Review

Home treatment for mental health problems: a systematic review

T Burns[1*]
M Knapp[2,3]
J Catty[1]
A Healey[2]
J Henderson[2]
H Watt[4]
C Wright[4]

[1] Department of Community Psychiatry, St George's Hospital Medical School, London, UK
[2] Department of Social Policy, London School of Economics, UK
[3] Department of Health Services Research, Institute of Psychiatry, London, UK
[4] Department of Psychiatry, St George's Hospital Medical School, London, UK

* Corresponding author

Executive summary

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Executive summary

Objective

This review investigates the effectiveness of 'home treatment' for mental health problems in terms of hospitalisation and cost-effectiveness. For the purposes of this review, 'home treatment' is defined as a service that enables the patient to be treated outside hospital as far as possible and remain in their usual place of residence.

Methods

Systematic literature search

'Home treatment' excluded studies focused on day, residential and foster care. The review was based on Cochrane methodology, but non-randomised studies were included if they compared two services; these were only analysed if they provided evidence of the groups' baseline clinical comparability.

Review of economic evaluations

Economic evaluations among the studies found were reviewed against established criteria.

Identification of service components

A three-round Delphi exercise ascertained the degree of consensus among expert psychiatrists concerning the important components of community-based services that enable them to treat patients outside hospital. The identified components were used to construct the follow-up questionnaire.

Follow-up of authors

As a supplement to the information available in the papers, authors of all the studies were followed up for data on service components, sustainability of programmes and service utilisation.

Data analysis

The outcome measure was mean days in hospital per patient per month over the follow-up period.

- Comparative analysis – compared experimental to control services. It analysed all studies with available data, divided into 'inpatient-control' and 'community-control' studies, and tested for associations between service components and difference in hospital days.
- Experimental services analysis – analysed only experimental service data and tested for associations between service components and hospital days.

Results

Systematic literature search

A total of 91 studies were found, conducted over a 30-year period. The majority (87) focused on people with psychotic disorders.

Review of economic evaluations

Only 22 studies included economic evaluations. They provided little conclusive evidence about cost-effectiveness because of problems with the heterogeneity of services, sample size, outcome measures and quality of analysis.

Delphi exercise

In all, 16 items were rated as 'essential', falling into six categories: home environment; skill-mix; psychiatrist involvement; service management; caseload size; and health/social care integration. There was consensus that caseloads under 25 and flexible working hours over 7 days were important, but little support for caseloads under 15 or for 24-hour services, and consensus that home visiting was essential, but not on teams being 'explicitly dedicated' to home treatment.

Response to follow-up

A total of 60% of authors responded, supplying data on service components and hospital days in most cases. Other service utilisation data were far less readily available.

Service characterisation and classification

The services were homogeneous in terms of 'home treatment function' but fairly heterogeneous in terms of other components. There was some evidence for a group of services that were multi-disciplinary, had psychiatrists as integrated team members, had smaller caseloads, visited patients at home regularly and took responsibility for both health and social care. This was not a cohesive group, however.

Sustainability of services
The sustainability of home treatment services was modest: less than half the services whose authors responded were still identifiable. Services were more likely to be operational if the study had found them to reduce hospitalisation significantly.

Meta-analysis
Meta-analysis with heterogeneous studies is problematic. The evidence base for the effectiveness of services identifiable as 'home treatment' was not strong. Within the 'inpatient-control' study group, the mean reduction in hospitalisation was 5 days per patient per month (for 1-year studies only). No statistical significance could be measured for this result. For 'community-control' studies, the reduction in hospitalisation was negligible. Moreover, the heterogeneity of control services, the wide range of outcome measures and the limited availability of data might have confounded the analysis.

Regularly visiting at home and dual responsibility for health and social care were associated with reduced hospitalisation. Evidence for other components was inconclusive. Few conclusions could be drawn from the analysis of service utilisation data.

Location
Studies were predominately from the USA and UK, more of them being from the USA. North American studies found a reduction in hospitalisation of 1 day per patient per month more than European studies. North American and European services differed on some service components, but this was unlikely to account for this finding, particularly as no difference was found in their experimental service results.

Conclusions

State of research
There is a clear need for further studies, particularly in the UK. The benefit of home treatment over admission in terms of days in hospital was clear, but over other community-based alternatives was inconclusive.

Non-randomised studies
Difficulties in systematically searching for non-randomised studies may have contributed to the smaller number of such studies found (35, compared with 56 randomised controlled trials). This imbalance was compounded by a relatively poor response rate from non-randomised controlled trial authors. Including them in the analysis had little effect.

Limitations of this review
A broad area was reviewed in order to avoid the problem of analysing by service label. While reviews of narrower areas may risk implying a homogeneity of the services that is unwarranted, the current strategy has the drawback that the studies cover a range of heterogeneous services. The poor definition of control services, however, is ubiquitous in this field, however reviewed areas are defined.

Inclusion of mean data for which no standard deviations were available was problematic in that it prevented measuring the significance of the main findings. The lack of availability of this data, however, is an important finding, demonstrating the difficulty in seeking certainty in this area.

Only days in hospital and cost-effectiveness were analysed here. The range and lack of uniformity of measures used in this field made meta-analysis of other outcomes impossible. It should be noted, however, that the findings pertain to these aspects alone.

The Delphi exercise reported here was limited in being conducted only with psychiatrists, rather than a multidisciplinary panel. Its findings were used as a framework for the follow-up and analysis. Their possible bias should be borne in mind when considering them as findings in themselves.

Implications for clinicians
The evidence base for home treatment compared with other community-based services is not strong, although it does show that home treatment reduces days spent in hospital compared with inpatient treatment. There is evidence that visiting patients at home regularly and taking responsibility for both health and social care each reduce days in hospital.

Implications for consumers
Services that visit patients at home regularly and those that take responsibility for both health and social care are likely to reduce time spent in hospital. Psychiatrists surveyed in this review also considered support for carers to be essential. The evidence from this review, however, was that few services currently have protocols for meeting carers' needs.

Recommendations for research and commissioners

A centrally coordinated research strategy, with attention to study design, is recommended. Studies should include economic evaluations that report health and social service utilisation. Service components should be collected and reported for both experimental and control services. Studies should be designed with adequate power and longer durations of follow-up and use comparable outcome measures to facilitate meta-analysis. Research protocols should be adhered to throughout the studies. It may be advisable that independent researchers conduct studies in future. It is no longer recommended that home treatment be tested against inpatient care, or that small, localised studies replicate existing, more highly powered studies.

Publication

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Initially, six HTA panels (pharmaceuticals, acute sector, primary and community care, diagnostics and imaging, population screening, methodology) helped to set the research priorities for the HTA Programme. However, during the past few years there have been a number of changes in and around NHS R&D, such as the establishment of the National Institute for Clinical Excellence (NICE) and the creation of three new research programmes: Service Delivery and Organisation (SDO); New and Emerging Applications of Technology (NEAT); and the Methodology Programme.

This has meant that the HTA panels can now focus more explicitly on health technologies ('health technologies' are broadly defined to include all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care) rather than settings of care. Therefore the panel structure has been redefined and replaced by three new panels: Pharmaceuticals; Therapeutic Procedures (including devices and operations); and Diagnostic Technologies and Screening.

The HTA Programme will continue to commission both primary and secondary research. The HTA Commissioning Board, supported by the National Coordinating Centre for Health Technology Assessment (NCCHTA), will consider and advise the Programme Director on the best research projects to pursue in order to address the research priorities identified by the three HTA panels.

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