6. Links between physical and mental health

6.1. Introduction

The links between physical and mental health are complex.ⁱ Someone with physical health problems may have worse mental health outcomes as a result; for instance, someone experiencing long-term pain, loss of independence or social isolation because of poor physical health is at higher risk of depression. Conversely, someone with mental health issues may have worse physical health outcomes as a result; for instance, someone with depression may struggle to exercise or eat a healthy diet, increasing their risk of heart disease.

It is also true that some wider determinants of health - such as housing, employment and family circumstances - influence both mental and physical health and, as such, act to reinforce social inequalities in wellbeing.

The complexity of these relationships for common mental health disorders and obesity is illustrated in Figure 1.

Figure 1: Model for the relationship between obesity and common mental health disorders



Reproduced from *Obesity and Mental Health*, National Obesity Observatory,ⁱⁱ adapted from Markowistz et al. 2008ⁱⁱⁱ and Napolitano et al. 2008^{iv}

For links between mental health and substance misuse, see the Substance misuse section of this chapter.

Box 17: Local case study: Understanding the links between physical and mental health

F was abused by her ex-partner, including a violent attack that has left her with severe pain. She has anxiety as a result of this abuse, and when she is anxious, her pain intensifies. This is in part due to holding tension in her muscles, which makes the physical effects of her injuries worse, and in part due to anxiety increasing her awareness of her pain.

When F spoke to a nutritionist, it also transpired that she was consuming several kilograms of sugar each week in her tea.

F has received counselling and been helped to form positive relationships at Body & Soul. With help, she has also cut out sugar in her tea and started drinking more water. These changes have improved her physical and mental wellbeing, and have made her feel that she is making positive choices in her life.

Adapted with permission from a case study provided by Body & Soul.

6.2. Life expectancy and cause of death

On average, people with mental health disorders live shorter lives than those without. $^{\rm v}$

Most of this excess mortality is due to 'natural' causes such as cardiovascular and respiratory diseases, as opposed to 'external' causes such as accidents, assault and suicide. In one study, 81% of excess mortality in those with schizophrenia was from natural causes, with smoking-related diseases accounting for most of this.^{vi} This section explores some of the key reasons behind this.

6.2.1. The national picture

The life expectancy of men with SMI¹ is 13 years lower than average; women with SMI can be expected to die 12 years earlier than average. Amongst those with depression treated in a secondary mental health setting, men have a life expectancy 11 years lower and women seven years lower than average.^{vii}

It is possible that these figures underestimate the life expectancy gap because they are based on treatment populations, which excludes those who died without receiving treatment. There is evidence that those with mild depression, anxiety and sub-clinical psychological distress also have increased mortality rates.^{viii}

¹ Severe Mental Illness, defined on the national Quality and Outcomes Framework (QOF) as bipolar disorder, schizophrenia and other psychosis.

6.2.2. Comparisons with other areas and over time

Public Health England has produced the *Severe Mental Illness Profiles*, a free, online tool that allows users to compare local and national mortality in those with SMI: <u>http://fingertips.phe.org.uk/profile-group/mental-health/profile/severe-mental-illness</u>

A small selection of indicators are displayed below, looking at death rates in those age 18-74² with SMI. In summary, Hackney has similar levels to England when figures account for the local death rates in the general population ('excess mortality') but much lower levels than England when the figures do not ('premature mortality'). This may reflect Hackney's younger demographic profile, which means that it has fewer deaths per 100,000 population.

Excess mortality

Excess mortality is a *relative* measure of the extra deaths in those with SMI when compared to the population as a whole.

Figure 2 shows that Hackney is similar to its statistical peers and to England, with more than three times as many deaths in those aged 18-74 with SMI as there are in the general population of the same age. The City of London's results are included, but due to small numbers it is not possible to draw strong conclusions about its excess mortality ratio, as a large amount of variation could simply be due to chance.

Figure 3 shows that there was little change in this indicator for Hackney or England between 2008/09 and 2012/13. Trend data is not available for the City of London.

² Deaths after the age of 74 are not considered 'premature' for the purposes of these statistical measures.



