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Does a patient medicines information helpline improve patient safety and outcomes?

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INTRODUCTION

Hospital discharge leads to a high incidence of medicines discrepancies and potential risk of errors1-5. Changes to patients’ medication; omissions/errors on discharge letters; and errors in medication reconciliation during the hospital stay can leave patients with unresolved questions when they leave the hospital that potentially can lead to harm. Patients may not have equitable access to adequate medicines information in a format that they can understand before discharge from hospital.

UK Medicines Information services provide patient medicines information helplines that are highly valued by patients7,8. There are no clear data on outcomes and the possible direct/indirect benefits from the advice and/or interventions provided.

AIMS & OBJECTIVES

This study aimed to evaluate a pilot patient medicines information telephone line (PPMITL) through patient satisfaction, patients’ perceptions of the impact of the information provided and assessment of outcome and risk reduction attributable to the information provided through the PPMITL for patients recently discharged from hospital.

METHODS

Over a six week pilot period, patient information leaflets (PIL) were given to patients in high turnover specialties in a large teaching hospital inviting them to call the area Medicines Information (MI) service after discharge if they had questions about their medicines. Enquiries were logged on the secure MI Databank and consent for participation in the evaluation obtained. A previously used questionnaire2 was the basis of a telephone survey conducted by an independent investigator to measure user satisfaction of the service and to assess their perception of the effect of the information provided on their health. An expert panel of three independent experts in medicine, pharmacology and patient safety methodology formed a nominal group and used a six-point rating scale8 to establish consensus on the potential impact of the information given on patient safety and patient care/outcome.

RESULTS

19 calls were received (= 3 calls per week). One was excluded as not a MI enquiry. 10 callers were patients, 8 were carers. Patient mean (SD) age 70 (14.8) years. Total time to undertake the enquiries = 20 hours of a senior MI pharmacist.

Most enquiries resulted from inappropriate documentation or inappropriate communication with the patients. There were also questions regarding indication of the medicines, contraindication and checking drug interactions. Five enquiries were related to adverse drug reactions. Five medication errors and one possible inappropriate “low dose” were identified, as illustrated in Table 1.

17/18 enquirers were surveyed. All were satisfied with the service. PPMITL advice was followed by 15 (88%) of the patients. Treatment of 9 patients (53%) changed as a result of MI Service advice (Figure 1). All 17 were reassured by the MI service advice. Forty-two (82%) of the interviewees reported that the PPMITL helped them to understand their medicines better, and 8 (47%) were supplied with additional advice/information that they did not request.

Eight (47%) reported an improvement in their or their family members’ condition as a result of following the MI Helpline advice. Ten (59%) enquirers felt that the advice given prevented a harmful situation with their medicines. Sixteen (94%) reported that the service does not need any improvement.

Positive impact of the PPMITL on patient care or outcome was agreed by the panel in 16/18 (89%) cases. Figure 2 illustrates “some positive impact” was allocated in 7 cases; “positive impact” was allocated in 8 cases, and in 1 case “very positive impact” was allocated. One case was assigned “adverse impact” since thought providing the patient with a list of medicines that was administered during anaesthesia could possibly cause a problem in the future (i.e. patient received the list of medicines as confirmed allergies instead of the full letter from MI that narrowed down the potential causative agents to a smaller possible list).

In terms of patient safety/risk reduction, the panel rated a positive impact in 14 (78%) cases. Of these, low risks were avoided in 8 cases; moderate risks were avoided in 5 cases; and a major risk was avoided in one case. The panel commented on the complexity of issues and the requirement for experienced pharmacists to answer the enquiries.

CONCLUSIONS

This small PPMITL confirmed that some patients have medicines information needs after leaving hospital. The results suggest that the service improved patient care and safety with an improvement in patient outcomes in the majority of patients. The service was valued and satisfactory to the users; and the service had a reassuring effect on patients or their carers. The expert panel consensus opinion recognised that harm was avoided in the majority of patients due to the information provided; and senior pharmacists should staff these patient medicines information lines. A larger study with availability of objective documentation of patient outcomes is needed to confirm the impact and benefit of such a service.

