# Appendix 22a: 2009 Access and engagement study characteristics tables

**Please note that some of the references and the data in this appendix have been incorporated from the previous guideline and have therefore not been updated to reflect current house style.**

**Full terms of abbreviations are listed at the back of the guideline, except in some instances where they are explained in situ.**

**An asterisk next to an author's name indicates that their study is the primary study.**

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# Early intervention services

## Characteristics of included studies (update)

| Study ID | CRAIG2004-LEO |
|---|---|
| General info | **Funding source:** Non-industry support<br>Directorate of Health and Social Care London research and development organisation and management programme (grant No Brixton Early Psychosis Project RDC 01657).<br>**Published or unpublished data?:** Published |
| Method | **Type of study:** Individual randomised trial (effectiveness/pragmatic)<br>**Type of analysis:** ITT<br>ITT analysis was used to compare the outcomes at 18 months and to determine whether patients had relapsed at any point. Patients who had previously relapsed but had recovered by 18 months were included as "well" at that point.<br>**Blindness:** Only raters blind<br>Two of the researchers (TKJC and PG) agreed on the ratings for recovery (full or partial) and relapse, based on operationalised criteria, which were applied to extracts of the clinical case notes from which information pertaining to group allocation had been removed. Group allocation remained concealed until completion of the ratings. To test the success of blinding, assessors guessed the group allocation of each patient. The two raters correctly guessed the allocation of 60% (95% confidence interval 52% to 63%) of the patients ( 0.20).<br>**Duration:** No. weeks of treatment - 78 weeks<br>**Raters:** Not stated to be independent of treatment<br>**Design:** Single-centre - Lambeth, London, UK<br>**Number of people screened, excluded & reasons:**<br>319 people presented to psychiatric services between January 2000 and October 2001 with symptoms suggestive of a psychotic disorder.<br><br>144 met the inclusion criteria and were randomised<br><br>175 excluded<br>- 38 not resident in Lambeth, too old or too young.<br>- 90 didn't meet diagnostic criteria<br>- 35 already engaged with services<br>- 12 lost before confirmed |

**Notes about study methods:**
Eligible patients were randomised by permuted random blocks of between two and six. Group allocation was concealed in sealed envelopes. The trial statistician independently carried out the randomisation and concealment of results. Patients were informed of the randomisation process, and written consent was sought to collect outcome data from case notes and by interview as soon as feasible after randomisation and at follow up 18 months later.

**Participants**

**Diagnosis:** Schizophrenia [% of sample]- 69% (100/144) schizophrenia

**Diagnosis:** Other schizophrenia related [%] - 31% (44/144) - individual diagnoses not specified, but inclusion criteria was diagnosis in ICD-10 codes F20-29

**Diagnostic tool:** ICD-10

**Inclusion criteria:**
- Aged 16-40
- Living in London Borough of Lambeth
- Presenting to the mental health service for the first time with non-affective psychosis (schizophrenia, schizotypal, and delusional disorders, F20-29)
- People who had presented once but had been disengaged without treatment from routine community services.

**Exclusion criteria:**
- Organic psychosis or a primary drug or alcohol addiction
- Non-English speakers were not excluded but asylum seekers who were liable to enforced dispersal were excluded.

**Total sample size:**
No. randomised: 144 randomised
71 to specialised care
73 to standard care

**Total sample size:** ITT population
Data on number of relapses and readmissions to hospital were obtained for 136 (94%) patients over the 18 months of follow up. We had complete information on clinical status (recovered, unwell or relapsed) for 131 (91%) patients at 18 months.

**Gender:** % female - 35% female (51/144)
In specialised care group - 45% female (32/71)
In standard care - 26% female (19/73)

**Age:** Mean
age mean (SD) years
specialised care - 26 (6.0)
Standard care - 26.6(6.4)

**Ethnicity:** number (%)

[specialised / Standard]
white - 27 (38) / 18 (25)
Black British 10 (14) / 6(8)
Black Caribbean 9 (13) / 13 (18)
Black African 16 (23) / 25 (34)
Mixed 6 (8) / 6 (8)
Other 3 (4) / 5 (6)

**Setting:** Outpatient

**Setting:** Inpatient

**Baseline stats:** [Specialised care / Standard care] - characteristics No (%)
First episode - 61 (86) / 52 (71)
Single - 50 (71) / 51 (73)
Living situation:
Family - 37 (54) / 40 (55)
Alone - 23 (33) / 18 (25)
Other* - 9 (13) / 15 (20)
Employment:
Full time - 9 (13) / 8 (11)
Part time - 4 (6) / 5 (7)
Unemployed - 45 (63) / 45 (64)
Student - 10 (14) /10 (14)
Housewife - 3 (4) / 2 (3)

*Shared with friends or living in hostel
DUP - mean (SD) in months - 10.5(17.2) / 7.6(10.7)
not statistically significantly different.

**Notes about participants:** For most patients, admission to hospital was their first experience of mental health care (43 of 71 patients (61%) in specialised care group, 44 of 73 patients (60%) in control group) two thirds of which were involuntary admissions (specialised care 67%, controls 72%).

**Interventions** **Intervention - group 1.:** specialised care (assertive outreach for early psychosis); n=71; duration = 18 months

**Intervention - group 2.:** standard care; duration = 18 months; n=73

**Notes about the interventions:**
Assertive outreach for early psychosis
The Lambeth Early Onset (LEO) Team is a community team comprising 10 members of staff (team leader, part time consultant psychiatrist, trainee psychiatrist, half time clinical psychologist, occupational therapist, four community psychiatric nurses, and two healthcare assistants). It was established on the principles of assertive outreach, providing an extended hours service by including weekends and public holidays. Evidence based interventions adapted to the needs of people with early psychosis included low dose atypical antipsychotic regimens, cognitive behaviour therapy based on manualised protocols and family counselling and vocational strategies based on established protocols. Adherence to the assertive outreach model and to these treatment protocols was ensured through supervision of cognitive behaviour therapy, medication prescribing, family support, and the assertive outreach model. Whereas medication was prescribed to all patients, the range of psychological interventions varied according to need as assessed by the treating clinicians.

Standard care
Patients in the control group received standard care delivered by the community mental health teams. These teams received no additional training in the management of early psychosis, although they were encouraged to follow available guidelines.

**Outcomes**

**Death:**
Natural causes - 1 patient in control group died - unknown cause

**Death:**
Suicide - 1 patient in control group died

**Other:**
Primary outcomes - Rates of relapse and readmission.
Secondary outcomes - number of appointments offered, missed appointments, psychosocial treatments offered, number in recovery at endpoint.

**Quality**

**1.1 The study addresses an appropriate and clearly focused question.:** Well covered

**1.2 The assignment of subjects to treatment groups is randomised.:** Not reported adequately

**1.3 An adequate concealment method is used.:** Adequately addressed

**1.4 Subjects and investigators are kept 'blind' about treatment allocation.:** Poorly addressed

**1.5 The treatment and control groups are similar at the start of the trial.:** Adequately addressed
specialised care group - fewer men, more first episode patients, more white. Not stated if statistically significantly different or not.
specialised care group longer DUP - stated not significantly different.
Stats section states "Subsequent analyses controlled for possible imbalances in characteristics at baseline."

**1.6 The only difference between groups is the treatment under investigation.:** Well covered

**1.7 All relevant outcomes are measured in a standard, valid and reliable way.:** Well covered

**1.8 What percentage of the individuals or clusters recruited into each treatment arm of the study dropped out before the study was completed?:** *<20% complete info available on 131/144 (91%) of patients at 18 month follow up.*

**1.9 All the subjects are analysed in the groups to which they were randomly allocated (often referred to as intention-to-treat analysis). :**Well covered

**1.10 Where the study is carried out at more than one site, results are comparable for all sites.:** Not applicable

**2.1 How well was the study done to minimise bias?: +**

**Study ID**

**GRAWE2006-OTP**

**Funding source:** Non-industry support

**Published or unpublished data?:** Published

**Method**

**Type of study:** Individual randomised trial (effectiveness/pragmatic)

**Type of analysis:** ITT
LOCF used for missing assessments.

**Blindness:** Only raters blind

**Duration:** No. weeks of treatment - 104 weeks

**Raters:** Independent of treatment

**Design:** Single-centre - New referrals to mental health services in Sor-Trondelag county, Norway

**Number of people screened, excluded & reasons:**
168 screened of which 96 met criteria for schizophrenia.
46 of those were excluded due to -
-not recent onset (21)
-substance abuse (4)
-lived out of catchment area (4)
-no written consent (4)
-mental retardation (2)
-not recovered from initial episode (11)

50 were left for randomisation.

**Notes about study methods:**
Written consent and baseline assessments completed before randomisation which was conducted by an independent assistant with no knowledge of patients. A secretary (not part of clinical service) opened prenumbered envelopes with treatment group assigned according to random numbers provided by the central Optimal Treatment Project administration. Blocks were of variable size (8-12), stratified according to sex with a treatment ratio of 3:2 to ensure majority of cases received experimental treatment.

