



Medicines Evidence Commentary

commentary on important new evidence from Medicines Awareness Weekly

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Connect with Pharmacy: a web-based intervention to reduce hospital readmissions for older people

A retrospective observational study from Leeds suggests that electronic transfer of hospital discharge and handover information to nominated community pharmacies reduced the number of hospital readmissions in older people taking multiple medicines and using compliance aids. The results of this study are in-line with the [NICE guideline on medicines optimisation](#) which highlights the importance of medicines reconciliation and robust medicines-related communication systems when people are discharged from hospital or move from one care setting to another.

Overview and current advice

The [NICE guideline on medicines optimisation](#) provides recommendations on medicines reconciliation and medicines-related communication systems when people move from one care setting to another. NICE recommends that medicines reconciliation should be carried out in primary care for all people who have been discharged from hospital or another care setting. This should happen as soon as is practically possible, before a prescription or new supply of medicines is issued and within 1 week of the GP practice receiving the information.

The [evidence](#) underpinning the guideline highlights the implications of poor communication across health and social care which have been well known for several years. Poor communication of information about medicines can lead to suboptimal use of medicines. It can also have a negative effect on the quality of care a person receives and may affect the outcomes a person gets from their medicines.

In addition, NICE recommends that when a person is discharged, consideration should be given to sending their medicines discharge information to their nominated community pharmacy, when possible and in agreement with the person. NICE also recommends that organisations should consider arranging additional support for some groups of people (including older people, those taking multiple medicines or with long term conditions) when they have been discharged from hospital, such as pharmacist counselling, telephone follow-up, and GP or nurse follow-up home visits.

There are a number of [shared learning examples](#) published on the NICE website which relate to medicines optimisation such as [Refer to Pharmacy and medicines optimisation](#), which is an electronic tool that allows bedside referral of hospital patients to their community pharmacist.

New evidence

[Connect with Pharmacy](#) is a web-based programme available for people admitted to Leeds Teaching Hospitals NHS Trust that allows the electronic transfer of a person's discharge and handover information (including referral's for community pharmacy services such as Medicines Use Reviews) from the hospital to the person's chosen community pharmacy.

A retrospective observational study ([Sabir et al. 2019](#)) has evaluated the first phase of the Connect with Pharmacy programme which focussed on people using a compliance aid. The primary aim of the study was to evaluate whether the Connect with Pharmacy intervention reduced hospital readmission rates in people aged 65 years and older who were using a compliance aid before admission.

The study followed-up 768 people aged 65 years and older who received the Connect with Pharmacy intervention, 141 people died during follow-up and were excluded from the study. Referrals that were 'not completed', 'rejected' or 'not actioned' were also excluded from the study. The final study group included 627 people (mean age 81 years). The mean number of medicines being taken was 11.97 and the median number was 11. The primary outcome measure was the total rate of readmissions pre- and post-intervention. Admission rates for the study group 6 months before the Connect with Pharmacy intervention (which was conducted between January and April 2017) were compared with admission rates 6 months after the intervention. Elective admissions were excluded from the analysis. The secondary outcome measure was the total average length of stay on the ward for all hospital admissions pre- and post-intervention.

There was a reduction in the total number of hospital readmissions for the group post-intervention (690 readmissions, mean 1.1 per person; 95% [confidence interval](#) [CI] 0.98 to 1.22) compared with pre-intervention (823 readmissions; mean 1.31 per person; 95% CI 1.21 to 1.42; $p < 0.0001$). The greatest reduction was seen in the number of people who had no readmissions (293/627 [46.73%] post-intervention compared with 193/627 [30.78%] pre-intervention).

For the secondary outcome of length of stay on the ward, there was no difference between the post-intervention and pre-intervention hospital admissions (mean 7.82 days, 95% CI 6.64 to 9.00 days compared with mean 7.40 days, 95% CI 6.51 to 8.29 days; $p = 0.12$).

This study was an observational study and as such it has several limitations as the study authors have highlighted. We cannot be certain that the Connect with Pharmacy intervention was the cause of the reduction in hospital readmissions or if the study group would have had a reduction in readmissions anyway due to other factors such as improvements in their health conditions or the time of the year the pre and post-intervention data was collected (that is, was it over the winter or over the summer). The study did not investigate the reason for the readmissions and so we do not know how many readmissions either pre or post-intervention may have been due to medicines-related issues. In addition, the study was conducted in a specific population (people aged 65 years and older using a compliance aid). People who died during the course of the study were also excluded. It is unclear whether the results of the study would be generalisable to other groups of people for example, people not using compliance aids or older people who are very unwell with severe and complex health needs.

Commentary

Commentary provided by NICE

Although this study has several limitations, the results suggest that the Connect with Pharmacy intervention reduced the number of hospital readmissions in a group of older people taking multiple medicines and using compliance aids. The study did not report the specific interventions that the community pharmacies made so it is not possible to say which intervention may have led to the reduction for example, medicines reconciliation, Medicines Use Review or a combination of

interventions. The Medicines Use Review service will be [decommissioned at the end of the 2020/21 financial year](#).

The Connect with Pharmacy intervention evaluated in this study is based on a similar model of electronic referral from hospital to community pharmacies at Newcastle-upon-Tyne NHS Foundation Trust which has been previously described and evaluated ([Nazar et al. 2016](#)). In this study, 2,029 people were referred to their nominated community pharmacy to provide a follow-up consultation tailored to their individual needs. Most people were over 60 and referred for a Medicines Use Review or enrolment for the New Medicines Service. Only 31% (619/2,029) participated in a follow-up consultation. People who had a community pharmacist follow-up consultation had statistically significant lower rates of readmissions and shorter hospital stays than those who did not have one. Nazar et al. 2016 was also an observational study and as such we cannot be certain that the community pharmacist follow-up consultation was the cause of the reduction in readmissions. Community pharmacies were able to reject a referral and 47% (944/2,029) were rejected, the most common reason given for rejection was that the person was uncontactable or housebound.

The results of these studies are in-line with the recommendations from the NICE guideline on medicines optimisation which highlights the importance of medicines reconciliation and robust medicines-related communication systems when people are discharged from hospital or move from one care setting to another. Relevant information about medicines should be shared with patients, and their family members or carers, where appropriate, and between health and social care practitioners when a person moves between care settings, to support high-quality care. The guideline also includes recommendations on medication review (particularly for older people, people with chronic or long-term conditions and people taking multiple medicines) and highlights the importance of involving people in making decisions about their medicines.

Study sponsorship

The retrospective observational study received no specific funding.

References

Sabir F, Tomlinson J, Strickland-Hodge B, Smith H (2019) [Evaluating the Connect with Pharmacy web-based intervention to reduce hospital readmission for older people](#). International Journal of Clinical Pharmacy 7: DOI: 10.1007/s11096-019-00887-3
Nazar H, Brice S, Akhter N et al (2016) [New transfer of care initiative of electronic referral from hospital to community pharmacy in England: a formative service evaluation](#). BMJ Open 6 (10): e012532. DOI: 10.1136/bmjopen-2016-012532

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