A week after admission to a SNF, Ann, an 87 year old female resident, was noted to develop lesions on her vagina. She also had a diffuse maculopapular rash on her torso. She stated the vaginal lesions and rash did not itch or cause her any discomfort. The nursing staff attributed the vaginal lesions to incontinence and the rash to dermatitis due to summer heat. They applied barrier cream with each incontinence episode and obtained an order for triamcinolone (steroid) cream to the rash two times a day. After five days there was no improvement. The mid-level practitioner was notified and a telephone order was given to begin Valtrex 500mg by mouth two times a day for three days and apply acyclovir ointment to vaginal lesions six times a day for seven days for suspected HSV (herpes simplex virus). The practitioner also ordered an HSV test and instructed the nurses to continue the triamcinolone cream for the rash. Several weeks later, during a routine chart review, the facility’s consultant pharmacist noticed the HSV test results were negative, the Valtrex and acyclovir regimens were complete, vaginal lesions had improved, but the rash remained. The consultant pharmacist spoke with the practitioner and recommended a RPR titer (rapid plasma reagin) and if the RPR titer was positive, obtain a T. pallidum antibody test for syphilis. During the consultant pharmacist’s subsequent chart review, it was noted the RPR was 1:2, the T. pallidum antibody was > 8.00H. The resident was positive for syphilis, and was sent to an Infectious Disease clinic for treatment.

Many are surprised by the existence of syphilis in the elderly, but the incidence in this population is significant in terms of newly acquired disease and residual complications due to prior infections. Ageist attitudes cause many people, including healthcare providers, to assume the elderly are not sexually active and not at risk for STDs like syphilis. In skilled nursing facilities, sexual histories of older adults are often incomplete or completely lacking. Although studies on sexuality in older adults are limited, one national sample reported the average frequency of sexual activity in older adults is two to four times per month. One study found that 29% of men > 80 years old were having intercourse weekly, while 38% were having no sexual activity at all. It is also a misconception that all older adults are monogamous. Anywhere from 2.5-3% of older adults in the U.S. had two or more sexual partners in the previous year. Thus, transmission of STDs in the elderly is a real healthcare concern.

Syphilis is often thought to be a disease of the past, largely eradicated in the modern U.S. However, rates are still extremely high in certain populations and rising. The diagnosis is often overlooked by geriatric practitioners due to the presence of non-specific signs and symptoms. Geriatric practitioners are often unfamiliar with the diagnostic tests and recommended treatments for syphilis. Left untreated, life threatening complications such as hepatitis, stroke, and central nervous system damage may occur.

Syphilis is caused by a spirochetal bacterium, Treponema pallidum (T. pallidum). Although it is considered a STD, it can be transmitted from mother to child. It can also be transmitted through oral sex, kissing, and even through skin contact with a person with an active lesion.
Behaviors are very common in people who suffer with dementia, affecting some 90% of patients. Psychopharmacological medications are usually started as first-line therapy in these residents. Due to potential side effects and questionable safety profiles of these medications, perhaps physicians should consider nondrug therapies first before the kneejerk reaction of starting pharmacologic treatment. This article will review dementia and its stages, behaviors seen, and specific nondrug interventions that can be used in each stage.

Alzheimer’s disease is the most common type of dementia among people aged 65 years and older. It is estimated to affect 13% of people over age 65 and 50% of those over age 85. Behavioral and Psychological Symptoms of Dementia or (BPSD) is one of the most common diagnoses we encounter in Long Term Care and can be classified as early, intermediate, and late.

- **In Early (Mild) Dementia**, people may forget words or misplace objects, repeat questions, forget something they just read, have difficulty planning or with more complex daily tasks like driving, and not remember names of new people they meet. Sociability is usually not affected.

- **In Middle (Moderate) Dementia**, people may have more confusion and memory loss, have problems recognizing family and friends, continuously repeat stories/wants/motions, have problems with performing basic activities of daily living, have lack of concern for hygiene and appearance, and have difficulty with social and environmental cues.

- **In Late (Severe) Dementia**, there is almost total memory loss and people become entirely dependent on others. People may have delusions, mistake a person for someone else, have a strong need for tactile stimulation, nurturing or companionship, and need help with all of the basic activities of daily living (eating, drinking, dressing, walking, etc.).

