A domiciliary medication review service meeting an unmet patient need:

- Supporting patients to live independently at home
- Facilitating effective transfer of care
- Optimising medicines following discharge
- Contributing to the delivery of integrated care

Our pharmacist Medicines Support at Home (MESH) service.

Next Steps

If you would like to discuss our service model and how we could support you please contact a member of our team.

Prescribing Support Services

Pegasus House
90 Otley Road
Shipley
BD18 3SA

Windhill Green Medical Centre
2 Thackley Old Road
Shipley
BD18 1QB

T: 01274 299 536
F: 01274 592 305

practice.pharmacist@nhs.net

www.prescribingsupportservices.co.uk
Prescribing Support Services (PSS) has pioneered the development of primary care pharmacist services since 2000. After the success of our care home medicines management service in Bradford which produced a net saving of £200/resident and improved the quality of medication prescribing and monitoring, it was proposed that a similar service be set up for sheltered housing residents, the housebound and those at risk of harm from their medicines. A pilot in 2012 proved the concept of the MESH service, and it was rolled out across the Bradford CCGs in 2013. Our work has highlighted that there is an unmet need to reduce unnecessary prescribing, address medication adherence problems, address hoarding and waste of medicines and to support patients to manage their medication regimes, reducing risk of harm.

Local and national NHS priorities and strategies are integral to a domiciliary medication review service:

- Patient-centred care
- Promoting self-care to support independent living and reduce admissions to residential care
- Working as part of integrated care services
- Addressing risks for the fragile elderly
- Non-elective admissions avoidance
- Reducing inappropriate polypharmacy by appropriate deprescribing
- De-prescribing

By visiting patients in their own homes, it is possible to get a clear picture of how they are managing their medicines, and implement strategies to help optimise their medicine taking that fit to the individual’s need.

The MESH service provides a review service in patients’ homes by:

Stage 1 - Identifying patients at risk, medicines reconciliation, and detailed clinical medication review.

Stage 2 - Visit to the patients at home to find out how medicines are actually being taken, provide adherence support, and optimise medicines management with the patient, carers and relevant healthcare professionals.

The MESH pharmacists do a detailed and comprehensive medication review, work with patients to optimise their regime, and communicate with family, carers, GP practices, community pharmacists, and other healthcare professionals to ensure continuity, reduce unnecessary polypharmacy, and minimise waste of medicines and thus valuable NHS resources.

PSS is able to work with health and social care commissioners to develop and implement a fully managed, cost-effective pharmacist led service model, optimising the benefits from medicines and reducing the risk of harm.


Prescribing of medication is the most common form of medical intervention, with 46% of the UK population being prescribed at least one repeat medication.

Older people are more likely to be taking regular medications, with around 75% of those aged 60 years and older, and over 90% in the over 70s taking at least one prescribed medicine.

Numbers of medicines taken by patients have been increasing with over 5 for the 60-69 year olds, and up to 7.1 for the over 80s. However, studies estimate that up to 50% of medicines are not taken as prescribed, and medicines are implicated in 5-17% of hospital admissions, of which up to 80% could be avoided.
"An excellent service that is patient centred and holistic. It also feeds well into safety of medicines and the cost-effective prescribing agenda.”

GP feedback

The role of the MESH pharmacist providing domiciliary medication review

The MESH service is an emerging model of care delivery which utilises the skills of pharmacists in helping GP practices and primary care providers:

- Identify and address medication adherence problems
- Identify and address waste of medications
- Identify unnecessary polypharmacy and facilitate deprescribing where appropriate
- Ensure the medication regime is fit for purpose

Using pharmacists in this way addresses an unmet need; clinical medication review in someone’s own home gives a unique opportunity to find out what people are really doing with their medicines. Medication issues can then be addressed, and regimens can be tailored to fit in with patients’ lives and daily routines. No other healthcare professional provides this service.

“Very helpful, excellent and informative. The pharmacist went through from start to finish about medication and I now know what I am taking. I found it helpful to know what the various drugs are for!”

Patient feedback
MESH pharmacists are experienced clinical pharmacists specialising in medication review to optimise benefit from medicines, reduce the risk of harm, and reduce cost.

