QualityWatch

Focus on: People with mental ill health and hospital use

Exploring disparities in hospital use for physical healthcare

Research summary
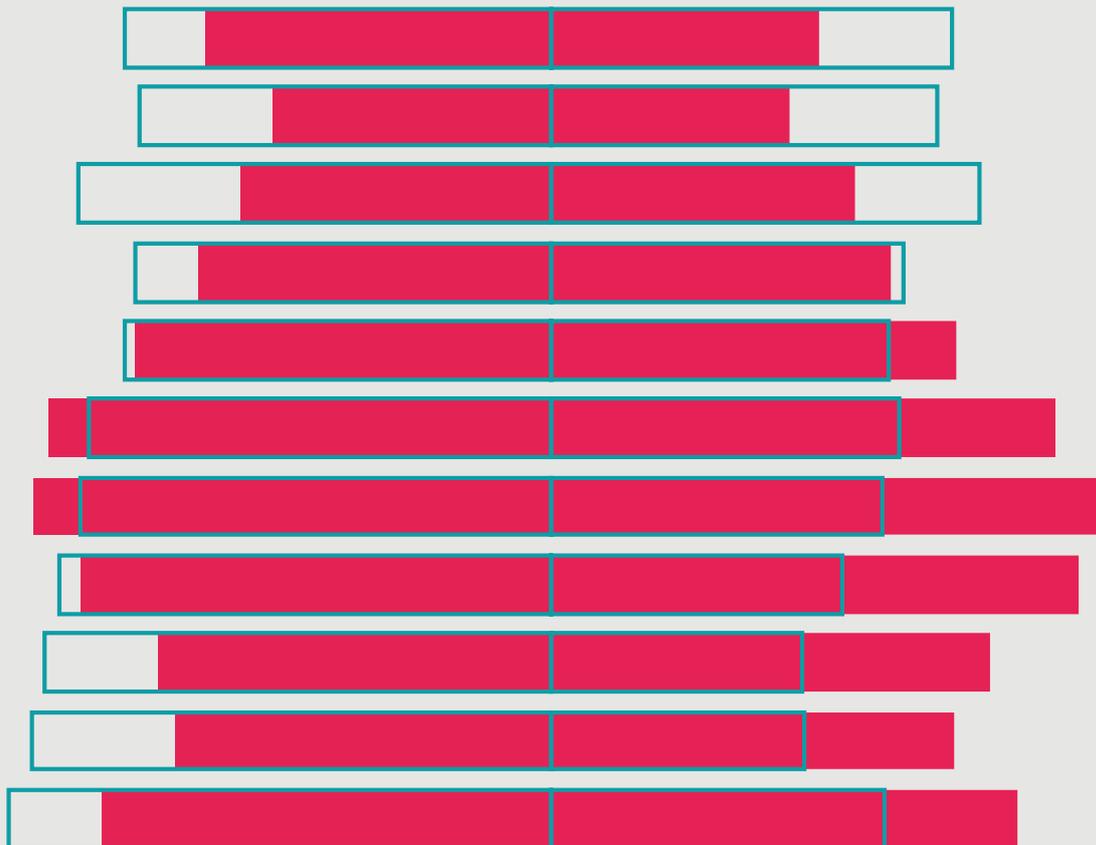
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About QualityWatch

QualityWatch is a major research programme providing independent scrutiny into how the quality of health and social care is changing. Developed in partnership by the Nuffield Trust and the Health Foundation, the programme provides in-depth analysis of key topics and tracks an extensive range of quality indicators. It aims to provide an independent picture of the quality of care, and is designed to help those working in health and social care to identify priority areas for improvement. The programme is primarily focused on the NHS and social care in England, but also draws on evidence from other UK and international health systems.

The QualityWatch website **www.qualitywatch.org.uk** presents key indicators by area of quality and sector of care, together with analysis of the data. This free online resource also provides research reports, interactive charts and expert commentary.

About this report

QualityWatch Focus On reports are regular, in-depth analyses of key topics. These studies exploit new and innovative methodologies to provide a fresh view of quality in specific aspects of health and social care. This QualityWatch Focus On uses Hospital Episode Statistics data to explore whether differences exist in how people with mental ill health use hospital services compared to those without mental ill health. This research summary provides an overview of the key findings from the report. The full report can be accessed at **www.qualitywatch.org.uk/mental-physical** .

