Proactive Care in Care Homes: Role of Pharmacists

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Abstract

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Introduction
The North West London Integrated Care Programme Innovation Fund was set up to test new integrated services for high risk patients, with a view to reduce non-elective hospital admissions. A local review of ambulance call-outs and an audit of selected care homes showed inequity of provision and access to services. Care homes with limited General Practitioner (GP) input have a higher London Ambulance Service (LAS) call out.

The Central London Community Healthcare NHS Trust (CLCH) was commissioned to deliver proactive, integrated and multidisciplinary care to 1,000 care home residents. The project was commissioned across Hammersmith & Fulham (H&F) and West London (WL) boroughs with the aim to improve access to care by delivering the standards as agreed for the project.

Method
Two Band 8a Clinical Pharmacists delivered proactive care by visiting the care homes and providing level 3 medication reviews, medicines optimisation, medicines reconciliation, reducing medication errors and wastage, providing training, supporting development of medication policies, attending multidisciplinary team meetings and working in partnership across different healthcare sectors. Interventions were recorded and graded using a tool adapted from King's College NHS Foundation Trust.

Results
The preliminary results from December 2013 to July 2016 showed that 9,922 interventions were made for 981 residents, with 213 grade IV (Reversible harm or admission to hospital) and 2 grade V (Averted death or major permanent harm) with total net cost savings of £160K per annum by reduction in polypharmacy and implementing other cost saving strategies. Positive qualitative feedback was collected independently by the Collaboration for Leadership in Applied Health Research and Care (CLAHRC) North West London which showed the benefit of care homes pharmacists.

Conclusions
Following the end of the project in WL, a pharmacist has been commissioned to continue the service. The project ended in H&F in March 2017 with a view to embed the activities undertaken by the project team and outcomes achieved into current practice to sustain long term benefits.

Keywords: care homes, medicines optimisation, medication review, medicines reconciliation, multidisciplinary, proactive care.

Background

Medication safety in the care homes setting was highlighted in 2004 as an area of concern by the Department of Health (DoH).[1] The recommendations at the time included better communication, especially on transfer of care to prevent medication errors, training on safe administration of medicines, better documentation and more robust and integrated incident reporting system.

More recently, the NHS England (NHSE) Five Year Forward View (FYFV) recognised the need for enhanced health in care homes (EHCH),[2] with equal access to services to meet their health need. There are currently six vanguards delivering this care model across England. The EHCH framework was then developed consisting of seven core elements.[3] Stakeholders

can use this to work collaboratively across the different organisations to commission and deliver enhanced care to the care homes.

The National Institute of Health and Care Excellence (NICE) published guidance on Managing Medicines in Care Homes,[4] followed by the quality standards which provide measurable tools[5] to quantify improvement. The recommendations are in line with the DoH report but with emphasis on covert administration, medication review, safeguarding and medicines reconciliation.

The Royal Pharmaceutical Society (RPS) recently published a document to highlight the important role of pharmacist in care homes.[6] On average, 50% of elderly residents in care homes experience a fall each year, with 35% resulting in serious injury and 8% with fractures.[7,8,9] Pharmacists can undertake medication reviews to reduce falls to minimise untoward consequences e.g. pain, loss of independence, hospital admission. The project also employed two falls therapists to ensure that the physical and environmental factors leading to falls are addressed. Medication review should include the use of psychotropic medication. Audits have shown that psychotropic medicines are often inappropriately prescribed in care homes.[10,11,12] The Banerjee report showed that 26% of care home residents did not require the psychotropic medication prescribed with risk outweighing the benefit. One of the largest study on care homes by Barber et al showed that 70% of the care home residents experienced at least one medication error,[13] having a pharmacist in the care home to regularly review and rationalise regimen will help reduce this. One trial showed a 91% reduction in errors.[14]

A better and integrated communication system across the board has been highlighted. In the Care Home Use of Medicines Study (CHUMS), 50% of communication errors were made between care home and community pharmacy.[13] This can be reduced significant by having access to patient health records.

