CHAMOIS project (Care Homes And Medicines Optimisation Implementation Service)

Sally Bower, *Head of Medicines Optimisation;* **Helen Whiteside,** *Clinical Care Homes Pharmacist: Leeds West Clinical Commissioning Group.*
Correspondence to: sallybower@nhs.net

Abstract

Introduction
There is a need to improve the management of medicines in care homes. This was done through holistic, patient-centred medication reviews.

Method
Clinical pharmacists specialised in long-term disease management and medicines usage in older people provided medication reviews to patients in care homes and developed a holistic approach to patient care through multi-agency and multi-disciplinary working. An animation using a fictitious character (Doris) was used to demonstrate the impact that the approach could have in practice.

Results
1,102 patient reviews were conducted. 2,499 recommendations were made to GPs regarding changes needed to medication (93% of these were accepted) and 1,398 tests and observations were carried out. 28% of residents required a follow-up medication review. 125 medicine-related errors or near-miss events were identified and reported. The average net cost saving was £110 per resident review.

Conclusion
The project demonstrated an increase in the quality of care and the safety of medicines use for care home residents.

Keywords: care homes, medicine, optimisation, review, recommendations

Introduction

The need to improve the management of medicines in Care Homes has been highlighted[1,2,3,4,5,6,7] as have the risks that may occur when hospital inpatients are transferred to primary care or for new residents in care homes.[3, 7]

Medication risk is greatest when medicines are changed or when care is transferred between settings, which may occur when hospital inpatients are transferred to primary care or with new residents in care homes.[3, 7] Issues that can arise include unclear indications for changes, unintentional changes or omissions in medicines and doses, which can be overcome by accurate and prompt medicines reconciliation.

Following a pilot project in 2012, Leeds West Clinical Commissioning Group (CCG) provided funding to employ specialist clinical pharmacists to provide annual medication reviews to the care home residents of the 38 member GP practices.

Our primary aim was to build on this wealth of guidance to improve the quality of care and the safety of medicines for our care home residents through:

- the delivery of holistic, patient-centred medication reviews (Level 3)[9,8]
- a focus on the management of polypharmacy[10,11,12,13]
- the process of deprescribing.[14,15]

This was to be achieved by utilising the principles of medicines optimisation[16] (see Figure 1) to provide a cost effective medication review service linked to the CCG's strategic priority health goals in areas including cardiovascular disease, respiratory disease, diabetes, mental health and dementia.

Medication review has been defined as 'a structured, critical examination of a patient's medicines with the objective of reaching an agreement with the patient about treatment, optimising the impact of medicines, minimising the number of medication-related problems and reducing waste'.[9]

This article outlines the project and the outcomes achieved over a 21 month period commencing in July 2013.

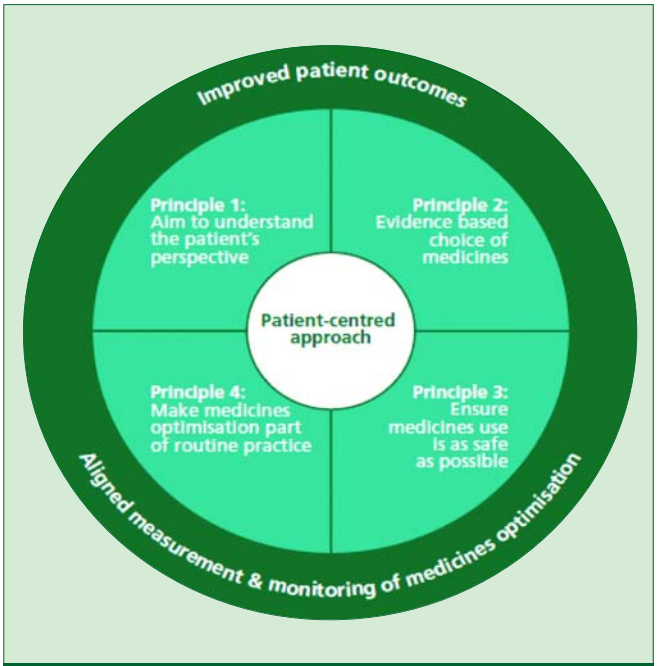

Figure 1: Principles of medicines optimisation[16]

Method

Staffing

Three pharmacists (2.4 WTE) were recruited with a varied range of previous experience but who all had specialised in long-term disease management and medicines usage in older people. They provided patient-centred medication reviews for highly complex, frail adult patients living in nursing and non-nursing (residential) care homes. When a pharmacist left the project for a career change, a pharmacy technician was recruited to reduce medicine and dressings waste in the care homes.