Acknowledgements

Key points

This report looks at emergency and planned hospital use for people with mental ill health compared to those without. We considered whether other factors, beyond mental ill health, contributed to the differences that were found. We also examined whether people with mental ill health had more potentially preventable hospital admissions. Finally, we explored whether people with mental ill health were more likely to have an emergency rather than a planned admission or stay longer in hospital for some common procedures. We found that:

- People with mental ill health use more emergency care than people without mental ill health. In 2013/14, they had 3.2 times more A&E attendances and 4.9 times more emergency inpatient admissions. Conversely, people with mental ill health used slightly less planned inpatient care than people without.

- Only a small part of the emergency care used by people with mental ill health was directly for mental health needs. In 2013/14, one fifth of emergency inpatient activity for those with mental ill health was to directly support their mental health. This means that the majority of care is used to support other health concerns.

- Deprivation is strongly associated with emergency care use. In 2013/14, the most deprived people with mental ill health visited A&E 1.8 times more than the least deprived and had 1.5 times more emergency inpatient admissions.

- People with mental ill health had 3.6 times more potentially preventable emergency admissions than those without mental ill health in 2013/14.

- For some common inpatient procedures, people with mental ill health were more likely to have an emergency rather than a planned admission, stay longer in hospital or be admitted overnight.

- The high levels of emergency care use by people with mental ill health indicate that they are not having their care well managed and suggest that there are opportunities for planned care (inside and outside of the hospital) to do more. These people are well known to the healthcare system and are having many health encounters. All of these encounters represent opportunities to identify and support their physical health needs.

A glossary providing definitions of the key terms used in this paper is included on page 10.

This is a research summary. The full report can be accessed at:
www.qualitywatch.org.uk/mental-physical

Introduction

A greater proportion of people with mental ill health have poor physical health compared to the general population (De Hert and others, 2009), and they die younger (Chief Medical Officer, 2013; QualityWatch, 2015). These differences are most profound for people with serious mental illnesses (see glossary for definition), such as psychosis or bipolar disorder, who die on average 10 to 17 years earlier than the general population (Chief Medical Officer, 2013).

Considering physical health alongside mental health is imperative in order to address the disparities in life expectancy for those with mental ill health. Recently, there has been a greater focus, both at a national and local level, on the ambition to achieve 'parity of esteem' between physical and mental health, i.e. to ensure people are able to maintain both their physical and mental wellbeing. The 2011 cross-government strategy 'No Health Without Mental Health' aimed to improve the physical health of people with mental ill health (HM Government, 2011). Even more recently, in March 2015, the Mental Health Taskforce was formed with the aim of developing a five-year strategy on mental health (NHS England, 2015).

In order for these policy measures to be effective, we must improve our understanding of how people with mental ill health use hospital services – both in terms of what type of care they use and how much. We are particularly interested in hospital care related to physical health conditions.

This study therefore aims to address the following questions:

- Do people who have previously used hospital services for mental ill health go on to use more hospital care than those who have not?

- If so, are there other factors, beyond mental ill health, behind these differences?

- Do people with mental ill health have more potentially preventable hospital admissions than those without?

- Are people with mental ill health more likely to have an emergency rather than a planned admission or stay longer in hospital for common physical health procedures than those without?

Approach

This analysis was conducted using Hospital Episode Statistics (HES) data from April 2007 to March 2014. The HES datasets include all planned and emergency inpatient admissions, outpatient appointments and A&E attendances in NHS hospitals in England (see glossary for definitions). Using all datasets allowed us to gain a detailed picture of a patient's hospital use. On average, these datasets cover roughly 100 million care events each year. We limited our analysis to adults aged under 75 years in order to reflect the age limits in the definition of premature mortality.

We identified three cohorts (patient groups) of interest (see Figure 1).

The **mental health cohort or 'MH cohort'** were patients who used hospital services for mental ill health in a given year. This was defined as patients who had at least one inpatient admission or outpatient appointment with a primary diagnosis of any mental and behavioural disorder, or where the main specialty (medical specialty

under which the hospital consultant is contracted) was mental health within that given year. This cohort included all those with a serious mental illness.

The **serious mental illness or 'SMI' cohort** were a subset of the MH cohort who had at least one inpatient admission or outpatient appointment with a primary diagnosis of schizophrenia, bipolar disorder or psychosis in a given year.

The **physical health cohort or 'PH cohort'** were patients who used hospital services in a given year but had no record of mental ill health (see 'MH cohort' definition above).

Excluded from the study were those who had a secondary diagnosis of any mental and behavioural disorder. We also excluded people from the PH cohort who had any inpatient or outpatient activity relating to mental ill health in the previous two years.

