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Open general medical wards versus specialist psychiatric units for acute psychoses (Review)

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[Intervention Review]

Open general medical wards versus specialist psychiatric units for acute psychoses

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ABSTRACT

Background

As international healthcare policy has moved away from treating people with severe mental illness in large inpatient psychiatric institutions, beds for people with acute psychiatric disorders are being established in specialised psychiatric units in general hospitals. In developing countries, however, limited resources mean that it is not always possible to provide discrete psychiatric units, either in general hospitals or in the community. An alternative model of admission, used in the Caribbean, is to treat the person with acute psychosis in a general hospital ward.

Objectives

To compare the outcomes for people with acute psychosis who have been admitted to open medical wards with those admitted to conventional psychiatric units.

Search methods

We searched The Cochrane Schizophrenia Group's study-based register (April 2007). This register is compiled from searches of BIOSIS, CINAHL, The Cochrane Library, EMBASE, LILACS, MEDLINE, PsycINFO, PSYNDEX, Sociofile, and many conference proceedings.

Selection criteria

We would have included all relevant randomised or quasi-randomised trials, allocating anyone thought to be suffering from an acute psychotic episode to either acute management on general medical wards, or acute management in a specialist psychiatric unit. The primary outcomes of interest were length of stay in hospital and relapse.

Data collection and analysis

We extracted data independently. For dichotomous data we would have calculated relative risks (RR) and their 95% confidence intervals (CI) on an intention-to-treat basis based using a fixed effects model.

Main results

We didnt identify any relevant randomised trials.

Authors' conclusions

The Caribbean practice of treating people with severe mental illness on general medical wards has been influenced by socio-economic factors rather than evidence from randomised trials. This practice affords an opportunity for a well designed, well conducted and reported randomised trial, now impossible in many other settings.

PLAIN LANGUAGE SUMMARY

Open general medical wards versus specialist psychiatric units for acute psychoses

Psychosis is disturbance of a person's thinking that causes them to have false perceptions of the senses (hallucinations) and see the world in a different way from the majority (delusions). Psychosis can cause the sufferer to become very distressed. The majority of people who need hospital treatment for psychosis receive it in specialist psychiatric wards. However in some parts of the developing world, especially the Caribbean, a system has grown up where people with psychosis are admitted and treated on general medical wards along with those who have non-psychiatric conditions such as diabetes and heart disease. They are treated with antipsychotics and are expected to help nurse others as they get better.

This review attempted to compare trials randomising treatment in a general medical ward with treatment in a psychiatric ward, however there are no trials which meet the inclusion criteria. Since there is a published article which suggests that people in a general ward recover faster and are more able to return to employment or education afterwards, it would be helpful to do a randomised controlled trial comparing these two treatments to see if this is the case.

(Plain language summary prepared for this review by Janey Antoniou of RETHINK, UK www.rethink.org).

BACKGROUND

Decisions regarding admission to institutions or hospitals for people with severe acute mental illness often depend on risk assessment. If a person's illness is thought to cause them to be a severe risk to themselves or others, and families and communities are unable to manage the risk, then the person is admitted. Sometimes admission is under restraint, and patients may be compulsorily detained and medicated.

Use of the acute hospital bed for treating severe mental illness has been the central element of psychiatric care around the world since the advent of the mental hospital (Scull 1977). As international healthcare policy has moved away from treating people with severe mental illness in large inpatient psychiatric institutions, acute psychiatric beds have been established in specialised psychiatric units in general hospitals or in discrete psychiatric units in community mental health centres (Hoenig 1968). Managing acute mental illnesses in such units is well established in many parts of the world (Baker 1969, Brook 1961, Hoenig 1966, Leyberg 1959, Oldham 1969). These authors concluded that psychiatric units in general hospitals could manage most, if not all, acute psychiatric admissions, and looked forward to a positive future for general hospital psychiatry. The general hospital psychiatric unit and the discrete community psychiatric unit has subsequently become the flagship of modern community psychiatry in the developed world.

