A person centred approach for reducing drug burden in complex patients with multimorbidity

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Introduction: Strategies developed to manage chronic diseases have created a growing burden for patients with multimorbidity. Fractured care and achieving evidence based specific targets for multiple diseases in a single patient leads to a considerable treatment burden for a patient with already impaired capacities because of frailty, disability and other social or familiar burdens. Minimally disruptive medicine seeks to tailor treatment regimens to the realities of the daily lives of patients instead of tailoring patient’s lives to treatment.

An interdisciplinary team of doctors, nurses and pharmacists at Consorci Sanitari de Terrassa developed a standardized methodology for drug review process focusing not only on disease related issues, but also individual health goals prioritization, patient values, preferences and capacities.

We applied this methodology to a group of complex and polimedicated patients and prospectively evaluated the reduction of drug burden and its persistence.

Practice change and methods

Design. Multicentre controlled intervention

Setting and subjects. 112 chronic complex patients on ≥8 medications, identified by 15 different healthcare teams in three different healthcare organizations.

Intervention

- Multidimensional clinical, social, cognitive, emotional evaluation that includes a “brown bag” medication review including medication adherence problems and its causes.
- Personalized care plan agreed between patient/caregiver and healthcare team, for drug treatment alignment with new care goals.
- Progressive implementation of drug regimen changes.
- Persistence of medication changes monitoring after 3 months.
Outcomes measured

Drug burden at baseline and after medication review implementation:

- Number of medications per patient
- Extreme polipharmacy (patients on ≥8; ≥10 or ≥15 drugs)
- Medication regimen complexity index (MCRI)
- Number of Potentially inappropriate medications (PIM) according to STOPP START criteria.

Results: 112 patients got a geriatric multidimensional assessment. Multidisciplinary person centered medication review was agreed for 109 patients. Five patients died before changes could be implemented, and 98 of 104 patients whose medication regimen was reviewed, were alive 3 months after the implementation of medication changes.

Population characteristics and preferences: 64% female, mean age was 81.2, on average they had 5.3 comorbidities, and a modified Charlson index of 6.2, 19% had advanced chronic disease, and a Barthel Index of 65.6. Moderate or severe depression was present in 41.7%, 37% had a severe cognitive disorder, 89% had increased risk for falls and 62% of caregivers experienced intense burden. Main patient/caregiver goal was reducing pain or other symptoms for 49.6%, living as long as possible for 34.5%, and remaining independent for 13.3%. Lack of treatment adherence was acknowledged by 32.4%.

At baseline participants used a mean of 11.96 (IC95% 11.4-12.5) drugs, their MRCI was 26.22 (IC95% 25.1-29.6), and 26% used PIM, mean of 2.5 PIMs per patient (IC95% 2.3-2-8). All of them used ≥8 drugs, 83% used ≥10 and 16% used ≥15 drugs.

After medication review the number of drugs per patient had dropped to 9.69 (IC95% 9.1-10.2), mean reduction of 2.19 drugs per patient (18% reduction). Patients on ≥8, ≥10, ≥15 drugs dropped to 81%, 57% and 7% respectively. MRCI after medication review was 20.25 (IC95% 18.2-22.3), a 20% reduction from baseline. Mean number of PIM per patient after medication review was 2.17 (IC95% 1.9-2.5).

Three months after medication changes were implemented, 98 patients were still alive. Sixty patients (61%) had had one or more drug changes. Only 11.5% of these new drug changes were due to reappearance of symptoms or adverse events related with drug review.

Conclusion: Reducing drug burden in elder polymedicated people with multimorbidity is possible. However medicines review must not be disease oriented, but person centred, and requires establishing realistic and meaningful health goals first. Otherwise, incentives to improve isolated outcomes in specific diseases leads to extreme polipharmacy. Primary care has traditionally sought to coordinate care for people with multiple morbidities, however minimally disruptive medicine implies using less drugs than expected according to strict practice guidelines application for each one of the patient conditions. Patient involvement must be a central part of disentangling treatment burden since only patients and their caregivers can report on the magnitude and causes of this burden.
Now we face the challenge of transferring this person centered multidisciplinary approach to daily practice but in order to do it we must rethink and redessign our daily rutine.

**Keywords:** personalized centered care; polipharmacy; medication review; minimally disruptive medicine; treatment burden