REFERENCES

1. Forster AJ, Clark HD, Menard A, Dupuis N, Chernish R, Chandok N et al. Adverse events among medical patients after discharge
3. Bramley D, Mohandas C, Soor S, Erskine D, Oborne C A. Does a medicines information service have a positive impact on patient
7. UK Medicines Information services provide patient medicines information helplines that are highly valued by patients7,8. There are no clear data on outcomes and the possible direct/indirect benefits from the advice and/or interventions provided.
8. See Figure 2 for the summary of independent expert panel rating of the impact of MI advice patient care/outcome and risk reduction (patient safety).

Table 1 - Medicines errors identified by the MI service

<table>
<thead>
<tr>
<th>Medicines error</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate or no supply of the medicine</td>
<td>2</td>
</tr>
<tr>
<td>Wrong dose prescribed</td>
<td>2</td>
</tr>
<tr>
<td>Double dose taken by the patient</td>
<td>1</td>
</tr>
<tr>
<td>Possible “low dose” prescribed</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 1 - Treatment change after receiving the advice from MI Service

Figure 2 - Summary of independent expert panel rating of the impact of MI advice patient care/outcome and risk reduction (patient safety)
1) Introduction

Non-adherence to medication is a significant problem for patients with a chronic condition, with 30–50% of patients not taking their medication as prescribed. Medicines adherence is the cornerstone of care in mental health and non-adherence to medicines may limit their benefits which can result in lack of improvement, or deterioration in health. Prevalence studies show a similar rate of non-adherence to treatment across medical and psychiatric conditions.

According to NICE, increasing patient involvement in decisions about medicines is an important step towards improving adherence – adherence was found to be around 80% when patients were allowed to discuss and negotiate treatment with their doctors. In order to achieve this, patients should be offered information that is relevant to their condition and possible treatments, is easy to understand, free from jargon and takes into account personal circumstances. Furthermore, patients should be informed of where they might find reliable information and support after the consultation.

CNWL is one of the largest non-acute Trusts in the UK, caring for people with a wide range of physical and mental health needs. The CNWL Medicines Helpline is an information and support service for patients and/or carers within the Trust and is currently promoted within the mental health services. Medicines information pharmacists are available to answer enquires on all aspects of medicines following outpatient attendance or discharge from hospital. The service is open Monday to Friday from 9am until 5.25pm (with an out-of-hours voicemail service available) and is also contactable via email.

An analysis of helpline enquires was carried out between November 2011 and October 2012 to establish trends in types of enquiries received by the medicines helpline including which medicines are most commonly asked about. During this one year period, the helpline received 209 calls from patients and/or carers with medicines-related enquires. The majority of enquires were made by out-patients.

2) Aims and Objectives

Aim

To highlight the importance of the medicines helpline in providing information and support to patients and to establish trends in the types of enquires received by the medicines helpline, including which medicines are most commonly asked about.

Objectives

• To extract data on all patient helpline queries from November 2011 to October 2012 from the medicines information database
• To categorise each enquiry according to its content and identify the most popular categories
• To identify the different types of questions asked within each category
• To identify the classes of medication that patients enquire about most commonly

3) Methodology

Data from medicines helpline enquires (extracted from the medicines information database – MI Databank) was analysed both quantitatively and qualitatively. All medicines helpline enquires from November 2011 to October 2012 were reviewed and categorised according to their content. Each enquiry was also categorised according to the class of medication to which it referred. Simple statistics were used to analyse the data. Interesting examples of enquires from each category were also extracted.

4) Results

Almost half of all enquires received (46%) were with regard to the adverse effects of medicines. These enquires included both commonly reported adverse effects which are included on the PILs e.g. nausea with sertraline, and more obscure adverse effects that were not thought to be medicine-related.

‘Interactions’ was the third most common MI category (19%) and included queries about interactions between psychotropics and physical health medicines, nutritional supplements, food and other psychotropics.

Choice of Therapy/Indications/Contraindications comprised 16% of enquires with patients wanting to know about alternatives to current treatment due to lack of effect and reassurance that medicines they were taking were appropriate for their illness.

5) Discussion

This analysis highlights the importance of the medicines helpline in providing information and support for patients and carers within CNWL which is reported to improve adherence to treatment. It also emphasises the need for healthcare professionals to routinely discuss adverse effects, administration/dosage issues, drug-drug interactions and alternative treatments (the most common enquiry categories) and to signpost to relevant resources where necessary. Due to their training and access to the UKMi network of specialist medicines information centres, medicines information pharmacists facilitating the medicines helpline, are in a good position to advise patients about both physical and mental health medicines.

