A few important issues have been highlighted by De Hert *et al*.[5] First, involvement of patients and carers in screening and monitoring of patients' physical health is a vital part of patients' and carers' education and empowerment, which will be reflected positively in management and outcome. Second, their study raised the legitimate question of who should screen and monitor physical health: the psychiatrist or the general practitioner (GP). The care programme approach of 2008 indicates that mental health professionals should consider service users' needs holistically and aim to improve their quality of life and their health. Assessments and care plans should identify and tackle the impact that mental illness symptoms and possible treatment programmes can have on physical health and the impact that physical symptoms can have on an individual's mental well-being.[6] I think the way forward is a proper collaboration through the local shared care protocol as the process should be initiated by psychiatrists and results should be communicated to GPs who would plan management through proper referral to different specialties.

De Hert *et al* rightly state that all previous evidence indicates that guidelines have an impact on real-life screening and that monitoring rates are minimal to poor.

The national Prescribing Observatory for Mental Health (POMH)[7] has included screening for metabolic syndrome in community patients receiving antipsychotics as a topic for its quality improvement programme. The POMH group conducted a retrospective case-note audit of patient's prescribed antipsychotic medication with a standard of yearly monitoring of blood pressure, measure of obesity, glucose and lipids. Results showed that between 0 and 41% (0 and 48% at re-audit a year later) of trusts were monitoring for all four aspects on an annual basis. Our study is consistent with these figures, with 40% conducting physical examinations and liver function tests (further details available from the author on request).

Scrutinising guidelines is a very important issue but what is more important, as De Hert *et al*'s article indicated, are clear, comprehensive, inclusive and up-to-date local policies and procedures to implement physical health check-ups, with an initial assessment of risk factors and identification of people with metabolic problems with a view to referring them to a metabolic clinic for management, and to continue to monitor patients who are on atypical antipsychotics regularly, at least annually. It has been reported that establishing a metabolic clinic and managing patients at risk has improved physical check-ups and referral to GPs for abnormal results by 25% in the re-audit.[8] All efforts should be directed towards patient and carer involvement, education and promotion of healthy living.

1 Fuster V, Kelly BB (eds). *Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health*. National Academic Press, 2010.

2 Osby U, Correia N, Brandt L, Ekbom A, Sparén P. Mortality and causes of death in schizophrenia in Stockholm county, Sweden. *Schizophr Res* 2000; **45**: 21–8.

3 Osby U, Corriera N, Brandt L, Ekbom A, Sparén P. Time trends in schizophrenia mortality in Stockholm county, Sweden: cohort study. *BMJ* 2000; **321**: 483–4.

4 Mozaffarian D, Capewell S. United Nations' dietary policies to prevent cardiovascular disease. *BMJ* 2011; **343**: d5747.

5 De Hert M, Vancampfort D, Correll CU, Mercken V, Peuskens J, Sweers K, et al. Guidelines for screening and monitoring of cardiometabolic risk in schizophrenia: systematic evaluation. *Br J Psychiatry* 2011; **199**: 99–105.

6 Department of Health. *Refocusing the Care Programme Approach: Policy and Positive Practice Guidance*: 22. TSO (The Stationery Office), 2008.

7 Royal College of Psychiatrists. *Prescribing Observatory for Mental Health (POMH-UK)*. Royal College of Psychiatrists, 2006 (http://www.rcpsych.ac.uk/pdf/T2%20info%20leaflet.pdf).

8 Gumber R, Abbas M, Minajagi M. Monitoring the metabolic side-effects of atypical antipsychotics. *Psychiatrist* 2010; **34**: 390–5.

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Authors' reply: Dr Najim highlights the valuable resource of the UK Prescribing Observatory for Mental Health (POMH) which appears to show that National Health Service trusts record suboptimal levels of metabolic monitoring and, indeed, of physical examination of high-risk patients prescribed antipsychotic medication. We would be most interested to know whether the POMH database can help highlight monitoring rates in those taking antipsychotics for indications other than schizophrenia, particularly bipolar disorder and dementia. Further, are there data on metabolic monitoring in individuals taking depot antipsychotic medication? This has been a question very much overlooked in the literature to date.

