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Polypharmacy—the use of more medications than are clinically indicated—is a problem that affects many older adults. Adults aged 65 years and older make up approximately 13% of the population, but they consume nearly one third of all prescriptions dispensed. Older adults are more prone to adverse drug reactions and drug–drug interactions because of physiological changes and multiple comorbidities. It can be difficult to address the problem because there are many contributing factors, including multiple prescribers and specialists, the use of multiple pharmacies, and gaps in communication. The initial step is to avoid the problem. However, when this does not work, it must be identified and then treated by carefully changing medication regimens to improve the quality of care to patients. The home healthcare nurse has an essential role in this process, which will be reviewed in this article. Some of the barriers that may be encountered and examples of communication with providers are included.

Part 2

POLYPHARMACY in Older Adults at Home

What It Is and What to Do About It

Implications for Home Healthcare and Hospice

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Patient Example: ML

ML is a 79-year-old female who was recently discharged from the hospital after being diagnosed with atrial fibrillation (A. fib) and heart failure (HF). The discharging physician orders home healthcare to follow up with ML until she can see a cardiologist. ML is now taking 13 medications by mouth (PO): aspirin 81 mg once daily, metoprolol 50 mg twice daily, warfarin 5 mg once daily (dose adjusted based on International Normalized Ration [INR]), amlodipine 10 mg daily, lisinopril 5 mg daily, simvastatin 40 mg once daily, hydrochlorothiazide 25 mg once daily, oxybutynin 10 mg once daily, citalopram 20 mg once daily, alendronate 70 mg once weekly, calcium 500 mg twice daily, vitamin D 400 IU twice daily, and a multivitamin once daily. The first four medications are new medications, started when ML was in the hospital and the last three are over-the-counter (OTC), but recommended by the primary care prescriber. You, the home healthcare nurse, are out to visit ML and start her care with your home health agency (HHA). As you ask to see her discharge paperwork and medications, ML gets teary eyed and says she doesn't know how she will keep track of all of her medications.

The Problem

ML is in a situation that many older adults find themselves in: discharged from the hospital with a long list of medications, new diagnosis, and often a disjointed plan of how to manage the situation (Boult & Wieland, 2010). The primary care prescriber may face many challenges with the multiple needs in this population and many older adults find the medical system difficult to navigate (and for that matter, younger adults do as well!). HHAs can have a major impact on aiding in this care transition, but sometimes are unable to maintain ongoing assistance because patients often do not qualify for home healthcare services on a long-term basis. As was covered in depth in the first part of this article, there are many factors that contribute to polypharmacy and many health-related problems that it can cause.

The definition of polypharmacy established in Part 1 of this two-part article is that polypharmacy occurs when "more medications are used or prescribed than are clinically indicated" (Lee, 1998, p. 142). Polypharmacy leads to a waste of resources: medications, money, time, and energy. Some of the factors that contribute to polypharmacy include polyprescribing (and the utilization of many specialists and subspecialists), limited training and evidence to guide prescribers when making prescribing decisions for older patients with multiple comorbidities (therefore leading to multiple medications), and a lack of communication between multiple clinicians. Boult and Wieland (2010, p. 1936) discuss the challenges posed to older patients in the current healthcare system, which provides "care that is fragmented, incomplete, inefficient, and ineffective." The prescribing cascade can lead to the addition of medications to treat side effects of other medications (Rochon & Gurwitz, 1995).

The problems that arise with polypharmacy are endless. It can cause harmful side effects on a patient's health, especially in older adults who are often more sensitive to the effects of medications. It can at times lead to very serious drug interactions, which may bring an older adult to the hospital. Polypharmacy can therefore be very costly to both a patient and the healthcare system. Polypharmacy can further directly lead to a decreased quality of life and impaired function in older adults, which is very important to them (Sloan, 2009).

Part 1 of this two-part article explored the causes of polypharmacy, who is at risk for polypharmacy, the importance of addressing this iatrogenic disease, and some of the tools currently available that have been used to try to identify and reduce polypharmacy. Part 2 will further expand on ways a clinician can identify polypharmacy and help to reduce the problem. For the purposes of this article, the word prescriber will be used as an all-encompassing term for all clinicians who are legally authorized to prescribe, including but not limited to physicians, nurse practitioners, and physicians assistants. Any clinician with legal prescribing authority within their state may be used interchangeably when physician is used.

Tackling the Problem

There are several questions that need to be considered when tackling the problem of polypharmacy. First, how can the problem be avoided to begin with? If it does occur, how can the problem be identified? Once identified, how do clinicians advocate for discontinuation of problem medications by the prescribing provider?

