On-Demand Clinical News

Cost Effective Medication Use at End of Life

By: Brett Gillis, PharmD, RPh

Rising healthcare costs and an aging population have prompted increasing attention to and emphasis on cost-effective medication use within hospice and palliative care organizations and the entire healthcare compendium. In medication therapy management (MTM), pharmacists partner with allied healthcare professionals to optimize drug therapy and improve therapeutic outcomes. In its simplest form, cost is "the amount or equivalent paid or charged for something," but, in terms of a clinical intervention or medication, price does not equal cost. Defining cost of an intervention or medication entails an analysis of the procurement price, clinical comparison to alternatives, the impact on the healthcare system, and outcomes. Effective is defined as "successful in producing a desired or intended result." Therefore, cost-effective is a compound adjective, and cost-effective medications are the least costly medications that will produce the desired clinical outcome.

The most cost-effective medication/pharmacological intervention is the one that costs the least but provides the desired outcome. Often times the least costly intervention entails discontinuing an offending treatment or factor, and, as such, the symptom management decision pathway generally starts with a recommendation to eliminate any modifiable underlying causes, including medications that may reasonably be discontinued. For example, if a patient is experiencing esophagitis and has limited functional ability and a prognosis of only a few months, then discontinuing a causative preventative medication (such as alendronate) would most likely be the best course of action.

Next, implement lifestyle modifications and nonpharmacological interventions (such as limiting late-day naps, caffeine, and fluids if insomnia is a symptom management issue), and then optimize current treatments and plan of care (such as scheduling oral steroids earlier in the day to lessen the risk of nighttime insomnia). If these steps do not yield the desired outcome, then consider initiating a new medication or treatment (such as trazodone, temazepam, or low-dose mirtazapine to treat insomnia). If the patient has multiple symptoms and a new medication is indicated, another helpful hint is to initiate a medication that palliates multiple symptoms, also known as a portmanteau, which has the potential of minimizing pill burden while maximizing compliance and symptom management.

Continued on Page 2

Respiratory Disease in the Hospice Patient

By: Karen Bruestle-Wallace, PharmD, BCGP, CPh

The different types of respiratory disease in advanced lung disease (ALD) include: chronic obstructive pulmonary disease (COPD), interstitial lung diseases, cystic fibrosis, lung transplant and pulmonary hypertension.

Most patients with ALD are on some type of respiratory inhaler. There are three different types of inhalers including metered dose inhalers (MDI), dry powder inhalers (DPI) and soft mist inhalers (SMI). Some studies in non-hospice patients have shown over 50% of patients do not use their inhalers correctly and up to 94% of patients do not use their DPI's correctly. Up to 1 in 4 patients have never had verbal technique instruction. In the patients that do receive verbal instruction, many times the quality and duration is not adequate and is not reinforced by follow up checks. All of this results in sub-optimal drug delivery and poor symptom relief. Common errors when using inhalers include failing to exhale before actuation, failing to hold breath after inhalation, incorrect positioning of inhalers, incorrect rotation sequence (especially with DPI's) and failure to execute a forceful and deep inhalation.

Other challenges include: coordinating breathing and inhaler activation with MDI's; also DPI's may require a higher level of inspiratory effort to get the dry powder into the lungs where it is active; some inhalers require up to eight steps to be used correctly; and some patients may not be able to adequately rinse their mouth after inhaled steroid use. All patients using inhalers must have regular assessment and reinforcement of correct inhalation technique. Thus, it can be easy to understand how hospice patients with ALD may be getting little benefit from their inhalers. The majority should be switched over to nebulizers and oral steroids if needed and not contraindicated.

Continued on Page 3

Cost Effective Medication continued from page 1

One of the most practical ways to quickly and consistently access and identify the preferred (most cost-effective) medications in hospice and palliative care is to develop a hospice formulary (HF) or preferred drug list (PDL). General goals are to include medications in a variety of classes and dosage forms that treat the most common terminal disease states and symptoms encountered at end of life (such as pain, shortness of breath, and terminal secretions). Current reimbursement rates generally convey the recommendation to limit total medication expenditures to less than $7.50 per patient per day. In other words, the goal is to spend less than $7.50 per day on each patient's hospice-covered medications. Medications that are infrequently filled (i.e. once every fifteen days or every thirty days) are important to consider. For example, if it is known that a non-preferred inhaler costs $300 and that it lasts for one month, then this one medication will result in a daily expenditure of $10, an amount which exceeds the $7.50 target per patient per day. It also forces a 30-day fill rather than a 15-day fill. Costly medications may, however, be cost effective in certain circumstances, such as the use of a high-cost inhaler that ultimately prevents hospitalization for a COPD exacerbation in a patient who is able to correctly and fully inhale the contents.