Dr Reed rightly queries whether the recommendation to screen for cardiometabolic problems is evidence based. He is no doubt aware of the controversy regarding screening for depression and for dementia when screening is not necessarily translated into measurable patient benefit. We would argue that the case for screening for cardiometabolic risk has strong face validity and at least a moderate evidence base that does justify our recommendations. We concede, however, that the detail of how much and how often is not fully resolved and is disputed in the current guidelines. The case for cardiometabolic monitoring is supported by the undeniably large prevalence of the problem. Some studies suggest that as many as 90% of patients with chronic schizophrenia maintained on antipsychotics have at least one clinically important cardiometabolic risk factor.[1] Further, in this population, the risk is at least in part iatrogenic, thereby promoting the responsibility of the medical profession to detect and deal with it. Direct evidence comes from guideline implementation studies. Screening guidelines do seem to increase monitoring rates, although the increase is less than is often hoped. We recently examined this using a meta-analysis of screening rates before and after guideline implementation.[2] Seven studies have directly monitored rates in the same sample before and after guideline introduction and these reported on glucose surveillance. These studies showed a significant 15.4% (95% CI 4.8–25.9) increase ($\chi^2 = 8.1$; $P = 0.005$) in glucose testing following the introduction of guidelines. This increase is significant but nevertheless rather disappointing, although when combined with gradually increasing awareness of metabolic complications could increase further with time.

Another type of evidence is the additional yield of significant complications found after the introduction of a systematic screening or surveillance programme. Several such studies exist but, as far as we are aware, none have randomised a group to metabolic screening and no metabolic screening, for ethical reasons. In non-randomised studies the yield from systematic monitoring for cardiometabolic problems is appreciable. For example, Kusumi *et al*[3] began testing 537 patients who had schizophrenia but no pre-existing diabetes in June 2008 across 25 Japanese hospitals. At baseline, only 51% had a normal body mass index and 12% had glucose abnormalities of which 9.5% was for the pre-diabetic type. Equally concerning, during the next year of follow-up, 42% of those with pre-diabetes progressed to probable diabetes, such that by the end of the study 25% of patients with schizophrenia had recognised glucose abnormalities.[4] Collectively this seems to constitute a strong case

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for regular cardiometabolic monitoring in high-risk patients, including anyone prescribed long-term antipsychotic medication. Periodic checks were already part of routine care but the literature suggests this practice was inadequate. Systematic monitoring is an improvement but still not adequate on its own. Systematic testing must be tied to clear treatment options and also clear lines of responsibility.

Declaration of interest

M.D.H has been a consultant for, received grant/research support and honoraria from, and been on the speakers/advisory boards of AstraZeneca, Bristol-Myers Squibb, Eli Lilly, Janssen-Cilag, Lundbeck JA, Pfizer and Sanofi Aventis.

1 Bell R, Farmer S, Ries R, Srebnik D. Metabolic risk factors among Medicaid outpatients with schizophrenia receiving second-generation antipsychotics. *Psychiatr Serv* 2009; **60**: 1686–9.

2 Mitchell AJ, Delaffon V, Vancampfort D, Correll CU, De Hert M. Guideline concordant monitoring of metabolic risk in people treated with antipsychotic medication: systematic review and meta-analysis of screening practices. *Psychol Med* 2012; **42**: 125–47.

3 Kusumi I, Ito K, Honda M, Hayashishita T, Uemura K, Hashimoto N, et al. Screening for diabetes using Japanese monitoring guidance in schizophrenia patients treated with second-generation antipsychotics: a cross-sectional study using baseline data. *Psychiatry Clin Neurosci* 2011; **65**: 349–55.

4 Kusumi I, Ito K, Uemura K, Honda M, Hayashishita T, Miyamoto K, et al. Screening for diabetes using monitoring guidance in schizophrenia patients treated with second-generation antipsychotics: a 1-year follow-up study. *Prog Neuropsychopharmacol Biol Psychiatry* 2011; **35**: 1922–6.

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Correction

Effects of lowered serotonin transmission on cocaine-induced striatal dopamine response: PET [^{11}C]raclopride study in humans. *BJP*, **199**, 391–397. Figure 3 (p. 394): blue diamonds should be labelled 'BAL+cocaine'. Online Table DS1, the headings of columns five and six for parts (b) to (d) should read: (b) 'BP_{ND} values on nutritionally balanced amino acid mixture + cocaine test, mean (s.d.)' and '% change BP_{ND} induced by acute tryptophan depletion + cocaine, mean (s.d.)'; (c) 'BP_{ND} values on nutritionally balanced amino acid mixture + placebo test, mean (s.d.)' and '% change BP_{ND} induced by acute tryptophan depletion + cocaine, mean (s.d.)'; (d) 'BP_{ND} values on nutritionally balanced amino acid mixture, mean (s.d.)' and '% change BP_{ND} induced by acute tryptophan depletion, mean (s.d.)'.

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