Staff awareness of correct oral chemotherapy procedures in non-specialist wards needs improving

Specialists in the use of chemotherapies will be very familiar with local procedures for their appropriate use, but how aware of Trust policies are staff working in non-specialist areas? Amy Wong set out to answer this question and her findings are presented here.

Abstract

Objectives:

- To determine staff awareness of the Trust's oral chemotherapy policy in non-oncology and haematology areas at Hull Royal Infirmary (HRI) and Castle Hill Hospital (CHH).
- To carry out a baseline inspection of oral chemotherapy posters on specified wards, survey staff of knowledge and awareness of the current policy and poster, and review drug charts for appropriate prescribing of oral chemotherapy and adherence to pharmacy guidelines.

Setting: Non-specialist wards at Hull Royal Infirmary and Castle Hill Hospital.

Standards: Current practice was audited against the policy. This included:

- All prescriptions for new oral chemotherapy treatment should be written only by the consultant or specialist.
- If the patient is already taking chronic or continuous oral chemotherapy it must not be administered until the correct dose has been confirmed by a pharmacist or specialist consultant/registrar.
- If medical staff are in any doubt they should not proceed and must seek specialist advice.

Results: Thirty drug charts were screened. There were four cases of non-compliance involving methotrexate, cyclophosphamide and hydroxycarbamide. Of these 30 charts 77% had the dose confirmed; 60% had the dose confirmation dated and in 13% of cases the dose had been administered before it was confirmed by a pharmacist. The majority of nurses at HRI were aware of the policy compared to less than half at CHH. At HRI 72% of nurses were not aware of the existence of a resource poster or its location on the ward, compared to 49% at CHH. The majority of nurses at both sites were not aware of the content of the poster, but were able to suggest its purpose.

Conclusion: The audit has highlighted several issues that need addressing within the Trust and has confirmed the lack of awareness of oral chemotherapy procedures on non-specialist wards.

Introduction

The majority of NHS clinical care is of a very high standard. In comparison to the volume of work undertaken serious errors are uncommon. Along with the introduction of clinical governance the National Patient Safety Agency (NPSA) encouraged organisations to focus on risk management and patient safety, and to improve local and national reporting systems.[1] Specific groups of medicines have been identified in *Building a safer NHS for patients* as having a greater likelihood of being associated with medication errors and as requiring particular attention, such as cancer chemotherapy.[2] The number of oral chemotherapy agents has significantly increased over the last decade contributing to a shift from parenteral to oral therapy. These medicines are increasingly used in hospital and in the community, but the risks of medication errors increases when non-specialist practitioners prescribe, dispense or administer them. The NPSA *Rapid response report* highlighted the risks and incidents that arose from incorrect use of oral anti-cancer medicines from data that was collected between November 2003 and July 2007. The report included a list of action points, which NHS Trusts had to comply with by 22 July 2008.[3]

Trust policy

The Hull and East Yorkshire NHS Trust's policy states:

- All prescriptions for new oral chemotherapy treatment should only be written by a consultant or specialist registrar.
- If the patient is already taking chronic or continuous oral chemotherapy this must not be administered until the correct dose has been confirmed by a pharmacist or member of the specialist team.
- If medical staff are in any doubt they should not proceed and must seek specialist advice.

Method

Data were collected over three months from all patients (32 in total) admitted to non-specialist wards at both Hull Royal Infirmary (HRI) and Castle Hill Hospital (CHH) sites who were taking oral chemotherapy. Confidential questionnaires and drug chart

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screening were used as audit tools. Data were obtained by assessing two nurses at random per ward with closed questions on the current policy and resource poster.

Screening of drug charts involved recording the following details: admission date, site, ward, ward type, drug name, dose confirmed, dose confirmation dated and dose administered. Data were analysed using Microsoft Excel®. There was no direct patient involvement.

Results

Sixty-four nurses were interviewed in total, 62% at HRI were aware of the policy, compared to 40% at CHH. At HRI 72% of the nurses interviewed and at CHH 49% of the nurses interviewed were not aware of the existence of a resource poster and whether it was displayed on the ward. The majority of nurses at both sites (75% at HRI, 63% at CHH) were not aware of the content of the poster, but were able to suggest its purpose, such as to promote staff awareness, to explain the policy and as a source of referral.