Avoiding the Problem

The situation: A 76-year-old gentleman visits his primary care physician with his daughter and the daughter reports increased confusion

It is important to note that prescribers alone cannot eliminate polypharmacy. They are working directly with their patients (and patients' caregivers) and patients play a very important role in decreasing polypharmacy. Patients need to be sure to share their complete, up-to-date, and accurate medication lists with all prescribers they see. When possible, they need to be advocates for themselves (a role a home care nurse or pharmacist can fulfill in some situations), when they are noticing changes in how they feel that may be side effects of the medications they are taking. It is less important for patients to focus on if a symptom or change they notice is a "side effect" of a medication, but rather that they have noticed a change.

and forgetfulness. After brief questioning, the physician writes a prescription for donepezil, a medication used to slow the progression of symptoms of Alzheimer's disease. Several months later, the gentleman returns to his doctor. He reports a new problem of urinary incontinence. The physician writes a prescription for oxybutynin and sends the gentleman on his way, assuring him this will help.

The first step to avoiding polypharmacy is prudent prescribing. Carlson (1996) uses this term and lists questions and concerns that prescribers should be asking when considering a new medication. Carlson's recommendations include compiling a complete list of all medications being taken along with brand and generic name and indications. The physician should also identify the side effects for each medication and risk factors that may increase the risk of them. A medication should be discontinued if it is no longer indicated, is no longer providing clinical benefits, is treating the adverse effects of another medication, or if a safer alternative is appropriate. Medication regimens should be kept simple and include the least number of medications with the least frequent dosing that is indicated for that individual. Bain et al. (2008, pp. 1947–1948) go a step further to propose a step-wise approach to prescribing, which includes "consider discontinuing medication" (Figure 1). Polypharmacy continues to cause harm to older adults, raising many questions. Are the techniques proposed by Carlson (1996) and Bain et al. (2008) being used? Are they effective? How can they effectively be incorporated into prescribing patterns?

Returning to the previous situation regarding the patient with dementia, the physician, rather than prescribing a new medication for the gentleman's urinary incontinence, could have used prudent prescribing, as Carlson (1996) and Bain et al. (2008) propose, by first asking if this new symptom was perhaps a side effect of a medication. The prescriber can also do a more thorough assessment of what the possible underlying etiology of the symptoms are. The recent addition of the donepezil to this gentleman's medication regimen led to a side effect of urinary incontinence, leading to another medication being added. This is a classic example of the "prescribing cascade" that directly leads to polypharmacy.

It is important to note that prescribers alone cannot eliminate polypharmacy. They are working directly with their patients (and patients' caregivers) and patients play a very important role in decreasing polypharmacy. Patients need to be sure to share their complete, up-to-date, and accurate medication lists with all prescribers they see. When possible, they need to be advocates for themselves (a role a home care nurse or pharmacist can fulfill in some situations), when they are noticing changes in how they feel that may be side effects of the medications they are taking. It is less important for patients to focus on if a symptom or change they notice is a "side effect" of a medication, but rather that they have noticed a change. Prescribers can only work with as much information as they are given or request. Although it can be difficult—and at times impossible—to get the complete picture from a patient, it is important that the prescribers, nurses, and pharmacists partner together to get this "complete picture" as their common goal.

Before starting a medication, there are many questions that should be considered. These have

been highlighted by Carlson (1996). Gurwitz et al. (1997, p. 22) state that "any symptom in an elderly patient may be a drug side effect until proved otherwise." A patient is more likely to experience these symptoms following changes to a medication regimen: new medications, discontinued medications, or dose changes. If a home care nurse identifies the potential relationship between changes to the medication regimen and symptoms, they can report this to the prescriber noting the timeline of medication changes perhaps contributing to new symptoms.

Identifying the Problem

The situation: An 83-year-old woman was recently diagnosed with hypercholesteremia and started on simvastatin. Several weeks later, the patient notices she is feeling increased weakness in her

