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[Intervention Review]

Day centres for severe mental illness

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ABSTRACT

Background

The number of people with severe mental illness who receive treatment whilst living at home has increased greatly over the last 30 years. Day centres and day hospitals frequently supplement this treatment.

Objectives

To determine the effects of non-medical day centre care for people with severe mental illness.

Search methods

We updated our search in September 2005. All databases and searches are detailed in the body of the text.

Selection criteria

We would have included all randomised controlled trials where seriously mentally ill people were allocated to non-medical day centre care.

Data collection and analysis

We reliably selected studies, quality rated them and extracted data. For dichotomous data, it had been hoped to estimate the fixed effects Relative Risk (OR) with 95% confidence intervals (CI) and the number needed to treat statistic (NNT). Analysis was to have been by intention-to-treat. Normal continuous data were to have been summated using the weighted mean difference (WMD) and scale data presented only for those tools that had attained pre-specified levels of quality.

Main results

Electronic searches identified over 300 citations but none were relevant to this review. We found no trials of non-medical day centres.

Authors' conclusions

We feel that the inclusion of any studies less rigorous than randomised trials would result in misleading findings and that it is not unreasonable to expect well designed, conducted and reported randomised controlled trials of day centre care. More precise nomenclature would greatly help identify relevant work. At present non-randomised comparative studies give conflicting messages about the roles provided by day centres and the clinical and social needs they are able to meet. It is therefore probably best that people with serious mental illness and their carers, if given the choice, take a pragmatic decision on which type of unit best meets their needs. There is a clear need for randomised controlled trials of day centre care compared to other forms of day care, and when resources are limited, day centre care within the context of a pragmatic randomised trial may be the only way of ensuring equity of provision.

PLAIN LANGUAGE SUMMARY

Day centres for severe mental illness

The last 30 years have seen a large increase in the number of people with severe mental illness receiving treatment whilst living at home. Community care of the severely mentally ill is frequently enhanced by care provided by day centres run by non-medical services (Social Services in the UK, or the charitable sector). In this review we sought, but could not find, any evidence from well-conducted randomised trials of the effects of non-medical day centres. Day centres are currently becoming prominent in service planning, but this is not based on good evidence as to their effectiveness for people suffering from severe mental illness. If a choice between facilities is available, people with serious mental illnesses and their carers are currently left to make their own judgements based on the evidence of experience and a few non-randomised studies.

BACKGROUND

The last 30 years have seen a large increase in the number of people with severe mental illness receiving treatment whilst living at home. This treatment may be at day hospitals or outpatient departments, which are largely organised and run by health services. An alternative is to receive support and care at a range of facilities run by non-medical services (such as the Social Services in the UK) or the charitable sector, usually supplementing medical care. In the UK, legislation as long ago as 1975 envisaged that local authority day centres, not under the auspices of the health service, would provide long-term support for the chronically ill, while medically run day hospitals would emphasise treatment. Understandably, a 'considerable amount of overlap and confusion' surrounds such services (Vaughan 1984). It has also been argued that it is becoming less relevant to divide day settings into those with primarily a social orientation and those focusing on treatment (Beecham 1988). There may be considerable difficulty differentiating between day hospitals and day centres (Carter 1981, Holloway 1988).

Numerous studies have compared inpatient care to day care provided in medical settings (such as day hospital), but attempts to distinguish between day hospitals and day centres or study the latter are rare (Holloway 1988). One study of day centres compared the organisation and management practices of four centres and the quality of interactions between staff and patients (Shepherd 1979). The authors concluded that 'client-oriented' institutions have more positive interactions between staff and patients than 'institutionally-oriented' ones. The Camberwell group, working in inner city London, undertook a large-scale investigation of day care, covering both day centres and day hospitals (Brewin 1987, Brewin 1988, Brugha 1988, Sturt 1984, Wing 1982). They found that the non-medical day centres were providing care for a higher proportion of people with long-term dependency than were day hospitals, and found nothing to suggest that users of day hospitals were receiving a greater variety of care than those attending day centres (Brugha 1988). No evidence was found that unmet need was greater in the day centres. Our study of day centres found that they were catering predominantly for people with long-term mental health problems that were not using the day hospitals concurrently (Catty 2001a).

