

Recording and sharing allergic and adverse drug reactions with patients.

This work started in 2006 and continues at Highfield surgery.

Adverse drug reactions are a well recognised cause of much morbidity and mortality in patients. Such adverse reactions are increasing because more drugs are being prescribed to an ever increasing elderly population (1).

A new initiative was started in 2006 at our practice which involved sharing individual adverse and allergic drug recording with patients. It was hoped that a more communicative and shared system would increase the accuracy of information and also increase awareness of this problem. Sharing of a medication's purpose with patients had already been undertaken by the practice: this was called Clinical Indications (2) and was in everyday use, but sharing adverse drug recording was new. Safety of prescribing is an important issue and patients wish to be involved. This programme was started because it had become apparent that some patients were unaware of drugs that had caused them major adverse reactions (e.g. suxamethonium), or allergy (e.g. septrin). They may not remember these events if it was many years ago, or if they were children at the time. Another reason for the development of this listing was to remind both patient and clinician of drug side effects that may have occurred recently, e.g. amlodipine and swollen ankles. Thus clinicians could avoid prescribing the drug again when a condition such as blood pressure remains uncontrolled.

Objective

The main aim of this pilot study was to explore the feasibility and acceptability of sharing allergic and adverse medication information with patients. It was hoped that this would increase the recording of such problems on the computer system and enhance the reliability of the data and improve communication between prescriber and patient.

Description

The study took place at an average-sized health centre with 5,800 patients in a semi-rural location outside High Wycombe. The practice does have a significant number of elderly patients and this group has been shown to be at increased risk of adverse drug reactions (1).

The clinical computer system, Isoft Premiere, was not designed to deliver such shared medicines information, so by careful 'tweaking' of the drug prescribing module, it has been possible to make it a feature of the repeat screen, the paper patient record and also to print information onto the repeat prescription request slip held by the patient. Clinical indications labelling which records the purpose of a drug, as well as this adverse and allergic reaction listing use existing technology so cost is minimal. Patients do not have to have access to computer technology to benefit from this simple paper system. The addition of this listing to the repeat prescription module was made because prescribers often check this list before prescribing any new medication and it reduces the number of computer screens that have to be opened. In the appendices below this article are visual examples of the computer screen, drug listing and repeat prescription slip.

Discussing the patient's experience of a medicine side effect and listing their perception of side effects in a single word was often challenging but in another sense rather liberating. Somehow it provided one with a feeling of freedom from computer driven menus and known drug listed side effects! By writing what they had experienced you felt you had really communicated. The patient can check on their prescription slip to see if there has been any error in recording. This recording has been carried out extensively by the senior partner at the practice from 2006 onwards. Most allergic and adverse descriptions recorded were known

side effects but some were idiosyncratic. Most patients at our practice carry their own list of allergic and adverse drugs with their repeat prescription list so this is useful at hospital outpatient appointments and in emergency situations. The list can be useful when recording information on patient-held medic-alert bracelets. The listing is automatically recorded on all hospital referral letters.

Pharmacy computers at present do not have software to record this information other than in a notes section on each patient and as a result this is unlikely to be looked at by the pharmacy team when issuing medication. This list can be useful at Medicine Use Review meetings between pharmacist and patient as information is more certain and guessing the use of drugs and side effects is not required. A list of commonly used adverse and allergic drug phrases was made in October 2007 and can found on this website.

Audit of allergic and adverse drug listing on prescription

This listing of adverse and allergic drugs shared with patients is used every day at our practice. It complements the clinical indications system and offers enhanced communication with patients about their individual drug side effects. There can be no doubt that the recording of adverse drug reactions has increased rapidly. In an audit (21/1/08) of 100 repeat prescription requests there were 13 scripts with adverse drug comments containing 29 adverse drug descriptions. In addition there were 14 allergic drug comments with 24 allergic drug descriptions. This contrasts with none recorded on repeat prescription slips in January 2006.

No patient has asked to have the information removed from their repeat prescription slip and many have been impressed by the level of information that they have been given about medications by the practice. This often happens when patients from different practices compare their repeat prescription lists! The author believes that the recording of such prescribing information has helped to deliver personal medication information to patients that will enhance their safety and leads to a more informed dialogue between prescriber and patient. This unique innovation needs widespread application throughout all healthcare systems.