Medicines reconciliation (MR) has become a core process in the management of medicines since the guidance issued by NICE and the then National Patient Safety Agency (NPSA).[15] With 9 in 10 older people discharged from hospital experiencing a change to their medication[16] and a 4.4% increased risk of adverse drug reactions post-discharge with every alteration,[17] pharmacists are well placed to support MR in care homes, especially when there are discrepancies.

In the context of end of life (EoL) medicines, 53% of care home residents were symptomatic in their last days of life.[18] Pharmacists working in the care homes have a crucial role in facilitating access to anticipatory medicines by working closely with specialists and care home staff. This is also one of the recommendations from NICE.[4]

Research in 2010 estimated £300million medicines wastage each year in England, £24million disposed unused by care homes.[19] Pharmacists have a role in helping care homes to improve effective use of medicines. Savings are also made through interventions and medicine reviews. The pilots showed that medicines optimisation can make average savings of £184 per resident[20] through mainly stopping medicines.

The commissioning of services to care homes is complex as there is lack of clarity as to who should take responsibility. The

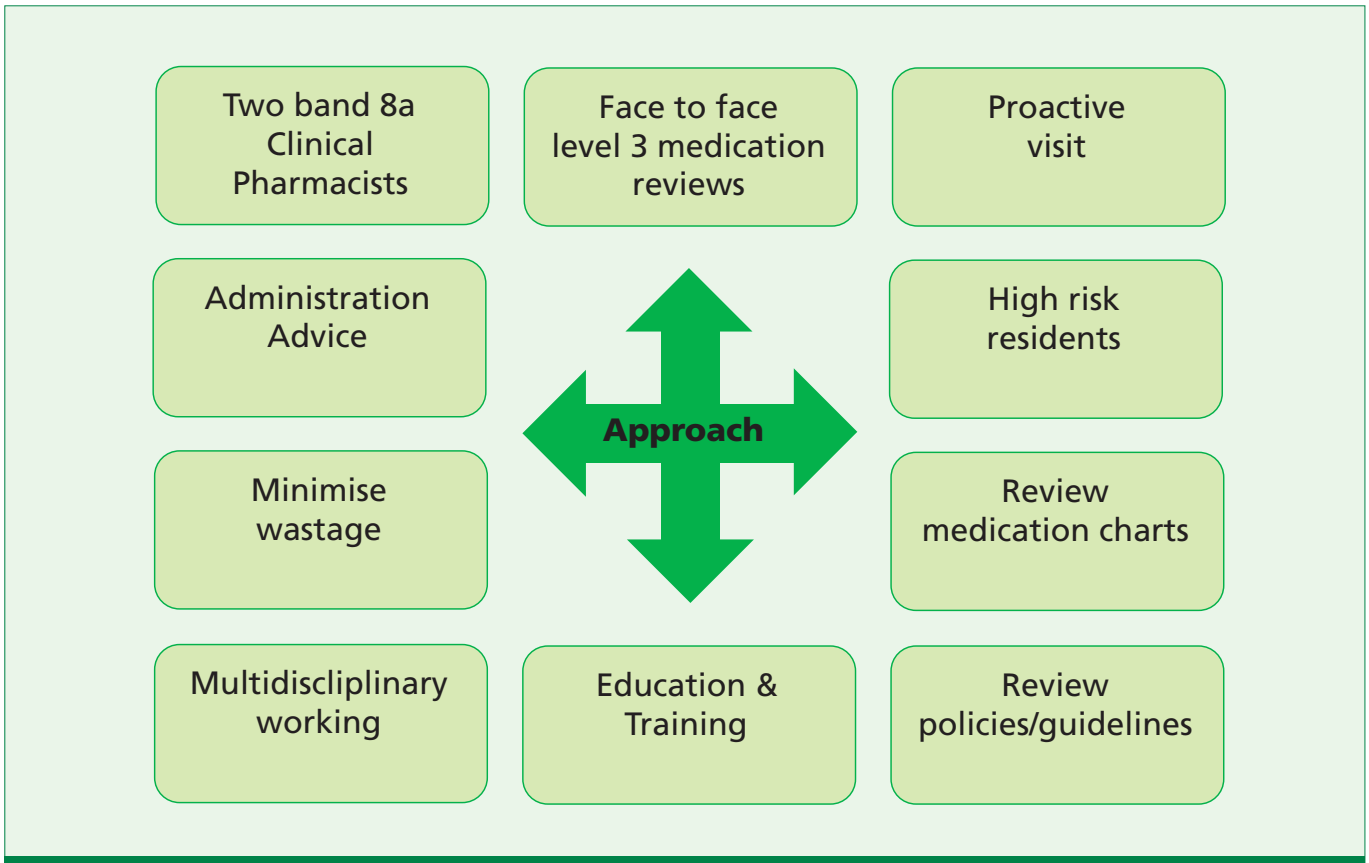

Figure 1: Activities undertaken by the Proactive Care Homes Pharmacists

outcome from the RPS summit[6] was that the accountability should rest with the Clinical Commissioning Groups (CCGs) to co-ordinate the care but with joint funding from health and social care and local authority. This is one of the core elements in the NHSE EHCH framework.[3]

