

THE TABLET: PALLIATIVE CARE PHARMACY TIPS



November 5, 2021

Vol. 1, No. 29

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TODAY'S TOPIC:

Implications of Polypharmacy in Palliative Care

Background:

Polypharmacy is simultaneous use of multiple medications, defined as the use of 5 or more medications or 10 or more medications depending on the reference. As adults age, their risk for multiple comorbidities and life-limiting illnesses for which they are treated with numerous pharmacologic agents increases. Patients taking multiple medications have a higher chance of taking potentially inappropriate medications (PIMs). PIMs, as defined by validated instruments like Beer's Criteria, have a higher risk associated with their use for older adults contributing to adverse effects, hospitalizations, and even mortality. In palliative care, oftentimes we utilize PIMs to assist with symptom management, and palliative care population is excluded from validated instruments like Beer's Criteria. Generally, it is thought that symptomatic benefit of these medications outweighs the risk in the palliative care population based on the patient's goals of care, treatment target, and prognosis. It is unclear if polypharmacy still contributes to adverse outcomes in the palliative care population or patients with life-limiting illness and shorter life expectancies.

Importance:

In our palliative care population, polypharmacy is extremely common. It is important for palliative care clinicians to be aware of the implications of polypharmacy on patient-related outcomes, such as symptom burden and quality of life for our patients.

The Literature:

[J Gen Intern Med. 2019 Apr;34\(4\):559-566.](#)

Associations between polypharmacy, symptom burden, and quality of life in patients with advanced, life-limiting illness

Objective: To evaluate associations between polypharmacy, symptom burden, and quality of life in adult patients with advanced, life-limiting illness

Methods:

- Secondary analysis of multicenter, parallel-group, unblinded, pragmatic clinical trial (June 3, 2011 to May 2, 2013) of adults with estimated life expectancy of between 1 month and 1 year
- Polypharmacy groups as low (0-8 medications), medium (9-13 medications) and high (≥ 14 medications)

Outcomes:

- Symptom burden defined by Edmonton Symptom Assessment Scale (ESAS), Quality of life (QOL) measured by McGill Quality of Life Questionnaire

Results

- N = 372, Average number of non-statin medications taken by all participants was 11.6 (SD 5.0)
- Higher symptom burden was associated with higher polypharmacy (adjusted beta 0.81; $p < 0.001$) with each additional medication associated with higher symptom burden of 0.81 points on the ESAS scale (0-10)
- Higher polypharmacy was associated with lower QOL, with each additional medication associated with lower QOL by 0.06 points on QOL questionnaire (adjusted beta -0.06; $p = 0.001$)
- Adjusting for symptom burden weakened the association between polypharmacy and QOL

Discussion:

- Medication-related symptoms may be a concern for this cohort as the association between polypharmacy and QOL was weakened when adjusted for symptom burden

Conclusion

- Polypharmacy was associated with higher symptom burden and worse QOL in adults with life-limiting illness

[Oncologist. 2020 Jan;25\(1\):e94-e108.](#)

Associations of polypharmacy and inappropriate medications with adverse outcomes in older adults with cancer: A systematic review and meta-analysis

Objective: To evaluate the association of polypharmacy (PP) and potentially inappropriate medications (PIMs) with outcomes in older adults with cancer

Methods:

 Systematic review and meta-analysis

- Studies published between 2005-2018 included if they examined outcomes associated with PP and/or PIM, included patients with cancer, adults ≥ 65 years old, were clinical trials, observational cohort studies, cross-sectional studies or meta-analysis written in English (n=47)

Outcomes: Post-operative outcomes, Chemotherapy-related outcomes, frailty/falls and physical/functional outcomes, survival outcomes

Results

- Patients taking 5 or more medications prior to cancer surgery were at a higher risk of post-operative delirium (OR 1.9; $p = 0.008$)
- Polypharmacy was associated with severe chemotherapy toxicity in 1/3 of studies that included these outcome measures; it was not related to dose reduction, chemotherapy completion, or chemotherapy delay
- Polypharmacy is associated with increased falls (OR 1.6), impaired activities of daily living or instrumental activity of daily living (OR 2.3, 2.1), and frailty (Frailty OR 4.5; 95% CI 1.9-10.5)
- Two studies out of 11 demonstrated association between polypharmacy and decreased survival (OR NR) or increased mortality (HR 2.13, 95% CI 1.15-3.92), 9 studies did not

Conclusion

- Polypharmacy is associated with postoperative complications, functional impairment and possibly chemotherapy-related toxicity

Bottom Line:

- Heterogenous definitions of polypharmacy throughout the literature makes it difficult to compare the studies in the meta-analysis, even if researching same outcomes... although overall message remains clear that polypharmacy is a burden to our palliative care patients
- Especially when considering PIMs (e.g. benzodiazepines), consider drug interactions or other concomitantly prescribed medications that could heighten side effects of PIMs
- As symptom management experts, we must be weary of the prescribing cascade and avoid treating a known or suspected side effect of one medication with another...
- Deprescribing offending agents or dose reduction may be the best treatment, rather than adding on an additional medication if suspecting a reported symptom may be a side effect or intolerance of a currently prescribed medication
- Thoughtful deprescribing strategies to reduce medication burden, even chronic disease medications, in the palliative care population is imperative
- Including medication preferences/goals of pharmacologic therapy during goals of care discussions allows for more open discussion surrounding stopping inappropriate or unnecessary drug therapy for patients with life-limiting illness

CLINICAL PEARL: Polypharmacy is associated with negative patient-related outcomes, even in patients with life-limiting illness.