Cost-utilization analysis tools may be used to assess a hospice's cost outcomes on a periodic basis, such as quarterly. Examples of these tools include target drug reports (TDRs) and medication cents reports [sic]. TDRs are lists of the most costly medications used over the assessment period that the organization is targeting to improve over the next assessment period, such as oxycodone ER (Oxycontin), transdermal scopolamine (Transderm-Scop), and rifaximin (Xifaxan). Medication cents reports (MCRs) offer a "sense" of where an organization is expending the most on medications by retrospectively analyzing medication use across a wide spectrum of disease states and symptoms. MCRs may target classes of medications as a whole (such as opioids), symptom categories (such as agents used to treat insomnia), or the top 5 most costly medications by number of patients and/or by total cost of the medication. It is not uncommon for one target medication such as rifaximin (Xifaxan) or linezolid (Zyvox) to cost more than the sum of several other patients' entire medication lists. Together, TDRs and MCRs are useful in developing what may be termed a target drug list (TDL), or a short list of medications that a hospice is targeting for reduced utilization over the next assessment period. For example, if oxycodone ER, transdermal scopolamine, and rifaximin continue to surface as agents that are resulting in significant costs to the organization, then these agents may comprise the next TDL for the interdisciplinary team to reference during initial admission consultations and at regularly scheduled team meetings. As helpful as these reports and lists may be, they are not static, as each assessment period may present new opportunities for cost containment. The interdisciplinary team should refocus based on the most recent findings.

"Burdensome expense should never be our sole consideration, especially at the end of life, but in the current health care climate, it is best to bring the money elephant out of the shadows and deliberately and carefully consider the ever-increasing cost of health care and the burden it imposes on patients, families, and communities."

–Margaret McLean, Markkula Center for Applied Ethics

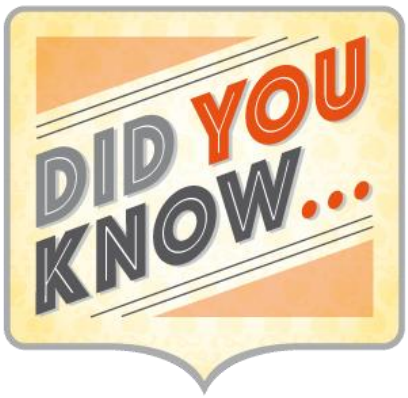
Respiratory Disease in the Hospice patient continued from page 1

Dyspnea is defined as shortness of breath, labored or difficult breathing and air hunger. In patients experiencing dyspnea, the cause should always be treated when possible. In COPD this would include nebulized bronchodilators and oral steroids. Effusions should be drained if possible. Patients with hypoxemia (oxygen saturation less than 88%) should be on oxygen. If there is a CHF component, utilize diuretics including a loop such as furosemide, and/or an aldosterone antagonist such as spironolactone. Short bursts can be used where appropriate. There are non-pharmacological measures to help with dyspnea. Cool air (fan), open windows, chest wall vibration, upright position, and purse-lipped breathing can help shortness of breath. Relaxation techniques and calming music can help dyspnea and the anxiety that many times accompanies it.

Opioids are a main pharmacologic treatment for dyspnea. The exact mechanism of action is unknown. Opioids may decrease chemoreceptor response to hypercapnia (elevated blood CO2) and hypoxia (reduced oxygen). They may also cause vasodilation, which may reduce preload and pulmonary congestion resulting in decreased dyspnea. In addition to this, they may decrease anxiety and the sensation of dyspnea. Morphine is the gold standard and has the most support for use in shortness of breath. Other opioids at equivalent doses can be used if morphine is contraindicated. Some literature does not support the use of fentanyl for dyspnea. Also, studies do not support the use of nebulized morphine for dyspnea. Some studies show that nebulized morphine is no more effective than nebulized normal saline. Benzodiazepines are also used for treating shortness of breath and anxiety. They do not reduce dyspnea directly, though, and should never be use alone for shortness of breath.

For additional guidance on the optimal management of dyspnea and other symptoms in ALD, please contact your ProCare clinical pharmacist team. We are here for you 24 hours a day, 7 days a week.

