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RESEARCH PAPER

Management of patients on chemotherapeutic treatment for advanced cancer with acute conditions in the emergency department

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Summary
Background: Chemotherapy is increasingly used in people with advanced cancer to palliate symptoms and improve survival. New Zealand provides medical oncology services in a *Hub and Spoke* model, with an increasing emphasis on delivering treatment at out-patient *spoke* services, where after hours and urgent care is provided by the Emergency Department (ED). This study sought to describe the factors that influenced the care and clinical decision-making of this group of patients in the ED.
Methods: Semi-structured telephone interviews were held with five ED nurses from three hospitals at the *spoke*. Raw data was thematically analysed via an exploratory descriptive approach.
Results: Care of the oncology patient in ED is determined by the presentation itself, and differs little to the care delivered to other patient groups. That the patient is on chemotherapy may have little influence on the interventions provided. Challenges arise through patient complexity, lack of oncology specialist availability and low volumes preclude the maintenance of specialist skills and knowledge. Clinical decisions are influenced by local Hospice teams rather than Oncology team providing cancer treatment.
Conclusion: A more collaborative relationship between Oncology and ED nurses may support the provision of emergency care within the context of active cancer treatment.

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What is known

Internationally it is known that the complexity of cancer care and specialised skills and knowledge required create significant clinical risk to the cancer patient on chemotherapy presenting to the ED. Over 50% of patients receiving outpatient chemotherapy may have an ED presentation, and have greater clinical complexity, higher admission rates and higher morbidity and mortality at that admission. Uncertainty, lack of information, fragmentation of care and delays in diagnosing febrile neutropenia and commencing antibiotics all contribute to this risk.
A review of New Zealand's medical oncology services recognises that the disease trajectory may be prolonged and punctuated by acute, treatment or disease related events and there is an expected trend towards chemotherapy of greater complexity being given to more people with advanced cancer, more frequently, and to an older population overall.

What this paper adds?

The specialised, episodic, emergency care that ED nurses are trained to provide to a very diverse population, does not always meet the needs of this highly specific patient group. In spite of the dilemmas that may be anticipated to arise in the care of this patient group in the ED (and which were expected to be uncovered in this project), no participant described personal or professional dilemmas arising in the clinical care of these patients, except the conflict of prioritising the ED case load. There is a potential gap in the care of patients on chemotherapy for advanced cancer as they traverse the ED with acute events. It is hoped that an understanding of the nature of the phenomenon will inform further research and represent an opening gambit in an on-going dialogue between Oncology nurses and ED nurses in New Zealand that will be mutually supportive and lead to improved patient outcomes.

Introduction

A review of New Zealand's medical oncology services recognises a number of factors impacting on future cancer service delivery: that the disease trajectory may be prolonged and punctuated by acute treatment or disease-related events; and an expected trend towards chemotherapy of greater complexity being given to more people with advanced cancer, more frequently, and to an older population overall. This review favours the current *hub and spoke* model of service delivery with increasing devolution of clinical services to the *spoke* where smaller hospitals provide ambulatory chemotherapy and/or visiting specialist outpatient clinics.[1] Specialised oncology knowledge and skills in smaller hospitals will frequently be invested in a few key staff, often nursing only. Advanced cancer patients, more numerous, older, with greater complexity and receiving a greater range of disease-modifying treatments will be directed to their local ED for management of acute events.

It is known that the complexity of cancer care and specialised skills and knowledge required create significant clinical risk to the cancer patient on chemotherapy presenting to the ED.[2] Over 50% of patients receiving outpatient chemotherapy may have an ED presentation,[3] have greater clinical complexity, and higher admission rates, morbidity and mortality at that admission.[2,4] Uncertainty, lack of information, fragmentation of care and delays in diagnosing febrile neutropenia and commencing antibiotics all contribute to this risk.[2]

Other notable challenges to the care of this patient group within acute services in general include lack of specific knowledge, expertise and time, and the emotional nature of the care. It is suggested that the acute care, non-specialist environment is not conducive to providing for the complex needs of the cancer patient[5–7] and causes stress for nurses in acute care settings.[7] Negative perceptions of cancer and misconceptions about cancer treatment may exist[4,8] and be detrimental to the patient.[5] Patient experience of care may be enhanced when continuity is maintained and admission is to the specialist oncology unit or review by their oncology specialist occurs.[4]

The United Kingdom (UK), using a similar *hub and spoke* model of cancer service delivery, conducted an extensive review of adverse outcomes[9] which suggested that emergency care was best delivered by cancer specialists within a specialist cancer centre. The ensuing best practice guidelines advocated for the development of an acute oncology service that integrated the clinical expertise of oncology, emergency medicine and general medicine.[10] The tendency of cancer services to focus on the administration of chemotherapy rather than the entire chemotherapy pathway was also noted.[10] Senior cancer nurses in the UK supported this recommendation and saw it as a leadership opportunity for cancer nurses.[11] Such inter-professional collaboration sits well within the Ministry of Health expectations of cancer care in New Zealand.[12]

Māori, the first people of New Zealand, have the poorest health status of any ethnic group in this country,[13] experiencing a higher incidence of cancer overall than non-Māori,[14] and a 29% higher mortality on average than non-Māori.[15] There is a widening gap in survival between lower and higher socio-economic status (SES)[15] and a significantly higher number of cancer registrations and deaths in areas of greatest socio-economic deprivation.[16] Both Māori ethnicity and lower SES are more prevalent at the *spoke*.[17]

This project was undertaken to gain an understanding of the factors that influenced clinical decision-making and nursing care of this population group in the ED, specifically in peripheral centres away from the cancer treatment *hub*.

Material/methods

A qualitative study was undertaken, using a voluntary, purposive sample of ED nurses from the *spoke* District Health Boards (DHB) of one cancer treatment *hub*. The study had ethics approval from the Eastern Institute of Technology, locality approval from the four *spoke* DHBs and the consent of the College of ED Nurses in New Zealand. Recruitment