Best Evidence Summaries of Topics in Mental Healthcare

BEST *in* MH *clinical question-answering service*

Question

In difficult to engage service users in a community setting (street homeless, hostel dwellers, drug/alcohol/substance misusers, those recently discharged from prison), how effective (and cost effective) is Assertive Community Treatment / Assertive Outreach, compared to any other community treatment, in terms of reducing homelessness, reducing substance misuse, and improving engagement and retention in services?

Clarification of question using PICO structure

Patients: Difficult to engage service users in a community setting
Intervention: Assertive Community Treatment (ACT) / Assertive Outreach
Comparator: Any other community treatment
Outcome: Reducing homelessness, reducing substance misuse, and improving engagement and retention in services.

Clinical and research implications

Limited UK based evidence suggests that outcomes for patients with serious mental illness were similar for community mental health teams and ACT teams, but ACT may be better at engaging clients and may lead to greater satisfaction with similar costs of the two treatments. Based on studies conducted among homeless people in the US, ACT appears beneficial on a number of outcomes. However, it is unclear whether these results are generalizable to a UK setting. All included studies had methodological weaknesses and so these results should be interpreted with some caution. There is a need for further UK based studies to evaluate the effectiveness of ACT in this setting.

What does the evidence say?

Number of included studies/reviews (number of participants)
Two systematic reviews (1,2) (6 RCTs and 4 observational studies) and three (3-7) RCTs (n=645) were identified. All studies included in the second SR(2) were also included in the first SR.(1) All studies included in the SRs appear to have been conducted in the US, two of the RCTs were also conducted in the US only one study was conducted in the UK(4-6). The UK based study was the only study not restricted homeless clients.

Main Findings

Homelessness: Both SRs reported that homelessness was significantly reduced in patients in the ACT treatment groups (RD 37%, 95% CI 18% to 55% based on 6 RCTs, RD 104%, 95% CI 67% to 141% based on 4 observational studies; ES=0.47, no measure of variance or significance reported). One RCT found that at 24 months clients receiving IACT or ACT had more days in stable housing than those receiving standard care(p=0.03)(7), a second RCT found no impact of treatment on residential status (3).

Hospitalisation: One SR reported no significant difference (p=0.24) in hospitalisation rates between treatment groups based on 4 RCTs although one observational study reported better hospitalisation outcomes. The other review found that ACT was effective in decreasing hospitalisation for psychiatric difficulties but there was an increased use of health and social services. One RCT (3) round that, at 1 of 2 sites, clients in the standard treatment group averaged significantly more days in hospital (p=0.002) and institutionalised (p=0.02). The UK based RCT found no statistically significant differences between the ACT and control patients in total inpatient days over 18 months (MD=1, 95% CI -16 to 38)(4) or 36 months (MD=0, 95% CI -50 to 56)(5).

Mental health outcomes: One SR reported a significant improvement in psychiatric symptoms (RD 26%, 95% CI 7% to 44% based on 3 RCTs; RD 62%, 95% CI 0 to 124% based on 3 observational studies). Two RCTs found no impact of treatment on mental health outcomes compared to standard care (3;7).

Patient satisfaction and quality of life: One review found that ACT was more effective in producing positive self ratings of overall health and well being and improving the ability to meet basic needs.(2) One US based RCT found that at 24 months clients receiving IACT or ACT were significantly more satisfied than those receiving standard care (p=0.03). The other two RCTs, including the UK based study, found no impact of treatment on general life satisfaction or global functioning (3) or on clinical or social outcomes at 18 months(4).

Substance abuse: Two RCTs reported no differences between treatment groups in terms of substance abuse (3; 7).

Costs: The UK based RCT found that the cost of ACT over 18 months was greater than standard treatment but the difference was not significantly significant (£4031, 95% CI £-2592 to £10 690)(6). One US based RCT reported that IACT and control programmes cost significantly less than ACT (p<0.02)(7).

Authors Conclusions

Both reviews (1,2) and one RCT (7) concluded that ACT reduces homelessness compared to standard treatment(1,2). One review concluded that ACT also reduced symptom severity(1) and the other that it reduced hospitalisation.(2) A further RCT concluded that integrated treatment can be successfully delivered either by ACT or by standard clinical case management(3). The only UK based RCT(4-6) concluded that community mental health teams are able to support people with serious mental illnesses as effectively as ACT teams but ACT may be better at engaging clients and may lead to greater satisfaction with similar costs of the two treatments.