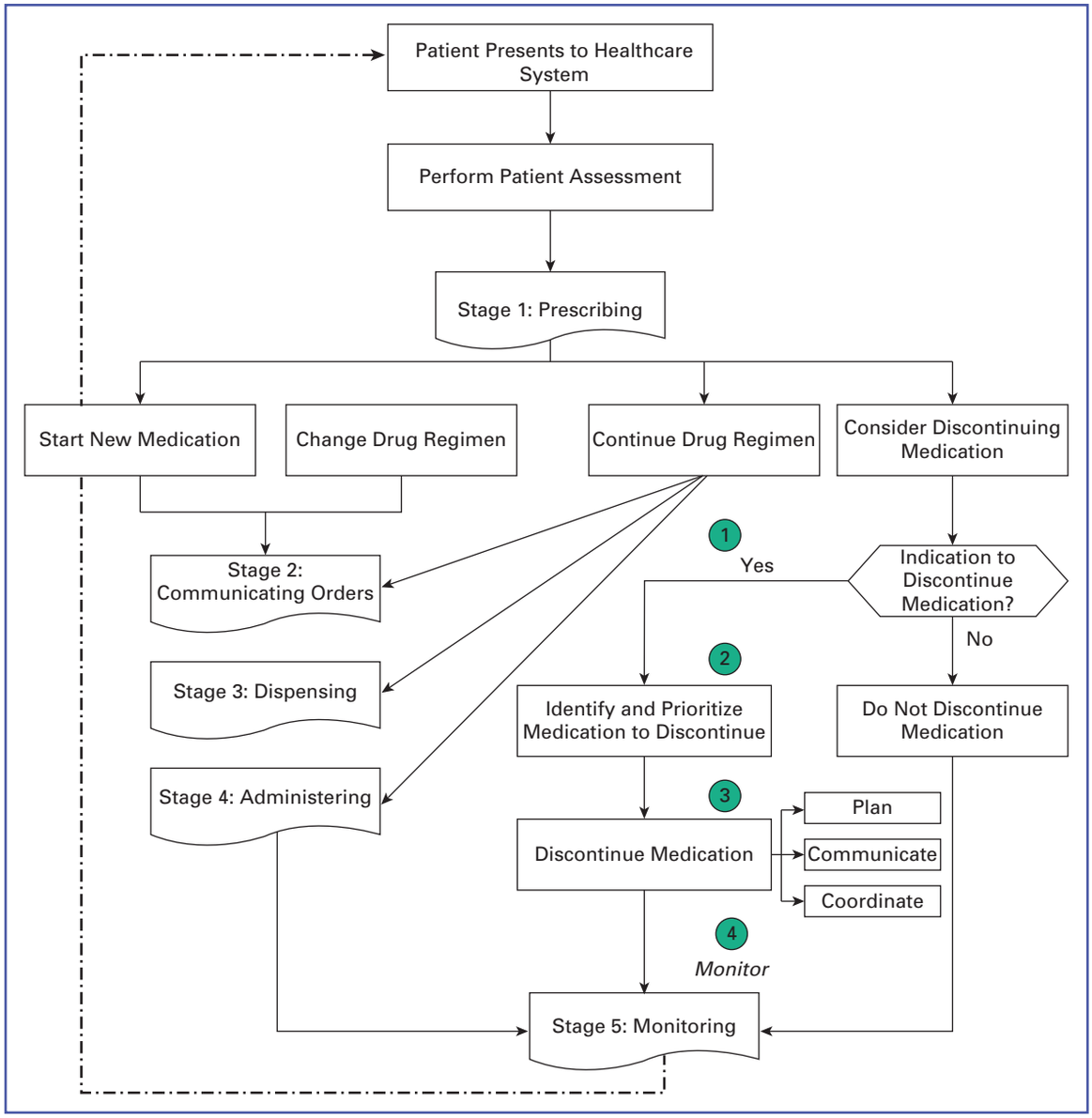

Figure 1. The prescribing stage revised. Reprinted with permission from Bain, K. T., Holmes, H. M., Beers, M. H., Maio, V., Handler, S. M., & Pauker, S. G. (2008). Discontinuing medications: A novel approach for revising the prescribing state of the medication-use process. *Journal of the American Geriatrics Society, 56*(10), 1946–1952. Copyright © 2008 John Wiley and Sons.

legs and pain with ambulation. She no longer is interested in attending her yoga classes. She also notices she doesn't seem to be thinking as clearly as she used to. She begins to feel saddened as she sees these as signs she is getting old.