In developing countries, limited resources mean that it is not always possible to provide discrete psychiatric units either in general hospital or in the community. In Africa, acute psychiatric treatment is confined to the few European-designed mental hospitals, to the family, or to the extensive network of traditional healers (Farooq 2001, Roberts 2001). In the Caribbean, where financial constraints often compete with first-world demands for the development of general hospital psychiatric units, a new direction for treating acute severe mental illness has been forged. People in need of acute psychiatric treatment are managed within a medical ward of a general hospital (Beaubrun 1968). This has happened in Jamaica. In 1965, six acute beds for treatment of people with severe mental illnesses were established on a dermatology ward at the University Hospital of the West Indies in Kingston. These beds provided psychiatric care for 150 acute psychiatric admissions per year. More than 70% of these admissions were for severe acute psychoses such as schizophrenia and affective psychoses (Hickling 1975). In subsequent years, similar models were established in other Caribbean islands, such as St. Thomas, in the Virgin Islands (Murphy 1967), and Grenada (Mahy 1973). The ini-

tiative to treat acute psychosis in medical wards of general hospitals was formally accepted as government policy in Jamaica in 1970 (Hickling 1994). Subsequent amendments to the Mental Hospital Law (1974) provided the legislative framework to facilitate the compulsory detention of people with severe acute mental illness in medical wards of general hospitals around the islands. By 1988, more than one-half of the acute psychiatric admissions in Jamaica were to acute beds in medical wards of general hospitals (Hickling 1991).

This alternative model of general hospital treatment for people with acute, severe, mental illnesses developed in Jamaica as a result of necessity, not design (Ottey 1973). The model requires minimal specialised mental health services, early and aggressive treatment with antipsychotic drugs, and integration of psychiatric treatment procedures into services provided by nurses and doctors of conventional general hospital secondary care facilities (Abel 1994). General medical doctors and nurses admit acutely psychotic patients to the open medical wards. Thus, psychiatrically disturbed people are managed side by side with patients with non-psychiatric illnesses such as diabetes and heart disease. This management includes sedation and treatment with short-term or depot antipsychotic medication. Family members are often allowed to remain on the ward with their ill relative, and are encouraged to participate in their general nursing and medical care. This model of treatment facilitates open care, and allows patients to be treated in a similar manner to the physically ill. Patients are in a friendly, non-confrontational environment, often with their family present. As people recover, they are encouraged to participate in caring for other physically ill patients and to participate in the process of recovery and recuperation. On discharge, they are encouraged to reengage swiftly with work and normal community activities. This process is thought to keep stigmatisation to a minimum.

In Jamaica, the main source of resistance to this model came from the medical staff of the secondary care services, not from people with mental illness or their relatives. There is some empirical evidence from Jamaica to reassure health professionals about this approach. Hickling followed a cohort of 120 people with schizophrenia whose first contact with the psychiatric service in Jamaica was in 1992, and who had been treated as inpatients during the acute phase of their illness (Hickling 2000). These people were admitted to an open ward, a closed community psychiatric unit, or the acute ward of a custodial mental hospital, according to the geographic catchment area of their home. On first contact, the researchers assessed severity of illness, sociodemographic variables, pathways to care, and legal status. At discharge and for the subsequent 12 months, blinded observers rated relapse, length of stay and employment status. The three groups did not differ significantly in patterns of symptoms and severity of psychosis. Lengths of stay (see Table 1) and clinical outcome variables were significantly better for people treated in the general hospital medical wards, as were outpatient compliance and gainful employment. While allowing for possible differences in the three patient groups, and the clinical settings, it was concluded that the results of treatment in general hospital medical wards were at least equivalent to, and, for some people, superior to, treatment in conventional psychiatric facilities (Hickling 2000).

In the light of these findings, we sought to identify randomised controlled trials examining the benefits and harms of managing acutely psychotic patients on general medical wards compared to specialist units. We felt that the results of this review would be relevant to countries with limited specialist psychiatric inpatient care and may provide important lessons for high-income countries.