Reliability of conclusions/Strength of evidence
The only UK based RCT(4-6) suggested that outcomes for patients with serious mental illness were similar for community mental health teams and ACT teams, but ACT may be better at engaging clients and may lead to greater satisfaction with similar costs of the two treatments. There was some evidence, mainly from US based studies, that ACT improved homelessness, hospitalisation, mental health outcomes, and patient satisfaction and overall health and well being. There was no impact on substance abuse outcomes. Evidence from one US based RCT suggested that ACT may be more costly than treatment as usual. All included studies had methodological weaknesses and so these results should be interpreted with some caution.

What do guidelines say?
No directly relevant NICE or SIGN guidelines were found. The intervention is briefly mentioned in the NICE clinical guidelines as a community treatment option for bipolar disorder, borderline personality disorder, antisocial personality disorder and schizophrenia. However the intervention is not discussed in terms of the questions population, or with an emphasis on the desired outcomes.

Date question received: 10/04/2012
Date searches conducted: 12/04/2012
Date answer completed: 26/04/2012

References

Systematic Reviews

1. Coldwell C, Bender W. The Effectiveness of Assertive Community Treatment for Homeless Populations With Severe Mental Illness: A Meta-Analysis. *Am J Psychiatry 2007; 164:393–399*

2. Nelson G, Aubry T, Lafrance A. A review of the Literature on the Effectiveness of Housing and Support, Assertive Community Treatment, and Intensive Case Management Interventions for Persons With Mental Illness Who Have Been Homeless. *American Psychological Association200, Vol 77, No 3, 350-361*

Randomised Controlled Trials

3. Essock S, Mueser K, Drake R, Covell N, McHugo G, Frisman L, Kontos N, Jackson C, Townsend F, Swain K Comparison of ACT and Standard Case Management for Delivering Integrated Treatment for Co-occurring Disorders *ps.psychiatryonline.org, February 2006 Vol. 57 No. 2*

4. Killaspy H, Bebbington P, Blizard R, et al: The REACT study: Randomised Evaluation of Assertive Community Treatment in north London. British Medical Journal 332:815– 818, 2006

5. Killaspy H, Kingett S, Bebbington P, Blizard R, Johnson S, Nolan F, Pilling S, King M. Randomised evaluation of assertive community treatment: 3-year outcomes. *The British Journal of Psychiatry (2009) 195, 81–82. doi: 10.1192/bjp.bp.108.059303*

6. McCrone P, Killaspy H, Bebbington P, Johnson S, Nolan F, Pilling S, King M, Ph.D. The REACT Study: Cost-Effectiveness Analysis of Assertive Community Treatment in North London *ps.psychiatryonline.org ' July 2009 Vol. 60 No. 7*

7. Morse G, Calsyn R, Klinkenberg W, Helminiak T, Wolff N, Drake R, Yonker R, Lama G, Lemming M, McCudden S. Treating Homeless Clients with Severe Mental Illness and Substance Use Disorders: Costs and Outcomes. *Community Mental Health Journal, Vol. 42, No. 4, August 2006 (_ 2006) DOI: 10.1007/s10597-006-9050-y*