Figure 1: The number of people in each cohort

PH cohort
91% of hospital users*
(n=13,140,421)

MH cohort
4% of hospital users*
(n=535,739)

Excluded from the study
6% of hospital users*
(n=819,521)

**SMI subgroup**
10% of MH cohort
(n=50,987)
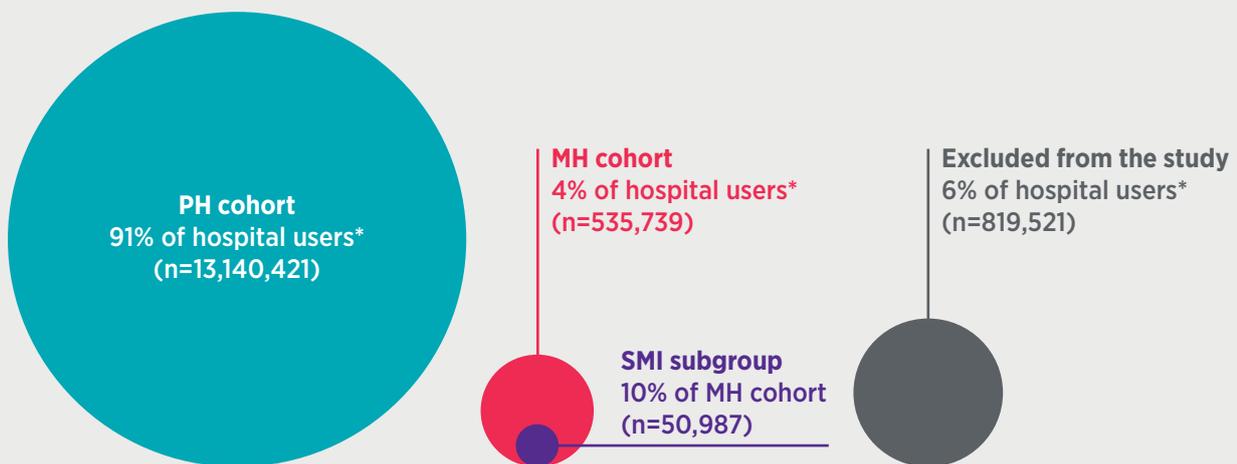
*Proportion of unique hospital users between 18 and 74 in 2009/10 inpatient and outpatient data

Having identified the cohorts, we then looked at hospital activity (see glossary for definition) for the patients within these groups.

To understand why we see differences in hospital use in our cohorts we need to capture any other factors which may influence a person's hospital use beyond their health needs, such as age and deprivation. To provide a simple comparison, Figure 2 shows the differences in characteristics of the cohorts identified.

Figure 2: How do people with mental ill health in our study differ from those without?

**People with mental ill health –
'MH cohort'*:**
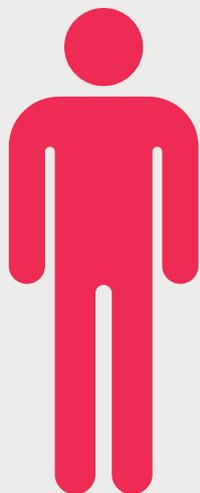
- are younger (40% under 40)

- 50% male

- are more deprived
  (18% in the most deprived
  areas of the country)

- have similar levels of
  long-term conditions
  (21% have at least one
  long-term physical condition)

**Compared to people with no
mental ill health – 'PH cohort':**
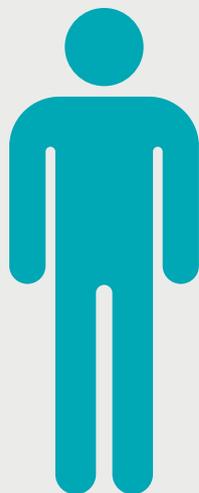
- 36% are under 40

- 42% male

- 10% in the most deprived
  areas of the country

- 24% have at least one
  long-term physical
  condition

*Demographic information based on 2009/10 cohorts

Findings

People with mental ill health use more emergency care than people without mental ill health.

Emergency care includes A&E attendances and emergency inpatient admissions. Figure 3 shows how the rate of emergency care use varies by cohort over time. The MH cohort used more emergency care than the PH cohort in all the years in our study. The SMI group were the highest care users of emergency care in all years.

The rate of emergency inpatient admissions and A&E attendances increased over time for the MH cohort: in 2009/10, the MH cohort had 2.7 times more A&E attendances than the PH cohort, and this increased to 3.2 times more in 2013/14. The MH cohort had 3.6 times more emergency inpatient admissions in 2009/10. This increased to 4.9 in 2013/14 – this was due to a decrease in the rate of emergency inpatient admissions in the PH cohort.

