Research Round Up- Pharmacist Prescribers

Introduction

Last month the research round up provided you with an overview of articles looking at three articles all with a relationship to prescribing in alcohol dependence. This month we will be reviewing articles looking at pharmacist prescribing. The first article reviews a collaborative pharmacist prescribing model in an emergency department. The others look at prescribing by pharmacists in primary care from 2 perspectives, releasing GP time and the use of advanced practice pharmacists.

An evaluation of a collaborative pharmacist prescribing model compared to the usual medical prescribing model in the emergency department

Ogilvie, M., Nissen, L., Kyle, G. & Hale, A. (2022) *An evaluation of a collaborative pharmacist prescribing model compared to the usual medical prescribing model in the emergency department*. Journal Of Research in Social and Administrative Pharmacy *In Press.*

This original piece of evaluation research, published online in May 2022 in the Journal of Research in Social and Administrative Pharmacy sought to assess the safety and accuracy of inpatient medication charts within a pharmacist collaborative prescribing model as an intervention, in direct comparison with the usual medical model defined as a control, in the emergency department (ED). This was set up as a randomised control trial with the control being prescribed by medical practitioners as opposed to the intervention group having the prescription charts completed by pharmacists. Although not meeting all CONSORT (2010) criteria for an RCT protocol it did follow enough guidelines to be considered quasi-RCT. The trial was conducted between October 2016 and September 2017 in a medium sized Australian hospital ED. A secondary outcome of interest was the evaluation of Venous Thromboembolism (VTE) Prophylaxis Prescribing and any differences in this between pharmacist prescribers and the control group of doctors. Recruitment was of adult patients presenting at the ED within a referral window for medical admissions between Monday to Friday, 7.30am- 2pm. Randomisation to either intervention or control was done by a four block randomisation method until the necessary sample size, defined by using a power calculation as 250 individual drug prescriptions, was achieved. The patient was blinded to the intervention but for practical and legal reasons the prescriber could not be. The medication charts were then reviewed and audited retrospectively and independently to reduce researcher bias and using validated audit tools. In total 94 patients were recruited, (48 to control and 46 to intervention) with an overall number of 769 separate medication orders. Exclusions for accidental prescribing by a medical prescriber on a pharmacist-initiated patient or a patient discharged/transferred lead to a final cohort size of 38 in the control arm (with 357 medication orders) and 35 in the intervention group (with 412 medication orders).

The researchers found that within the medication charts written up by the prescribing pharmacists there were significantly fewer over a range of criteria. They looked at charts with no errors and then bands of 1-5 errors, 6-10, 11-20 and 21 or more. Significantly the number of charts with no errors was 10 for pharmacists and only 1 for doctors. At the high end of 21 or more errors, 1 chart was found written by a doctor and none by a pharmacist. The overall error rate was 78% in the control group compared to 16% in the intervention group.

Other areas were audited including adverse drug reaction documentation, slow-release medication prescription, medicines reconciliation, safety monitoring, VTE prophylaxis and chart completeness.

Within these the findings of significance were a greater documentation of adverse drug reactions and better adherence to VTE guidance in the intervention group. The authors conclude that collaborative pharmacist prescribing has excellent results in the areas of safety and accuracy, especially around error rate and documentation. They suggest this collaborative model is suitable for implementation in the ED setting.

https://www.sciencedirect.com/science/article/abs/pii/S1551741122001553

New ways of working releasing general practitioner capacity with pharmacy prescribing support: a cost-consequence analysis

Johnson, C.F., Maskrey, M., MacBride-Stewart, S., Lees, A., MacDonald, H. & Thompson, A. (2022) *New ways of working releasing general practitioner capacity with pharmacy prescribing support: a cost-consequence analysis.* Journal of Family Practice.

This article, published in January 2022 in the Journal of Family Practice, aimed to evaluate the cost effectiveness of using additional prescribing pharmacists to enable release of GP capacity. The driver for this study was the workforce crisis in general practice in the UK and an aim to establish if the suggested part solution of a move to more multidisciplinary working was cost effective and had sufficient impact.