1. Patel et al. Trends in hospital admissions for adverse drug reactions in England: an analysis of national hospital episode statistics 1998-2005
www.biomedcentral.com/1472-6904/7/9
2. www.clinicalindications.com

Appendix 1: Isoft Premiere Prescription Software Screen

ISOFT Premiere - [12618 Mr Peter Rabbit]

File Links Claim Medical Log History Isis Print Reports Options Add-ins +Applications Window Help

Mr Peter Rabbit
 Highfield Surgery, Highfield Way, Hazlemere, High Wycombe, Bucks
 HP15 7UW.
 Born: 01/01/1945 Age: 63y 1m Tel: 01494 813496

NHSNo: CHINo:
 Registered 03/09/2003
 Reg. GP: Dr Nigel Masters Usual GP:

Summary Clinical notes Patient information Repeat prescriptions Immunisations Health promotion Tests

Extend selected
 Scripts: 6 Review date: 12 Months

Medication	First	Last	Auth	Review
ADVERSE DRUG REACTION, Codeine:nausea/Bendroflumethazide:low blood sodium 0	-	-	6	06/06/200€
ALLERGIC DRUG REACTION, Penicillin:rash 0	-	-	6	06/06/200€
Allopurinol tablets 300mg, take one daily to prevent gout, 56 tablet(s) (56 days)	16/01/200€	17	4	16/01/200€
Salbutamol cfc free inhaler 100micrograms/inhalation, inhale two doses as needed to relieve asthma symptoms (blue inhaler). 1	16/01/200€	17	3	06/06/200€
Salmeterol with fluticasone cfc free inhaler 25micrograms + 50micrograms/actuation, inhale two doses twice daily to prevent asthi	16/01/200€	17	4	16/01/200€

No	Issue date	Days Since Last Issue	Compliance	Scripts Issued	Repeat Dispense (Y/N)	Comments
			Not issued			

15:10 Premier Role : Secretary SSO Role :

BBC possessions rise to 27,000 • Williams under fire in Sharia row • Driver arrested for 'trafficking' • Minister says tax plans hurt City • UK

Start Premiere ApolloScan Docu... Appointments Inbox - Microsoft... 2 Microsoft Offi... Google - Microso... 15:10

Appendix 2: Patient Record

Patient Record

NHS NO:

D.O.B.: 01/01/1945

Mr Peter Rabbit

Sex: Male

Highfield Surgery, Highfield Way, Hazlemere, High Wycombe, Bucks HP15

Premiere Patient Number: 12618

Home Tel No: 01494 813496

Registered GP: Dr Nigel Masters

Mobile Tel No:

Usual GP:

Current Medication as at 08/02/2008

- 16/01/2008 Allopurinol tablets 300mg, take one daily to prevent gout, 56 tablet(s) supplied[56 days] (Rpt) 6 authorised Until 16/01/2009, 2 issued, last on 22/01/2008.
- 16/01/2008 Salmeterol with fluticasone cfc free inhaler 25micrograms + 50micrograms/actuation, inhale two doses twice daily to prevent asthma symptoms (purple inhaler), 1 x120 dose inhaler with counter supplied (Rpt) 6 authorised Until 16/01/2009, 2 issued, last on 22/01/2008.
- 06/06/2007 ADVERSE DRUG REACTION, Codeine:nausea/Bendroflumethazide:low blood sodium 0 supplied (Rpt) 6 authorised Until 06/06/2008, 0 issued, script not printed.
- 06/06/2007 ALLERGIC DRUG REACTION, Penicillin:rash 0 supplied (Rpt) 6 authorised Until 06/06/2008, 0 issued, script not printed.
- 18/04/2007 Salbutamol cfc free inhaler 100micrograms/inhalation, inhale two doses as needed to relieve asthma symptoms (blue inhaler), 1 x200 dose inhaler supplied (Rpt) 6 authorised Until 06/06/2008, 3 issued, last on 22/01/2008.