Key MESH interventions which help patients and save money:

1. **Medication review**
   - A clinical and technical review of medicines
   - Addressing medicine-taking behaviour
   - Addressing issues relating to use of medicines in the context of their clinical condition

2. **Reducing the risk of harm from medicines**
   - Assessing risk of interactions and adverse effects.
   - Ensuring adequate monitoring
   - Providing medicines information and advice for both patients and prescribers

3. **Deprescribing and reducing polypharmacy**
   - Simplification of the medication regime where possible
   - Ensuring that all medications are appropriate and effective
   - Stopping unnecessary medicines reduces cost

4. **Concordance and compliance support**
   - Discovering how patients really take their medicines at home
   - Exploring patient understanding of their condition, treatment and health beliefs
   - Involving the patient to come to a mutually agreed treatment plan

5. **Medicines information and advice**
   - General advice to patients
   - Contribution to clinical education and PLT
   - Practice medicines information service
   - Staff training and development

6. **Reduce waste medicines accumulation**
   - Compliance aids do not always ensure patients manage medicines successfully.
   - Medicines can be reviewed before starting a compliance aid to reduce inappropriate medicines and frequency of dosing where possible.

7. **Reduce non-adherence of medicines**
   - Visiting patients’ homes can help to discover and address excess medication ordering and non-adherence
   - High cost medicines can accumulate unused in patients homes e.g. inhalers and sip feeds

- High cost medicines can accumulate unused in patients homes e.g. inhalers and sip feeds
- Compliance aids do not always ensure patients manage medicines successfully.
- Medicines can be reviewed before starting a compliance aid to reduce inappropriate medicines and frequency of dosing where possible.
- Visiting patients’ homes can help to discover and address excess medication ordering and non-adherence.
- High cost medicines can accumulate unused in patients homes e.g. inhalers and sip feeds.
- Compliance aids do not always ensure patients manage medicines successfully.
- Medicines can be reviewed before starting a compliance aid to reduce inappropriate medicines and frequency of dosing where possible.
- Visiting patients’ homes can help to discover and address excess medication ordering and non-adherence.
- High cost medicines can accumulate unused in patients homes e.g. inhalers and sip feeds.
- Compliance aids do not always ensure patients manage medicines successfully.
- Medicines can be reviewed before starting a compliance aid to reduce inappropriate medicines and frequency of dosing where possible.
- Visiting patients’ homes can help to discover and address excess medication ordering and non-adherence.
- High cost medicines can accumulate unused in patients homes e.g. inhalers and sip feeds.
- Compliance aids do not always ensure patients manage medicines successfully.
- Medicines can be reviewed before starting a compliance aid to reduce inappropriate medicines and frequency of dosing where possible.
- Visiting patients’ homes can help to discover and address excess medication ordering and non-adherence.
- High cost medicines can accumulate unused in patients homes e.g. inhalers and sip feeds.
- Compliance aids do not always ensure patients manage medicines successfully.
- Medicines can be reviewed before starting a compliance aid to reduce inappropriate medicines and frequency of dosing where possible.
- Visiting patients’ homes can help to discover and address excess medication ordering and non-adherence.
- High cost medicines can accumulate unused in patients homes e.g. inhalers and sip feeds.
Clinical case study: patient stories

1. Excess medicines in the patient home

The excess medicines discovered in this patient’s home were causing distress and confusion. Two different pharmacies were supplying the patient, one with a compliance aid, and one as a 28 day supply and the accumulation in the pantry was only revealed following a domiciliary medication review by the MESH pharmacist. The value of the inhalers alone in the picture is over £250.

How the MESH service tackles this regular recurring problem:

• Patient/family/carer education when excess medicines removed.
• Working with patients and community pharmacies to run down stocks and implementing a system for evaluating if more medicines are needed.
• Removing items from or adding messages to repeat templates indicating excess stock at home and indicating the date the item next needs to be ordered.

How the MESH service tackles this type of problem:

A District Nurse had removed 2 black bin bags full of untouched compliance aids and so asked the MESH pharmacist to visit.

2. Compliance aid (e.g. Dosette Box) problems

A MESH pharmacist can support GP practices to achieve improved use of medicines:

• Up to 50% of medicines are not taken as intended by the prescriber1.
• Between 5 to 8% of all unplanned hospital admissions are due to issues related to medicines (this figure rises to 17% in the over 65s2).
• Medicines waste is a significant issue; reported as £300 million in primary care alone, about half of which is avoidable. In addition an excess of £500 million per annum is the estimated opportunity cost of the health gains foregone because of incorrect or inadequate medicine taking.
• Medicine safety data indicate that we could do much better at reporting and preventing avoidable harm from medicines3.
• Multi-morbidity and inappropriate polypharmacy in frail elderly people can be problematic4. These patients need regular review of their medicines to ensure that all medicines prescribed, or bought over the counter, are safe and appropriate.
• There is often a communication breakdown at the point of discharge from hospital resulting in prescribing errors. These errors can lead to damage to health, much time wasted for administrative and clinical teams in primary care alone, about half of which is voidable. In addition an excess of £500 million per annum is the estimated opportunity cost of the health gains foregone because of incorrect or inadequate medicine taking.
• From the patient perspective, with increased focus on patient-centred care, there is much more to be done to allay concerns about polypharmacy and address the lack of support with medicines taking. Pharmacists are specifically trained to be experts in the optimal use of medicines in multi-morbidity. These skills ideally complement the role of GPs and practice nurses and add to the range of knowledge available in GP surgeries to manage increasingly complex care.