OBJECTIVES

To compare outcomes of people with acute psychoses who have been admitted to open medical wards with those admitted to conventional psychiatric units.

METHODS

Criteria for considering studies for this review

Types of studies

We included all relevant randomised controlled trials. Where a trial was described as 'double-blind', but it was implied that the study was randomised, these trials would have been included. Quasi-randomised studies, such as those allocating people to treatments by using alternate days of the week, medical notes number or alphabetically would have been included.

Types of participants

We included people suffering from an acute psychotic episode which was not clearly related to a general medical condition, as defined by the trialists. In studies where less than 100% of participants were suffering from acute psychoses, as long as that proportion was greater than 50%, we would have included the trial. Where a study did not clearly stipulate diagnoses, but where acute psychoses were implied for the majority of participants, we would have included these trials.

Types of interventions

1. Any acute nursing and medical management on general medical wards. For the purposes of this review 'general medical wards' were wards covered by a particular nursing team and included patients with general medical problems who were referred from

other health care providers, general practitioners or outpatient and casualty departments.
2. Any acute nursing and medical management in a specialist psychiatric unit. For the purposes of this review 'a specialist psychiatric unit' was a unit within a hospital for psychiatric patients which was staffed by nursing teams dedicated solely to the care of psychiatric patients.

Types of outcome measures

1. Global state
1.1 Relapse*
1.2 Length of stay in hospital*
1.3 Leaving the study early
2. General functioning
2.1 Compliance with follow up clinic
2.2 Employment status
3. Behaviour
3.1 Need for tranquillisation/sedation
3.2 Aggressive events to others or self
3.3 Trouble with the police
3.4 No important improvement in self care
4. Symptoms
4.1 No important reduction in severity of symptoms as defined by each study
4.2 Deterioration of symptoms
5. Adverse effects
5.1 Death
5.2 Incidence of side effects, general and specific
5.3 Use of antiparkinsonian medication
6. Satisfaction with care
6.1 Recipients of care
6.2 Family
6.3 Professional carers
7. Economic outcomes
*We chose relapse and length of hospital stay (as defined in the individual studies) as the primary outcome measure.
We grouped outcomes into four pre-defined time periods: 'within the admission' was taken as before discharge from the initial admission, 'short term' as within three months of discharge, 'medium term', as between three and 12 months, and 'long term' beyond a year.

Search methods for identification of studies

1. Electronic search for the 2007 review update
We searched the Cochrane Schizophrenia Group Trials Register (April 2007) using the phrase:
[((* ward * or * wards * or * general*) in title, abstract and index fields in REFERENCE) OR ((* general* or *hosp* in interventions field in STUDY]
This register is compiled by systematic searches of major databases, hand searches and conference proceedings (see Group Module).
1.2 Previous electronic search
We searched The Cochrane Schizophrenia Group Trials Register (November 2001) using the phrase:
[{(Title like * ward *) or (Abstract like * ward *) or (Index terms like * Ward *) or (Title like * wards *) or (Abstract like * wards *) or (Index terms like * wards *) or (Title like * general*) or (Abstract like * general*) or (Index terms like * general*) in REFERENCE} or {(Intervention like * general*) or (intervention like *hosp*) in STUDY}]
This register is compiled by methodical searches of BIOSIS, CINAHL, The Cochrane Library, Dissertation Abstracts, EMBASE, LILACS, MEDLINE, PSYNDEX, PsycINFO, RUSSMED, Sociofile, supplemented with hand searching of relevant journals and numerous conference proceedings (see Group Module).
2. Reference searching
We inspected references of all identified studies, included or excluded, for more studies.
3. Authors of studies
We contacted the first authors of studies when necessary to clarify data, and asked for additional studies.

