Delivering care to oncology patients in the community: an innovative integrated approach

Terry Hanan, Louise Mullen, Janice Richmond, Mary Wynne, Marie Laffoy, Eve O’Toole

Cancer incidence in Ireland will grow by 100% in the next 10–15 years (National Cancer Registry Ireland, 2011). This, together with advances in oncology drugs and patient treatment, will increase cancer prevalence and survival. Medical advances, though welcome, exert pressure on hospital capacity, where traditionally all such patient care is delivered. Alternative ways to safely manage patients are needed to address demand. Integrating care between primary and secondary health-care services can help to address this demand. The new model of care outlined in the Programme for Government (Government of Ireland, 2013) identifies primary care as the main channel for health service delivery, which should reduce the over-reliance on acute services.

Ireland’s National Cancer Control Programme (NCCP) established a number of functions, including a community oncology division, which works to enhance the scope of primary care personnel to care for patients with cancer and to provide a smooth, seamless pathway to and from specialist services. Nurses, being at the front line of service delivery, have an important role to play in recognising signs and symptoms and prompting early intervention and treatment (Shafter, 1997). The NCCP published a Strategy and Educational Framework for Nurses Caring for People with Cancer in Ireland (NCCP, 2012), to guide and support nurses in the provision of quality cancer care in the context of the multidisciplinary teams. Its recommendations are presented under four themes: patient-centred care; leadership in cancer nursing; cancer education, knowledge, skills and experience of the nurse and delivering evidence-based practice; and cancer research. This strategy has facilitated the development of a number of nursing education programmes to meet the needs of nurses caring for patients with cancer (Figure 1).

One of these programmes is the community oncology nurse education programme. This article describes the context, development and components of the community oncology nurse education programme. The methodology, results and evaluation of this programme are presented and discussed. Following this, the key critical success factors and challenges are identified.

**ABSTRACT**

A community oncology nursing programme was developed in Ireland between the hospital and community health services for patients receiving systemic cancer therapy, in response to a service need. A robust evaluation of the pilot programme was undertaken, which found that defined clinical procedures traditionally undertaken in hospitals were safely undertaken in the patient’s home with no adverse effects. There was a dramatic decrease in hospital attendances for these defined clinical procedures, and hospital capacity was consequently freed up. Patients valued having aspects of their care delivered at home and reported that it improved their quality of life, including reduced hospital visits and travel time. Community nurses expanded their scope of practice and became partners with oncology day-ward nurses in caring for these patients. Community nurses developed the competence and confidence to safely deliver cancer care in the community. This initiative shows that defined elements of acute cancer care can be safely delivered in the community so long as the training and support are provided. The findings and recommendations of the evaluation resulted in university accreditation and approval for national roll-out of the programme. Integration of services between primary and secondary care is a key priority. This innovative programme is a good example of shared integrated care that benefits both patients and health-care providers.

**KEY WORDS**

- Community
- Education
- Nursing
- Oncology
The community oncology nurse education programme

Rationale for the programme

The NCCP and Office of the Nursing and Midwifery Services Directorate (ONMSD) supported the development of the community oncology nurse education programme, an education and training programme for community-based nurses. The requirement for the development of this programme emerged as a result of a need identified by hospital and community health personnel in County Donegal. Hospital oncology staff noted that many patients travelled long distances for interventions that took only a few minutes to complete in the hospital.

Community nurses visit patients in their homes for many reasons and could, if appropriately trained, undertake an assessment of cancer patients, assess their response to treatment and perform appropriate home-based cancer interventions. These interventions requested by the specialist oncology team would reduce the patient’s need to travel to the acute setting for care that could safely be delivered in their own home.

Prior to the introduction of the community oncology nurse education programme, clinical skills training had been delivered to community nurses to enable them to undertake specific interventions in relation to central line and ambulatory chemotherapy care in the community. The subsequent development of the community oncology nurse education programme educated community nurses in the theory associated with these interventions and enabled them to expand their practice further.

