



Addressing Polypharmacy in Dually Eligible Individuals with I/DD: A Spotlight on Partners Health Plan

Polypharmacy is defined as the use of multiple medications by an individual. The minimum number of medications used for the definition of polypharmacy varies, but generally ranges from 5-10.¹ While polypharmacy typically refers to prescription medications, it is vital to also consider over-the-counter, herbal, and natural products. Problematic polypharmacy is defined as the use of multiple medications in a way that is not deemed appropriate by clinical guidelines or an individual's physician (e.g., treatment is not evidence-based or the risk of harm from treatments outweighs the benefits).² When an adverse drug event (ADE) is misinterpreted as a new medical condition and additional drug therapy is then prescribed to treat this apparent medical condition, that prescribing cascade is also considered problematic polypharmacy.³

Polypharmacy can lead to negative health effects as an individual's likelihood of experiencing an ADE, medication nonadherence, and unwanted side effects increases with additional medications.⁴ Polypharmacy can also lead to medication contraindications and duplicate prescriptions, likely from seeing multiple physicians.⁵ The use of greater numbers of medications has been independently associated with an increased risk for an ADE and increased risk of hospital admission.^{6,7}

Who is most at risk of negative health effects due to polypharmacy?

In general, individuals with multiple chronic conditions often take multiple medications to manage their conditions, leading them to potentially experience negative effects related to polypharmacy.⁸

¹ Ferner, R. & Aronson, J. (2006). Communicating information about drug safety. *BMJ (Clinical research ed.)*, 333(7559), 143–145. <https://doi.org/10.1136/bmj.333.7559.143>.

² Duerden, M., Avery, T., & Payne, R. (2013). Polypharmacy and medicines optimisation: Making it safe and sound. *The King's Fund*. Available at: <https://www.kingsfund.org.uk/publications/polypharmacy-and-medicines-optimisation>.

³ Rochon, P. & Gurwitz, J. (1997). Optimising drug treatment for elderly people: the prescribing cascade. *BMJ (Clinical research ed.)*, 315(7115), 1096–1099. <https://doi.org/10.1136/bmj.315.7115.1096>.

⁴ Legislative Analysis and Public Policy Association. (2021). Polypharmacy and the elderly: Reducing the risk of adverse events through monitoring and communication. Retrieved from <http://legislativeanalysis.org/wp-content/uploads/2021/01/Polypharmacy-FINAL.pdf>.

⁵ Ibid.

⁶ Wimmer, B. C., Cross, A. J., Jokanovic, N., Wiese, M. D., George, J., Johnell, K., Diug, B., & Bell, J. S. (2017). Clinical outcomes associated with medication regimen complexity in older people: A systematic review. *Journal of the American Geriatrics Society*, 65(4), 747–753.

⁷ Lu, W., Wen, Y., Chen, L. K., & Hsiao, F. Y. (2015). Effect of polypharmacy, potentially inappropriate medications and anticholinergic burden on clinical outcomes: a retrospective cohort study. *CMAJ: Canadian Medical Association journal = journal de l'Association medicale canadienne*, 187(4), E130–E137. <https://doi.org/10.1503/cmaj.141219>.

⁸ Legislative Analysis and Public Policy Association. (2021).

- Individuals 65 and older are the most likely age group to experience polypharmacy.^{9,10} More than half of individuals 65 and older report taking four or more medications, compared to one third of adults between the ages of 50 and 64 and one in ten adults between the ages of 18 and 49.¹¹
- Sixty-five percent of individuals dually eligible for Medicare and Medicaid have two or more chronic conditions,¹² and dually eligible individuals with disability in particular experience high rates of multiple chronic health conditions.¹³ For example, of dually eligible individuals aged 65 and older with disability, 35 percent have four or more chronic conditions.¹⁴
- In addition, individuals with intellectual and developmental disabilities (I/DD) are also diagnosed with multiple chronic conditions at high rates¹⁵ and typically prescribed more medications leading to a greater risk of polypharmacy than the general population.¹⁶
- Other factors that increase an individual's risk of polypharmacy include having chronic mental health conditions, living in a long-term care facility, and seeing multiple physicians.¹⁷

