In November 2010, my group practice moved to new premises. This was an opportunity for the practice to review a number of procedures. We instituted a major change in the method of providing repeat prescriptions. One perceived advantage of the change in procedure was that the GP would be able to document and communicate alert messages to patients arising from their requests for repeat medication. This report describes the scope and impact of such messages over the first year of operation of our new system for one GP.

Description of the practice
- Non-GP training, undergraduate teaching practice.
- 17,000 active patients (seen in past three years)
- 6,400 GMS eligible patients
- Seven WTE GPs and three WTE practice nurses
- Clinical records: Paperless, Health.one v7
- Location: Navan town centre.

Formerly, we had allowed patients to obtain their repeat medication by directly requesting medicines at the reception desk, where the receptionist transcribed the medication based on the computer record or from a patient-held list. The GP who was next available at the desk reviewed and signed any prescriptions for these patients who formed a queue.

There were many disadvantages with this system. These included the fact that no record was kept of the prescribed medication unless the GP instructed the reception staff to photocopy and scan a particular script. On the other hand, a GP did see each patient as they obtained their prescription and had the opportunity to address any issues arising, although this was limited by lack of time, privacy or access to the clinical notes. The system was acknowledged as being stressful for GPs and not allowing thorough medication recording or review.

On moving to new premises, we adopted a more orthodox approach to repeat prescribing, whereby 48 hours’ advance notice and a written, faxed or emailed request was required. Patient access to their own prescription record using a code protected, stand-alone prescription server (Savience, UK) is also installed, but not yet launched, which will add to the methods patients have at their disposal for requesting or viewing their repeat medication prescriptions.

This change has allowed the prescribing GP to maintain a current record of the drugs issued, the repeat drug list and to annotate prescriptions where there is any issue about the prescription. While this system has addressed many of the limitations of our previous procedure, it has, as expected, not saved any time, with each GP spending between 30 minutes and an hour each day preparing prescriptions.

Methods
- Record review of patients for whom the author had issued any repeat prescription other than in face-to-face consultation, between 8/11/10 and 8/11/11.

Results
- Working eight sessions per week, over a one-year period with six weeks leave, the author had 5,927 face-to-face consultations.
Annotations made to 2,473 repeat prescriptions in 12 months

<table>
<thead>
<tr>
<th>Alert message to patient</th>
<th>Example</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB: A review is required before the next prescription</td>
<td>Contraceptive check overdue</td>
<td>217 (47%)</td>
</tr>
<tr>
<td>NB: Possible overuse of tranquiliser medication. Please have a review with your usual GP1</td>
<td>Request includes repeating supply benzodiazepine, not explicitly sanctioned in notes</td>
<td>72 (16%)</td>
</tr>
<tr>
<td>NB: Possible need for gastro protection if continuous use of these pain killers. Please talk to the GP2</td>
<td>Request includes chronic NSAID</td>
<td>39 (8.5%)</td>
</tr>
<tr>
<td>NB: The dose of antacid tablet is now reduced. This is recommended for long term treatment. Please let us know if this does not control your symptoms2</td>
<td>Request includes chronic high dose PPI without evidence of ulcer or reflux disease</td>
<td>38 (8.5%)</td>
</tr>
<tr>
<td>NB: Possible overuse of reliever inhaler. Please see GP soon to discuss additional treatment.3</td>
<td>Request includes repeat B agonist inhaler &gt;=1 inhaler per month, without preventer</td>
<td>25 (5.5%)</td>
</tr>
<tr>
<td>NB: The prescription requested includes a large supply of glucose test strips. It is only necessary for non-insulin using diabetes patients to test three to four times per day for three to four days before clinic visits and otherwise only when ill, or when medication changes4</td>
<td>Request from patient not on insulin includes repeating supply test strips</td>
<td>11 (2.5%)</td>
</tr>
<tr>
<td>Other notifications</td>
<td>See text</td>
<td>56 (12%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>458</td>
</tr>
</tbody>
</table>

Table 1

Consultations, excluding house calls and wrote 2,473 repeat prescriptions (of which, 1,867 [75%] were for GMS eligible patients). There were 7,450 individual drugs prescribed—a mean of three drugs per script.

Of these prescriptions, 458 (20%) were annotated by printing a note from a menu of standard alerts and attaching this to the prescription. The alert notes were based on the author’s personal opinion of best practice, supported by discussion with partners and available literature.