Only a small part of the emergency care used by people with mental ill health was explicitly for mental health needs.

Previously, we showed that 21 per cent of the MH cohort had at least one long-term physical condition (see Figure 2) and it is well known that physical health concerns contribute to premature mortality in those with mental ill health.

Figure 4 shows the proportion of emergency inpatient admissions that related to the patients' mental health for our cohorts. For the MH cohort, just 19 per cent of emergency inpatient admissions was directly related to patients' mental health needs. This means that if emergency inpatient admissions related to mental health are excluded, the MH cohort experienced 3.9 times more emergency inpatient admissions than the PH cohort in 2013/14.

## Figure 3: How does emergency care use vary in those with mental ill health?

A&E attendances

Emergency inpatient admissions

Legend: PH cohort · MH cohort · SMI subgroup
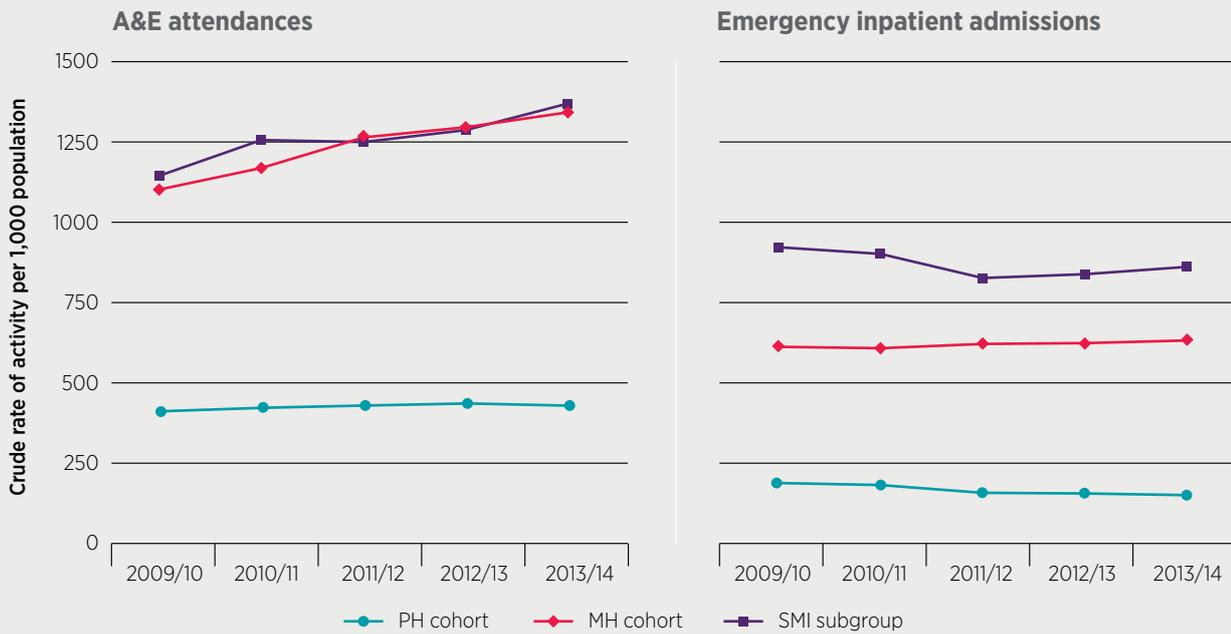
Figure 4: What proportion of emergency inpatient admissions are used for support with mental health?

