H and Campion J (2010) Cigarette smoking and mental health in England. Data from the Adult Psychiatric Morbidity survey. National Centre for Social Research.
www.natcen.ac.uk/media/21994/smoking-mental-health.pdf

73   Improving the physical health of people with mental health problems: Actions for mental health nurses, (2016). Department of Health.
www.gov.uk/government/uploads/system/uploads/attachment_data/file/524571/Improving_physical_health_A.pdf

74   The Lester UK Adaptation of the Positive Cardiometabolic Health Resource.
www.rcpsych.ac.uk/quality/nationalclinicalaudits/schizophrenia/nationalschizophre
niaaudit/nasresources.aspx

75   Physical healthcare of patients with server mental illness: A template for physical
healthcare in Bradford – collaboration between specialist mental health and
primary care.
www.nhsiq.nhs.uk/media/2484208/bradford_mental_illness_-_final_updated.pdf
and www.england.nhs.uk/2015/04/smi-bradford/

76   Improving the physical health of patients with serious mental illness – a practical
toolkit. www.england.nhs.uk/mentalhealth/resources/smi-toolkit/

77   King's Fund (2016) Bringing together physical and mental health.
www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/Bringing-together-Kings-
Fund-March-2016_1.pdf

78   ASH (2016). The stolen years. The mental health and smoking action report
www.ash.org.uk/current-policy-issues/health-inequalities/smoking-and-mental-
health/the-stolen-years

79   Public Health Outcomes Framework. www.phoutcomes.info/

80   Excess premature mortality indicator calculation methodology
//indicators.hscic.gov.uk/download/Outcomes%20Framework/Specification/NHSO
F_Domain_1_S.pdf

81   Does better quality of primary care influence admissions and health outcomes for
people with serious mental illness (SMI)? A linked patient-level analysis of the full
patient care pathway. www.nets.nihr.ac.uk/projects/hsdr/135440. Study in
progress as October 2016.

82   Prescribing Observatory for Mental Health (POMH_UK).
www.rcpsych.ac.uk/workinpsychiatry/qualityimprovement/nationalclinicalaudits/pre
scribingpomh/prescribingobservatorypomh.aspx

83   CCG mental health leadership programme.
mentalhealthpartnerships.com/leadership/ccg-gp-leadership-programmes/

84   Hardy S and Kingsnorth R. (2015) Mental health nurses can increase capability
and capacity in primary care by educating practice nurses: an evaluation of an
education programme in England. Journal of Psychiatric and Mental Health
Nursing. 22 270–277.

85   Charlie Waller Memorial Trust. www.cwmt.org.uk/

86   Hardy S, Hinks P and Gray R. (2014) Does training practice nurses to carry out physical health checks for people with severe mental illness increase the level of screening for cardiovascular risk? International Journal of Social Psychiatry. 60 (3) 236-242.

87   Hardy S, Hinks P and Gray R. (2013) Screening for cardiovascular risk in patients with severe mental illness in primary care: a comparison with patients with diabetes. Journal of Mental Health. 22 (1) 42-50.

88   Mitchell A and Hardy S. (2013) Surveillance for metabolic risk factors in patients with severe mental illness vs diabetes: National Comparison of Screening Practices. Psychiatric Services. 64 (10) 1060-1063.

89   Osborn D et al. (2016) Evaluating the clinical and cost effectiveness of a behaviour change intervention for lowering cardiovascular disease risk for people with severe mental illnesses in primary care (PRIMROSE study): study protocol for a cluster randomised controlled trial. Trials. 17:80. DOI 10.1186/s13063-016-1176-9.

90   Bernardo M, Cañas F, Banegas JR, Casademont J, Riesgo Y, Varela C, RICAVA Study Group. Prevalence and awareness of cardiovascular risk factors in patients with schizophrenia: A cross-sectional study in a low cardiovascular disease risk geographical area. European Psychiatry 2009; 24: 431–441.