Figure 2: Excess under 75 mortality in adults with SMI, standardised mortality ratio³ (2012/13)

Hackney value not statistically significantly different from England City of London value not statistically significantly different from England Value for London not available

Data from Health and Social Care Information Centre (HSCIC), analysis by Public Health England^{ix} Black bars are 95% confidence intervals. This are a statistical indicator of how closely the reported figures are likely to reflect the 'true' or underlying pattern.

Figure 3: Excess under 75 mortality in adults with SMI, standardised mortality ratio (2009/10-2012/13)



Value for City of London not available Value for London not available Data from HSCIC, analysis by Public Health England

³ This is measured as the ratio of the rate of death in those with SMI against the rate of the death in those without. A mortality ratio of 100 is a 1:1 ratio – there is the same rate of death in both groups. A ratio of greater than 100 means there is a higher rate of death in people with SMI – a ratio of 300 means the rate of death is three times higher.

Premature mortality

Premature mortality, in contrast to excess mortality, is an *absolute* measure that describes the number (rate) of deaths in those aged 18-74 per 100,000 people in the population.

Figure 4 shows that Hackney, in common with all of its statistical peers, has a premature mortality rate for those with SMI which is about half that of England. This lower figure may reflect Hackney's younger demographic profile. For more information on Hackney's demographic profile, see Chapter 1 of the Joint Strategic Needs Assessment (JSNA), *The People of Hackney and the City*. The City of London's results are included, but due to small numbers it is not possible to draw strong conclusions about its premature mortality rate, as a large amount of variation could simply be due to chance.

Figure 5 shows that there was little change in this indicator for Hackney or England between 2008/09 and 2012/13. Trend data is not available for the City of London.



Figure 4: Premature (age 18-74) mortality in adults with SMI per 100,000 population (2012/13)

Hackney value statistically significantly lower than England City of London value not statistically significantly different from England Value for London not available Data from HSCIC, analysis by Public Health England



Figure 5: Premature (age 18-74) mortality in adults with SMI per 100,000 population (2009/10-2012/13)

Value for City of London not available Value for London not available Data from HSCIC, analysis by Public Health England

6.3. Smoking

Smoking is the largest avoidable cause of premature death in those with mental health disorders.^{vi}

People with depression and anxiety may use smoking to reduce symptoms. However, there is some evidence that smoking can actually contribute to depression^x and that smoking cessation is linked to a reduction in depression and anxiety symptoms, equal to or larger than that of antidepressant treatment.^{xi}

Smoking used to be believed to be a protective factor against dementia, but there is now clear evidence that it is a risk factor.^{xii}

6.3.1. The national picture

Nationally, 42% of all tobacco consumed is consumed by people with mental illnesses, who make up 23% of the population.^{xiii} Not only are people with mental ill health more likely to smoke than average, they also smoke more. This is true both for common mental illnesses such as depression and anxiety (32% were smokers in 2010, compared to 21% of the population in general in 2010).^{xiii} and severe mental illnesses such as psychosis (40% were smokers in 2010).^{xiii}

For more on the national picture, see <u>the 2014 primary care guidance on smoking</u> and <u>mental disorders</u> produced by the Royal College of GPs and Royal College of Psychiatrists.

6.3.2. Numbers affected – known to services

In Hackney and the City, 1,593 people with SMI recorded by their GP smoke, making them nearly twice as likely to smoke as the general population (Figure 6). Ninety-four with SMI recorded by their GP have chronic obstructive pulmonary disease (COPD), a condition strongly linked with smoking, making them nearly twice as likely to have COPD as the general population (Figure 7).

In Hackney and the City, 3,061 people with depression recorded by their GP smoke, making them just over one and a half times as likely to smoke as the general population. One hundred and eighty three people with depression recorded by their GP have COPD, making them just over one and a half times as likely to have COPD as the general population (Figure 6, Figure 7).

Smoking is also linked to other long-term physical conditions, such as cancer and cardiovascular disease, which are also much more prevalent in people with SMI (Section 6.5). For more information, see Chapter 3 of the JSNA (*Lifestyle and Behaviour*).

Data is not available separately for Hackney and the City.



Figure 6: Smoking in Hackney and the City residents (2014)

Data extracted from the GP register by Clinical Effectiveness Group (CEG), Blizard Institute, April 2014

Data cover Hackney and the City residents registered with a GP in Hackney, the City of London, Tower Hamlets and Newham.



