Welcome to issue 56 of Pharmacy Research Review.

Several of the papers in this issue involve a counselling theme: the evidence demonstrates that pharmacists are well placed to optimise medication use, by talking with patients about medication risk, instruct inhaler-naïve patients on correct inhaler technique, and provide individualised discharge counselling and post-discharge follow-up. There is also a paper later in the issue which highlights different levels of assessing appropriateness of medication therapy, highlighting the need to discuss and clarify expectations so all stakeholders are on the same page.

I hope you find the papers in this issue useful in your practice and I welcome your comments and feedback.

Kind regards,
Chloë Campbell
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Interdisciplinary medication decision making by pharmacists in pediatric hospital settings: An ethnographic study

Authors: Rosenfeld E et al.

Summary: This exploration of interdisciplinary medication decision making by pharmacists in paediatric hospital settings recruited pharmacists, registered nurses and doctors from three wards of an Australian paediatric tertiary teaching hospital, comprising general surgical, gastroenterology, endocrinology, neurology, adolescent and rehabilitation settings. Thematic analysis of data collected from observations, semi-structured interviews and focus groups revealed that pharmacists played a key role in complex paediatric medication decision making, intervening about dosage, administration, drug interactions and authorities. Pharmacists were proactive, willing to contact doctors and nurses about prescribing issues; those employees routinely approached pharmacists for medication advice. Pharmacists were perceived as medication experts and their guidance was sought for resolution of complex issues: when off-label medications were prescribed, when protocols were absent or ambiguous, where tension existed between protocol adherence and patient safety, and where patients on multiple medications were at risk of medication error. Pharmacists used strategies such as case note review and medication reconciliation to identify prescribing errors, although the lack of emergency department pharmacists and limited after-hours staffing posed challenges to both strategies.

Comment: This paper provides a unique lens by reframing traditional ‘interventions’ as ‘interdisciplinary medication decision-making’, which they define as ‘interactions of pharmacists with clinicians of other disciplines with the outcome of changes in medication treatment’. The findings add to the picture of pharmacist contribution in optimising medication use, particularly emphasising their role in situations of complexity.

Reference: Res Social Adm Pharm. 2017 Mar 22. [Epub ahead of print]

Abstract
The effect of counseling on willingness to take medication and perceptions of medication safety

Authors: Bitonti M et al.

Summary: These researchers examined the effect of patient pharmacist counselling concerning medication risks. Specifically, the study sought to determine how adverse effect likelihood and pharmacist counselling on adverse effect prevention determines how willing individuals are to use a hypothetical medication and how they perceive medication safety. Using a hypothetical scenario, the 601 participants (aged ≥18 years) were asked to imagine they were prescribed an anti-asthma medication that could cause fungal infections of the throat. They were randomised to 1 of 9 scenarios that differed on: probability of developing an infection (5%, 20%, no probability mentioned) and whether they were told how to reduce the risk of infection (no prevention strategy discussed, prevention strategy discussed, prevention strategy discussed with explanation for how it works). Participants were less willing to take the medication and considered it less safe when the likelihood of an adverse effect occurring was high (20% vs 5% probability or when no such information was given). Participants were more willing to take the medication and perceived it as safer when a strategy was given to prevent adverse effects. Moreover, providing participants with prevention information reduced the effect of variation in the probability of infection on both willingness to use the medication and how the participants perceived medication safety.

Comment: An interesting approach using a fictitious medicine to investigate the impact of different information on willingness to take a medicine. However, counselling is not simply a means of ‘persuading’ patients to take medicines. Patient choice will be affected by individual risk perception, values and preferences. Using the lens of the previous paper, one might consider the role of pharmacists to be supporting decision-making in complex situations.


Effectiveness of various methods of teaching proper inhaler technique - the importance of pharmacist counselling

Authors: Axtell S et al.