Emergency inpatient admissions

Legend: MH cohort (all activity) · PH cohort (excluding activity relating to mental health) · MH cohort (excluding activity relating to mental health)
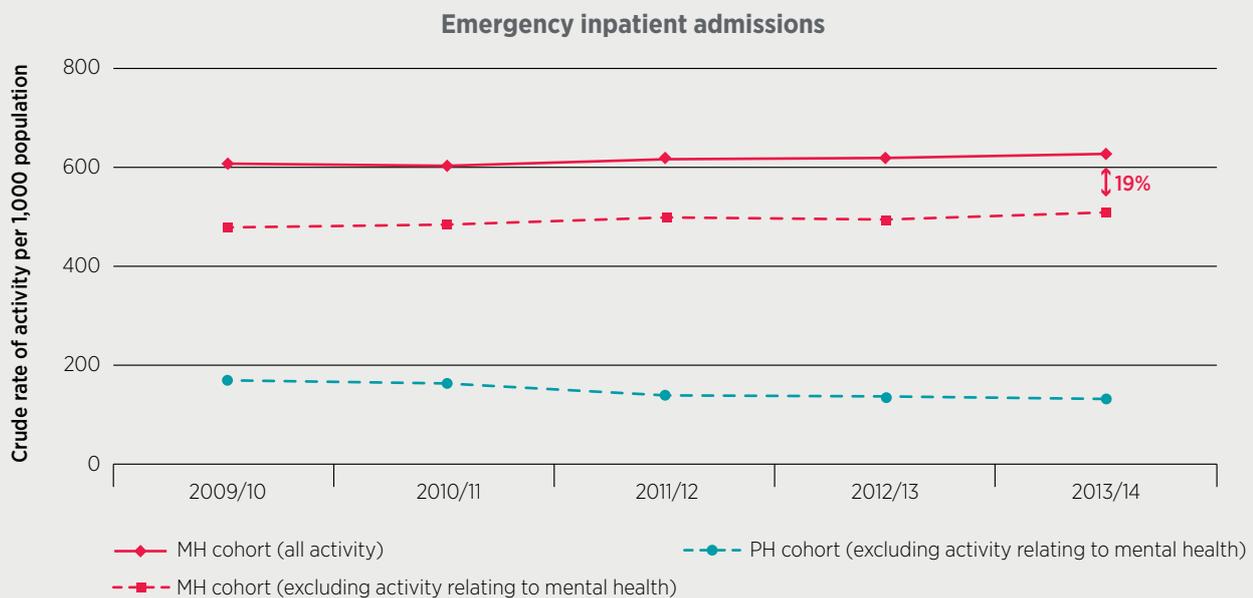
> **Deprivation is strongly associated with emergency hospital use. The most deprived people with mental ill health experienced more A&E attendances and emergency inpatient admissions than the least deprived.**

This study identified a strong association between emergency care use and deprivation in both cohorts. Figure 5 shows how A&E attendances in 2013/14 varied by decile of deprivation for the MH and PH cohorts. For the MH cohort, the most deprived decile had 1.8 times more A&E attendances than the least deprived. A similar picture is found in emergency inpatient admissions, where the most deprived group used 1.5 times the care used by the least deprived group in the MH cohort.

Inequalities in levels of emergency hospital activity across deprivation deciles have remained consistent over the past five years for people with mental ill health.

Many studies show a link between mental ill health and socio-economic deprivation. We found that the MH cohort was more deprived than the PH cohort (see Figure 2) and in 2013/14, 62 per cent of all A&E attendances for people with mental ill health were from the three most deprived categories.

Figure 5: What is the relationship between deprivation and A&E use?

A&E attendances in 2013/14
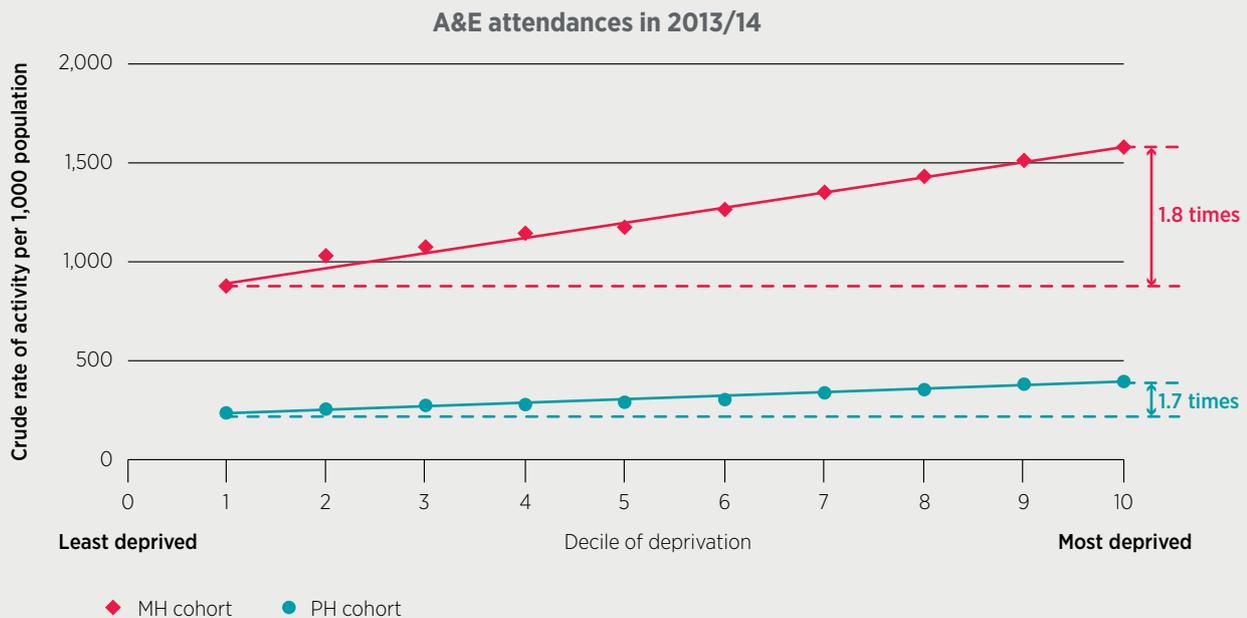
Those with mental ill health had a higher rate of potentially preventable emergency admissions than those without.

