Managing polypharmacy: teamwork in general practice

J O H N  M I N S H U L L  A N D  N I N A  B A R N E T T

Regular medication review has an important role in preventing patient harm from inappropriate polypharmacy. This article discusses how effective teamwork among healthcare professionals, including GPs, pharmacists and nurses working in general practice, can optimise patient outcomes.

In 2017, the World Health Organization (WHO) launched its third Global Patient Safety Challenge, Medication Without Harm, with a summary target for international health systems to reduce the level of severe, avoidable harm caused by medication by 50% within five years.¹ WHO specifically highlighted that polypharmacy should be the target of work to standardise processes, including looking at regular medication review.¹ This has long been seen as a priority in the UK as part of medicines optimisation, as established by the Royal Pharmaceutical Society,² and in England as set out by NICE.³

Medication review (see Table 1) has long been a part of the care provided to patients taking multiple medicines. Since 2016, it has been embedded in the NICE guideline on medicines optimisation, which encourages healthcare professionals to consider carrying out a structured review of medicines for some groups of people, such as those taking multiple medicines.³ NICE left it for individual organisations to decide who would be the most appropriate healthcare professional to take on this task. Important in deciding this is knowledge about processes for managing medicines, knowledge of therapeutics and communication skills.³ This offers scope at a commissioning level to consider the local needs of the population and availability of different healthcare groups to determine whether services need to be developed or incentivised to meet this need.

WHO quoted “four or more medicines” as the threshold for polypharmacy,¹ which is very specific and establishes the bar relatively low. This approach differs from that taken by, for example, NICE, who did not establish a polypharmacy threshold to trigger a review.³ The number of patients taking four or more medicines that any GP practice has registered is likely to be very high; a study conducted in 2010 estimated that one in five patients in Scotland were taking five or more medicines.⁴ Although only patients taking inappropriate polypharmacy will need

### Table 1. Definitions of medication review²,²²,²³

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<tr>
<th>NICE</th>
<th>Pharmaceutical Care Network Europe</th>
<th>Royal Pharmaceutical Society</th>
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<td>• 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.</td>
<td>• A structured evaluation of patient’s medicines with the aim of optimising medicines use and improving health outcomes. This entails detecting drug-related problems and recommending interventions.</td>
<td>• 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.</td>
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<tr>
<td>Should include all medicines the patient is taking, including prescribed medicines, over-the-counter (OTC) medicines, complementary medicines and supplements.</td>
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more detailed interventions, all patients taking polypharmacy would need to be reviewed in order to accurately identify inappropriate cases. A team approach across the entire health service will be inevitable to ensure all patients are supported. This is particularly true given the current crisis in general practice resulting in declining numbers of GPs, and is consistent with the NHS Long Term Plan intention of interdisciplinary working. At a national level, there is already a contractual agreement that patients identified as living with severe frailty will receive an annual medication review as part of their clinical review.

Conducting an annual medication review in 80% of people taking four or more medicines or receiving repeat medication was in the past a core part of the Quality and Outcomes Framework (QOF) for GPs. This required that at least a ‘level 2’ medication review be conducted (a review of medicines alongside full clinical notes) by a competent person. The type of medication review envisaged by NICE requires that it be conducted with the aim of “reaching an agreement with the person about [their] treatment”, which implies that the person should be present during the review.

**Teamwork**

There are many different healthcare professionals involved in supporting people to take their medicines, for example GPs, pharmacists, nurses and geriatricians (see Figure 1). Each healthcare profession brings a slightly different understanding of the patient and their medicines to the encounter, though it is important that each is held to the same standards.

General practice, as the gatekeeper to and co-ordinator of people’s medical needs, has access to the holistic view of a person’s medicines-related needs. Historically, general practice has met medication review needs in line with the QOF and available best practice. The practice will remain central to any co-ordinated approach to delivering medication review, but workload pressures and increasing complexity of patients’ treatments may mean the practice pharmacist or GP may not always be the most appropriate healthcare professional to provide the review.