Priority areas

Medicines optimisation was focussed on the following five areas:

- personalised and holistic reviews
- CCG priority disease areas
- specific high risk medicines
- deprescribing of less beneficial medicines
- appropriate monitoring.

Standard Operating Procedure (SOP)

A SOP was developed to ensure consistency of service provision and recording.

A clinical medication review tool was then developed based around the PREVENT tool (**P**hysical impairment, **R**isk from specific medicines related admissions, adh**E**rence issues, cogniti**V**e impairment, n**E**w diagnosis/exacerbation of disease, complia**N**ce support, socie**T**al/social),[17] which included elements of the Common Geriatric Assessment (CGA), polypharmacy/deprescribing guidance, and the STOPP/START criteria (**S**creening **T**ool of **O**lder **P**erson's **P**rescriptions/ **S**creening **T**ool to **A**lert doctors to **R**ight **T**reatment).[18]

Process

A systematic approach was adopted that involved:

- review of GP practice patient medical records
- requesting appropriate monitoring, observations or tests
- visiting the care home, viewing records and talking to the carer
- reconciling medicines administration record (MAR) charts with current repeat medicines on the GP system
- talking with residents and engaging with family members
- liaising with other healthcare team members and non-medical prescribers
- recording findings in GP practice records
- making recommendations to GPs for medicine changes, monitoring tests and care planning
- communicating the agreed medicine changes, monitoring criteria and personalised care plans in writing to the resident and the dispensing community pharmacist as part of the process to ensure the safe management of medicines at all stages[1,2,3]
- following up patients to ensure that the care plan has been implemented, is acceptable to the resident and is producing the intended outcomes.

Data collection

A data collection tool was developed to collect data and outcomes. This recorded details about the patient, tests requested/actioned, medicines taken, recommendations made and whether or not these were accepted, follow-up, Datix reports and cost information.

Multi-disciplinary and multi-agency approach

Appropriate links were already established with care consultants for older people and clinical pharmacists at the acute and mental health trusts. However, in view of the need to improve the quality of holistic patient-centred care and facilitate care coordination,[19,20,21] links were established with a wide range of teams involved in the care of residents e.g. the eating and drinking team, memory services team and mental health team. Links were also developed with the community continence, chronic pain, tissue viability, heart failure and diabetes services. This is represented diagrammatically as the Care Jigsaw in Figure 2.

To ensure that they maintained best practice and as part of the quality assurance system, the pharmacists also participated in regular local and national peer review meetings.

Patient experience

With the support of the CCG's communications team, an animation (Doris) was developed to highlight the medicines issues in care homes (Figure 3). This animation was used throughout the project to demonstrate the impact that holistic patient-centred medication reviews could have in practice.

To see the public version of Doris go to:

http://www.leedswestccg.nhs.uk/news/leeds-care-home-patients-benefit-medication-review-service/