As questions about adverse effects of medicines made up nearly half of all enquires, it is clear that this topic should be regularly discussed with patients at all interfaces (medical, pharmacy, nursing) and not just on initiation of the medication. This echoes the results of the CQC community mental health surveys, which highlight that patients want more information on the side-effects of their medicines. The atypical antipsychotics, SSRI/SNRIs/NaSSA antidepressants and mood stabilisers were the most popular medicines amongst medicines helpline enquires. This may simply reflect that these are the most commonly prescribed medicines within the cohort of patients currently engaging the medicines helpline. Nevertheless, it highlights that patients need on-going support and advice with these medicines and the role of the medicines helpline in providing such support. Physical health medicines were also among the most popular enquires, which underlines the importance of having a holistic approach to medicines optimisation to ensure all medicines-related needs are met.

The information obtained from this analysis was disseminated to all healthcare professionals involved in the use of medicines within CNWL via the monthly medicines bulletin. Providing medicines support and advice to patients throughout the various stages of the treatment pathway will facilitate the medicines optimisation agenda and ultimately help to improve patient outcomes. This data highlights the role of the medicines helpline in providing additional support and information to patients in the community. It also emphasises the need to continue to raise awareness of the medicines helpline and to roll it out trust-wide. All healthcare professionals should routinely engage in discussions about medicines and signpost to relevant resources including the medicines helpline when further support is needed. The next step in this analysis would be to evaluate the impact of the medicines helpline on patient outcomes.

References

2. Henderson S, Nissenbaum M. Adherence according to Mirel Popovic strategies to make the medicines go down. Perspectives in Psychiatric Care 2010; 46(1):3-13
Could analysis of all calls about pregnancy and breastfeeding from the last year determine if increased prescribing awareness is required?

By Sam Wood, Pre-registration pharmacist

Supervisors: Charlotte Hay, Medicines Information Pharmacist and Fran Garraghan Lead Pharmacist for Obstetrics and Gynaecology

Objectives

•To analyse all pregnancy and breastfeeding enquiries recorded on MiDatabank in a 12-month period.
•To establish how many enquiries are made before or after drug exposure.
•To identify users of the service in order to target promotional work to increase awareness thus reducing potential harm to babies.

Introduction

The safety of medication during pregnancy and breastfeeding is a very important issue. Uneducated prescribing of medication to a mother during pregnancy and breastfeeding can lead to adverse effects on the baby. The Medicines Information (MI) department at Central Manchester NHS Foundation Trust receives a high number of calls regarding medication during pregnancy and breastfeeding. This is largely due to the presence of a specialist Obstetrics & Gynaecology hospital (Saint Mary's). It was believed that by analysing the information on MiDatabank, we could find which sectors are the most frequent callers within the hospital and what percentage of calls are made after exposure, thus ascertaining how many babies have already been potentially exposed to adverse effects of the medication. It could then be determined if increased awareness of prescribing drugs in pregnancy and breastfeeding is necessary.

Method

In order to collect the information for the audit, MiDatabank was used. Two separate searches were completed using the advanced search function in the database. The first search was performed by selecting “Drugs in Pregnancy” from a drop-down option and a second search by selecting “Drugs in Breast Milk.”

Results and discussion

The results showed that the majority of enquiries came from the from obstetrics and gynaecology outpatient clinic, obstetrics and gynaecology wards and GP surgeries, suggesting these locations may be a good place to begin when increasing prescribing awareness of medication in pregnancy and breastfeeding. The results also showed that there was also a high proportion of enquiries from the outpatients pharmacy and the public (both 7%). This suggests that patients may not have been counselled fully by the prescribers on the effect of their medication in pregnancy and breastfeeding. However, as the majority of the enquiries came from obstetrics and gynaecology outpatient clinics, obstetrics and gynaecology wards and GP surgeries, this suggests that the prescriber may have considered the safety of the medication but that this may not have been communicated to the patient.

Analysis of the data regarding whether the medication exposure had already occurred shows that 33% of pregnancy enquiries and 30% of breastfeeding enquiries were made after drug exposure. This means that the baby will have already been exposed to potential adverse effects of the medication that the mother has received. Therefore, awareness needs to be improved regarding the safety of medication in these women.