Figure 7: COPD in Hackney and the City residents (2014)

6.3.3. Numbers affected – estimates

Table 1 provides estimates of the number of people with common and serious mental illness who smoke in Hackney and the City of London. More than 9,000 working age adults with common mental health disorders are estimated to smoke in Hackney, and almost 1,000 older adults. In the City, the numbers are 230 and 44 respectively.

National estimates suggest that smoking is much more common in adults with SMI than in those with common mental health disorders (43% compared with 32%).

No national estimates were found for the prevalence of smoking among those with dementia.

Data extracted from the GP register by CEG, Blizard Institute, April 2014 Data cover Hackney and the City residents registered with a GP in Hackney, the City of London, Tower Hamlets and Newham.

		Hackney		City of London		Total
Condition	Estimated smoking prevalence	Est'd number with condition	Est'd number of people with condition who smoke	Est'd number with condition	Est'd number of people with condition who smoke	est'd number of people with condition who smoke
Mixed anxiety and depression (age 18-64)	32%	29,276	9,368	719	230	9,598
Depression (age 65+)	32%	2,862	916	139	44	960
Serious mental illness (all ages)	43.5%	6,200	2,697	156	68	2,765

Table 1: Estimated number of smokers with named mental health conditions

Estimated smoking rates taken from national rates for depression^{xiv} and local rates for SMI (Figure 6). Estimated number of people with conditions taken from Section 2 Section 3 and Section 5.

6.3.4. Unmet need

Section 6.3.2 and Section 6.3.3 suggest that around 11,000 Hackney and the City residents with depression smoke and 3,100 are known to their GP. This suggests that there are roughly $7,400^4$ people with depression who smoke and are not known to their GPs (71%).

Section 6.3.2 and Section 6.3.3 suggest that around 2,800 Hackney and the City residents with SMI smoke and 1,600 are known to their GP. This suggests that there are roughly $1,200^5$ people with SMI who smoke and are not known to their GPs (42%).

6.3.5. Local action: East London Foundation Trust

Nationally, it is estimated that 70% of current inpatients in mental health units smoke, of whom 50% smoke more than 20 cigarettes a day.^{xv}

A number of mental health NHS trusts have gone 'smoke free', with no smoking allowed anywhere on the hospital grounds for staff, service users or visitors. This includes the London trusts South London and Maudsley NHS Foundation Trust, Tavistock and Portman NHS Foundation Trust and Camden and Islington NHS Foundation Trust.

⁴ Figures do not necessarily sum to total due to rounding.

⁵ Figures do not necessarily sum to total due to rounding.

East London NHS Foundation Trust's forensic units (John Howard Centre and Wolfson House, both located in Hackney and both serving North East London) went smoke free in January 2016. This will be followed by the rest of the trust in a tiered approach, with the entire trust smoke free by 2017.

6.3.6. Evidence for what works

For general information about smoking cessation, see the <u>NICE smoking prevention</u> and cessation pathway.

For specific information on smoking cessation and mental health, see:

- <u>Pharmacy Guidance on Smoking and Mental Health</u> (Forum for Mental Health in Primary Care);
- Improving Physical and Mental Health (Royal College of Psychiatrists);
- Smoking and Mental Health (Action on Health);
- <u>Smoking Cessation in Secondary Care Mental Health Settings</u> (Public Health England).

6.3.7. Services and support available locally

For general information about smoking cessation, see <u>Smokefree Hackney</u> and <u>City</u> <u>of London Stop Smoking Services</u>.

6.4. Healthy weight

'Healthy weight' is defined as having a body mass index (BMI) of 18.5 to 24.9. BMI is calculated on the basis of a person's height and weight. An adult is classified as 'obese' if their BMI is 30 or higher and 'overweight' if their BMI is 25 or over. Cut offs are lower for some ethnic groups.^{xvi}

While tackling obesity is often the main public health focus of healthy weight strategies, mental ill health can be associated with unhealthy weight *loss*,^{xvii,xviii} and the stigma and discrimination around obesity can negatively impact on mental health.^{xix} The data presented below concerns obesity only, but care should be taken not to conflate healthy weight and healthy eating with simply 'not being obese'.