Results

Systematic Reviews

Author (year)	Search Date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Coldwell et al (2007)(1)	2003 (month not specified)	*Study design*: experimental or observational *Population*: homeless persons with a severe mental illness, but not limited to addictive disorders alone; *Intervention:* use of assertive community treatment or an assertive community treatment-based treatment; *Comparator*: No restriction *Outcome:* Housing plus hospitalization and/or symptom severity.	6 RCTs (n=940), 4 observational studies (n=4854)	There was a significant decrease in homelessness associated with assertive community treatment compared to standard treatment (RD 37%, 95% CI 18% to 55% based on 6 RCTs; RD 104%, 95% CI 67% to 141% based on 4 observational studies). There was also a significant improvement in psychiatric symptoms (RD 26%, 95% CI 7% to 44% based on 3 RCTs; RD 62%, 95% CI 0 to 124% based on 3 observational studies). There was no significant difference (p=0.24) in hospitalisation rates between treatment groups based on 4 RCTs although one observational study reported better hospitalisation outcomes. There was little evidence of publication bias,	High
2. Nelson et al (2007)(2)	December 2004	*Study design:* Experimental or quasi-experimental design that included a control group *Population:* People with mental illness who had a history of homelessness *Intervention:* Housing and support, assertive community treatment and/or intensive case management models that have been previously described *Comparator:* Not specified - Included a sample of people with mental illness who had a history of homelessness.	16 studies in total, 4 studies assessed ACT or PACT (n=560). All studies included in this review also included in Coldwell (1).	ACT was associated with a significant improvement in housing stability (ES=0.47, no measure of variance or significance reported). ACT was effective in decreasing hospitalisation for psychiatric difficulties but there was an increased use of health and social services. ACT was also more effective in producing more positive self ratings of overall health and well being and improving the ability to meet basic needs. Results for other interventions were also reported.	High

Author (year)	**Inclusion criteria**	**Number of participants**	**Summary of results**	**Risk of bias**
Essock et al (2006)(3)	*Population*: US homeless or unstably housed clients with co-occurring major psychotic disorder and active substance use disorders who had high service use in the past 2 years *Intervention*: Assertive community treatment *Comparator*: Standard clinical case management *Outcomes :* Substance use, residential status, severity of psychiatric symptoms or general life satisfaction, global functioning.	N= 198 (results available for 179; unclear if ITT performed)	Participants in both treatment arms improved in multiple outcome domains. There was no significant difference between treatment groups for substance abuse, at 1 of 2 sites clients in the standard treatment group averaged significantly more days in hospital (p=0.002) and institutionalised (p=0.02). There were no differences between groups at the other site or for other outcomes.	Unclear
Killaspy et al (2006(4), 2009(5)) McCrone et al (2009)(6)	*Participants:* UK high users of in-patient care who were living independently and whom the community mental health teams had found problematic to engage over at least the previous 12 months. *Intervention:* High fidelity assertive community treatment *Comparator:* Continued treatment as usual with the participants Community Mental Health Team. *Outcome:* Clinical and social Functioning, total in-patient days, adverse events.	N=251	There were no statistically significant differences between the ACT and control patient in total in patient days over 18 months (MD=1, 95% CI -16 to 38) or 36 months (MD=0, 95% CI -50 to 56). There also no differences in clinical or social outcomes at 18 months. The mean number of face-to-face contacts was significantly greater for ACT at 36 months (MD 4.98, 95% CI 2.11 to 7.85). Clients who received care from the ACT team seemed better engage and were more satisfied with services. Total costs over 18 onths were higher for the ACT group by £4031 (95% CI £-2592 to £10 690).	High
Morse et al (2006)(7)	*Participants:* US Homeless people with severe mental illness and DSM-IV substance use disorder not currently enrolled in an intensive case management program. *Intervention 1:* Integrated assertive community treatment (IACT) *Intervention 2:* Assertive community treatment (ACT) *Comparator*: Standard care. *Outcomes:* Client satisfaction; stable housing; mental health; substance misuse, and costs.	N=196 (results available for 149)	At 24 months clients receiving IACT or ACT were significantly more satisfied than those receiving standard care (p=0.03), and had more days in stable housing (p=0.03). There were no significant differences between IACT or ACT for these outcomes. There was no difference in mental health or substance use between treatment groups. IACT and control programmes cost significantly less than ACT (p<0.02).	High

Risk of Bias: SRs

Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Coldwell et al (2007)(1)	☺	☺	☺	☹	☺
Nelson et al (2007)(2)	☺	☹	☹	☹	☹

RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Essock et al (2006)(3)	☺	?	?	☺ for some outcomes	?	☺
Killaspy et al (2009) McCrone et al (2009)	?	?	?	☹	☺	☺
Morse et al (2006)(7)	?	?	?	?	☹	☺