In December 2013, CLCH was commissioned to deliver proactive, integrated and multidisciplinary care to approximately 1,000 care home residents. Care homes were targeted based on a local review of ambulance calls outs and audit of selected care homes showed inequity of provision and access to services; for example, care homes with limited GP input had a higher LAS call out for infection and breathing problems. Two Band 8a pharmacists and two falls therapists were employed to deliver the service across H&F and WL boroughs with the aim to improve access to care by delivering the standards as agreed for the project.

Methodology

Two band 8a clinical pharmacists proactively provided level 3 medication reviews[21] to patients in 20 care homes in H&F and WL from December 2013 to March 2017. A service level agreement including key performance indicators (KPIs) in which the pharmacy service was measured against was agreed.

This included:

- reducing medication errors
- initiation of bone health medication where appropriate
- polypharmacy review
- education and training of care homes on medicines management
- attending monthly multidisciplinary team (MDT) meetings.

Residents who were newly admitted/recently transferred to the care home, had recent falls or where carers had concerns were prioritised.

Activities undertaken by the pharmacists are shown in Figure 1. Any interventions that required action were communicated using the agreed medium to the designated GP. This included documenting in the care home communication book to be reviewed at each GP visit, emailing to the GP or directly actioned during the MDT/ward round.

Interventions made were graded for clinical significance by the care home pharmacists using a tool adapted from Kings College NHS Foundation Trust[22] and recorded onto a database for project evaluation. The interventions were analysed and reported to the project board on a monthly basis.

Referrals for review were made across the different disciplines as appropriate. This was identified during an MDT or by individual discipline.

Tailored medicines management training was delivered to individual care homes on site, usually in the form of presentation and case studies or exercises e.g. critical medicines and omitted doses, inhaler technique, transcribing. Any medicines-

