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Exploring the work of nurses who administer chemotherapy to children and young people

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A B S T R A C T

Purpose of the research: To explore the knowledge, attitudes and beliefs of nurses who administer chemotherapy to children and young people.
Methods and sample: A national postal survey of nurses working within the 21 cancer centres in the United Kingdom and Ireland. The questionnaire included 25-items addressing the attitudes, beliefs and concerns regarding nurses' roles, support mechanisms and educational preparation related to administration of chemotherapy.
Results: In total 286/507 (56%) questionnaires were returned. The majority of nurses worked in inpatient +/-outpatient (78%) settings and most gave chemotherapy on a daily basis (61%). The median time working in oncology was 10 [range 0.5–32] years and time administering chemotherapy was 8 [0.1–32] years. Aspects of administration that caused the most worry included treatment side-effects, extravasation, dealing with allergic/anaphylactic reactions and knowledge deficits in colleagues. There was no significant difference in worry according to level of nurse education but those with an oncology qualification had less Knowledge-related worry ($p = 0.05$). There was no difference in attitude according to level of education or having an oncology qualification. There were significant correlations between time qualified, time working in oncology and the number of years administering chemotherapy and the worry domains (ranging from $r = -0.14$ to $r = -0.24$, $p < 0.05$); and attitude to chemotherapy (ranging from $r = 0.12$ to $r = 0.26$, $p < 0.001$).
Conclusion: As anticipated nurses new to chemotherapy administration were initially anxious about the role and they worried about making a drug error. Education and support from colleagues appears to have a positive effect on reducing worry and increasing competence.

Introduction

Children and young people with cancer are currently cared for in the 21 Childhood Cancer and Leukaemia Group (CCLG) centres and around 60 shared care units (care closer to home) within the United Kingdom (UK) and Ireland. Throughout these centres chemotherapy remains the primary treatment modality for haematological malignancies and many solid tumours, when it is

Abbreviations: CCLG, Children's Cancer and Leukaemia Group; CIVAS, Central Intravenous Additive Service; DH, Department of Health; NCAG, National Chemotherapy Advisory Group; NCAT, National Cancer Action team; NCIG, National Chemotherapy Implementation Group; NPSA, National Patient Safety Agency; PONF, Paediatric Oncology Nurse's Forum; RCN, Royal College of Nursing; SRS, Stress-Response-Sequence.

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usually used in combination with surgery with or without radiotherapy. The delivery of chemotherapy to children and young people, particularly small children, is recognised to be especially difficult, with more potential for errors more than in chemotherapy administration in adults (National Institute for Health and Clinical Excellence, 2005).

Background

Over the past twenty years the important task of administering chemotherapy has become an integral part of the role of the children's cancer nurse. The overall aim of nurses administering chemotherapy is to ensure that patients receive it safely and provide support for children, young people and their families to enable them to manage the physical and psychological consequences of their treatments (Hooker and Palmer, 1999). Nurses must be confident about their knowledge, competence and technical skills in order for them to effectively fulfil this role. This confidence should not only come from clinical experience but also education (Pike and Gibson 1991; Price and McShane, 2002). However, the education programmes undertaken to prepare nurses for this role are often delivered within a clinical service and developed locally to meet the needs of the workforce. Wide variation is known throughout the UK in terms of educational preparation: this is disconcerting given the implications and current concerns regarding chemotherapy administration (Department of Health [DH], 2007; National Chemotherapy Advisory Group [NCAG], 2009; National Confidential Enquiry into Patient Outcome and Death, 2008).

Many of the education programmes are similar in content and assessment strategies but there are no nationally agreed educational standards to be attained (Royal College of Nursing [RCN], 2005). Additionally, little is known about the needs and competence of practitioners in this area. This resulted in a group of children's cancer nurses leading on the production of a key document, the Integrated Competency Framework for Training Programmes in the Safe Administration of Chemotherapy to Children and Young People (RCN, 2005). This was revised in 2010 and incorporated as part of a set of generic competencies for practice: An integrated career and competence framework for nurses working in the field of children and young people's cancer care (RCN, 2010). Although disseminated throughout the UK CCLG centres, and referenced in the Children's Cancer Measures (National Cancer Action Team [NCAT], 2011), it is not known how far this framework has been implemented, and where it has, its impact on education and practice. More will be known following peer review of the CCLG units using the measures; this should be reported from across the UK in 2013. Additional information will result from a focus on the chemotherapy workforce by the National Chemotherapy Implementation Group (NCIG; www.ncat.nhs.uk/our-work/ensuring-better-treatment/chemotherapy), but until then, the national profile of how education is provided, the support available to nurses and the effect this has on competence and confidence has yet to be described prior to this survey.

Nurses' informal accounts of their work suggests that some find the chemotherapy role to be a stressful and all-consuming part of their work. There is often anticipation of this extension to their role, a role some nurses look forward to taking on and others remain anxious and uncertain about. There is a desire to deliver holistic care, including chemotherapy administration, yet there are concerns about what it means to be a 'chemo-giver'. Although there is a natural progression towards developing this aspect of their role, little is known about how nurses experience this transition; their attitudes, concerns and feelings surrounding this role extension have yet to be explored. It is argued that to give quality emotional and physical support to the individual with cancer and their families, the nurse's perception and experience of work in this field of care needs to be explored in depth (McCray, 1997).

Some of these issues have been explored by Verity and a team at King's College London (Wiseman et al., 2005) in a multi-method study, incorporating both a survey and ethnographic design to explore the role of nurses in adult cancer care. The first component of the study utilised the Chemotherapy: Education, Worries and Attitudes Questionnaire, which was sent to 526 nurses working with adults within London hospitals providing chemotherapy services. Staff education and experience, pressures of time and workload, nurses receiving regular updated knowledge and working with more experienced and knowledgeable role models were found to be factors that influenced nurses' perspectives of administering chemotherapy. Although this information is helpful, we would suggest that while there are some similarities, such as safe handling of chemotherapy, there are differences in this specific role between nurses who care for adults and those who care for children and young people for the findings to be translated into our practice. For example, variation in educational preparation, local issues around training and support for nurses in the role. Additionally, the nature of the work itself we might anticipate that very different worries and concerns might be raised about administration of chemotherapy to children, particularly the very young. Despite these differences we feel that the similarities are sufficient to adopt the same research design, and benefit from the experience of this research team to benefit our study through collaboration. We believe that there is much to be gained from collaboration within profession but across specialty (Ream and Gibson, 2007).

Aims

The principle research question was: What is the knowledge, attitudes and beliefs of nurses who administer chemotherapy to children and young people?

Specific aims of the study were to:

- Explore attitudes, feelings and beliefs of nurses' administering chemotherapy;
- Ascertain the nature and extent of educational preparation and sources of support that nurses who administer chemotherapy are in receipt of and whether they perceive this to be sufficient;
- Determine whether experience and/or education have an impact on nurses' attitudes or concerns.

Methods

Study design

This was a national survey collecting a combination of quantitative and qualitative data.

Theoretical framework for the study

The theoretical framework for this study draws on the work of Hinds who sought to explore role-related stress and role meaning in paediatric oncology nursing (Hinds et al., 1990). The field of children's and young people's cancer care is undoubtedly stressful. Nurses can easily become overwhelmed in providing care to young patients and their families. The nature of the work itself and the work environment can impact on a nurses' performance. It has been suggested that one of the main reasons for oncology nurses experiencing stress and burnout is associated with