

# Medicines Optimisation in frail, older adults with Multiple Long Term Conditions

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## Abstract

Frail older people are the most vulnerable of patients with multiple long term conditions (mLTCs). Reducing polypharmacy (deprescribing) is an important component of medicines optimisation in such patients. A personalised, holistic, multi-disciplinary, flexible and co-ordinated approach needs to be used to address the whole system and improve care.

The Guy's and St Thomas' NHS Trust (GSTT) Community Health Services model, which applies the four principles of medicines optimisation in practice, is described. This includes the involvement of an Integrated-care Clinical Pharmacist (ICP) receiving referrals from health care practitioners and undertaking domiciliary medication reviews and co-ordinating medicines related care for frail older people identified as having medicines related risks.

**Keywords:** medicines, optimisation, frail, multiple long term conditions, holistic, polypharmacy

## Introduction

Frail older people with multiple long term conditions (mLTCs) should be considered as a priority for medicines optimisation.

The existence of mLTCs, which refers to the co-existence of two or more LTCs, is increasingly becoming the norm in primary care. It is not exclusive to older people but more prevalent in that group.

Frail older people are the most vulnerable of patients with mLTCs. They take many medicines (polypharmacy) and are at higher risk of adverse drugs effects (ADEs). In addition, they are less resilient to ADEs, which can lead to rapid deterioration in their health status, frequent hospital admissions and longer recovery times.

The safe reduction of polypharmacy (deprescribing) is an important component medicines optimisation, which can have a particularly high impact on patient experience, health outcomes and costs<sup>1,2</sup> in frail older people. Practitioners often see deprescribing as rationalising the use of medicines by research evidence (either practitioner specialist knowledge or use of a validated tool such as the **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 (STOPP/START). However, to ensure that medicines optimisation is effective in this cohort, deprescribing must be carried out in a holistic and patient-centered way to include everything else going on with the patient.