Although prudent prescribing has the potential to decrease the incidence of polypharmacy, the problem will still exist. The next step to aid in decreasing the problem is identifying it—a very challenging task. There have been many attempts by various clinicians to develop tools to assist with this process, such as the Beers Criteria (The American Geriatrics Society 2012 Beers Criteria Update Expert Panel, 2012), Medication Appropriateness Index (Hanlon et al., 1992), Comprehensive Geriatric Assessment (Sergi et al., 2011), Assessing Care of Vulnerable Elders (Wenger et al., 2001), the Screening Tool of Older Persons' Potentially Inappropriate Perscriptions (STOPP) (Gallagher et al., 2008), and the Screening Tool to Alert Doctors to Right Treatment (START) (Barry et al., 2007) criteria. Please see Part 1 of this series for more discussion on these specific tools (Riker & Setter, 2012). Unfortunately, none of these tools alone will identify all unnecessary medications. A thorough medication review and reconciliation is the best method, talking to the patient and all prescribers, and asking questions about each medication and the regimen as a whole. If this seems fundamental; why is this not routinely done? The answer is time, detail, complexity, and responsibility. It takes a lot of time to not only gather all the information, but then to further investigate and perhaps ask many questions, sometimes involving other prescribers and/or family members for clarity. Also, it does not happen once. It is an ongoing process, so there are rarely quick fixes. In addition, many older adults are not stable so their health status changes frequently, and therefore their medication needs may be constantly changing. The second reason is responsibility. Ultimately it is everyone's responsibility to aid in identifying polypharmacy; however, no one person is typically delegated or assigned to this one task. Therefore, each clinician may do a part of the medication review, but this can lead to disjointed and fragmented work. Consistent and effective communication between clinicians, patients, and prescribers is essential.

The Role of the Home Healthcare Nurse

Home healthcare nurses have a wonderful and unique opportunity to help identify polypharmacy. Because home healthcare nurses are skilled in patient assessment and interaction, have medication knowledge, and see their patients on a regular basis, they may identify medication-related issues that others do not see or may miss. As is seen with the patient case presented in this article, when a nurse notices that a patient who is typically active and alert is now weak and confused, the question of polypharmacy should be brought up and explored. Sudden changes in a person's status whether mental, physical, or emotional may often be related to a medication problem. Some of the questions they can ask their patients either when doing medication reconciliation or if a concern arises, include

- How long have you been on this medication? Did you notice any changes in how you felt when/after you started this medication? This can include changes in mood, appetite, mobility, thinking, sleep, digestion, dizziness; overall clinical status. … The list is really endless.
- Why are you taking this medication? Is [insert the reason the patient is taking the medication] still a problem for you?
- What challenges do you have with taking your medications? This may include adverse effects, remembering to take them, mixing up the medications, the schedule, paying for them, the size of the pill, and swallowing them … just to name a few.

In some cases, the patient may not know the answer to the questions. This is okay; the goal is just to get as much information as possible. Recall the situation with the 83-year-old woman who recently started simvastatin. She is experiencing a change in how she feels that may often be attributed to "old age"; however, it could also be an adverse effect of the new medication. Simvastatin is known to sometimes cause muscle weakness and confusion in patients. When the home healthcare nurse asks if she has noticed any changes since starting the medication, the patient may reveal this information, which can then be reported back to the prescriber who can reevaluate the risks and benefits of this medication in this patient. Because there is little evidence to support primary prevention in this instance (i.e., lowering cholesterol in a patient who has not had a cardiac event) (Morley, 2011), the risks (or adverse effects) this patient is experiencing are likely to outweigh the benefit (which is little to none).

To expand further on the questions posed in the previous paragraph, let's look at "indications," or why the patient is taking the medication. If the patient is taking a preventative medication, how long do they need to take the medication to prevent a potential event? Have studies been done showing evidence that the medication lowers the chances (e.g., decreases the risk) of having this event done in the same population (gender, age, comorbidities, etc.) as the patient? Often times, data from studies done in younger populations are extrapolated by prescribers and then applied in older populations. As discussed in Part 1 (Riker & Setter, 2012), older adults are often excluded from clinical trials, so the chances of a study being done in the same population as the patient may be low. This has been shown with aggressive treatment of blood glucose, blood pressure, and cholesterol in older populations (Beckett et al., 2008; Brown et al., 2003; Morley, 2011). There are also differences in prevention between men and women. This may also lead to conversations with the prescriber about the goals of therapy and if the therapy is still warranted for this patient. Preventative therapies may also need to be reconsidered as people age. Physicians are often hesitant to discontinue medications prescribed by other physicians; however, if the patient is not benefiting from the medication, communication between prescribers regarding possible discontinuation of medications should take place (Bain et al., 2008).

The Role of the Pharmacist in Polypharmacy

Pharmacists are a valuable resource for medication reviews. Using his or her extensive drug knowledge, a pharmacist can speak with a patient to find out what symptoms the patient may be having and help to identify if the symptom could be medication-related. A pharmacist who is trained to work with older adult patients will have a special expertise to assist in this process, but it is very important to always remember that each older adult is unique, and there is no one specific answer that can work for all patients. It is also important to take a patient-centered approach to the review process. Pharmacists can become additionally trained or specialized through the Certified Geriatric Pharmacist (CGP) exam, which is a certification offered through the American Society of Consultant Pharmacists (ASCP). To find a CGP in your area, visit: http://www.ccgp.org/consumer/locate.htm.