Thirty drug charts were screened across the two sites. The audit findings are presented in Table 1. There were four cases of non-compliance with the Trust policy involving methotrexate and cyclophosphamide, and two involving hydroxycarbamide. The dose was administered before a dose confirmation had been carried out by a member of the specialist team or a pharmacist.

Overall, in 77% of drug charts the dose had been confirmed. Sixty percent of drug charts had the dose confirmation dated but 13% of drugs charts had the dose administered before a dose confirmation by a pharmacist. A comparison of charts assessed at the two sites found that 89% at HRI and 55% at CHH had the dose confirmed and 68% at HRI and 45% at CHH had the dose confirmation dated.

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Three cases of non-compliance occurred at CHH and one case occurred at HRI. The difference was marginal between surgical and medical wards.

Discussion

The audit demonstrated a low level of awareness of both the Trust policy and resource poster by staff based on non-specialist wards. Many nurses had either not read the policy or had forgotten it, although many suggested that it was not necessary for such specialist medication. The NPSA report states that particular attention is essential for high-risk drugs and the main concern is with non-specialist practitioners. New posters were often displayed without the knowledge of ward staff and many found it difficult to distinguish between new and old posters. Further comments, however, verified the posters as useful sources of information, although limited ward space was said to be a problem. Suggestions to improve the system of distribution or removal of old posters may be beneficial in this respect.

Investigation of the standard of current practice showed a high proportion of drug charts were confirmed by a pharmacist and most were dated, although this is not mandatory in the current policy.

The lack of awareness of the Trust policy extends to non-specialist prescribers and there were several incidents involving incorrect dosing. However, medical staff were not included in the audit because consent would have been required from Trust Medical Committee. This was a major limitation in this study because medical staff are involved in the prescribing and administering of oral chemotherapy and practitioner awareness of the oral chemotherapy policy could not be monitored. Time constraints meant it was impossible to track down every patient who was taking oral chemotherapy and for the investigator to be at both sites at the same time. Therefore, there may have been patients over the three-month data collection period that were not included in the study.

The pharmacy department were aware that the audit was in progress and this might have influenced the results, but these circumstances were unavoidable. With this in mind the data suggest there was better compliance with the policy at HRI than at CHH. Ward pharmacists or ward support technicians had to be relied upon to locate patients and it was difficult for staff to always remember to point these out. This may have reduced the number of cases identified.

Table 1. Summary of the audit findings across HRI and CHH sites

	Dose confirmed		Confirmation dated		Drug administered	
Oral Chemotherapy	Yes	No	Yes	No	Yes	No
Methotrexate (n = 12)	9	3	8	4	2	10
Mercaptopurine (n = 1)	1	0	0	1	1	0
Hydroxycarbamide (n = 8)	5	3	4	4	5	3
Cyclophosphamide (n = 8)	7	1	5	3	2	6
Melphalan (n = 1)	1	0	1	0	0	1
Total	**23**	**7**	**18**	**12**	**10**	**20**

Neither the oncology or haematology wards nor the Princess Royal Hospital were included in the audit because it would not have been feasible to cover adequately all three sites within the Trust. The audit therefore focussed on the non-oncology or haematology environment at two sites. Consequently, the results were not a true reflection of awareness across the entire Trust, but our findings show that in the non-specialist areas there is need for improvement.

The audit results have been disseminated to the Trust safe medication practice committee and the specialist chemotherapy nursing team with recommendations for implementation improvements and for re-audit. The principle recommendations for improvement are to amend the current policy to include the confirmation date. Mechanisms should also be put in place for identifying adherence to the policy and for enabling errors to be traced. We also intend amending existing posters to clarify the location of the policy on the intranet and to communicate to charge nurses when new posters are produced and placed on wards. ✣

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Declarations of interest

The author has no interests to declare.

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References

1. Department of Health Expert Group. *An organisation with a memory*, Department of Health, London, 2000.
2. Smith J. *Building a safer NHS for patients: Improving Medication Safety*, Department of Health, London, 2004.
3. National Patient Safety Agency, *Rapid response report: Risk of incorrect dosing of oral anti-cancer medicines*. National Patient Safety Agency, London, 2008.