91   Learning Disability Reasonable Adjustment www.improvinghealthandlives.org.uk/projects/reasonableadjustments

92   Hardy S (2016) An innovation project aiming to improve support for people with severe mental illness to reduce smoking. Journal of Smoking Cessation (under review)

93   CCG Outcomes Indicator Set indicator 3.17: Percentage of adults in contact with secondary mental health services in employment (by psychotic supra cluster). indicators.hscic.gov.uk/webview/

94   CCG Outcomes Indicator Set indicator specification for percentage of adults in contact with secondary mental health services in employment (indicator 3.17). indicators.hscic.gov.uk/download/Clinical%20Commissioning%20Group%20Indicators/Specification/CCG_3.17_I01986_S.pdf

95   NHS Data Model and Dictionary v3:
       www.datadictionary.nhs.uk/data_dictionary/attributes/s/ses/settled_accommodatio
       n_indicator_de.asp?shownav=1

96   CCG Outcomes Indicator Set indicator specification for people with serious mental
       illness who have received the complete list of physical checks (indicator 1.12).
       indicators.hscic.gov.uk/download/Clinical%20Commissioning%20Group%20Indica
       tors/Specification/CCG_1.12_I00777_S.pdf

97   Quality and Outcomes Framework indicator from the PHE local tobacco control
       profiles www.tobaccoprofiles.info/

98   General Medical Services Statement of Financial Entitlements Directions (2013).
       Pages 110 - 111.
       www.gov.uk/government/uploads/system/uploads/attachment_data/file/233366/ge
       n_med_servs_statement_financial_entitlements_directions_2013_acc.pdf

99   NHS Atlas of Variation in Health Care (2015): Mental Health Disorders.
       www.england.nhs.uk/rightcare/intel/cfv/atlas/

100   Saha S et al. (2005) A systematic review of the prevalence of schizophrenia. PLoS Med
       2(5): e141. www.ncbi.nlm.nih.gov/pmc/articles/PMC1140952/pdf/pmed.0020141.pdf

101   DESMOND: Developing Quality Structure Education in Diabetes.
       www.desmond-project.org.uk/whatisthedesmondprogramme-271.html

102   National Mental Health Intelligence Network's website:
       http://www.yhpho.org.uk/resource/view.aspx?RID=207308

Acknowledgements

Appendix 1

Metric metadata

Number of people with psychosis

Estimated number of new cases of psychosis

This metric is an estimate based on modelled predictions of the expected incidence of psychotic disorder among people aged 16-64 years, expressed as a rate per 100000 general population aged 16-64 years. The estimate uses a number of population characteristics: population density, social deprivation and ethnicity, taken from the 2011 census and feeds them into a prediction algorithm. It must be noted that predictions of incidence contain a degree of error which should be taken into consideration when using the data. The estimates predict the expected number of new cases with psychotic disorder in a given population, not actual demand for psychosis services, which may be higher. More information on the modelling methodology and advice on how to use and interpret modelled estimates can be found on the psymaptic website: www.psymaptic.org.

Estimated prevalence of psychosis

Recorded number of people with SMI (people on GP SMI registers 2014/15)

The QOF SMI register 2014/15[10] is used to generate a proxy measure, using the wider SMI conditions. This metric reports the recorded number of people with schizophrenia, bipolar disorder or other psychoses, or those on lithium therapy, on GP practice SMI registers. It is expressed as a percentage of the total number of people registered to GP practices. The register is a cumulative count of all identified cases, so as the register builds it will come to show a primary care-based lifetime prevalence. The register does not include people with psychosis who are not registered with a GP, for example, those who are homeless.

Recorded number of people with psychosis (people assigned to psychosis supra cluster, snapshot November 2015)

The last available NHS Digital MHLDDS, Currency and Payment (CaP) monthly report (November 2015)[13] data is used to generate another proxy measure, providing an estimate of case numbers of people with psychosis. The metric is a measure of the number of people in scope for mental health currencies at the end of the month

assigned to the psychosis supra cluster expressed as a rate per 100000 resident population aged 16 years and over. In scope services are listed in the appendix, together with descriptions of the clusters which make up the psychosis supra cluster. This measure will reflect the nature of local practice in how care is shared between primary and secondary services for people with long-term psychotic illness. It may be in areas of higher demand a greater proportion of people with stable, long-term psychosis will be managed from year-to-year by GPs, without reference to specialists.

Access to and quality of commissioned services

People with psychosis in specialist mental health providers who are on the Care Programme Approach (CPA)

This indicator uses data from the last available NHS Digital MHLDDS, CaP monthly report (November 2015)[13]. It measures the number of people at the end of the month assigned to the psychosis supra cluster who are recorded as being on CPA. A supporting metric is presented alongside which measures the number of people assigned to the psychosis supra cluster who have been on CPA for more than twelve months and who have had a CPA review.

People with SMI in primary care with a comprehensive care plan

This indicator uses data from the SMI QOF 2014/15[10]. It measures the percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a comprehensive care plan documented in the record, in the preceding 12 months, agreed between patients, their family and/or carers as appropriate. Exceptions are included in the denominator. For patients on the register who are in contact with secondary care services, the interpretation is that that if they are on CPA, this is evidence that a comprehensive care plan exists. For patients who are not in contact with secondary care services, the practice will need to develop a care plan with the patient.