OBJECTIVES

The objectives were to determine the effects of day centre care for people with severe mental illness, as opposed to the effects of (a) standard community mental health team care; and (b) day hospital care.

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 we included these trials in a sensitivity analysis. If adding these 'implies randomisation' studies did not cause heterogeneity in primary outcomes (see 'Types of outcome measures') then we included these in the final analysis. If they did cause heterogeneity then we only used clearly randomised trials and described the results of the sensitivity analysis in the text. We excluded quasi-randomised studies, such as those allocating by using alternate days of the week.

Types of participants

Adults with severe mental illness such as schizophrenia or other psychotic illnesses. Where study participants were described as suffering from 'severe/chronic mental illness/disorder' they met the inclusion criteria.

Types of interventions

1. Day centre care: defined as daytime attendance at a non-medical services day setting, excluding specialist work units or crisis facilities.
2. Standard care: the care offered as standard to people in the community.

We did not evaluate the effects of standard community mental health team care and day hospital care in this review.

Types of outcome measures

1. Death, suicide or natural causes

2. Leaving the study early

3. Clinical response
3.1 relapse*
3.2 clinically significant response in global state - as defined by each of the studies*
3.3 mean score/change in global state
3.4 clinically significant response on psychotic symptoms - as defined by each of the studies
3.5 mean score/change on psychotic symptoms

4. Behaviour
4.1 violence
4.2 crime

5. Service utilisation outcomes
5.1 hospital admission*
5.2 days in hospital

6. Economic outcomes

7. Quality of life/satisfaction with care for either recipients of care or carers
7.1. significant change in quality of life/satisfaction - as defined by each of the studies
7.2 mean score/change in quality of life/satisfaction
7.3 living independently

We grouped outcomes into immediate (0-5 weeks), short term (six weeks-five months), medium term (six months-one year) and longer term (more than 12 months).

* Primary outcomes.

Search methods for identification of studies

1. Electronic searches for the 2005-6 update
1.1 We searched The Cochrane Schizophrenia Group's Trials Register (July 2005) using the phrase:

[((day and (centre* or center* or care*)) or (community and mental and health and cent*) or cmhc) in REFERENCE ti, ab and in fields or (centre* or center* or day* in STUDY intervention field)]

This register is compiled by systematic searches of major databases, hand searches and conference proceedings (see Group Module).

1.2 We searched The Cochrane Central Register of Controlled Trials (CENTRAL) 2005 Issue 2
((day* near/3 (centre* or center* or care*)) or ((communit* near/3 care*) and (mental* near/3 health*)) or CMHC*) and ((schiz* or psych* or mental* or depress* or dement* or mania* or Mental Disorders) and not (sr-schiz))

1.3 Additional searches
We repeated all the steps below, with the exception of 2.4, limiting the search to the years 2000-2006.

2. Electronic searching for the previous version of this review (Catty 2001b)
2.1 We searched Allied and Complementary Medicine Database (January 1985 - May 1999) using the Cochrane Schizophrenia Group's terms for randomised controlled trials with the phrase:

[(day near2 (centre* or center* or care*)) or (community mental health cent*) or CMHC or explode "day-care" or explode "community-mental-health-centers"]

2.2 We searched the British Nursing Index (January 1994 - December 1998) using the Cochrane Schizophrenia Group's terms for randomised controlled trials with the phrase:

[(day near2 (centre* or center* or care*)) or (community mental health cent*) or CMHC]

2.3 We searched the Cochrane Library (Issue 2, 1999) using the phrase:

[((((day next ((centre* or center*) or care*)) or (community and (mental and (health and cent*))))) or CMHC) or day-care*:me or community-mental-health-centers*:me]

2.4 We searched the Cochrane Schizophrenia Group's Register (May 1999) using the phrase:

[(day and (centre* or center* or care*)) or (community and mental and health and cent*) or CMHC or #42=170 or #42=584 or #42=53 or #42=598 or #42=530]

#44 is the field in this register in which intervention codes are stored.