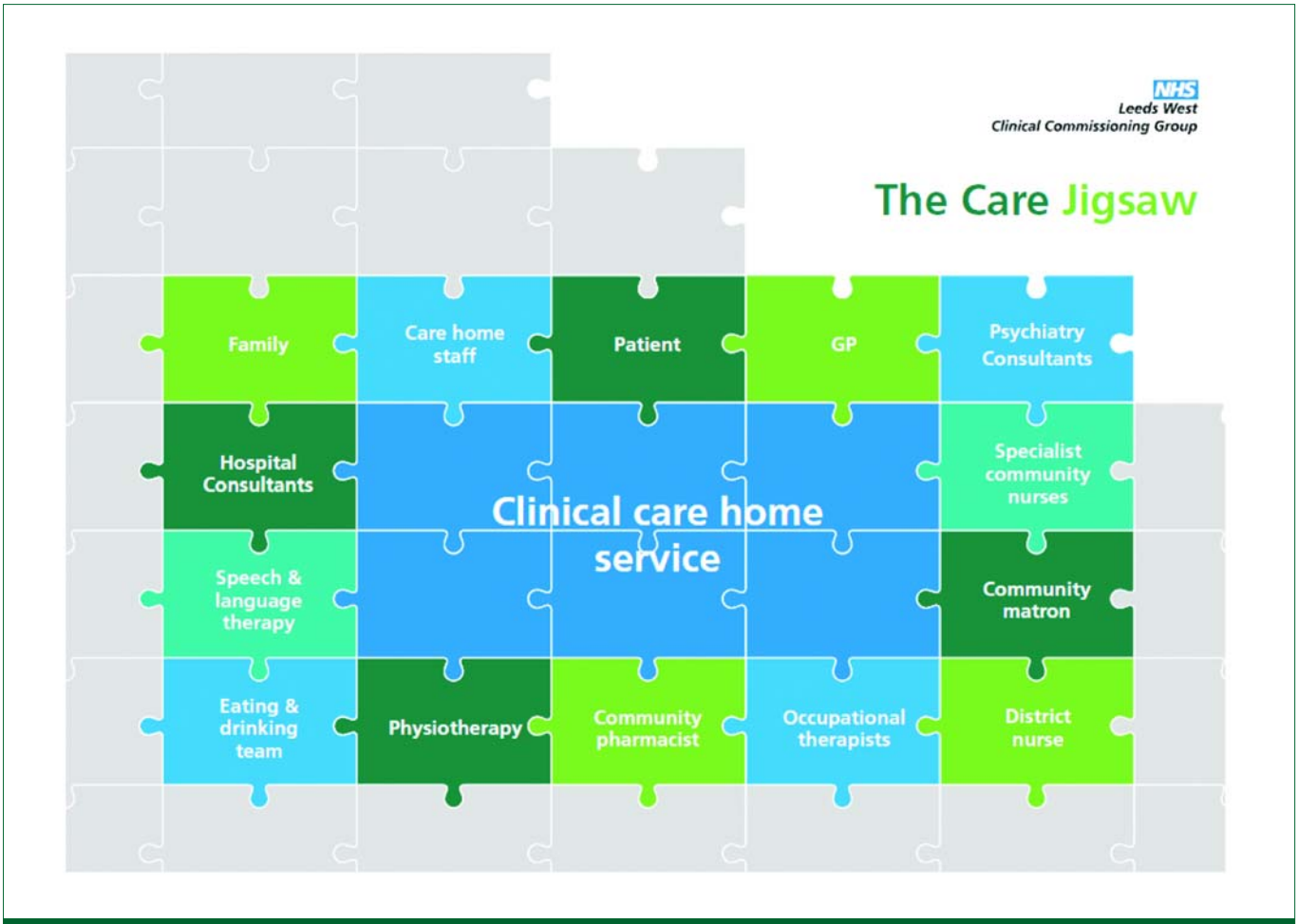

Figure 2: The Care Jigsaw

Outcomes

The following outcomes relate to a period of 21 months, at which time a total of 1,102 patient reviews had been conducted.

Recommendations made

- 2,499 recommendations were made to GPs and 93% of these were accepted
- 1,398 tests and observations were carried out
- 28% of residents required a follow-up medication review. In the first year, 15% of dementia patients treated with anticholinesterases were lost to follow-up and needed to be reconnected with the service. This increased to 30% in the subsequent period due to a significant decrease in memory nurses.

Figure 3: Doris

Medication changes

The following changes to medication were made:

- 25% of residents started on calcium and vitamin D
- 40% of residents required a change to their inhaler or an additional aid
- 45% of proton pump inhibitors (PPIs) were stopped or doses reduced
- 14% of residents were started on a PPI
- 40% of sedative drugs were stopped or doses reduced
- 23% of antipsychotic drugs were stopped or doses reduced
- 50% of oral nutritional supplements (ONS) were stopped or reduced.