People with psychosis in specialist mental health services with a crisis plan in place

This indicator uses data from the last available NHS Digital MHLDDS, CaP monthly report (November 2015)[13]. It measures the number of people in scope for mental health currencies at the end of the month assigned to the psychosis supra cluster and who have a crisis plan in place, it does not take into account the content and quality of the crisis plan.

People with psychosis in specialist mental health services admitted to hospital in an emergency

This indicator uses completed admission data from the Hospital Episode Statistics (HES) and mid-year population estimates from the Office for National Statistics (ONS). Data is pulled from HES which matches the criteria for being emergency admissions for those who had a primary diagnosis of psychosis (ICD10 F20-F29). HES is a data collection held by NHS Digital which contains details of all admissions, outpatient appointments and A&E attendances at NHS Hospitals (acute, primary care trust and mental health trust) in England.

Employment status in specialist mental health population

Employment status is measured using indicator 3.17 from the CCG Outcome Indicator Set[93]. Data from the MHLDDS is used to construct the indicator which measures the percentage of people receiving secondary mental health services who are in employment at the time of their most recent assessment, formal review, or other multi-disciplinary care planning meeting, by psychosis supra cluster (2014/15). More information on the definition and calculation of the indicator can be found in the indicator specification on the NHS Digital indicator portal website[94]. The completeness of the recording of employment status in care records should be taken into account when interpreting the findings.

Data is not routinely available that allows assessment of employment status for people who access mental health primary care.

Accommodation status

Accommodation status is measured using data from the last available NHS Digital MHLDDS, CaP monthly report (November 2015)[13]. This metric measures the percentage of people with psychosis in contact with specialist mental health services, who have an accommodation status recorded in their care record and who are in settled accommodation. Settled accommodation refers to secure, medium to long-term accommodation in which the person has security of tenure/residence in their usual accommodation or is part of a household whose head holds such security of tenure of residence[95]. The completeness of the recording of accommodation status in care records should be taken into account when interpreting the findings.

National Audit of Schizophrenia 2014 metrics

These metrics report on the results from some of the questions asked through the care record audit and the service user and carer surveys of the National Audit of Schizophrenia[11].

The care record audit scope covers:

- care records including details of a care plan
- care records which showed that CBT had ever been offered to service users
- care records which showed that any form of family intervention had been offered to services users
- care records which showed no antipsychotic medication being prescribed
- care records which showed more than one antipsychotic medication being prescribed (excluding clozapine)

The service user survey asked:

- if they had been given written or online information about medication in a format they could understand
- whether their views had been taken into account when deciding which medication to prescribe
- if they knew how to get help if there was a crisis or emergency.
- whether they had received help to obtain work or get involved in other structured activities
- if they were satisfied with the care they received over the last 12 years

The carers survey asked:

- if they were satisfied with the support and information they have been provided with

More detail around the NAS survey questions and further results from the audit can be found on the Royal College of Psychiatrists website[11].

Improving the physical health of people with psychosis and reducing premature mortality

People with SMI who have received the complete list of physical health checks

This metric uses indicator 1.12 from the CCG Outcome Indicator Set[14]. Data from the GPES 2014/15 is used to construct the indicator which measures the percentage of people with schizophrenia, bipolar affective disorder or other psychoses, on GP lists as of March 31, who have a record of a complete list of physical checks in the preceding 12 months (BMI, blood pressure, ratio of cholesterol:hdl, blood glucose of HbA1c, alcohol consumption and smoking status). More information on the definition of the indicator can be found in the indicator specification on the NHS Digital indicator portal

website[96]. It should be noted that data completeness is not always 100% within GPES. For this indicator 71% of CCGs had data completeness of 80% -100%.

Results from the first (2011) and second (2013) round of the NAS reported in 2012 and 2014[11] are used to show variation across time at England level. The Royal College of Psychiatry CCQI collected data for indicator 4a of the Mental Health CQUIN 2015/16 which reports on whether service users with a SMI (psychoses, including schizophrenia) have comprehensive assessments of the cardiometabolic risk factors and the necessary treatments and that the results are recorded and shared appropriately with the patient and clinical teams. These assessments could have taken place within all types of inpatient units and community early intervention psychosis services within secondary mental health trusts. The CQUIN was also commissioned in 2014/15 and will be again for 2016/17.

