posts limit experience gained. It is vital that we take steps (Box 1) to raise the profile of rheumatology and ensure that we continue to attract strong candidates in order to maintain a high standard of care for our patients.

PIPPA WATSON
Specialist registrar in rheumatology
Addenbrooke's Hospital, Cambridge

KARL GAFFNEY
Consultant rheumatologist
Norfolk and Norwich University Hospital

References

1 Leigh JP, Krautz RL, Schembri M, Samuels SS, Mobley S. Physician career satisfaction across specialities. *Arch Intern Med* 2002;162: 1577–84.
2 Asch DA, Jedrziewski MK, Christakis NA. Response rates to mail surveys published in medical journals. *J Clin Epidemiol* 1997;50:1129–36.
3 Beebe TJ, Locke GR 3rd, Barnes SA, Davern ME, Anderson KJ. Mixing web and mail methods in a survey of physicians. *Health Serv Res* 2007;42:1219–34.

A review of discharge planning for people with chronic obstructive pulmonary disease at high risk for readmission

The National Institute of Health Research Northwest London Collaboration for Leadership in Applied Health Research and Care (CLAHRC) is an alliance of academic and healthcare organisations working to develop and promote a more efficient and sustainable uptake of innovative and cost-effective interventions into care for patients.[1] Patients who require long-term care for conditions such as chronic obstructive pulmonary disease (COPD) may have differing service needs and are often involved with many healthcare organisations and health professionals.[2] A CLAHRC work stream has focused on the development and roll out of a COPD discharge care bundle in North West London in order to reduce hospital readmissions and improve the patient's quality of life.

To understand the potential benefits that care bundles could confer, we undertook a review of the interventions that reduce readmission to hospital with the aim of informing the CLAHRC COPD bundle initial development. A care bundle being a group of evidence-based interventions that address a particular health issue to prevent further episodes of illness.[3] There is emerging evidence that care bundles may reduce hospital mortality.[3,4]

A comprehensive search for interventions associated with a reduction in COPD readmissions and improved functioning was performed using the following databases, with no limits applied: Medline, Pubmed, PsycINFO, EMBASE, Cochrane Library, CINAHL, Database of Abstracts of Reviews of Effectiveness, and TRIP. Additional searching of conference proceedings and web browsing was undertaken to identify further publications. In total, 714 references were identified after duplicates were removed.

We identified themes of integrated and intermediate care, psychological support, nutritional care and pulmonary rehabilitation, as interventions that reduced readmission and improved functioning. Pulmonary rehabilitation especially had substantial evidence for reducing readmission and improving functioning.

When focusing upon readmission, potential deficits were identified in communication, medical errors, and recognition that some COPD readmissions may not be disease driven but may be due to a psychosocial component and/or social isolation.[5,6] In a Canadian study, adverse events associated with COPD exacerbations were significant in both hospitalised and discharge care programmes.[7] Care gaps were identified in patient education-related medicines, oxygen therapy and poor documentation of the patient progress over time.[7] Furthermore adverse drug events were highest for corticosteroids, anticoagulants, antibiotics, analgesics and cardiovascular medications.[8] The lack of monitoring of these medications by health professionals after hospital discharge was the most common cause of preventable adverse drug events.[8]

In conclusion, there is evidence that in the management of COPD a discharge care bundle for COPD patients could prove beneficial. There are gaps in knowledge requiring further research and considering all readmissions as a failure of care must be undertaken with caution. However, putting into practice that which is already known should have a positive effect upon outcomes.