As Yang et al. (2001) identified, an in-home interview and investigation is the most effective way to obtain a complete medication list for a patient. This is an opportunity when the questions already discussed can be asked to help identify potential polypharmacy the patient may be experiencing. It is essential to focus on the individual patient and what their situation presents. As Avorn (2005) and Sloan (2009) discuss in their texts, symptoms reported by older patients should be viewed as potential medication side effects first.

Treating the Problem of Polypharmacy

The situation: A 72-year-old male patient is experiencing significant edema in his lower extremities. He is currently taking multiple medications, two of which medications can cause this side effect: gabapentin and diltiazem. As the home healthcare nurse, you are unsure of which of his medications may be causing this side effect, but note that his gabapentin dose was recently increased. You call the prescriber to report your observations.

An example of how this communication may take place is

Dear Presciber,
I have been working with [insert agency] and seeing [insert patient]. Recently I have noticed some changes in how [patient] has been feeling and would like to ensure you are aware of this. I understand that you have been working with this patient for a long time and that I may not have the complete picture. [Patient] has been experiencing a significant increase in lower extremity edema, especially since the increase in his gabapentin dose. Would decreasing his gabapentin back to its previous dose [insert previous dose] be an option to see if this symptom is relieved? If you agree to this change, please contact [patient]'s pharmacy at [insert pharmacy name, phone number, fax]. If you could also please respond to this fax so that we can keep our records up to date. Please do not hesitate to contact me with any questions at (insert number.)

___ Yes, return to patient's previous gabapentin dose.

___ No, continue patient on current gabanetin dose.

___ Other:

Thank you,
[signature]

Once the problem of polypharmacy has been identified, the next step is working to remedy the problem. If a specific medication has been identified as being unnecessary, or possibly unnecessary, a plan for discontinuation should be made. It is important to communicate with all providers, especially the prescribing clinician, when creating this plan. The home healthcare nurse may be communicating the symptoms or concerns she has with the primary or prescribing prescriber, rather than a specific plan for discontinuation. In some cases, more than one unnecessary medication may be identified. When more than one medication will be discontinued, priority must be established to assign an order for which the medications will be discontinued. This order will be specific to each individual.

If a patient is experiencing a symptom that is suspected to be a side effect of the their medications, the most likely medication should be discontinued first, then the next likely medication until the symptom resolves or unnecessary medications have been discontinued. It can be helpful to look at the timing of when medications were changed—this includes new medications added, medications stopped, doses changed, or changes to generics. The timing can help establish the relationship between medications and symptoms and priority of discontinuation. If the patient is not experiencing a specific side effect symptom, and it has been determined that medications can be stopped, the prioritizing may be of less importance. It is very important to discontinue medications cautiously, one at a time, and slowly.

A familiar phrase when starting medications in older adults is "Start low and go slow" and its counterpart is a similar statement "stop slow as you go low" (Bain et al., 2008, p. 1948). When a medication is started in an older adult, it is important to start at lower doses and titrating up slowly to help avoid adverse events. It can be equally important to discontinue medications gradually to reduce adverse drug withdrawal events (ADWEs). This is not necessary with all medications; however, it is very important with others such as β-blockers and benzodiazepines. See Table 1 for a detailed list of some common medications that need to be discontinued slowly due to potential ADWEs. Pharmacists can be very helpful in assisting prescribers with a plan for discontinuing specific medications. They can use their knowledge of medications to advise about whether a tapering plan needs to be used and what types of reactions a patient may experience and how they should be monitored, and what symptoms they should be monitored for specifically.

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Bain et al. (2008) propose a four-step process to discontinuing medications: recognizing, identifying and prioritizing, discontinuing, and monitoring. This last step is especially important. Monitoring can be directed toward both beneficial and harmful effects and will be specific to each medication and each patient. ADWEs can occur and may be very troublesome to a patient; therefore, open lines of communication between the patient and each healthcare provider are essential in determining if a new plan needs to be made.

Referring back to situation discussed in this section, the physician may recommend that the patient try decreasing the gabapentin back to the previous dose, rather than adding a diuretic to treat the edema. If the patient is taking the gabapentin for neuropathic pain, his pain levels should be monitored as well as a hopeful reduction in his edema. If the patient does not improve (or pain continues to be a problem), this should

be reported back to the physician and a new plan can be made. The process of slowly reducing a medication's doses when it is suspected of causing a side effect, however, is also deemed as necessary, which is "gradual dose reduction." This is a practice that consultant pharmacists working in skilled nursing facilities must do on a regular basis with the atypical antipsychotics due to Medicare regulations (Centers for Medicaid & Medicare Services [CMS], 2011).