In Ireland there are graduate diploma programmes in cancer nursing. However, these do not meet the needs of community nurses. Community nurses provide care to patients in their areas from ‘cradle to grave’—but this does not traditionally include cancer care. The opportunity to build capacity in the community for acute cancer care has been limited. However, nurses providing palliative care to patients is a good example of how nurses who have expanded their practice can meet the needs of this patient population in their homes. Expansion of practice involves a holistic process, taking both the patient need and nursing skills into account. This approach has been successfully used in Ireland and internationally, resulting in enhanced service provision for patients and increased job satisfaction for nurses (National Council for the Professional Development of Nursing and Midwifery, 2010). Up until now, the approach to cancer nurse education has focused predominantly on the needs of acute services. The community oncology nurse education programme enables community nurses to provide appropriate care in their home for patients with cancer. It moves elements of oncology care to the community and positively affects patients’ quality of life and improves hospital capacity through shared working.

Development of the training programme

Following discussions between the National Cancer Control Programme and the hospital and community nursing staff, it was agreed that an education programme for community nurses would be developed to provide a more holistic, shared care approach within a good governance structure. It was proposed that this programme be accredited by educational authorities and made available nationally, following evaluation of a pilot programme in County Donegal.

Aim of the programme

The specific aim of the community oncology nurse education programme is to provide a continuous professional development programme that enables community nurses to develop and enhance their knowledge, skill and competence of professional issues in cancer care. It also aims to ensure that, upon completion, community-based nurses are equipped with the knowledge, skills and competencies to safely provide care to individuals with cancer in the community care setting, within the nurse’s own scope of practice (An Bord Altranais, 2000).

Programme structure

The programme is delivered over a 6-month period and involves local specialist cancer staff delivering appropriate education on cancer care relevant to community nurses. The training is both theoretical and skills-based, and was approved by the Nursing and Midwifery Board of Ireland. Clinical learning and work placement is delivered in designated cancer centres and units associated with centres of nurse education. Following evaluation and participant feedback, the revised programme obtained formal academic accreditation and consists of 250 hours of theoretical and clinical learning, to include library time, individual learning time and assessment (Figure 2).

The curriculum covers a wide range of topics that are directly applicable to nursing cancer patients (Table 1). Programme participants continue to work in their home environment while undertaking clinical learning, to include library time, individual learning time and assessment (Figure 2).
INNOVATIONS IN CARE

Clinical areas in primary care settings for the duration of this continuing professional development (CPD) programme.

Learning outcomes

The learning outcomes for this programme were derived from the educational aims of the programme, but are stated in terms of the ‘capabilities that participants should attain as a result of instruction’ (Quinn and Hughes, 2007:112). Learning outcomes were defined for each of the units of learning.

Governance

National and local governance structures and processes were established. The national implementation group comprises senior clinical oncology nurses, managers and educationalists. This group oversees and approves cancer nursing education programmes, following endorsement from the national director of the NCCP and the national director of the Office of the Nursing and Midwifery Services Directorate. Local implementation group representatives include key stakeholders in primary care nursing practice and education, including a programme coordinator (registered nurse tutor), clinical personnel (including nurses from primary care settings), members of the Cancer Care multidisciplinary team and nursing management to oversee the planning, delivery and evaluation of the programme.

Principles

The overarching principle for this model of care was the safety of patients being cared for at home. The responsibility for the patient, wherever the care was being delivered, belonged to the consultant medical oncologist caring for this patient. Another key safety feature built into the programme included formal assessment of community nurses’ knowledge, skills and competence upon completion of training.

In addition to these aspects, the programme included the following safety features:

- The development of a standardised referral procedure from the medical oncology day ward to the community
- Direct access to the medical oncology department was provided to the community nurses for phone calls or direct admissions from the community
- The development of a community oncology resource

Table 1. Units of learning in the community oncology nurse education programme

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<td>Professional and legal issues</td>
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<tr>
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<tr>
<td>5</td>
<td>Supportive interventions (psycho-oncology) survivorship and palliative care</td>
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<td>Clinical skills workshops</td>
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Figure 2. Breakdown of theoretical and clinical hours for the community oncology nurse education programme. European Credit Transfer and Accumulation System (ECTS) is a standard for comparing the study attainment and performance of students of higher education across the European Union and other collaborating European countries.

