

MY CAREER AS ... A CANCER SERVICES PHARMACIST

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Opportunities for pharmacists in cancer services have increased markedly over recent years. This article outlines the current and future roles of oncology pharmacists and sets out details of the supporting specialist professional organisations and postgraduate education available

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Counselling patients in prechemotherapy clinics about the side effects they can expect is one of the roles of a cancer services pharmacist

Cancer is the most common cause of death in the UK after heart disease. More than one in three people will develop cancer at some stage in their lives and one in four will die of their disease. Across the UK in 2002 over 270,000 were diagnosed with cancer, and over 150,000 died from it.¹

Pharmacists have an increasingly important role to play in the management of the cancer patient as part of the multidisciplinary team. They may interact with patients at many stages in their cancer journey. As the number of patients receiving chemotherapy increases, so to do the number of patients coming into contact with oncology pharmacists.

CANCER SERVICES

In 1995 the Calman-Hine report proposed a hub-and-spoke organisational structure for cancer services.² At the hub were specialist cancer centres, each linked with a group of associated cancer units and, in turn, with primary care teams. The formation of cancer networks followed the publication of the NHS cancer plan in 2000.³

Cancer centres provide a full range of cancer treatments, which includes less common and rare cancers as well the more common cancers which may be too specialised or technically demanding for cancer units. Cancer

units provide secondary care for the more common cancers such as breast, lung and colorectal. The units may not necessarily have in-patient cancer beds or medical oncologists based there. In these units chemotherapy is generally provided only for day-case patients.

A cancer network brings together health service commissioners (health authorities, primary care groups and trusts) and providers (primary and community care and hospitals), the voluntary sector and local authorities to deliver a comprehensive cancer service across the patient pathway for a population of between one and two million people. There are 34 such networks in England, three in Wales and three in Scotland.

Until about ten years ago, most chemotherapy was given in hospitals that also delivered radiotherapy. Oncology pharmacists posts were restricted mainly to regional oncology centres. Over the last five years, there has been a growth in the number of oncology pharmacist posts being created. In 2003, for example, there were 110 cancer related pharmacy posts from B to G grade advertised in *The Pharmaceutical Journal* compared to approximately 20 in 1995. A substantial proportion of these posts were for pharmacists working within cancer units as opposed to cancer centres. This increase in the number of posts can be attributed to several factors including, the growing demand for chemotherapy and the publication of *The Manual of Cancer Services Standards*.⁴ The standards require every hospital providing drug treatment specific to malignant disease to have pharmacists supervising

chemotherapy prescribing and a designated pharmacist responsible for the pharmaceutical services to cancer patients.

PHARMACIST'S ROLE

My 20-year involvement in oncology pharmacy was not a conscious decision, but circumstances led me along the path to specialising in oncology. So what has kept me interested for so long, and what continues to attract new pharmacists to this area of practice?

The role of the clinical pharmacist in oncology has grown, both technically and clinically with the ever-increasing complexity of cancer treatment. Oncology is one of the areas of pharmacy practice where pharmacists can combine their traditional preparative skills with a wide range of clinical activities. Many junior pharmacists take their first steps into the world of oncology pharmacy via rotations in production or aseptic services.

Oncology also offers pharmacists a wide variety of different disciplines within which they may practise. During my own career for example, I have managed a cytotoxic reconstitution service, managed oncology clinical trials within the pharmacy, taught nurses, medical staff and pharmacists at postgraduate level, been involved in implementing electronic prescribing systems for chemotherapy as well as having responsibility for the clinical pharmacy service at a cancer centre. More recently as a cancer network lead pharmacist, I have become involved in oncology at a more strategic level.

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Oncology pharmacists (or more correctly cancer services pharmacists) may have varying roles and responsibilities. Oncology is an area of medicine where there is a wide multidisciplinary team and pharmacists are valued for the contributions they make to patient care. The role of the oncology pharmacist may encompass a wide range of activities, some of which are set out in Panel 1.

Many oncology pharmacists (especially those working in cancer units or smaller cancer centres) may have a dual role, providing clinical pharmacy services as well managing aseptic services or the cytotoxic reconstitution unit. A number of larger trusts now offer B or C grade (and sometimes D grade) rotations between aseptic and clinical services. This has proven to be of value to departments who have had difficulty in recruiting to posts which are 100 per cent aseptic services and is beneficial to junior pharmacists unsure of which career direction to take.