**Participants**

**Diagnosis:** Schizophrenia [% of sample] 80%

**Diagnosis:** Other schizophrenia related [%]
schizoaffective - 12%
schizophreniform - 8%

**Diagnostic tool:** DSM-IV used SCID-IV interviews to give DSM-IV diagnosis

**Inclusion criteria:**
- age 18-35
- diagnosis DSM-IV schizophrenic disorders
- recent onset (<2 years since first psychotic symptoms)

**Exclusion criteria:**
- first psychotic symptoms >2 years ago
- primary substance use disorder or mental retardation
- temporary residents not expecting to stay longer than 1 year

**Total sample size:** ITT population - 50

**Total sample size:** No. randomised - 50

**Gender:** % female - 38% female

**Age:** Mean 25.4(4.6) years

**Setting:** Outpatient

**Setting:** Inpatient

**Baseline stats:**
Integrated / standard
mean (sd) GAF: 52.5(11.2) / 45.7(8.2)
mean (sd) BPRS: 38.5 (7.8) / 42.8 (6.6)
drug dose (CPZ equiv) 208 (91) / 261 (137)

Contact with family

living with parents/family 16 (53) / 12 (60)
weekly contact 9 (30) / 5 (25
none/little contact 5 (17) / 3 (15)

Hospitalised before study entry
no 2 (7) / 6 (30)
yes 28 (93) / 14 (70)
days in hosp in 12 months before study entry
mean (sd) 122.4 (105.8) / 125 (105)

**Interventions** **Intervention - group 1.:** integrated treatment, n= 30 participants

**Intervention - group 2.:** standard treatment, n= 20 participants

**Notes about the interventions:**

Standard treatment
Clinic-based case management with antipsychotics, supportive housing, day care, inpatient treatment, rehab (promoted independent living & work activity), brief psychoeducation, supportive psychotherapy. 80% received standard treatment from hospital outpatient service, the rest from general health services.

Integrated treatment
Treatment by an MDT separate from standard treatment programme. Pharmacotherapy and case management similar to standard care but low case load (approx 1:10). Also received structured family psychoeducation, cognitive-behavioural family communication and problem solving skills training, intensive crisis management at home, individual CBT for residual symptoms and disability.

Treatment sessions were conducted at home, content and frequency tailored to goals and needs of patients and carers (most cases - hour per week for 2 months, then at least once every 3 weeks for first year, then once a month for second year). At times of crisis up to 3 sessions a week at home plus telephone consultation. If patient had less than weekly contact with carer then educational and problem solving training offered in individual sessions.

The lowest effective dose of antipsychotic was used with monotherapy preferred, plasma assays to optimise dose and check adherence. Depots offered to those non-adherent.

**Outcomes** **Leaving the study early:** Leaving due to any reason (non-adherence to study protocol)

**Global state & service outcomes (e.g. CGI):** Relapse

**Global state & service outcomes (e.g. CGI):** Re-hospitalisation

**Mental state (e.g. BPRS, PANSS, BDI):** Average score/change in mental state - BPRS

**General and psychosocial functioning (e.g. SFS):** Average score/change in general functioning - GAF

**Engagement with services (e.g. SES):** Average score/change in engagement with services - Number of admissions

**Non-adherence to study medication:** Non-adherence

**Other:**
Minor/major recurrence
persistent symptoms
adherence to psychosocial

**Quality**

**1.1 The study addresses an appropriate and clearly focused question.:** Well covered

**1.2 The assignment of subjects to treatment groups is randomised.:** Well covered

**1.3 An adequate concealment method is used.:** Well covered

**1.4 Subjects and investigators are kept 'blind' about treatment allocation.:** Adequately addressed

**1.5 The treatment and control groups are similar at the start of the trial.:** Adequately addressed - Significant difference in GAF scores between groups at baseline. This is mentioned in results and statistical analysis with initial scores as covariates included.

**1.6 The only difference between groups is the treatment under investigation.:** Well covered

**1.7 All relevant outcomes are measured in a standard, valid and reliable way.:** Well covered

**1.8 What percentage of the individuals or clusters recruited into each treatment arm of the study dropped out before the study was completed?:** <20%

**1.9 All the subjects are analysed in the groups to which they were randomly allocated (often referred to as intention-to-treat analysis). :**Well covered

**1.10 Where the study is carried out at more than one site, results are comparable for all sites.:** Not applicable

**2.1 How well was the study done to minimise bias?:** ++

| Study ID | KUIPERS2004-COAST |
|---|---|
| General info | **Funding source:** Not mentioned |
| | **Published or unpublished data?:** Published |
| Method | **Type of study:** Individual randomised trial |
| | **Type of analysis:** Completer<br>Scale based data used only those available at follow up |
| | **Type of analysis:** ITT<br>Hospitalisation data was available for all participants who were randomised. |
| | **Blindness:** Only raters blind |
| | **Duration:** No. weeks of treatment - 52 |
| | **Raters:** Independent of treatment |
| | **Design:** Single-centre - Croydon, UK (single service) |
| | **Number of people screened, excluded & reasons:**<br>Of the 76 people referred, 59 consented to take part in the study |
| | **Notes about study methods:**<br>Randomisation based on permuted blocks carried out by an independent administrator using a computer programme. |
| Participants | **Diagnosis:** Schizophrenia [% of sample] - 83% schizophrenia or schizoaffective disorder |
| | **Diagnosis:** Other<br>*6% Bipolar affective*<br>10% Drug induced psychosis/ depression and psychosis |
| | **Diagnostic tool:** Other method - Operational Criteria Checklist |
| | **Inclusion criteria:**<br>- Part of Croydon adult mental health services<br>- Aged 18-65<br>- Documented first contact with services within 5 years. |
| | **Exclusion criteria:**<br>- Primary learning disability<br>- Organic psychosis |
| | **Total sample size:** No. randomised - *59* |
| | **Gender:** % female - *24%* |

**Age:** Mean - *28*

**Ethnicity:** Details not reported

**Setting:** Outpatient

**Setting:** Inpatient

**Setting:** Other - Service level intervention

**History:** - Details not reported

**Baseline stats:**
[COAST / TAU]
GAF: 5.4(1.1) / 5.9(1.6)

**Interventions** **Intervention - group 1.:** COAST - Croydon outreach and assertive support team, N = 32

**Intervention - group 2.:** TAU; N = 27

**Notes about the interventions:**
COAST
The coast service consisted of a team leader, care co-ordinators, clinical psychologist, consultant psychiatrist and family therapists. A range of interventions including medication review and monitoring, vocational and benefits help, individual CBT, family therapy and information about psychosis were offered on a flexibly basis.

TAU
Remained within the referring team and offered usual services available from a multidisciplinary team which did not include specialised psychological interventions, nor information tailored to the first episode psychosis.

**Outcomes** **Global state & service outcomes (e.g. CGI):** Average score/change in global state - GAF

**Global state & service outcomes (e.g. CGI):** Days in hospital

**Mental state (e.g. BPRS, PANSS, BDI):** Average score/change in mental state - PANSS positive, negative and general subscales; BDI

**Quality of Life:** Average score/change in quality of life - MANSA

**Other:**
Carer outcome -Unmet needs

**Quality** **1.1 The study addresses an appropriate and clearly focused question.:** Well covered

**1.2 The assignment of subjects to treatment groups is randomised.:** Well covered

**1.3 An adequate concealment method is used.:** Well covered

**1.4 Subjects and investigators are kept 'blind' about treatment allocation.:** Poorly addressed

**1.5 The treatment and control groups are similar at the start of the trial.:** Adequately addressed

**1.6 The only difference between groups is the treatment under investigation.:** Adequately addressed

**1.7 All relevant outcomes are measured in a standard, valid and reliable way.:** Adequately addressed

**1.9 All the subjects are analysed in the groups to which they were randomly allocated (often referred to as intention-to-treat analysis). :** Poorly addressed

**1.10 Where the study is carried out at more than one site, results are comparable for all sites.:** Not applicable

**2.1 How well was the study done to minimise bias?: +**

| | |
|---|---|
| **Study ID** | **PETERSEN2005A-OPUS** |
| **General info** | **Funding source:** Non-industry support<br>**Published or unpublished data?:** Published |
| **Method** | **Type of study:** Individual randomised trial (effectiveness/pragmatic)<br>**Type of analysis:** ITT<br>For participants lost-to-follow-up at 2 years, two assumptions made: either carried forward from baseline, or assumed remission<br>**Blindness:** Open<br>**Duration:** Length of follow-up - See secondary papers<br>**Duration:** No. weeks of treatment - *104*<br>**Raters:** Independent of treatment<br>**Design:** Multi-centre - All mental health services in Copenhagen and Aarhus county, Denmark<br>**Number of people screened, excluded & reasons:**<br>547 randomised<br>**Notes about study methods:**<br>The included patients were centrally randomised to integrated treatment or standard treatment. In Copenhagen, randomisation was carried out through centralised telephone randomisation at the Copenhagen Trial Unit. The allocation sequence was computer generated, 1:1, in blocks of six, and stratified for each of five centres. In Aarhus, the researchers contacted a secretary by telephone when they had finished the entry assessment of each patient. The secretary then drew one lot from among five red and five white lots out of a black box. When the block of 10 was used, the lots were redrawn. Block sizes were unknown to the investigators. |
| **Participants** | **Diagnosis:** Schizophrenia [% of sample] - 66% |

**Diagnosis:**
Other schizophrenia related [%] - Schizotypal: 14%
Delusional disorder: - 5%
Brief psychosis: - 8%
Schizoaffective: - 5%
Unspecified non-organic psychosis: - 2%

**Diagnostic tool:** ICD-10

**Inclusion criteria:**
- Aged 18-45 years
- ICD-10 schizophrenia spectrum diagnosis
- Had not been given antipsychotic drugs for more than 12 weeks of continuous treatment.

