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Intensive Case Management for Severe Mental Illness

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Background

Intensive Case Management (ICM) is a community-based package of care aiming to provide long-term care for severely mentally ill people who do not require immediate admission. ICM evolved from 2 original community models of care, Assertive Community Treatment (ACT) and Case Management (CM), where ICM emphasizes the importance of small caseload (fewer than 20) and high-intensity input.

Objectives

To assess the effects of ICM as a means of caring for severely mentally ill people in the community in comparison with non-ICM (caseload greater than 20) and with standard community care. We did not distinguish between models of ICM. In addition, to assess whether the effect of ICM on hospitalization (mean number of days per month in hospital) is influenced by the intervention's fidelity to the ACT model and by the rate of hospital use in the setting where the trial was conducted (baseline level of hospital use).

Search Methods

We searched the Cochrane Schizophrenia Group's Trials Register (last update search April 10, 2015).

Selection Criteria

All relevant randomized clinical trials focusing on people with severe mental illness, aged 18 to 65 years and treated in the community care setting, where ICM is compared to non-ICM or standard care.

Data Collection and Analysis

At least 2 review authors independently selected trials, assessed quality, and extracted data. For binary outcomes, we calculated risk ratio (RR) and its 95% CI, on an intention-to-treat basis. For continuous data, we estimated mean difference (MD) between groups and its 95% CI. We employed a random-effects model for analyses.

We performed a random-effects meta-regression analysis to examine the association of the intervention's fidelity to the ACT model and the rate of hospital use in the setting where the trial was conducted with the treatment effect. We assessed overall quality for clinically important outcomes using the GRADE approach and investigated possible risk of bias within included trials.

Main Results

The 2016 update included 2 more studies (n = 196) and more publications with additional data for 4 already included studies. The updated review therefore includes 7524 participants from 40 randomized controlled trials (RCTs). We found data relevant to 2 comparisons: ICM vs standard care, and ICM vs non-ICM. The majority of studies had a high risk of selective reporting. No studies provided data for relapse or important improvement in mental state.

ICM vs Standard Care

When ICM was compared with standard care for the outcome service use, ICM slightly reduced the number of days in hospital per month (n = 3595, 24 RCTs, MD −0.86, 95% CI −1.37 to −0.34, low-quality evidence, figure 1). Similarly, for the outcome global state, ICM

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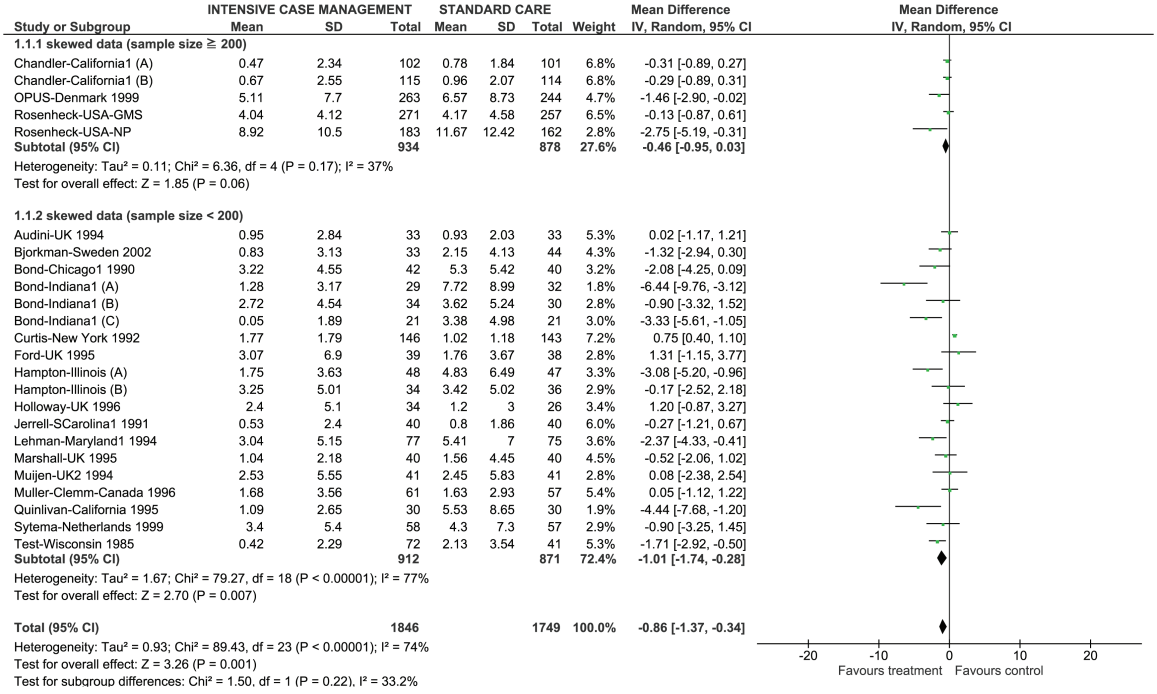

