



A Report on the Dispensing and Supply of Oral Chemotherapy and Systemic Anticancer Medicines in Primary Care

January 2011



**Steve Williamson
Consultant Pharmacist in Cancer Services
Northumbria Healthcare/
North of England Cancer Network**

Contents	Page No
1 Executive Summary	3
2 Introduction	4
3. The Cancer Patient Journey	5
4. Prescribing and Review of Patient	5
5 Models of Service Delivery	8
1. Level One - Baseline Service	8
2. Level Two – Specialised Service	9
3. Level Three – Advanced Service	10
4. Summary of Levels of Service	10
6 Benefits of Community Services	10
7.1 Case Studies	11
7 Commissioning Services	12
8 Recommendations	14
9 Acknowledgements	15
10 References	16
Appendix One: Oral Systemic Anticancer Therapies (SACT) Available in the UK.	17
Appendix Two: Template for Assessment of Service Needs	18

Contact details	Steve Williamson Consultant Pharmacist in Cancer Services Northumbria Healthcare NHS Trust Pharmacy, North Tyneside Hospital Rake Lane, North Shields, Tyne and Wear, NE29 8NH steve.williamson@nhct.nhs.uk
------------------------	--

1 Executive Summary

Community service providers, including pharmacists, have the potential to be involved in the dispensing, administering and monitoring of patients receiving oral chemotherapy and Systemic Anticancer Therapies (SACT).

Oral anticancer medicines are associated with significant risks and have been traditionally supplied from secondary care. Guidance on developing safe service models for the dispensing and supply of oral anticancer medicines in primary care is needed to ensure patient safety. This report has been prepared as part of collaborative work between the NHS, pharmaceutical professional bodies and pharmacy practice interest groups (see section 10) to address the need for guidance.

The document aims to set the requirements for a community based service that any provider can offer. The document lists the requirements for service providers and provides a template for assessment of service needs.

Service Models

Three models describing level of service that could be offered have been prepared:

- Level One - Baseline Service: In this level the service provider would be undertaking supply of the oral anticancer medicine for the patient ensuring compliance with the recommendations of the NHS Safety Alert (NPSA 2008)
- Level Two - Specialised Service: In this level the service provider would check the oral anticancer medicine prescription, referring to a regimen protocol following the basics of national standards for chemotherapy verification (BOPA 2010)
- Level Three – Advanced Service: At this level the service provider would assess the patients clinically to ensure that it is safe to proceed with chemotherapy

Features common to all three models include the need for service providers:

- To be able to access oral anticancer medicines protocols in order to check that the drug doses have been prescribed appropriately
- To receive appropriate training or have previous experience in oncology. The level of training and competency that is required could be dependent on the level of service to be offered
- To develop links with secondary care cancer pharmacists from the hospital where treatment is initiated who can advise them as necessary

Recommendations

- It is essential for patient safety that any development of community oral anticancer medicine services is part of a planned and commissioned process
- Commissioners and secondary care Trusts should discuss potential opportunities for oral anticancer medicines to be dispensed in primary care. This should include a base line assessment of the potential demand
- Only service providers who have undertaken additional training and can comply with the service models should be accredited to provide the service