**Total sample size:** No. randomised - 547

**Total sample size:** ITT population - 436 analysed at 2-year follow-up

**Gender:** % female - 41%

**Age:** Mean - 26

**Setting:** Inpatient

**Setting:** Outpatient

**History:**
[Integrated / Standard]
Median weeks DUP: 46 / 53

**Baseline stats:**
[Integrated / Standard]
Diagnosis of harm or dependence syndrome: 73 (27) / 73 (27)
Psychopathology scores:
Psychotic: 2.8 (1.4) / 2.6 (1.4)
Negative: 2.2 (1.2) / 2.2 (1.2)
Disorganised: 1.0 (0.9) / 1.0 (1.0)
Social functioning:
Mean (SD) GAF symptoms: 32.7 (10.3) /34.4 (11.0)
Mean (SD) GAF function: 41.6 (13.6) / 41.0 (13.1)
Living conditions:
Living alone, with partner or child: 208 (76) / 213 (80)

Living with parents: 49 (18) / 41 (15)
Living in supervised setting: 1 (0) / 2 (1)
Homeless: 14 (5) / 10 (4)
Inpatient at randomisation: 117 (43) / 127 (47)

**Notes about participants:**
Less than 12 weeks antipsychotic use (as per inclusion criteria)

**Interventions** **Intervention - group 1.:** Integrated treatment: 2 years; n=275

**Intervention - group 2.:** Standard treatment: 2 years; n=272

**Notes about the interventions:**
Integrated treatment
Assertive community treatment enhanced by family involvement and social skills training, delivered to patients individually by multidisciplinary teams with caseloads of about 10. Patients were visited in their homes or other places in their community according to their preference. During hospitalisation, treatment responsibility was transferred to the hospital, but a team member visited the patient once a week. A crisis plan was developed for each patient. If the patient was reluctant about treatment, the team stayed in contact with the patient and tried to motivate the patient to continue treatment. The fidelity of the programme, measured with the index of fidelity of assertive community treatment was 70% in both Copenhagen and Aarhus.

Psychoeducational family treatment was offered, following a manual focused on problem solving and development of skills to cope with the illness. This included 18 months of treatment, 1.5 hours twice monthly, in a multiple family group with two therapists and four to six patients with their families.

Patients with impaired social skills were offered social skills training focusing on medication, coping with symptoms, conversation, and problem solving skills in a group of maximum six patients and two therapists.

Standard treatment
Usually offered the patient treatment at a community mental health centre. Each patient was usually in contact with a physician, a community mental health nurse, and in some cases also a social worker. Home visit was possible, but office visits were the general rule. A staff member's caseload in the community mental health centres varied between 1:20 and 1:30. Outside office hours, patients could refer themselves to the psychiatric emergency room.

Patients in both treatment groups were offered antipsychotic drugs according to guidelines from the Danish Psychiatric Society, which recommend a low dose strategy for patients with a first episode of psychotic illness and use of second generation antipsychotic drugs as first choice.

**Outcomes** **Death:** Suicide

**Death:** Natural causes

**Leaving the study early:** Leaving due to any reason (non-adherence to study protocol)

**Mental state (e.g. BPRS, PANSS, BDI):** Average score/change in mental state - SAPS and SANS (summed for the three dimensions), suicidality (thoughts and attempts), diagnoses of depression and dependence

**General and psychosocial functioning (e.g. SFS):** Average score/change in general functioning - GAF

**Engagement with services (e.g. SES):** Average score/change in engagement with services - No. days in hospital

**Satisfaction with treatment:** Service user satisfaction

**Quality of Life:** Average score/change in quality of life - Living independently, employed, in education, social circle (number of friends and family)

**Other:**
Adherence to treatment, antipsychotic use (doses and types)

**Quality**

**1.1 The study addresses an appropriate and clearly focused question.:** Well covered

**1.2 The assignment of subjects to treatment groups is randomised.:** Well covered

**1.3 An adequate concealment method is used.:** Well covered

**1.4 Subjects and investigators are kept 'blind' about treatment allocation.:** Poorly addressed

**1.5 The treatment and control groups are similar at the start of the trial.:** Well covered

**1.6 The only difference between groups is the treatment under investigation.:** Adequately addressed

**1.7 All relevant outcomes are measured in a standard, valid and reliable way.:** Well covered

**1.8 What percentage of the individuals or clusters recruited into each treatment arm of the study dropped out before the study was completed?:** 20-50%

**1.9 All the subjects are analysed in the groups to which they were randomly allocated (often referred to as intention-to-treat analysis). :**Poorly addressed

**1.10 Where the study is carried out at more than one site, results are comparable for all sites.:** Not addressed

**2.1 How well was the study done to minimise bias?: ++**

**References to included studies (update)**

**CRAIG2004-LEO**
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**GRAWE2006-OTP**
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**KUIPERS2004-COAST**
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**PETERSEN2005-OPUS**
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## Services - ACT vs. standard care

**Characteristics of included studies (update)**

| Study ID and country | Interventions and comparisons | Participants | Ethnicity data | Lost to follow-up | Other notes |
|---|---|---|---|---|---|
| **MORSE1992**<br><br>St Louis, US | 1. Continuous treatment team program including assertive outreach<br><br>2. Drop in centre<br><br>3. Standard outpatient treatment<br><br>**ACT vs. Standard care** | Schizophrenia – 30.1%<br>Major depression – 20.9%<br>Bipolar disorder – 8.5%<br>Other psychotic disorders – 4.5% | 52.5% of the participants were non-white. Virtually all of the non-white participants were African American | Continuous treatment team – 15/52 (29%)<br>Drop-in centre – 32/62 (52%)<br>Outpatient treatment –29/64 (45%) | All participants were currently homeless<br><br>Participants who left the study early (n=28) were replaced by people randomly assigned to one of the groups. Data in the review was based on sample sizes after the replacement of early drop outs. More participants needed to be replaced in the day centre program and outpatient program than in the continuous treatment condition |
| **AUDINI1994**<br><br>London, UK | 1. continuing home care<br><br>2. out/in-patient care (after 30 months of home care)<br><br>3. controls (no home care)<br><br>**ACT vs. Standard care** | SMI – with 38% of the total sample diagnosed with schizophrenia. | States ethnic background of participants was the same as in south Southwark<br><br>British/Irish – 65%<br>Afro-Caribbean – 26% | Continuing home-care – 3/33<br><br>Out/in-patient care – 4/32 (+1 participant who committed suicide during intervention)<br><br>Above two groups combined as both received ACT<br><br>ACT – 7/65<br>Control – 17/97 | Participants were originally randomized into DLP home-care of control. After 20 months of home-based care, (Phase 1) home-care participants were randomised at month 30 into phase II to have either further home-based care or out/in patient care.<br>Study notes that 26 participants originally randomized into home-care could not be re-randomised in phase 2 due to leaving the study for various reasons. |

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| **BOND1988**<br><br>Indiana, US | 1. Assertive case management<br><br>2. Standard community care<br><br>**ACT vs. Standard care** | Schizophrenia – 61% | White – 64%<br>Black – 34%<br>Latino – 2% | Attrition rate by 6 months<br>ACT – 18/84<br>SC – 25 / 83 | |
| **BOND1990**<br><br>Chicago, US | 1. ACT – Stein & test model<br><br>2. Drop-in centre providing standard community care<br><br>**ACT vs. Standard care** | Schizophrenia 38% | [ACT / Drop-in]<br>Race (n/%)<br>White: 31(69) / 25(58)<br>Black: 14(31) / 13(30)<br>Other: 0(0) / 5(12) | Lost to follow-up for any reason in study:<br>ACT – 11/44<br>Drop-in 19/43<br>All people lost to follow up from the study had also dropped out from treatment. In addition to this 21 participants in the drop-in centre group had also dropped out of treatment. Thus in total, after 1 year, 33 (76%) of the ACT participants and only 3(7%) of the Drop-in centre participants were involved in the respective programmes. | |
| **LEHMAN1997**<br><br>Maryland, US | 1. ACT program – modified version of Stein & Test<br><br>2. Usual community services | Schizophrenia – 45%<br>Schizoaffective - 14%<br>Bipolar – 20.5%<br>Depressive disorder – 8.5% | There was a difference in ethnicity between the ACT and control subjects<br>*indicates a | ACT – 10/ 77<br>SC – 17/75 | Intervention was aimed at homeless people with SMI<br><br>Those refusing to consent in the study did not differ in terms of ethnicity from those who consented |