2.5 We searched EMBASE (January 1980 - May 1999) using the Cochrane Schizophrenia Group's terms for randomised controlled trials with the phrase:

[and (day near2 (centre* or center* or care*)) or (community mental health cent*) or CMHC or explode "day-care"/ all subheadings or explode "community-mental-health-center"/ all subheadings]

2.6 We searched MEDLINE (January 1966 - March 1999) using the Cochrane Schizophrenia Group's terms for randomised controlled trials with the phrase:

[and (day near2 (centre* or center* or care*)) or (community mental health cent*) or CMHC or explode "day-care"/ all subheadings or explode "community-mental-health-centers"/ all subheadings]

2.7 We searched PsycLIT (1887 - March 1999) using the Cochrane Schizophrenia Group's terms for randomised controlled trials with the phrase:

[and (day near2 (centre* or center* or care*)) or (community mental health cent*) or CMHC or "adult-day-care" in de or "day-care-centers" in de or explode "day-care"/ all subheadings or explode "community-mental-health-centers"/ all subheadings]

2.8 We searched the Royal College of Nurses Database (January 1985 - December 1996) using the Cochrane Schizophrenia Group's terms for randomised controlled trials with the phrase:

[(day near2 (centre* or center* or care*)) or (community mental health cent*) or CMHC]

2.9 We searched Sociological Abstracts (January 1963 - May 1999) using the Cochrane Schizophrenia Group's terms for randomised controlled trials with the phrase:

[(day near2 (centre* or center* or care*)) or (community mental health cent*) or CMHC or "adult-day-care" in de or "day-care-centers" in de]

3. Reference searching
We inspected the references of all identified studies for more trials.

4. Personal contact
We would have contacted the first author of each included study for information regarding unpublished trials.

Data collection and analysis

1. Study selection
JC performed the search. JC and AC undertook the first stage of selection independently, and in parallel. We read the abstracts, titles and descriptor terms of all downloaded material from the electronic searches and discarded irrelevant reports to create a pool of potentially eligible studies. We then merged these two pools and obtained the articles. JC and ZB performed the update.

Again working independently, we evaluated the acquired studies and decided which should be included. Agreement was evaluated by the kappa statistic, and if overall agreement was less than 0.75 (the level regarded as excellent by Cicceti 1981), we reviewed the strategy of selection. Where resolution was not possible, we added the study to those awaiting assessment and contacted the authors for further data.

2. Quality assessment
We allocated trials to three quality categories, as described in the Cochrane Collaboration Handbook (Higgins 2005). When disputes arose as to which category a trial was allocated, we again attempted resolution by discussion. When this was not possible and further information was necessary to clarify into which category to which to allocate the trial, we did not enter the data and the trial was allocated to the list of those awaiting assessment. We included trials only if they were in Category A or B.

3. Data extraction

No individual data were sought at this stage of the review. We independently extracted data. Again, we discussed any disagreement and documented the decisions and where necessary, we contacted the authors of the studies to help resolve the issue.

4. Data synthesis
4.1 Incomplete data
Where more than 30% of those randomised were lost to follow-up by six months, or 50% by beyond that time, we felt that data were too prone to bias to use and therefore we did not report these.

4.2 Dichotomous - yes/no - data
4.2.1 Statistics: for binary outcomes, for example 'admitted' or 'not admitted', we would have estimated a fixed effect Relative Risk with 95% confidence intervals (CIs). Where possible, we also would have calculated the number needed to treat statistic (NNT).

4.2.2 Intention to treat: We would have presented data on a 'once-randomised-always-analyse' basis. We assumed that those who were lost to follow up had the negative outcome, with the exception of the outcome of death that was coded separately. For example, for the outcome of relapse, those who were lost to follow would have all been assumed to have been in relapse.