People with SMI who are current smokers

Indicator 1.23 from the CCG Outcome Indicator[15] set is used to show variation at England level between current smoking status for people with SMI and the general population. This measures the number of people aged 18 and over with SMI, identified on GP systems who are current smokers and is looked at alongside the Smoking Prevalence indicator from QOF[97] for all people on GP practice lists. These two indicators cannot be compared directly due to different age groups used in the indicators.

People with SMI who were excepted from physical health checks in QOF

An exception relates to registered patients who are on the relevant disease register who should be included in the indicator denominator, but who are excepted by the GP practice on the basis of one or more of the exception criteria as set out in General Medical Services Statement of Financial Entitlements Directions[98]. The concept of exception reporting is to ensure that GP practices are not penalised on practice achievement, for example, where patients have been recorded as being invited to attend for review, but have refused. However, where exceptions are applied this may result in people with SMI who are in most need and need outreach to be brought into appointments, being excluded from physical health checks[99]. This metric uses data from QOF[10] (2013/14) to calculate a combined exception rate for the blood pressure, cholesterol, glucose and BMI health checks. Data from QOF 2014/15 could not be used due to cholesterol, glucose and BMI checks not being part of published QOF measures.

Women aged 25 to 64 years with SMI who have had a cervical screening test in the preceding five years

Indicators from QOF[10] are used to show variation in uptake of cervical screening tests compared with the general population. The QOF indicator measures the percentage of women aged 25 to 64 years with schizophrenia, bipolar affective disorder and other psychoses, whose notes record that a cervical screening test has been performed in the preceding five years. Exceptions are included in the denominator. This indicator is compared with the equivalent QOF indicator for all relevant women registered on GP practice lists.

Excess premature mortality

Excess premature mortality is measured using the Public Health Outcomes Framework (PHOF) indicator: Excess under-75 mortality rate in adults with SMI[79]. The indicator is the ratio (expressed as a percentage) of the observed number of deaths in adults in contact with secondary mental health services compared to the expected number of deaths in that population based on mortality rates in the general population. Data sources for this indicator are the MHLDDS and ONS Mortality data. The indicator is calculated by NHS Digital and detailed methodology of the calculation of the indicator can be found on the NHS Digital website[80].

Appendix 2

In-scope services and teams for mental health currencies

In-scope refers to where a person had an inpatient stay on an in-scope mental health ward or has had a contact with a health care professional from an in-scope community team:

- day care services
- crisis resolution team/home treatment team
- adult community mental health team
- older people community mental health team
- assertive outreach team
- rehabilitation and recovery service
- general psychiatry
- psychotherapy service
- psychological therapy service (non-IAPT)
- young onset dementia
- personality disorder service
- early intervention in psychosis team
- primary care mental health service
- memory services/clinic

Care cluster descriptions

- Care cluster 10: First episode of psychosis (with/without manic features)
  This group will be presenting to the service for the first time with mild to severe psychotic phenomena. They may also have mood disturbance and/or anxiety or other behaviours. Drinking or drug-taking may be present but will not be the only problem. Likely primary diagnosis: schizophrenia, schizotypal and delusional disorders, bi-polar disorder

- Care cluster 11: Ongoing recurrent psychosis (low symptoms)
  This group has a history of psychotic symptoms that are currently controlled and causing minor problems if any at all. They are currently experiencing a sustained period of recovery where they are capable of full or near functioning. However, there may be impairment in self-esteem and efficacy and vulnerability to life. Likely primary diagnosis: schizophrenia, schizotypal and delusional disorders, manic episode, bi-polar affective disorder

- Care cluster 12: Ongoing recurrent psychosis (high symptoms)
  This group has a history of psychotic symptoms with a significant disability with major impact on role functioning. They are likely to be vulnerable to abuse or exploitation. Likely primary diagnosis: schizophrenia, schizotypal and delusional disorders, manic episode, bi-polar affective disorder

- Care cluster 13: Ongoing recurrent psychosis (high symptom and disability)
  This group will have a history of psychotic symptoms which are not controlled. They will present with severe to very severe psychotic symptoms and some anxiety or depression. They have a significant disability with major impact on functioning. Likely primary diagnosis: schizophrenia, schizotypal and delusional disorders, manic episode, bi-polar affective disorder

- Care cluster 14: Psychotic crisis
  This group will be experiencing an acute psychotic episode with severe symptoms that cause severe disruption to role functioning. They may present as vulnerable and a risk to others or themselves. Likely primary diagnosis: schizophrenia, schizotypal and delusional disorders, manic episode, bi-polar affective disorder