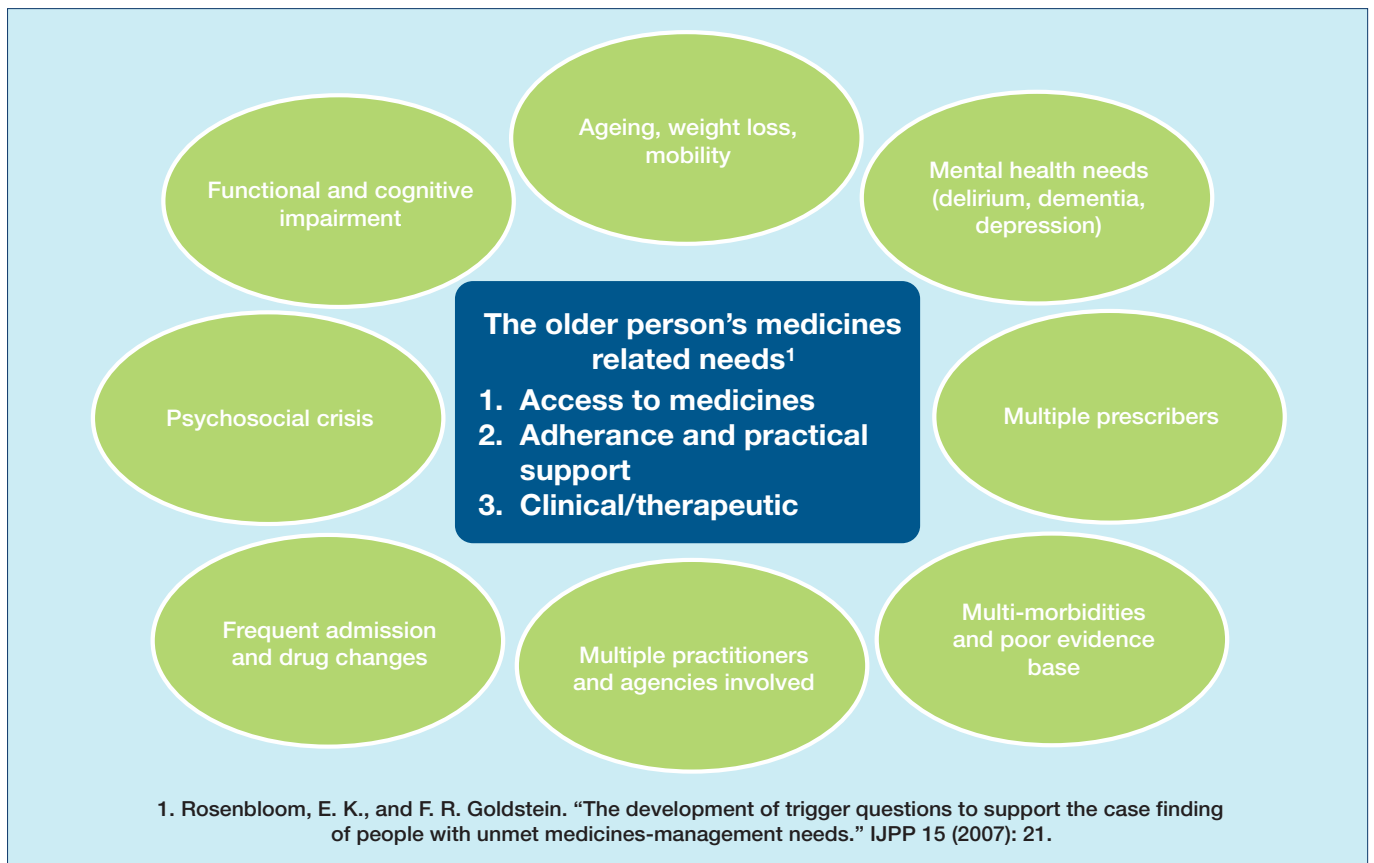
## Medicines Optimisation

Medicines optimisation utilises an outcome focused approach to safe and effective use of medicines that takes into account the patient's values, perception and experience rather than just

clinical indicators or biochemical markers such as target blood pressure. It is in accord with the definition of evidence based practice,<sup>3</sup> which gives equal considerations to patients' values and preferences, best research evidence and clinician expertise. In frail older people, taking this approach is imperative as the research evidence for prescribing is not particularly robust. Many patients will rationalise their use of medicines but, because of the increased pill burden in people with mLTCs, it is a particularly common occurrence. Frail older people constantly rationalise and make choices about what medicines to take.

These issues are important to all people but, in frail older people and those with mLTCs, they become exaggerated for many reasons. The net consequence becomes problems that might be ignored in others but which, in frail older people, need to be addressed through medicines optimisation.

Every encounter we have with these patients should be seen as a means to achieve a positive outcome. Outcomes should reflect what matters most to patients. Meaningful outcomes include improved quality of life, independence, physical functioning, emotional wellbeing, dignity, choice and control.<sup>4,5,6</sup> This way of working requires a paradigm shift in how we have traditionally assessed the effectiveness of therapeutic interventions. As a start, we can individually proactively seek opportunities in day to day practice to link medicines use with these patient centred outcomes e.g. thinking beyond pain scores to the patient's ability to perform daily activities of their choice when taking analgesics or beyond prescription 'synchronisation' to relieving patients' anxieties about running out of medicines for symptomatic relief when setting up repeat prescribing processes.



**Figure 1: Impact of frailty on medicines use**

One major challenge with optimising medicines use in this patient cohort is addressing the impact of the complex, multivariate, interconnected factors associated with frailty on how patients access, adhere to and respond to the therapeutic effects of medicines. A more holistic approach to care should take into account other common risk factors such as falls and psychosocial distresses (Figure 1).

medical, functional and psychosocial circumstances. Current interventions that seek to resolve discrete parts in isolation are less likely to work than those which offer a personalised, holistic and co-ordinated approach to address the whole system. For example, focusing on prescribing or medication reviews without due attention to how medicines are administered or ensuring adequate communication between the patient and relevant practitioners can lead to poor adherence and therapeutic failures (Figure 2).