2 Introduction

- 2.1 The publication of the 2010 NHS white paper focused the NHS on extending choice for patients and cutting bureaucracy. Extending the choice of chemotherapy service providers from secondary care to include community service providers builds upon previous NHS initiatives.
- 2.2 The 2010 NHS white paper highlighted a shift from Primary Care Trust (PCT) commissioning to GP consortia led commissioning in 2012/13. There is an expectation that the NHS will seek to commission services involving supply of oral anticancer medicines in the community. This is part of an ongoing strategy to manage NHS capacity by moving services to primary care.
- 2.3 There are strong drivers for commissioners looking at moving services closer to the patient's home e.g. horizon scanning the potential number of patients requiring care in future years. Chemotherapy services in secondary care are facing capacity pressures as the number of patients receiving chemotherapy grows. Alternative models of delivery of chemotherapy need to be explored in order to manage patient numbers.
- 2.4 It is recognised that community pharmacists are healthcare professionals who could have an expanded role supporting cancer patients. The pharmacy profession recognises that there is potential for community pharmacists to be involved in the dispensing, administering and monitoring of patients receiving oral anticancer medicines in the community.
- 2.5 There have been concerns over the safe supply and dispensing of oral chemotherapy in the community following an NHS Safety Alert issued by the National Patient Safety Agency (NPSA) in January 2008. The alert entitled 'Risks Of Incorrect Dosing of Oral Anticancer Medicines' highlighted the potential for fatal outcomes if incorrect doses of oral anticancer medicines are prescribed, dispensed or administered. The NPSA data showed that 6 million doses of oral anticancer medicines were used in the community. **Note** As part of the restructuring of the NHS the functions of the NPSA are to be replaced by a Patient Safety sub-committee of the new NHS Commissioning Board, until otherwise informed this will not affect need to comply with the safety standards on oral anticancer medicines.
- 2.6 This document proposes three service models for oral anticancer medicine supply. It is intended to form the basis for future service specifications for primary care that can be used by service providers, e.g. community pharmacists delivering services and NHS commissioning organisations.
- 2.7 For the purposes of this document the term oral anticancer medicine is used to refer to all drugs with direct anti-tumour activity, orally administered to cancer patients, including traditional cytotoxic chemotherapy such as capecitabine, hydroxycarbamide, chlorambucil and small molecule/ antibody treatments such as imatinib, erlotinib, sunitinib and other agents such as thalidomide or lenalidomide. It does *not* include hormonal or anti-hormonal agents such as tamoxifen.

3 The Cancer Patient's Journey

In order to define potential service models for community provision of oral anticancer medicines to patients it is first necessary to understand the cancer patient's journey and examine how community pharmacy would interact and slot into this journey. Patients receive oral anticancer medicines for a variety of different clinical reasons and diseases. Some patients receive medicines for advanced metastatic disease and may require more careful monitoring than those patients who receive medicines for adjuvant treatment. Consideration of the risks of these medicines is essential.

Oral anticancer medicines have the same potential for risk as intravenous anticancer medicines both in terms of treatment related toxicities and potential for serious medication errors. Oral anticancer medicines are often given as pulsed treatments with short courses, multiple drugs and complex dosing regimens. Patients are at risk from bone marrow suppression and life threatening neutropenic sepsis from cytotoxic medicines. Newer targeted therapies are also associated with serious side effects such as severe uncontrolled diarrhoea, hypertensive episodes and extreme skin toxicities.

The patient's journey begins with a consultation with their doctor, consultant oncologist or haematologist who initiates, i.e. prescribes, the treatment.

4 Prescribing and Review of Patient

- 4.1 Current Department of Health guidelines (Cancer Measures) require the patient's consultant oncologist or haematologist to make the initial treatment decision and decide choice of treatment. In addition the consultant is currently required to prescribe the first cycle of any course of any anticancer medicine. It would therefore seem sensible for patients on oral anticancer medicines to have their first prescription in secondary care before moving into primary care.
- 4.2 The subsequent prescribing of the oral anticancer medicine is an issue for discussion. Who prescribes, where the prescription is generated and how it is taken to the community pharmacy are key questions to look at in the service models. Two scenarios for prescribing include:
 - Oral anticancer medicine is prescribed by the patient's secondary care consultant and the prescription is taken by the patient to be dispensed in community. Careful consideration of the choice of form used for prescribing is needed, secondary care Trusts can issue FP10HPs which can be dispensed in community pharmacy.
 - A shared care arrangement with the patient's General Practitioner (GP) allows the patient's care and prescribing to be transferred from the oncologist to the GP. It is unclear if shared care prescribing would work for short courses of oral anticancer medicines given for solid tumours, however shared care could be a viable option for treating haematological malignancies where there is potential for long term continuous therapy, e.g. Imatinib (Glivec®) for chronic myeloid leukaemia (CML). It must be noted that shared care arrangements can be challenging to implement and may not be an equitable solution.