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| | **ACT vs. Standard care** | Other Axis I disorder - 12% | significant different p<.01.<br><br>[ACT / control]<br>African American: 61 / 84<br>White: 35 / 12<br><br>Follow-up paper reports mean cost per case with results reported by ethnicity.<br><br>Patient race interacted with the observed patterns of service utilization – White patients accounted for the significantly lower utilization of in-patient mental health care for ACT, whereas Black patients accounted for the significantly lower utilization of mental health ER visits. Similarly, the observed ACT vs. SC difference in use of out-patient | | to participate.<br><br>Due to the significant differences, ethnicity was included as a covariate in the analysis |

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| | | | substance misuse treatment was due primarily to significant increases in the use of these services among Black ACT patients. | | |

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| **BUSH1990**<br><br>Atlanta, US | 1. Intensive support from case managers in the community<br><br>2. Control – some of the same services but at a less intense level. These participants received the same case management and rehabilitation services that they had received prior to the study<br><br>**ACT vs. case management*** | Schizophrenia – 86%<br>Bipolar disorder – 7%<br>Personality disorders – 7% | Black – 50%<br>White - 50% | No mention of lost to follow up: appears to be a completer analysis.<br><br>ACT – 0/14<br>Case management – 0/14 | In the intensive treatment, case managers provided a range of services to the clients where they lived, which included boarding homes, jails, hospitals and on the streets. |
| **CHANDLER1997**<br><br>California, US<br><br>Paper was actually published 1999 – may have been unpublished at time of initial Cochrane review | 1. ACT – capitated assertive community treatment program. This combined ACT with specialist services in substance abuse, employment and social skills.<br><br>2. Usual county services – all participants were currently in locked subacute long-term facilities.<br><br>**ACT vs. Hospital-based rehabilitation** | Schizophrenia – 61%<br>Schizoaffective – 34%<br>Other psychotic – 5% | [ACT / control]<br>Race (%)<br>African–American: 40.0 / 55.2<br>Caucasian: 40.0 / 27.6<br>Other: 20.0 / 17.2 | ACT – 3/29*<br>Control – 2/30<br><br>1 client in the ACT group died so had been removed from the analysis (e.g. total lost to follow up for any reason = 4/30) | At the time of study group assignment all participants were residents in a long-term locked subacute facility.<br><br>Trial was cluster randomized.<br><br>There were significant group differences in terms of the number that had previously been in state institution (ACT – 67%, comparison – 33%) |

**References to included studies (update)**

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Bush, C. T., Langford, M. W., Rosen, P., & Gott, W. (1990). Operation outreach: intensive case management for severely psychiatrically disabled adults. *Hospital and Community Psychiatry* 41, 647- 649.

**CHANDLER1997** (Published Data Only)
Chandler, D., Spicer, G., Wagner, M., & Hargreaves, W. (1997). Cost-effectiveness of a capitated Assertive Community Treatment program. *Psychiatric Rehabilitation Journal* 22 [4], 327-336.

**LEHMAN1997** (Unpublished and Published Data)
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**Characteristics of excluded studies (update)**

**ABERG1999 –** does not report drop out within an ethnically diverse population
**DECANGAS1994 -** does not report drop out within an ethnically diverse population
**DEKKER2002 –** does not report drop out within an ethnically diverse population
**DRAKE1998 –** does not report drop out within an ethnically diverse population
**ESSOCK1995 –** does not report drop out within an ethnically diverse population
**FEKETE1998 –** does not report drop out within an ethnically diverse population
**HAMPTON1992 –** does not report drop out within an ethnically diverse population
**HERINCKX1997 –** does not report drop out within an ethnically diverse population
**JERRELL1995 –** does not report drop out within an ethnically diverse population
**LAFAVE1996 -** does not report drop out within an ethnically diverse population
**MARX1973 -** does not report drop out within an ethnically diverse population
**MORSE1997 -** does not report drop out within an ethnically diverse population
**QUINLIVAN1995 -** does not report drop out within an ethnically diverse population
**ROSENHECK1993 -** does not report drop out within an ethnically diverse population
**TEST1991 -** does not report drop out within an ethnically diverse population

**References of excluded studies (update)**

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**ESSOCK1995** (Published Data Only)
Essock, S. M. & Kontos, N. (1995). Implementing assertive community treatment teams. *Psychiatric Services* 46, 679-683.

**FEKETE1998** (Published Data Only)
Fekete, D. M., Bond, G. R., McDonel, E. C., Salyers, M., Chen, A., & Miller, L. (1998). Rural assertive community treatment: a field experiment. *Psychiatric Rehabilitation Journal*, 21, 371-379.

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Hampton, B., Korr, W., Mayes, J., Havis P., (1992) *Integration services system approach to avert homelessness, CSP homeless prevention project for HMI adults*. State of Illinois NIMH Demonstration Grant program, Final report.

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**LAFAVE1996** (Published Data Only)
Lafave, H. G., deSouza, H. R., & Gerber, G. J. (1996). Assertive Community Treatment of severe mental illness: a Canadian experience. *Psychiatric Services* 47, 757-759.

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**TEST1991** (Published Data Only)
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**Characteristics of excluded studies (Bipolar guideline review)**

**BIGELOW1991** Not a RCT
**BOND1989** Not a RCT (housing interventions)
**BOND1991** Not a RCT
**BORLAND1989** Not a RCT (Intensive case management)
**BURNS1991** Home treatment team, not ACT
**CHAMPNEY1992** Case management, no ACT
**DEAN1990** Not a RCT
**DEAN1993** Not a RCT
**DHARWANDKAR1994** Not a RCT
**FENTON1979** Intensive community support vs. standard care, not ACT
**GOERING1988** Not a RCT
**HERZ1977** Brief hospitalisation vs. standard hospital care, not ACT
**HORNSTRA1993** Not a RCT
**HOULT1983** ACT vs. acute admission (focus of another review)
**KNIGHT1990** Not a RCT
**KULDAU1977** Rapid discharge vs. hospital care, not ACT
**LANGSLEY1971** Family crisis case management vs. hospital admission, not ACT
**LEHMAN1993** Case management vs. case management
**MACIAS1994** Case management vs. psychological rehabilitation programme, not ACT
**MARSHALL1995** Case management vs. standard care, not ACT
**MARTIN1993** Unclear if randomised
**MCFARLANE1992** Unclear if randomised, ACT vs. FACT
**MCGOWAN1995** Unclear if randomised,
**MCGREW1994** Not a RCT
**MERSON1992** home treatment vs. emergency assessment, no standard care group
**MODCRIN1988** Not a RCT (Case management vs. case management)
**MOSHER1975** Not a RCT
**MUIJEN1992** ACT vs. acute admission (focus of another review)
**PAI1982** Not a RCT

**POLAK1976** Community based therapeutic environment vs. standard hospital care
**REIBEL1976** Brief hospital admission, not ACT
**ROSSLER1992** Not a RCT
**ROSSLER1995** Not a RCT
**SANTIAGO1985** Case management vs. standard care, not ACT
**SLEDGE1996A** Both treatments were hospital based (partial hospitalisation vs. standard hospitalisation)
**SOLOMON1994** Case management vs. case management
**SOLOMON1995B** Not RCT (ACT vs. forensic intensive case management vs. standard care)
**STEIN1980** ACT vs. hospital admission (focus of another review)
**SUSSER1997** Critical time intervention, not ACT
**TEAGUE1995** Not a RCT
**THORNICROFT1991** Not a RCT
**TORO1997** Only 20% had SMI
**TYRER1995** Case management vs. standard care, not ACT
**TYRER2003** Review
**VINCENT1977** Not a RCT
**WOOD1994** Not a RCT

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**BOND1991**
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Burns, T., Beadsmoore, A., Ashok, V. B., Oliver, A., & Mathers, C. (1993). A controlled trial of home-based acute psychiatric services. I: Clinical and social outcome. *British Journal of Psychiatry* 163, 49-54.
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Champney, T. F. & Dzurec, L. C. (1992). Involvement in productive activities and satisfaction with living situation among severely mentally disabled adults. *Hospital and Community Psychiatry* 43, 899-903.

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**DHARWANDKAR1994**
Dharwandkar, N. (1994). Effectiveness of an assertive outreach community treatment program. *Australian and New Zealand Journal of Psychiatry* 28, 244-249.

**FENTON1979**
Fenton, W. S., Tessier, L., Struening, E. L., Smith, F. A., Benoit, C., & Contandripoulos, A. P. (1984). A two-year follow-up of a comparative trial of the cost-effectiveness of home and hospital psychiatric treatment. *Canadian Journal of Psychiatry* 29, 205-211.

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Langsley, D. G., Machotka, P., & Flomenshaft, K. (1971). Avoiding mental hospital admissions: a follow up study. *American Journal of Psychiatry* 127, 1391-1394.

