

Combating Nonadherence Due to Polypharmacy at Centennial Pharmacy Services

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What's One More Pill?

Polypharmacy, or the concurrent use of multiple drugs, is a growing concern in the healthcare industry, affecting both patients and providers. People suffering from chronic illnesses and the aging population are at the highest risk of experiencing polypharmacy-related issues due to complex, multi-drug regimens. On the surface, polypharmacy may seem to be a singular issue that can be solved simply by organization, however, it is often the root from which other complications arise. Polypharmacy has been proven to increase the risk of duplicate therapies, adverse drug reactions, drug-drug interactions, and geriatric 'syndromes', such as urinary incontinence, falls, and psychological dysfunction, all of which directly impact a patient's health and wellbeing. Other obstacles healthcare providers have to navigate include cognitive impairment, language barriers, functional limitations, and financial restraints. Addressing polypharmacy will not only improve the patient's quality of life, but it will also give providers the opportunity to truly focus on patient care.

Defining Nonadherence

Depending on where in the medication use process it occurs, nonadherence can be divided into three types: nonfulfillment (or primary nonadherence), nonpersistence, and nonconforming. Nonfulfillment occurs when the doctor prescribes a medication but it is never filled or taken by the patient. Nonpersistence is when the patient decides to stop taking the medication without advice from a medical professional. Finally, nonconforming is when the patient does not take the medication as prescribed, such as skipping doses, taking incorrect doses, or taking medication at the wrong time. There are various reasons why a patient may be nonadherent to their medication regimen; the most commonly encountered at Centennial Pharmacy Services include forgetfulness, unclear indication, and regimen complexity. Regardless of the type of nonadherence that occurs, patients who do not take their medications as prescribed are at an increased risk of treatment failure, hospitalization, and overall lower health outcomes.

CONSEQUENCES OF NONADHERENCE AND POLYPHARMACY

MEDICATION ADHERENCE

Data estimates between **30–50%** of patients **do not take their medications as prescribed**. Reasons for nonadherence include forgetfulness, side effect concerns, unclear indications, cost, and regimen complexity.

HOSPITALIZATIONS

Nonadherence accounts for about **50% of treatment failures**, around **125,000 deaths**, and up to **25% of hospitalizations** each year in the US.

COST

Addressing nonadherence could **reduce healthcare costs** by approximately **\$100 to \$300 billion** each year.²

REGIMEN COMPLEXITY

Polypharmacy is most common among older patients aged 65 and up. On average, these patients take **5+ medications** daily.³

ADVERSE DRUG REACTIONS

Studies have shown patients taking **5–9 medications** daily are **50% more likely** to experience an ADR than patients taking less. This risk was increased to **100%** if the patient was taking **20+ medications**.³

QUALITY OF LIFE

Polypharmacy **increases the risk** of duplicate therapies, adverse drug reactions, and drug-drug interactions, all of which may decrease the patients overall quality of life.

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Centennial PHARMACY SERVICES

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Centennial's Role

Standard solutions healthcare providers suggest to improve adherence include using a pillbox or setting reminders or alarms at designated times. These methods offer minor adherence improvements, and many patients are still overwhelmed with medications. Centennial Pharmacy Services offers an unique, individualized approach to medication management based on the medications taken and personal needs. With CentennialCare™, patients gain medication literacy, improved medication compliance, greater CMS-measured outcomes, and enhanced medication management, resulting in healthier, independent patients who are able to age-in-place and control their chronic conditions.

Onboarding & Synchronizing

New patients joining CentennialCare™ are welcomed by a clinical pharmacist who will work with the patient's other healthcare providers to perform a comprehensive medication review and set a medication start date. The patient's start date not only marks the beginning of their CareCycle, but all of their medications will be synchronized and filled on that date. This allows the patient to receive all of their medications on the same date every month. Throughout the CareCycle, the clinical team will contact the patient's providers to obtain necessary refills, solve any discrepancies, review medication changes, and prepare their CarePack prior to their next start date.

Comprehensive Clinical Reviewing

Prior to designing a CarePack for a patient, everything going inside of it must be verified. Centennial's clinical team is composed of pharmacists, pharmacy interns, pharmacy technicians, and onsite nursing. Together, they conduct thorough, comprehensive medication reviews upon enrolling patients in CentennialCare™ and monthly afterward. Each medication, vitamin, herbal supplement, and alternative treatment is individually assessed for indication, effectiveness, and safety based on the patient's medical conditions. Members of the clinical team take the time to understand each patient's medication history, experiences, preferences, and cost restrictions, and evaluate the medication regimen. After identifying any drug-therapy problems, a clinical pharmacist will work with the patient and care team to develop a care plan that includes any recommended therapeutic changes needed to achieve optimal healthcare outcomes. Routine follow-ups with the patient are conducted to determine the success of the care plan in place and discuss if any adjustments are needed.

Each patient's care plan also contains a medication administration record, or MAR, which is used to compare and analyze medication changes and adherence each month. MARs are referenced at every step of the filling process, which allows for multiple clinical pharmacist checks to be done prior to the CarePack reaching the patient. The MAR is then converted into a patient-friendly Medication List with corresponding pictures, instructions, and patient demographics. This Medication List is provided each month in paper and available to patients and providers through the CentennialCare MedPath Portal to further increase health literacy and ease provider communications.

Customizing

Customizable CarePacks are designed to make medication management as easy as possible for the patient. Depending on their regimen complexity, the patient's daily medications can be separated into pouches labeled for the corresponding time of day. Each pouch will list the drug names, dosages, and quantities of all the medications within that pouch. The patient may request customizations that include specific times, pictorial icons, color, reminder pouches, and instructions like "with breakfast" for further clarification. CarePacks can be printed in a variety of different languages and include summary pouches that list all of the medications dispensed. The pouches are securely sealed, labeled, and rolled into boxes, making it easy for patients to tear off the upcoming pouch when it is time for their next dose. CarePacks are discrete and compact, relieving the hassle of storing and traveling with multiple medication bottles.

Maintaining through CareCycles

Centennial continuously strives to improve medication adherence and lessen the burden of polypharmacy many patients experience. With CentennialCare™, patients, caregivers, and other providers all gain organization, peace of mind, and confidence in medication management. Through tailored CarePacks and diligent medication reconciliations done by the clinical team, Centennial makes adhering to complicated drug regimens as easy as drinking a glass of water.

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1. Maher RL, Hanlon J, Hajjar ER. Clinical consequences of polypharmacy in elderly. *Expert Opin Drug Saf.* 2014; 13(1):57-65.
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CentennialCare Medication Management

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