- 4.3 Oral anticancer medicines should be printed on a standalone prescription, not included on a prescription with other medicines. If using FP10 or FP10HP forms it is possible to amend the forms to include contain the drug protocol information on the right hand side (RHS). If carefully set up it is possible to print the regimen and any other relevant prescribing details e.g. body surface area on the RHS. (See 5.4 below). The patient will have the option to take the FP10 prescription to the pharmacy of their choice as long as the pharmacy is participating in the scheme.
- 4.4 After the prescription has been written the next stage of the patient journey involves assessing the patient's fitness to receive treatment. This includes checking of full blood counts to ensure that they are the required levels, checking tolerance to treatment and documented assessment of side effects
- 4.5 Review of the patient's fitness to receive treatment may be done as part of the medical consultation when the doctor reviews the patient and writes the prescription. However this is a 'traditional' model which many secondary care services have moved away from and operate pre-prescribing of anticancer medicines with specialist nurse/ pharmacist led review. Patients do not need to see their doctor every cycle. This is common for adjuvant treatment and long term stable patients e.g. those on hydroxycarbamide or imatinib.
- 4.6 Before chemotherapy can be dispensed in the community the patient has to have been assessed and deemed fit to receive the oral anticancer medicines. Whether this is done in primary care or secondary care could affect the level of service that has to be offered and the expertise needed.
- 4.7 The oral anticancer medicine prescription needs to be professionally checked (verified) by the pharmacist before dispensing and supply. The British Oncology Pharmacy Association (BOPA) has produced standards for pharmacist verification of prescriptions for SACT and competencies for pharmacists to support achieving these standards.
- 4.8 There should be a minimum requirement for any professional supplying oral chemotherapy in the community. The NHS Pharmaceutical Services and Medicines Act regulations acknowledge that there are two models of provision of NHS pharmaceutical services in the community, by community pharmacists or by doctors who have been granted permission to supply drugs to particular patients. Other providers of this service could be from homecare companies or the private sector. These models would involve a pharmacist in dispensing but this could be done remotely to the patient, with other arrangements for ensuring patient care in place. Some secondary care Trusts have established contracts with homecare providers to provide community oral chemotherapy
- 4.9 This document aims to set the requirements for service delivery of a community based oral SACT service that any of the above providers can offer. For the purposes of this document the term 'pharmacist' will be used in the service models. It is acknowledged that dispensing doctors, Homecare companies and the private sector represent other options as providers of oral SACT services in the community.

4.10 A list of criteria that service providers must meet to supply oral anticancer medicines is given below:

- The pharmacist and pharmacy premises supplying the medicines must be registered with the professional regulator General Pharmaceutical Council (GPhC).
- Staff providing the service should have suitable training/ experience, see section 5.6, 5.10 and 5.12 to clinically assess the patient and have a commitment to Continuing Professional Development appropriate to the service
- The provider must have access to the chemotherapy/ SACT protocol e.g. via internet or local handbook
- The provider needs to have a link to a secondary care oncology pharmacist. This could be via a dedicated telephone number where the oncology pharmacist on duty can be contacted i.e. local Trust pharmacy or designated oncology pharmacist. The secondary care Trust pharmacy service will need to assure itself that the workload in providing this support is acceptable.
- All dispensing must comply with requirements from the GPhC Professional Standards and Guidance for the Sale and Supply of Medicines e.g.
 - Appropriate standard operating procedures (SOPS) must be in place for dispensing
 - Every prescription is clinically assessed (verified) by a pharmacist to determine its suitability for the patient
 - The patient must receive sufficient information to enable the safe and effective use of the medicines including advice on handling, safe storage, disposal and/or return of unwanted medicines
 - All dispensing must be clearly labelled clear and legible and include where relevant; the intended period of treatment; start and stop dates for the number of days expressed as 'for X days ONLY' to indicate that the medicine is not continuous (for short term or intermittent treatment)
 - Record of errors or near miss incidents must be maintained to minimise the risk of dispensing errors.

4.11 In order to ensure safety and quality, the standards of care described above should be applicable to both NHS patients and private patients.

4.12 The professional supplying the oral anticancer medicine should be different to the person who prescribed the treatment.

4.13 Appendix one provides a list of oral anticancer medicines available in the UK. It is anticipated that oral anticancer medicines used in patients with more stable disease would be most suitable for dispensing and supply in the community. This could include medicines such as imatinib for chronic myeloid leukaemia, hydroxycarbamide for haematological malignancies, capecitabine for adjuvant colorectal cancer, potentially some of the non cytotoxic targeted therapies used in solid tumours, e.g. erlotinib, sunitinib. The suitability of a drug to be supplied in community depends on an assessment of patient factors as well as drug factors. Appendix two provides some guidance on assessing service needs.