The researchers employed a prospective observational cohort study methodology. They included 15 general practices all within an urban setting, encompassing 69 general Practitioners (GPs) in one locality area. This included a population of approximately 82,00 patients. The study required GPs to document the time they spent within their working day addressing key prescribing targets. This was done over a two-week period and repeated on five occasions. Additionally, a number of pharmacists were engaged to perform the same key prescribing target activities to release GP capacity for a period of time equating to 225 hours of pharmacist time per week. A standardised scale of staff costings based on nationally recognised salaries was used to analyse the prospective financial impact. The key prescribing indicator performance of this one locality was then compared to the performance of seven other localities within the same health board to draw comparison.

The results as determined by the researchers were that this could produce a cost effective and sustainable reduction in GP activity on these key prescribing indicators of 47% or around 4.9 GP hours, per practice, per week (73 hours in total per week). The findings also showed that in the observed time periods there were no significant step changes observed in that locality's safety or quality prescribing measures. The also stated no negative effects on the one locality prescribing cost efficiency. The authors conclude that the use of appropriate pharmacist resources could deliver a cost-efficient prescribing activity and thereby free up GP time in an attempt mitigate some of the workforce crisis situation.

https://academic.oup.com/fampra/advance-article-abstract/doi/10.1093/fampra/cmab175/6500732

Role of advanced practice pharmacists in general practice

Martin, S. Shaw, N., Burnage, K. & Petty, D. (2022) *Role of advanced practice pharmacists in general practice.* Prescriber, 33: 15-18

This article, published in the clinical pharmacy section of the Journal Prescriber in January 2022, looked at the role of advanced practice pharmacists working in general practice under the guise of this representing the next step in the development of clinical pharmacy in primary care.

The article outlines the key areas of pharmacist involvement, including clinical assessment, medicines optimisation, long term conditions, medication reviews and prescribing. The article discusses the routes that can be taken, and key skills needed to train to advanced practice level. These include the traditional Advanced Clinical Practice masters programme, the advanced pharmacy practice programme and bespoke routes. The authors then present three case studies to highlight how advance practice pharmacists across a variety of roles and conditions can impact on primary care service provision. The roles that these advanced pharmacists typically take on depend upon the individual pharmacist's competency and scope of professional practice as well as being in line with the needs of the service they work within. The authors state that independent prescribing is a key qualification to enable autonomous practice with regard to medicines optimisation and management of long-term conditions. They acknowledge the need for good governance and safeguards around professional accountability and indemnity. The authors concede that many advanced pharmacist prescribers initially have a narrow scope, perhaps hypertension or diabetes, but as they develop in their primary care role, their competence can broaden and expand whilst taking into account multi morbidity and polypharmacy. The article also discusses career progression within advancing practice and how this may take a path away from the traditional medication role of pharmacists as they develop in primary care. The authors conclude that advanced practice pharmacists in primary care have a vital role to play in complex medication reviews particularly within long term condition management and the autonomy of prescribing is essential to this role.

https://wchh.onlinelibrary.wiley.com/doi/full/10.1002/psb.1961

Conclusion

It is clear that the pharmacist has a vital part to play in medicines management across many aspects of practice but that the increasing abilities of the prescribing pharmacist can be utilised, especially in the areas reviewed here of general practice and the emergency department. Prescribing pharmacists can alleviate some of the prescribing burden of their medical colleagues without reduction in safety and performance and in some cases have been shown to make less errors that their medical counterparts. Cost effectiveness is important and using the specific talents of prescribing pharmacist can save money without a reduction in care.

Additional References

Moher D, Hopewell S, Schulz KF, Montori V, Gøtzsche PC, Devereaux PJ, Elbourne D, Egger M, Altman DG. *CONSORT 2010 explanation and elaboration: updated guidelines for reporting parallel group randomised trials.* J Clin Epi 2010; 63(8): e1-e37.