Data collection and analysis

1. Study selection
We independently inspected all reports. We resolved any disagreement by discussion, and where doubt remained, we acquired the full article for further inspection. Once the full articles were obtained, we independently decided whether the studies met the review criteria. If disagreement could not be resolved by discussion, we sought further information and these trials were added to the list of those awaiting assessment.
2. Assessment of methodological quality
We assessed the methodological quality of included studies using the criteria described in the Cochrane Handbook (Higgins 2005), which is based on the degree of allocation concealment. Poor concealment has been associated with overestimation of treatment effect (Schulz 1995). Category A includes studies in which allocation has been randomised and concealment is explicit. Category B studies are those which have randomised allocation but in which concealment is not explicit. Category C studies are those in which allocation has neither been randomised nor concealed. Only trials that are stated to be randomised (categories A or B of the handbook) will be included in this review. The categories are defined below:
A. Low risk of bias (adequate allocation concealment)
B. Moderate risk of bias (some doubt about the results)
C. High risk of bias (inadequate allocation concealment).
3. Data collection

We independently extracted data from selected trials. When disputes arose we attempted to resolve these by discussion. When this was not possible and further information was necessary to resolve the dilemma, we did not enter data and added the trial to the list of those awaiting assessment.

4. Data synthesis

4.1 Data types

We assessed outcomes using continuous (for example changes on a behaviour scale), categorical (for example, one of three categories on a behaviour scale, such as "little change", "moderate change" or "much change") or dichotomous (for example, either "no important changes or "important change" in a person's behaviour) measures. Currently RevMan does not support categorical data so we were unable to analyse this.

4.2 Managing lost data

We excluded data from outcomes where more than 50% of participants in any group were lost to follow up (this did not include the outcome of 'leaving the study early'). We analysed the impact of including studies with high attrition rates (25 to 50%) in a sensitivity analysis. Sensitivity analyses for people lost to follow up would have been undertaken for primary outcomes. If inclusion of data from this latter group had resulted in a substantive change in the estimate of effect, their data would not have been added to trials with less attrition, but presented separately.

4.3 Binary data

For binary outcomes we calculated the relative risk (RR) and its 95% confidence interval (CI) based on the fixed effects model. Relative Risk is more intuitive (Boissel 1999) than odds ratios, and odds ratios tend to be interpreted as RR by clinicians (Deeks 2000). This misinterpretation then leads to an overestimate of the impression of the effect. When the overall results were significant we calculated the number needed to treat (NNT) and the number-needed- to- harm (NNH). Where people were lost to follow up at the end of the study, we assumed that they had had a poor outcome and once they were randomised they were included in the analysis (intention-to-treat /ITT analysis).

Where possible, efforts were made to convert outcome measures to binary data. This can be done by identifying cut off points on rating scales and dividing participants accordingly into "clinically improved" or "not clinically improved". It was generally assumed that if there had been a 50% reduction in a scale-derived score such as the Brief Psychiatric Rating Scale (BPRS, Overall 1962) or the Positive and Negative Syndrome Scale (PANSS, Kay 1986), this could be considered as a clinically significant response (Leucht 2005a, Leucht 2005b). It was recognised that for many people, especially those with chronic or severe illness, a less rigorous definition of important improvement (e.g. 25% on the BPRS) would be equally valid. If individual patient data were available, the 50% cut-off was used for the definition in the case of non-chronically ill people and 25% for those with chronic illness. If data based on these thresholds were not available, we used the primary cut-off presented by the original authors.

4.4 Continuous data

4.4.1 Normal distribution

Continuous data on outcomes in trials relevant to mental health issues are often not normally distributed. To avoid the pitfall of applying parametric tests to non-parametric data we applied the following standards to continuous final value endpoint data before inclusion: (a) standard deviations and means were reported in the paper or were obtainable from the authors; (b) when a scale started from zero, the standard deviation, when multiplied by two, should be less than the mean (otherwise the mean is unlikely to be an appropriate measure of the centre of the distribution - Altman 1996); In cases with data that are greater than the mean they were entered into 'Other data' table as skewed data. If a scale starts from a positive value (such as PANSS, which can have values from 30 to 210) the calculation described above in (b) should be modified to take the scale starting point into account. In these cases skew is present if 2SD>(S-Smin), where S is the mean score and Smin is the minimum score. We reported non-normally distributed data (skewed) in the 'other data types' tables.