5 Models of Service Delivery

There is potential for a variation in the level of service that could be offered. Three models with different levels of service are described below. This is not an exhaustive list, it is possible that other services models may develop but these must be developed as part of a planned and commissioned process. It is recommended that pharmacies that decide to participate in the scheme put systems in place to ensure that the pharmacy staff have relevant training and competencies to minimise any disruption to the regular dispensing process in the pharmacy.

Level One - Baseline Service

- 5.1 In this level the community pharmacist would be undertaking supply of the oral anticancer medicine for the patient. For example, the patient would have been seen in secondary care or by a GP in a shared care arrangement. They would have had their blood checked to ensure levels are suitable to receive the medicine and the medicine has been prescribed on a suitable prescription form. This is taken to the community pharmacist who checks the prescribed medicine(s) doses, dispenses and supplies the medication for the patient.
- 5.2 Even at this basic level of service the community pharmacist would still need to be able to check the oral anticancer medicine protocol, the drug doses and the patient's treatment plan in order to ensure compliance with the 2008 NHS Safety Alert (NPSA) on oral anticancer medicines.
- 5.3 The NPSA Alert stated *'staff dispensing oral anti cancer medicines should be able to confirm that the prescribed dose is appropriate for the patient; the patient is aware of the required monitoring requirements by having access to information in the written protocol and a treatment plan from the hospital, the treatment is initiated and have advice from a pharmacist with experience at cancer treatment in that hospital.'*
- 5.4 In practice if the pharmacist has access to the chemotherapy protocol and the patient has been give a treatment plan that could be shared with pharmacists, this would enable the NPSA's dispensing requirements to be satisfied. If community service providers do not comply with this safety alert they risk compromising patient safety.
- 5.5 Many prescribing systems allow clinical messages to be printed on the Right Hand Side (RHS) of FP10/ F10HP forms. These normally include either a list of patient's medications or instructions for the patient but can be adapted to contain oral anticancer medicine regimen protocol information.
- 5.6 With a *level one* service there is some requirement for community pharmacists to have knowledge of the currently available SACT regimens, access to regimen information and some basic knowledge on interpretation and checking of these medicines. It is recognised that the BNF is often not a suitable source for checking chemotherapy regimens and access to protocols (ideally those produced by the local Cancer Network) is needed for the community pharmacist. The NHS Safety Alert makes it clear that the community pharmacist will need to

have a link to a secondary care specialist cancer pharmacist from the hospital where treatment is initiated for advice.

- 5.7 Pharmacists as experts in medicines would be expected to be able to provide this level of service as part of their normal professional dispensing responsibility and accountability. The Pharmaceutical Services Negotiating Committee (PSNC) has indicated there may be a need to negotiate for compensatory funding for compliance with NHS safety alerts under the 'regulatory burden' component of the pharmacy contract's annual funding uplift formula.
- 5.8 In order to establish the links between secondary care cancer pharmacists and the community pharmacist is envisaged that a formalised working arrangement will be needed. For example this could be a virtual clinical network between community pharmacy and secondary care, it could be developed as part of the secondary care Trust working with GP commissioners to deliver local services.

Level Two - Specialised Service

- 5.9 In this model the pharmacist would check the oral anticancer medicine prescription, referring to the protocol and undertake the basics of chemotherapy verification as defined by the BOPA Verification Standards 2010. That is they would:
- check the prescriber's details and have some knowledge if the prescriber was authorised to prescribe systemic anticancer therapies, e.g. ensuring that the GP is prescribing on behalf of the secondary care specialist
 - know that the regimen has been locally approved
 - check the regimen against the patient's treatment plan to ensure that it was what was intended
 - they would check that there are no drug interactions with the treatment and the patient's other medications
 - check that the oral anticancer medicine is to be administered at an appropriate time, i.e. that if it was part of ongoing treatment the pharmacist should be able to check that the appropriate time interval has taken place since the last treatment
 - be able to check the calculations both of body surface area and of drug doses based upon body surface area as appropriate
- 5.10 Ideally the pharmacist will keep a record of the oral anticancer medicine in the patient's medication record that could be referred back to as needed when checking subsequent cycles.
- 5.11 This is the basic level of clinical input that is undertaken in secondary care hospitals and therefore should be the same for community pharmacy. It is anticipated that some form of training would be necessary for the community pharmacist to deliver this. Community pharmacists will **not** need to be trained to the same level as specialised secondary care cancer pharmacists. Rather they should meet the same competencies as non-cancer specialised pharmacists in a hospital dispensary who verify and dispense oral anticancer medicines.