SM SMITH[1,3]
D BELL[4]
NS HOPKINSON[4,6]
J VALENTINE[4]
EL SHAW[5]
MR PARTRIDGE[7]
SL ELKIN1,[2]

[1]*Imperial Clinical Respiratory Research Unit, Imperial College Healthcare NHS Trust, St Mary's Hospital, London*

[2] *Chest and Allergy, Imperial College Healthcare NHS Trust, St Mary's Hospital London*

[3] *School of Nursing and Midwifery, University of Western Sydney, Sydney, Australia*

[4] *NIHR CLAHRC for Northwest London Imperial College London and Chelsea and Westminster Hospital NHS Foundation Trust*

[5] *Imperial College London, Chelsea and Westminster Campus Library, London*

[6] *NIHR Respiratory Disease Biomedical Research Unit, Imperial College London and Royal Brompton and Harefield NHS Foundation Trust, London*

[7] *Imperial College London, NHLI Division at Charing Cross, London*

References

1 Comprehensive Leadership for Applied Health Research and Care. NIHR CLAHRC for Northwest London, 2009. www.clahrc-northwestlondon.nihr.ac.uk
2 Taylor SJ, Candy B, Bryar RM *et al.* Effectiveness of innovations in nurse led chronic disease management for patients with chronic obstructive pulmonary disease: systematic review of evidence. *BMJ* 2005;331:485.
3 Robb E, Jarman B, Suntharalingam G *et al.* Using care bundles to reduce in-hospital mortality: quantitative survey. *BMJ* 2010;340(c1234).
4 Weeraratne J, Lenstra A, Lee A *et al.* The NICS care bundle: aiming to improve the initial care of patients with stroke and transient ischaemic attack. *Med J Aus* 2010;193:381-.
5 Gruffydd-Jones K, Langley-Johnson C, Dyer C *et al.* What are the needs of patients following discharge from hospital after an acute exacerbation of chronic obstructive pulmonary disease (COPD)? *Primary Care Resp J* 2007;16:363–8.
6 Luthy C, Cedraschi C, Rutschmann OT *et al.* Managing postacute hospital care: a case for biopsychosocial *needs. J Psychosomatic Res* 2007;62:513–9.

7 Choi PP, Day A, Etchells E. Gaps in the care of patients admitted to hospital with an exacerbation of chronic obstructive pulmonary disease. *CMAJ* 2004:170:1409–13.
8 Forster AJ, Murff HJ, Peterson JF, Gandhi TK, Bates DW. Adverse drug events occurring following hospital discharge. *J Gen Intern Med* 2005;20:317–23.

Inappropriate continuation of medication when patients are admitted acutely: the example of capecitabine

Some cytotoxic drugs which are widely used to treat cancer are administered orally. Any hospital which has an emergency department (ED) must expect to admit patients who are taking oral chemotherapy drugs prescribed locally or elsewhere. The risks of repeat prescriptions of these medicines have long been recognised.[1] The warning on this subject, issued by the UK National Patient Safety Agency,[2] reported 445 incidents; 187 (42%) concerned capecitabine (Xeloda®), an oral chemotherapy agent used singly or in combination with other drugs to treat a variety of cancers particularly of the breast and gastrointestinal tract. This treatment was the second most common to be associated with death shortly after chemotherapy in the study by the National Confidential Enquiry into Patient Outcome and Death.[3] This is a consequence of myelosuppression or severe mucous membrane toxicity associated with this drug.[4]

Policy for admissions to this hospital is that oral chemotherapy drugs are not prescribed until the patient has been reviewed by an oncologist. However, we identified six patients on capecitabine where this was not followed. Five of these patients were taking it within combination chemotherapy, the other drugs being given intravenously. Four patients were admitted for reasons not directly related to chemotherapy toxicity. The other two patients were pyrexial but not neutropenic and had recognised sources of infection. All the patients had brought in their drugs from home and, in all cases, it would seem that they were routinely transcribed onto the inpatient prescription by the admitting junior doctor without the appropriateness being questioned.

Work with emergency admissions is an essential part of medical training. It is important that undergraduates and junior doctors are educated to understand that the prescription of any medicine, including the transcription of a list of the patient's medication on admission onto an inpatient prescription form, requires an understanding of the drug concerned and thought about its appropriateness in the immediate context. Adverse effects of drugs are a common cause of emergency admissions; this is not confined to cytotoxic agents.