Summary: This investigation compared the effectiveness of 4 different instructional interventions in training 72 inhaler-naïve adults on correct inhaler use: (1) a metered dose inhaler (MDI) package insert pamphlet; (2) a Centers for Disease Control and Prevention (CDC) video demonstrating MDI technique; (3) a YouTube video demonstrating MDI technique; and (4) direct instruction from a pharmacist or fourth-year pharmacy student regarding MDI technique (2 minutes long). The effectiveness of each intervention was assessed by the patient’s ability to complete all 7 prespecified critical steps of correct inhaler technique. Less than one-third (29.2%) demonstrated competent inhaler technique. There was a statistically significant increase in correct inhaler technique amongst participants given pharmacist direct instruction and the remaining interventions, both combined (p<0.0001) and individually (p≤0.03). No such between-group differences were observed amongst the other intervention groups.

Comment: Another paper on the topic of counselling. These authors point to evidence that some inhaler users never receive instruction on proper technique from a health professional and argue that, in light of their findings, time spent doing so is justified. A quick take-away for practitioners is to note the two steps of metered-dose inhaler use most often missed by the patients in this study: exhaling before inhaling the medication and holding one’s breath after inhaling the medication.


Independent commentary by Chloë Campbell

Chloë Campbell has worked in hospital and community pharmacy in New Zealand and the United Kingdom, specialising in Medicines Information for 14+ years. She is currently co-convenor of the Medicines Information and Clinical Pharmacy Special Interest Group of the New Zealand Hospital Pharmacists Association and a member of the Editorial Advisory Board of the New Zealand Formulary. FOR FULL BIO CLICK HERE

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Post discharge medicines use review (dMUR) service for older patients: Cost-savings from community pharmacist interventions

Authors: Ramsbottom H et al.

Summary: The UK National Health Service (NHS) provides Medicines Use Reviews (MURs), free face-to-face consultations between a patient and their regular community pharmacist, as a means of identifying any medication-related problems or information needs and offering solutions for patients. However, uptake of post discharge dMURs (dMURs) has been poor. This feasibility study explored the clinical and economic impact of community pharmacist intervention. It referred 30 patients to their regular community pharmacist. Twenty dMURs were conducted (67% completion rate). Twelve (60%) were completed within 4 weeks of discharge; the remaining were completed after 4 weeks. The most common reason for non-completion at 4 weeks was patients’ inability to visit the pharmacy, affecting almost a quarter of participants. Action plans were returned for 17 of the 20 dMURs, generating 35 interventions. Of all intervention, the most common (n=14, 40%) was providing patients with information that improved their understanding of why and how they were taking their medicines; the medical condition for which they were using the medication; how to avoid side effects, or a combination. Staff costs approximated to £42.44 for each referral that resulted in a dMUR. After adding the MUR fee, the final cost of the service amounts to £70.44 per completed dMUR, representing a substantial cost saving to the NHS.


Abstract

Impact of concomitant medications on obstructive sleep apnoea

Authors: Jullian-Desayes I et al.

Summary: This systematic review sought to clarify the possible influence of commonly used drugs in obstructive sleep apnoea (OSA). It categorised drugs by 4 categories, those which (1) may worsen OSA; (2) are unlikely to have an impact on OSA; (3) have scarce or contradictory data; and (4) drugs with a possible positive effect. Drugs that may worsen OSA include opioids and opiates, benzodiazepines, myorelaxants (e.g. baclofen), testosterone and drugs associated with weight gain. All of these drugs exacerbate OSA and should be avoided. Some medications have no demonstrated impact upon OSA, often because of scant or inconclusive evidence. This category includes antihypertensive agents, nicotine, anaesthetic agents, melatonin-related drugs, drugs inducing weight loss, as well as ondansetron and clonidine. Drugs with an unresolved impact upon OSA include “Z” drugs (non-benzodiazepine drugs with effects similar to benzodiazepines), opiate antagonists, medications for acromegaly, ACE inhibitors, antidepressant agents, tumour necrosis factor-α inhibitors, and proton pump inhibitors. The review advises that all of these drugs should be used with caution. It goes on to say that larger trials are needed to clarify the potential positive impact of certain drugs on OSA. This list includes anti-inflammatory agents (antileukotrienes and nasal corticosteroids), topical soft tissue lubricant, diuretics, β₂-agonists, acetycholinesterase inhibitors, female hormones, parkinsonian medications, and treatment with medical gases (i.e. carbon dioxide [CO₂] inhalation and oxygen supplementation). The review concludes that in the meantime, some, such as diuretics or antihypertensive medications, help to reduce the cardiovascular risk associated with OSA.