5.12 The British Oncology Pharmacy Association (BOPA) has produced Competencies for Clinical Pharmacy Verification of Prescriptions for Cancer Medicines. It is recommended that meeting these competencies forms the backbone of the knowledge and skills requirement for community pharmacy. BOPA is committed to producing an e-learning package in 2010/11 to support pharmacists to achieve these competencies

Level Three – Advanced Service

5.13 The next level would include the pharmacist undertaking all the above checks as part of the verification protocol of the prescription but also taking responsibility for assessing the patients clinically to ensure that it is safe to proceed with chemotherapy.

5.14 This could include checking the patient's blood tests against the protocol and could also include a clinical review with the patient which would be checking for toxicities of treatment, counselling the patient on how to take their medicine and also a consultation about discussing the potential side effects and therapies for managing side effects. This is a higher level of clinical service that is of the type that can be provided by a specialist oncology pharmacist or a chemotherapy nurse on a chemotherapy ward in secondary care.

Summary of Levels of Service

5.15 Whilst these models have different levels of involvement and may require different levels of expertise, there are some common features to them:

- The need for a link between the community pharmacist and secondary care specialist pharmacists to provide advice as necessary
- The need for access to oral anticancer medicine protocols in order for the community pharmacists to check the drug doses that have been prescribed appropriately
- The community pharmacist will need training or experience in oncology/haematology and ideally have met agreed competencies which include appropriate background knowledge, e.g. BOPA verification competencies
- The level of knowledge and background training that is required would be dependent on the level of service offered with level two and three requiring a more extensive training and knowledge compared to level one.

6 Benefits of Community Services

- 6.1 The benefits in managing growing demand by utilising untapped capacity in community services have been discussed in section 2 above.
- 6.2 Other anticipated benefits of providing an oral chemotherapy service closer to the patient's home/ work may be:
- Improving efficiency of care through better use of skill mix and preventing the need for more costly interventions
 - providing consistent care regardless of demographic, socio-economic or geographical status
 - providing patient-centred care that is respectful of, responsive to and guided by patient preferences, needs and values
 - improved access, enabling patients to be treated closer to home without having to attend hospital, and offering patients a choice of provider
- 6.3 The advantage of community pharmacists as providers is:
- face to face accessibility without appointment
 - potential to utilise existing relationship between patient and pharmacist
 - regular contact with and prior knowledge of customers and their carers
- 6.4 The advantage of Homecare companies as providers is:
- trained nursing staff to support patients
 - delivery to patients home
 - can be contracted directly from secondary care
- 6.5 Some chemotherapy services may already have arrangements in place to have oral anticancer medicines dispensed in community pharmacy e.g. where there is a lack of specialist pharmacists and pharmacy dispensing services. The case studies below illustrate successful examples of community dispensing

Case Study 1: Lewis Pharmacy, Exmouth, Devon

The community pharmacist was able to intervene when a local patient was too ill to wait for hospital script and presented to the community pharmacist. The community pharmacist confirmed the patients medication with the local Trust oncology pharmacy team and liaised with the patients GP to produce an FP10 (community prescription) which was then dispensed and the patient was counselled accordingly. The community pharmacist has established a relationship with the secondary care Trust and is able to provide a service. The community pharmacist has the option of recording information as a prescription intervention so the patient can present a printed document to his GP confirming the community pharmacist has spoken to secondary care and has checked the treatment.

Case Study 2: Glan Clwyd Cancer Centre, North Wales

The North Wales Cancer centre has developed a service for patients in rural communities. These patients receive their prescriptions via the GP which are then dispensed in their local community pharmacy. The hospital haematologists then adjust the doses by telephone conversations to the GP according to FBC results. This saves the patient's hours of travelling / parking time.