Consideration must be given to the combined effects of the interactions, synergies and conflicts between these factors on therapeutic outcomes for each individual according to their

**Male patient, lives alone, six LTCs, fairly independent**

- Referred by specialist diabetic nurse; long term non-adherence (4 doses taken in 2 months)
- 2 hospital admissions - Acute decompensated CHF
- T2DM: BG 33mmol/L. HbA1c 12.9%
- Maximum oral antidiabetic drugs and refusing insulin
- Poor knowledge about medicines and conditions due to poor engagement
- Overwhelmed by pill burden and negative effects on social life (17 doses/day)

**Outcome following clinical pharmacist visits and interventions**

- 5 medicines, 6 doses, 1 PRN
- Improvement in patient's perception of his well being, and biochemical markers
- 0 to 50% adherence, conditions stable and no worsening of symptoms
- Continuity of care provided by local community pharmacy liaising with GP



**Figure 2: The need for adequate communication**

Although there is limited research on effective interventions for this complex group, emerging evidence shows that incorporating a holistic personalised, multidisciplinary approach into ongoing care that is flexible, improves care<sup>7,8,9</sup> Also, strategies that ensure continuity of care and care co-ordination with case finding, patient centred assessments and joint care planning are successful.<sup>7,8,9</sup>

There is general consensus that tackling polypharmacy is a big challenge and a range of guidance has been made available in recent times to help address the issue. To assist practitioners, a seven step guide based on recently published evidence and current practice has been developed to provide a patient-centred, structured approach to deprescribing (safe withdrawal of medicines).<sup>10</sup>

## Guy's and St Thomas' NHS Trust (GSTT) Community Health Services model

The GSTT model of care, which is now established in practice and has been subject to a favourable evaluation, successfully applies the principles and strategies described so far (Figure 3) to deliver all four aspects of medicines optimisation in community settings. It draws on different pharmacists' skill sets and matches the older person's need to the appropriate level of expertise to build capacity and sustainability.

The GSTT model involves an Integrated-care Clinical Pharmacist (ICP) receiving referrals from health care practitioners and undertaking domiciliary medication reviews for frail older people identified as having medicines related risks. The ICP jointly agrees a care plan with the patient and takes the lead to coordinate and monitor its implementation by liaising with the GP and others. Once stable, the patient is transferred their local community pharmacist for ongoing care to optimise their medicines use. Evaluation of the model after usage with over 400 patients has shown that, as a result, patients have a better understanding of their medicines and experienced better outcomes. There has been a reduction in polypharmacy and medicines waste as well as improved pharmacist: pharmacist working and multidisciplinary working. Findings and resources from the initiative have been showcased and disseminated widely to support other across NHS organisations.

All medicines related care starts with and focuses on the patient. The level of engagement, patient priorities and goals

are established early on in the encounter. They are given the essential information they need to engage in discussions. Simple and open questions that invite them to share their values, perspective and experience from taking medicines and communicate their priorities are asked. For example, "Tell me how you get on with your medicines", "Explain to me how your medicines fit in with your life". Relevant information is gathered and shared at all stages through close collaboration of pharmacists with GPs, referrer and relevant others.

Processes have been developed to ensure that vulnerable patients are proactively identified as part of routine care and referred appropriately to pharmacists. Case-finding criteria go beyond specific diseases, specific drugs or number of drugs to those centred on the patient needs or experiences, such as increasing frailty or vulnerability during care transitions, significant changes to life situations or medicines regimen, new diagnosis or rapid deterioration in health status.