Strategies for reducing the risk of polypharmacy

Thoughtful assessment and communication are critical for reducing polypharmacy risk. Formal targeted review and outreach programs can be effective in assessing and reducing the risk of polypharmacy, particularly for populations at higher risk, such as those with I/DD. For example, one study found that dually eligible individuals taking more than 15 medications who participated in a care coordinator-driven medication review program had a 34 percent reduction in hospitalizations and a 25 percent reduction in emergency room visits. Program components of this study included medical record and drug utilization reviews, an introductory meeting with the care coordinator and ongoing telephonic outreach, and any necessary recommendations to primary care providers.¹⁸

Individualized person-centered care is especially important when addressing polypharmacy for individuals with disability, including I/DD, since this population experiences a great deal of variability in disability type, associated impact on functioning, and variability in prescribed necessary medications.¹⁹ Individuals with I/DD may also have difficulty understanding medication side effects or the impact of the prescribed additional medication and may not be able to provide fully informed consent to medication use.²⁰

⁹ Ibid.

¹⁰ Halli-Tierney, A., Scarbrough, C., & Carroll, D. (2019). Polypharmacy: Evaluating risks and deprescribing. *American Family Physician*, 100(1), 32-38. Retrieved from <https://www.aafp.org/afp/2019/0701/p32.html>.

¹¹ Legislative Analysis and Public Policy Association. (2021).

¹² Fox, M. H., & Reichard, A. (2013). Disability, health, and multiple chronic conditions among people eligible for both Medicare and Medicaid, 2005-2010. *Preventing Chronic Disease*, 10, E157. <https://doi.org/10.5888/pcd10.130064>.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Nabhanizadeh, A., Oppewal, A., Boot, F. H., & Maes-Festen, D. (2019). Effectiveness of medication reviews in identifying and reducing medication-related problems among people with intellectual disabilities: A systematic review. *Journal of Applied Research in Intellectual Disabilities: JARID*, 32(4), 750-761. <https://doi.org/10.1111/jar.12580>.

¹⁶ Nabhanizadeh, A., Oppewal, A., Boot, F. H., & Maes-Festen, D. (2019).

¹⁷ Halli-Tierney, A., Scarbrough, C., & Carroll, D. (2019).

¹⁸ Doyle, D., Emmett, M., Crist, A., Robinson, C., & Grome, M. (2016). Improving the care of dual eligible patients in rural federally qualified health centers: The impact of care coordinators and clinical pharmacists. *Journal of Primary Care & Community Health*, 7(2), 118-121. <https://doi.org/10.1177/2150131915617297>.

¹⁹ Selph, C., & Cosca, B. (2016). Less is more: Preventing polypharmacy in individuals with intellectual disabilities. *Impact – Institute on Community Integration*. Retrieved from <https://publications.ici.umn.edu/impact/29-1/less-is-more-preventing-polypharmacy-in-individuals-with-intellectual-disabilities>.

²⁰ Nabhanizadeh, A., Oppewal, A., Boot, F. H., & Maes-Festen, D. (2019).

Broad strategies to reduce the risk of polypharmacy include:²¹

- Thoroughly assessing an individual's health status, lifestyle, health goals, and other factors in the broader context of prescribing;
- Evaluating the potential benefits and risks of providing each medication and proactively examining the necessity of each medication in context with all other prescribed medications;
- Discussing each prescribed medication with an individual and, as relevant, their caregivers, to inform them of the medication's importance, providing sufficient time to address individual and caregiver questions and concerns;
- Encouraging individuals to use one pharmacy for all medications; and
- Ensuring open communication between individuals and care team members.

Some health plans have created formal medical review and reconciliation programs to address polypharmacy in dually eligible individuals with disability, including I/DD. The section below highlights how the Clinical Pharmacy Program created by Partners Health Plan (PHP) addresses polypharmacy in dually eligible individuals with I/DD during their inpatient admission to skilled nursing facilities or hospitals.

Partners Health Plan: Clinical Pharmacy Program Serving Individuals with I/DD

Partners Health Plan (PHP) is a not-for-profit managed care organization focused solely on services and supports for individuals with I/DD and those who care for them. PHP serves over 1,500 members in nine counties in and surrounding New York City through a Medicare-Medicaid Plan (MMP) and is the only MMP nationwide that exclusively serves dually eligible individuals with I/DD.