Case Study 3: John Low Chemist, Shotley Bridge, County Durham

Following closure of the dispensary at Shotley Bridge Hospital (part of Durham and Darlington NHS Trust) the hospital pharmacist established a relationship with a local community pharmacist who was willing to provide a dispensing service. It was arranged for prescriptions for anticancer medicines issued by hospital haematologists to be dispensed in the community pharmacy. The prescriptions are printed on regimen specific FP10HP forms that have the essential protocol information pre-printed on the right hand side. The community pharmacy was provided with copies of the regimen protocols and the hospital pharmacist spent time on one-to-one training for the community pharmacist. In the event of any queries the community pharmacist contacts the cancer pharmacist on duty at the main site of the hospital.

7 Commissioning Services

- 7.1 It is essential for patient safety that any development of community oral anticancer medicine services is part of a planned and commissioned process. This is ideally done with joint agreement of secondary care Cancer Centres/Cancer Units, commissioners and Cancer Networks. There should be clear definitions of roles and responsibilities of all parties involved.
- 7.2 The decision to utilise the expertise of community pharmacists or other providers, e.g. homecare, in providing the medicines to cancer patients would relieve some of the pressure on secondary care. This could facilitate more efficient investment in secondary care by avoiding the need to invest in out-patient chemotherapy infrastructure to manage the growing numbers of chemotherapy patients.
- 7.3 Consideration of how many patients might be likely to access a community oral anticancer medicine service needs to be given. Commissioners should discuss potential patient numbers with secondary care and Cancer Networks. Initial estimates suggest there are likely to be anywhere from 3 to 9 patients per week on oral anticancer medicines potentially suitable for management in the community from an average sized secondary care Trust (i.e. serving a population of 250,000).

- 7.4 Extra training and expertise will be needed when dispensing prescriptions for oral anticancer medicines in the community regardless of the level of service that is involved. Verifying and checking oral anticancer medicine prescriptions is a more complex process than is normally undertaken by community pharmacists. The current community pharmacy contract /terms and conditions for dispensing already cover the basic dispensing and supply of oral anticancer medicines.
- 7.5 A potential source of funding is the VAT applied to these drugs. Secondary care pharmacies currently pay VAT on oral anticancer medicines. With high cost medicines this VAT can be a considerable sum. Oral anticancer medicines dispensed by community pharmacists is not subject to the same VAT. It is therefore potentially cheaper for Commissioners to pay for the drug to be dispensed in community pharmacy and not incur the VAT charge rather than it being dispensed in secondary care where the Commissioner has to pay the VAT as part of the drug costs.
- 7.6 A parallel to draw would be to the MUR or Medicines Use Reviews. Community pharmacists receive payment from commissioners for undertaking MURs with patients. One way of remunerating community pharmacy for the extra work involved in providing an oral anticancer medicine service could be to attach an MUR payment to each time an oral anticancer medicine prescription is dispensed in community pharmacy. Care would have to be taken ensure this option does not disadvantage community pharmacies who have met their MUR payment cap.
- 7.7 Another way of looking at the service is to negotiate it as a locally enhanced service (LES) whereby the commissioners negotiate to reimburse community pharmacists for the extra work in oral chemotherapy dispensing. Potentially this could include the reimbursement of the drug costs as well as a part of a complete package. There are schemes which facilitate rapid payment for high cost drugs where the service provider doesn't have to wait the standard three months for payment. In order for this to be successful it is anticipated the commissioners would have to be able to justify the funding and ideally ensure this fitted the QIPP framework i.e. by investing in community oral anticancer medicine dispensing they could demonstrate savings were made elsewhere.
- 7.8 Currently patients having oral anticancer medicines in secondary care either incur an outpatient attendance or if the oral anticancer medicines is administered on the chemotherapy unit, a tariff as a day case chemotherapy patient. The Commissioners could analyse attendance numbers to see if savings could be made as there would be a reduction in tariff costs for patients not attending secondary care.
- 7.9 When setting up a service commissioners, secondary care Trusts and community providers should consider the impact on chemotherapy data collection and ensure that services are monitored and regularly audited.