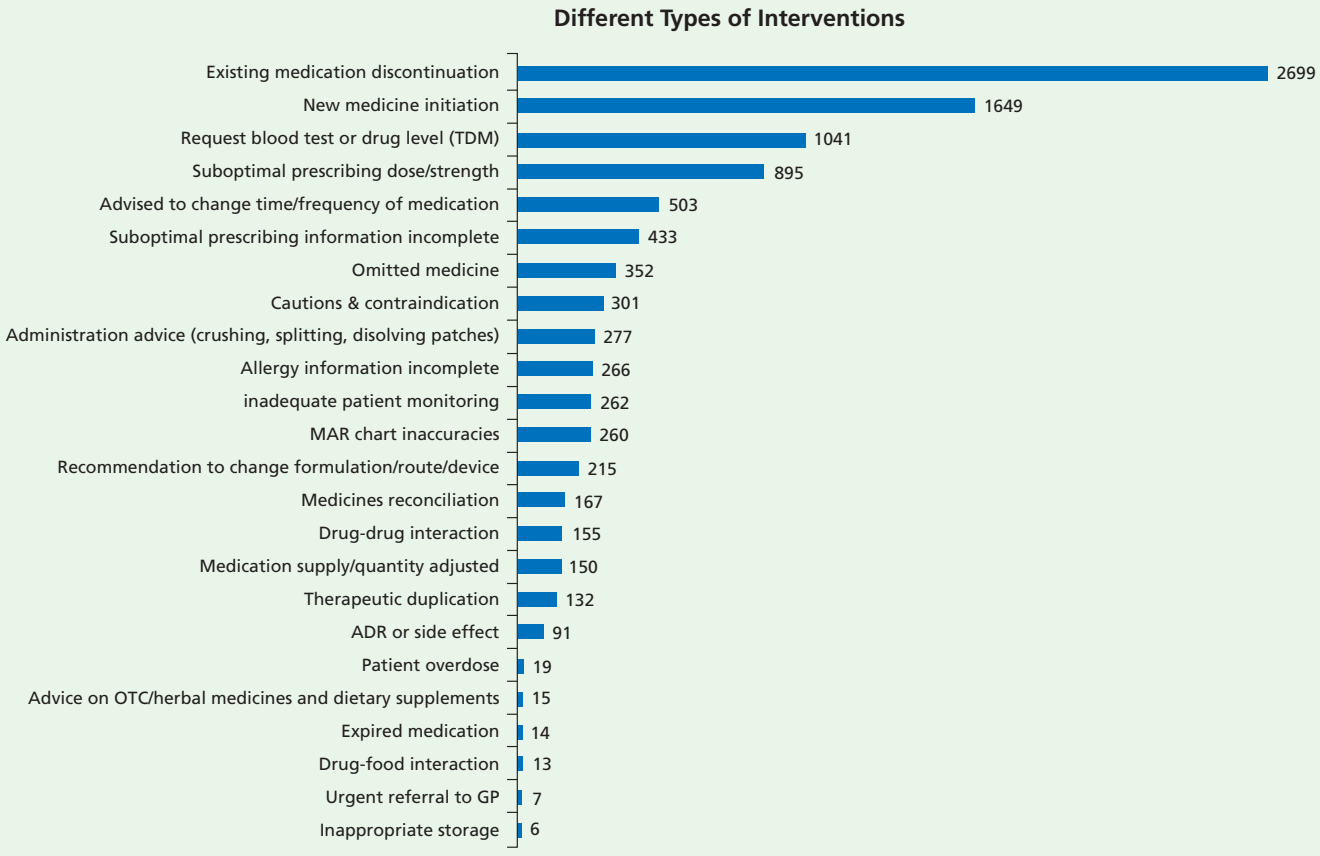

Figure 2: Number of different types on interventions provided by the Proactive Care Homes Pharmacists

related errors identified were highlighted to the carer/nurse, GP and manager of care home to be investigated with an incident form completed and with support provided to prevent further reoccurrence.

Data on number of falls, Accident and Emergency (A&E) attendances, hospital admissions and LAS callouts were manually collected by the project co-ordinator from the care homes accidents/incidence reporting systems.

Results

Preliminary results from December 2013 to July 2016 showed that the care homes pharmacists made 9,922 interventions for 981 care home residents; an average of 10 interventions per resident. 213 were grade IV (reversible harm or admission to hospital) and 2 were grade V (Averted death or major permanent harm), with 85% of recommendations accepted by the GP, 4% rejected and 11% awaiting to be confirmed in July 2016.

Figure 2 below shows a breakdown of the types of interventions made. The role of the care homes pharmacist was to optimise medication by, where appropriate, stopping unnecessary medication or medication which may be causing harm to patients and, where necessary, starting medication e.g. bone protection or anticoagulation for atrial fibrillation (AF). The most common interventions were recommendations to stop medication (27%) followed by initiating new medication (17%).