As we had observed high rates of emergency inpatient admissions in our MH cohort, we used standard methods to understand what proportion of these were for a group of conditions commonly regarded as potentially preventable (see glossary for definition) – ambulatory care sensitive (ACS) conditions. These include conditions such as asthma, urinary tract infections and hypertension. The MH cohort had higher rates of emergency ACS admissions compared to the PH cohort in 2013/14 (74.2 per 1,000 and 20.6 per 1,000, respectively).

People with mental ill health used less planned inpatient care than people without mental ill health.

Planned hospital care includes planned inpatient admissions and outpatient appointments. The levels of planned hospital care a patient receives can be an important indicator of how well their health needs are being managed. Given that the mental health cohort has complex health needs, we might expect them to have higher levels of planned care to support these needs.

Figure 6 shows the rate of planned care for both cohorts over time. The MH cohort used slightly less planned inpatient care than people without mental ill health. In 2013/14, this was 353.9 per 1,000 compared to 404.6 per 1,000 in the PH cohort.

Conversely, for outpatient appointments, the MH cohort used more care, with twice as many appointments in 2013/14. The number of outpatient appointments increased greatly (by 20 per cent) over time for the MH cohort, from 4,900 per 1000 in 2009/10 to 5,900 in 2013/14. This means that in 2013/14, each person had, on average, six outpatient appointments.

Figure 6: How does planned care use vary in those with mental ill health?
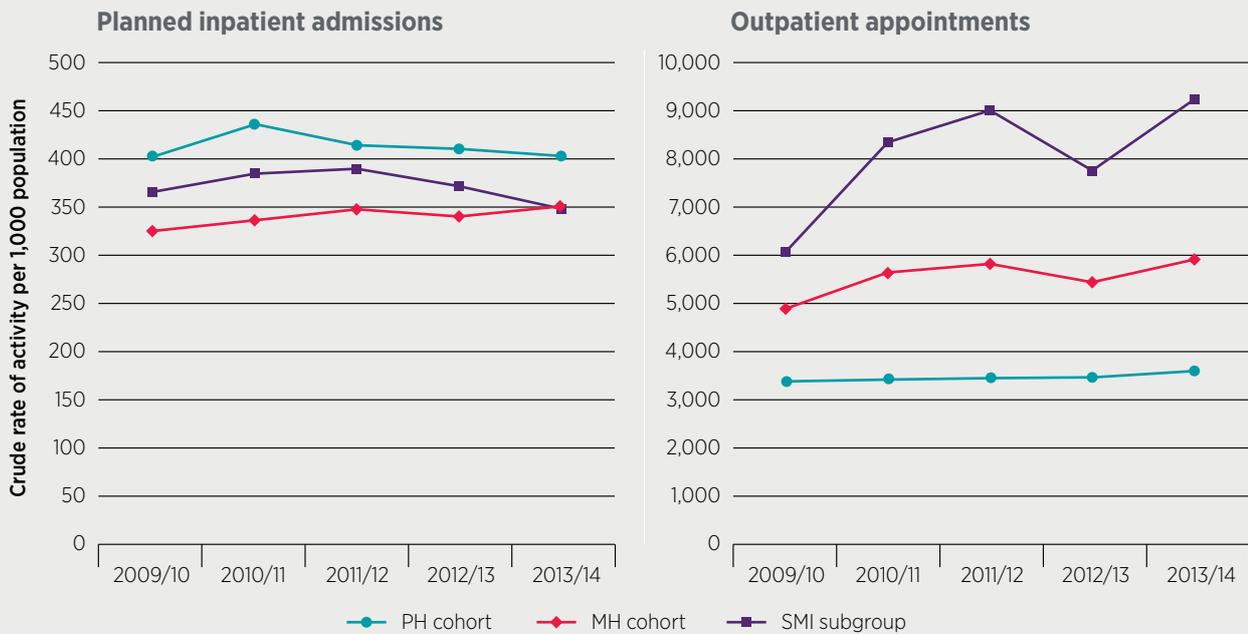
Planned inpatient admissions

