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CoR Research Award - £5000

X-Raying children: Identifying differences in practices between adult departments and dedicated children's hospitals in Scotland

Background

Children are major users of health care (Hart and Chesson, 1998), but their perceptions of treatment and care can be very different to those of adults (Chesson et al 1997). Recent estimates are that one in four patients attending UK Accident and Emergency departments are children (Salter and Maconochie, 2004). Of these a significant proportion will proceed to the x-ray department. As there are merely 15 children's hospitals in the UK (three of which are in Scotland) the majority of children will be x-rayed in adult departments. Currently we do not know how these children fare

A search of the MEDLINE (1996-2006) and CINAHL (1982-2006) indicates a lack of research relating to how children's needs are met within x-ray departments. The majority of research has focused on radiation doses delivered during imaging and one study (Kyriou et al 1996) has indicated that specialist centres dedicated to children, consistently delivered lower radiation doses due to amended use of equipment. Although there has been an unpublished survey (2004) this related largely to imaging departments' physical environment.

Work in a different paradigm has been that carried out by the Health Services Research Group. In one study children were asked to draw what is felt to have an x-ray and one of the main findings indicated that children have anxieties when attending for x-rays (Chesson et al 2002). In a follow-up study, new innovative methods of data collection, such as the provision of a graffiti

wall and 'Big Brother' type video box were used to engage children in research.

With the move toward child-centred services (Department of Health, 2003) it is essential we increase our knowledge of how children are treated and cared for within the imaging departments of an adult hospital. A key issue is the extent to which staff are prepared for handling children whose needs and requirements may be very different to those of adults.

Aims and objectives of the investigation

The main aims of the study are to

- compare and contrast the provision for children having x-ray examinations in adult and children's hospitals
- enhance the provision for children within adult x-ray departments.

Objectives

The main objectives are to

- determine provision for children in the x-ray departments of non-specialist hospitals
- investigate the preparation, especially training of radiographers in adult and dedicated children's hospitals to carry out the imaging of children
- establish current methods of communicating with a child in an x-ray department
- ascertain the availability of child centred environments in adult hospitals both within the normal working day and 'out of hours'
- identify the extent to which children's needs are taken into account when providing an imaging service in a general department, developing policies and protocols, and procuring equipment
- ascertain the involvement of x-ray departments with children in the community e.g. schools

Research plan

A quantitative approach will be adopted in order to obtain robust evidence of

current practice. A survey of all hospitals containing x-ray facilities in Scotland, including the dedicated children's hospitals, will be surveyed using a mailed questionnaire.

An application for ethical approval is currently in preparation for submission to MREC.

Data collection

A questionnaire will be developed containing both closed and open questions. The main areas for inclusion in the questionnaire will be

- the practice of x-raying children
- the numbers of radiographers attending children's courses and conferences
- availability of child centred environments both within the 'normal' day and 'out of hours'
- procedures and protocols to address sensitive areas of practice such as Non-Accidental Injury, and possible pregnancy of minors
- activities undertaken by x-ray departments to familiarise children such as school visits

Questionnaires (with pre-paid return envelopes) will be sent to superintendent radiographers and radiography managers in hospitals throughout Scotland with x-ray facilities (estimated at 70). Questionnaires will be given unique identifiers to ensure confidentiality but enable non-respondents to be followed up. Reminders will be sent out to non-respondents, after a period of three weeks.

Data analysis

All the quantitative data will be entered into SPSS-PC. The analysis of open-ended questions will in general follow the procedures identified by Miles and Hubermann (1994).

This research will be based within the Health Services Research Group,

which is a multi-disciplinary research unit within the Faculty of Health and Social Care, The Robert Gordon University, Aberdeen.

Outcomes

- Increased knowledge of the provision of imaging for children
- Work will be available to inform a follow-up questionnaire survey of England, Wales and Northern Ireland
- Data will be available to policy managers and NHS managers for improvement to services for children

References

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