One of the KPIs was to ensure that bone health medication was prescribed for all residents, where appropriate. There was a 17% increase in bone health medication prescribed as a result.

In the same period, a net cost saving of 160K per annum was made. This cost takes into consideration medication that was stopped or started following medication review. This figure does not include hidden cost benefits from improved compliance with medication, reduction in omitted/delayed doses, adverse events or hospital admissions.

Wider project benefits were also demonstrated as shown in Table 1.

Qualitative data was also collected independently from the CLAHRC Northwest London between February and December 2014 from care home managers, GPs and residents and showed the benefit of the pharmacists.

Examples of interventions

- Grade IV Intervention: Patient discharged from hospital back to care home following seizure. During the hospital admission the hospital had withheld blood pressure medication due to low BP and had increased the antiepileptic medication dose. However, this was not actioned by the care home following discharge for two days and was identified by the pharmacist during their visit. This was actioned with feedback to the nurse, clinical lead and GP.
- Grade IV Intervention: Patient had been non complaint with his medication (antidepressant, antiplatelet and antihypertensive) for four months and was presenting with a low mood and profound self-neglect. The GP had requested for mental health team review for covert administration of medication. Pharmacist discussed compliance with resident who explained it was a result of swallowing difficulties following recent tooth extraction. Options were discussed with the patient who suggested taking the tablets with yoghurt to support swallowing. Six months later resident remained complaint with medication with improvement in mood.
- Grade V Intervention: Resident discharged from hospital with rivaroxaban. It was documented on the discharge letter that this was switched from warfarin. The resident was never on warfarin and it was not indicated. Rivaroxaban was stopped.

Challenges and overcoming them

One size does not fit all

One of the biggest challenges was to understand the operation of the different care homes. There are variations in terms of policies, documentations as they are managed by different providers. There are also different types of care homes e.g. nursing, extra-care which then dictates the scope and remit of the staff to perform certain tasks including handling of medicines (Table 2).

Communication

This included accessing timely and relevant information on the residents and communicating interventions to the GP for action. This has significantly improved since pharmacists have access to the GP practices system. There are still challenges in

Activities	Borough		Data period measured	Data period compared with
	H &F	WL		
Reduction in Falls	16%	3%	2015	2014
Reduction in Falls	39%	23%	January to June 2016	January to June 2014
Reduction in hospital admissions	35%		2015	2014
Reduction in LAS callouts	17%		2015	2014

Table 1: Outcomes of the Proactive Care Homes Project

accessing care homes record. This can be overcome by becoming familiar with the way each care home operates and speaking directly to the staff. Permanent care home staff are a good resource to provide important relevant background information on their residents.

Engagement

Whilst stakeholders were involved in how the project would be delivered right from the start, the project team faced some challenges in delivery of the service. This barrier mainly contributed to the increased workload on some services e.g. GPs who are already operating on full capacity. Engagement of care home staff was paramount as the project involved delivery of a new service that was unfamiliar to them, and having all the stakeholders are involved enabled the project to be more effective.

Who to see first

The care homes involved in the project had approximately 1,000 residents, so prioritising patients for medication review was necessary. Familiarising with each of the care homes and speaking with the managers highlighted aspects of medicines management that each home found challenging. The National Prescribing Centre (NPC) Guide to Medication Review[23] also provides a guide as to the 'at risk' groups to target first.

Commissioning

As a project, funding was an ongoing challenge. Fortunately, the project was able to run for over three years. Whilst there are examples of pharmacists making significant savings from reviewing and optimising medications, the services to care homes need to be fully commissioned.

Moving from Project to Practice

The Proactive Care Homes project ran from December 2013 to March 2017. In a time where resources are stretched within the NHS a cost effective model of working is essential. The project has achieved a number of key outcomes with benefit to both patients and the local health economy.

