Delivering chemotherapy with a nurse-led cancer outreach service

This project shows how outreach chemotherapy services can be delivered in the community

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This article outlines an initiative to deliver outreach chemotherapy closer to patients’ homes. Five nurse-led units were set up in the community. Cancer treatments can now be provided outside the acute hospital setting. This nurse-led service has improved and developed the delivery of chemotherapy by looking at alternative and innovative ways of addressing service delivery.

INTRODUCTION
East Kent Hospitals University NHS Trust consists of three acute district general hospitals and two community hospitals. Simple and complex chemotherapy for all tumour sites, including haematology/oncology, is delivered at three chemotherapy units.

As in many other trusts, chemotherapy services are under pressure as patient numbers increase and new treatments are approved. Cancer has become a long-term condition and, with higher survivorship rates leading to more years of chemotherapy, treatment capacity will continue to be an issue. The three units in East Kent work at full capacity and, even though services have been expanded, capacity is inadequate to meet future demands. Alternative ways of working had to be considered.

OPTIONS FOR CARE
The project was established following NICE (2006) approval of trastuzumab (Herceptin) for the adjuvant treatment of early-stage HER2-positive breast cancer. If this drug was to be administered to a growing number of patients, the capacity of support services to deliver it had to be considered.

Initial estimates for uptake in Kent and Medway based on population modelling identified around 145 patients per year who would be eligible; East Kent Hospitals University NHS Trust expected to treat a third of these. This translates into some 900 treatments, based on 18 treatments delivered every three weeks over a year.

The average additional chair occupancy was calculated to be approximately 35 hours per week, or the equivalent of a full-time chemotherapy nurse administering only trastuzumab all week. This and other factors meant alternatives had to be considered.

A business case was put forward to Southern and Coastal PCT outlining three models of expanded service delivery, based solely on the delivery of trastuzumab:

- Setting up a home chemotherapy service (Hayward, 2002), using existing chemotherapy nurses from the treatment units. This was dismissed as it was not considered to be cost-effective;
- Expanding space in existing units. As the unit in Margate was a new and dedicated building, Ashford had recently been expanded and Canterbury had moved into a new larger space, this was not feasible;
- Setting up a dedicated outreach chemotherapy team using the community hospital network in East Kent. This would not only be able to deal with the increase in capacity related to trastuzumab but could also deliver other chemotherapy treatments, thereby freeing up capacity in the units. The PCT chose to support this option.

PLANNING SERVICES
Moving care outside of a hospital setting involves significantly more than changing a location. Work has to be undertaken before setting up a new service to enable and support change across the whole network. This involves patients, commissioners and service providers, as well as an evaluation of existing service provision to ensure the best use of resources (Kelly et al, 2004).

After consultation, the location was decided. This was within local PCT and trust premises in the form of community hospitals and health centres, at Dover, Folkestone, Herne Bay, Deal and Faversham. These outreach sites had to deliver the same standard of care as that provided at cancer units, so the existing ambulatory nurse-led model of care was assessed to ensure it could work in this setting. Following discussion with chemotherapy nurses, consultants, pharmacy and aseptics staff (who work in the sterile chemotherapy preparation area), it was felt this model would be suitable for the outreach setting.

There was a need to change some processes to ensure a seamless service, such as taking blood samples in the community. This could be done by GPs or community hospitals. A telephone pre-chemotherapy assessment was also introduced, where patients were assessed
BACKGROUND

- The approval of the use of adjuvant trastuzumab (Herceptin) (NICE, 2006) in HER2-positive women had implications for all chemotherapy units in East Kent.
- The Department of Health’s (2007) cancer reform strategy said care should be delivered in the most appropriate setting and localised where possible for patient convenience.
- Increasing numbers of drugs and rising numbers of patients living with cancer will put more pressure on all cancer units.

48 hours before treatment, and followed up with a face-to-face assessment on the treatment day at the outreach site. To date, there have been no cancellations on the day because of deteriorating conditions or information discrepancies between telephone and face-to-face assessments.

All safety procedures are compiled in accordance with guidelines and policies. New guidance was produced on anaphylaxis and provided along with a kit of drugs that could be administered in the event of such an emergency.

At all points, discussions were carried out with the risk and legal departments.

SERVICE PROVISION

The service is available to all adult patients with cancer but there are some restrictions. The careful selection of patients as well as the regimens administered is important to its success.

A few treatments known to cause severe hypersensitive reactions are excluded, as are treatments that include cisplatin. This is because of the long nature of the regimen and the lack of dedicated sluice facilities on site. Also, patients who receive certain treatments for breast cancer often have scalp cooling to lessen hair loss, which cannot be offered in the community setting. Any patients with an uncontrolled medical condition that could cause concurrent problems requiring regular medical intervention are also excluded.

Trials and studies dealing with home versus hospital chemotherapy delivery support the safety of this kind of service and patients’ satisfaction (Borras et al, 2001).

Two members of staff manage this service – a chemotherapy outreach sister, and a chemotherapy staff nurse from one of the chemotherapy units who works on an eight-week rotation. It is assumed that the two nurses between them can deliver up to 10 treatments a day per site, averaging 2,500 a year. The impact is already being felt in the chemotherapy units, as waiting times are reduced and patients offered more choice.

Transport of equipment and staff had to be addressed. The outreach team is based in Canterbury from where it starts every morning. As no storage space is available at the sites, all equipment is transported every day. A large van that driven by nurses, was leased and converted. To prevent cross-contamination and infection all equipment is cleaned daily on leaving each site, before being loaded back in the van.

The first phase of treatment delivery began in February 2008 and lasted until the end of April. This saw the delivery of trastuzumab from cycle 3 onwards, disodium pamidronate (formerly known as APD), gemcitabine, carboplatin, fluorouracil, oral vinorelbine, oral capecitabine and oral etoposide. The second phase, which started in May, added the following drugs: oxaliplatin, irinotecan, mitomycin, mitoxantrone, epirubicin, cyclophosphamide and intravenous etoposide. Since September, some oral haematology regimens have been added.

OUTCOMES

The outreach staff have noted that more careful planning and coordination is required as there is a lack of flexibility around delaying treatments or bringing patients in for repeat blood tests. The workload is, however, more predictable for nurses, as there are fewer interruptions and highly complex, long regimens are excluded.

A patient satisfaction survey is being carried out. One aim is to compare satisfaction with, and preference between, treatment in the main district general hospitals and the outreach service. The survey also includes questions on privacy, information-giving and treatment administration. Although it is ongoing, the trend seems to be towards a preference for treatment in the community due to ease of access and continuity of care.

This service allows patients to be treated locally and in familiar surroundings, which could result in a better quality of life. Giving them a sense of control about where they receive care can leave patients feeling empowered. With increased capacity comes the benefit of faster treatment times, so we can continue to achieve waiting-time targets.

CONCLUSION

This nurse-led service has improved and developed the delivery of chemotherapy in the trust, by looking at alternative and innovative ways of addressing service delivery. It has also led to an expansion in capacity, carried out in a proactive patient-focused manner.