A review of research on the structure, process and outcome of liaison mental health services

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CRD summary
This review assessed general liaison mental health services (LMHS). The authors concluded that few studies evaluated LMHS and some had serious methodological limitations. They further concluded that these services may reduce the workload of emergency departments and help clients to contact mental health services. The conclusions were generally based on single studies and, therefore, are suggestive rather than definitive.

Authors' objectives
To describe the structure, process and outcomes of general liaison mental health services (LMHS). This abstract only refers to the evaluation of LMHS.

Searching
MEDLINE (1975 to 2000), ASSIA (1992 to 1998), EMBASE: Psychiatry (1987 to 2000), PsycINFO (1984 to 2001), DARE (Issue 1, 2001), British Nursing Index (1985 to 1986), CINAHL (1982 to 2001), Nursing Collection (1995 to 2001), the Cochrane Library (Issue 1, 2001) and Best Evidence (1991 to 2002) were searched. Websites of mental health-related organisations, including that of the Royal College of Psychiatrists, were also examined and the reference lists in all included reports were checked. The British Journal of Psychiatry, the Journal of Advanced Nursing and the British Journal of Social Work were handsearched from 1985 to 2001. Only reports in English were included.

Study selection
Study designs of evaluations included in the review
Reviews were eligible for inclusion. Studies of research undertaken before 1975 were excluded. No other inclusion criteria were specified with respect to study design. The included studies were of a wide variety of designs.

Specific interventions included in the review
Studies of general LMHS were eligible for inclusion. The review defined LMHS as services provided by mental health specialists in general health settings, and characterised by liaison, consultation, education and, in some cases, direct intervention with users of the service. LMHS provided by professionals within single or multiple disciplines were eligible. The studies could be set within accident and emergency (A and E) departments and could operate within at least two different specialities. Studies of LMHS provided to only one speciality were excluded, as were studies of treatments within LMHS. Most of the included studies were set in the UK. Nurses alone provided LMHS in most of the included studies; in other studies, multidisciplinary teams or psychiatrists alone provided the services.

Participants included in the review
Studies of patients who had self-harmed were excluded. The participants in the included evaluative studies were users of the service or health-care professionals. Users of the service were patients seen in A and E departments or referred from there, medical and surgical patients, and patients discharged from long-term psychiatric care. Health-care professionals comprised clinicians, social work and liaison staff, physicians, and nurses on general wards. All studies used convenience samples of participants.

Outcomes assessed in the review
Studies reporting quantitative and qualitative or descriptive data were eligible for inclusion. Only studies that generated or synthesised observed data were included. Most of the included studies used questionnaires to assess the users or carers’ satisfaction with the service.

How were decisions on the relevance of primary studies made?
One of the reviewers read all of the identified articles. Where there was doubt about the eligibility of a study, two reviewers read the article and reached consensus on inclusion or exclusion.
Assessment of study quality
Validity was apparently assessed according to criteria described by the Centre for Reviews and Dissemination. Study quality was discussed in the text with reference to sample selection, power calculation, validity of the methods used to assess the outcomes, response rates and comparison of non-responders with responders. The authors did not state who performed the validity assessment.

Data extraction
Reviewers extracted data using a specially designed form. The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
The evaluative studies were summarised according to the characteristics of the studies, quality of the studies and the results, and a narrative synthesis was undertaken.

How were differences between studies investigated?
Differences between the studies were described with respect to intervention and study quality.

Results of the review
Sixteen evaluative studies were included in the review. There was one controlled trial (n=107), three studies with comparison groups (n=463), one quasi-experimental study (n not reported), two pre- post-intervention studies (n=125), four surveys (n=369), one survey and focus group (n=153), one time series (n=99), one correlation study (n=508) and one economic analysis (n not reported).

The sample size ranged from 3 to 508. All of the studies used convenience samples of participants. None of the studies used a power calculation to estimate the sample size. Few of the 10 studies using questionnaires reported on their reliability and validity. The response rates ranged from 23 to 92% (median 39%). Studies with low response rates did not compare responders with non-responders.

Less than 50% of the studies sought the client's opinion of the service.

Overall, the studies found respondents were satisfied with LMHS. Clinicians were satisfied with the speed of response, quality of assessments, documentation and outcome (1 survey of 29 clinicians).

General nurses were satisfied with liaison nurses' work with families and the ease of referral to LMHS (1 survey of 75 nurses). General nurses in this same study were least satisfied with the documentation and outcome recommendations of LMHS. Ward nurses valued liaison nurses for their availability, objectivity, and good counselling and supportive skills (1 focus group study with 3 nurses).

Physicians most valued a multidisciplinary team for advice on patient management and follow-up visits, but least valued their teaching and conflict resolving (1 survey of 250 physicians). Senior staff valued LMHS more than junior staff.

Clients were satisfied with care provided by liaison nurses (1 pre- post-intervention study with 95 patients), information provided about their treatment (1 survey of 15 clients), and reported high overall satisfaction with the service (1 survey of 57 users and 96 clinicians). The introduction of a liaison nursing service reduced the length of stay at a psychiatric facility (1 comparison of two liaison services with 148 users and 195 clinicians).

A multidisciplinary LMHS doubled the number of psychosocial referrals and reduced the number of people with mental health problems attending A and E departments (1 study with 30 patients comparing a period of liaison with no liaison). Attaching a community psychiatric nurse to A and E departments increased the clients' use of mental health services and reduced the use of other services (1 time series analysis of 99 users).
LMHS made little change to the number of sitters required for mental health clients in general wards (1 controlled trial with 107 users) or to interdisciplinary cooperation (1 comparative study with 148 users and 195 clinicians).

LMHS in A and E departments reduced attendances in A and E by patients with mental health problems, but did not improve attendance at psychiatric appointments (1 quasi-experimental study; number of participants was not reported).

Cost information
The review identified one study that found that a social work service was cheaper than a liaison mental-health nurse service (no actual costs were reported).

Authors' conclusions
Few studies evaluated LMHS and some had serious methodological limitations. The authors concluded that clients and professionals valued LMHS, and that A and E-based services may reduce the departments' workload, help clients contact mental health services and reduce readmission rates.

CRD commentary
The review question was clear in terms of the intervention and outcomes. The inclusion criteria were broadly defined in terms of the participants. Several relevant sources were searched, but the search terms were not stated. By limiting the included studies to those in English, the authors might have omitted some relevant studies. The methods used to assess validity were not described; hence, any efforts made to reduce errors and bias cannot be judged. Various aspects of validity were assessed and methodological limitations were discussed in the text of the paper.

Some relevant information on the included studies was tabulated. Given the small number of heterogeneous studies, a narrative synthesis was appropriate. The results for controlled trials and quasi-experimental studies were discussed separately in the synthesis. The authors discussed some of the limitations of the review in the text. The evidence presented appears to support the authors' conclusions about there being limited evidence available from the few generally methodologically-flawed studies. Conclusions about the effect of LMHS on specific outcomes were generally based on single studies and, therefore, are suggestive rather than definitive.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that better designed studies are required to evaluate LMHS. They stated that studies should be designed using published criteria, that samples should be representative of the population, and that reports should provide extensive descriptions of the clients. In addition, studies should compare the effects of different models of LMHS on client and staff outcomes, and should include an economic analysis of LMHS.

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**Record Status**
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.