Comment: There is a neat juxtaposition between this paper and the previous one. The previous highlights issues at the transition from secondary to primary care; this paper presents results from a feasibility study aiming to address analogous issues. It contains useful information for service designers to consider. A significant issue identified was the effect of poor mobility of elderly patients on uptake of the service, pointing to the need for a home-based option.


Abstract

Interprofessional communication between community pharmacists and general practitioners: a qualitative study

Authors: Weissenborn M et al.

Summary: These researchers conducted 4 focus groups (4–5 participants per group) and 14 in-depth, semi-structured interviews with 13 general practitioners (GPs) and 19 community pharmacists working in an ambulatory care setting in Germany. The aim of the study was to gather ideas and thoughts from both professions to inspire the development of a standardised interprofessional communication concept facilitating information exchange. Analysis of the transcribed recordings from the focus groups identified 7 internal (e.g. GP and community pharmacist do not know each other) and 9 external barriers (e.g. mutual accessibility) that can adversely affect communication between GPs and community pharmacists. The groups also identified 10 organisational, 8 medication-related, and 4 patient-related types of information requiring interprofessional communication. Ratings of the importance of this information varied between the professions, e.g. community pharmacists rated organisational issues much higher than GPs did. Both professions indicated communication by phone to be the most suitable and best accepted method of communication.

Comment: This is important work in the light of goals to improve collaboration in primary care. One thing I took away from this paper was the idea for pharmacists and GPs to discuss their communication preferences in advance and make a plan together about a general approach that will work best for them – part standardisation, part individualisation.


Abstract

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How pharmacists check the appropriateness of drug therapy? Observations in community pharmacy

Authors: Nusair MB et al.

Summary: This Canadian investigation describes how pharmacists gather patient information and evaluate medication appropriateness in a community pharmacy setting. It surveyed 9 pharmacists from 5 different pharmacy stores in Alberta province, where a Chat Check Chart (CCC) model has been introduced to help pharmacists understand how patient care standards fit into routine practice. The CCC process covers the following: 1) Chat-asking 3 prime questions to gather information; 2) Check-perform pharmacotherapy workup by assessing prescription’s indication, efficacy, safety and manageability; and 3) Chart-document findings of the pharmacotherapy workup. The qualitative analysis included 15 audio recordings of the pharmacists talking with patients and 14 instances of them thinking aloud while evaluating medication therapy. Pharmacists allotted 16% of their think-aloud time on clinical-related issues for new and chronic medications, and the remainder on technical dispensing activities. All pharmacists checked if the medication was safe, but fewer than half checked if the prescription was indicated, effective, or useable (i.e. adherence). Pharmacists covered more content areas when checking the appropriateness for new prescriptions in comparison to chronic refills. They gathered insufficient clinical information to assess their patients’ medication therapy and relied too much upon the patients’ profiles, asked non-specific questions and missed patient cues, failed to undertake personalised assessments, and focused on routine pharmacist activities.

Comment: On the face of it the authors’ conclusions appear quite negative towards Alberta pharmacists but it might be a case of shifting the goals posts, and this paper raises important issues for wider discussion. All the pharmacists checked that the medication was safe but did not score so well on other aspects of a ‘pharmacotherapy work-up’ — this highlights that there are different levels of assessment of appropriateness of drug therapy. It is important that expectations of different stakeholders are discussed and that legislation, contractual agreements and professional ethics are aligned so that everyone is on the same page.