8 Recommendations

- 8.1 It is recommended that commissioners and secondary care Trusts discuss potential opportunities for oral anticancer medicines to be dispensed in primary care. It is suggested that this could be undertaken as part of the review of chemotherapy services in community and that Cancer Networks act as facilitators. Appendix two gives a suggested model for assessment of service need.
- 8.2 A base line assessment should be undertaken by each commissioning body/ Cancer Network for the potential demand for oral anticancer medicines dispensing in community pharmacy. It is recognised that GPs will see relatively few cancer patients and therefore individual community pharmacies may see even fewer cancer patients.
- 8.3 Because of the training and expertise that community pharmacists would need to acquire to perform this service, it is recommended that not all community pharmacies would be suitable for the level two and three models described above.
- 8.4 Any community pharmacy dispensing oral chemotherapy must ensure they comply with the good practice recommendations issued by the NPSA. **Note** as part of the 2010 restructuring of the NHS the functions of the NPSA are to be replaced by a Patient Safety sub-committee of the new NHS Commissioning Board, until otherwise informed this will not affect need to comply with the safety standards on oral chemotherapy.
- 8.5 It is recommended that individual pharmacists and their premises should be accredited to provide the level 2 and 3 services. Patients would be given the choice of provider to dispense their chemotherapy medicines, e.g. they could be given a list of local pharmacies commissioned to provide a level 2 or 3 service.
- 8.6 The commissioners and local secondary care Trusts should work together to look at the potential catchment areas where patients would be likely to take their prescriptions for oral chemotherapy, how this fits in with the geography of their locality and also the population density. There may be a demand for patients to be able to take their prescription to a community pharmacy near their home or place of work.
- 8.7 Community pharmacists providing a service must familiarise themselves with and work towards compliance with the national standards for verifying (clinically checking) a prescriptions for chemotherapy and systemic anticancer therapies issued by BOPA (The British Oncology Pharmacy Association). Pharmacists who are interested in developing oral chemotherapy services should be able to get support and information from the key stakeholders e.g. BOPA, NPA, CCA, RPS and PSNC.

9 Acknowledgements

Many people and organisations have contributed to this document which has been developed as part of a collaborative work between the NHS and pharmaceutical professional bodies and pharmacy specialist practice/ interest groups.

Groups represented on the working party were:

British Oncology Pharmacy Association (BOPA)
Cancer Networks Pharmacist Forum (CNPF)
Company Chemists Association (CCA)
English Pharmacy Board (EPB)
Faculty of Cancer Pharmacy (FCP)
National Pharmacy Association (NPA)
Pharmaceutical Services Negotiating Committee (PSNC)
Royal Pharmaceutical Society (RPS)
Department of Health (DH)
Essex Local Pharmaceutical Committee

Thanks are due to the following individuals for their contributions:

Bruce Burnett, Consultant Pharmacist, North Wales Cancer Treatment Centre
Helen Clarke, Chief Pharmacist, Clatterbridge Centre for Oncology
Ian Costello, Chief Pharmacist, The Royal Marsden NHS Foundation Trust
Dr Libby Hardy, Lead Pharmacist, Peninsula Cancer Network
Jackie Lewis, Pharmacist Director, Lewis Pharmacy, Exmouth
Calum Polwart, Clinical Pharmacy Team Manager, Durham and Darlington NHSFT
June So, Chief Pharmacist, The Christie NHS Foundation Trust
Martin Stevens, National Clinical Director for Hospital Pharmacy

10 References

British Oncology Pharmacists Association (BOPA) (2004). Position statement on the care of patients receiving oral chemotherapy. *Pharmaceutical Journal*; 272:422-423

Chemotherapy in the Community: A guide for PCTS, DH, February 2010

Chemotherapy Services in England ensuring Quality and safety, DH, August 2009

'Equity and Excellence: liberating the NHS, DH, July 2010

Hardy I, Lewis J, Koundakjian J, Dispensing of oral chemotherapy in the community: a viability assessment in the UK. *Journal of the European Society of Oncology Pharmacy (EJOP)* • Volume 2 • 2008/Issue 1

National Patient Safety Agency (NPSA) Rapid Response Report. 'Risks Of Incorrect Dosing of Oral Anticancer Medicines.' 22nd January 2008. Available at <http://www.npsa.nhs.uk/patientsafety/alerts-and-directives/rapidrr/risks-of-incorrect-dosing-of-oral-anti-cancer-medicines/>