Behaviors most often occur in the moderate stage, but could be apparent during the course of the disease. These behaviors may include yelling, wandering, reversal of the normal sleep-wake cycle, hoarding, aggression, refusal of care, hallucinations, delusions, psychosis, depression, anxiety, and sexual disinhibition. Unfortunately, family and caregivers are at a high risk of depression and burnout. These behaviors can be overwhelming to caregivers and left untreated may increase resident morbidity, physical harm, and usually leads to institutionalization.

Medications are usually considered first line therapy when treating behaviors, but before starting ANY treatment, be sure and look at other conditions that may cause behaviors. These may include infection, pain, fecal impaction, depression, pressure ulcers, adverse effects of medication, or hunger/thirst. Environmental factors should also be reviewed such as loud noises, poor lighting, or strong smells.

When looking to implement non-pharmacologic and pharmacologic therapies, caregivers and families should set realistic expectations (i.e. decreasing the severity or frequency of the behaviors may be more realistic than totally eliminating them). Also, patient specific target behaviors should be treated since not all people will respond the same to medications or to the same non-pharmacologic interventions. Families and friends should be encouraged to participate in the care plan of their loved one in the long-term care facility because they are the ones who know that individual best. They can provide a wealth of information such as food preferences, music/activity preferences, sleep habits, former occupation or household habits, traumatizing events that occurred in the past (that may trigger behaviors), pleasurable memories from the past, daily routines, audio or video recordings of their conversations/memories/stories, pictures, etc. Memory books are great to have in the resident's room with labeled photos of family members or other significant persons, home, places or objects that are special to the resident.

The following are some specific suggestions for non-pharmacologic treatment:

**Massage/Touch Therapy:** Hand massage may have a significant improvement in agitation. Also improvement in nutritional intake and hand massage, when combined with positive encouragement during a meal, may result in a short-term reduction in agitation.

**Aromatherapy:** Lemon balm and lavender oils have been studied and shown to reduce agitated behaviors. Specifically giving a light arm massage with lemon balm vs. odorless cream or placing a lavender sachet on each side of the pillow
during sleep may help. Other common oils used in facility settings are cinnamon, orange and peppermint.

**Exercise:** Exercising has been proven to benefit patients of all ages. Some of these include group stretching, passing a balloon in the air or volunteer-led walking programs that encourage singing and/or hand holding.

**Music Therapy:** Many studies have been done on music therapy. Pleasant, soothing sounds such as ocean waves, listening to music based on known preferences of the resident, or recordings of stories/prayers by a resident’s family yielded positive results. Personal selection of resident's favorite CD's or an iPod preloaded with resident's favorite songs could be used.

**Nonphysical Barriers:** For those residents that tend to wander, these strategies could be helpful: Camouflaging exits by painting them to look like bookcases or painting a black square in front of the elevator to look like a hole.

**Cognitive Stimulation:** Activities such as reviewing current events, drawing, coloring, word association, discussing hobbies, and planning daily activities have shown to improve cognition.

**Tactile Stimulation:** Items such as balls, soft throws, washable dolls or stuffed animals, busy aprons or busy muffs can be used which may especially help in the late stages of dementia.

Below are suggestions of when to use specific non-pharmacologic therapies in each stage of dementia as referenced by the Alzheimer’s Foundation of America. Remember these are only ideas and what works best is knowing the resident:

**Early Stage:**
- Trivia games, word puzzles and memory games
- Passing a balloon in the air with a group
- Reminiscing with family picture albums
- Listening to favorite and familiar music
- Story telling
- Flower arranging
- Conversations with friends from the past

**Middle Stage:**
- Aroma therapy and/or light therapy to help with sleep
- Small tasks like folding towels, or putting socks together
- Family pictures, stories and conversations continue to benefit
- Stuffed animal therapy can benefit (adult appropriate, like dogs and cats) to help with tactile stimulation, comfort, and play
- Buddy pets with grandchildren- having the same stuffed animal pet for conversation props when visiting with each other
- Baby doll therapy is also helpful as nurturing can be beneficial

**Late Stage:**
- Listening to familiar songs from the person’s past
- Aroma therapy can still be beneficial
- Stuffed animals continue to benefit with comfort and companionship
- Baby doll therapy also continues to help with the need to nurture
- Empathy, human touch and love

As the disease progresses, communication skills can become impaired and it is important to know whether the activities you are providing continue to add stimulation or whether the activity may need to be simplified. Watch for cues and body language, such as walking away from the activity, crying, cursing, or throwing as clues to when the activity may not continue to be providing pleasure or stimulation.