Pharmacists work in a range of patient-facing roles: hospitals, community pharmacies, general practice and care homes. As experts trained in the safe and effective use of medicines, they will have a key role in delivering people to take their medicines (see Table 2). There are over 1000 pharmacists working in general practice in England, with further funding available for clinical pharmacists to be recruited to Primary Care Networks. A key role of this workforce is holding consultations with patients to discuss medication needs. On top of this, there are at least 400 pharmacists working in care homes. Pharmacists working in the types of organisation listed will be able to use their own knowledge and skillsets (independent prescribing qualifications, advanced therapeutic knowledge obtained through postgraduate qualifications, experience operating at consultant pharmacist level) to manage more complex patients in line with their competency. Clinical pharmacists have been highlighted as vital for the delivery of patient care, in line with the NHS Long Term Plan.

Clinical pharmacologists and care of the elderly physicians provide medical support to patients with multimorbidity and ensuing polypharmacy. The ambition of the healthcare system should be that it routinely harnesses the knowledge of these experts to support management of medicines in patients with highly complex needs.

An important element in being able to measure how well the healthcare system provides a medication review service to as many eligible patients as possible is the way it can harness each professional group to contribute in their unique way. Centralised collection of data on each medication review conducted will allow the system to report that it is addressing polypharmacy in this way to WHO; at the moment there is no routine recording of medication review conducted on any patient. The system therefore needs to consider how it can ensure these professional groups are remunerated for their contribution to the challenge.

**Pay for performance**

The idea of pay for performance is to ensure healthcare providers are incentivised for providing higher quality care. This is in contrast to payment mechanisms that reward a provider for delivering more work regardless of the quality.

The NHS in England operates under a complex mix of contractual arrangements, which pay different professional groups in different ways to provide a service. General practice, for instance, largely relies on a mixture of capitation payment and QOF to provide care to their patients. Hospital consultants, conversely, are salaried employees of an
NHS Trust. Community pharmacies are paid based on the number of Medicines Use Reviews or New Medicines Scheme consultations they conduct. This difference affects how the health system would ‘pay for performance’ in relation to delivery of medication review.

Under the Long Term Plan, there is an expectation that the whole of England will be covered by Integrated Care Systems by April 2021, which will further embed the practice of commissioners and providers working together to achieve joint objectives. Until then, there remains a range of pay for performance schemes in operation in the NHS, which may also contribute to achieving this WHO patient safety challenge ambition.

Commission for Quality and Innovation
A Commissioning for Quality and Innovation (CQUIN) scheme is agreed between the commissioner and any provider operating under the NHS Standard Contract. Schemes should focus commissioners’ attention on achieving high quality and innovative care from providers, with particular attention in the 2019/20 scheme of incentivising widespread adoption of recognised good practice. The scheme can be worth up to 1.25% of an organisation’s income.

This scheme could be valuable for roll out of medication review provided in different settings (including acute trust, mental health trusts and care homes). At present there are no CQUINs that focus specifically on conducting medication review, yet there is opportunity to incentivise organisations to harness the skills of clinical pharmacists to achieve this.

Quality Premium
Designed to reward CCGs for commissioning quality services, the overall Quality Premium scheme has a large total pot (£5 per head of population). A national indicator for co-ordinated delivery of medication review could be used to utilise clinical pharmacists from across healthcare settings to take a team approach: the contribution of general practice, acute care and other providers can be pooled for the overall achievement of the CCG. CCGs are in a position to commission a joined up, health economy-wide provision of medication review services. Currently there is no national indicator for this.

Pharmacy Quality Scheme
A national pay for performance scheme aimed exclusively at community pharmacy, the Pharmacy Quality Scheme is designed around community pharmacy being rewarded for delivery of high-quality, clinically effective and responsive care to patients. This recent addition to the English pay for performance arena has seen participation by 90% of pharmacies.

The only indicator in this scheme looking at clinical effectiveness involves identifying patients obtaining excessive numbers of asthma reliever inhalers and referring them for a review with an appropriate healthcare professional. This pay for performance scheme could be used to harness the power of community pharmacy to identify patients with specific medicines-related risk factors and to participate in the system-wide, co-ordinated delivery of medication review.