Appendix 3: Repeat Prescription Request Slip

Pharmacy Stamp		Age 63	Title, Forename, Surname & Address Rabbit Peter Highfield Surgery Highfield Way Hazlemere High Wycombe	Rabbit Peter We are closed between 1-2pm. For telephone enquiries please phone between 10.30 and 11.30am. We cannot take telephone requests for prescriptions.	Date: 16/01/08 Born: 01/01/45
Please don't stamp over age box Number of days' treatment N.S. Ensure dose is stated		D.o.B 01/01/45	NHS Number:	Please tick items required.	
Endorsements		Allopurinol tablets 300mg take one daily to prevent gout Supply: 56 tablet(s)		<input type="checkbox"/> ADVERSE DRUG REACTION Codeine:nausea/Bendroflumethazide:low blood sodium Supply: 0, Iss: 0, Auth: 6, Until: 06/06/2008	
		Salbutamol cfc free inhaler 100micrograms/inhalation inhale two doses as needed to relieve asthma symptoms (blue inhaler) Supply: 1 x200 dose inhaler		<input type="checkbox"/> ALLERGIC DRUG REACTION Penicillin:rash Supply: 0, Iss: 0, Auth: 6, Until: 06/06/2008	
		Salmeterol with fluticasone cfc free inhaler 25micrograms + 50micrograms/actuation inhale two doses twice daily to prevent asthma symptoms (purple inhaler) Supply: 1 x120 dose inhaler with counter		<input type="checkbox"/> Allopurinol tablets 300mg take one daily to prevent gout Supply: 56 tablet(s), Iss: 1, Auth: 6, Until: 16/01/2009	
		XXXX		<input type="checkbox"/> Salbutamol cfc free inhaler 100micrograms/inhalation inhale two doses as needed to relieve asthma symptoms (blue inhaler) Supply: 1 x200 dose inhaler, Iss: 2, Auth: 6, Until: 06/06/2008	
Signature of Prescriber		Date 16/01/08		You may obtain your prescription via our website www.highfield.gpsurgery.net and click on 'REPEAT PRESCRIPTIONS', or fax us on 01494 814107. Rowlands Pharmacy, Alliance Pharmacy, SAE enclosed Patient collection PLEASE ALLOW TWO WORKING DAYS. 17 12618	
For dispenser No. of Prescs. on form		Buckinghamshire Health Authority Dr N Masters 822352 Highfield Surgery Highfield Way Hazlemere Buckinghamshire HP15 7UW Tel. 01494 813396/813496		PATIENTS - please read the notes overleaf	
NHS		58165269719		FP10SS0406	

Appendix 4: Adverse Drug Reactions

Adverse drug reactions listed on repeat prescriptions recorded in October 2007 at Highfield Surgery by Vincent Wong, Royal Grammar School work experience student. The adverse drug description is shared information between drug prescriber and patient, and records the patient's experience rather than reflecting known knowledge. This information is available on all repeat prescription slips (patient held) and repeat prescribing screen (prescriber controlled). Easy to understand lay descriptions are first recording choice rather than pharmaceutical phrases.

Drug Name	Side effects	Known Side Effect?	notes
ACE drugs	renal disease	known side effect	
ACE2	cough	known side effect	
Adalat LA	ankle swelling	known side effect	
Alendronic acid	diarrhoea	known side effect	
Amlodipine	constipation	not known side effect	
Amlodipine	depression	known side effect	
Amlodipine	facial flushing	known side effect	
Amlodipine	fluid retention	known side effect	
Amlodipine	swollen ankles	known side effect	
Amlodipine	swollen feet	known side effect	
Amoxicillin	Indigestion	not known side effect	
Arcoxia	fluid retention	known side effect	
Aspirin	bleeding	known side effect	
Aspirin	bruising	known side effect	
Aspirin	Indigestion	known side effect	
Aspirin	vomits	known side effect	
Atenolol	cold extremities	known side effect	
Atenolol	fatigue	known side effect	
Atenolol	misery	known side effect	
Atenolol	slow pulse rate	known side effect	
Atenolol	tiredness	known side effect	
Atorvastin	nausea	known side effect	
Atorvastin	wind	known side effect	
Augmentin	indigestion	known side effect	
Bendroflumethiazide	gout	known side effect	
Bendroflumethiazide	Low blood sodium	known side effect	
Bendroflumethiazide	myalgia	known side effect	
Bendroflumethiazide	urinary symptoms	known side effect	
Beta blockers	heart attack	known side effect	
Celecoxib	whooziness	known side effect	
Cholestyramine	constipation	known side effect	
Ciprofloxacin	skin reaction	known side effect	
Clarithromycin	sore tongue and mouth	known side effect	
Clopidogrel	bruising	known side effect	
Codeine	itchy skin	known side effect	
Codeine	nausea	known side effect	
Codyramol	vomiting	known side effect	
Coproxamol	bowel upset	known side effect	
Coproxamol	nausea, dizziness	known side effect	
Diclofenac	diarrhoea	known side effect	