4.2.3 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 these 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).

4.3 Continuous - scale - data
4.3.1 Normal data: mental health continuous data are often not 'normally' distributed. To avoid the pitfall of applying parametric tests to non-parametric data we applied the following standards to all data before inclusion: (a) standard deviations and means were reported in the paper or were obtainable from the authors (b) when a continuous outcome starts from a finite number (such as zero), the standard deviation, when multiplied by two, was less than the mean (as otherwise the mean was unlikely to be an appropriate measure of the centre of the distribution - Altman 1996). Data that did not meet the second standard were not entered into the RevMan calculator (which assumes a normal distribution). However, data not meeting these standards can be reported in the 'Other data types' of the results section if they had been analysed with appropriate non-parametric tests.

If continuous data were recording change, where the finite parameters of the measure were unclear, we decided whether the data were usable or not.

4.3.2 Rating scales: a wide range of instruments is available to measure mental health outcomes. These instruments vary in quality and many are not valid, or are ad hoc. For outcome instruments some minimum standards have to be set. They could be that: (a) the psychometric properties of the instrument should have been described in a peer-reviewed journal (b) the instrument was not written or modified by one of the trialists (c) the instrument should either be: (i) a self report, or (ii) completed by an independent rater or relative (not the therapist) and (d) the instrument should be a global assessment of an area of functioning (Marshall 2000).

5. Heterogeneity
As well as inspecting the graphical presentations, we checked the differences between the results of each included trial using a test of heterogeneity. RevMan automatically calculates this. We interpreted a significance level less than 0.10 as evidence of heterogeneity. If heterogeneity had been present, we would have undertaken a sensitivity analysis to determine the effect of including or expanding certain studies from the meta-analysis. In this review we present all data from studies that have been selected.

6. Tables and figures
Where possible, we entered data into RevMan in such a way that the area to the left of the line of no effect indicates a favourable outcome for day centres.

7. Addressing publication bias
There were insufficient data available to address the question of publication bias. Had sufficient data been available, we would have entered data into a funnel graph (trial effect against trial size) in an attempt to investigate the likelihood of overt publication bias (Egger 1997).

RESULTS

Description of studies

1. Excluded studies
Of the 330 items found in the electronic search, 13 trials warranted further investigation. Of these, one, Weissert 1980, studied people with chronic physical illnesses and five trials of 'day treatment' studied day hospitals rather than day centres (Creed 1990, Dick 1985, Endicott 1979, Glick 1986, Washburn 1976). In another five trials, 'day treatment' was, on closer inspection, a medical service run by the health sector. In Kluiter 1992, day treatment was delivered either in a day hospital or in a clinical unit. In Linn 1979, the 'day treatment centre' was in hospital. In Piper 1993 and Rosie 1995, the 'day treatment' was delivered in a hospital outpatient department. In Schene 1993 it was a day clinic in a hospital. Polak 1976 evaluated 'a model to replace psychiatric hospitals', but the experimental service here was private homes rather than day care. Finally, Lamb 1971 studied 'discharged mental patients...in the community', but the experimental service was a 'high-expectation' setting that included day hospital but not day centre care. When

the review was updated, one trial merited further investigation (Tsemberis 2003). This study turned out to be one of consumer preferences set in a supported housing programme.

2. Awaiting assessment
Takano 1995 awaits assessment as it is written in Japanese. From the abstract, however, it is unlikely that it will be a study of day centres.

3. Ongoing studies
We know of no ongoing studies.

4. Included studies
We found no trials of non-medical day centres.

Risk of bias in included studies

We found no relevant trials for inclusion.

Effects of interventions

1. The search
Despite extensive searching, we found no trials of non-medical day centres. The electronic search identified 502 citations but none were relevant.