Barriers to Discontinuing Medications

Discontinuing medications can be a challenge in some cases. Bain et al. (2008) list several of these involving various perspectives. The patient, who may be used to being prescribed medications,

Table 1. Medications Commonly Associated With Adverse Drug Withdrawal Events (ADWEs)

Medication	Type of Withdrawal Reaction	Withdrawal Event
Alpha-antagonist antihypertensive	P	Agitation, headache, hypertension, palpitations
Angiotensin-converting enzyme inhibitor	P, D	Heart failure, hypertension
Antianginal	D	Angina pectoris (myocardial ischemia)
Anticonvulsant	P, D	Anxiety, depression, seizures
Antidepressant	P, D	Akathisia, anxiety, chills, coryza, gastrointestinal distress, headache, insomnia, irritability, malaise, myalgia, recurrence of depression
Antiparkinson agent	P, D, N	Hypotension, psychosis, pulmonary embolism, rigidity, tremor
Antipsychotic	P	Dyskinesias, insomnia, nausea, restlessness
Baclofen	P, N	Agitation, anxiety, confusion, depression, hallucinations, hypertonia, insomnia, mania, nightmares, paranoia, seizures
Benzodiazepine	P	Agitation, anxiety, confusion, delirium, insomnia, seizures
Beta-blocker	P, D	Angina pectoris, anxiety, hpertension, myocardial infrction, tachycardia
Corticosteroid	P, N	Anorexia, hypotension, nausea, weakness
Digoxin	D	Heart failure, palpitations
Diuretic	D	Heart failure, hypertension
Histamine-2 blocker	D	Recurrence of esophagitis and indigestion symptoms
Narcotic analgesic	P	Abdominal cramping, anger, anxiety, chills, diaphoresis, diarrhea, insomnia, restlessness
Nonsteroidal anti-inflammatory drug	D	Recurrence of arthritis and gout symptoms
Sedative or hypnotic (e.g., barbiturate)	P	Anxiety, dizziness, muscle twitches, tremor
Statin	D, N	Cardiogenic shock, early neurological deterioration, heart fialure, myocardial infraction, ventricular arrhythmia

Notes: D = exacerbation of underlying condition; N = new set of symptoms; P = physiological withdrawal.
Source: Reprinted with permission from Bain, K. T., Holmes, H. M., Beers, M. H., Maio, V., Handler, S. M., & Pauker, S. G. (2008). Discontinuing medications: A novel approach for revising the prescribing state of the medication-use process. *Journal of the American Geriatrics Society, 56*(10), 1946–1952. Copyright © 2008 John Wiley and Sons.
Modified by Bain et al. from Hanlon et al.

may have been told they will be on them "forever," or feels that the medication is necessary to treat one of his or her diseases and may not feel comfortable stopping that medication. Clinicians and prescribers, including nurses, physicians, and pharmacists, may be unsure about how to approach the subject of discontinuing medications with their patients because it could hurt their relationship; they may feel uncomfortable stopping a medication another prescriber started, or they may not feel they have enough information to know the most effective step-wise approach to withdrawing a specific medication. An appropriate plan can be made with careful cautious planning and effective and ongoing communication among team members caring for the patient.

In some cases, after a medication is discontinued, a patient may not respond well. They may have intolerable withdrawal side effects or it may be established that the patient does need the medication to treat a symptom or to control an important clinical parameter, such as blood pressure. For instance, this can be the case when trying to stop a medication that helps to reduce stomach acid known as a proton pump inhibitor. Sometimes patients have what can be known as "rebound acid reflux" after they stop these medications. Depending on the patient, some may be able to "tough it out" until it goes away, whereas others may need to restart the medication. This further illustrates the importance of monitoring and communication; in this case telling the patient that they may have increased "acid" for a time after stopping the medication. A flexible plan will allow the patient, prescriber, and other clinicians involved in the patient's care to change the course of action if an unpleasant reaction occurs.

Steinman and Hanlon (2010) look at several cases of managing multiple medications in clinically complex older patients and then further identify strategies to improve the medication management to provide better care for the patient as well as families and caregivers. Goals of therapy play an important role in the decisions made about discontinuing medication. In some cases, a medication may have an indication, however, for other reasons; it may no longer be benefiting the patient. For example, a patient with advanced dementia may no longer be receiving benefit from his dementia medications, even though they still have an indication. The struggle that ensues when his caregivers try to give him the medication may cause more tension or adverse effects than the potential minimal benefit. It is important to emphasize the importance of establishing what the patient and family's goals of medication therapy are pertaining to life expectancy, longevity, and quality of life. In some cases, these goals may not all be the same for the patient and family members—posing yet another challenge. Working with the patient and family, it can be advantageous to find a mutual goal that will provide the optimal care for the patient.