Abstract

Time spent reading this publication has been approved for CME for Royal New Zealand College of General Practitioners (RNZCGP) General Practice Educational Programme Stage 2 (GPFE2) and the Maintenance of Professional Standards (MOPS) purposes, provided that a Learning Reflection Form is completed. Please CLICK HERE to download your CPD MOPS Learning Reflection Form. One form per review read would be required.

This Review has been endorsed by PSNZ ENHANCE for 30 minutes of group 1 learning and pharmacists may allocate 0.5 group 1 points after reading this review.

Group 1 points may be allocated at 1 point per hour for any further reading of the full research papers (via the links).

Accreditation number: 2016/16, Expiry 26/10/18.

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New Zealand Wound Care Society 8th National Conference 2017

“Clearing the Air – Dispelling Myths and Misconceptions in Wound Care”

Thursday 18th – Saturday 20th May 2017
Energy Events Centre Rotorua, New Zealand

Patient, family physician and community pharmacist perspectives on expanded pharmacy scope of practice: a qualitative study

Authors: Donald M et al.

Summary: The Alberta Vascular Risk Reduction Community Pharmacy Project: EACH trial evaluated the efficacy of community pharmacy-based case findings and intervention in patients at high risk for cardiovascular disease (CVD). The EACH intervention identified community-dwelling patients with poorly controlled risk factors and sought to reduce their CV risk through patient education, prescribing and follow-up with their community pharmacist. This analysis sought the perspectives of patients, family physicians and community pharmacists regarding pharmacists’ identification and management of EACH participants, to identify strategies to facilitate implementation of the pharmacist’s expanded role in routine patient care. Perceptions were categorised into macro (structure), meso (institution) and micro (practice) health system levels, based on a conceptual framework of care for optimising scopes of practice. Data were analysed from individual, semi-structured interviews held with 14 patients, 13 family physicians and 21 community pharmacists. Patients were very supportive of the expanded scope of practice model. All participants emphasised the importance of communication, ability to share patient information, trust and better understanding of the roles, responsibilities, accountabilities and liabilities of pharmacists within their expanded role of practice.

Comment: This Canadian ‘perspectives’ research provides valuable data for the sector in working to make optimal use of pharmacists’ skills and knowledge. The results are presented in a framework of macro (structural), meso (institutional) and micro (practice) levels. It almost reads like a handy to-do list, but the authors do highlight the need for collaboration at many levels to achieve successful harmony of roles.


Abstract

Pharmacist–industry relationships

Authors: Saavedra K et al.

Summary: This investigation explored the beliefs and attitudes that American pharmacists have about pharmacists’ interactions with industry. Open-ended interviews were conducted with 4 hospital pharmacists, 2 independent pharmacists, 2 retail pharmacists and 1 administrative pharmacist in the Washington, DC, metropolitan area. All participants reported regular interactions with pharmaceutical company representatives. Seven had received gifts or services from pharmaceutical companies, including article reprints, textbooks, pocket reference texts, summaries of package inserts, and training demonstrations for proper use of insulin pens, inhalers, and other products. All interviewees expressed strong, negative views of industry rationales for increasing drug costs and they considered that ‘copycat’ drugs were of limited use, although they generally had a neutral-to-positive view of industry-funded adherence/compliance programmes, coupons, vouchers, and copay payment programmes. Interviewees viewed direct-to-consumer advertising negatively, but did not correlate industry-funded drug information with escalating drug prices.

Comment: The authors note this is the first qualitative exploration of this issue. Given the extending role of pharmacists, being cognisant of potential industry influence is increasingly relevant. It could be argued that in New Zealand, PHARMAC provides a degree of protection, but this paper reminds us of the need for undergraduate teaching on this topic and ongoing vigilance in professional practice.


Abstract

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