2. No trial-based data
We had hoped to present analyses of relapse, clinically significant response in global state and hospital admission as primary outcomes, and to analyse other outcomes relating to clinical response, behaviour and service utilisation, as well as economic outcomes. There are, however, no trial-based data.

DISCUSSION

1. Strengths and weaknesses
The strength of this review is that it is a rare attempt to objectively evaluate day centres that represent a common part of non-hospital services. That there are no data from randomised studies is not a weakness of the reviewing process itself. It is possible, however, that the extensive searches undertaken for this review did nevertheless fail to identify reports of relevant trials. Evaluation of day centres might be reported in literature not commonly indexed by the databases we searched and may appear in the future as searches are widened.

It is a limitation of this review that only randomised trials were sought. If the criteria for including studies had been widened to include non-randomised trials, some data would have been available. This leaves us with a dilemma. However, because even poorly randomised studies are associated with more positive estimates of effect than their well-conducted and reported counterparts (Schulz 1995), we still feel that the inclusion of any less rigorous studies would result in misleading findings.

2. The results
2.1 No randomised trials
There were no randomised studies of day centre care. Many studies of day centres have been primarily descriptive (Blake 1984, Catty 2001a, Shepherd 1979) or have reported surveys of satisfaction or other issues (Bender 1985, Webster 1992). Where comparisons have been made with day hospital care, studies have focused on organisational issues and differences in programmes offered, characteristics and needs of users, and users' attitudes or satisfaction with their care. The Camberwell High Contact Survey studied long-term attendees at day hospitals, day centres and workshops, and found unmet need to be significantly higher for day centre than day hospital users: 1.5 times as high for clinical unmet needs and over twice as high for unmet social needs (Brewin 1988). By contrast, Holloway 1991 found that users of one day centre and a workshop studied were 'less disabled' than users of the other day centres and day hospitals. They found few differences in 'met' or 'unmet' needs for care between the different types of service, except for drug and alcohol dependency needs and needs for help with 'cooking', which were higher for day centre users. Holloway 1991 also found that similarities between the different day units outweighed their differences in terms of organisation, aims and resources, and advocated that the distinction between them be abandoned. This is not supported by preliminary findings of a comparative study by the present reviewers of day centre compared to day hospital care, which suggests that the roles provided by the two types of provision and the characteristics of their users differ significantly (Catty in preparation). Holloway 1991 also recommended that a comparative prospective study be conducted to address the issues raised. Given the increasing prominence of day centres in health service planning, it is clearly vital that such robust research be conducted to establish their effectiveness compared to other forms of day care. It is not impossible or unethical to randomise to day centre care as an alternative to other forms of day care and this form of support may be doing far more or less good than is currently apparent. We feel that it is not unreasonable to expect well designed, conducted and reported randomised controlled trials of day centre care.

2.2 Nomenclature
The majority of studies found (whether randomised or not) were of day hospitals or other kinds of 'day treatment', for instance, delivered from an inpatient ward (Endicott 1979) or in an outpatient department (Klein 1974, Linn 1979, Rosie 1995). Imprecise nomenclature in day care services led to some apparently relevant trials being discarded when they turned out to be of services run by the health sector and staffed by psychiatrists (e.g. Kluiter 1992). This was particularly true of studies conducted during the earlier years of the community mental health movement (Linn 1979). Even more recently, however, it was common for 'day treatment' to be used synonymously with 'day hospital treatment' (Creed 1990). More precise nomenclature would greatly help identify relevant work.

