Implementation of integrated care for patients with cancer: a systematic review of interventions and effects

CRD summary
This review evaluated the effects of integrated care interventions on quality of care for cancer patients and concluded that promising interventions found in this review should be part of a multicomponent intervention programme focused on patients, professionals and organisation of care. Due to methodological limitations, conclusions specific to the effects of the evaluated interventions may not be reliable.

Authors' objectives
To review the effects of integrated care interventions on quality of care for cancer patients.

Searching
MEDLINE and The Cochrane Library were searched from January 1996 to October 2006 to identify relevant English-language publications. Search terms were reported. Reference lists of retrieved studies were examined to identify further relevant evidence.

Study selection
Randomised controlled trials (RCTs), interrupted time series and controlled before-after studies were eligible for inclusion if they evaluated an integrated care intervention or programme that aimed to improve care for adult patients with cancer in a hospital or outpatient setting. The intervention had to address one of the three principles of integrated care: patient centred; multidisciplinary; and organisation.

Included studies evaluated interventions in a range of different cancers, most frequently breast cancer. Most studies were conducted in UK, USA and Canada.

Two reviewers independently selected studies for inclusion.

Assessment of study quality
Studies were evaluated against five methodological criteria described by the Cochrane Collaboration (completeness of follow-up, reliability of outcomes, protection against contamination, baseline measurement and concealment of allocation). Only studies that met at least three of the five criteria were included in the review.

Two reviewers independently assessed validity. Discrepancies were resolved by a third reviewer.

Data extraction
Data were extracted on four categories of study outcome: intervention outcomes (outcome most closely related to the aim of the intervention); satisfaction (patient or professional); subjective health outcomes (such as quality of life, anxiety); and objective health outcomes (such as morbidity, mortality). Outcomes were defined as having a positive effect if there was a statistically significant difference (p<0.05) between intervention and control groups. Where more than one outcome was reported in one category, the intervention was considered to have a positive effect when more than half the outcomes had significant positive effects.

Two reviewers independently extracted data. Discrepancies were resolved by a third reviewer.

Methods of synthesis
Studies were grouped by type of intervention (patient-centred, multidisciplinary care, organisation of care or combination approaches) with the number of studies that reported a positive effect for each category of outcome.
Results of the review

A total of 33 studies (n=unclear) were included in the review: 31 randomised or quasi-randomised studies and two controlled before-after studies. Only one study fulfilled all five quality criteria.

Patient-centred interventions (16 studies):

Two out of three studies that provided information to patients reported positive effects on intervention outcomes, three studies reported no positive effects on satisfaction and three studies reported no positive effects on subjective health outcomes.

Three out of five studies that provided decision aids to patients reported positive effects on intervention outcomes, two out of three studies reported positive effects on satisfaction and one out of three studies reported positive effects on subjective health outcomes.

Two out of two studies that provided audiotaped consultations reported positive effects on intervention outcomes, two studies reported positive effects on satisfaction and one reported no positive effects on subjective health outcomes.

None of four studies that provided patient-mediated interventions reported positive effects, one out of four reported positive effects on satisfaction and two studies reported positive effects on subjective health outcomes.

Two studies that provided communication training for professionals reported no positive effects on intervention outcomes and one study reported no positive effect for satisfaction.

Organisation of care interventions (14 studies):

Two out of four studies that provided follow-up by nurses reported positive effects on intervention outcomes, one study out of five reported positive effects on satisfaction, six studies reported no positive effects on subjective health outcomes and one out of four studies reported positive effects for objective health outcomes.

One study that provided follow-up by GP (General Practitioner) reported no positive effect on intervention outcomes, one of two studies reported positive effects on satisfaction and two studies reported no positive effect on subjective health outcomes.

One study that provided case management reported positive effects on intervention outcomes, one study reported positive effects on satisfaction, one reported no positive effect on subjective health outcomes and one reported positive effects on objective health outcomes.

Two studies on one-stop clinics both reported positive subjective health outcomes.

Multidisciplinary care (one study):

One study reported a positive effect of having a radiologist as part of a multidisciplinary team for patients with gastric cancer.

Combination approaches (two studies):

One study of a shared care programme reported positive effects on intervention outcomes and satisfaction, but not on subjective health outcomes. One study of patient-held records reported no positive effects on intervention outcomes or subjective health outcomes.

Authors' conclusions

A multicomponent intervention programme focused on patients, professionals and organisation of care was required to improve integrated care for patients with cancer. The promising interventions found in this review should be part of that programme. The programme should be evaluated using rigorous methods and unequivocal outcome measures linked to the intervention.
CRD commentary
The review question was reasonably well defined in terms of the participants, interventions and study designs of interest. Individual study validity was assessed and attempts were made to minimise bias at each stage of the review process. However, the vote-counting approach to synthesis (based on the number of statistically significant outcomes reported across studies) was inadequate to properly establish the effects of the interventions. Key details of the included studies (such as sample sizes and specific outcome measures used) were not reported. As it appeared that no attempts were made to identify unpublished studies, the results of the synthesis may have been compromised further.

The authors recommendations for future research were appropriate, but the conclusions about the effects of the evaluated interventions may not be reliable.

Implications of the review for practice and research
Practice: The authors stated that patient-directed information interventions should be included in any integrated care programme.

Research: The authors stated that future research should be conducted on composition, functioning and impact of effective teamwork on intervention and patient outcomes for patients with cancer; evaluations should focus on outcomes linked directly to the intervention of interest.

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