It is important also to note that diet and physical activity have health benefits that are independent of body weight, including mental health benefits.^{xx, xxi, xxii}

6.4.1. The national picture

Depression

Strong links have been found between obesity and depression. In an analysis of international data, obese adults were found to have a 55% increased risk of developing depression compared to those of a healthy weight; conversely, people with depression were found to have a 58% increased risk of developing obesity compared to those without.^{xxiii}

This is important for health and wellbeing because of the significant disease risk associated with obesity, including Type 2 diabetes, cardiovascular disease and some cancers. For more information, see Chapter 3 of the JSNA (*Lifestyle and Behaviour*).

Severe and enduring mental illness

Obesity and other metabolic changes, including extreme tiredness, are a common side effect of some antipsychotic medicines taken by many people with SMI and other severe and enduring mental illnesses (including some people with severe depression or anxiety).^{xxiv} Severe and enduring mental illnesses often include loss of energy or motivation (see section 3 of this chapter) which can make people less likely to exercise or eat healthily.

6.4.2. Numbers affected – known to services

In Hackney and the City, 1,210 people with SMI recorded by their GP are obese (BMI of 30+) and 230 are very obese (BMI of 40+). This means they are nearly twice as likely to be obese and over two and a half times as likely to be very obese as the general population (Figure 8). This puts them at increased risk of obesity-related disease and disability (Section 6.5.2).

In Hackney and the City, 1,844 people with depression recorded by their GP are obese and 274 are very obese (Figure 8). This means they are also more likely to be obese and very obese than the general population (although much less so than people with SMI).





Local data: Extracted from the GP register by CEG, Blizard Institute, April 2014 Data cover Hackney and the City residents registered with a GP in Hackney, the City of London, Tower Hamlets and Newham.

6.4.3. Numbers affected – estimates

In Hackney, it is estimated that over 8,000 working age adult residents and around 800 older adult residents with common mental health disorders are obese (Table 2). In the City of London, it is estimated that around 200 working age adult residents and around 40 older adult residents with common mental health disorders are obese.

Table 2: Estimated number of people with depression in Hackney and the City who are obese

		Hackney		City of London		Total
Condition	Est'd obesity rate in those with depression in Hackney and the City	Est'd number with condition	Est'd number of people with condition who are obese	Est'd number with condition	Est'd number of people with condition who	est'd number of people with condition who are obese
Mixed anxiety and depression (age 18-64)	28%	29,276	8,197	719	201	8,399
Depression (age 65+)		2,862	801	139	39	840

Estimated obesity rate in those with depression in Hackney and the City based on 17.7% rate in general population (based on data extracted from the GP register by CEG, Blizard Institute, April 2014) and 58% increased risk of obesity in those with depression^{xxiii}

Estimated number of people with conditions taken from Section 2 and Section 3. No national prevalence estimates could be found for obesity in those with common mental illnesses, SMI or dementia

6.4.4. Unmet need

Section 6.4.2 and Section 6.4.3 suggest that around 9,200 Hackney and the City residents with depression smoke and 1,800 are known to their GP. This suggests that there are roughly 7,400⁶ (80%) people with depression who are obese and are not known to their GPs.

No estimates are available for obesity rates in those with SMI.

6.4.5. Evidence for what works

For general information about healthy weight, nutrition and physical activity, see the NICE pathways for <u>obesity</u>, <u>improving people's diet</u> and <u>encouraging physical</u> <u>activity</u>.

For specific information on healthy weight and mental health, see:

- Obesity and Mental Health (Public Health England);
- <u>Healthy Eating and Depression</u> (Mental Health Foundation);
- Improving Physical and Mental Health (Royal College of Psychiatrists).

6.4.6. Services and support available locally

For general information about physical activity, see <u>Hackney Council Sports and</u> <u>Leisure</u> and <u>City of London Exercise Classes</u>. A full overview of nutrition, physical activity and healthy weight be available in Chapter 3 of the JSNA, to be updated later in 2016.

⁶ Figures do not necessarily sum to total due to rounding.

For general information about nutrition, physical activity and healthy weight, see Chapter 3 of the JSNA (*Lifestyle and Behaviour*).