In 2018, PHP began a Clinical Pharmacy Program to identify and address polypharmacy risks for their members when admitted to hospitals or skilled nursing facilities. Through this program, pharmacists at PHP conduct comprehensive medication therapy reviews (CMTRs) within 30 days of a hospital discharge using data on prescribed outpatient and inpatient medications, previous prescription fills and refills, and information from the hospital discharge summary, lab results, and overall clinical medical record. By conducting CMTRs, PHP addresses the risks of polypharmacy among individuals with I/DD by identifying those that are most likely to need changes to medication and care management plans during a hospital or skilled nursing facility stay. PHP chose

CMTR Case Example

A man went to the emergency department after developing a urinary tract infection (UTI) and falling after getting out of bed to go to the bathroom. He experienced back pain, increased fatigue, and was unable to walk after discharge. Due to his fall and UTI diagnosis, the CMTR assessor was concerned that he may have been prescribed multiple medications contributing to new symptoms, including orthostatic hypotension (low blood pressure when sitting up or standing). The assessor recommended that the patient should be monitored for symptoms including faintness, dizziness, vertigo, a spinning sensation, or lightheadedness, among other symptoms. In addition, the assessor recommended a full cardiology evaluation. Post-discharge, the man received the recommended evaluations and has not been admitted to the emergency department since. He is doing well at home, is medically stable, and has not reported any additional falls.

²¹ Selph, C., & Cosca, B. (2016).

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admission to a hospital or facility as a focus point due to the potential that medications themselves may lead to new or exacerbated symptoms. These symptoms, in turn, may contribute to additional medical and psychiatric admissions as well as the risk of discrepancies between inpatient and outpatient medication regimens. Through CMTRs, PHP pharmacists review for:

- Drug-Drug, Drug-Disease, and Drug-Nutrient interactions
- Appropriate dosage
- Appropriate dose form (e.g., liquid instead of tablet if the individual receives medication through a feeding tube)
- Dose availability due to a Food and Drug Administration recall or manufacturer backorder
- Dose schedule
- Unnecessary or inappropriate medications
- Duplicate medication
- Potential need for additional medications or underutilization of appropriate medication
- Possible ADEs
- Medication effectiveness
- Medication adherence
- Any additional necessary medication reconciliation
- Anticholinergic activity (e.g., a medication with high anticholinergic burden can lead to symptoms such as constipation, abdominal pain, tenderness, and distention, and nausea. A patient may concurrently be treated with opioids, which worsen constipation and could contribute to additional clinical complications such as colitis or colonic obstruction)
- Prescribing cascades (e.g., an ADE is misinterpreted as a new medical condition and additional drug therapy is then prescribed to treat this apparent medical condition)

Using this data, PHP pharmacists build out a profile for each member and use an outcome classification system to rank each member's polypharmacy risk as high, medium, or low priority for additional follow-up, as displayed in Exhibit 1 below.

Exhibit 1. PHP's CMTR Outcome Classification System

Priority	Reason
High	<ul style="list-style-type: none">• A significant acute (immediate) threat to an individual's health based on diagnoses, potential drug/drug or drug/nutrient interactions, duplicate prescriptions, or other factors• A potential cause for current or future admissions based on an individual's diagnoses• Significant risk for disease progression with continued use of certain medications or medication interactions
Medium	<ul style="list-style-type: none">• Inappropriate medical regimen for diagnosis (based on commonly accepted guidelines)• Additional medication is warranted for appropriate treatment (based on commonly accepted guidelines)
Low	<ul style="list-style-type: none">• No diagnosis to support use of medication

Priority	Reason
	<ul style="list-style-type: none">• Low priority potential for adverse reaction due to drug/drug interaction or drug/nutrient interaction• Few instances of inappropriate use of medication based on current information• Few instances of inappropriate dosing (amount of drug or dosing schedule), or change to alternative therapeutic medication• Few challenges with medication adherence• Drug interactions and drug/disease interactions that require additional monitoring which may lead to change in therapy• Addition of preventative drug therapy

The PHP pharmacist contacts the member's primary care provider or specialist regardless of priority status. In this contact, the pharmacist provides detailed medication therapy findings and corresponding recommendations to resolve the identified issues. The provider responds to the CMTR recommendations with feedback and instructions which the pharmacist communicates to the care management team. This may include referring the individual to other outpatient programs if needed.