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Considerations About Discontinuing Medications in Hospice and Palliative Care

The situation: An 82-year-old female patient has just received a terminal diagnosis and is admitted to hospice care. She is taking 13 medications, including oral medications to treat her high cholesterol, diabetes, and hypertension. With her recent diagnosis, she has been told she should expect to experience pain and may soon require high doses of pain medication, which may make her drowsy, constipated, and decrease her coordination. She is not looking forward to having to take more medications added to her already burdensome list.

In hospice and palliative care, the goals of therapy often change to have a heavier focus on improving comfort and quality of life rather than preventing future diseases or events. When a patient is admitted to hospice or a palliative care approach is taken, medications that are used for prevention may be discontinued and medications may be added to provide increased treatment of pain or other symptoms. Some of the common symptoms that require assessment

End-of-life care can present a unique set of symptoms that may require new medications to be added and changed frequently. By ensuring that the medication regimen contains only medications that are necessary, in this case, providing symptomatic relief, the patient is likely to experience greater benefit and less burden from polypharmacy.

and treatment at end of life include pain, constipation, fatigue, nausea and vomiting, delirium, dyspnea, anorexia, and cachexia. Home healthcare nurses and hospice nurses recognize the shift in goals of therapy to a palliative approach where tight control of blood pressure, blood glucose, and cholesterol are no longer the focus of care. And as with any setting, the family and the patient themselves also need to understand and be willing to discontinue these medications. For example, insulin may no longer be needed (or may be needed less frequently) as the goals of diabetes management in these patients will be symptomatic treatment rather than prevention of longer-term effects. It may be comforting for them to understand that stopping certain medications does not mean they are giving up, but that they are changing with their goals of care. Many hospice patients have frequent medication changes as medications are added and stopped for symptom relief and in response to frequent clinical status changes, therefore benefiting from ensuring that only necessary medications are initiated and continued.

Returning to the case presented above, this patient has some concern with having more medications added to her regimen. It is important for her to express these concerns with the clinicians she works with—the nurse, prescriber, or pharmacist. The next vital step is to have a care conference that involves clinicians, prescribers, family, and the patient to discuss goals of therapy and formulate a care plan. With the specific focus of medications, it is important to discuss why each medication is being used. In this patient's case, as is similar with many hospice and palliative care situations, medications that provide long-term preventative benefits are likely to be appropriate candidates for discontinuation. A plan of discontinuing medications can then be formed. This will allow for certain medications to be discontinued, such as the medications to control her cholesterol, as well as perhaps the diabetes and blood pressure medications. As was mentioned earlier, end-of-life care can present a unique set of symptoms that may require new medications to be added and changed frequently. By ensuring that the medication regimen contains only medications that are necessary, in this case, providing symptomatic relief, the patient is likely to experience greater benefit and less burden from polypharmacy.

In palliative and hospice care, a patient-centered approach is essential. As diseases progress and new symptoms arise, medications that are generally considered "forbidden" among older patients may be considered. One example of this is the use of haloperidol in hospice. Typically an antipsychotic that is avoided in older patient due to side effects, haloperidol can be a very beneficial medication for this patient population to relieve delirium. This is one of many examples of how therapy goals will shift during this time of care.

Communicating With Prescribers for Change: Focusing on the Patient's Symptoms

Communication among healthcare providers can be another challenge. Everyone is busy, held to various standards and quality indicators, and can be pulled in multiple directions and by numerous responsibilities and priorities. This makes a conversation regarding discontinuing medications potentially even more daunting. Home healthcare nurses may identify a medication that appears to no longer be providing a benefit to a patient. Examples may be due to an intolerable adverse effect or a lack of efficacy. The nurse may then wonder the best approach to communicate this information to the prescriber. Three strategies may help to make this conversation go more smoothly: (a) identifying that you may not have all the information, (b) addressing the specific concerns with the medication as they pertain to the patient (e.g., reporting the observed symptoms), and (c) proposing a plan.

By initially identifying that you are only one of the many clinicians this patient interacts with and therefore may not have all the information is a good way to partner with the prescriber. Addressing specific symptoms (low heart rate at 60, nausea, muscle weakness, fatigue, etc.) that the patient is exhibiting helps establish a strong focus on the patient and help provide information about what may be beneficial for the patient. If it is lack of efficacy of a medication or impracticality of using a preventative medication in an older adult because of shortened life expectancy, these points can also be shared. By proposing a plan, which should include a schedule for how the medication can be discontinued or tapered and what will be specifically monitored and by whom, such a discussion and plan will help complete the conversation.