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book to assist the community nurses in the clinical assessment of patients.

Resource book
The resource book was developed in consultation with relevant stakeholders, including community nurses, nurse education professionals and oncology specialists (medical personnel and nurses). The guide book is available at www.cancercontrol.ie (National Cancer Control Programme, 2011) and is a practical, informative guide for community nurses, enabling them to safely provide high-quality oncology care to patients in their homes.

It is divided into two sections:
- Section A details the purpose, scope, legislation, roles, responsibilities and governance structures
- Section B illustrates the patient ‘head to toe’ clinical assessment, giving step-by-step guides to each intervention and actions for the community nurse to take when managing potential oncological side effects.

The spiral-bound innovative resource book is A5 for convenient use.

Evaluation of the programme

Methodology
An evaluation of the pilot programme was undertaken in 2012, using qualitative and quantitative methods. The evaluation focused on interventions undertaken by the community nurses in February and March 2012. The main aim of the evaluation was to determine whether training and systems were put in place to equip community nurses participating in the programme with the competence and confidence to manage patients safely in the community. The evaluation involved patient interviews, focus groups with community and hospital staff, and an analysis of activity data obtained from patient interventions in both hospital and community (NCCP, 2013).

Ethics
Ethical approval was obtained by the local hospital ethics committee. Project design, implementation, data collection, analysis and evaluation involved collaboration with all relevant stakeholders.

Quantitative methodology
Hospital activity data were collected from the day oncology log book (no information technology system collects this data) for May–June 2007, May–June 2010 and May–June 2012. Collation and assessment of defined procedures of cancer care provided by community nurses were compared with oncology day ward activity before and after the implementation of the programme. The three distinct time points were used to estimate whether there were changes in hospital activity after the original brief skills training and subsequent development of the programme and delivery of care in the community. May–June 2010 was chosen, as this was after the community nurses completed the original brief skills training, and May–June 2012 was chosen, as the community nurses had completed the full community oncology nurse education programme pilot and had commenced the delivery of oncology care in the community.

Qualitative methodology
The qualitative research involved telephone interviews and focus groups. The patient's perspective was ascertained using telephone interviews and aimed to gain insight and identify any concerns the patients might have had with the new service and its impact on the patient and their families. Ten patients were consented by the advanced nurse practitioner in oncology for interview and were then contacted by the researcher. The selection criterion used was the patient’s health status; therefore, this was a purposive rather than a random sample. Three of the ten patients consented did not participate, as they either could not be contacted, or attempts were made to reschedule that were unsuccessful. Interviews were taped and transcribed, and transcripts were read and coded using an open coding method. A number of cycles of coding were completed using literature and topic guides as reference; themes were identified and discussed among the research team. The final themes were agreed and developed in the final report (NCCP, 2013) (see Table 2).

The focus group participants were invited to provide input into the evaluation process and to describe the experience of being part of the pilot programme. Two focus group meetings were held over a 2-day period in February 2012. One focus group was held using teleconferencing facilities in May 2012. Participation was

| Table 2. Focus groups for evaluation of oncology nurse education programme |
|-----------------------------|-----------------|-----------------|
| **Type of participant**     | **Number in group** | **Duration (mins)** |
| 1. Hospital oncology personnel | 6               | 41               |
| 2. Public and community health nurses (who completed the community oncology nurse education programme) | 7               | 60               |
| 3. Public and community health nurses (who did not undertake the community oncology nurse education programme) | 4               | 37               |
| 4. Assistant directors of public health nursing | 4               | 39               |
| **Total**                   | **21**          | **Average: 44**  |
The establishment of the community oncology nurse education programme has resulted in aspects of oncology care being delivered safely to patients in their homes. It was considered successful by both the community and hospital staff. Furthermore, it was reported by the patients to improve their quality of life. Community nurses expanded their scope of practice and became partners with oncology day-ward nurses in caring for patients. The community nurses had the competence and confidence to safely deliver cancer care in the community. Interventions such as patient assessment, management of treatment side-effects, dressing/flushing of central lines, disconnection of ambulatory chemotherapy and medication management are now taking place in the community and would previously have been delivered in the hospital.

