**Follow-up care of patients treated for breast cancer: a structured review**
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**CRD summary**
This review assessed the effectiveness of breast cancer follow-up services. The authors' conclusions appear appropriately cautious, however, the poor quality of the majority of the included studies and the poor reporting of review methodology mean that their reliability cannot be accurately determined.

**Authors' objectives**
To assess the effectiveness of follow-up services for breast cancer patients.

**Searching**
MEDLINE, EMBASE, CINAHL, British Nursing Index, RCN Journals Database, PsycINFO, National Research Register, HMIC, the Cochrane Database of Systematic Reviews, and the NHS Centre for Reviews and Dissemination's databases were searched from 1989 to April 2001 for publications written in English. In addition, the references of identified articles were checked and the Annals of Oncology Journal was searched.

**Study selection**
**Study designs of evaluations included in the review**
Case studies and studies that reported health care professionals' views or experiences, medical procedures or technology advancements were excluded from the review.

**Specific interventions included in the review**
Studies of patients attending a routine follow-up service after treatment for primary breast cancer were eligible for inclusion. Follow-up differed in intensity (minimal versus intensive), frequency, location (primary versus secondary), discharge from routine follow-up, nurse-practitioner follow-up and patient-initiated follow-up. Minimal follow-up was defined as including history taking, physical examination and mammography. Intensive follow-up was defined as including extensive diagnostic investigations such as chest X-ray, clinical chemistry, haematology and bone scans. Most of the included studies were conducted in the UK or the USA; the remainder were conducted in other European countries, Canada or Japan.

**Participants included in the review**
Studies of patients who had received treatment for primary breast cancer were included in the review.

**Outcomes assessed in the review**
Studies reporting data on any outcome were eligible for inclusion. The included studies assessed a wide range of outcomes: survival, recurrence, number of breast lesions missed, affect (including depression and anxiety), quality of life, satisfaction, other morbidity, knowledge, involvement in decision-making, attitude, perceptions and preferences, service impact, designation of practitioner, and economic assessment.

**How were decisions on the relevance of primary studies made?**
One reviewer selected papers for inclusion in the review. A second reviewer checked 10% of the decisions, and decisions were discussed between the reviewers.

**Assessment of study quality**
The methodological quality of the included studies was evaluated against a predefined list which included 13 questions relating to the sample, intervention and interpretation of results, including blinding, randomisation and use of an intention-to-treat analysis. Each study was assigned a quality score according to how well the criteria were met. The authors did not state how many reviewers performed the validity assessment.
Data extraction
Data were extracted onto a predefined form. The authors did not state how many reviewers extracted the data from the primary studies.

Methods of synthesis
How were the studies combined?
A narrative synthesis was employed, grouped by outcome.

How were differences between studies investigated?
Differences between the studies were highlighted in study tables and the body of the text.

Results of the review
Thirty-eight studies were included in the review: 5 randomised controlled trials (n=3,116), 1 before-and-after study (n=29), 29 surveys (n>12,305), 2 cost comparison/minimisation studies (n=1,616) and 1 cost estimation study (n=222).

In general, research quality was poor with inadequate measures of effectiveness or research designs. Eleven studies rated less than half the possible score for research quality. These studies were not included in the results of the review. Seventeen studies rated 75% or greater of the total possible score.

Patient survival and quality of life were not affected by intensity of follow-up or location of care. Patients held positive attitudes towards follow-up, but psychological distress was consistently high regardless of location of services. Few studies assessed patient involvement in treatment decisions and findings regarding preferred patterns of service were mixed, with no consensus on appointment frequency.

Cost information
Yes. Three studies assessed economic outcomes. One study found the cost of follow-up to the National Health Service and the patient to be lower in primary care than hospital follow-up. Another study found the cost of intensive follow-up to be 3 to 5 times greater than minimal follow-up. The remaining study found that the costs of follow-up were greater in the first 6 to 18 months compared with 18 to 30 months after treatment (US$362 and US$297 per patient, respectively).

Authors' conclusions
There was insufficient primary empirical evidence to draw conclusions regarding the best practice for breast cancer follow-up care in terms of patient involvement in care, reduction in morbidity, or cost-effectiveness of service provision.

CRD commentary
The review questions were set out clearly and supported by inclusion criteria for the participants and interventions. A search of several electronic databases was supplemented by checking the reference lists from relevant primary studies and handsearching a key journal. However, the search was limited to articles written in English and the possibility that relevant studies might have been overlooked cannot be excluded. The methods undertaken to select studies for inclusion were likely to have reduced the potential for errors and bias. However, the authors did not report whether similar methods were taken at other stages of the review. The validity of the included studies was assessed using appropriate criteria and the results broadly reported. Given the heterogeneity of the included studies, the use of a narrative synthesis was suitable. The authors' conclusions appear appropriately cautious, but the poor quality of the majority of the included studies and the lack of reporting of review methodology mean that their reliability cannot be accurately determined.
Implications of the review for practice and research

Practice: The authors suggested that a minimal approach is as effective as intensive interventions.

Research: The authors indicated that further studies are required to determine whether or not there is an optimum care package for patients treated with breast cancer and what circumstances might affect the components of this package; what the consequences are of providing long-term follow-up services; and how to facilitate patient involvement in decision-making. They also stated that research into the training requirements of non-specialist staff for the delivery of follow-up care should be undertaken.

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