**LEHMAN1993**
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Knapp, M., Beecham, J., Koutsgeorgiopoulu, V., Hallam, A., Fenyo, A., & Marks, I. M. (1994). Service use and costs of home-based versus hospital-based care for people with serious mental illness. *British Journal of Psychiatry* 165, 195-203.

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**PAI1982**
Pai, S. & Nagarajaiah. (1982). Treatment of schizophrenic patients in their homes through a visiting nurse. *International Journal of Nursing Studies* 19, 167-172.

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**POLAK1976** (Published Data Only)
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**ROSSLER1992**
Rossler, W., Loffler, W., Fatkenheuer, B., & Reicher-Rossler, A. (1992). Does case management reduce the rehospitalization rate? *Acta Psychiatrica Scandinavica* 86, 445-449.

**ROSSLER1995**
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Santiago, J. M., McCall-Perez, F., & Bachrach, L. J. (1985). Integrated services for chronic mental patients: theoretical perspective and experimental results. *General Hospital Psychiatry* 7, 309-315.

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Sledge, W. H., Tebes, J., Wolff, N., & Helminiak, T. W. (1996). Day hospital crisis respite care versus inpatient care .2. Service utilization and costs. *American Journal of Psychiatry*, 153, 1074-1083.

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Solomon, P. & Draine, J. (1995). Consumer case management and attitudes concerning family relations among persons with mental illness. *Psychiatric Quarterly* 66, 249-261.

Solomon, P. & Draine, J. (1994). Family perceptions of consumers as case managers. Community Mental Health Journal 30, 165-176.
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**SOLOMON1995B** (Published Data Only)
Solomon, P. & Draine, J. (1995). One-year outcomes of a randomized trial of case management with seriously mentally ill clients leaving jail. *Evaluation Review* 19, 256-273.

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Test, M. A. & Stein, L. I. (1980). Alternative to hospital treatment. III: Social Cost. *Archives of General Psychiatry* 37, 409-412.
Stein, L. I., Test, M. A., & Marx, A. J. (1975). Alternative to the hospital: a controlled study. *American Journal of Psychiatry* 132, 517-522.

**SUSSER1997**
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Teague, G. B., Drake, R. E., & Ackerson, T. H. (1995). Evaluating the use of continuous treatment teams for persons with mental illness and substance abuse. *Psychiatric Services* 46, 689-695.

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Thornicroft, G. & Breakey, W. R. (1991). The COSTAR programme 1: Improving social networks of the long-term mentally ill. *British Journal of Psychiatry* 159, 245-249.

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**TYRER2003** (Published Data Only)
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Wood, K. & Anderson, J. (1994). The effect on hospital admission of psychiatric case management involving general practitioners: preliminary results. *Australian and New Zealand Journal of Psychiatry* 28, 223-229.

## Services - CRHTT vs. standard care

**Characteristics of included studies (update)**

| Study ID and country | Interventions and comparisons | Participants | Ethnicity data | Lost to follow-up | Other notes |
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| **FENTON1998**<br><br>**Montgomery County, US** | 1. Community residential alternative – eight bed crisis alternative staffed 24 hours a day. The service is based on Soteria and Crossing Place with continuous participation in ongoing community-based treatment, rehabilitation, school, work or other activities supported.<br><br>2. Standard inpatient care<br><br>**CRHTT vs. Standard care** | Schizophrenia, schizoaffective disorder, other psychoses – 56% | [CRHTT / SC]<br>Ethnicity, %<br>Caucasian: 74 / 64<br>Black: 14 / 28<br>Other: 6 / 6 | CRHTT – 28 / 93<br>SC – 44 /92 | 14% of the randomized participants declined admission after receiving assignment.<br><br>In total 66 individuals (36%) did not successfully enter the study. The 66 unsuccessful admissions did not differ from the successful admission on any of the 27 variables tested including ethnicity. |
| **PASAMANICK1964**<br><br>**Louisville, US** | 1. Drug home care group<br><br>2. Placebo home care group – not used in BP review analysis<br><br>In both home care groups, visits are | All had schizophrenia | With reference to the 152 patients who completed the study as reported by Pasamanick1967<br><br>White – 67.1%<br>“negro” – 32.9% | Lost to follow up for those admitted to the programme in the first 18 months<br><br>Home care (combined) – 9/143<br>SC – 0/50 | Inclusion criteria for the study stated that family members all must express willingness to supervise the patient in the home.<br><br>The paper states that “many of the patients are drawn from “hard core” or |

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| | made to the home; all patients have access to a 24hr telephone answering service. Practical support and assistance are offered to the family and patient in the home.<br><br>3. Hospital control group<br><br>**CRHTT vs. Standard care** | | Pasamanick1967 states: "The study population composed of 102 white and 50 negro patients or a 67 to 33 percentage split. White ITC patients constituted 68.4 percent of the drug, 68.3 percent of the placebo, and 64.8 percent of the hospital control cases. There was a larger percentage of white schizophrenic patients in Central State Hospital (78.4 percent) than in the study population probably because of insistence on returning the patient to a supervised family setting. In general, Negro families even though frequently disorganized, are probably more likely to accept patients for home care since it has been repeatedly demonstrated that the lower the social class position, the greater the tolerance for deviant behaviour." | These are the figures reported in the Pasamanick 1964 paper. They differ from Pasamanick 1967 which reports data for only 163 patients of which lost to follow up rates were:<br><br>Home care (combined) – 11/109<br>SC – 0/54<br><br>This paper notes that these 163 cases represent approx 30% of patients admitted to the hospital and 87% of those who passed the initial hospital screening and were referred to the treatment centre.<br><br>The analysis is then conducted on the 152 participants who remained in the study | multiproblem families. They tend to represent the lowest socioeconomic stratum of the population and come from disorganized family settings" Paper notes that the patients typify schizophrenia populations in most US state hospitals.<br><br>With regards to successes e.g. remaining in the home as opposed to re-admission to hospital, the paper states: "Nor were the findings significant with regard to race. Of the 30 white drug cases, about 80 percent succeeded as did 72 percent of the Negro drug patients. As for the placebo patients, race was an equally unimportant variable in the case outcome. This finding negates one of our subsidiary hypotheses about the differential willingness of white and Negro families to tolerate deviant persons and behaviour." |

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| **MUIJEN1992**<br><br>**London, UK**<br><br>**Reports lost to follow up by ethnicity** | 1. Home-based care – daily living programme which involved a multidisciplinary team, crisis clinics, 24 hour answering service, home visits and relative support<br><br>2. Standard hospital care<br><br>**CRHTT vs. Standard care** | Schizophrenia – 49%<br>Mania – 17%<br>Depression – 19%<br>Neurosis – 12%<br>Unclassified – 3% | [CRHTT / SC]<br>Ethnic origin. N (%):<br>British or Irish: 57(62) / 63(65)<br>Afro-Caribbean: 23(25) / 20(21)<br>Other: 12(13) / 14(14) | Total lost to follow up<br>CRHTT – 24/92<br>SC – 36/97<br><br>[CRHTT / SC]<br>Lost to follow up by ethnicity, number dropped out(total number in sample):<br>British or Irish: 16(62) / 24(63)<br>African-Caribbean: 9(23) / 7(20)<br>Other: 3(12) / 5(14)<br><br>For the CRHTT the proportion of African-Caribbean individuals lost to follow up is greater than the percentage of British and Irish individuals lost to follow up (39% vs. 21% respectively), For standard care the percentage lost to follow up is equivalent across groups with 38% of British or Irish and 35% of African-Caribbean individuals being | The paper notes that "ethnicity was similar to that of south Southwark population with a slight excess of patients from Afro-Caribbean background."<br><br>The reasons for missing data / lost to follow up differed between the two treatment groups with 88% of the CRHTT refusing, whereas hospital patients either refused (42%) or were untraceable (50%) which the authors state is "probably a consequence of lack of clinical follow up in hospital care" |

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| | | | | lost to follow up.<br><br>A follow up cost effectiveness study reports service utilization for the two groups but does not provide ay information grouped by ethnicity. | |

**References of included studies (update)**

**FENTON1998** (Published Data Only)
Fenton, W. S., Mosher, L. R., Herrell, J. M., & Blyer, C. R. (1998). Randomized trial of general hospital and residential alternative care for patients with severe and persistent mental illness. *American Journal of Psychiatry* 155 [4], 516-522.

**MUIJEN1992** (Published Data Only)
Knapp, M., Beecham, J., Koutsgeorgiopoulu, V., Hallam, A., Fenyo, A., & Marks, I. M. (1994). Service use and costs of home-based versus hospital-based care for people with serious mental illness. *British Journal of Psychiatry* 165, 195-203.

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**PASAMANICK1964** (Published Data Only)
Davis, A. E., Dinitz, S., & Pasamanick, B. (1972). The prevention of hospitalization in schizophrenia: five years after an experimental program. American *Journal of Orthopsychiatry* 42, 375-388.

Pasamanick, B., Scarpitti, F. R., Lefton, M., Dinitz, S., Wernert, J. J., & McPheeters, H. (1967). *Schizophrenics in the community: an experimental study in the prevention of hospitalization.* New York.