We as caregivers can make a huge impact in the lives of residents with dementia, but as mentioned earlier, it can be very stressful and lead to depression. As a caregiver, please be sure to take time for yourself and seek support if needed. Stay positive, build your skills, and educate yourself about the disease as well as the regulatory guidelines that go along with caring for demented residents. Take time and take care of yourself! Remember, you work the closest to these residents and make all the difference in the world to them.

“We remember their love when they can no longer remember.” — Unknown

Article by Heather Eaton Erskine, PharmD, BCGP, FASCP Regional Clinical Manager, NMG
STD’s in the Elderly: Focus on Syphilis……………continued from page 1

The incidence is highest among gay/bisexual men, those with HIV or other STD infections, illicit drug users, and prostitutes. In 2013 there were 5.3 cases per 100,000 people in the U.S. This is more than double the 2.1 cases per 100,000 people in the U.S. in the year 2000. Infection rates are highest among black and Hispanic males. Syphilis is most common in the southern and western parts of the United States.

Syphilis has four overlapping stages of progression. A person may present in any of these stages with a number of chief complaints. During the first stage (primary syphilis), syphilis chancres appear at the site of initial contact with T. Palladium. They start out as small papules and typically heal on their own in one to three weeks. The patient may not seek medical attention because the location of the chancre may be difficult to see (i.e. genital or anal region) and the chancre is painless. The person is highly contagious at this stage. Syphilitic chancres can be easily misdiagnosed as HSV-related ulcers (herpes simplex virus). However, HSV ulcers are more superficial, non-indurated, and very painful.

The next stage, secondary syphilis, presents as a non-pruritic papulosquamous skin rash. The rash occurs weeks to months after initial infection. Again, it can be easily misdiagnosed due to its non-specific nature, but the presence of the rash on the palms and soles is highly indicative of syphilis. Secondary syphilis can also present with a fever, sore throat, alopecia, malaise, lymphadenopathy, and mucous membrane ulcers (small warty growths on genitalia and the perianal area). Tertiary syphilis is rare and only occurs if treatment was never initiated. It is uncommon in the United States and Western Europe due to the use of antibiotic treatment. However, if it does occur it is characterized by destructive granulomatous lesions of the skin, bone, heart, and other organs.

Latent syphilis is asymptomatic and can occur any time after the primary stage. Latent syphilis is further characterized by early or late based on the time since infection. Early latent infection is present < 1 year whereas late latent infection is > 1 year in duration. Syphilis cannot be transmitted in this stage. It is usually only found during routine screenings.

Neurosyphilis can occur anywhere between the Secondary and early latent stages. It is characterized by rare neurological features: sensory dysfunction, stroke, altered mental status, motor function changes, and visual changes. Severe and irreversible dementia can also occur with long-standing central nervous system infection. Neurosyphilis occurs more frequently in those that are immunocompromised. It is diagnosed by testing the cerebrospinal fluid. Unfortunately, the VDRL (Venereal Disease Research Laboratory) test is insensitive and may result in missing positive cases. It is recommended if Neurosyphilis is suspected, primary care physicians should consult an infectious disease specialist.

Diagnostic testing: The current approach starts with the high-sensitivity and Treponema-specific antibody test followed by a non-specific RPR test and titer. If the RPR is negative, one of the following tests is done: MHA-TP, TP-PA, or the FTA-ABS for confirmation. The RPR titer is also useful for monitoring therapy response. Many commercial labs offer both individual and combinations of these tests. Providers unfamiliar with these tests should seek advice from the lab’s pathologist or clinical representative. Note the RPR may revert to negative in 25% of those treated in the primary stage, but those treated in the secondary, latent, or tertiary stages may have a positive antibody test for life.

How do we treat such a complex disease? It is rather simple. Primary, Secondary, and early latent syphilis: the drug of choice is Penicillin G benzathine (Bicillin-LA) 2.4 million units IM x one dose. For late latent or an infection of unknown duration, give Penicillin G benzathine 2.4 million units IM every 7 days for 3 doses. It is important to counsel the patient on the possibility of Jarisch-Herxheimer reaction which occurs in up to 75% of early cases of syphilis treated with Pen G or in those with a high RPR titer. It is less likely when treating later stages of syphilis. It is characterized by fever, myalgia, and headache. It is generally self-limiting and lasts 2-24 hours. Symptoms are treated with non-steroidal anti-inflammatory drugs and acetaminophen. If the patient has a true penicillin allergy and has primary, secondary, or early latent syphilis, doxycycline 100mg by mouth two times a day for 14 days may be used. For late latent syphilis, treat with doxycycline 100mg by mouth two times a day for 28 days.

