

Medicines adherence and waste

This bulletin focuses on medicines adherence and waste. It provides guidance, advice and examples of good practice for medicines optimisation teams to develop local initiatives and campaigns. This bulletin is part of a PrescQIPP webkit which includes tools, such as a project planning document, campaign posters, leaflets, animation and media messages.

Recommendations

- Due to the complexity of the causes of medicines wastage, a multifaceted and long-term approach across all healthcare sectors is required.
- An extensive social marketing and communication strategy is essential.
- Encourage engagement and partnership working with other third sector organisations such as Age UK, Healthwatch, voluntary groups and local councils.
- Engage with:
 - » The local fire service to distribute promotional materials within their organisation and also to be integrated into their home fire check visits sometimes called “Safe and Well visits”. This supports the distribution of promotional materials to a wider cohort of people.
 - » Local school children to promote key message to prevent medicines waste, via competitions, talks and distributing promotional materials.
 - » Community pharmacies and GP practices (receptionists and prescription clerks) to improve systems and processes for ordering repeat prescriptions.
 - » GP receptionists and prescription clerks in the form of support and training, and upskilling to improve knowledge when issuing repeat prescriptions.
 - » Local community services and multidisciplinary groups. For example, district nurses and care agencies with the aim to reach those patients who are complex and housebound.
 - » Patient participation groups.
- Consider service redesign and process change for ordering repeat prescriptions. See the PrescQIPP adherence and waste webkit for examples: <https://www.prescqipp.info/info/maw>
- Implement the recommendations on optimising medicines use. These are discussed in the National Institute for Health and Care Excellence (NICE) guideline ‘Medicines Optimisation: the safe and effective use of medicines to enable the best possible outcomes’.¹ See the National Guidance section of this bulletin for further details.
- Promote the use of medication passports developed by the Imperial College Healthcare NHS Trust.² Paper copies or a downloadable app for iPhone/iPad can be obtained through this link: <http://clahrc-northwestlondon.nihr.ac.uk/resources/mmp> These resources are available free of charge.
- Consider using the supporting guide by East and South East England Specialist Pharmacy Services ‘Reducing medicines waste throughout the patient journey’ as it demonstrates how to engage with:³
 - » Primary care to improve the repeat prescription ordering process.
 - » Secondary care to improve medicines reconciliation throughout the patient journey.
 - » Care Homes to ensure ongoing medicines optimisation.
- The Royal Pharmaceutical Society document, ‘Keeping patients safe when they transfer between care providers - getting the medicines right’ recommends:⁴
 - » Improving the quality of hospital discharge communications when medications are stopped, started or changed helps to reduce waste/avoid repeat ordering of stopped medicines.

Background

Medicines optimisation is an integral part of the health care system. Medicines prevent, treat or manage many illnesses or conditions and are the most common intervention in healthcare. Optimising the use of medicines is crucial to improving clinical outcomes for patients and providing financial benefits to the NHS. Due to the current demand on NHS services, it is becoming increasingly important to maximise the use of medicines. One vital area that needs extensive improvement is ensuring patients obtain optimal benefit from their prescribed medicines. This can be done by improving adherence and avoiding unnecessary wastage of medicines.

What is the scale of medicines waste?

Unnecessary wastage of medicines has a huge burden on NHS financial resources. Research performed by the York Health Economics Consortium (YHEC) and The School of Pharmacy, University of London in 2010 documented the scale and the causes of medicines waste.⁵ In brief, the report stated that:

- Gross annual cost of prescription medicines waste in primary and community care is £300 million per year in England.
- This sum represents approximately £1 in every £25 spent on primary care and community pharmaceutical and allied product used.
- £90 million worth of unused medicines are retained in people's homes at any one time.
- £110 million worth of medicines are returned to pharmacies for disposal, over the course of a year.
- £50 million worth of NHS supplied medicines to care homes are disposed of unused.

This study also estimates that less than 50% of medicines waste is preventable in a cost effective way. The average English primary care organisation seeking further medicines waste reductions will be unlikely to realise more than £0.5 million net per annum. That is between £1-2 per head of population served.

There is evidence of considerable public and professional concern about NHS medicines wastage. Reductions in its scale and costs would not only be financially desirable, but might also be politically popular. Yet the research presented in section five of the report by YHEC/University of London indicates that, in welfare terms, significantly greater returns could be generated by better medicines use, as opposed to waste reduction. Improving adherence in medicines taking can improve health outcomes. The estimated cost due to incorrect medicines taking in just five therapeutic areas is in excess of £500 million per annum.