Fig. 1. Average number of days in hospital per month.

reduced the number of people leaving the trial early (n = 1798, 13 RCTs, RR 0.68, 95% CI 0.58 to 0.79, low-quality evidence). For the outcome adverse events, the evidence showed that ICM may make little or no difference in reducing death by suicide (n = 1456, 9 RCTs, RR 0.68, 95% CI 0.31 to 1.51, low-quality evidence). In addition, for the outcome social functioning, there was uncertainty about the effect of ICM on unemployment due to very low-quality evidence (n = 1129, 4 RCTs, RR 0.70, 95% CI 0.49 to 1.0, very low-quality evidence).

ICM vs Non-ICM

When ICM was compared with non-ICM for the outcome service use, there was moderate-quality evidence that ICM probably makes little or no difference in the average number of days in hospital per month (n = 2220, 21 RCTs, MD −0.08, 95% CI −0.37 to 0.21, moderate-quality evidence) or in the average number of admissions (n = 678, 1 RCT, MD −0.18, 95% CI −0.41 to 0.05, moderate-quality evidence) compared to non-ICM. Similarly, the results showed that ICM may reduce the number of participants leaving the intervention early (n = 1970, 7 RCTs, RR 0.70, 95% CI 0.52 to 0.95, low-quality evidence) and that ICM may make little or no difference in reducing death by suicide (n = 1152, 3 RCTs, RR 0.88, 95% CI 0.27 to 2.84, low-quality evidence). Finally, for the outcome social functioning, there was uncertainty about the effect of ICM on unemployment as compared to non-ICM (n = 73, 1 RCT, RR 1.46, 95% CI 0.45 to 4.74, very low-quality evidence).

Fidelity to ACT

Within the meta-regression we found that (1) the more ICM is adherent to the ACT model, the better it is at decreasing time in hospital ("organization fidelity" variable coefficient −0.36, 95% CI −0.66 to −0.07); and (2) the higher the baseline hospital use in the population, the better ICM is at decreasing time in hospital ("baseline hospital use" variable coefficient −0.20, 95% CI −0.32 to −0.10). Combining both these variables within the model, "organization fidelity" is no longer significant, but the "baseline hospital use" result still significantly influences time in hospital (regression coefficient −0.18, 95% CI −0.29 to −0.07, P = .0027).

Authors' Conclusions

Based on very low- to moderate-quality evidence, ICM is effective in ameliorating many outcomes relevant to people with severe mental illness. Compared to standard care, ICM may reduce hospitalization and increase retention in care. It also globally improved social functioning, although ICM's effect on mental state and quality of life remains unclear. ICM is at least valuable to people with severe mental illnesses in the subgroup of those with a high level of hospitalization (about 4 days per month in past 2 years). ICM models with high fidelity to the original team organization of ACT model were more effective at reducing time in hospital.

However, it is unclear what overall gain ICM provides on top of a less formal non-ICM approach.

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We do not think that more trials comparing current ICM with standard care or non-ICM are justified; however, we currently know of no review comparing non-ICM with standard care, and this should be undertaken. For details please see full Cochrane review.[1]

Reference

1. Dieterich M, Irving CB, Bergman H, Khokhar MA, Park B, Marshall M. Intensive case management for severe mental illness. *Cochrane Database Syst Rev*. 2017;1:CD007906.

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