Institution: University College London

Unit of Assessment: 2 - Public Health, Health Services and Primary Care

Title of case study: Improving management of schizophrenia and severe mental illnesses in general practice

1. Summary of the impact

Our research has led to major changes in the management of people with severe mental illness (SMI) in general practice. Our findings that people with schizophrenia are at greater risk of cardiovascular diseases informed NICE guidance in the UK and international guidelines. The Department of Health's strategy on Mental Health was influenced by our work on the interface between physical and mental health. Recommendations in the NICE guidance have now been taken up by the NHS Quality Outcomes Framework (QoF) in England and Scotland. General practitioners are specifically required to monitor BMI (Body Mass Index), blood pressure, and glucose and serum lipids levels in all registered patients with SMI.

2. Underpinning research

UCL has led internationally on research on the care offered to people with severe mental illnesses (i.e. schizophrenia and bipolar illnesses) in general practice. Little was known about the primary care management of this population prior to us initiating research work on this topic in the 1990s. Professor Irwin Nazareth and colleagues (Department of Primary Care & Population Health) found that although people with schizophrenia were frequent attenders, their management was unstructured with little attention given to their physical health, compared to the care offered to people with other chronic diseases. We found that one in three people with schizophrenia were exclusively managed by their general practitioners with no contact with a psychiatrist. Moreover, most people with schizophrenia were willing to have their physical and psychological health needs managed by their general practitioners **[1]**. Early evidence from an exploratory controlled evaluation suggested beneficial trends from structured health care delivered in primary care **[2]**. Since then, we have led on a programme of MRC-funded research to identify and reduce cardiovascular disease (CVD) in NHS patients with severe mental disorders.

Our research demonstrated high relative rates of cardiovascular mortality in people with severe mental illnesses when compared to people without these disorders. There was a threefold risk of cardiovascular deaths in people with schizophrenia between the age of 18-50, and twice the risk in people aged 50-75 **[5]**.

Further research on this topic found an excess rate of abnormal lipids (especially low levels of HDL), smoking and diabetes in people with severe mental illnesses in general practice compared with healthy controls **[4]**. The significantly lower level of HDL in people with schizophrenia was a novel finding and had never been previously reported. This work also revealed that poor diets and low levels of physical activity were common in this group of people and were worthy targets for interventions **[6]**. Our research additionally demonstrated that people with mental disorders were willing to participate in CVD screening in primary care **[3]** and the importance of this finding was highlighted in a Lancet editorial (vol 367; 1469-71).

We then published a systematic review regarding lipids, diabetes and hypertension levels as well as qualitative and quantitative findings to facilitate the design of a new nurse-led intervention for cardiovascular screening in SMI **[7]**. This led to a successful phase II trial of the intervention **[8]** subsequently highlighted as a promising development for clinical services in a Lancet editorial in 2011 (Lancet 377; 611).

Our ongoing research, funded by the Department of Health and NIHR, explores inequalities in cancer and CVD screening in people with mental illnesses and intellectual disabilities. We are also investigating the contribution of antipsychotic medication to cardiovascular risk in these people.

Furthermore, we are developing and testing CVD risk prediction models for people with SMI, and refining and evaluating a an intervention delivered over a period of one year within a cluster trial based in primary care settings.

3. References to the research

[1] Nazareth I, King M, Davies S. Care of schizophrenia in general practice: the general practitioner and the patient. British Journal of General Practice. 1995 July; 45(396):343–347. http://europepmc.org/articles/PMC1239294

[2] Nazareth I, King M, See-Tai S. Monitoring psychosis in general practice: a controlled trial. British Journal of Psychiatry. 1996 Oct;169(4):475-82. http://dx.doi.org/10.1192/bjp.169.4.475

[3] Osborn DPJ, King M, Nazareth I. Participation in screening for cardiovascular risk by people with schizophrenia or similar mental illnesses - a cross sectional study in general practice. BMJ. 2003 May 24;326(7399):1122-3. http://dx.doi.org/10.1136/bmj.326.7399.1122