What are the general causes of medicines wastage?

Poor compliance with prescribed medicines is one of the biggest causes of medicines waste. Up to 50% of patients worldwide do not take their prescribed medicines as recommended.⁶ It has also been estimated that between 30% and 50% of medicines prescribed for long term conditions are not taken as intended.¹

Other factors that contribute to the cause of medicines waste include:

- Inadequate repeat prescribing management at GP practices or pharmacies.
- Poor management of repeat prescriptions by patients.
- Lack of ownership by the patients regarding their medication.
- Patients and GP practice staff lacking awareness regarding pharmacy services for example Medicines Use Reviews (MUR) and New Medicines Service (NMS).
- Preconceived ideas (from patients) around taking prescribed medicines.
- Ordering medicines on prescription that are no longer required.
- Patient has died and unused medicines are wasted.
- Medication being changed or stopped – due to ineffectiveness or side effects, or the condition resolves.
- Changes in patient health conditions, therefore new treatments are needed.

- Failure by healthcare professionals to support taking prescribed medicines.
- Poor medicines reconciliation at the interface between NHS care providers.
- Inadequate medicines management procedures at residential or care homes.
- Patients feeling frightened or worried about asking for help regarding taking their prescribed medicines.

Campaigns that address some of these issues should lead to improved medicines adherence and therefore a reduction in wastage.

National guidance

The NICE document 'Medicines Optimisation: the safe and effective use of medicines to enable the best possible outcomes' identifies key areas for improvement and developing a patient centred approach to taking medication.¹

The key recommendations from the document are:

- Implement systems for identifying, reporting and learning from medicines-related patient safety incidents.
- Having robust medicines-related communication systems in place when patients move from one care setting to another.
- Performing medicines reconciliation:
 - » This is the process of identifying an accurate list of a person's current medicines and comparing the actual medicines with the current list, recognising any discrepancies and documenting any changes thereby resulting in a complete list of medicines, accurately communicated. The medicines reconciliation process will vary depending on the care setting that the person has just moved into - for example from primary care into hospital or from hospital to a care home.
- Performing a medication review:
 - » This can have several different interpretations and there are also different types which vary in their quality and effectiveness. In this NICE guidance a medication review is defined as a structured, critical examination of a person's medicines with the objective of reaching an agreement with the person about treatment, optimising the impact of medicines, minimising the number of medication-related problems and reducing waste.
- Using patient self-management plans:
 - » These can be patient-led or healthcare professional-led.
 - » They aim to support people to be empowered and involved in managing their condition.
 - » Different types of self-management plan exist and they vary in their content depending on the needs of the individual person.
 - » In this guideline self-management plans are structured, documented plans that are developed to support a person's self-management of their conditions using medicines.
- Using patient decision aids in consultations involving medicines:
 - » Many people wish to be active participants in their own healthcare and to be involved in making decisions about their medicines.
 - » Patient decision aids can support healthcare professionals to adopt a shared decision-making approach in a consultation. This is to ensure that patients and their family members or carers (where appropriate) can make well-informed choices that are consistent with the person's values and preferences.
- Using clinical decision support systems:
 - » This software is a component of an integrated clinical IT system providing support to clinical services, such as in a GP practice or a secondary care setting.
 - » These are used to support healthcare professionals to manage a person's condition.
 - » In this guideline the clinical decision support software relates to computerised clinical decision support which may be active or interactive at the point of prescribing medicines.

- Employing medicines-related models of organisational and cross-sector working:
 - » The introduction of skill-mixing of various health and social care practitioners to meet the needs of different groups of people has led to various types of models of care emerging across health and social care settings.
 - » Cross-organisational working further provides seamless care during the patient pathway when using health and social care services. The type of model of care used will be determined locally based on the resources and health and social care needs of the population in relation to medicines.
 - » Organisations should consider a multidisciplinary team (MDT) approach to improve outcomes for people who have long term conditions and take multiple medicines (polypharmacy).
 - » Organisations should involve a pharmacist with relevant clinical knowledge and skills, when making strategic decisions about medicines use, or when developing care pathways that involve medicines.

