



## From the Front Lines

Alixarx Clinical Pharmacists Address Everyday Challenges in Long-Term Care

### Advantage of Non-Pharmacological Treatment in Behavioral Patients

**Case Example:** EDNA is a frail 90 year old female reported as having “behavioral problems” in the nursing notes. The physician was called and a new order for a high potency antipsychotic, Seroquel 50mg QHS, was given to help calm her. Several days later Edna fell and fractured her pelvis resulting in immediate surgery, several months of recovery and physical therapy. What steps were overlooked in Edna’s initial treatment and why are they important?

Typical efforts for behavioral management in patients involve pharmacologic treatments (specifically off label use of atypical antipsychotics)<sup>1-3</sup> One concern with this intervention is the lack of reported efficacy of these medications. In the CATIE-AD trial, clinical investigators found that the adverse effect profiles of these drugs significantly outweigh any clinical advantage.<sup>4</sup> Atypical antipsychotics also carry a black box warning for a heightened risk for mortality in dementia patients.<sup>5-6</sup> In addition, the increased cost of these medications combined with a potential for increased falls and drug/drug interactions make antipsychotics less desirable than treatment with nonpharmacological interventions.

Treatment performed by the medical staff not involving pharmaceuticals is referred to as non- pharmacological interventions. Certain medical conditions can cause behavioral problems in a dementia patient. Nonpharmacological interventions include a urinary analysis with laboratory blood work which helps to eliminate untreated medical conditions (UTI, hypothyroidism, hypercalcemia, or hypoglycemia). Evaluation of the patient for infection, pain, or unnecessary medications (anticholinergic drugs) can also help determine the origin of behavioral problems. Co-morbid psychiatric disorders and other neurologic conditions (depression) should also be ruled out.<sup>7</sup> By using these intervention strategies, medical staff can eliminate certain medical conditions before starting a new medication.

Other overlooked non-pharmacological treatments include the use of behavioral strategies for managing difficult patients. Techniques can be targeted with the intent of eliminating conditions contributing to disruptive behavior. Additionally, there are strategies directly involving the patient such as communication techniques, soothing music or exercise.<sup>8</sup> Family education and support can also be helpful in managing the patient.

According to CMS’s Quality Measure/Quality Indicator Report (2010) almost 40% of nursing home residents are placed on antipsychotic medications. Patient issues can be compounded with the addition of antipsychotic medications in an already frail population. Staff should be trained and encourage to follow a systematic treatment plan when disruptive behaviors occur. Among the primary steps for treatment, non-pharmacological interventions must be documented

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along with their outcomes. Any change of condition in a patient should include a Pharmacist review for medication related issues as required by CMS State Operations Manual (Pharmacy Services F-425 and F-428 Medication Regimen Review). This spares the patient unwanted side effects, unwanted drug/drug interactions and unwanted polypharmacy. Just ask Edna.

References: 1. Schneider LS, Dagerman KS, Insel P. Risk of death with atypical antipsychotic drug treatment for Dementia. *Journal of the American Medical Association*. 2005; 294(15):1934-1943. 2. Schneider LS, Tariot PN, Dagerman KS, Davis SM, Hsiao JK, Ismail MS, et al. Effectiveness of atypical antipsychotic drugs in patients with Alzheimer's disease. *New England Journal of Medicine*. 2006; 355(15):1525-1538. 3. Ballard C, Hanneley ML, Theodorou M, Douglas S, McShane R, Kosakowski K, et al. The dementia antipsychotic withdrawal trial (DART-AD): Long term follow-up of a randomized placebo-controlled trial. *The Lancet Neurology*. 2009; 8:151-157. 4. Schneider LS, Tariot PN, Dagerman KS, et al. Effectiveness of atypical antipsychotic drugs in patients with Alzheimer's disease. *NEJM*. 2006; 355:1525-38. 5. Sink KM, Holden KR, Yaffe K. Pharmacological treatment of neuropsychiatric symptoms of Dementia: A review of evidence. *Journal of the American Medical Association*. 2005; 293(9):696-698. 6. Kales HC, Valenstein M, Kim HM, et al. Mortality risk in patients with dementia treated with antipsychotics versus other psychiatric medications. *Am J Psychiatry*. 2007; 164(10):1668-76. 7. The inpatient with dementia US Pharmacist Nove 2014 HS18-258. Gatin LN, Kales HC, Lyketsos CG. Managing Behavioral Symptoms in Dementia Using Nonpharmacologic Approaches: An Overview. *JAMA : the journal of the American Medical Association* 2012; 308(19):2020-2029 doi:10.1001/jama.2012.36918. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3711645/> accessed 01/09/15

Submitted by **Kirk Seale, PharmD**

## My Resident's INR is elevated!

What is the recommended treatment? What should I expect?

Guidelines for anticoagulant therapy have been updated and changed slightly over the past few years. Below is a simplified table for your reference:

**INR < 4.5 with no significant bleeding:** Decrease or hold warfarin dose and monitor INR more frequently. Reinitiate therapy at a lower dose once a therapeutic INR is reached. If slightly above the therapeutic range, no dose reduction may be required.

**INR  $\geq$  4.5 and  $\leq$  10 with no evidence of bleeding:** Clinical practice guidelines recommend against the routine use of vitamin K. Hold the next 1 or 2 doses of warfarin, monitor the INR more frequently, and reinitiate therapy at a lower dose once a therapeutic INR is reached.