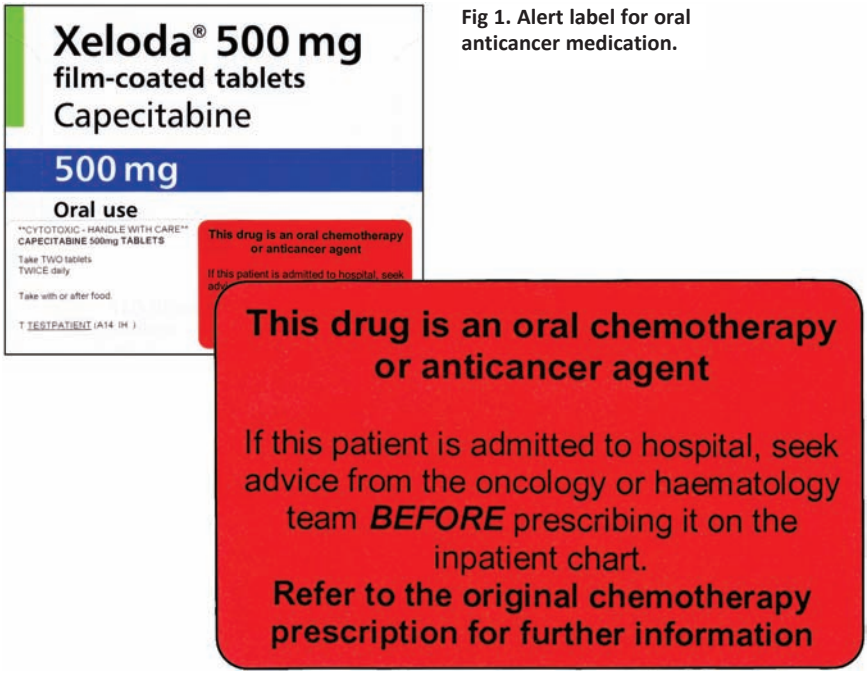

Fig 1. Alert label for oral anticancer medication.

Patients at this hospital attend a dedicated consent clinic between the decision to initiate treatment and its commencement. There they are counselled to tell any healthcare personnel that they consult that they are taking oral chemotherapy tablets. The contact card that all patients are given at that time has a specific instruction to discontinue capecitabine if diarrhoea is experienced.

Since November 2009 all oral chemotherapy dispensed at Airedale General Hospital has a red label on the box stating that it should not be prescribed until the specialist team has been consulted (Fig 1). Our experience shows that this procedure is not infallible, one reason being that patients sometimes do not bring the labelled box with them into hospital.

This hospital's onsite oncology service designates a consultant medical oncologist to identify and review admitted patients on the next working day. The National Chemotherapy Advisory Group recommends that all hospitals with EDs should have an acute oncology service which includes this function.[5] Our experience illustrates the importance of this.

JA BOOTH
Clinical assistant in medical oncology
C BOOTH
Lead pharmacist for cancer services
S MICHAEL CRAWFORD
Consultant medical oncologist
Airedale General Hospital

References

1 Crawford SM, Cox JA, Hunt KM. Repeat prescriptions for cytotoxic drugs. *BMJ* 1981;283:1054.
2 National Patient Safety Agency. *Oral anticancer medicines: risks of incorrect dosing.* Rapid response report. London: NPSA, 2008.
3 National Confidential Enquiry into Patient Outcome and Death. *For better, for worse?* London: NCEPOD, 2008.
4 Michael C Perry. T*he chemotherapy source book*, 4th edn. London: LWW, 2008.
5 NHS National Cancer Action Team. *Chemotherapy services in England: ensuring quality and safety – a report from the National Chemotherapy Advisory Group.* London: Department of Health, 2009.