For change data (mean change from baseline on a rating scale) it is impossible to tell whether data are non-normally distributed (skewed) or not, unless individual patient data are available. After consulting the ALLSTAT electronic statistics mailing list, we entered change data in RevMan analyses and reported the finding in the text to summarise available information. In doing this, we assumed either that data were not skewed or that the analysis could cope with the unknown degree of skew.

4.4.2 Final endpoint value versus change data

Where both final endpoint data and change data were available for the same outcome category, only final endpoint data were presented. We acknowledge that by doing this much of the published change data may be excluded, but argue that endpoint data is more clinically relevant and that if change data were to be presented along with endpoint data, it would be given undeserved equal prominence. Authors of studies reporting only change data are being contacted for endpoint figures.

4.4.3 Data synthesis

For continuous outcomes we estimated a weighted mean difference (WMD) between groups based on a fixed effects model.

4.5 Rating scales

A wide range of instruments are available to measure mental health outcomes. These instruments vary in quality and many are not valid, and are known to be subject to bias in trials of treatments for schizophrenia (Marshall 2000). Therefore continuous data from rating scales were included only if the measuring instrument had been described in a peer-reviewed journal.

4.6 Cluster trials

Studies increasingly employ cluster randomisation (such as randomisation by clinician or practice) but analysis and pooling of clustered data poses problems. Firstly, authors often fail to account for intra class correlation in clustered studies, leading to a unit-of-analysis error (Divine 1992) whereby p values are spuriously

low, confidence intervals unduly narrow and statistical significance overestimated. This causes Type I errors (Bland 1997, Gulliford 1999).

Where clustering was not accounted for in primary studies, we presented the data in a table, with a (*) symbol to indicate the presence of a probable unit of analysis error. In subsequent versions of this review we will seek to contact first authors of studies to obtain intra-class correlation co-efficients of their clustered data and to adjust for this using accepted methods (Gulliford 1999). Where clustering has been incorporated into the analysis of primary studies, we will also present these data as if from a non-cluster randomised study, but adjusted for the clustering effect.

We have sought statistical advice and have been advised that the binary data as presented in a report should be divided by a design effect. This is calculated using the mean number of participants per cluster (m) and the intraclass correlation co-efficient (ICC) [Design effect=1+(m-1)*ICC] (Donner 2002). If the ICC was not reported it was assumed to be 0.1 (Ukoumunne 1999). If cluster studies had been appropriately analysed taking into account intraclass correlation coefficients and relevant data documented in the report, we synthesised these with other studies using the generic inverse variance technique.

4.7 When randomisation is impossible

Whilst randomised studies remain the least biased method of evaluating effects of all types of intervention, there are certain situations where conventional randomised studies might be inappropriate, difficult or impossible to conduct (Gilbody 2002). For example, questions relating to health policy and the organisation and delivery of care for those with serious mental disorder might require the randomisation of clinical teams, hospitals, geographical areas or even whole healthcare systems. Adapting the randomised study to these situations involves the conduct of 'clustered randomised trials'.