2.3 Heterogeneity of service and context of care
Holloway 1991 found considerable variations in day care services in one area and even between the two day hospitals and the three day centres surveyed. Given this heterogeneity, even in one location, it is not surprising that seeking evidence of a particular service model, non-medial day centres, in other geographical locations is problematic. The search produced numerous studies of American 'Community Mental Health Centers' (CMHCs): a service not limited to day care but including provision of beds and medical staff. One study set in Spain (Gomez 1997) illustrates the more vexed issue of transferring the medical/non-medical dichotomy to another geographical setting. The day centres studied were run by the health service and linked to a hospital, although based in the community, but their staff did not include psychiatrists. The fact that 'social services' provide fewer services in Spain than in the UK suggests that the centres studied here were as close to the present review's definition of 'day centre' as is possible in this

context. The study, however, was not a comparative one. Another Spanish study (Otero 1993) compared 'psychiatric rehabilitation' including but not limited to a 'day centre' to care by 'mental health centre' (primary care centre for mental health). This was not a randomised study. The lack of randomised trials in this area, except for day hospitals and CMHCs, means, however, that such problems with interpretation of services in context did not affect the inclusion of any studies for analysis.

AUTHORS' CONCLUSIONS

Implications for practice

1. For recipients of care and their carers
At present there is no evidence from randomised trials for the effects of day centre care compared to other types of day care. Non-randomised comparative studies give conflicting messages about the roles provided by day centres and the clinical and social needs they are able to meet. It is therefore probably best that people with serious mental illness and their carers, if given the choice, take a pragmatic decision on which type of unit best meets their needs.

2. For clinicians
There is no robust evidence base for the effectiveness of day centre care compared to other types of day care. Few studies even describe day centres as a service model, and far fewer compare them to other services. Evidence from non-randomised studies about their capacity to meet their patients' clinical and social needs is contradictory. Clinicians should be cautious about referring patients to day centres, until more robust evidence becomes available. Given the dearth of studies, clinicians will have to continue to use their judgement as to which type of day care to refer people to, should there be a choice, unsupported by trial-based evidence.

3. For funders and policy-makers
There is little research evidence about the effectiveness of day centre care and what there is does not derive from robust, randomised trials. The recent emphasis on day centres in service planning is not at present matched by any robust evidence base concerning their effectiveness in meeting clinical or social need. Funders should expect evaluation of day care facilities to confirm their continuing financial support of such institutions.

Implications for research

1. General
Any future studies should clearly describe the method of allocation, the integrity of blinding, especially with regard to the more subjective outcomes, and the reasons for early withdrawal (Moher 2001).

2. Specific
There is a clear need for randomised controlled trials of day centre care compared to other forms of day care, such as day hospitals. We have suggested a design in Table 1. This is only a suggestion and should not be taken as the only way of answering the many important questions related to day centres. However, we do think such studies are possible and desirable. Clinical decision making within the context of a pragmatic randomised trial may be the only way of ensuring equity of care in a given community.

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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
Bender 1985	Allocation: not randomised.
Blake 1984	Allocation: not randomised.
Boardman 1986	Allocation: not randomised.
Bowman 1983	Allocation: not randomised.
Camberwell 1987	Allocation: not randomised.
Cormier 1987	Allocation: not randomised.
Creed 1990	Allocation: randomised. Participants: people 18-65 admitted to psychiatric hospital. Interventions: day hospital versus inpatients, not day centre.
Currie 1995	Allocation: not randomised.
Dick 1985	Allocation: randomised. Participants: people referred to acute day hospital. Interventions: day hospital versus outpatients, not day centre.
Drake 1994	Allocation: not randomised.
Endicott 1979	Allocation: randomised. Participants: people newly admitted to hospital. Interventions: brief hospitalisation with versus brief hospitalisation without day care versus standard inpatient plus aftercare, day care based in inpatient ward, not day centre.
Figueiredo 1976	Allocation: not randomised.
Glick 1986	Allocation: randomised.