References:
1. Jennings, A-L., Davies, A. N., Higgins, J. P. T., Gibbs, J. S. R., Broadley, K. E. (2002). A Systematic Review of the Use of Opioids in the Management of Dyspnea. *Thorax*, 57, 939-944.
2. Gore, J. M., Brophy, C. J., Greenstone, M. A. (2013). How Well Do We Care for Patients with End Stage Chronic Obstructive Pulmonary Disease. *Thorax,* 55, 1000-1006.
3. Pistelli, R., Ferrara, L., Misuraca, C., Bustacchini, S. (2011). Practical Management Problems of Stable Chronic Obstructive Pulmonary Disease in the Elderly. *Current Opinion in Pulmonary Medicine,* 17 (Suppl 1), S43-S48.
4. National Comprehensive Cancer Network (2016). NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines), Palliative Care
5. Lavorini, F., Magnan, A., Dubus, J. C., Voshaar, T., Corbetta, L., Broeders, M., et al. (2008). Effect of Incorrect Use of Dry Powder Inhalers on Management of Patients with Asthma and COPD. *Respiratory Medicine,* 102, 593-604.
6. https://www.healthypeople.gov/2020/topics-objectives/topic/respiratory-diseases
7. https://www.nhlbi.nih.gov/about/documents/factbook/2012/chapter4
8. http://pulmccm.org/main/2016/copd-review/new-2017-gold-guidelines-copd-released/
9. https://www.thoracic.org/patients/patient-resources/breathing-in-america/resources/pdf
10. http://geriatrics.uthscsa.edu/tools/Hospice_elegibility_card__Ross_and_Sanchez_Reilly_2008.pdf
11. Controlling health care costs while promoting the best possible health outcomes: ACP; 2009.
12. Furrow, BR. The ethics of cost-containment: bureaucratic medicine and the doctor as patient-advocate: NDJL (187:3:2:3); 1988.
13. Hospice and palliative care formulary usa: Palliativedrugs.com LTD (2); 2008.
14. Hospice enrollment saves money for medicare and improves care quality across a number of different lengths-of-stay; Health Affairs (32:3); 2013.
15. Lexicomp online: Lexi-Comp, Inc.; accessed: March, 2017.
16. McLean, MR. Is it ethical to consider the cost of treatment in medical decision making? MCAE; 2011.
17. Merriam-Webster.com. Merriam-Webster, accessed: March, June, 2017.
18. Pollack, A. Cost of treatment may influence doctors. NYT; 2014.
19. ProCare HospiceCare Preferred Drug List: 3D: PDL; 2016.
20. WHO drug and therapeutics committees: a practical guide; 2003.
21. WHO guide to cost-effectiveness analysis; 2003.



The term ***portmanteau*** dates from the mid-16th-century French and has various meanings: a large suitcase, a word derived from blending two or more distinct forms, or combining one or more use or quality.

Everyday examples of portmanteau: brunch (combining breakfast and lunch), smog (combining smoke and fog)

Medical examples of portmanteau: oral steroids such as prednisone and dexamethasone (for their treatment of inflammatory pain, appetite, and mood), short-acting opioids such as morphine IR tablets or concentrate and oxycodone IR tablets (for their treatment of pain and shortness of breath).

Upcoming Lunch and Learn Presentations

August

"Management of Community-Acquired Pneumonia in the Adult Hospice Patient"

Presenter: Shaun Gutstein, PharmD

Tuesday, August 8, 2017 at 3:00pm ET; Wednesday, August 9, 2017 at 12:00pm ET

September

"Parkinson's Disease: Management at End of Life"

Presenter: Joelle Potts, PharmD, CGP

Tuesday, September 12, 2017 at 3:00pm ET; Wednesday, September 13, 2017 at 12:00pm ET

RSVP by contacting Suzanne Stewart, Lunch and Learn Coordinator, at:
1-800-662-0586 ext. 3303 or sstewart@procarerx.com.

Miss a Lunch and Learn?

Log onto PHC's website, click on "Resources and Education", "Client Resources" and "Lunch and Learn"

to listen to audio and view handouts from previous programs.

(https://phc.procarerx.com/resource/edutools/l-l)

Summer Selfie Contest

Snap and win! Snap a selfie and email it to mepowell@procarerx.com to be entered into our monthly give-away! Every contestant wins a prize!

Connect with us on social media!

Facebook (@ProCareHospiceCare)
Twitter (@PHCpharmacy)
Instagram (@ProCareHospiceCare)

Don't miss important updates!
Join over 500 followers and keep up with PHC's Lunch & Learn, Conferences, Contests, Clinical News, & more.




ProCare HospiceCare welcomes all suggestions and comments. If you would like additional information about our services, have ideas for articles, or wish to submit a comment, email us at **resources@procarerx.com**.

ProCare **HospiceCare**
1267 Professional Pkwy., Gainesville, GA 30507
800.377.1037

Executive Editor: Meri Madison, PharmD
Editor: Kristin Speer, Pharm D, BCPS