Diclofenac	indigestion	known side effect	
		not known side effect	
Diclofenac	red face		
Dihydrocodeine	nausea	known side effect	
Dihydrocodeine	vomiting	known side effect	
Diltiazem	flushing	known side effect	
Dipyridamole	headaches	known side effect	
DoxazosinMR	postural blood pressure drop	known side effect	
Doxycycline	Indigestion	known side effect	
Erythromycin	Indigestion	known side effect	
Ezetimibe	diarrhoea	known side effect	
Gliclazide	haziness	known side effect	
Gliclazide	headaches	known side effect	
Hydoxyzine	collapse	known side effect	
Ibuprofen	head pain swelling	known side effect	
Ibuprofen	Indigestion	known side effect	
Lisinopril	angioedema	known side effect	
Lisinopril	cough	known side effect	
Losartan			
Metformin			
Metronidazole	painful legs	known side effect	
Microgynon	Inter-menstrual bleeding	known side effect	
Moduretic	low blood sodium	known side effect	
Naproxen	ill feeling		vague
Nifedipine and diltiazem	swollen ankles	known side effect	
Nitrates			
Nitrofurantoin	nausea	known side effect	
Omeprazole	diarrhoea	known side effect	
Parecetamol	aggravates headaches		
Penicillin	rash	known side effect	
Penicillin	severe reaction		vague
Pentasa(mesalazine)	abdominal pain	known side effect	
Perindoprol			
Propranolol	raynauds	known side effect	
Propranolol	wheezing	known side effect	
Ramipril	balance	known side effect	
Ramipril	cough	known side effect	
Ramipril	Facial allergic swelling	known side effect	
		not known side effect	
Ramipril	glands in neck		
Ramipril	headaches	known side effect	
Risperidone	raised prolactin	known side effect	
Simvastatin	bowel disturbance		
Simvastatin	muscle pain	known side effect	
		not known side effect	
Statins	joint pain		
		not known side effect	hot flushes
Tamoxifen	hot feet		
Terbinafine cream	rash	known side effect	
Tetracycline	unwell		vague
Tramadol	dizziness	known side effect	
Tramadol	nausea	known side effect	
Valium	nightmares	known side effect	
Voltarol	rash	known side effect	

Appendix 5: Allergic Drug Reactions

Allergic drug listings from repeat prescriptions compiled by Vincent Wong, Royal Grammar School work experience student in October 2007 at Highfield Surgery. Allergic reactions are a reflection of patient experience and assessed by the prescribing clinician to be listed as allergic reactions. They are shared by prescriber and patient. The former on the repeat prescribing screen and the latter on the repeat prescription paper request slip.

Drug Name	Side Effect(s)	Known side effect(s)
Amoxicillin		
Aspirin	rash and sick	recognised side effect
Cephadrine	angioedema/facial swelling	recognised side effect
Codeine		
Comfeel plus		
Erythromycin		
Genticin		
Ibuprofen	red skin rash	
Iodine		
Lisinopril	angioedema	recognised side effect
Neomycin	severe reaction	
Penicillin	urticaria	recognised side effect
Penicillin	rash	recognised side effect
Penicillin (co-amoxiclav)		
Phenytoin		
Piriton		
Prochlorperazine		
Septin	blistering skin eruption	recognised side effect
Sulphasalazine	rash	recognised side effect
Terbinafine cream	rash	recognised side effect
Tetracycline		
Tramadol	nausea	recognised side effect
Trimethoprim	rash and vomiting	recognised side effect