Study	Reason for exclusion
	Participants: people with severe mental illness. Interventions: day hospital versus outpatients, not day centre.
Gomez 1997	Allocation: not randomised.
Guidry 1979	Allocation: not randomised.
Holloway 1991	Allocation: not randomised.
Klein 1974	Allocation: not randomised.
Kluiter 1992	Allocation: randomised. Participants: people referred for inpatient treatment. Interventions: day treatment (either in a day hospital or in a clinical unit) versus standard care, not day centre.
Lamb 1971	Allocation: randomised. Participants: people with severe mental illness. Interventions: high-expectation (including day hospital) versus low-expectation settings, not day centre.
Linn 1979	Allocation: randomised. Participants: people with severe mental illness. Interventions: day treatment center (in hospital) with drugs versus drugs, not day centre.
Manthei 1983	Allocation: not randomised.
McCreedie 1984	Allocation: not randomised.
Otero 1993	Allocation: not randomised.
Piper 1993	Allocation: randomised. Participants: people with affective and personality disorders. Interventions: immediate outpatient day treatment versus delayed outpatient day treatment, not day centre.
Polak 1976	Allocation: randomised. Participants: people with severe mental illness. Interventions: private homes versus inpatients, not day centre.
Pryce 1982	Allocation: not randomised.
Rosie 1995	Allocation: randomised. Participants: people with long-standing personality disorders. Interventions: immediate day treatment in outpatients versus delayed day treatment in outpatients, not day centre.
Schene 1993	Allocation: randomised. Participants: people with severe mental illness. Interventions: day treatment (day clinic in hospital) versus inpatients, not day centre.
Sexton 1992	Allocation: not randomised.
Shepherd 1979	Allocation: not randomised.
Sturt 1984	Allocation: not randomised.

Study	Reason for exclusion
Tsemberis 2003	
Vannicelli 1978	Allocation: not randomised.
Washburn 1976	Allocation: randomised. Participants: women with severe mental illness. Interventions: day hospital versus inpatients, not day centre.
Webster 1992	Allocation: not randomised.
Weissert 1980	Allocation: randomised. Participants: people with chronic physical illness.
Wilberg 1998	Allocation: not randomised.

ADDITIONAL TABLES

Table 1. Suggested design for trial

Methods	Participants	Interventions	Outcomes	Notes
Allocation: centralised sequence generation with table of random numbers or computer generated code, stratified by severity of illness, sequence concealed till interventions assigned. In the context of limited provision, randomisation may be the only equitable way of distributing care. Blinding: those recruiting and assigning participants, those administering intervention may even be possible, those assessing outcomes. Duration: minimum of 1 year.	Diagnosis: it may be preferred not to use diagnostic categories such as DSM IV and just to include those whose mental health problem is designated as severe. Thereafter diagnositc categories should be recorded. N=300.* Age: adults. Sex: men and women. Setting: community.	1. Day centre care: defined as daytime attendance at a non-medical services day setting, excluding specialist work units or crisis facilities. 2. Standard care: other forms of day care offered as standard to people in the community.	Qualtiy of life: healthy days. Service outcomes: days in hospital, time attending psychiatric outpatient clinic. Satisfaction with care: patients/carers. Global state: CGI.*** Mental state: CGI, relapse.** Functioning: engagement with services, leaving the study early, living independently. Adverse effects: including mortality. Economic outcomes: cost-effectiveness and cost-benefit.	* size of study to detect a 10% difference in improvement with 80% certainity. *** Primary outcome. If scales are used to measure outcome then there should be binary cut off points, defined before study start, of clinically important improvement.

WHAT'S NEW

Date	Event	Description
24 April 2008	Amended	Converted to new review format.

HISTORY

Protocol first published: Issue 3, 1999

Review first published: Issue 2, 2001

Date	Event	Description
14 November 2006	New citation required and conclusions have changed	Substantive amendment

CONTRIBUTIONS OF AUTHORS

Jocelyn Catty - protocol development, searches, study selection, writing.

Tom Burns - acquiring funds, protocol development, study selection.

Adelina Comas - protocol development, study selection, translations.

DECLARATIONS OF INTEREST

None known.

SOURCES OF SUPPORT

Internal sources

- St. George's Hospital Medical School, UK.

External sources

- No sources of support supplied

INDEX TERMS

Medical Subject Headings (MeSH)

*Community Mental Health Centers; *Day Care, Medical; Mental Disorders [*therapy]

MeSH check words

Humans