Pregnant women must use Penicillin G benzathine. Doxycycline is contraindicated in pregnancy. Pregnant women should be counseled on the symptoms of Jarisch-Herxheimer reaction to Pen G and that the reaction can trigger pre-term labor, placental infarction, and other complications. However, despite these risks, pregnant women with syphilis should be treated as soon as possible. Congenital syphilis and neurosyphilis must be treated with IV penicillin and treatment should be followed by an infectious disease specialist. It is important to check the RPR titer at 6, 12, and 24 months after treatment. A fourfold decrease in the RPR titer within 6-12 months indicates a successful response to treatment. A fourfold increase indicates re-exposure to syphilis in the same patient.

As we saw with the case of Ann, syphilis is “the great imitator”. It can be misdiagnosed as contact dermatitis, acne, herpes simplex virus, etc. It is important that we learn to recognize the potential for STD transmission in the elderly population and the differences in the diseases. Syphilis is on the rise and it is possible to see cases of this disease in skilled nursing facilities. If it goes unnoticed and untreated it is harmful to the patient, their partners, and the community. All documented cases should be reported to the local health department.
Heart Failure: Medications to Avoid

Heart failure (HF) is the leading hospital discharge diagnosis in patients ≥ 65 years of age and a large portion of Medicare expenditures each year (estimated to be $31 billion). Preventing drug/drug interactions and direct myocardial toxicity has the potential to reduce hospital admissions, which is the largest cost associated with heart failure. Managing these 2 elements of care also would increase quality of life. Older adults often take 5 or more medications (the definition of polypharmacy) and those with HF are at risk for using medications that may interfere with the treatment of their condition. With this in mind, the American Heart Association (AHA) released a scientific statement that addresses not only prescription medications, but also complementary and alternative medications (CAM) and over-the-counter (OTC) medications that may worsen heart failure.

Medications (prescription and OTC) and CAMs may worsen HF through several mechanisms:
1) Direct toxicity to the heart
2) Affecting the substances that control the electrical conduction system, muscle relaxation and muscle contraction (chronotropes, lusitropes and inotropes, respectively) of the heart
3) Providing high amounts of sodium (as an inactive ingredient) or causing the body to retain sodium/water
4) Drug/drug interactions that reduce the benefit of the medications used to treat HF

The AHA statement notes that the use of OTC medications continues to rise as more medications are moved to OTC status and that information as to how these products affect HF is limited. This same information for CAMs is even scarcer. These AHA guidelines offer the following recommendations regarding the use of CAMs in patients with HF:

1) Naturaceuticals should not be used for the management of HF nor for the secondary prevention of cardiac events. Additionally, AHA HF guidelines state that nutritional supplements should not be used for treating HF.
2) Products that contain ephedra-like (ma-huang) substances should not be used because of their stimulant effects on pulse and blood pressure, and their increased risk of morbidity and mortality.
3) Products that have significant drug interactions with medications such as digoxin, vasodilators, beta-blockers, anticoagulants and antiarrhythmic medications should not be used.

Additionally, the use of vitamin E was discussed in this statement. Evidence exists that vitamin E in doses ≥ 400 IU daily may increase the risk of new-onset HF, so the AHA recommends avoiding this vitamin in patients with heart failure.

The table below lists selected medications and CAMs with the medication effect on patients with HF:

<table>
<thead>
<tr>
<th>Medication or CAM</th>
<th>Effect on HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dong quai, garlic, gingko, saw palmetto, NSAIDs, COX-2 inhibitors</td>
<td>Increased risk of bleeding with anticoagulants and antiplatelet meds</td>
</tr>
<tr>
<td>Alendronate effervescent tablet, nafcinil, oxacillin, omeprazole/sodium bicarbonate, sodium phosphates solution (Fleets enema), penicillin G</td>
<td>High sodium content</td>
</tr>
<tr>
<td>Amiodarone, black cohosh, citalopram, escitalopram, fluconazole, haloperidol, methadone, levofloxacin</td>
<td>Prolongation of the QTc interval</td>
</tr>
<tr>
<td>Amphoterixin B, capecitabine, clozapine, etanercept, hydroxychloroquine, lithium</td>
<td>Direct myocardial toxicity</td>
</tr>
<tr>
<td>Carbamazepine, cilostazol, diltiazem, ginseng, licorice, metformin, nifedipine, NSAIDs, COX-2 inhibitors, thiazolidinediones, saxagliptin, sitagliptin</td>
<td>Worsening of the underlying problem causing HF</td>
</tr>
<tr>
<td>Black cohosh, ginseng, grapefruit juice, hawthorn, St. John’s wort</td>
<td>Drug interactions with the usual medications used to treat HF</td>
</tr>
</tbody>
</table>

For all patients with a HF diagnosis, the AHA statement recommends that a thorough medication reconciliation be performed at each office visit or each admission. Care should be taken to specifically ask about CAMs and OTCs so that they are clearly documented in the medical record. During medication reconciliation, it is important to identify opportunities to streamline therapy by evaluating the goals of therapy, along with the risks and benefits. Medications with no indication for use or are contraindicated should be discontinued. Patient education is an important element in managing medication therapies used for the treatment of HF. Patients should specifically be counseled regarding medications or CAMs that should be avoided, and they should be instructed to discuss with their provider or other health care professional any medications or CAMs prior to starting. The new AHA scientific statement provides health care professionals with a concise resource to evaluate medications and CAMs, which enables them to make more informed decisions regarding medication use in HF and improve the care of those with HF.
Overview of chronic kidney disease
Each year, kidney disease kills more people than breast or prostate cancer. In 2013, more than 47,000 Americans died from kidney disease. Chronic kidney disease (CKD) or chronic kidney failure is a condition in which kidneys slowly lose their ability to filter blood properly over time. As a result, wastes, toxins and excess fluid buildup leads to several complications such as hypertension, edema, anemia, electrolyte abnormalities, bone diseases, and nutrient deficiencies. If left unrecognized or untreated, CKD may progress to end-stage renal disease (ESRD) which requires dialysis or a kidney transplant. CKD is also a major risk factor for increased cardiovascular diseases and death. An estimated 14 percent of the general population suffers from CKD. The prevalence has increased faster than it would be expected from the predicted trends calculated based on the known CKD risk factors, such as diabetes and hypertension. Therefore, it has been suggested that another factor like medications might contribute to the extra rise in CKD cases.

Proton pump inhibitor use and associated risk
Proton pump inhibitors (PPIs) are the most commonly prescribed medications for heartburn and gastroesophageal reflux (GERD). They are also considered drugs of choice for many conditions including erosive esophagitis, peptic ulcer disease, Helicobacter pylori infection, stress ulcer prophylaxis, and risk reduction of nonsteroidal anti-inflammatory drug-associated gastric ulcer. Common medications in the PPI group are Prilosec® and Nexium® (Table 1). Being the most potent and effective group of medications for reducing stomach acid secretion and treating various diseases have led the number of PPI prescriptions to increase dramatically over the past decade. More than 15 million Americans used prescription PPIs in 2013, costing more than $10 billion. Study findings suggest that up to 70% of these prescriptions are without indication and that 25% of long-term PPI users could discontinue therapy without developing symptoms. There is also a trend towards PPI use in infants and children. Numerous observational studies have shown that chronic PPI use might result in several adverse effects like hip fractures, community acquired pneumonia, Clostridium difficile infections, and acute kidney injury (AKI). However, little is known about the link between PPI use and CKD.