- Care cluster 15: Severe psychotic depression
  This group will be suffering from an acute episode of moderate to severe depressive symptoms. Hallucinations and delusions will be present. It is likely that this group will present a risk of non-accidental self-injury and have disruption in many areas of their lives. Likely primary diagnosis: severe depressive episode with psychotic symptoms

- Care cluster 16: Psychosis and affective disorder (high substance misuse and engagement)
  This group has enduring, moderate to severe psychotic or bipolar affective symptoms with unstable, chaotic lifestyles and co-existing problem drinking or drug taking. They may present a risk to self and others and engage poorly with services. Role functioning is often greatly impaired. Likely primary diagnosis: mental and behavioural disorders due to psychoactive substance use. Schizophrenia, schizotypal and delusional disorders, bi-polar disorder

- Care cluster 17: Psychosis and affective disorder (difficult to engage)
  This group has moderate to severe psychotic symptoms with unstable, chaotic lifestyles, there may be some problems with drugs or alcohol not severe enough to warrant care associated with cluster 16. This group will have a history of non-concordance, are vulnerable and engage poorly with services. Likely primary diagnosis: schizophrenia, schizotypal and delusional disorders, bi-polar disorder

Appendix 3

Comparison of prevalence rates with other countries

Results from a number of studies are reported here to give examples of the nature of prevalence of psychotic disorders reported elsewhere. They report on different prevalence types (point, period, lifetime) derived from different study methodologies. The study results are summarised in table five below, together with the prevalence data reported in this report from the QOF SMI register (2014/15) and MHLDDS (November 2015). Brief descriptions of the studies are also given.

Table 5: Prevalence estimates from different sources

Prevalence measure method	Condition	Prevalence estimate with 95% CIs per 1000*
QOF SMI register (lifetime prevalence)	SMI (schizophrenia, schizoaffective disorder and delusional disorder)	8.81 (8.78 - 8.83)
MHLDDS psychosis supra cluster cases (point prevalence)	all psychosis	4.01 (3.99 - 4.03)
APMS household survey (annual estimate)[16]	all psychosis	7.00
English study systematic review (annual prevalence)[22]	all psychotic disorders	Pooled 4.10 (2.6 - 6.5)
Finnish study of a population survey[24] (lifetime prevalence)	all psychosis	30.6 (26.6 – 35.1)
Finnish study of a population survey[24] (lifetime prevalence)	all psychosis (non-responder group included)	34.8 (30.6 – 39.6)
Swedish study of health records[23] (annual estimate)	non-affective psychoses	6.7
Finnish study of a population survey[24] (lifetime prevalence)	non-affective psychoses	19.4 (16.3 - 22.9)
Global meta-analysis[100] (point prevalence)	schizophrenia	Pooled 4.6 (1.9 - 10.0)**
English study systematic review (point prevalence)[22]	schizophrenia	Pooled 3.1 (2.0 - 5.0)
Global meta-analysis[100] (period prevalence)	schizophrenia	Pooled 3.3 (1.3 - 8.2)**
English study systematic review (annual prevalence)[22]	schizophrenia	Pooled 4.10 (2.9 - 5.6)
Swedish study of health records[23] (annual estimate)	schizophrenia	3.7
Global meta-analysis[100] (lifetime prevalence)	schizophrenia	Pooled 4.0 (1.6 - 12.1)**
Finnish study of a population survey[24] (lifetime prevalence)	schizophrenia	8.7 (6.8 - 11.1)

76

- A global meta-analysis[100] (2005) reviewed estimates of schizophrenia prevalence from 188 studies drawn from 46 countries based on household studies, to explore factors which could influence prevalence estimates

- A study in Sweden (2014)[23] designed to estimate the one-year prevalence of schizophrenia and non-affective psychoses using population-based health records from inpatient and outpatient care

- A Finnish study (2007)[24], carried out to provide reliable estimates of the lifetime prevalence of psychotic disorders, using a general population survey to screen a nationally representative sample of persons over 30 years old for psychotic and bipolar I disorders

- The English Adult Psychiatric Morbidity Survey (2007)[16] which aims to collect data on mental health among adults aged 16 and over living in private households in England. Where respondents were diagnosed with psychotic disorder if they completed a phase two Schedule for Clinical Assessment in Neuropsychiatry (SCAN) interview and it was positive

- A systematic review of prevalence of active psychotic disorder and schizophrenia in England (2012)[22]