Face-to-face reviews in the patient's home environment with sufficient time to address mLTCs allow the consultations to focus the patient's needs and not just a list of drugs. The assessment tools are designed to consider the whole range of patient's medicines needs and decisions about deprescribing incorporate evidence based practice. Interventions are considered in the context of the patient's overall treatment goals and functional abilities. The pharmacists act as patient advocates, helping to manage their anxieties on various aspects of medicines use and navigating them through the system. The Community Matron co-ordinates all aspects of the patient's care but, where patients are identified as being vulnerable or at high risk to medicines related problems, the pharmacist takes the lead in co-ordinating these aspects. Feedback from Community Matrons was obtained during the evaluation process through telephone interviews. This indicated that, while they are experienced practitioners and prescribers in their own right, the nature and complexity of medicines use in this cohort takes them beyond their expertise and they highly valued the pharmacist as the expert to resolve medicine issues. Similar feedback was obtained from GPs.

The care plan aligns the patient (and carers) needs with specific agreed outcomes. The pharmacists take the lead to ensure that the changes, communication and monitoring needed to implement the care plan happen in a safe and timely manner. Through referral and signposting they ensure that patients have access to the range of tailored interventions from local agencies to support medicines

### Optimising Medicines Use in mLTCs

- Patient centred and holistic medication review and assessments
- Structured approach to deprescribing
- Care coordination and continuity of care led by pharmacists
- Multidisciplinary working and shared records
- Improved communication during transfer of care

**Figure 3: Principles and strategies to optimise medicines use in mLTCs**

## Final thoughts

By applying the general principles and strategies that have been shown to improve outcomes for frail older people, pharmacists in all settings can successfully lead the delivery of medicines optimisation in this patient cohort. However, it will require a radical change from current models of care that are more suited to patients with single long term conditions or taking specific medicines.

## Declaration of interests

Honoraria: Pharmacy Management Regional Roadshows (London/Manchester), May 2015.

## References

1. Oliver D, Foot C, Humphries R. Making our health and care systems fit for an ageing population. Kings Fund. 2014.
2. Kings Fund. Transforming our health care system: Ten priorities for commissioners. 2013.
3. Sackett D. Evidence-based Medicine: How to Practise and Teach EBM. 2002.
4. Department of Health. Independence Well-being and Choice. Our vision for the future of social care for adults in England. 2005.
5. Department of Health. Our health, Our care, Our say: a new direction for community services. Health and social care working together in partnership. 2006.
6. Department for Communities and Local Government. Strong and Prosperous Communities. 2006.
7. Smith SM, Soubhi H, Fortin M et al. Interventions for improving outcomes in patients with multimorbidity in primary care and community settings. *Cochrane Database Syst Rev.* 2012 Apr 18;4:CD006560. doi: 10.1002/14651858.CD006560.pub2.
8. Ross S, Curry N, Goodwin N. Case Management. What it is and how it can best be implemented. Kings Fund. 2011.
9. Royal College of General Practitioners. Managing multi-morbidity in practice... what lessons can be learnt from the care of people with COPD and co-morbidities? 2013.
10. NHS Specialist Pharmacy Services. A patient centred approach to polypharmacy: a process for practice. 2015. Available at: [http://www.medicinesresources.nhs.uk/en/Download/?file=MDS3NDc3NDY7L3VwbG9hZC9kb2N1bWVudHMvQ29tbXVuaXRpZXMvU1BTX0VfU0VfRW5nbGFuZC9QYXRpZW50IENlbnRyZWQgQXBwc m9hY2ggdG8gUG9seXB0YXJtYW50IChzdW1tYXJ5J5IGZvc m1lcmx5IHNI dmVulHN0ZXBzKV9KdWx5IDlwMTUgVnMgMiAoTkplChMTY kgKEtTKS5wZGY\\_.pdf](http://www.medicinesresources.nhs.uk/en/Download/?file=MDS3NDc3NDY7L3VwbG9hZC9kb2N1bWVudHMvQ29tbXVuaXRpZXMvU1BTX0VfU0VfRW5nbGFuZC9QYXRpZW50IENlbnRyZWQgQXBwc m9hY2ggdG8gUG9seXB0YXJtYW50IChzdW1tYXJ5J5IGZvc m1lcmx5IHNI dmVulHN0ZXBzKV9KdWx5IDlwMTUgVnMgMiAoTkplChMTY kgKEtTKS5wZGY_.pdf).