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**Characteristics of excluded studies (update)**

**FENTON1979 -** does not report drop out within an ethnically diverse population
**HOULT1981 -** does not report drop out within an ethnically diverse population
**JOHNSON2005 -** does not report drop out (paper used in secondary sub-group analysis)
**STEIN1980 -** does not report drop out within an ethnically diverse population

**References of excluded studies (update)**

**FENTON1979**
Fenton, W. S., Tessier, L., Stuening, E. L., Smith, F. A., Benoit, C., & Contandripoulos, A. P. (1984). A two-year follow-up of a comparative trial of the cost-effectiveness of home and hospital psychiatric treatment. *Canadian Journal of Psychiatry* 29, 205-21

Fenton, W. S., Tessier, L., Contandripoulos, A. P., Nguyen, H., & Stuening, E. L. (1982). A comparative trial of home and hospital psychiatric treatment: financial costs. *Canadian Journal of Psychiatry* 27, 177-185.

*Fenton, W. S., Tessier, L., & Stuening, E. L. (1979). A comparative trial of home and hospital psychiatric care: one-year follow-up. *Archives of General Psychiatry* 36, 1073-1079.

**HOULT1981** (Published Data Only)
Hoult, J. (1986). Community care of the acutely mentally ill. *British Journal of Psychiatry* 149, 137-144.

*Hoult, J., Reynolds, I., Charbonneau, P. M., Cole, P., & Briggs, J. (1981). A controlled study of psychiatric hospital versus community treatment: the effect on relatives. *Australian and New Zealand Journal of Psychiatry* 15, 323-328.

Hoult, J., Rosen, A., & Reynolds, I. (1984). Community orientated treatment compared to psychiatric hospital orientated treatment. *Social Science and Medicine* 18, 1005-1010.

**JOHNSON2005** (Unpublished and Published Data)
Johnson, S., Nolan, F., Pilling, S., Snador, A., Hoult, J., McKenzie, N., White, I. R., Thompson, M., Bebbington, P. (2005) Randomised controlled trial of acute mental health care by a crisis resolution team the north Islington crisis study. *British Medical Journal*, 17, 331 (7517), 586-7.

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Test, M., Knoedler, W., Allness, D., Burke, S., Brown, R., & Wallisch, L. (1989). Community care of schizophrenia: two-year findings. *Schizophrenia Research: Advances in Neuropsychiatry and Psychopharmacology* 3, 1-16.

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Stein, L. I., Test, M. A., & Marx, A. J. (1975). Alternative to the hospital: a controlled study. *American Journal of Psychiatry* 132, 517-522.

**Characteristics of excluded studies (Bipolar guideline review)**

**BURNS1991** 332 randomised, but only 162 entered trial. Majority were not severely ill, only 35% 'psychotic' (CRHTT)
**BUSH1990** Participants were not in need of CRHTT, not in acute crisis (Community intensive outreach vs. hospital care)
**HENDERSON2004** RCT, looking at joint crisis plans
**LEVENSON1977** Treatment not delivered by multidisciplinary team, no 24hr crisis support (Admission vs. hospital care)
**MOSHER1975** Not a RCT (CRHTT)
**PAI1982** Not a RCT (home vs. hospital care) (CRHTT)

**References of excluded studies (Bipolar guideline review)**

**BURNS1991**
Burns, T., Beadsmoore, A., Ashok, V. B., Oliver, A., & Mathers, C. (1993). A controlled trial of home-based acute psychiatric services. I: Clinical and social outcome. *British Journal of Psychiatry* 163, 49-54.

Burns, T., Raftery, J., Beadsmore, A., McGuigan, S., & Dickson, M. (1991). A controlled trial of home-based acute psychiatric services. II: Treatment patterns and costs. *British Journal of Psychiatry* 163, 55-61.

*Burns, T. & Raftery, J. (1991). Cost of schizophrenia in a randomized trial of home-based treatment. *Schizophrenia Bulletin* 17, 407-410.

**BUSH1990** (Published Data Only)
Bush, C. T., Langford, M. W., Rosen, P., & Gott, W. (1990). Operation outreach: intensive case management for severely psychiatrically disabled adults. *Hospital and Community Psychiatry* 41, 647- 649.

**HENDERSON2004** (Published Data Only)
Henderson, C., Flood, C., Leese, M., Thornicroft, G., Sutherby, K., Szmikler, G. (2004) Effect of joint crisis plans on use of compulsory treatment in psychiatry: single blind randomised controlled trial. *British Medical Journal*, 329 (7458), 122-123.

**LEVENSON1977**
Levenson, A. J., Lord, C. J., Sermas, C. E., Thornby, J. I., Sullender, W., & Comstock, B. S. (1977). Acute schizophrenia: an efficacious outpatient treatment approach as an alternative to full-time hospitalization. *Diseases of the Nervous System* 38, 242-245.

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**MOSHER1975**
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Pai, S. & Nagarajaiah. (1982). Treatment of schizophrenic patients in their homes through a visiting nurse. *International Journal of Nursing Studies* 19, 167-172.

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## Services - Case management vs. standard care

**Characteristics of included studies (update)**

| Study ID and country | Interventions and comparisons | Participants | Ethnicity data | Drop out | Other notes |
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| **Franklin1987**<br><br>Texas, US | 1. Case management; the team included one supervisor and 7 cases managers with graduate and undergraduate degrees in related fields and experience working with people with SMI. The team was responsible for non-clinical services, brokerage and other activities such as travel.<br>Ratio: Case manager 1: Client 30.<br><br>2. Standard care: Routine hospital aftercare<br><br>**Case Management vs. Standard care** | 56% schizophrenia | [Case Management / Standard care]<br>Ethnicity, n (%):<br>White: 154(72) / 104(70)<br>Hispanic: 4(2) / 12(6)<br>Black: 54(25) / 48(24)<br>Other: 1(1) / 0(0) | Total Lost to FU:<br>Case management: 76/213<br>Standard care: 78/204<br><br>**Lost to FU by ethnic subgroup**<br><br>**Case management:**<br>White: 55/154<br>Black: 19/54<br><br>**Standard care**<br>White: 51/141<br>Black: 19/48 | |
| **Ford1995**<br><br>London, UK | 1. Intensive case Management: The case management team involved 4 nurses and 1 OT with advice from a consultant psychiatrist. The case manager was described as the "single accountable point of contact". The emphasis was on care co-ordination, advocacy and direct care delivery. Case managers worked 9-5 without any 24 hr cover. Ration: Case manager | 82% schizophrenia | [Intensive case management / Standard care]<br>Ethnicity, n (%):<br>Minority ethnic groups: 9(23) / 14(37) | Lost Contact with services<br>Intensive case management: 1/39<br>Standard care: 9/38 | The paper also reports on the number in contacts with services in the two groups:<br><br>[ICM / SC]<br>Service, n (%):<br>GP: 31(79) / 25(66)<br>Other primary care: 11(28) / 4(11)<br>Psychiatrist outpatient: |

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| | 1: client 10<br><br>2. Standard care: routine care from psychiatric services.<br><br>**Intensive case management vs. Standard care** | | | | 29(74) / 18(13)<br><br>Although there was no statistically significant effect on the number in contact with GPs, the intensive case management group was significantly more likely to be in contact with the other two services when compared to those in the standard care group. |
| **Holloway1998**<br><br>London, UK | 1. Case management – consisted of a core team of four nurses and an OT with part-time involvement of two psychiatrists and a clinical psychologist. The staff provided direct interventions and acted as advocates, when linking clients with other services. The teams did not offer 24 hour service or aim to avoid hospitalization at all costs<br>Ratio: Case manager 1: Clients 8<br><br>2. Standard care – local consultant teams receiving services as deemed appropriate from CPN, social workers, in and out-patient teams, depot clinics and community care workers.<br>Ratio: CPNs 1: clients 30<br><br>**Intensive case management vs. Standard care** | 66% schizophrenia or schizoaffective disorder | [ICM / SC]<br>Ethnicity, n (%):<br>White: 17(49) / 15(43)<br>Non-white: 18(51) / 20(57) | Lost to FU:<br>ICM: 8/34<br>Standard care: 8/33<br>Lost to FU (including deaths):<br>ICM: 9/35<br>Standard care: 10/35<br><br>Dropping out of contact with services (excluding deaths and those moved abroad)<br>ICM: 0/34<br>Standard care: 6/32) | |