The NICE guidance was underpinned by The Royal Pharmaceutical Society. 'Medicines Optimisation: Helping patients to make the most of medicines' document.⁷ This document gives four guiding principles, which are:

1. Aim to understand the patient's experience.
Aim to have an open and continued dialogue with patients/carer regarding choices and experiences. Also recognise experiences may change overtime.
2. Evidence based choice of medicines.
Ensure that the most appropriate choice of clinically and cost effective medicines (informed by the best available evidence base) are made that can best meet the needs of the patient.
3. Ensure medicines use is as safe as possible.
The safe use of medicines is the responsibility of all professionals, healthcare organisations and patients, and should be discussed with patients and/or their carers. Safety covers all aspects of medicines usage, including unwanted effects, interactions, safe processes and systems, and effective communication between professionals.
4. Make medicines optimisation part of routine practice.
Health professionals routinely discuss with each other and with patients and/or their carers how to get the best outcomes from medicines throughout the patient's care.

The essence of these four principles is to have a patient-centred approach and improve outcomes. The document encourages healthcare professionals to think about these principles to change practice.

The ultimate goal of both of these key documents is to give best practice advice for healthcare professionals. By implementing these guidelines, those patients receiving suboptimal benefit from their prescribed medicines will have hopefully improved their adherence and this in turn should reduce medicines waste.

Published medicines waste and adherence case studies

A case study of a Clinical Commissioning Group (CCG) initiative in the NHS England pharmaceutical waste reduction document showed that reviewing repeat prescriptions can reduce waste and medicines-associated costs.⁸ The CCG achieved a £3.05 saving for every £1 invested. These reviews were performed by Medicines Optimisation Pharmacists based in GP practices and linked with the local CCG. There is the potential to save over £100 million per annum if this is scaled-up nationally, this can be through reviewing repeat prescriptions at the point of issue or in the clinic setting. The benefit of undertaking these reviews would be: improved medicines optimisation, reduced medicines wastage and improved quality of prescribing. The common theme of each of the schemes in the NHS England document are improving patient outcomes. This document also contains other case studies which are also relevant to improving medicines waste and improving adherence, which are outlined on the next page.

- East Staffordshire “What a Waste” focuses on:
 - » Patient centred medication optimisation clinics.
 - » Medicine wastage prevention strategies.
- Nene “CHAPs” focuses on:
 - » Medicines optimisation using Pharmacist led interventions for care home residents.
 - » This project achieved £122 per patient per annum. There is a potential saving of over £40m per annum if scaled nationally.
- Northumberland “SHINE” focuses on:
 - » Medicines optimisation using Pharmacist led interventions for care home residents.
 - » This project achieved £184 per patient per annum. There is a potential saving of over £60m per annum if scaled nationally.
- Northumberland “Care Home Medication Review Pilot” focuses on:
 - » Medicines optimisation using Pharmacist led interventions for Care Home residents.
 - » This project achieved £150 per patient per annum. There is a potential saving of over £50m per annum if scaled nationally.
- Ipswich/East Suffolk “SIP Feeds” focuses on:
 - » Implementation of tighter controls to the prescribing, dispensing and administration of SIP Feeds.
 - » This project achieved 23% reduction in SIP feed spend. There is a potential saving of about £35m per annum if scaled nationally.
- Sheffield “Bulk Prescribing project” focuses on:
 - » Management and control of PRN medicines within care homes through the introduction of bulk prescribing.

The Department of Health ‘Action plan for improving the use of medicines and reducing waste’,⁹ advises commissioning a “not dispensed scheme” through community pharmacies.

Examples of many of successful projects on medicines waste and adherence can be found in the PrescQIPP webkit: <https://www.prescqipp.info/info/maw> These include marketing campaigns, improving repeat prescription systems, GP receptionist training and up-skilling, medication reviews, polypharmacy and deprescribing, and secondary care interface projects.

All of the above schemes provide a good starting point for CCGs who wish to undertake a project to reduce medicines waste. They can be built upon and support the evidence base needed in a business case to secure funding for implementation of this work.

Summary

- The cause of medicines waste is multifaceted and therefore too complex to define one single cause. Medicines waste and adherence projects/initiatives need to be multi-layered and long term in their approach. Standalone posters and leaflets campaigns will not change behaviours. An extensive social marketing and communication strategy is essential and partnership working across many organisations and stakeholders is encouraged.
- Implementing the NICE guidance on medicines optimisation¹ and using shared good practice and case studies to build up a business case to support investing in medicines adherence projects should reduce waste overall.
- Review the good practice examples and supporting resources available within the PrescQIPP medicines waste and adherence webkit: <https://www.prescqipp.info/info/maw>

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Additional PrescQIPP resources



Data pack



Patient letters, posters, postcards, animations, checklists, social media messages, planning tools.

Available here: <https://www.prescqipp.info/info/maw>

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Contact help@prescqipp.info with any queries or comments related to the content of this document.

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