Colleagues at Birmingham City Hospital have developed a computerised referral system to allow quicker access to specialist psychiatry services which employ the expertise of clinical pharmacists.

Increase referrals intelligently and boost access to specialist advice

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Patients with dementia and other mental health conditions are at risk of premature death, longer hospital stays and experiencing frequent adverse events if they are prescribed more than one antipsychotic medicine for their condition. It is crucial that such patients receive regular specialist review to optimise their therapy and prevent them from harm.

At Birmingham City Hospital (BCH), the rapid assessment, interface and discharge (RAID) team provides a mental health service to patients who are admitted to the hospital and are in need of review (see Box 1). Traditionally, the chances of a patient being assessed by the RAID team relied strongly on referrals from medical and nursing teams; however, since the introduction of pharmacist referrals — prompted electronically when antipsychotic medicines are dispensed from the pharmacy — more patients are now accessing this service.

Missed opportunities

Research into the benefits of the RAID team, conducted in 2011 (Box 1), showed vast improvements in patient outcomes had been made since its introduction two years earlier.

Nevertheless, when antipsychotic prescribing was analysed alongside this, it was found that only a third of patients prescribed antipsychotic medicines had been reviewed by the RAID team. Furthermore, despite the team responding to most referrals within 24 hours, it took an average of 14.6 days for a patient to be referred — this delay is thought to have been due to some elderly patients being referred to the team late in their hospital stay.

The report concluded that many patients who could benefit from early referral were potentially being overlooked.

Box 1: About RAID

The rapid assessment, interface and discharge (RAID) team is a liaison psychiatry team, established at Birmingham City Hospital (BCH) in 2009 and which provides a 24-hour, comprehensive mental health service to inpatients.

An independent review, conducted in 2011, reported that the introduction of the team at BCH resulted in savings of around £3.5m a year by improving the diagnosis and treatment of psychiatry patients and reducing length of hospital stay, particularly for the elderly.

These positive findings supported the expansion of the RAID service to the rest of the Birmingham and Solihull region in April 2012, and variations on this liaison psychiatry model are currently being developed across the UK.
Intelligent referrals

The pharmacy computer system holds an extensive amount of data on medicines use within the hospital and has the potential to be used to identify and target patients according to their prescribed medicines. It is frequently used for retrospective analysis of prescribing trends and expenditure but had never been used prospectively to identify patients and guide their therapy.

A novel computer-assisted pharmacist referral system — dubbed the “intelligent referral system” — was introduced at BCH in June 2012 to investigate two main questions. These were:

- Can a pharmacist use real-time dispensing information to identify and review patients according to their medicines?
- Are clinical pharmacists able to provide effective referrals to specialist medical teams?

The intelligent referral system used real-time dispensing information to identify patients in the hospital who were receiving psychiatric medicines.

When a prescription for an antipsychotic was issued, an alert detailing a patient's name, unique identifier and location was generated. The alerts were received by the psychiatric liaison pharmacist, who reviewed the patients and assessed the need for a referral to the RAID team. The psychiatric liaison pharmacist could request access to patients' mental health records to help inform the review.

Ward-based pharmacy teams were also asked to alert the psychiatric liaison pharmacist of patients who were self-administering antipsychotics because these patients would not have been identified by the pharmacy dispensing system.

The psychiatric liaison pharmacist referred patients using the standard RAID documentation and attended the weekly RAID multidisciplinary meetings to provide specialist pharmacy input into case discussions.

Preliminary analysis

The intelligent referral system aimed to increase the number of reviews of patients taking antipsychotics by the specialist mental health team and reduce the time between hospital admission and review by the RAID team.

An initial feasibility study was conducted between June and August 2012 (see Box 2 for early results). This preliminary work demonstrated that referrals could be generated by a computer system and then consolidated by a pharmacist.

Patients were referred to the RAID team by the pharmacist for a variety of reasons (see Box 3, p178). Feedback from the team was positive: all the pharmacist's referrals were accepted and some patients were even signposted back to the pharmacist for ongoing pharmaceutical care.

Although the RAID team can receive referrals anytime, the psychiatric liaison pharmacist can only make referrals during standard working hours, which may have delayed some referrals; this is one main limitation of the new service. Nevertheless, the average time from admission to referral by the psychiatric liaison pharmacist was four days — demonstrating that the new service provides timely access to the RAID team.

Almost half of the patients reported to be taking antipsychotic medicines during the study period were not referred to the RAID team, despite most of them being reviewed by the psychiatric liaison pharmacist. This was mainly because an assessment was never deemed necessary by the pharmacist. Reasons why patients were not referred included:

- Antipsychotic treatment (dose, choice and indication) was appropriate and there was evidence of recent specialist mental health input
- Patient was at the end of life
- Antipsychotic medicine had been prescribed for an alternative indication, eg, chlorpromazine for hiccups

Next steps

The key finding of the preliminary study was that the intelligent referral system works efficiently and effectively and improves patient access to the specialist mental health team.

A revised system, featuring new referral criteria, has now been developed. It can be used by other pharmacists at BCH and in other hospitals as the RAID service expands. The system was implemented in September 2012.

Box 2: Feasibility study — preliminary results

Between June and August 2012 the psychiatric liaison pharmacist received an alert every time an antipsychotic medicine was issued from the pharmacy. Most alerts were generated by the pharmacy dispensing computer system and the rest came from ward pharmacy teams.

Preliminary results from this feasibility study found that:

- The psychiatric liaison pharmacist received 140 alerts; of these 57 alerts were excluded — leaving a total of 83 alerts for 58 patients
- 51 patients were reviewed by the psychiatric liaison pharmacist to determine if referral to the RAID team was necessary
- Following review, the psychiatric liaison pharmacist referred 16 patients to the RAID team
- During the study period, 30 of the 58 patients who were taking antipsychotics were seen by the RAID team
- It took a median of four days for the psychiatric liaison pharmacist to review patients after admission to hospital

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Are drug interactions with dental local anaesthetics clinically significant?

Reports of serious drug interactions associated with currently recommended doses of local anaesthetics and vasoconstrictors in used in dentistry are exceedingly rare. Practitioners can minimise the risk of interactions by using an aspirating syringe, which reduces the likelihood of the local anaesthetic being administered directly into a blood vessel. Adhering to the dosage recommendations in the product literature will also minimise the risk.

This answer does not cover the use of local anaesthetics for patients with medical conditions that may contraindicate or require caution in their use. A table setting out the clinical relevance of interactions at the doses used in dentistry is provided with the full UKMi document.