PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (see an example) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Quality of medical care and excess mortality in psychiatric patients – a nationwide register-based study in Sweden
AUTHORS	Emma Björkenstam, Rickard Ljung, Bo Burström, Ellenor Mittendorfer-Rutz, Johan Hallqvist and Gunilla Ringbäck

VERSION 1 - REVIEW

REVIEWER	Jan Mainz Professor, Medical Director, MD, Ph.D Department for Health Services Research, Unit for Health Economics, Univ of Southern Denmark & Psychiatry Region North Denmark
REVIEW RETURNED	14/01/2012

GENERAL COMMENTS	It should be considered to up date the data base.

REVIEWER	Prof Steve Kisely School of Population Health Herston Rd, University of Queensland, Australia
REVIEW RETURNED	24/01/2012

REPORTING & ETHICS	Is the unique personal identity number assigned to each Swedish citizen or permanent resident that was used to link information from the four population-based registers encrypted? How is patients' confidentiality protected?
GENERAL COMMENTS	This paper assesses overall and cause-specific mortality, and the quality of somatic care among psychiatric patients using the Swedish national register. Compared to individuals with no episodes of treatment for mental disorder, psychiatric patients had a substantially increased risk of all studied death-causes as well as death from conditions considered amenable to intervention by the health service, i.e. avoidable mortality. The highest mortality was found among those with another mental disorder, predominantly substance abuse (for women, an IRR of 4.7 (95% CI 4.3 to 5.0), and for men an IRR of 4.8 (95% CI 4.6 to 5.0)). The analysis of quality of somatic care revealed lower levels of health care quality for psychiatric patients, signalling failures in public health and medical care. A particular strength is the population-based design, using national registers with high completeness There are a number of minor areas which would benefit from clarification. 1) Does the data base cover people treated by alcohol and drugs services?

	2) The comprehensive introduction might benefit from the inclusion of access to neurological procedures. See Kisely S, Cox M, Smith M, Lawrence D, Maaten S Does inequitable access to cardiological or neurological procedures contribute to preventable mortality in people with mental illness?" Can Med Assoc Journal 2007;176:779-784 3) Is the unique personal identity number assigned to each Swedish citizen or permanent resident that was used to link information from the four population-based registers encrypted? How is patients' confidentiality protected? 4) One limitation that needs to be added is that the databases didn't cover patients treated in primary care Steve Kisely, Prof, University of Queensland

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Query1:
"It should be considered to update the data base."
Reply to reviewer 1, query 1:
We agree, but unfortunately at the time being we are not able to update the database with more recent data, since individuals in the dataset are no longer identifiable.
Changes in manuscript:
None.

Reviewer: 2
This paper assesses overall and cause-specific mortality, and the quality of somatic care among psychiatric patients using the Swedish national register. Compared to individuals with no episodes of treatment for mental disorder, psychiatric patients had a substantially increased risk of all studied death-causes as well as death from conditions considered amenable to intervention by the health service, i.e. avoidable mortality. The highest mortality was found among those with another mental disorder, predominantly substance abuse (for women, an IRR of 4.7 (95% CI 4.3 to 5.0), and for men an IRR of 4.8 (95% CI 4.6 to 5.0)). The analysis of quality of somatic care revealed lower levels of health care quality for psychiatric patients, signalling failures in public health and medical care. A particular strength is the population-based design, using national registers with high completeness

There are a number of minor areas which would benefit from clarification.
Query1:
Does the data base cover people treated by alcohol and drugs services?
Reply to reviewer 2, query 1:
Yes, both alcohol and drugs services are included.
Changes in manuscript (page 6, line 128-129):
The National Patient Register covers all inpatient care in Sweden since 1987 (psychiatric inpatient care since 1973, where both alcohol and drugs services are included).

Query2:
The comprehensive introduction might benefit from the inclusion of access to neurological procedures. See Kisely S, Cox M, Smith M, Lawrence D, Maaten S Does inequitable access to cardiological or neurological procedures contribute to preventable mortality in people with mental illness?" Can Med Assoc Journal 2007;176:779-784

Reply to reviewer 2, query 2:
We have with interest read the suggested paper and have included it as a reference in the manuscript.
Changes in manuscript (page 4, line 28)
New reference 28

Query3:
Is the unique personal identity number assigned to each Swedish citizen or permanent resident that was used to link information from the four population-based registers encrypted? How is patients' confidentiality protected?
Reply to reviewer 2, query 3:
The personal identity number is encrypted.
The Swedish National Board of Health and Welfare is a governmental agency and may according to Swedish law use the population-based registers in order to follow and analyze health and social circumstances in the population and data were made available to us in such a way that individuals could not be identified. Furthermore the study has been approved by ethical committee.
Changes in manuscript
None

Query4:
One limitation that needs to be added is that the databases didn't cover patients treated in primary care
Reply to reviewer 2, query 4:
We agree that a large part of patients with mental health problems are treated in primary care. Regrettably the National Patient Register does not contain primary care. Thus, we decided to focus on psychiatric patients, defined as those patients that at some point in time have seen a psychiatrist in outpatient specialist care of inpatient care. We have included a sentence in the discussion section to clarify this limitation.

Changes in manuscript (page 12, line 257-263)
Also, as the National Patient Register does not cover primary care we were not able to study all levels of psychiatric care. Hence, patients treated for mental health problems solely in primary care are classified as unexposed. Assuming a similar effect for patients in primary care as for psychiatric patients in our study selected by a more strict definition of mental health problems, i.e. patients who have seen a psychiatrist, this misclassification will dilute our results towards the null.

VERSION 2 – REVIEW

REVIEWER	Prof Steve Kisely School of Population Health Herston Rd, University of Queensland, Australia
REVIEW RETURNED	27/01/2012

The reviewer filled out the checklist but made no further comments.