# Addressing Polypharmacy in the Frail Older Person – the WIDE Review

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## Introduction

People are living longer, with more long term conditions, are referred to more consultants who feel compelled to prescribe more medications according to disease specific guidance. We need to treat the whole patient, not their individual conditions. We need to look at the **WIDE**R view.

A **WIDE** Review is:
**W**holistic (establishes the patient's priorities),
**I**ntegrated (links with primary care providers), involves
**D**eprescribing (to improve outcomes and quality of life) and
**E**valuation (of risk and benefits of each medication).

Patients are more amenable to deprescribing conversations if they understand the rationale (potential for harm) and are involved in the deprescribing plan.[1]

Poor coordination of transitions from secondary to primary care, has been shown to put patients at increased risk of medication errors, adverse drug events, and readmissions.[2,3] Improving this, particularly for older patients with complex care needs, has been identified as an international policy priority as it has been shown to reduce mortality, hospital readmissions, and number of readmission days. [4,5]

The adverse outcomes associated with the STOPP criteria are well established, including adverse drug events, emergency admissions or emergency department visits, and poorer quality of life.[6,7]

Frailty is a distinct health state resulting in vulnerability [8] and the risk of being prescribed an inappropriate medication is doubled if you are frail.[9]

## Aim

To develop and pilot a patient led, pharmacist facilitated deprescribing service to improve the quality of life for frail patients and the appropriateness of their medication regimes.

## Methods

The pilot study was conducted over an eight week period in Portiuncula University Hospital from Monday 21st January to 15th March 2019.

**Inclusion Criteria for Intervention and Control group:**

- Patients ≥ 65 years of age, admitted to PUH under 2 participating consultants.
- Prescribed ≥ 6 regular medications prior to admission
- Identified as frail (by a score ≥3 on the PRISMA 7 frailty screening tool)

Patients were allocated to the control or intervention group depending on which medical ward they were admitted to.

**Control Group** patients received the current standard of clinical pharmacy care in PUH

**Intervention Group** patients also received a WIDE Review

The pharmacist reviewed the patient's clinical parameters: co-morbidities (including continence, cognition, falls risk, swallow issues, renal function and bowel function). Each of the patients medications were screened, using the STOPP/START criteria.

The WIDE review appointment took place in the presence of a nominated carer/family member if appropriate. The potential risks and benefits of each medication were discussed and the patient and carer/family member were asked if they felt that the drug was effective or likely to be effective for them (patient decision aids were used when appropriate), if they felt that they were experiencing side effects and if they wished to continue the medication.

All of the relevant information was entered into the WIDE findings sheet which was used to calculate the Medication Appropriateness Index (MAI) score.

| Patient#:3 Medication | Indicated? NO=3 | Effective? NO=3 Cost-Effective? NO=1 | Correct dose? NO=2 Acceptable Duration? NO=1 | Correct directions? NO=2 Practical directions? NO=2 | Drug-drug interaction? Yes=2 Duplication? YES=1 | Drug-condition interaction (Side effects) YES=1 | TOTAL MAI if >3 in-appropriate | OUTCOME | MAI on discharge |
|---|---|---|---|---|---|---|---|---|---|
| Lansoprazole 30mg daily | N=3 STOPP Criteria A1, F2 | Yes | No=2; N=1 | Yes | No | No | 6 | Patient and her daughter feel it is no longer needed. Consultant agrees and is happy to stop. Reduced to 15mg daily during inpatient stay then stopped. | 0 |
| Quetiapine 12.5mg BD | N=3 regular use not currently indicated STOPP Criteria D9 | Yes | No=1 | Yes | Yes=2 increased risk of sedation with fentanyl, mirtazapine, quetiapine, pregabalin | Y=1 can worsen dysphagia; can increase risk of falls; increased risk of cerebrovascular adverse events in the dementia population; patient complaining of drowsiness during inpatient stay "caused by the half tablet taken twice a day" STOPP Criteria K2 | 7 | Reviewed by POLL during inpatient stay. Recommended reduce to PRN use only. For review again by POLL in the community to reassess agitation | 3 |

The WIDE findings sheet was used to frame the discussion with the patient's consultant. Agreement to deprescribe, start or dose reduce certain medications was reached.

At the time of discharge, the deprescribing plan was signed by the pharmacist & communicated to the patient +/- family member, their GP & community pharmacist.

**WIDE Review Deprescribing plan**

Dear Doctor/Pharmacist

Please find below the outcome of the WIDE Review for your patient ##

| Medication Change | Reason and Future Recommendations |
|---|---|
| Atenolol 100mg daily **stopped** | For use in hypertension, beta-blockers are not first line agents. ## was having episodes of bradycardia. Beta blockers tend to be poorly tolerated in elderly patients and increase the risk of falls. We slowly reduced the dose of atenolol during ## inpatient stay and it is now stopped. |
| Donepezil 10mg daily **stopped** | ## was having episodes of bradycardia so donepezil was stopped. ## will be followed up by POLL in the community. |
| Quetiapine 12.5mg BD **reduced** to as required use | Quetiapine can worsen dysphagia, increase the risk of falls, increase the risk of cerebrovascular adverse events and increase the risk of sedation with fentanyl and mirtazapine. ## reported feeling drowsy so the dosage was reduced to 12.5mg nocte. Following a POLL review during inpatient stay, it was changed to PRN use only. POLL in the community are to reassess for agitation. |
| Lansoprazole 30mg daily **stopped** | No evidence based clinical indication. Monitor for heartburn, regurgitation, epigastric pain, dyspepsia. If this occurs, consider restarting. No such symptoms during inpatient stay on the lower dose of lansoprazole or when it was stopped. |