**INR > 10 with no significant bleeding:** Vitamin K1 (Mephyton, Phytonadione) 2.5–5 mg PO with the expectation that the INR would be reduced substantially in 24–48 hours. Hold warfarin therapy. Monitor INR more frequently. If the INR is still elevated, additional vitamin K may be given. Reinitiate therapy at a lower dose once a therapeutic INR is reached.

**Serious bleeding at any elevation of INR:** Vitamin K1 5–10 mg IV by slow infusion in addition to 4-factor prothrombin complex concentrate. Hold warfarin therapy.

### \*\*\*Nursing Pearl\*\*\*

Large doses of Vitamin K can lead to warfarin resistance for up to a week after vitamin K is discontinued. Therefore, your residents INR may remain "low" or subtherapeutic for up to a week after vitamin K is administered regardless of the warfarin dose. This is especially true if a large dose (>5mg) of Vitamin K is administered.

What is available in my AlixaRx Electronic Medication Cabinet (EMC)?

Vitamin K1 Injection 10mg/ml

Mephyton (Phytonadione, Vitamin K1) 5mg tablet.

For additional questions please contact your AlixaRx Clinical Pharmacist.

References: Ansell J, Hirsh J, Hylek E, et al. Pharmacology and management of the vitamin K antagonists: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). *Chest* 2008;133:160S-198S. Holbrook A, Schulman S, Witt DM, et al. Evidence-Based Management of Anticoagulant Therapy: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *CHEST* 2012;141:152S-184S.

Submitted by **Matt Palmer, PharmD**

## We have an influenza outbreak! Not all residents are created equal when dosing Tamiflu.

Have you ever heard a colleague say "start low and go slow"? This "saying" refers to the fact that, as we age our ability to eliminate medication decreases. One of the major ways that we eliminate medication from our bodies is our kidneys. Kidney function is commonly expressed on a routine metabolic panel as glomerular filtration rate (GFR). Estimated creatinine clearance (CrCl) is a calculation also used to estimate renal function. Renal function is an important piece of information to know when figuring out what dose of Tamiflu to use for your residents.

**Patients with normal renal function (GFR or CrCl>60ml/min):**

Influenza treatment: Tamiflu 75mg BID x 5 days

Influenza prophylaxis: Tamiflu 75mg daily x 14 days (see CDC recommendation below)

**Patients with Renal Impairment (GFR or CrCl<60ml/min):****Influenza treatment**

CrCl > 60 ml/min: No dosage adjustment necessary.

CrCl > 30—60 ml/min: 30 mg PO twice daily for 5 days.

CrCl > 10—30 ml/min: 30 mg PO once daily for 5 days.

CrCl ≤ 10 ml/min, not undergoing dialysis: Oseltamivir is not recommended.

**Influenza prophylaxis**

CrCl > 60 ml/min: No dosage adjustment necessary.

CrCl > 30—60 ml/min: 30 mg PO once daily.

CrCl > 10—30 ml/min: 30 mg PO every other day.

CrCl ≤ 10 ml/min, not undergoing dialysis: Oseltamivir is not recommended.

**Intermittent hemodialysis (ESRD patients with CrCl ≤ 10 ml/min)**

**For influenza treatment:** 30 mg after every hemodialysis cycle; treatment duration not to exceed 5 days. The initial dose may be given immediately, with subsequent doses administered after each dialysis.

**For influenza prophylaxis:** 30 mg after alternate hemodialysis cycles. The initial dose may be given prior to the start of dialysis.

**CDC recommends antiviral chemoprophylaxis for a minimum of two weeks and for at least seven days after the onset of the last confirmed or suspected case of influenza at the LTCF.**

Reference: Tamiflu (oseltamivir phosphate) package insert. South San Francisco, CA: Genentech; 2014 Nov. www.cdc.gov

Submitted by **Matt Palmer, PharmD**

## Short Stay/Change of Condition

Preventable medication-related events are a serious concern in nursing homes. Pharmacist review of medication regimens can help prevent medication related adverse events. CMS State Operations Manual F- 428 requires that the pharmacist review each resident's medication regimen at least once every month. However, the pharmacist may be required to conduct reviews more frequently if it is determined that the patient's condition or risk for adverse medication effects warrants an additional review. Current surveyor guidance under F-428 Medication Regimen Review has identified that medication regimen reviews may be necessary more frequently than every 30 days. Surveyors may consider issuing a deficiency under F-428 if these more frequent reviews are not requested when needed and performed appropriately.

If a resident is at risk for a possible adverse medication event, such as a significant change of condition that could be related to medication therapy or the facility has a resident who is expected to stay less than 30 days, a short stay / change of condition review should be requested by the facility.

Your AlixaRx clinical pharmacist (ACP) can supply the Medication Regimen Review Request form that is to be completed to request a change of condition or short stay review. The completed form can then be faxed or e-mailed to your ACP. Additional information, such as recent labs, may be requested by the pharmacist to assist in a more thorough and complete review. These reviews will be completed within 3 business days. If a review is needed sooner, please let your ACP know that the review is of an urgent nature.

Please note there is a nominal charge of \$10 per resident for this service.

Submitted by **Jenny Rowley-Funk, Pharm D**



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