6.5. Physical and mental comorbidities

A recent joint report by the King's Fund and the Centre for Mental Health summarised the impact of mental ill health on long-term physical conditions as 'poorer clinical outcomes, lower quality of life and reduced ability to manage physical symptoms effectively'.^{xxv}

6.5.1. The national picture

It has been estimated that 30% of adults with long-term physical conditions also have mental health problems (compared to 20% of the population as a whole) and 46% of people with a mental health problem have one or more long-term physical conditions (compared to 30% of the population as a whole).^{xxv}

Common mental health disorders

Long-term physical conditions can cause and exacerbate depression; they can also be caused or exacerbated by depression.^{xxvi} This means that people with long-term physical conditions are at increased risk of depression, and so as well as monitoring and promoting the physical health of those with common mental health disorders, it is also important to monitor and promote the mental health of those with long-term physical conditions.

Severe and enduring mental health disorders

In illnesses such as schizophrenia and bipolar disorder, long-term physical conditions cannot cause the mental illness, but self-neglect and lifestyle factors such as smoking (Section 6.3), obesity (Section 6.4) and increased alcohol consumption^{xxvii} associated with the mental illness can both bring on and exacerbate long-term physical conditions. It is also the case that long-term physical conditions can exacerbate existing severe mental illness.

Dementia

People with dementia may be unable to recognise or communicate physical health warning signs; they are also at risk of self-neglect, through being unable to remember, unable to carry out, or lacking in motivation to carry out self-care.^{xxviii}

6.5.2. Numbers affected – known to services

Depression

In Hackney and the City, adults with depression recorded by their GP are more likely than average to have active asthma, multiple sclerosis (MS), COPD and epilepsy (Figure 9). Having a physical condition increases the risk of developing depression; it

is also the case that active asthma and COPD are both linked to smoking and people with depression are more likely to smoke (Section 6.3).

Figure 9: Long term physical conditions in Hackney and the City residents with depression compared to general population



Local data: Extracted from the GP register by CEG, Blizard Institute, April 2014 Data cover Hackney and the City residents registered with a GP in Hackney, the City of London, Tower Hamlets and Newham.

SMI

In Hackney and the City, adults with SMI recorded by their GP are more likely to have most long-term physical health conditions than average. Diabetes and hypertension are the two most common conditions; those with SMI are 2.4 times as likely to have diabetes and 1.6 times as likely to have hypertension than average.

Many of these physical conditions are linked to smoking (Section 6.3) and diet, weight and physical activity (Section 6.40). In particular, people with SMI are not at increased risk of Type 1 diabetes (which is largely genetically determined) but are at a vastly increased risk of Type 2 diabetes (which has both a genetic and a lifestyle component).

Figure 10: Long term physical conditions in Hackney and the City residents with SMI compared to general population



Local data: Extracted from the GP register by CEG, Blizard Institute, April 2014 Data cover Hackney and the City residents registered with a GP in Hackney, the City of London, Tower Hamlets and Newham.

Dementia

Alzheimer's disease is known to be associated with an increased risk of epilepsy; the exact causal mechanisms behind this are still unclear.^{xxix} In Hackney and the City, people with dementia recorded are also more likely to have chronic heart disease (CHD), cancer and hypertension than all residents aged 65+. However, these conditions are all age-linked, as is dementia; it is not possible from the available data to control for this, so we do not know how much of the effect is due to the fact that the subgroup of people age 65+ with dementia is likely to have an older age distribution than the general population age 65+.

Figure 11: Long term physical conditions in Hackney and the City residents with dementia compared to general population



Hackney and the City residents with dementia recorded
65+ GP registered Hackney and the City residents

Local data: Extracted from the GP register by CEG, Blizard Institute, April 2014 Data cover Hackney and the City residents registered with a GP in Hackney, the City of London, Tower Hamlets and Newham.

6.5.3. Comparisons with other areas and over time

Data are collected from general practice on 'process measures' which monitor the quality of physical health care provided by GPs to patients with SMI. This section describes how City and Hackney performs on these measures compared to other areas. These data are from 2013/14; work has been done since then to improve the identification and management of long-term conditions in all City and Hackney patients.

People with SMI should have certain physical health checks every year, including alcohol consumption, blood glucose, blood pressure, BMI, cholesterol and, where appropriate, cervical screening.

The data presented in this section shows that City and Hackney performs as well as or slightly better than England, and similarly to most of its 'statistical peers',⁷ on ensuring that patients recorded as having SMI by their GP receive these checks every 12 months.