Clinical trials
Recently, there has been three observational studies performed by Lazarus et al (2016), Xie et al (2016), and Arora et al (2016) to evaluate the relationship between PPI use and CKD. In the first study, Lazarus and his group followed more than 10,000 adults between 45 and 64 years old with normal kidney function from 1996 to 2011. They concluded that PPI users had up to 20-50% higher chance of developing CKD than those who were not on PPIs. The similar trend was noted when comparing the PPI group directly to H2 blocker consumers. (H2 blocker is another class of stomach acid suppressor, and Pepcid® and Zantac® are examples of medications in this group) (Table 2). Furthermore, they also found that twice daily PPI dosing was associated with higher risk than once-daily dosing. Xie’s study reviewed records of 125,596 PPI and 18,436 Histamine H2 receptor antagonists (H2 blockers) consumers over a 5-year period. Compared with the H2 blocker group, patients receiving PPIs were more likely to have a diagnosis of CKD and ESRD, even after adjusting for the other factors that might interfere with the results. Researchers from both Lazarus and Xie’s studies suggested that the risk of CKD appears to be tied to PPI use itself and not the underlying cause of PPI use as H2 blockers did not show similar results. Arora and colleagues investigated database from the Veterans Affairs Health Care in upstate New York of more than 22,000 patients who developed CKD between 2001 and 2008. Their results showed that PPI use increased the odds of having CKD by 10% and was associated with a 75% increased risk of death. Other factors associated with the high risk of CKD in this group included age (each 1-year in age increased the risk of
CKD by 7%), gender (females had a 32% greater risk than males) and simultaneous presence of other chronic diseases (i.e. diabetes, hypertension).

One possible explanation from the studies for the risk of developing CKD and death associated with PPIs is unrecognized or partially recovered acute kidney injury (AKI). A link between PPI exposure and the risk of AKI has been well-documented in the literature, and about 30-70% of patients with drug-induced AKI do not fully return to their baseline renal function. AKI is sometimes difficult to diagnose as up to 30% of AKI patients have nonspecific symptoms on presentation or their symptoms might resolve by the time the laboratory tests are obtained. Therefore, their kidney injury has never been properly treated and failure to address this issue in order to discontinue offending agents that cause kidney damage put the kidneys more at risk of deterioration over time. Other reasons that might contribute to higher odds of CKD are comorbidities and the use of other medications that induce kidney failure. Patients who take PPIs also tend to be obese and have other health issues such as cardiovascular disease, diabetes and hypertension that make their kidney function more susceptible to CKD and death. People who take a lot of pain killers like nonsteroidal anti-inflammatory drugs (e.g. ibuprofen, diclofenac, and aspirin) are also at risk for kidney damage. Another potential mechanism that may result after 14 days, he or she needs to see the doctor for further evaluation of the heartburn. Patients should only use PPIs for FDA approved indications, and not to treat simple heartburn, indigestion, pain or difficulty when swallowing food.

### Table 2. Common H2 blockers

<table>
<thead>
<tr>
<th>Brand name</th>
<th>Generic name</th>
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<tbody>
<tr>
<td>Pepcid, Pepcid AC</td>
<td>Famotidine</td>
</tr>
<tr>
<td>Zantac</td>
<td>Ranitidine</td>
</tr>
<tr>
<td>Tagamet, Tagamet HB</td>
<td>Cimetidine</td>
</tr>
<tr>
<td>Axd</td>
<td>Nizatidine</td>
</tr>
</tbody>
</table>

**Future considerations and recommendations**

Evidence from these studies has suggested the potential link between proton pump inhibitor use and increased risk of chronic kidney disease and death. Further research is needed to investigate whether PPIs alone cause CKD and, if so, the underlying mechanism of this relationship. In the meantime, given the increase in the number of PPI prescriptions, healthcare providers should be cautious in prescribing these drugs as the risk might outweigh the benefit. Dr. Schoenfeld, from the University of California, San Francisco and Dr. Grady, from the Veterans Affairs Medical Center, San Francisco advised physicians to consider alternatives such as H2 blockers or lifestyle changes before prescribing PPIs. They said, “a large number of patients are taking PPIs for no clear reason – often remote symptoms of dyspepsia or heartburn that have since resolved. In these patients, PPIs should be stopped to determine if symptomatic treatment is needed.”

Duration for short-term use of over-the-counter PPIs is considered a maximum of 14 days for up to 3 courses per year, but not more than every 4 months. If a patient’s heartburn is not improved or getting worse after 14 days, he or she needs to see the doctor for further evaluation of the heartburn. Patients should only use PPIs for FDA approved indications, and not to treat simple heartburn, indigestion, pain or difficulty when swallowing food.
To all the Pharm Notes Family,

Thought for the day.....Short and sweet but so very true.......  

Even though there are days that I wish I could change some things that have happened in my past.......  

There’s a reason that the rear view mirror is so small and the windshield is so big. 

Where you are headed is much more important than what you’ve left behind!

Till next time........

Cathy Fuquay
Pharm Notes Editor