Table 2. Areas of focus and expertise of GPs and clinical pharmacists

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<tr>
<th>GPs</th>
<th>Clinical pharmacists</th>
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<tr>
<td>Diagnosis focus</td>
<td>Focus on choice of medicines, formulation and adherence</td>
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<tr>
<td>Disease focus</td>
<td>Focus on combining evidence base and person-centred care in relation to medicines</td>
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<tr>
<td>Understanding diagnosis and disease: pathways of care</td>
<td>Understanding of the medicines pathway (development, production, supply, storage, dispensing, adherence, waste)</td>
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<tr>
<td>Diagnosis and treatment focus</td>
<td>Medicines safety focus</td>
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<tr>
<td>Linked to medical profession</td>
<td>Linked to pharmacy profession</td>
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<tr>
<td>Expertise in solving complex problems</td>
<td>Growing expertise in solving complex medicines-related problems</td>
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<tr>
<td>Experience and expertise in onward referral</td>
<td>Developing expertise as prescriber role increases</td>
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<tr>
<td>Expertise in evidence-based medicine use</td>
<td>Expertise in evidence-based medicine use</td>
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<td>Patient focus</td>
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Quality and Outcomes Framework
The QOF is a well-recognised scheme through which NHS GP practices are remunerated specifically for delivering high-quality care. When it was first established, the QOF was the world’s largest pay for performance scheme for health. Medication review was included in the English QOF until 2011.

QOF payments are made exclusively to GP practices; therefore, reintroducing medication review to QOF may increase GP demand for them, but would not incentivise staff outside the practice (in hospitals) to increase delivery. The recent review of the QOF commissioned by NHS England identified a benefit in paying for improved collaborative work through this mechanism. The QOF contract includes payments for conducting reviews in specific cohorts of patients, which may include reviewing their medication and co-ordinating with a specialist, for cancer and for rheumatoid arthritis, but future iterations of the scheme could take this further to focus specifically on collaborative delivery of medication review, including by clinical...
pharmacists employed in general practice or care homes.

**Conclusion**

Ensuring that all patients who may be at risk of harm from taking inappropriate polypharmacy receive a medication review is a large, but important, task. Collaboration between health and social care across sectors and professions will be important to ensure patients are seen by an appropriately skilled person to meet their unique needs. Optimising skill mix according to complexity of care, as illustrated in Figure 2, requires the use of the increasing variety of healthcare professionals reviewing medicines, and making the most of social prescribing. This may improve services to patients against a backdrop of decreasing GP numbers.

Service redesign to address polypharmacy, which includes the establishment of clinical pharmacists in general practice and care homes, is already a key part of NHS policy. The continued use of clinical pharmacists will be fundamental to meeting future patient care needs. Additionally, commissioning arrangements for Primary Care Networks specifically identify the importance of employing clinical pharmacists to conduct medication review for patients with complex polypharmacy.

Increasing the number of appointments available to patients for medication review as a result of service redesign is required, alongside appropriate training for healthcare professional to deliver care that recognises the different levels of complexity in relation to patients’ medication needs. This will rely on appropriately commissioning services, and could potentially be achieved through appropriate use of pay for performance schemes such as CQUIN, Quality Premium, QOF and Pharmacy Quality Scheme, or may be achievable through Primary Care Network arrangements.

The ambitious WHO target to review all patients on polypharmacy is nothing new for GPs, who previously undertook medication review as part of the QOF. There is literature to suggest that these reviews were not always completed with the thoroughness that is required to achieve medicines optimisation. However, now there is an established and growing workforce of clinical pharmacists who can support this by providing detailed medication reviews to help prevent patients from medication harm.

The workload is large, but pooling of resources in an efficient manner will facilitate delivery and provide assurance that patients are achieving the best outcomes from their medicines.

**Figure 2. Hierarchy of input from different individuals (patient, carers and healthcare professionals) in response to increasing medicines complexity**

**References**

8. Barnett N. Opportunities for collaboration between pharmacists and clinical pharma-

Declaration of interests
John Minshull: London Medicines Information Service indirectly receives funding from NHS England via Specialist Pharmacy Service. London Medicines Information Service, and JM personally, provide services to NHS England, including secretariat services to NHS England Regional Medicines Optimisation Committee. Nina Barnett has delivered presentations and helped to produce educational materials for various companies, including Pfizer, Napp, Gilead, Chugai, Roche, i2i (Soar Beyond), Morph Consultancy, Healthcare Conferences UK and Pharmacy Management.

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