With net cost savings of £160K per annum made by the medicines management team alone, with additional cost savings from reduced hospital admissions, falls and LAS call-outs, there were clear financial benefits. This was a similar outcome to the Shine report.[20] There were also significant other benefits such as upskilling care homes staff through medication management training from pharmacists on various topics relevant to practice within the care homes. Additionally, falls prevention training was delivered by the falls prevention therapists within the project team. Residents also received more co-ordinated care as a result of individual case reviews and care plan formation through MDT meetings as well as ongoing review and referrals which were undertaken proactively.

One of the key aspects of this project was that services provided to the care home were proactive rather than reactive. Pharmacists were prioritising residents and reviewing medication in order to reduce falls risk, ensure that medications are being reviewed in a timely manner, used appropriately, optimised and have appropriate monitoring in place. Medication use was discussed with patients/carers where appropriate and recommendations discussed with the GP. The role of the pharmacist also involved supporting care homes in embedding good medicines management in practice through education and training as well as addressing any concerns that were highlighted e.g. omitted doses of medicines. It is difficult to quantify and assume direct correlation between pharmacist activities and project outcomes e.g. reduced hospital admissions and pharmacist interventions. However, studies have shown that up to 5-8% of hospital admissions are medicines related[24] of which up to 50%[25,26] are preventable therefore, potentially, the activities of the proactive care homes pharmacist may have more significant effect.

Areas of good practice by the proactive care home pharmacists included:

- regular and proactive clinical level 3 medication reviews[21]
- timely interventions e.g. review of new residents, medicines reconciliation on discharge
- early identification of medication errors or potential errors to prevent adverse effects
- presence in care homes provides prompts for resident referrals and raise medication issues
- regular audit e.g. omitted/delayed doses with feedback to care home staff

Task	Nursing Homes	Extra-care
Clinical i.e. staff	Yes	No
Monitoring (e.g. blood pressure)	Yes	No
Knowledge about medicines	Yes	Minimal
Crushing /covert administration	Yes	No
Medication administration (non-oral)	Yes*	No#

* some nursing homes do not administer intravenous medication but will give subcutaneous and intramuscular
# besides injectables, most extra-care care homes do not administer suppositories and patches.

Table 2: Nursing homes versus extra-care

- effective working relationship and communication with care home staff, community pharmacist, GPs, therapies, district nurses and other appropriate healthcare professionals
- care home staff upskilled and increased medicines management knowledge through planned and ad hoc education and training
- appropriate monitoring and counselling of residents to minimise adverse effects and improve patient experience and ultimately quality of care.

Prior to the project ending in WL in September 2016, the project activities were reviewed with stakeholders to explore what could be delivered through existing services and how to be delivered to ensure equity of access. The review also included acknowledging challenges, gaps in the project and resulted learning. Some of the areas for improvements included the need for care homes to have access to specialist community services in particular mental health nurses and standardising access to medical records to all GP practices which had care home residents to allow access to monitoring parameters as well as past medical history and medication lists.

With the role of pharmacists in primary care evolving there is a question whether project activities provided by the care home pharmacist could be undertaken by existing healthcare professionals or pharmacy services such as practice pharmacists, community pharmacists, GPs or care co-ordinators. However, this project has highlighted the benefit of dedicated care home pharmacists working within the care home setting locally to deliver the project outcomes as measured. Following review of project data and a stakeholder event in WL, a pharmacist and a falls prevention therapist were commissioned to undertake the activities of the project on an ongoing basis with review of embedding activities learnt from the project in existing services in H&F.

The CCG for the Gateshead vanguard funded a pharmacist and pharmacy technician to support all the care homes, whilst the East and North Hertfordshire CCG has a dedicated medicines management team which covers 60 care homes within the area.[3] It will be interesting to see how the CLCH project model compares to the vanguards model of care.

Declaration of interests

The authors having nothing to declare.

Acknowledgements

Thank you to Nicole Le Morgan and Chris Haigh, Proactive Care Homes Pharmacists, who significantly contributed to the project.

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