Outpatient appointments

PH cohort   MH cohort   SMI subgroup

> **For some common inpatient procedures, people with mental ill health were more likely to have an emergency rather than a planned admission, stay longer in hospital or be admitted overnight.**

Those in the MH cohort were more likely than the PH cohort to have an emergency rather than a planned admission, even for the same procedure. For procedures related to the upper digestive tract, for example, 21 per cent of the MH cohort had emergency hospital admissions, compared to 4.9 per cent in the PH cohort in 2013/14. For hip replacements, this was 40.1 per cent of the MH cohort versus 8.2 per cent of the PH cohort.

Furthermore, the mean length of stay is higher in the MH cohort for many procedures. In 2013/14, those in the MH cohort were likely to stay 3.1 days longer than those in the PH cohort for procedures related to the upper digestive tract, and 6.7 days longer for a hip replacement.

The other noticeable difference is in the proportion of admissions requiring an overnight stay. This is higher in the MH cohort: 17 per cent of cataract procedures required an overnight admission in the MH cohort, compared to just 3 per cent in the PH cohort in 2013/14.

Discussion

Having an understanding of patterns of hospital care use by people with mental ill health is of importance to policy-makers, commissioners and providers as they strive to improve the quality of physical healthcare and work towards achieving parity of esteem.

In this report we explored how hospital use varies between people who have previously used hospital services for mental ill health and people whose previous hospital use does not relate to mental health. Using these two patient groups, we compared: patterns of hospital use over time, differences in deprivation and physical health needs, rates of potentially preventable hospital admissions and patterns of hospital use for common physical health procedures.

We now examine the implications of our findings in each of these areas.

High levels of emergency hospital care are often used as an indicator for the overall quality of care. Visiting A&E or having an emergency admission can be distressing for patients and carers, is associated with a greater risk of mortality and longer-term morbidity, and is expensive to the healthcare system (Blunt, 2014). Therefore, the fact that people with mental ill health use more emergency care than people without is particularly troubling given that the poor healthcare outcomes of people with mental ill health have been known for some time.

Coupled with the slightly lower rate of planned inpatient admissions among the mental health cohort, our analysis reveals that people with mental ill health are more likely to use hospital services in an unplanned way. This suggests that greater support could be given to help people better manage their healthcare, although it should be noted that our cohort have complex care needs and may therefore be more likely to require greater support.

It has been known for some time that a greater proportion of people with mental ill health have poor physical health compared to the general population. Nonetheless, the patterns of hospital use we observe are concerning, with just a fifth of emergency care use in our MH cohort being explicitly related to mental health needs. These patterns suggest that people with mental ill health are not having their physical health well managed.

Deprivation was strongly associated with emergency care use, with those who are more deprived using more healthcare than those who are less deprived. Taken in isolation, this finding is not surprising. But the link between deprivation and care use suggests one area where a more dedicated focus could be beneficial. Planning care provision for a more deprived population must come with the expectation of higher levels of emergency care activity. Targeted interventions to address the physical health needs of the most deprived groups is one area which could result in decreased emergency care use overall. This has the potential to lead to patient benefits and cost savings.

The higher levels of potentially preventable emergency admissions for people with mental ill health that we have identified are of concern both from a policy and a patient perspective. Preventing these admissions could improve the quality of care, reduce the amount of distressing unplanned care for the patient, and provide potential cost savings. Moreover, providing appropriate primary or community care to this group could result in further improvements.

For common inpatient procedures, people with mental ill health were more likely to have an emergency admission rather than a planned one, stay longer in hospital

and be admitted overnight. The reasons for the longer length of stay are not straightforward. Some of this may be reasonable – our cohort has complex health needs, so staying in hospital longer may be the best option for their care.

However, the fact that people with mental ill health are more likely to experience an emergency rather than a planned admission suggests that they may have more unidentified health needs. This is the case despite the fact they are in contact with the health system due to their mental ill health. Identifying these physical health needs and providing appropriate care will therefore be key to improving this.

Conclusion

All of our findings represent opportunities for improvement: hospital use is expensive, and extended stays in hospital can be distressing for patients, so improving how people move through the system could release much-needed savings for the NHS and improve patients' experience of healthcare. But much of this will require support outside of the hospital setting – in particular community and primary care.