There was an impact on the scheduling of the usual community nursing services due to the urgency of some of the cancer procedures. Over a period of time, there was a dramatic decrease in hospital attendances for defined clinical procedures that are now performed in the community. The findings suggest there is a shift of the procedures undertaken in a patient’s home from the hospital to the community.

One of the main effects of the training was the increase in community nurses’ confidence in providing a safe cancer service in the patient’s home. This was reported in the focus group with the community nurses who had completed the course:

‘Knowledge is way up, you are more confident when you go into a house; now you can’t always answer everything, but you know a lot, lot more.’

Communication between the hospital and community staff was strengthened by the training programme. The community nurses now know the hospital staff and are now more at ease in contacting them:

‘Have a direct line to unit, we have met staff, we know them, we have a great relationship and we can ring them, we can pick up the phone to [name] or [name]. We feel really well supported.’

The programme demands a sustained effort by the hospital staff in the medical oncology day ward:

‘In my opinion, it is time well spent, it is intensive to train nurses, a number of nurses … we got to know them well all week, it was really great to meet them, get to know them, makes it much easier to ring someone you already know … the time you invested with them, was going to be repaid, in that they get to know our roles and that has been reciprocated.’

However, the staff in the oncology day ward stated that once the training was completed there was very little further training with the community nurses required. There is an ongoing need to properly select patients for care in the community, and hospital staff always need to be available to support their community nursing colleagues.

### Patient experience

One of the anticipated benefits of the programme was to reduce the burden of travel on the patients. The intervention forms completed by the community nurses showed that the most common distance of patients’ homes to hospital oncology day wards was 60–69 kilometres. The patients described the impact of being saved from making the journey and the stress of travel—especially when they do not drive themselves:

‘…More at ease with nurse and in own home. Better atmosphere for asking questions and it saved me a 1.5 hour journey when I wasn’t feeling well at all. I could ask questions about things that didn’t sink in at the hospital and I could take my time.’

Patients valued having aspects of their care delivered at home and they reported that it improved their quality of life. They expressed confidence in the skill of community nurses in meeting their needs. They indicated they are now participating in a more active way in their own care and had an increasing sense of autonomy.

### Education programme

There was very positive feedback on the education programme from both the community nurses and the hospital oncology personnel. It was noted that some elements of the course did not acknowledge the community nurses’ prior knowledge. It was proposed that the programme should be submitted for accreditation at a higher academic level, as this would reflect the volume of work undertaken by the community nurses to complete the programme. Both the hospital staff and the community nurses requested that there be a period of time when the programme was completed.

### Results of the evaluation

**Community nurses**

The findings suggest there is a shift of the procedures undertaken in a patient’s home from the hospital to the community. The programme demands a sustained effort by the hospital staff in the medical oncology day ward:

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Conclusion
The evaluation of the community oncology nurse education programme confirmed that this integrated care model was successfully delivered. By taking an integrated approach to patient care and delivering appropriate care in the community, the potential exists to meet the growing demands of oncology care in a patient-centred way.

This is a useful model for the shared care management and has the potential to be transferrable to the management of other chronic diseases. More research in this direction is therefore desirable.

Challenges
The main challenge with this initiative was the shift in delivery of care from the hospital to the community. There were concerns about successfully implementing the service safely, as these patients, if not managed appropriately, could die from undiagnosed complications. The absence of information technology structures for data collection made the evaluation process more challenging, as did competing workloads of community nurses, who reported having to prioritise cancer patients over other patients, because of the nature of the required intervention. However, patients reported satisfaction with the service, and there was a reduction in patient visits to the oncology day ward as a result of the programme. This reduction equated to approximately 1000 visits a year to the oncology day ward where the evaluation was undertaken. When the programme is delivered nationally, it has the potential to reduce day ward visits by up to 25,000 in the other 25 hospitals with oncology day ward services.

KEY POINTS
- This innovative integrated model of care provides safe, seamless elements of cancer care to patients in their homes
- The success of the programme can be attributed to strong governance, key stakeholder ‘buy in’ and the provision of the necessary education, skills and knowledge to community nurses carrying out this care in patients’ homes
- The introduction of this programme had a positive impact on patients’ quality of life