In some cases, a nurse may not be able to have this much information to provide to a prescriber. It may be a vaguer situation in which the patient appears to be having a symptom that could be a side effect or an overall decline in function or quality of life. In this case, the message to the prescriber may take on more of a "reporting" of the situation in the home to allow the prescriber to have more information and a greater understanding of the patient. It may be appropriate to identify if the patient is struggling with their medication regimen and could benefit from a less complex regimen.

Pharmacists can also help with this process by taking a deeper look at the symptoms the patient is experiencing and possibly linking this to a medication. Home healthcare nurses might provide the list of medications to the pharmacist along with the observations of the patient's individual situation. The pharmacists can then review the regimen and aid in further questions the home healthcare nurse may be able to ask the patient leading to identification of potential problems with the medications such as side effects, interactions, or decreased benefit.

The Beers Criteria: Identifying Potentially Inappropriate Medications in Older Adults

The Beers Criteria (The American Geriatrics Society 2012 Beers Criteria Update Expert Panel, 2012), described in the Part 1 article, is a tool that has been used for many years to aid in identifying potentially inappropriate medications in older patients (Riker & Setter, 2012). With the recent update, the Beers Criteria has again been circulating in the literature. It is important to consider the implications and clinical impact of these guidelines. Pulling together the information presented in both parts of this article, it is especially important to remember that while a systematic process can be used in doing a medication review of a patient who may be experiencing polypharmacy; each patient is still an individual. For home healthcare nurses and other clinicians less familiar with medication use in older patients, the Beers Criteria may serve as a helpful starting point to question medications that are included on the list. However, it is important to then view the patient as a whole, realizing he or she may have already tried alternative medications or may not be experiencing the symptom or adverse reaction that may be a concern with the medication. Cautious application of the Beers criteria is a starting point and an important step in utilizing it appropriately in the continuum of care.

Resolution of the Opening Patient Example: ML

When the home healthcare nurse sits down with ML, she begins by asking how she is feeling. ML says she is feeling very weak and confused. Her muscles just don't seem to work like they did before she went to the hospital. As she gets up to go into the kitchen to get her medications, she sways and clutches her head saying she feels very dizzy. ML is taking small steps and groans some with each step. The nurse asks if she is in pain, noting a grimace on ML's face. ML says that her feet hurt with every step because her shoes don't fit right anymore. After examining ML's feet, the home healthcare nurse notes there is significant swelling around her ankles and feet. The home healthcare nurse wonders if one of these newer medications may be contributing to ML's complaints. She calls the pharmacist working with the HHA and reports her findings.

The pharmacist obtains the comprehensive list of what ML takes, including OTC and herbal remedies. The pharmacist next identifies that three medications may be contributing to the feelings that ML is experiencing. They are amlodipine, metoprolol, and simvastatin. The pharmacist bases this on the timing of the medications partly (the new amlodipine starting to lead to edema, recent metoprolol prescription starting

to contribute to dizziness) and classic medication adverse effect relationship of simvastatin leading to muscle weakness and pain. The pharmacist next offers to contact the primary care prescriber. The pharmacist writes a fax to be sent to the primary care prescriber. First, the pharmacist states the symptoms the patient has reported and then goes on to identify the three medications as potentially contributing to the symptoms. It can be helpful for the pharmacist to also acknowledge that the HHA may not have the whole picture, but based on the information they have provided to the pharmacist, a trial to stop these medications may be beneficial to the patient. The pharmacist proposes stopping the amlodipine, then the simvastatin, and finally the metoprolol. The medications should be stopped one at a time, with the dose first being reduced by half for 1 week, then off completely for 1 week. The symptoms the patient is experiencing should be monitored frequently and the patient should be encouraged to contact a healthcare provider if he or she experiences any new symptoms. Continued communication should occur between the HHA and the primary care prescriber as well as appropriate prescribers.

Summary

Creating and maintaining open lines of communication between all clinicians and the patient are essential in treating and addressing the problems of polypharmacy. Creating and maintaining a single medication list that contains all the prescription and nonprescription medications, including OTC products such as vitamins, herbals, and dietary supplements the patient is taking, is necessary for all aspects of care. This list should be updated and periodically reviewed by the primary care prescriber, the pharmacist, and the home healthcare nurse. Polypharmacy causes harm to patients and it should be a goal of clinicians to work together to help reduce polypharmacy whenever possible. ⌂

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