☺Low Risk ☹High Risk ? Unclear Risk

Search Details

Source	**Search Strategy**	**Number of hits**	**Relevant evidence identified**
SRs and Guidelines			
NICE	((assertive adj community adj treatment) Or ACT OR (assertive adj outreach)) AND (substance OR alchohol OR drug) adj (misuse OR abuse)	19	0
DARE	1 (((drug or substance$) adj2 (abuse$ or addict$ or dependen$ or misuse))) 15 Delete 2 MeSH DESCRIPTOR Drug Users EXPLODE ALL TREES 2 Delete 3 MeSH DESCRIPTOR Substance-Related Disorders EXPLODE ALL TREES 550 Delete 4 MeSH DESCRIPTOR Substance Abuse Treatment Centers EXPLODE ALL TREES 37 Delete 5 (assertive) 44 Delete 6 MeSH DESCRIPTOR Community Mental Health Services EXPLODE ALL TREES 102 Delete 7 MeSH DESCRIPTOR Community Mental Health Centers EXPLODE ALL TREES 12 Delete 8 MeSH DESCRIPTOR Community Health Services EXPLODE ALL TREES 4082 Delete 9 MeSH DESCRIPTOR Community Health Centers EXPLODE ALL TREES 59 Delete 10 (homeless) 41 Delete 12 (homeles*) 59 Delete 13 (case management) 256 Delete 14 MeSH DESCRIPTOR Case Management EXPLODE ALL TREES 111 Delete	231	2

	15 MeSH DESCRIPTOR Managed Care Programs EXPLODE ALL TREES 146 Delete 16 (offend*) 67 Delete 17 (probat*) 16 Delete 18 #1 OR #2 OR #3 OR #4 562 Delete 19 #5 OR #6 OR #7 OR #8 OR #9 OR #13 OR #14 OR #15 4410 Delete 20 #10 OR #12 61 Delete 21 MeSH DESCRIPTOR Prisons EXPLODE ALL TREES 15 Delete 22 MeSH DESCRIPTOR Prisoners EXPLODE ALL TREES 27 Delete 23 (prison*) 92 Delete 24 #16 OR #17 OR #21 OR #22 OR #23 142 Delete 25 #18 OR #20 OR #24 713 Delete 26 #19 AND #25 231 Delete		
Primary studies			
CENTRAL	#1 "assertive outreach":ti,ab,kw or "assertive community treatment":ti,ab,kw in Trials 121 edit delete #2 (homeless*):ti,ab,kw or (hostel*):ti,ab,kw or (shelter*):ti,ab,kw in Trials 382 edit delete #3 (drug):ti,ab,kw or (substance):ti,ab,kw or (alcohol*):ti,ab,kw or (addict*):ti,ab,kw in Trials 277753 edit delete #4 (engage*):ti,ab,kw in Trials 1890 edit delete #5 MeSH descriptor Substance-Related Disorders explode all trees 10078 edit delete #6 MeSH descriptor Homeless Persons explode all trees 177 edit delete #7 (#2 OR #3 OR #4 OR #5 OR #6) 279804 edit delete #8 (#1 AND #7) 67 edit delete	67	4
PsycINFO	1. PsycINFO; "assertive outreach".ti,ab; 211 results. 2. PsycINFO; "assertive community treatment".ti,ab; 615	88	

	results. 3. PsycINFO; 1 OR 2; 802 results. 4. PsycINFO; homeless*.ti,ab; 6134 results. 5. PsycINFO; HOMELESS/ OR HOMELESS MENTALLY ILL/; 4558 results. 6. PsycINFO; hostel.ti,ab; 302 results. 7. PsycINFO; SHELTERS/; 809 results. 8. PsycINFO; shelter*.ti,ab; 4790 results. 9. PsycINFO; exp DRUG ABUSE/; 77651 results. 10. PsycINFO; ((substance OR drug) AND (abuse* OR misuse* use*)).ti,ab; 22965 results. 11. PsycINFO; 9 OR 10; 85934 results. 12. PsycINFO; engage*.ti,ab; 71981 results. 13. PsycINFO; 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 12; 164114 results. 14. PsycINFO; 3 AND 13; 247 results. 15. PsycINFO; CLINICAL TRIALS/; 5955 results. 16. PsycINFO; random*.ti,ab; 107931 results. 17. PsycINFO; groups*.ti,ab; 321923 results. 18. PsycINFO; (doubl* adj3 blind*).ti,ab; 16189 results. 19. PsycINFO; (singl* adj3 blind*).ti,ab; 1327 results. 20. PsycINFO; EXPERIMENTAL DESIGN/; 8197 results. 21. PsycINFO; controlled.ti,ab; 67512 results. 22. PsycINFO; (clinical adj3 study).ti,ab; 6726 results. 23. PsycINFO; trial.ti,ab; 56813 results. 24. PsycINFO; "treatment outcome clinical trial".md; 21606 results. 25. PsycINFO; 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24; 493812 results. 26. PsycINFO; 14 AND 25; 88 results.		
EMBASE	27. EMBASE; "assertive outreach".ti,ab; 213 results. 28. EMBASE; "assertive community treatment".ti,ab; 597 results. 29. EMBASE; 27 OR 28; 784 results. 35. EMBASE; exp DRUG ABUSE/; 53071 results. 36. EMBASE; ((substance OR drug) AND (abuse* OR misuse*	58	