Where mental health policy, particularly legislative mental health policy, is implemented at a national level, then randomisation within a country is very difficult to achieve. Similarly, if clusters are so large (e.g. whole healthcare systems) then it might be impossible on a practical level to generate or recruit sufficient numbers of clusters to conduct a sufficiently powered or well-balanced randomised trial. Non-randomised designs are used to evaluate such interventions. The Cochrane Effective Practice and Organisation of Care Group (EPOC) suggests that non-randomised controlled clinical trials (CCTs), controlled before and after studies (CBAs) and interrupted time series analyses (ITS) should be considered in the absence of randomised evidence (Bero 2002, Clarke 2000). There is currently a Cochrane Non-Randomised Studies Methods Group (NRSMG) that is seeking to publish guidelines on the use of non-randomised data in Cochrane reviews (Clarke 2000). In the interim, non-randomised studies will only be included in reviews in cases where randomised studies are impossible to conduct. The inclusion of non-randomised data should be clearly justified within a review and included in collaboration with the reviewer's contact editor. The interpretation and analysis of such studies will be conducted in collaboration with the Cochrane EPOC group (Bero 2002). Meta-analysis and the mixing of randomised and non-randomised evidence will not be attempted within reviews.

5. Investigation for heterogeneity

Firstly, we considered all the included studies within any comparison to judge for clinical heterogeneity. Then we visually inspected graphs to investigate the possibility of statistical heterogeneity. We supplemented this by using primarily the I-squared statistic. This provides an estimate of the percentage of variability due to heterogeneity rather than chance alone. Where the I-squared estimate was greater than or equal to 50%, we interpreted this as indicating the presence of considerable levels of heterogeneity (Higgins 2003). Where heterogeneity was present, reasons for this were investigated. If it substantially altered the results, we did not summate data, but presented the data separately and investigated reasons for heterogeneity.

6. Addressing publication bias

We entered data from all included studies into a funnel graph (trial effect against trial size) in an attempt to investigate the likelihood of overt publication bias (Egger 1997).

7. Sensitivity analyses

We carried out sensitivity analyses according to whether trials were truly randomised or quasi-randomised. If there had been no substantive difference within primary outcomes (see types of outcome measures) when these 'quasi-randomised' studies were added, we included data in the final analysis. If there had been a substantive difference, we only used clearly randomised trials, and described the results of the sensitivity analysis in the text.

8. General

Where possible, we entered data in such a way that the area to the left of the line of no effect indicated a favourable outcome for general medical wards. In the discussion and conclusions, we sought comments from policy makers, consumers and their families to help ensure a wide range of perspectives were represented.

RESULTS

Description of studies

See: Characteristics of excluded studies.

1. Included studies

No study met the criteria for this review.

2. Excluded studies

We excluded four studies. Two randomised trials did not allocate people to general open ward settings (Copas 1977, Kennedy 1980). One non-randomised study (Gripp 1971), also did not use open general medical wards. During the 2007 update we found Knights 1978. This study did not clearly involve an open general medical ward setting, and no outcome data were presented.

3. Ongoing studies
We are not aware of any ongoing trials.
4. Awaiting assessment
No trials await assessment.

Risk of bias in included studies

No study met the entry criteria for this review.

Effects of interventions

1. The search
The initial search of the Cochrane Schizophrenia Group's register of trials identified 102 references to studies. After a careful examination of the abstracts, only three were thought to be suitable for further examination. For the 2007 update, we identified 296 studies and only one was selected for closer inspection (Knights 1978) and added to the list of excluded studies.
2. COMPARISON: ADMISSION TO OPEN GENERAL MEDICAL WARDS versus ADMISSION TO CONVENTIONAL PSYCHIATRIC HOSPITAL
There are no data to present.

DISCUSSION

1. The search

The Cochrane Schizophrenia Group's register of trials is the most comprehensive register of its kind. It is compiled by searching mainstream and less well known bibliographic databases and from manual searches of key journals and conference proceedings. It is always possible that we may have missed relevant studies. Trials published in languages other than English, and those with equivocal results are often difficult to find. Our search was heavily biased by use of English phrases. It seems unlikely, however, that well designed and reported randomised trials went unnoticed.