PATIENT COUNSELLING

The majority of cancer patients first come into contact with an oncology pharmacist after the diagnosis of cancer has been made, when they are on the wards undergoing a series of investigations before they start a course of chemotherapy. For many patients this is a difficult time, as not only do they have to come to terms with their diagnosis but also the fear of chemotherapy and its potential side effects.

The pharmacist can play a significant role in a cancer patient's treatment by dispensing not just the chemotherapy and other medication, but by providing valuable information and support for the patient and their family throughout therapy. This includes information on chemotherapy and managing side effects, such as nausea and vomiting and mucositis, as well as proper drug handling techniques. In some hospitals, pharmacists are involved in

providing such support to patients by working with chemotherapy nurses to run pre-chemotherapy clinics.

Educating patients about the use and potential for misuse of oral chemotherapy is critical to patient safety. In recent years a couple of new orally available cytotoxic agents have become available and there are several others in development. A number of oncology pharmacists have set up systems within their hospitals to ensure that all patients receiving oral cytotoxics are seen and counselled by an oncology pharmacist or specialist nurse. In some hospitals this has led to the development of pharmacy-led clinics. The British Oncology Pharmacy Association (BOPA) have recently published a position statement in *The Pharmaceutical Journal* and on the internet about the pharmaceutical care of patients receiving oral anticancer chemotherapy that supports pharmacists counselling all patients receiving these agents.⁵

Panel 1: Activities of an oncology pharmacist

- Prescription monitoring and managing the adverse effects of chemotherapy
- Preparation and audit of protocols such as anti-emetics for chemotherapy induced nausea and vomiting, and the use of granulocyte-colony stimulating factor
- Patient counselling
- Improving the quality and safety of chemotherapy prescribing
- Education
- Clinical trials
- Medicines information
- Horizon scanning and managed entry of new cancer drugs
- Palliative care.

The exact nature of the activities an individual oncology pharmacist is involved in will depend on a number of factors such as where they work and their level of experience. Details of articles that provide more information about the roles of cancer services pharmacists can be found at www.pjonline.com/links/HP

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— PRESCRIBING

Chemotherapy is almost always prescribed on the basis of a protocol. The protocols describe which drugs are to be used in combination as well as the doses and the routes and methods of administration. Many of these protocols can be very complex and there is the potential for a variety of prescribing errors. The protocol-led nature of chemotherapy does, however, lend itself well to prescribing using prescription proformas which provide details of doses, dose modifications, ancillary treatment such as antiemetics, and so on. Chemotherapy is also ideally suited to being prescribed using a computerised program.

There are several different computer systems currently available in the UK for chemotherapy prescribing. Pharmacists are ideally placed to lead on the development and implementation of such systems within oncology departments and there has in recent years been a number of chemotherapy electronic prescribing implementation posts created in hospitals in different parts of the country.

— CLINICAL TRIALS

Research has always been an important part of oncology practice and many departments are involved in the conduct of clinical trials involving cytotoxics or supportive care drugs such as antiemetics, antifungals, etc. Since the establishment in 2001 of the National Cancer Research Network (NCRN), there has been a doubling of recruitment into cancer trials.

The trials may range from phase I studies which only usually take place at some cancer centres to larger scale phase III studies which may involve patients at both cancer units and cancer centres. Oncology pharmacists provide vital support to medical and nursing staff as well as patients involved in these trials. For many oncology pharmacists, this activity is an extension of their normal duties. In some of the larger cancer centres, however, which may have numerous clinical trials active at any one time, there are specific oncology clinical trial pharmacist posts. In some research networks the NCRN has funded a pharmacist (either in full or in part) to help co-ordinate the pharmacy aspects of research activities.

— HORIZON SCANNING

The last few years has seen a rapid increase in the number of drugs available to treat a variety of cancers. Drugs which have been licensed in the last five to six years such as the taxanes and the topoisomerase inhibitors are now, or soon will be, licensed for use in an increasing range of indications. A 2001 survey of American pharmaceutical companies identified over

400 drugs being developed for the treatment of different malignancies.

It is vital that oncology pharmacists keep abreast of the emerging medical literature and work with clinicians and others to look at which drugs are due to come to market — those which will result in changes in prescribing and treatment protocols. Many of these new treatments may have significant impact on drug budgets as well as service delivery. At least one cancer network has appointed an oncology pharmacist to “horizon scan” and produce evaluated summaries of the literature which can then be used to support formulary applications and business cases for the introduction of individual drugs.