	use*)).ti,ab; 27366 results. 38. EMBASE; engage*.ti,ab; 67932 results. 39. EMBASE; homeless*.ti,ab; 6420 results. 40. EMBASE; HOMELESSNESS/; 6858 results. 42. EMBASE; hostel*.ti,ab; 745 results. 43. EMBASE; HALFWAY HOUSE/; 849 results. 44. EMBASE; shelter.ti,ab; 2871 results. 45. EMBASE; 35 OR 36 OR 38 OR 39 OR 40 OR 42 OR 43 OR 44; 148378 results. 46. EMBASE; 29 AND 45; 202 results. 47. EMBASE; random*.tw; 716360 results. 48. EMBASE; factorial*.tw; 18570 results. 49. EMBASE; placebo*.tw; 172389 results. 50. EMBASE; (crossover* OR cross-over*).tw; 60310 results. 51. EMBASE; (doubl* adj3 blind*).tw; 126477 results. 52. EMBASE; (singl* adj3 blind*).tw; 13836 results. 53. EMBASE; assign*.tw; 200158 results. 54. EMBASE; allocat*.tw; 66963 results. 55. EMBASE; volunteer*.tw; 154136 results. 56. EMBASE; CROSSOVER PROCEDURE/; 33524 results. 57. EMBASE; DOUBLE-BLIND PROCEDURE/; 108172 results. 58. EMBASE; SINGLE-BLIND PROCEDURE/; 15702 results. 59. EMBASE; RANDOMIZED CONTROLLED TRIAL/; 319715 results. 60. EMBASE; 47 OR 48 OR 49 OR 50 OR 51 OR 52 OR 53 OR 54 OR 55 OR 56 OR 57 OR 58 OR 59; 1184650 results. 61. EMBASE; 46 AND 60; 58 results.		
MEDLINE	1. MEDLINE; "assertive outreach".ti,ab; 119 results. 2. MEDLINE; "assertive community treatment".ti,ab; 478 results. 3. MEDLINE; 1 OR 2; 580 results. 4. MEDLINE; homeless*.ti,ab; 5618 results. 5. MEDLINE; HOMELESS PERSONS/ OR HOMELESS YOUTH/; 5592 results. 6. MEDLINE; hostel*.ti,ab; 600 results.	65	

	7. MEDLINE; HALFWAY HOUSES/; 997 results. 8. MEDLINE; shelter*.ti,ab; 5454 results. 9. MEDLINE; ((substance OR drug) AND (abuse* OR misuse* use*)).ti,ab; 21679 results. 10. MEDLINE; exp SUBSTANCE-RELATED DISORDERS/; 335181 results. 11. MEDLINE; engage*.ti,ab; 58580 results. 12. MEDLINE; 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11; 408439 results. 13. MEDLINE; 3 AND 12; 188 results. 14. MEDLINE; "randomized controlled trial".pt; 324747 results. 15. MEDLINE; "controlled clinical trial".pt; 83905 results. 16. MEDLINE; randomi?ed.ab; 287782 results. 17. MEDLINE; placebo.ab; 134968 results. 18. MEDLINE; "drug therapy".fs; 1520749 results. 19. MEDLINE; randomly.ab; 176611 results. 20. MEDLINE; trial.ab; 248855 results. 21. MEDLINE; groups.ab; 1155108 results. 22. MEDLINE; 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21; 2917556 results. 23. MEDLINE; 13 AND 22; 65 results.		
Summary	**NA**	**NA**	

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