2. COMPARISON: ADMISSION TO OPEN GENERAL MEDICAL WARDS versus ADMISSION TO CONVENTIONAL PSYCHIATRIC HOSPITAL

We undertook this review to examine all the best available evidence on the outcomes of people with acute psychosis who have been admitted to open medical wards compared with those admitted to conventional psychiatric units. The aim was to elucidate the scientific basis for treating individuals with psychiatric disorders on general hospital medical wards. One of the authors (FH), in a non-randomised study which was prone to selection bias, found that outcomes are significantly better for people treated in general medical wards as are outpatient compliance and return to gainful employment, compared with those admitted to conventional psychiatric units (Hickling 2000). The treatment of people on the medical wards of general hospitals is not a widespread practice, and certainly not in the more developed countries in which the vast majority of studies is undertaken. In retrospect we might have been unrealistic to have expected more data from these countries.

3. Other methodologies

We remain unsure whether we should have opened our entry criteria for studies to other methodologies. It is possible that relevant studies exist that use a 'before and after' or non-randomised parallel cohort design. Searching the Cochrane Schizophrenia Group's register would not have identified these, as it includes only randomised or possibly randomised studies. In the methods of this review we state that non-randomised studies would only have been included in cases where randomised studies were impossible to conduct. In the case of open general medical wards versus psychiatric wards, we feel that randomised trials would indeed be very difficult. Firstly, this question may be one that is mostly of relevance to services in the developing world where resources for research are often very limited. Secondly, open ward management may be the only treatment setting available for an area. In such circumstances, randomisation would be very difficult. On the other hand, well-designed, pragmatic, randomised trials using routinely collected outcome data may not be a major drain on resources and even within under-resourced services, different treatment settings may well be available. Open general medical ward psychiatric care may well run in parallel with more traditional psychiatric hospital services and randomisation could be possible.

Nevertheless, after this 2007 update, we do think that we should now seek other types of evaluations of open general wards. Therefore in the next update we will include new methods for managing non-randomised studies.

AUTHORS' CONCLUSIONS

Implications for practice

1. For clinicians

Treating people with psychiatric disorders on medical wards will no doubt continue, especially in the situations and countries where it has evolved. There is, however, no trial-based evidence to support or refute this practice. Clearly the clinician cannot be sure that treating psychiatric patients on open medical wards is the most desirable practice, even though it may be one of the available options. Should both options be available, randomisation would be possible.

2. For people likely to be treated for acute psychoses on the medical wards of general hospitals

Due to the lack of evidence on the practice of treating individuals on a medical ward, it is important that there is flexibility and col-

laboration with people when other options are available. Imposing an unevaluated healthcare intervention on a person is ethically questionable. It is important that the nature, purpose, likely effects and advantages or disadvantages of treatment on a medical ward are discussed with recipients where possible. This would allow the recipient to make an informed decision. Although it is recognised that clinical experience should be respected when treating mental illness, given the fact that there is limited data on the benefits of treatment on medical wards in comparison to other treatment settings, individuals should be allowed to make an input in the decisions regarding the treatment setting to which they are assigned.

3. For policy makers

Traditional practice is often difficult to alter. The treatment of psychiatric patients on medical wards, though practised in some countries, is unevaluated through randomised studies. The advantages or disadvantages of this approach compared with the practice of admitting people to conventional psychiatric hospitals are unclear. This should be taken into consideration when developing services for the treatment of acute psychiatric disorders.

Implications for research

1. General

Given the possible clinical and socio-economic impact, and the opportunity to destigmatise mental disorders, which treating individuals with psychiatric disorders on general medical wards presents, a well designed, conducted and reported randomised study is needed. Such a study may be best conducted during periods where services are in a state of change. For example, the period of switching from one service, such as open general wards, to another, such as specialist mental health provision, affords opportunities for research. At such times it may be more equitable to allocate people to one treatment package or another within the context of a trial, rather than by the usual and often more biased means.

2. Specific

An outline for a feasible study is given below, and in table form (Table 2).