— PALLIATIVE CARE

It is a sad fact that a large proportion of patients with cancer die from their disease. These patients often require specialist palliative care. Although palliative care is a specialty in its own right in many hospitals, it is the oncology pharmacist who is responsible for providing clinical pharmacy support to the palliative care team and patients. Scotland is a notable exception to this and there are a number of palliative care pharmacist posts established within cancer centres and units. This provides oncology pharmacists with the ideal opportunity to experience working within another related specialty.

— SPECIALIST ORGANISATIONS

BOPA BOPA is a registered charity which was set up in 1996. BOPA aims to promote excellence in the pharmaceutical care of patients with cancer. Its objectives include promoting the highest standards of pharmaceutical practice within oncology, promoting the role of specialist oncology and haematology pharmacists and technicians and encouraging and promoting specialist postgraduate and other education for pharmacists and technicians.

The BOPA membership currently stands at over 425, of which approximately 80 per cent are hospital pharmacists. BOPA holds a weekend annual symposium which attracts over 250 delegates. At the symposium we aim to have a mixture of clinical sessions covering both new developments and updates on particular tumours as well as professional interest sessions. In addition, BOPA organises other training events with at least two study days per year for pharmacists and one for technicians. A newsletter published quarterly provides information on oncology pharmacy issues. Details of BOPA study days and copies of newsletters and other documents produced by BOPA can be found on the website www.bopa-web.org. The website also includes a discussion forum which is restricted to BOPA members.

The BOPA education and training working group is currently working on developing competencies for oncology pharmacists. These will be complementary to those being developed by Graham Davies and colleagues (London, Eastern and South East Pharmacy Competency Group) for advanced level pharmacy practitioners.⁶

Paediatric Oncology Pharmacists (POP) Specialist pharmacists working with paediatric oncology patients formed the POP group in 1996. The group has pharmacist-representation from all the UK Childrens' Cancer Study Group (UKCCSG) centres as well as a number of units. The aim of POP is to improve the pharmaceutical care of children receiving chemotherapy by facilitating communication between oncology pharmacists. POP holds study days twice a year and uses an e-mail group to share information between members. POP is affiliated both to BOPA and the Neonatal and Paediatric

Pharmacists Group (NPPG). All UKCCSG working groups now have a pharmacist representative. Further details about POP are available via the BOPA and NPPG (www.nppg.demon.co.uk) websites.

POSTGRADUATE EDUCATION

At present there is no nationally recognised training scheme or mandatory qualification required for pharmacists working in oncology or haematology. Most of the oncology pharmacy training is obtained "on-the-job", by attending oncology conferences and by reading oncology literature. Since 2000, some UK based oncology pharmacists have chosen to sit the American Board of Pharmaceutical Specialists oncology certification examination. There are now six UK pharmacists who can use the designation BCOP after their name. For further information about the exam and its relevance to UK practice

readers are advised to refer to a previous article in *The Pharmaceutical Journal*.⁷

Although a number of the clinical pharmacy diplomas offered by the schools of pharmacy include an oncology module, there are currently no postgraduate courses specifically aimed at oncology pharmacists. A couple are in development and it is hoped that a diploma course will be available at John Moores university within the next six months. There are, however, a number of diploma and masters courses in oncology that are multidisciplinary in approach and are available to pharmacists. These include the traditionally taught MSc in Clinical Oncology at Birmingham University and the part-time MSc in Oncology or Palliative care available from the University of Newcastle, which are web-based. For further information about these courses see www.postgraduate.bham.ac.uk/programmes/med_cancerstudies_taught.htm and www.ncl.ac.uk/cancereducationonline/.

FUTURE DEVELOPMENTS

Oncology pharmacy has come a long way in the last 10 years and will continue to change. Like many other specialties, supplementary prescribing will provide oncology pharmacists with the ideal opportunity to further develop the pharmaceutical care they provide patients.

Many senior oncology pharmacists eagerly await the development of consultant oncology pharmacist posts. This development does, however, need to be within the context of a competency based approach as described by Graham Davies and colleagues (London, Eastern and South East Pharmacy Competency Group),⁸ and discussed at last year's BOPA annual symposium.

Publication of the first version of the Manual of Cancer Standards and the NICE Cancer Outcomes guidance has helped to raise the standards of patient care. A revised version of the manual is expected shortly,

which is to include an increased number of standards (mainly technical) specifically around oncology pharmacy. A number of oncology pharmacists have contributed to the development of these standards and it is hoped that future versions of the manual will include many more. I would for example want the standards to mandate that an appropriately trained oncology pharmacist should counsel every cancer patient before commencing chemotherapy and at regular intervals during their treatment.

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