There is potential to better address people's physical health needs alongside their mental health needs by adopting new and innovative models of care. For example, extended and scaled-up models of primary care can give people access to both mental and physical health support and break down traditional barriers. Despite the potential for new models of care, improvements in this area are unlikely without continued and sustained investment. Cuts are likely to represent a false economy.

The extent of unplanned or emergency care used by people with mental ill health also suggests that there is the potential for better identification, management and preventative care for long-term physical health conditions in those with mental ill health. People with mental ill health were identified in this study because they had previously been in hospital for mental ill health, so these are people who have already had contact with the health service. This contact represents an opportunity to better identify and support these needs. The potential to address this could be realised by providing more training in physical health checks for mental health care professionals.

Recent policies have placed increased emphasis on achieving parity of esteem for physical and mental health. The creation of the Mental Health Taskforce in March 2015 (NHS England, 2015) represented the first strategic approach to improving mental health outcomes for people of all ages, and the Five Year Forward View (NHS England, 2014) aspires to break down the barriers between mental and physical health to "achieve a genuine parity of esteem between physical and mental health by 2020".

Some progress has been made in addressing mental health care (for example the introduction of waiting time targets and quality standards for mental health services), yet it is unclear how much of the policy focus on the physical health needs of people with mental ill health is being translated into practice. This is despite evidence showing that higher rates of premature mortality among people with mental ill health are largely attributable to underlying poor physical health. There are some welcome initiatives getting underway to tackle this, but if the gap between the physical and mental health cohorts we have identified in this study continues to widen, the goal of parity of esteem by 2020 is unlikely to be realised.

Glossary

A&E attendance: Any attendance to an accident and emergency (A&E) unit – this includes all major and minor A&E departments. Most people visit A&E at a point of crisis (such as a car accident or fall) for immediate care. They can arrive in person, be sent by a healthcare professional or arrive by ambulance. People can receive care in A&E or, if more serious, can be admitted to another part of the hospital (see inpatient admissions below).

Emergency inpatient admission: If someone needs immediate care which is more severe or complicated, a patient will be admitted to hospital for further care and given a bed. These admissions are not planned in advance and can be day cases (where a patient does not stay overnight) or an overnight stay. People may be admitted because their symptoms are severe or more complicated – for example if someone has a head injury following a car accident.

Hospital activity: Any recorded encounter with a hospital – this includes those described in this glossary: A&E attendance, outpatient appointment, planned and emergency inpatient admissions.

Hospital activity related to mental ill health: Using hospital services for support with mental ill health. This could include outpatient appointments with a psychologist for support with bereavement, an eating disorder to inpatient admissions on intensive psychiatric units, or crisis wards for those with more severe needs.

Mental ill health: Mental ill health affects the way a person thinks, feels and behaves. It can include diagnosed disorders such as depression, anxiety phobias or eating disorders, and it also includes feelings and behaviours such as panic attacks, self-harm or suicidal feelings (Mind, 2013).

Outpatient appointment: These hospital appointments are planned in advance and a patient can see a range of healthcare professionals for treatment or investigation – such as seeing a physiotherapist to recover after a fall, or a maternity unit for an ultrasound scan. For an outpatient appointment a patient only visits the hospital; they are not admitted and do not stay overnight.

Planned inpatient admission: Similar to outpatient appointments, these hospital admissions are planned in advance and are usually for more serious or longer-term treatments and procedures – for example a hip replacement or kidney transplant. Again, just like an emergency inpatient admission, these can be day cases (where a patient does not stay overnight) or an overnight stay.

Preventable admissions: One common marker of success for health systems is their ability to control rates of emergency admissions, especially for those conditions where preventive management is possible in the community. Specific subsets of these conditions (referred to as ambulatory care sensitive, or ACS cases) are used increasingly as markers of changes. These are conditions such as asthma or congestive heart failure.

Serious mental illness: There is no standard definition of what conditions are included in serious mental illness (Health & Social Care Information Centre, 2014). Therefore, for comparability, we have used a definition from White and others (2014); that is, individuals who have a diagnosis of schizophrenia, bipolar disorder or psychosis.

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Ian Blunt is a Senior Research Analyst at the Nuffield Trust. He joined the Trust in 2009 and has led a range of quantitative analyses making use of large administrative datasets. Recent examples include leading our QualityWatch programme (a five-year study on the way in which the quality of health and social care is changing over time), a number of analyses of the urgent care system in England and implementing a predictive risk model for emergency re-admissions within 30 days. Before joining the Trust Ian worked for the Healthcare Commission, developing an automated risk assessment process to target inspections of care providers.

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