Initially participants should undergo a psychiatric assessment by a medical practitioner. The clinical status could be objectively assessed and then people would be randomly allocated to either a medical ward within a general hospital or an acute psychiatric unit. An attempt should be made to gain patient consent, but this may be very difficult in practice if someone is acutely ill and highly disturbed. As both interventions are currently accepted practice it may be possible to gain consent from those accompanying the patient. Any study methods would be subject to local Ethics Committee approval.

Participants should be anyone who requires inpatient care. Interventions would be acute nursing and medical management on general medical wards compared with acute nursing and medical management in a specialist psychiatric unit.

Key outcomes would be those relating to service delivery and patient wellbeing such as relapse and length of stay in hospital. Others would relate to psychotic symptoms, disturbed behaviour and satisfaction with care.

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* *Indicates the major publication for the study*

CHARACTERISTICS OF STUDIES

Characteristics of excluded studies *[ordered by study ID]*

Study	Reason for exclusion
Copas 1977	Allocation: "matched pairs, treated respectively on first admission". Participants: mixture of diagnoses, including schizophrenia. Interventions: general psychiatric unit in general hospital versus psychiatric unit in psychiatric hospital, not general medical wards
Gripp 1971	Allocation: controlled clinical trial, not clearly randomised. Participants: mixture of diagnoses (except organic involvement), including schizophrenia Interventions: one ward in psychiatric hospital (with token economy) versus three wards in same psychiatric hospital (without token economy), not general medical wards
Kennedy 1980	Allocation: randomised. Participants: mixture of diagnoses, including schizophrenia. Interventions: experimental ward (14 beds) versus other admission wards(27+25 beds) of psychiatric hospital, not general medical wards
Knights 1978	Allocation: randomised. Participants: people with psychosis. Interventions: brief care (one week in hospital) versus standard care (length of admission at clinician's discretion). Outcomes: no usable data.

DATA AND ANALYSES

This review has no analyses.

ADDITIONAL TABLES

Table 1. The Jamaica cohort

Site of admission	Percent of cohort	Mean length of stay
Mental hospital	53	91 days
Psychiatric units of general hospitals	19	28 days
General medical wards in parish hospitals	28	17 days

Table 2. Suggested design for future study

Methods	Participants	Interventions	Outcomes	Notes
Allocation: randomised, block, fully explicit description.. Blinding: single, tested. Duration: 12-24 weeks treatment, and then follow up to at least 1 year	Diagnosis: not prestipulated. Entry criteria: anyone due admission to hospital ward for psychiatric problems. N=300.* Age: adults. Sex: both.	1. Acute nursing and medical management on general medical wards. N=150. 2. Acute nursing and medical management in a specialist psychiatric unit. N=150	Global state: relapse, length of stay in hospital. General functioning. Behaviour. Symptoms. Adverse events. Satisfaction with care. Economic outcomes.	* powered to be able to identify a difference of ~20% between groups for primary outcome with adequate degree of certainty

WHAT'S NEW

Last assessed as up-to-date: 20 August 2007.

Date	Event	Description
18 January 2012	Amended	Contact details updated.

HISTORY

Protocol first published: Issue 4, 2001

Review first published: Issue 2, 2003

Date	Event	Description
3 August 2009	Amended	Consumer-written plain language summary added.
26 April 2008	Amended	Converted to new review format.
20 August 2007	New citation required and conclusions have changed	Substantive amendment

CONTRIBUTIONS OF AUTHORS

Fred Hickling - initiated the review, wrote the protocol, checked searches and helped write the report.

Wendel Abel - wrote the protocol, checked searches and wrote the report.

Paul Garner - wrote the protocol, checked searches and helped write the report.

DECLARATIONS OF INTEREST

None.

SOURCES OF SUPPORT

Internal sources

- University of the West Indies, Jamaica.
- Liverpool School of Tropical Medicine, UK.

External sources

- Department for International Development, UK.

INDEX TERMS

Medical Subject Headings (MeSH)

*Hospital Units; *Patients' Rooms; Acute Disease; Hospitals, Psychiatric; Psychotic Disorders [*therapy]

MeSH check words

Humans