Please note: For all of the following indicators, the variation in performance between different areas is quite small in percentage terms. The graphs comparing City and Hackney to its statistical peers and England have therefore been 'cut' at the vertical axis in order to adjust the scale and make the differences in performance easier to see. Even when the differences are statistically significant they still take place in a narrow range.

The graphs showing performance over time have not been cut at the vertical axis, in order to make the scale of change over time clear across the different indicators.

Blood glucose

Figure 12 shows that City and Hackney has a similar proportion of patients with SMI recorded by their GP receiving a regular blood glucose check compared to England and most of its statistical peers, with around three-quarters having received such a test in the last year.

Figure 13 shows that there was an improvement of around 10 percentage points in this indicator from 2012/13 to 2013/14 both locally and nationally, with City and Hackney improving slightly more than the national average.

⁷ Local authorities with a similar demographic make up to Hackney, used for the purpose of comparisons. This chapter of the JSNA follows the 2014 *Mental Health Needs Assessment*, which used a previous version of Hackney's statistical peers ('London Cosmopolitan'): Brent, Haringey, Lambeth, Lewisham, Newham and Southwark.





City and Hackney Clinical Commissioning Group (CCG) not statistically significantly different from England

Value not available for London

Data from Quality and Outcomes Framework (QOF), analysis by Public Health England. xxx





Value not available for London Data from QOF, analysis by Public Health England

Blood pressure

Figure 14 shows that City and Hackney has a slightly higher proportion of SMI patients receiving a regular blood pressure check than England, but a similar proportion to most of its peers, with 86% having received such a test in the last year.

Figure 15 shows that the national performance dropped slightly between 2012/13 and 2013/14 while City and Hackney's performance remained steady.

Figure 14: Patients with SMI recorded by GP (all ages) with blood pressure check in last 12 months (2013/14)



City and Hackney CCG statistically significantly higher than England Value not available for London Data from QOF, analysis by Public Health England

Figure 15: Patients with SMI recorded by GP (all ages) with blood pressure check in last 12 months (2012/13-2013/14)



Value not available for London Data from QOF, analysis by Public Health England

BMI

Figure 16 shows that more SMI patients in City and Hackney have their BMI checked regularly than is the case in England as a whole and in most of its statistical peers, with 85% receiving such a check in the last year compared to 79% nationally.

Figure 17 shows that City and Hackney's performance on this indicator rose slightly between 2012/13 and 2013/14, while the national performance fell slightly.



Figure 16: Patients with SMI recorded by GP (all ages) with BMI check in last 12 months (2013/14)

City and Hackney CCG statistically significantly higher than England Value not available for London Data from QOF, analysis by Public Health England

Figure 17: Patients with SMI recorded by GP (all ages) with BMI check in last 12 months (2012/13-2013/14)



Value not available for London Data from QOF, analysis by Public Health England

Cholesterol

Figure 18 shows that City and Hackney CCG has a similar proportion of patients with SMI recorded by their GP receiving a regular cholesterol check compared to England and most of its statistical peers, with 71% having received such a test in the last year.

Figure 19 shows that there was a very big improvement in this indicator both locally and nationally between 2012/13 and 2013/14, increasing from around 40% to around 70%.

Figure 18: Patients with SMI recorded by GP (all ages) with cholesterol check in last 12 months (2013/14)



City and Hackney CCG not statistically significantly different from England Value not available for London Data from QOF, analysis by Public Health England

Figure 19: Patients with SMI recorded by GP (all ages) with cholesterol check in last 12 months (2012/13-2013/14)



Value not available for London Data from QOF, analysis by Public Health England

Cervical screening

Figure 20 shows that City and Hackney had a similar proportion of female patients with SMI recorded by their GP receiving a cervical check to England and most of its statistical peers, with 72% having received such a test in the last year.

Figure 21 shows that there was little change in this indicator locally or nationally between 2012/13 and 2013/14.



