Consultant Pharmacist Led Nursing Home Outreach Clinics show an improvement in patient safety and reduction in emergency department attendances in residents with chronic conditions

Hilary McKee, Joy Cuthbertson, Michael Scott, Pharmacy, Antrim Area Hospital, Northern Health and Social Care Trust;

**Objectives**
The objectives of this project were to demonstrate the benefit of holding outreach clinics in nursing homes with a consultant pharmacist, to rationalise the use of medicines, and to assess if there was a subsequent impact on the number of hospital admissions and emergency department attendances by nursing home patients.

**Method**
Over the two year project a total of 727 patients were reviewed in 16 nursing homes. Data on patient age, number and types of drugs taken, and types of interventions was collected for all patients reviewed. This data was presented to the home at the end of the series of clinics, and education sessions for nursing staff offered where necessary. In addition, for all the nursing homes visited monthly presentations and emergency department attendances were monitored. More detailed data was collected for 100 patients on type of intervention, Eadon grading of interventions (1), medication appropriateness using the Medication Appropriateness Index (MAI) (2), and drug costs (kardex calculations using dm & d prices). All data was entered into Excel and SPSS for exploration and analysis.

**Results**
In the 727 patients reviewed there were an average of 2.7 interventions per patient. For all clinics, individual and total MAI scores dropped by a highly significant amount after clinic review (Wilcoxon Signed Rank test, p<0.001), indicative of more appropriate prescribing. In the 100 patients who had their interventions ranked according to Eadon grading, there were a total of 281 interventions, 28 of which were ranked grade 5 or 6, which means the intervention was very significant preventing major organ failure or adverse reaction of similar importance, or was potentially lifesaving.

Over the project duration, the average monthly presentations to the Emergency department from these homes dropped by two per month, with associated potential cost savings estimated at £122k to £208k (representative of a 14.4% reduction in hospital admissions). Total drug cost savings for the two year period were estimated at £213k.

**Conclusion**
Nursing Home outreach clinics have resulted in cost effective and improved patient safety via significant clinical interventions and much improved appropriateness of medicines prescribed for the complex elderly patient. This has had an impact on emergency department attendances and subsequent admissions. More complex patients were added to consultant pharmacist case load for more intensive follow up.

The project has demonstrated effective working across the primary and secondary care interface, with excellent co-operation between general practitioners, nursing home staff, hospital and community pharmacists, geriatricians, and other staff such as community dieticians, community physiotherapists, and psycho-geriatricians.

Further education of home staff where appropriate, has resulted in increased confidence in managing these patients in their home environment. Increased use of technology, particularly the introduction of the Electronic Care Record, which enables visibility of patient data including medication and laboratory results, together with our own locally developed software developments relating to fully reconciled medications and clinical pharmacist interventions, has been a useful enabler within this process.

The process has had a demonstrable impact on emergency department attendances and subsequent admissions. This model has resulted in significantly improved patient outcomes. The project has now been granted further funding to allow recruitment of more staff to facilitate roll out throughout the trust. This work is ongoing and sustainable, and the model has been modified only slightly going forward. Consultant geriatricians will become involved at the request of the pharmacist with more complex patients being added to consultant pharmacist case load for more intensive follow up.

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**References**