The largest category were notifications requesting that the patient seek review before their next prescription. This notification was applied to prescription requests where, for example, there was no evidence of recent contraceptive prescription, blood pressure, diabetes or asthma review. There were also 11 patients whose annotation advised a blood test, such as lipid, renal function or thyroid function test. There were six patients who received a second notification about the same issue.

There were 56 miscellaneous annotations, where the message to the patient was not covered by any of the ready-made notifications. These included advice to consult because:

- Dose was unclear (19)
- Drug was not on the repeat prescription list (5)
- Request for two oral NSAIDs (4)
- Repeat requested before due date (4)
- Illegible request (3)
- Drug indication not clear in records (3)
- Request for two PPI drugs (1)
- Obvious drug interaction (Lithium + NSAID) (1).

In an effort to establish whether or not any action was taken by the GP or the patient on foot of the notifications, annotations made in the first six months of prescribing were reviewed. In this way, remedial action would have been expected to have occurred within the maximum duration of any prescription issued.

There were 106 annotations made to 1,511 repeat prescriptions in the first six months (7%). These are summarised in Table 2. Eight patients received two different messages. In two cases, no action was required in retrospect (one notification of topical cream being discontinued, one patient became pregnant while a pill check was due.)

Sixty-four per cent of annotations in the first six months were for GMS patients. There was no significant difference between GMS and private patients in the proportion of patients for whom alerts led to action. (chi2 test p=0.12)

Discussion

The change to an advance ordering system for issuing repeat prescriptions at my practice has permitted a review of the sort of alerts or messages to patients that were not available, or at least not documented, at our practice in the past.

The volume of notifications at 20%, of which half consisted of advice to attend for a clinical review (see Table 1) indicates an important hazard of a repeat prescription service that is not subject to active review. Clearly, these patients were not being advised to attend or were not acting on that advice under our previous prescribing regime.

The other large group of prescriptions that gave rise to concern were those for benzodiazepine drugs, which represented a fifth of all alerts.

By looking at the subsequent consultation and prescriptions for patients who received messages in the first half of the study period, it was possible to establish whether any action was taken to address the issue raised.

Overall, it is gratifying that 54% of alerts resulted in an action, whether that was a clinical review or change of therapy (see Table 2). Some of these were of immedi-
ate clinical importance, such as the prescription of bone density protective drugs for a patient on a long-term anti-convulsant, the addition of steroid therapy to an asthmatic with excessive use of beta agonist, the cessation of dual NSAID therapy or finding and addressing of an important drug interaction.

Elsewhere, the finding that 11 of 16 patients advised of the need for a contraception review (10 combined oral contraceptive, one depot progesterone) is a further illustration of the partial effectiveness of the system of patient messages in addressing a deficit in clinical practice.

In counterpoint, almost half of the notifications appear to have been ignored. For 46% of patients the message handed to the patient and recorded in the chart did not elicit any action on the part of the patient or doctor at the next face-to-face consultation or when a repeat prescription was next issued.

Additional measures to improve the quality of repeat prescribing are available, including pop-up alerts in the patient file and editing the number of prescription repeats allowed for these patients. It is planned to institute these measures at the practice.

**Conclusion**

In a practice without formal repeat prescribing protocols, one fifth of repeat prescriptions produced a clinical concern on review. Half of patients alerted to these concerns acted on the notification.

Niall Maguire is in practice in Navan, Co Meath

**References**

2. Guidance on Proton Pump Inhibitors (PPI) for Dyspepsia, NICE, 2000

**Table 3**

<table>
<thead>
<tr>
<th>Message</th>
<th>Frequency</th>
<th>Action taken</th>
<th>No action taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB: A review is required before the next prescription</td>
<td>56 (see Table 3)</td>
<td>36</td>
<td>20</td>
</tr>
<tr>
<td>NB: Possible overuse of tranquiliser medication. Please have a review with your usual GP</td>
<td>30</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>NB: Possible need for gastro protection if continuous use of these painkillers. Please talk to the GP</td>
<td>10</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>NB: The dose of antacid tablet is now reduced. This is recommended for long term treatment. Please let us know if this does not control your symptoms</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB: Possible overuse of reliever inhaler. Please see GP soon to discuss additional treatment</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>NB: The prescription requested includes a large supply of glucose test strips. It is only necessary for non-insulin using diabetes patients to test three to four times per day for three to four days before clinic visits and otherwise only when ill or medication changes</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subtotal: 100

Other notifications: 6

*Other notifications were: Dose unclear (2); Refusal to prescribe because this was the second notification of need for review (2); Refusal of request for depot steroid (1); Refusal of request for Orlistat without review (1)