[4] Osborn DPJ, Nazareth I, King M. Risk for coronary heart disease in people with severe mental illness: a cross sectional comparative study in primary care. British Journal of Psychiatry. 2006 Mar;188:271-7. http://dx.doi.org/10.1192/bjp.bp.104.008060

[5] Osborn DPJ, Levy G, Nazareth I, Petersen I, Islam A, King M. Relative risk of cardiovascular and cancer mortality in people with severe mental illness from the United Kingdom's general practice research database. Archives of General Psychiatry. 2007 Feb;64(2):242-9. http://dx.doi.org/10.1001/archpsyc.64.2.242

[6] Osborn DPJ, King MB, Nazareth I. 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. 2007 Oct;42(10):787-93. http://dx.doi.org/10.1007/s00127-007-0247-3

[7] Osborn DPJ, Wright CA, Levy G, King MB, Deo R, Nazareth I. Relative risk of diabetes, dyslipidaemia, hypertension and the metabolic syndrome in people with severe mental illnesses. Systematic review and metaanalysis. BMC Psychiatry. 2008 Sep 25;8:84. http://dx.doi.org/10.1186/1471-244X-8-84

[8] Osborn DPJ, Nazareth I, Wright CA, King MB. Impact of a nurse-led intervention to improve screening for cardiovascular risk factors in people with severe mental illnesses. Phase-two cluster randomised feasibility trial of community mental health teams. BMC Health Services Research. 2010 Mar 10;10:61. http://dx.doi.org/10.1186/1472-6963-10-61

Peer-reviewed funding

MRC Brain Sciences Initiative. Primary prevention of cardiovascular diseases with Severe Mental Illnesses: development and feasibility of complex intervention in primary and secondary care. £228,000

NIHR Programme Grant - Prediction and management of cardiovascular risk for people with severe mental illnesses. A research programme and trial in primary care. PRIMROSE. £2.03 million.

4. Details of the impact

Impact on NICE Guidelines:

Our evidence regarding CVD was used by NICE in the 2009 update of their schizophrenia guideline (CG 082). This recommends that annual physical review of these patients should focus on cardiovascular risk factors including blood pressure, cholesterol, HDL cholesterol, smoking and

diabetes. The guideline cites five of our papers as the reason for focussing on CVD risk factors in annual reviews for people with schizophrenia in national mental health policy. Nazareth was on the expert advisory panel of the NICE Schizophrenia guideline group **[a]**.

Impact on European Guidelines:

Our work was cited as the research evidence justifying a position statement by the European Psychiatric Association (EPA), supported by the European Association for the Study of Diabetes (EASD) and the European Society of Cardiology (ESC) in 2009. Their statement was designed to improve the care of patients suffering from severe mental illness. They cite two of our papers as the rationale for focusing on CVD risk screening in people with SMI. The statement refers in detail to our systematic review regarding the relative incidence of CVD risk factors in SMI, as well as our research demonstrating excess CVD mortality in young people with SMI **[b]**.

The position statement from the EPA has had further impact both in the UK and Australia. The EPA position document is referenced as the rationale for specific algorithms to help mental health professionals to deal with cardiovascular risk factors in people with SMI **[c]**. In turn the Australian guidelines have recently been adapted and endorsed by the Royal College of General Practitioners, Royal College of Psychiatrists, Royal College of Nursing, Royal College of Physicians, HQIP, Rethink Mental Illness and Diabetes UK to provide guidance in line with the SMI QoF (see below) and NICE guidance, which largely originates from the research done at UCL **[d]**. These guidelines have been sent to every GP and psychiatrist in the UK.

Impact on Psychopharmacology guidance:

The British Association of Psychopharmacologists produces evidence-based guidelines for international and national prescribing in mental health, aimed at all psychiatrists and other clinicians who prescribe in mental health. Their schizophrenia consensus guidelines cite two of our papers (Osborn, 2006; Osborn 2008) in making their recommendations regarding prescribing antipsychotics and screening for CVD risk factors for people with SMI who have been prescribed antipsychotic medications **[e]**.