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| **Muijen1994**<br><br>London, UK | 1. Intensive case management: acting as advocates offering practical advice and assistance with welfare benefits, housing and maintaining client input. None of the clients were discharged from the caseloads. Instead if they refused CPN contact they were placed on an 'inactive' list and offered services at a later date. Ratio: Case manager1: client 8<br><br>2. Standard care: care from CPNs in primary care<br><br>**Intensive case management vs. Standard care** | 83% schizophrenia | [ICM / SC]<br>Ethnicity, n (%)<br>UK/Irish: 27(66) / 31(76)<br>African / African-Caribbean: 12(29) / 7(17)<br>Asian: 1(2) / 2(5)<br>Other: 1(2) / 1(2) | Lost to FU:<br>Case management: 10/41<br>Standard care: 14/41<br><br>**Lost to FU by ethnic sub-group:**<br><br>**Case management:**<br>UK/Irish: 8/27<br>African / African-Caribbean: 2/12<br><br>**Standard care:**<br>UK/Irish: 10/31<br>African/African-Caribbean: 4/7 | The paper notes that a slightly higher proportion of Afro-Caribbean participants were randomized to the case management group.<br><br>The paper reports on the number of contacts with different services, however it does not break this information down by ethnic sub-group.<br><br>**Sub-group:**<br>The paper notes that there were differences between the ethnic sub-groups in terms of outcome. In the standard care group, UK/Irish patients functioned significantly better at 6 months, but these differences disappeared at 8 months. In the Intensive case management group there was a trend for outcomes to favour African-Caribbean participants at 18 months. |
| **Solomon1994**<br><br>Philadelphia, US | 1. Intensive case management: provided by a forensic case manager who worked with a community mental health centre. Ratio: case manager 1: clients 4 | % schizophrenia not stated but all participants were due to be released from | Ethnicity for the sample as a whole, n (%):<br><br>White: 27 (14.2) | Not reported | The paper notes that" the majority of participants were young black males, a profile which reflects the current population in |

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| | 2. ACT – this included 4 case managers working on a ratio of 10 clients per manager.<br><br>3. Standard care referral to local community mental health centre.<br><br>**Intensive case management vs. Standard care**<br><br>**Intensive case management vs. ACT** | prison, had SMI and were homeless | Black: 157 (82.6)<br>Hispanic: 6 (3.2) | | jails."<br><br>The intervention was effective in preventing reincarceration of clients within 6 months of discharge. A discriminate function analysis determining variables that distinguished clients who did and did not return to jail looked at the effect of ethnicity. The results indicated that ethnicity was not a significant predictor with only "identified service needs not met" being the only significant predictor of reincarceration at 6 months. |
| **Burn1999**<br><br>UK700<br><br>London and Manchester, UK | Case management involved mental health professionals being responsible for the direct care of the patient and coordinating a wide range of health and social inputs that are required by the individual. Two forms of case management were compared in the present study:<br><br>Intensive Case Management (ICM) – Small caseloads of 10-15 per case manager)<br><br>Standard Case Management | [ICM / SCM]<br>Diagnosis, n (%):<br>Major depression: 11(3.1) / 5(1.4<br>Mania or bipolar: 15(4.2) / 19(5.4)<br>Schizoaffective: 184(52.10 / 161(45.4)<br>Schizophrenia: 124(35.1) / 146(41.4)<br>Unspecified or functional: 18(5.1) | Participants were stratified based on ethnicity prior to randomization.<br><br>[ICM / SCM]<br>Ethnicity, n (%)<br>African-Caribbean: 103(29.2) / 94(26.5)<br>White: 180(51.0) / 187(25.7)<br>Other: 70(19.8) / 74(20.8)<br><br>One of the main | More patients in the ICM group lost contact with their case manager during the study: 46 vs. 27.<br>10 ICM and 7 ICM patients refused contact, 7 ICM and 1 SCM patient were admitted to prison or secure hospital facilities.<br><br>- Lost to follow-up<br>ICM = 8 (+7 died and 20 refused follow-up interview)<br>SCM = 6 (+8 died and 49 | |

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| | (SCM) – larger caseloads, less intensive service 30-35 cases per manager.<br><br>**Intensive vs. Standard case management** | / 24(6.8) | hypotheses under investigation was "The differences in outcome between intensive and standard case management are greater in African-Caribbean patients than other ethnic groups (mainly Caucasians)" | refused follow-up interview) | |
| **McKenzie2001**<br><br>Secondary analysis of UK700 | As above | As above | The paper reports on a subset of those included in the UK700 study. This paper focused on African-Caribbean and British White participants.<br><br>Follow-up information was available for 199 African-Caribbean and 234 White British participants. | Paper reports that in total 26(13%) of African-Caribbean patients and 35(15%) of British White patients were not interviewed. There were no differences between the groups in the proportion who refused or their reasons for refusal.<br><br>**Intensive case management**<br><br>**Deaths by end of study**<br><br>2.2% white (4 of 180)<br>1.5% African-Caribbean (2 of 135)<br><br>**Refused interview/lost to follow up**<br><br>10.0% white (18 of 180) | |

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| | | | | 12.6% African-Caribbean (17 of 135)<br><br>**Standard case management**<br><br>**Deaths by end of study**<br><br>2.7% white (5 of 187)<br>1.5% African-Caribbean (2 of 135)<br><br>**Refused interview/lost to follow up**<br><br>10.7% white (20 of 187)<br>12.6% African-Caribbean (17 of 135)<br><br>The paper does note that "patients could be included in the sample only if they agreed to take part in a case management study. African-Caribbeans could have been more likely to refuse study entry and this could have lead to selection bias"<br><br>The major difference between the African-Caribbean participants and British white participants was that the former were | |

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| | | | | less likely to receive psychotherapy and antidepressants. | |

**References of included studies (update)**

**BURNS1999 (UK700)** (Published Data Only)
Walsh, E., Harvey, K., White, I., Higgitt, A., Fraser, J., Murray, R. (2001) Suicidal behaviour in psychosis: Prevalence and predictors from a randomised controlled trial of case management: Report from the UK700 trial. *British Journal of Psychiatry*, 178, 355-260.

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UK700 GROUP (2000) Cost effectiveness of intensive v. standard case management for severe psychotic illness. *British Journal of Psychiatry*, 176,537-543.

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Walsh, E., Filvarry, C., Samele, C., et al (2001) Reducing violence in severe mental illness: Randomised controlled trial of intensive case management compared with standard care. *British Medical Journal*, 323, 1-5.

Huxley, P., Evans, S., Burns, T., Fahy, T., Green, J., (2001) Quality of life outcome in a randomized controlled trial of case management. *Society of Psychiatry and Psychiatric Epidemiology*, 36, 249-255.

Harvey, K., Burns, K., Fiander, M., Huxley, C., Manley, C., Fahy, T. (2002) The effect of intensive case management on the relatives of patients with severe mental illness. *Psychiatric Services*, 53, 12, 1580-1585.

Tyrer, P., Hassiotis, A., Piachaud, J., Harvey, K. , UK700 group (1999) Intensive case management for psychotics patients with borderline intelligence. *Lancet*, 354, 999-1000.

Tyrer, P., Manley, C., Van Horn, E., Leddy, D., Ukoumunne, O. C. (2000) Personality abnormality in severe mental illness and its influence on outcome of intensive and standard case management: A randomised controlled trial. *European Psychiatry*, 15 (Suppl 1) 7-10.

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Ford, R., Ryan, P., Beadsmoore, A., Craig, T., & Muijen, M. (1997). Intensive case management for people with serious mental illness - site 2: clinical and social outcome. *Journal of Mental Health* 6, 181-190.

Lear, G. (1993). Managing care at home. *Nursing Times* 89[5], 26-27.

Ford, R., Raftery, J., Ryan, P., Beadsmoore, A., & Craig, T. (1997). Intensive case management for people with serious mental illness - site 2: cost effectiveness. *Journal of Mental Health* 6, 191-199.

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**HOLLOWAY1998** (Published Data Only)
Holloway, F. & Carson, J. (1998). Intensive case management for the severely mentally ill. Controlled trial. *British Journal of Psychiatry* 172, 19-22.

**MUIJEN1994**
McCrone, P., Beecham, J., & Knapp, M. (1994). Community psychiatric nurse teams: cost-effectiveness of intensive support versus generic care. *British Journal of Psychiatry* 165, 218-221.

*Muijen, M., Rooney, M., Strathdee, G., Bell, R., & Hudson, A. (1994). Community Psychiatric Nurse Teams: Intensive support versus generic care. *British Journal of Psychiatry* 165, 211-217.

**SOLOMON1994** (Published Data Only)
Solomon, P. & Draine, J. (1995). Consumer case management and attitudes concerning family relations among persons with mental illness. *Psychiatric Quarterly* 66, 249-261.

Solomon, P. & Draine, J. (1994). Family perceptions of consumers as case managers. *Community Mental Health Journal* 30, 165-176.
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**Characteristics of excluded studies (update)**

**BJORKMAN2002 -** does not report drop out within an ethnically diverse population
**BRUCE2004 -** does not report drop out within an ethnically diverse population
**CURTIS1992 -** does not report drop out within an ethnically diverse population

**FRANKLIN1987 -** does not report drop out within an ethnically diverse population
**ISSAKIDIS1999 -** does not report drop out within an ethnically diverse population
**JERRELL1995 -** does not report drop out within an ethnically diverse population
**MACIAS1994 -** does not report drop out within an ethnically diverse population
**MARSHALL1995 -** does not report drop out within an ethnically diverse population
**ODONNELL1999 -** does not report drop out within an ethnically diverse population
**QUINLIVAN1995 -** does not report drop out within an ethnically diverse population
**RUTTER2004 -** does not report drop out within an ethnically diverse population
**TYRER1995 -** does not report drop out within an ethnically diverse population

**References of excluded studies (update)**

**BJORKMAN2002** (Published Data Only)
Bjorkman, T., Hannsson, l., Sandlund, M. (2002) Outcome of case management based on the strengths model compared to standard care: A randomised controlled trial. *Society of Psychiatry and Psychiatric Epidemiology*, 37, 147-152.