How the MESH service tackles this type of problem:

• Informing GPs or respiratory nurses of non-adherence or poor technique.
• Educating patients on inhaler technique or switching devices to one they can use.
• Providing written instructions to aid memory.
• Follow up visits to check corrections are being maintained.
• Involving relatives and formal or informal carers in supporting patients in using their inhalers.

Example

Of 251 patients using inhalers, 73% had technique corrected and 20% had the inhaler device changed.

3. Difficulty in managing inhalers

Of 251 patients using inhalers, 73% had technique corrected and 20% had the inhaler device changed.

Example

Inhaler technique checked with placebo turbo whistle – unable to make the placebo inhaler whistle indicating insufficient inspiration effort to activate the turbo haler – patient switched to MDI plus Aerochamber.

Example

Patient visited and discovered Seretide and Ventolin inhalers scattered around the house. Collected together there were 20 inhalers all half used. Patient stated never needed salbutamol and rarely used Seretide – both on repeat and being issued and delivered each month.

How the MESH service tackles this type of problem:

• Making links with patient relatives, community pharmacy, social care and GP surgeries to ensure good communication around medication issues and adherence support for the patient.
• Practices now encouraged to ask the MESH pharmacist to perform a medication review before starting a compliance aid where service capacity allows.

4. PSS waste poster being developed to put up in GP surgeries/pharmacies (initial design example attached).

5. MESH pharmacists’ contact details supplied to community pharmacists and GP receptionists if they suspect medication over-ordering or potential hoarding.

6. Patient/family/carer education when excess medicines removed.

The MESH service is self-financing, based purely upon in-year savings from medicines optimisation and reduction in waste.

A MESH pharmacist can support GP practices to achieve improved use of medicines:

The MESH service

Business case

Since the start of the MESH service in 2013, data reports continue to show:

- 2.5 interventions recommended per patient reviewed.
- £140 annualised savings per patient from recommendations actioned and supply/waste problems solved.
- Reduced GP and other HCP time, and reduced risk of harm for patients is a cost saving that has not yet been quantified.

For each £100,000 spent on service provision, £250,000 annualised drug cost savings have been realised.

The MESH service model

The pharmacist works with individual practices to identify those patients appropriate for review, which may include those patients who are housebound, recently discharged from hospital (particularly those patients with frequent admissions), exposed to polypharmacy or are known to the practice as high risk patients. Also, the team takes referrals from community pharmacists, social services, hospitals, interface and primary care voluntary organisations where a domiciliary medication review is required.

A face to face clinical medication review with the patient, after a review of the medical record:

- Ensures correct medicines are being prescribed, dispensed and taken by the patients
- Identifies and reduces waste from the prescribing of unnecessary medicines or dispensing of medicines that are not being taken
- Assists patients with medicine adherence issues to take their medicines correctly
- Provides a bespoke medication management service for individual patients.

Mobilising your service

PSS is able to support health and social care commissioners with developing and mobilising a MESH service. We are happy to work with commissioners to pilot the service and work collaboratively with secondary care colleagues for example discharge or reablement team teams.

Our mobilisation plan includes working with local partners and stakeholders to develop an integrated service model to:

- Establish the local commissioning strategies and planning forums.
- Develop a directory of key local services.
- Engage with practices.
- Map self-help or community support services to enable the team to provide a holistic support service to patients.
- Establish how to communicate any change in operational delivery to local partners and patients.
- Assess what policies and processes need to amendment.
- Define the critical success factors to ensure the new service is successful.

PSS: An overview

As an established NHS provider we are able to work with practices and primary care providers to implement a patient centred service solution which adds value to each primary health care team and their patients.

Our expertise includes:

- Experienced senior management team with experience across primary and secondary care as well as NHS commissioning expertise
- Core pharmacist team supported by effective clinical governance system inc CQC requirements
- Experience of working with all the main GP clinical systems
- Operational procedures that meet the high standards of corporate and information governance
- Track record of delivering innovative service solutions for example supporting the practice to develop anticoagulation services
- Service mobilisation experience including the recruitment of new teams
- Strong academic links with a number of our directors serving in University posts
- We encourage all of our clinical staff to complete post graduate education as well as attaining an independent prescriber qualification
- Support with CQC compliance - repeat prescribing policy, administration, storage and disposal of medicines policy etc