Figure 20: Female patients with SMI (all ages) recorded by GP with cervical check in last 12 months (2013/14)

City and Hackney CCG not statistically significantly different from England Value not available for London Data from QOF, analysis by Public Health England

Figure 21: Female patients with SMI recorded by GP (all ages) with cervical check in last 12 months (2012/13-2013/14)



Value not available for London Data from QOF, analysis by Public Health England

6.5.4. Health inequalities

We have no local data on health inequalities in this area. However, we do know that nationally, high levels of deprivation contribute to poorer mental and physical health outcomes. Notably, a recent paper examining multimorbidities in the records of 1.75 million people in Scotland found

Stakeholders working with Hackney's sensory impaired communities note that older adults are more like to experience hearing and vision loss. These contribute to social isolation and loss of independence, both of which are risk factors for common mental health disorders.

that 11% of those in areas of highest deprivation had both physical and mental health disorders, compared to 5.9% of those in areas of lowest deprivation.xxxi

This is relevant to the *resident* population of Hackney and the City of London, as well as the daytime *working* population of the City of London which includes both high earners in the financial industry and lower paid workers in the service industry (See Chapter 1 of the JSNA, <u>The People of Hackney and the City</u>, for more details).

6.6. Infographic: The health gap for those with severe mental illness



ⁱ National Obesity Observatory (2011). Obesity and mental health.

http://www.noo.org.uk/uploads/doc/vid_10266_Obesity%20and%20mental%20health_FINAL_070311 _MG.pdf

ⁱⁱ National Obesity Observatory (2011). Obesity and mental health.

http://www.noo.org.uk/uploads/doc/vid_10266_Obesity%20and%20mental%20health_FINAL_070311 _MG.pdf

^{III} Markowitz, S, Friedman, M.A. & Arent, S.M. (2008). Understanding the relation between obesity and depression: Causal mechanisms and implications for treatment. *Clinical Psychology: Science and Practice*, 15(1), 1-20.

^{iv} Napolitano, M.A. & Foster, G.D. (2008). Depression and obesity: Implications for assessment, treatment and research. *Clinical Psychology: Science and Practice*, 15(1): 21-27.

^v Chesney, E, Goodwin, GM, & Fazel, S (2014). Risks of all-cause and suicide mortality in mental disorders: a meta-review. *World Psychiatry*, *13*(2), 153-160.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4102288/

^{vi} Brown S, Kim M, Mitchell C et al (2010). Twenty-five year mortality of a community cohort with schizophrenia. *BJPsych*, 196, 116-121. <u>http://bjp.rcpsych.org/content/196/2/116</u>

^{vii} Chang C-K, Hayes RD, Perera G et al (2011). Life expectancy at birth for people with serious mental illness and other major disorders from a secondary mental health care case register in London. *PLoS ONE* 6(5), e19590.

http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0019590

^{viii} Russ, T. C., Stamatakis, E., Hamer, M., Starr, J. M., Kivimäki, M., & Batty, G. D. (2012). Association between psychological distress and mortality: individual participant pooled analysis of 10 prospective cohort studies. *BMJ*, *345*, e4933.

http://www.bmj.com/content/345/bmj.e4933

^{ix} [Web page] Public Health England. Severe Mental Illness Profiles. *Retrieved 1st December 2015 from* <u>http://fingertips.phe.org.uk/profile-group/mental-health/profile/severe-mental-illness</u>

[×] Munafò, M. R., & Araya, R. (2010). Cigarette smoking and depression: a question of causation. *The British Journal of Psychiatry*, *196*(6), 425-426. <u>http://bjp.rcpsych.org/content/196/6/425</u>

^{xi} Taylor, G., McNeill, A., Girling, A., Farley, A., Lindson-Hawley, N., & Aveyard, P. (2014). Change in mental health after smoking cessation: systematic review and meta-analysis. *BMJ*, *348*, g1151. http://www.bmj.com/content/348/bmj.g1151

^{xii} Royal College of Physicians, Royal College of Psychiatrists (2013). Smoking and mental health. Royal College of Psychiatrists Council Report CR178.

http://www.ncsct.co.uk/usr/pub/Smoking%20and%20mental%20health.pdf

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

xiv Szatkowski, L., & McNeill, A. (2013). The delivery of smoking cessation interventions to primary care patients with mental health problems. *Addiction*, *108*(8), 1487-1494. http://onlinelibrary.wiley.com/doi/10.1111/add.12163/abstract

^{xv} Jochelson J, Majrowski B (2006). Clearing the Air. Debating Smoke-Free Policies in Psychiatric Units. King's Fund. <u>http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/clearing-the-air-debating-smoke-free-policies-psychiatric-units-karen-jochelson-bill-majrowski-kings-fund-18-july-2006.pdf</u>