PHP evaluated the Clinical Pharmacy Program's 2019 progress by reviewing 280 CMTRs. They identified:

- 61 (22 percent) CMTRs of high priority,
- 45 (16 percent) CMTRs of medium priority,
- 149 (53 percent) CMTRs of low priority, and
- 25 (9 percent) CMTRs with no findings.

Overall, the most commonly identified polypharmacy issues include medication interaction, unnecessary medication therapy, the need for additional medication therapy, and ineffective medication. Often an individual receives a prescription but does not receive a follow-up evaluation to determine whether they need to continue the prescription. The prescription may be renewed automatically, or a provider may not have access to the full list of medications the member is taking. Of the high and medium priority CMTRs, the most common issue that the CMTRs uncover is medication interactions. Of the low priority CMTRs, unnecessary medication therapy is the most common issue.

PHP found providers to be receptive and responsive to the programs' expert pharmacy recommendations. When PHP pharmacists contacted providers for resolution of high priority CMTRs, 57 (72 percent) were accepted, meaning that the provider agreed with the pharmacist's recommendation and changed the individual's medication profile, and 10 (13 percent) received no response. Other results of the Clinical Pharmacy Program are difficult to measure since this program is a

CMTR Case Example

A woman who had fallen 11 times in the past six months was taken to the emergency room after another fall. She was having difficulty walking and needed moderate assistance after discharge. Upon conducting the CMTR, the pharmacist identified that the woman was on multiple anticholinergic medications, which can predispose individuals to worsening cognition and an increased risk of falls.

The CMTR findings included:

- Monitoring the patient for additive anticholinergic side effects (drowsiness, blurred vision, dizziness, etc.)
- Tapering medication dosages and discontinuing some of the medications
- Referring her to an outpatient physical therapy program for safe gait therapy

component of an overall patient-centric care management program and it is thus difficult to attribute success to any one factor. However, the PHP care management program has shown additional favorable outcomes of reduced hospital admissions and emergency room visits.

Based on the success of the initial pilot program, PHP expanded the Clinical Pharmacy Program to perform CMTRs for all members identified with polypharmacy regardless of inpatient admission. The clinical team leader can also request a CMTR in situations of disease change or exacerbation, to assess for potential causal links to medications. If determined necessary in an individual's care management plan, PHP also completes CMTR follow-ups to determine if further intervention is needed.

Additional Resources

Additional resources related to medication management and reconciliation approaches are included below:

[The Medication Therapy Management Pharmacist Reference Book](#)

- The National Board of Medication Therapy Management published this book, which includes chapters on clinical targeted medication reviews and the Centers for Medicare & Medicaid Services' requirements for clinical targeted medication reviews.

[Medication Reconciliation for Health Coaches](#)

- The University of California, San Francisco developed many health coaching resources, including this video for health coaches on medication reconciliation approaches.

[Medication Adherence: Why Taking Your Medication Matters](#)

- PHP developed this brief for their members with I/DD to provide guidance on medication adherence, including why medication is important, the right way to take medication, and who to speak to about medication problems.

[Medication Safety in Transitions of Care](#)

- This World Health Organization report includes an overview of transitions of care, medication reconciliation, and the importance of medication safety, as well as details on past and future improvements for medication safety.

[Polypharmacy: Evaluating Risks and Deprescribing](#)

- This article published in American Family Physician shares a background on polypharmacy, the risks of polypharmacy, and strategies for deprescribing.

The Medicare-Medicaid Coordination Office (MMCO) in the Centers for Medicare & Medicaid Services (CMS) seeks to help beneficiaries dually eligible for Medicare and Medicaid have access to seamless, high-quality health care that includes the full range of covered services in both programs. This spotlight is intended to support health plans and providers in integrating and coordinating care for dually eligible beneficiaries. It does not convey current or anticipated health plan or provider requirements. For additional information, please go to <https://www.resourcesforintegratedcare.com/>. The list of resources in this guide is not exhaustive. Please submit feedback to RIC@lewin.com.