**BRUCE2004** (Published Data Only)
Alexopoulos, G.S., Katz, I.R., Bruce, M., (2005) Remission in depressed geriatric primary care patients: A report from the PROSPECT study. *American Journal of Psychiatry*, 162, 718-724.
*Bruce, M.L., Ten Have, T., Reynolds, C. F., (2004) Reducing suicidal ideation and depressive symptoms in depressed older primary care patients: A randomised controlled trial. *Journal of the American Medical Association*, 291, 1081-1091.

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**FRANKLIN1987** (Published Data Only)
Franklin, J., Solovitz, B., Mason, M., Clemons, J., & Miller, G. (1987). An evaluation of case management. *American Journal of Public Health* 77, 674-678.

**ISSAKIDIS1999** (Published Data Only)
Johnston, S., Salkeld, G., Sanderson, K., Issakidis, C. et al (1998) Intensive case management: A cost effectiveness analysis. *Australian and New Zealand Journal of Psychiatry*, 32, 551-559.

*Issakidis, C., Sanderson, K., Teesson, M., Johnston, S., Buhrich, N. (1999) Intensive case management in Australia: a randomised controlled trial. *Acta Psychiatrica Scandinavica*, 99, 360-67.

**JERRELL1995** (Published Data Only)
Jerrell, J. M. (1995). Toward managed care for persons with severe mental illness: Implications from a cost-effective study. *Health Affairs* 14, 197-207.

Jerrell, J. M., Hu, T., & Ridgely, M. S. (1994). Cost-effectiveness of substance disorder interventions for people with severe mental illness. *Journal of Mental Health Administration* 21, 283-297.

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**MACIAS1994** (Published Data Only)
Macias, C., Kinney, R., Farley, O. W., Jackson, R., & Vos, B. (1994). The role of case management within a community support system: partnership with psychosocial rehabilitation. *Community Mental Health Journal* 30, 323-339.

**MARSHALL1995**
Conway, M. (1995). Care-management for mental illness. *Lancet* 345, 926-927.

*Marshall, M., Lockwood, A., & Gath, D. (1995). Social services case-management for long-term mental disorders: a randomised controlled trial. *Lancet* 345, 409-415.

**ODONNELL1999** (Published Data Only)
O'Donnell, M., Parker, G., Proberts, M. Matthews, R., Fisher, D., Johnson, B., Hadzi-Pavlovic, D. (1999) A study of client-focused case management and consumer advocacy: the community and consumer service project. *Australian and New Zealand Journal of Psychiatry*, 33, 684-693.

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Quinlivan, R., Hough, R., Crowell, A., Beach, C., Hofstetter, R., & Kenworthy, K. (1995). Service utilization and costs of care for severely mentally ill clients in an intensive case management program. *Psychiatric Services* 46, 365-371.

**RUTTER2004** (Published Data Only)
Rutter, D., Tyrer, P., Emmanuel, J., Weaver, T., Byford, S., Hallam, A., et al. (2004). Internal vs. external care management in severe mental illness: Randomized controlled trial and qualitative study. *Journal of Mental Health*, 13, 453-466.

**TYRER1995** (Published Data Only)
Tyrer, P., Morgan, J., Van Horn, E., Jayakody, M., Evans, K., & Brummell, R. (1995). A randomized controlled study of close monitoring of vulnerable psychiatric patients. *Lancet* 345, 756-759

**Characteristics of excluded studies (Bipolar guideline review)**

**BOND1989** Not a RCT (housing interventions)
**BORLAND1989** Not a RCT (Intensive case management)
**CHAMPNEY1992** All four comparisons received a form of case management, no control group
**DEAN1990** Not a RCT
**DEAN1993** Not RCT
**GOERING1988** Not RCT, used historical controls
**HORNSTRA1993** Not a RCT, historical controls
**KNIGHT1990** Not RCT
**LEHMAN1993** Both group received the same case management
**MCGOWAN1995** Not RCT
**MIRANDA2003B** Not case management (CBT vs. TAU)
**MODCRIN1988** Not a RCT
**ROSSLER1992** Not a RCT
**ROSSLER1995** Not a RCT
**SANDS1994** Not RCT (Case management)
**SHERN2000** Psychiatric Rehabilitation, not case management
**SOLOMON1995B** Not RCT (ACT vs. forensic intensive case management vs. standard care)
**SOLOMON1995C** Not RCT, pre/post intervention (case management)
**WOOD1995** Not RCT (Case management)

**References of excluded studies (Bipolar review)**

**BOND1989**
Bond, G. R., Witheridge, T. F., Wasmer, D., Dincin, J., McRae, S. A., Mayes, J. et al. (1989). A comparison of two crisis housing alternatives to psychiatric hospitalization. *Hospital and Community Psychiatry* 40, 177-183.

**BORLAND1989**
Borland, A., McRae, J., & Lycan, C. (1989). Outcomes of five years of continuous intensive case management. *Hospital and Community Psychiatry* 40, 369-376.

**CHAMPNEY1992**
Champney, T. F. & Dzurec, L. C. (1992). Involvement in productive activities and satisfaction with living situation among severely mentally disabled adults. *Hospital and Community Psychiatry* 43, 899-903.

**DEAN1990**
Dean, C. & Gadd, E. M. (1990). Home treatment for acute psychiatric illness. *British Medical Journal*, 301, 1021-1023.

**DEAN1993**
Dean, C., Phillips, J., Gadd, E. M., Joseph, M., & England, S. (1993). Comparison of community based services with hospital based service for people with acute, severe psychiatric illness. *British Medical Journal* 307, 473-476.

**GOERING1988**
Goering, P. N., Wasylenk, D. A., Farkas, M., Lancee, W. J., & Ballantyne, R. (1988). What difference does case management make? *Hospital and Community Psychiatry* 39, 272-276.

**HORNSTRA1993**
Hornstra, R. K., Bruce-Wolfe, V., Sagduyu, K., & Riffle, D. W. (1993). The effect of intensive case management on hospitalization of patients with schizophrenia. *Hospital and Community Psychiatry* 44, 844-847.

**KNIGHT1990**
Knight, R. G. & Carter, P. M. (1990). Reduction of psychiatric inpatient stay for older adults by intensive case management. *The Gerontologist* 30, 510-515.

**LEHMAN1993**
Lehman, A. F., Herron, J. D., Schwartz, R. P., Myers, C.P. (1993) Rehabilitation for adults with severe mental illness and substance misuse disorders: A clinical trial. *Journal of Nervous and Mental Disease*, 181, 86-90.

**MCGOWAN1995**
McGowan, M., Madison, K., Meisel, J., & Chandler, D. (1995). *Final Report: The Integrated Service Agencies. Report to California Department of Mental Health* (Rep. No. AB3777). Sacramento: Lewin-VHI, Inc.

**MIRANDA2003B** (Published Data Only)
Miranda, J., Azocar, F., Organista, K. C., Dwyer, E., & Areane, P. (2003). Treatment of depression among impoverished primary care patients from ethnic minority groups. *Psychiatric Services*, 54, 219-225.

**MODCRIN1988** (Published Data Only)
Modcrin, M., Rapp, C. A., & Poertner, J. (1988). The evaluation of case management services with the chronically mentally ill. *Evaluation and Program Planning* 11, 307-314.

**ROSSLER1992**
Rossler, W., Loffler, W., Fatkenheuer, B., & Reicher-Rossler, A. (1992). Does case management reduce the rehospitalization rate? *Acta Psychiatrica Scandinavica* 86, 445-449.

**ROSSLER1995**
Rossler, W., Loffler, B., Fatkenheuer, B., & Reicher-Rossler, A. (1995). Case management for schizophrenic patients at risk of rehospitalization - a case control study. *European Archives of Psychiatry and Clinical Neuroscience* 246, 29-36.

**SANDS1994** (Published Data Only)
Sands, R. G. & Cnaan, R. A. (1994). Two modes of case management: assessing their impact. *Community Mental Health Journal* 30, 441-457.

**SHERN2000** (Published Data Only)
Shern, D., Tsemberis, S., Anthony, W., Lovell, A. M., et al (2000) Serving street dwelling individuals with psychiatric disabilities: Outcomes of a psychiatric rehabilitation clinical trial. *American Journal of Public Health*, 90, 1873-1878.

**SOLOMON1995B** (Published Data Only)
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**SOLOMON1995C** (Published Data Only)
Solomon, P. & Draine, J. (1995). One-year outcomes of a randomized trial of consumer case management. *Evaluation and Program Planning* 18, 117-127.

**WOOD1995** (Published Data Only)
Wood, K. & Anderson, J. (1995). The effect on hospital admissions of psychiatric case management involving general practitioners: preliminary results. *Australia and New Zealand Journal of Psychiatry* 29, 223-229.