^{xvi} NICE (2014) Body mass index thresholds for intervening to prevent ill health among black, Asian and other minority ethnic groups. NICE LGB13.

https://www.nice.org.uk/advice/lgb13/chapter/introduction

^{xvii} Stunkard, A. J., Fernstrom, M. H., Price, R. A., Frank, E., & Kupfer, D. J. (1990). Direction of weight change in recurrent depression: consistency across episodes. *Archives of General Psychiatry*, *47*(9), 857-860. <u>http://archpsyc.jamanetwork.com/article.aspx?articleid=495109</u>

^{xviii} National Collaborating Centre for Mental Health (2004). Eating Disorders: Core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related eating disorders. NICE Clinical Guidance 9.

http://www.nccmh.org.uk/downloads/Eating_disorders/ED_CG9_Full_Guideline.pdf

xix National Obesity Observatory (2011). Obesity and mental health.

http://www.noo.org.uk/uploads/doc/vid_10266_Obesity%20and%20mental%20health_FINAL_070311 _MG.pdf ^{xx} Scully, D., Kremer, J., Meade, M., Graham, R., Dudgeon, K. (1998). Physical exercise and psychological wellbeing: a critical review. *British Journal of Sports Medicine*. 32(2):111-120. <u>http://bjsm.bmj.com/content/32/2/111.short</u>

^{xxi} Walsh, R. (2011) Lifestyle and mental health. *American Psychologist* 66(7):579-592. http://psycnet.apa.org/journals/amp/66/7/579/

^{xxii} Gomez-Pinilla, F. (2008) The influences of diet and exercise on mental health through hormesis. *Ageing Research Reviews*. 7(1):49-62.

http://www.sciencedirect.com/science/article/pii/S1568163707000219

^{xxiii} Luppino, F. S., de Wit, L. M., Bouvy, P. F., Stijnen, T., Cuijpers, P., Penninx, B. W., & Zitman, F. G. (2010). Overweight, obesity, and depression: a systematic review and meta-analysis of longitudinal studies. *Archives of general psychiatry*, *67*(3), 220-229.

http://archpsyc.jamanetwork.com/article.aspx?articleID=210608

^{xxiv} Lieberman, J. A. (2004) Metabolic changes associated with antipsychotic use. The Primary Care Companion to the Journal of Clinical Psychiatry. 6(suppl 2):8-13. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC487012/

^{xxv} Naylor, C., Parsonage, M. et al (2012). Long-term conditions and mental health. Joint report from The King's Fund and The Centre for Mental Health.

http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/long-term-conditions-mentalhealth-cost-comorbidities-naylor-feb12.pdf

^{xxvi} National Collaborating Centre for Mental Health (2010). Depression in Adults with a Chronic Physical Health Problem. NICE Clincial Guidance 91.

http://www.nice.org.uk/guidance/cg91/evidence/full-guideline-243876061

^{xxvii} Drake, R., Mueser, K. (2002). Co-Occurring Alcohol Use Disorder and Schizophrenia. Alcohol Research & Health 26(2):99-102. <u>http://pubs.niaaa.nih.gov/publications/arh26-2/99-102.pdf</u>

^{xxviii} Pavlou, M. P., Lachs, M. S. (2008). Self-neglect in Older Adults: a Primer for Clinicians. Journal of General Internal Medicine 23(11):1841-1846. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2585676/
^{xxix} Minkeviciene, R., Rheims, S., Dobszay, M.B., Zilberter, M., Hartikainen, J, Fülöp, L, Penke, B., Zilberter, Y., Harkany, T., Pitkänen, A., Tanila, H. (2009). Amyloid β-Induced Neuronal Hyperexcitability Triggers Progressive Epilepsy. Journal of Neuroscience 29(11):3453-3462. http://www.jneurosci.org/content/29/11/3453.full

^{xxx} [Web page] Public Health England. Severe Mental Illness Profiles. *Retrieved 1st December 2015 from* <u>http://fingertips.phe.org.uk/profile-group/mental-health/profile/severe-mental-illness</u>

^{xxxi} Barnett, K., Mercer, S. W., Norbury, M., Watt, G., Wyke, S., & Guthrie, B. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet*, *380*(9836), 37-43.

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)60240-2/fulltext