Pharmacy in England: building on strengths - delivering the future, White paper
Department of Health 3 April 2008

Society of Hospital Pharmacists of Australia SHPA. Standards of Practice for the Provision of Oral Chemotherapy for the Treatment of Cancer. *J Pharm Pract* (2007). Res 37(2):149-52

The Oral Anticancer Medicines Handbook: S Williamson, C Polwart 2008 ISBN 978-1-4092-4044-0

Weingart SN et al (2007). Oral chemotherapy safety practices at US cancer centres: questionnaire survey. *BMJ* 2007;334:407-411

Williamson S, Management of oral anticancer therapies. *The Pharmaceutical Journal* 2008; 281:399-402

Williamson S, New standards for chemotherapy verification *The British Journal of Clinical Pharmacy* 2010, Feb 02 p41-42

Appendix One: Oral Systemic Anticancer Therapies (SACT) Available in the UK.

(Note this is not an exhaustive list)

Drug	Commonly used for
Busulfan (Myleran®)	Leukaemia's
Capecitabine (Xeloda®)	Breast, Colorectal and upper GI cancers
Chlorambucil (Leukeran®)	Leukaemia's, Lymphomas
Cyclophosphamide (Endoxana®)	Leukaemia's, Lymphomas and many solid tumours
Dasatinib (Sprycel®)	Chronic Myeloid leukaemia
Erlotinib (Tarceva®)	Lung Cancer
Etoposide (Vepesid®)	Leukaemia's and solid tumours (lung, testies)
Fludarabine (Fludara®)	Leukaemia's
Gefitinib (Iressa®)	Lung cancer
Hydroxycarbamide (Hydrea®)	Leukaemia's,
Idarubicin (Zavedos®)	leukaemia's
Imatinib (Glivec®)	Chronic Myeloid leukaemia
Lapatinib (Tykerb®)	Breast Cancer
Lenalidomide (Revlimid®)	Myeloma
Lomustine (CCNU)	Lymphomas
Melphalan (Alkeran®)	Myeloma
Mercaptopurine (Puri-Nethol®)	Leukaemia's,
Methotrexate (Maxtrex®)	Leukaemia's and solid tumours
Mitotane (Lysodren®)	Adrenalcortical carcinoma
Nilotinib (Tasigna®)	Chronic Myeloid leukaemia
Procarbazine	Lymphomas
Sorafenib (Nexavar®)	Renal and Liver Cancers
Sunitinib (Sutent®)	Renal and GIST Cancers
Tegafur/uracil (Uftoral®)	Colorectal
Temozolamide (Temodal®)	Gliomas (brain tumours)
Thalidomide (Pharmion Brand)	Myeloma
Tioguanine (Lanvis®)	Leukaemia's,
Tretinoin (Vesanoid®)	Leukaemia's,
Topotecan (Hycamtin®)	Lung cancer
Vinorelbine (Navelbine®)	Lung and Breast cancers

Appendix Two: Template for Assessment of Service Needs

1. Patient Numbers per locality.
2. Agreement for chemotherapy regimen/ drugs to be dispensed. Factors to consider include;
 - Potential toxicity of the drug
 - Complexity of the regimen (more than one drug, pulsed schedule, variable dose)
 - Likely condition of the patient
3. Availability of Drugs (wholesaler or direct).
4. Origin of prescription (primary or secondary care).
5. Requirement for Shared Care documentation if prescribed in primary care.
6. Training and continuing education requirements for local pharmacists.
7. Availability of local agreed protocols.
8. Evaluation of consistency of community pharmacy workforce.
9. Remuneration and commissioning:
 - for additional pre-dispensing checks and responsibility
 - for potential wastage on expensive part packs
 - significant VAT savings for PCTs on expensive drugs, but considering very small savings on cheaper chemotherapeutic drugs
10. Handling and disposal of cytotoxic drugs (COSHH).
11. Establishment of links to specialist cancer pharmacy advice.
12. Provision for monitoring / audit of service.
13. Accreditation of community pharmacies
14. Promotion/ marketing of service to patients