## Results

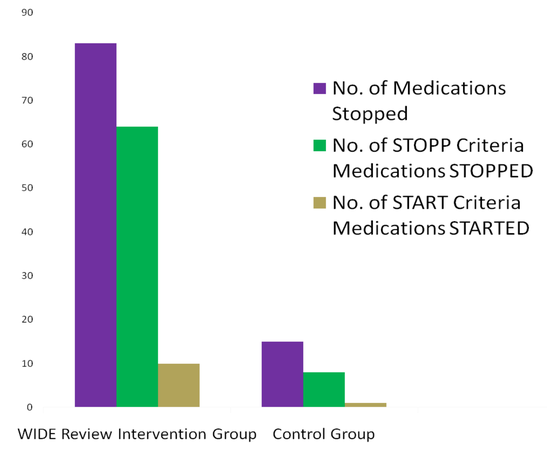
In the intervention group,
83 regular medications were stopped,
across 36 different BNF categories. The top 10 were:

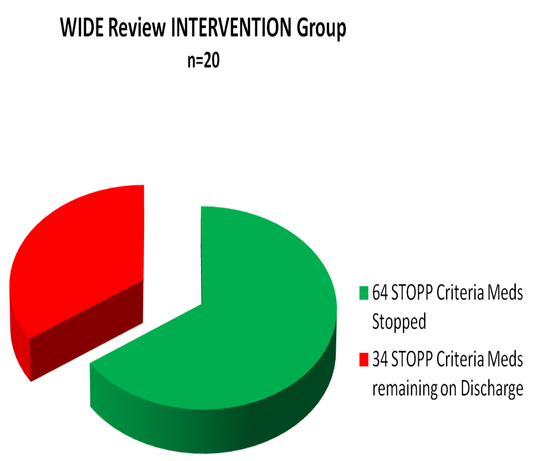
23 Medications were dose reduced,
across 12 different BNF categories. The top 4 were:

| BNF Category of Medication Stopped | #Stopped |
|---|---|
| 1.3.5 Proton Pump Inhibitors | 7 |
| 7.4.2 Drugs for Urinary Frequency & Incontinence | 5 |
| 2.5.5 Renin-Angiotensin System Drugs | 4 |
| 2.2.1 Thiazides & Related Diuretics | 4 |
| 6.6.2 Bisphosphonates | 4 |
| 2.6.2 Calcium Channel Blockers | 3 |
| 2.9 Antiplatelets | 3 |
| 4.1.2 Anxiolytics | 3 |
| 9.1.2 Drugs Used in Megaloblastic Anaemias (folic acid) | 3 |
| 10.1.4 Gout & Hyperuricemia | 3 |
| **BNF Category of Medication Dose Reduced** | **#Dose Reduced** |
| 1.3.5 Proton Pump Inhibitors | 6 |
| 1.6.2 Stimulant Laxatives | 3 |
| 2.4 Beta-Adrenoceptor Blocking Drugs | 3 |
| 4.1.1 Hypnotics | 3 |

## Results

- 40 patients were enrolled in the pilot study, 20 intervention and 20 control. The age, sex, length of stay & readmission rate were broadly similar between the two groups.
- Total MAI score was reduced from 769 to 276 (64%↓) in the intervention group.
- 65% of STOPP criteria were addressed in the intervention group versus 12% in the control.
- 62% of START criteria were addressed in the intervention group versus 5% in the control.
- 98% of the WIDE Review recommendations were upheld on 6 month follow up.




**€1,000 investment of hospital pharmacist time realised annual cost savings of €9,000**

## Discussion

A WIDE review aims to optimise patients' medications in accordance with their wishes. Although the intervention did succeed in reducing the total number of medications and PCRS expenditure, this was not the main objective. The appropriateness of the prescribing is more important. The results showed a very significant difference in the incidence of STOPP criteria on the discharge prescriptions of the intervention versus control groups. The overprescribing of proton pump inhibitors was clearly highlighted by our study as it was in a recent Irish study. This Irish study also found that hospital admission increased the incidence of STOPP criteria prescriptions.[10] Contrary to this, the number of STOPP criteria prescriptions reduced by 12% in our control group. This may be because same consultants were involved in both groups and discharge prescriptions were checked by pharmacists. However our study shows that the WIDE review was necessary to realise a dramatic (65%) reduction of the existing STOPP criteria. A dramatic (64%) decrease in the MAI score which incorporates clinical judgment and individual circumstances was also achieved. A higher MAI score has been shown to be associated with a lower quality of life.[11]

It could be argued that deprescribing should take place in primary care but many medications are often initiated in secondary care. Doctors have expressed a fear of changing a patient's prescription, even when they know it may not be appropriate for that patient.[12] Busy working environments, lack of time for prescription surveillance and lack of specific geriatric pharmacotherapy training all serve as barriers to optimal prescribing for older patients.[12] Hospital specialists have been called to "take the lead in deprescribing".[13]

There is ongoing work to take the fear out of deprescribing in the frail. The SENATOR and OPERAM studies are looking at optimising therapy to prevent avoidable hospital admissions in the multimorbid elderly and ADAPT is looking at the actual incidence of these in Ireland. It is hoped that their findings will facilitate a significant step towards evidence-based prescribing guidance for older multimorbid patients.

Prescribers have a duty of care to discuss with patients the risks and benefits of continuing a medication based on patient-specific factors. As deprescribing becomes the norm, practitioners who fail to consider it may be considered negligent.[14]

## Conclusion

WIDE Reviews with their patient-centred approach, deliver a better quality of care to the frail more cost-effectively. The National Clinical Care Programme for the Older Person states that all frail patients should receive a medication review from a pharmacist.

We believe that this should be a WIDE Review.

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