Developing evidence based service guidance to improve outcomes in head and neck cancers

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Objective

A series of systematic reviews was undertaken to inform service guidance for the management of head and neck cancers, published by the National Institute for Health and Clinical Excellence (NICE. *Guidance on Cancer Services: Improving Outcomes in Head and Neck Cancers: The Manual*. London: NICE, 2004).

Methods

Healthcare professionals and patient representative groups met to discuss issues that influence the outcomes of patients with head and neck cancers. As a result, a list of key questions for review was produced, addressing aspects of services likely to have a significant impact on health outcomes.

Comprehensive searches were carried out for each review question using a range of databases (MEDLINE, EMBASE, CancerLit, The Cochrane Library, Database of Abstracts of Reviews of Effects (DARE), AMED, HMIC databases (King's Fund database, DH-Data and HELMIS), CINAHL, British Nursing Index, NHS Economic Evaluation database (NHS EED) and SIGLE). Unpublished studies were also identified through personal contact with researchers in the field.

Selection of studies was based on pre-defined inclusion criteria that specified the participants, intervention, comparator(s) and outcomes of interest.

The studies were graded according to quality using an agreed hierarchy of evidence, shown in Figure 1.

Figure 1: Grading of evidence

Grade	Therapeutic Intervention	Diagnostic Intervention	
I	Systematic review of randomised controlled trials (RCTs)	Systematic review of grade II studies	
II	RCT	A blind comparison with a reference standard among an appropriate broadly defined sample of consecutive patients	
III	Systematic review of non-RCTs	Systematic review of poorer than level II studies	
IV	Quasi-experimental studies	Any one of the following →	■ Narrow population spectrum ■ Differential use of the reference standard ■ Reference standard not blind ■ Case control study design
V	Controlled observational studies a) Cohort studies b) Case control studies	Two of the following →	
VI	Observational Studies without control groups	Three/four of the following →	
VII	Expert opinion, consensus and case studies (n = 1)	Expert opinion, consensus and case studies (n = 1)	

Data were extracted into tables, which included a commentary on the quality of included studies.

Inclusion screening and data extraction were carried out independently by one reviewer and checked by a second.

The nature of the evidence concerning each question was described and the results summarised in a narrative synthesis, along with tables of studies giving fuller details of the research.

The results of the systematic reviews were used alongside the expertise of healthcare professionals, patients, commissioners and economists to produce service guidance and identify key recommendations central to implementation.

Results

The quality of the research identified for many of the review questions was poor. In many areas randomised controlled trials have not been undertaken and either only observational studies exist, or no studies could be identified at all.

The key recommendations of the guidance covered commissioning services for patients with head and neck cancers at the Cancer Network level and ensuring that multidisciplinary specialist teams are central to the service, with each specialist managing at least 100 new cases of upper aerodigestive tract cancer per annum.

Streamlining arrangements for referral at each stage of the patient's cancer journey, providing a wide range of support services and establishing co-ordinated local teams to provide long-term support and rehabilitation in the community were also recommended.

There was also a recommendation to develop and expand research.

Conclusions

Underpinning cancer service guidance with systematic reviews ensures that key recommendations are informed by the available evidence, and highlights areas in need of further research.

Further details

Guidance on Cancer Services: Improving Outcomes in Head and Neck Cancers: The Manual and The Research Evidence are available from NICE: **www.nice.org.uk**