Conclusion

•It has been determined that a significant proportion of pregnancy and breastfeeding enquiries occur after drug exposure, leading to potential risk to the baby.
•Therefore, increased awareness of the harm that may occur due to medication is required for both the public and health care professionals.
•It has also been found that the majority of calls within the hospital come from obstetrics and gynaecology wards, obstetrics and gynaecology outpatients.
•There is a potential lack of communication between prescribers and both patients, and the outpatients pharmacy, as to whether the medication has been checked for safety.

Future work

•Survey of health care professionals within Saint Mary’s who are responsible for reviewing and prescribing medication in pregnancy. The aim is to determine if health care professionals are checking the safety of medication in patients of childbearing potential and if they are communicating their findings with patients.
•Flow chart to prompt clinicians to contact the MI department when reviewing patient’s medication. This will be piloted in clinical areas over a defined period.
•During this pilot period, pregnancy enquiries made to MI will be analysed to determine if the flow chart has prompted their call.
•Future work may look at the need for a staff training package on counselling these patient groups.

Figure 1: Graph to show which locations were the most frequent callers

Figure 2: Table showing the percentage of enquiries made after exposure

Figure 3: Flow chart currently in development
Survey of Evidence Base Needs Amongst Health Professionals

Dr Rob Atenstaedt1 Ms Mair Martin2
Ms Pamela Jones3 Dr Graham Brown4

BACKGROUND
Evidence based practice is defined as a conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. Access to the latest evidence base is vital when making clinical decisions. As a precursor to a possible trial of the ATTRACT clinical enquiry service in secondary care in Betsi Cadwaladr University Health Board (BCU HB), a survey of evidence base requirements was undertaken amongst health professionals in North West Wales.

METHOD
An anonymous survey instrument was designed by a multi-professional group*. ATTRACT placed this survey instrument within the electronic programme “Survey Monkey.” After a pilot of the survey questions within the group and some minor changes, the final survey instrument was sent out by BCU Communications Team through the email list of BCU HB (West) marked “For Clinicians Only” in April 2012. Anonymous replies were gathered. A reminder was sent two weeks later and a final reminder a month later.

RESULTS
219 responses were received within the allotted time period. If the 24 in the “other” group which we do not have denominator for are excluded, this gives response rate of 195/2096 or 9% overall. A total of 56 (29%) of these were from doctors representing 17% of total doctors working in BCU West (majority from consultants), 78(40%) from nurses representing 5% of total nurses, 48(25%) from pharmacists representing 25% of majority from consultants), 78(40%) from nurses representing 5% of total nurses, 48(25%) from pharmacists representing 25% of pharmacists (majority from consultants), 41(21%) from other health professionals representing 18% of total therapists and 13(7%) from pharmacists representing 25% of pharmacists. This means that nurses are under-represented in survey respondents and pharmacists are over-represented.

DISCUSSION OF FINDINGS
- Survey findings are limited by the relatively low response rate (9%) and by the fact that it was carried out in one part of North Wales – BCU (West), introducing response bias. In addition, respondents were more likely to be pharmacists and less likely to be nurses. In spite of limitations, the fact that 219 busy clinicians responded is impressive, and shows the importance attached to using and accessing evidence services in BCU HB.
- 30% of respondents found it difficult to access the latest evidence - this is an important finding as this is a barrier to evidence base practice. Consultants found it much more difficult than their more junior colleagues, perhaps flagging up a training issue.
- Colleagues were highlighted as the main resource to go for evidence base support. This begs the question of where these colleagues are obtaining their evidence from? Google, which has obvious limitations, was mentioned as a very widely used evidence source. NICE was also in the top 3.
- More than half of clinicians surveyed said that they required rapid evidence support to answer a clinical enquiry, which shows time pressured roles that they perform. There was wide variation in this question within staff groups.
- Only one third of respondents felt that current sources/services fulfilled their needs, and another 46% felt they fulfilled their needs "partially". Doctors seemed least satisfied, especially training grade doctors.
- A number of comments were sent in concerning additional services which could be provided to clinicians. A number were about general access to IT to obtain evidence, others about access to particular evidence sources. Some health professionals felt unsure where to go for evidence base support and felt that the process could definitely be made more user friendly.

NEXT STEPS
The findings of the survey were fed back to health professionals in BCU (West), and they were asked whether they valued the development of a “one-stop” evidence webpage; also to suggest websites that could be IT prioritised. As a result of a positive response to this second survey, a Public Health Wales and BCU HB group is co-developing this webpage, which is to be maintained by the North Wales NHS Library Service for the benefit of health professionals, and ultimately patients, in North Wales.