Impact on Department of Health Policy:

The Department of Health published a new mental health strategy in 2011 titled “No health without mental health”. It made a number of recommendations regarding the interface between physical and mental health. This included six main objectives, including “that more people with mental health problems will have good physical health”. Osborn was invited to present our research findings to specific workshops run by the DH to formulate this strategy **[f]**.

Once published, the policy was developed into a guide for general practitioners by the Centre for Mental Health, in alliance with seven key national mental health organisations. These third sector organisations (outside the NHS) such as RETHINK cite our mortality work as one of the reasons why general practitioners should focus on CVD screening for people with mental disorders **[g]**.

Impact on the Quality Outcomes Framework:

In 2011, our influence on NICE guidelines led to changes in the national GP contract, through the Quality Outcomes Framework (QoF) for people with severe mental illnesses **[h]**. GPs are now remunerated for ensuring that people with SMI have had specific cardiovascular risk factors measured within the last 15 months. The QoF documents explicitly state that their recommendations are in line with the NICE schizophrenia guidelines regarding CVD screening and hence include screening for BMI, cholesterol, blood pressure and diabetes screening in the outcomes framework for SMI (see above). Our research has thus directly impacted on the day to day care provided for people with severe mental illnesses in general practices across England through NICE and into QoF.

Impact elsewhere in the UK

Further, the two most cited of our research papers on this topic were used by the Scottish QoF in 2008, recommending that Scottish GPs included these cardiovascular measurements in their annual assessments **[i]**.

These important changes within the NHS are thus leading to a reduction in the inequalities of care that occur in people with schizophrenia and severe mental illnesses.

5. Sources to corroborate the impact

[a] National Institute for Health and Clinical Excellence (2009) Schizophrenia: core interventions in the treatment and management of schizophrenia in adults in primary and secondary care. NICE clinical guideline 82. http://www.nice.org.uk/CG082. *See pages 7, 15, 21, 22, 26.*

[b] De Hert M, Dekker JM, Wood D, Kahl KG, Holt RI, Möller HJ. Cardiovascular disease and diabetes in people with severe mental illness position statement from the European Psychiatric Association (EPA), supported by the European Association for the Study of Diabetes (EASD) and the European Society of Cardiology (ESC). Eur Psychiatry. 2009 Sep;24(6):412-24. http://dx.doi.org/10.1016/j.eurpsy.2009.01.005. See page 413.

[c] Australian guidelines: Curtis J, Newall H, Samaras K. HETI 2011. Don't just screen. http://www.heti.nsw.gov.au/cmalgorithm *See reference to [b] on page 2.*

[d] Guidelines from the Royal Colleges:

- Royal College of Psychiatrists 2012. The Lester UK Adaptation. http://www.rcpsych.ac.uk/quality/nationalclinicalaudits/schizophrenia/nationalschizophreniaaudit/nasresources.aspx *Based on [c]*

[e] Barnes TR; Schizophrenia Consensus Group of British Association for Psychopharmacology. Evidence-based guidelines for the pharmacological treatment of schizophrenia: recommendations from the British Association for Psychopharmacology. J Psychopharmacol. 2011 May;25(5):567-620. http://dx.doi.org/10.1177/0269881110391123. See references to [5] and [7] on page 581.

[f] Department of Health (2011). No Health without Mental Health. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_123766

[g] The Centre for Mental Health. No health without mental health. A guide for general practitioners. http://www.centreformentalhealth.org.uk/pdfs/Web_Mental%20Health%20Strategic%20Partnership%20GPs.pdf *See reference to [5] on page 3.*

[h] NHS Employers. (2011) The Quality and Outcomes Framework. 2011-12 http://www.nhsemployers.org/SiteCollectionDocuments/QOFguidanceGMScontract_2011_12_FL%2013042011.pdf *Based on [a]*

[i] The Scottish Government (2008). Improving the physical health of people experiencing Mental illness in Scotland. http://www.scotland.gov.uk/Publications/2008/11/28152218/0 *References to [4] and [5] on page 34*