Clinical considerations during medication review

The key issues that need to be considered at the time of medication review were identified for medicines in the following categories:

- calcium and vitamin D
- cardiovascular
- respiratory
- diabetes
- opioids
- benzodiazepines and antipsychotics

- anticholinergics
- anticholinesterase inhibitors
- proton pump inhibitors
- oral nutritional supplements

Referrals

A total of 16% of residents required a referral. In the first year, 15% of dementia patients treated with anticholinesterases were lost to follow-up and needed to be reconnected with the service. This increased to 30% in the subsequent period due to a significant decrease in memory nurses.

Patient safety

- 20% of patients had mismatched allergy records
- 125 medicine-related errors or near-miss events from GP practices, care homes and community pharmacies were reported into the local medicines risk team. Consistent documentation by the GP, community pharmacist and care home is an essential component of a safe system

GP practices and care home staff were provided with educational sessions aimed at enhancing patient safety.

Costs

The net saving was £121k despite an additional £35k incurred in medicine costs.

An average net cost saving of £110 resulted resident review.

Feedback

Some of the feedback we have received is shown in Figure 4.

Case studies

Care home staff approached the pharmacist about a 90 year old lady prescribed donepezil who had been getting increasingly agitated and calling out to staff from her room. Staff were asking for lorazepam to be started. The pharmacist spoke to her daughter and considered that her agitation was possibly due to her husband passing away and a change in environment. Staff were asked to spend some additional time with her and a radio was turned on when she was on her own. BPSD (Behavioural and Psychochological Symptoms of Dementia) do not always require antipsychotics and hypnotics that have been associated with increased mortality.

An 82 year old lady was diagnosed, in hospital, with a fast heart beat that was being treated with digoxin. On review at the care home, the pharmacist advised that a digoxin level should be taken because of a concern that the dose prescribed may be too high for the patient in light of their other medical conditions. A blood test was taken and the digoxin level was found to be significantly high. The dose was reduced by the pharmacist. If a dose change had not been made, the patient might have needed to be readmitted to hospital.

Discussion

The current service has resulted in new partnerships, workstreams and changes to the commissioning of services to care homes. The current service focused on improving the quality and safety of patient care but it also reduced prescribing costs by an average of £110 per annual review by ensuring that:

- medicines prescribed are clinically indicated with optimal dosing

Figure 4: Feedback

- medicines (and diseases) are appropriately monitored to ensure they are effective and not causing harm including avoidance of falls and falls-related injury
- preventative medicine is increasingly used where appropriate
- formulations and timing schedules are acceptable to residents and carers
- medicines are ordered in appropriate quantities each month to minimise waste
- the medicines used offer the best value for money.

The project has been cost neutral in terms of spend when staffing costs are taken into account to provide the service. This project used a non targeted approach.

The future for the CHAMOIS project

Permanent posts were advertised and successfully filled in April 2015. From August 2015, the team will expand its work in line with the guidelines for medication review outlined in the British Geriatric Society (BGS) 'Commissioning Guidance'[22] and 'Fit for Frailty' publications.[23,24]

Medication reviews will be carried out for patients new to care homes, post discharge and annually, with targeted 6 months reviews as part of a multidisciplinary team including a consultant geriatrician, GPs, physiotherapists and occupational therapists. Links will be established with work that will be undertaken on 'winter pressure' and 'admission avoidance' plans. Residents and family members will also be more involved in reviews to embed patient-centred care even further. Different mechanisms to facilitate this, including pharmacist led medicine surgeries in the care home, pre-review questionnaires and communications such as posters and leaflets to increase awareness and knowledge of the service to families will be explored.

Further prescribing guidance will be produced for:

- calcium and vitamin D
- opiate patches
- COPD rescue pack

and care pathways/processes will be reviewed for:

- pain
- diabetes monitoring service
- GP processes (e.g. GP record keeping, prescribing systems, GP admission avoidance plans in the over 75s).

Following the launch of the NICE guidance on managing medicines in care homes,[3] the team is working alongside CCG managers and Local Authority commissioners to set quality standards for medicines in care homes to further develop the multi-disciplinary and multi-agency approach. Provision of education and training sessions will be the foundation of new quality of care.

Conclusion

The project has demonstrated an increase in the quality of care and the safety of medicines use for our care home residents through holistic, patient-centred medication reviews.

Declaration of interests

Sally Bower: None
Helen Whiteside: Honorarium: Pharmacy Management Regional Roadshow (Gateshead), May 2015.

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