the Remedi Pulse

PREVENTING HOSPITAL READMISSIONS

Remedi SeniorCare EDUCATION Rx

A CLINICAL AND REGULATORY UPDATE FROM REMEDI SENIORCARE

APRIL 2015

Preventing Hospital Readmissions

Our Pharmacists Share Common Sources of Medication Errors

Jennifer Hardesty, Pharm.D., FASCP, Chief Clinical Officer

Residents who are newly admitted to a post-acute care facility are increasingly complex and are often medically fragile. As residents transition through various levels of the health care system, medication therapies will likely undergo multiple changes. Complicated hospital courses, incomplete or inaccurate discharge summaries, transcription problems, in addition to residents who may not be able to articulate a clear medical history, create the perfect storm for medication errors or drug interactions. Medication dosing errors, omissions, or significant drug interactions can quickly destabilize a resident, and result in a re-admission to the hospital.

Our Remedi Pharmacists would like to share some of the more common medication issues they find for new admissions, which can have significant clinical impact on the resident:

FORMULATION MIX-UPS: Delayed release medications (XL, ER, CD, DR, SR, etc.) - are often confused with regular release cousins, which may result in an overdosing or underdosing of critical medications.

- Metoprolol XL vs. Metoprolol
- Nifedipine ER vs. Nifedipine
- Diltiazem CD vs. Diltiazem

TRANSCRIPTION ERRORS: Whether the error originates on the hospital discharge summary, or is made during the transcription process, there are several situations that are frequently problematic.

- Decimal point problems – 12.5 mg vs. 125 mg
- ½ tablet orders
- Weekly or monthly drugs transcribed as daily
- Using “U” for units mistaken as a “0”
- Different sets of allergy information for the same patient on different pages of orders

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FOR MORE INFORMATION

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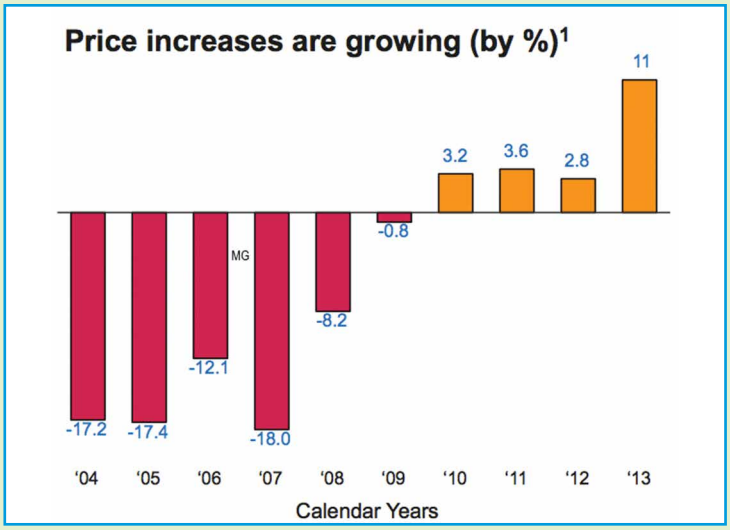
How Much Have the Prices of Generics Gone Up??!!

Sue Hilger, Vice President of Marketing

Many are buzzing about generic inflation recently, and it is truly astonishing. This article explores the pharmaceutical trends and causes for this escalation.

Once a generic drug enters the market, the manufacturer often has a six-month exclusivity. After this period, multiple manufacturers may enter the market, usually causing a further reduction in price over time. As a result, this "generic deflation" offsets the price "inflation" of name brand medications with patents that had not expired yet. When combining the impact of generics and name brand drugs, the net result was a bit of a balance in overall pricing. Ultimately, generics have kept medications affordable in the past.



The chart above illustrates the downward trend for generics from the periods of 2004 through 2008 – year after year, the impact was a reduction. In 2009, that trend started to change – the decrease was just 0.8%, essentially flat. From 2010 to 2013, the market experienced a pricing going up (not down). In 2013, the average pricing for generic drugs **increased** by 11% - an astounding increase!

The chart in the next column lists more common generic medications and their price increases.

There are a number of factors causing this dramatic trend.

1. Consolidation of manufacturers and their drug portfolio

- Drug company mergers are occurring because of more complex and expensive R&D, resulting in fewer suppliers. One of the basic tenets of economics supply and demand plays out in this situation. As buyers have fewer suppliers to choose from, the sellers are at an advantage and tend to increase pricing for as much as the market will bear.
- Generic pharmaceutical companies have tightened their product portfolio, offering fewer medications for sale. This scaled down assortment means fewer competitors, which drives price increases.

Drug	Strength	Date Increase	Price Increase
DILTIAZEM TAB	ALL	1/15/2015	90%
GLIMEPIRIDE TAB	1,2,4MG	1/15/2015	168%
FLUOCINONIDE CRE	0.05%	12/19/2014	524%
ENALAPRIL TAB	ALL	12/1/2014	65%
LIDOCAINE OINT	5%	12/1/2014	339%
CARBAMAZEPINE	100 MG	8/28/2014	185%

2. Supply disruption

- Shortage of raw materials is a factor. Some of the active and inactive drug ingredients, many of which come from Europe, India and China, have been in short supply. When any medication component is unavailable, the drug cannot be manufactured and distribution is compromised. Demand for those products in short supply will push prices up.
- The FDA has noticeably increased the number of FDA plant inspections. With more inspections underway, there has been a rise in warning letters, fines, and bans. This slows or stops production for varying periods of time until the FDA inspectors can return; thus, curtailing supply. Again, market forces are in play.

3. FDA approval time

A more timely review of drug applications by the FDA would ensure greater competition with generic medications, which could help lower prices. The FDA is not adequately staffed to handle the ever increasing number of applications, slowing the ability to get new drugs approved and into the market. Since fall 2013, the filing to approval process time has gone from 18 to 36 months – twice the time!

Congress has been examining the situation and is attempting to find methods to stem these increases. In the meantime, Remedi SeniorCare is working diligently to consistently lower your overall drug costs through:

- **Therapeutic interchange**
  Our team of experts proactively switches your medication orders to the most clinically appropriate, lower-cost drugs in the same therapeutic class.
- **Clinical management**
  We assess the use of medications for individual residents to determine necessity and remove duplication.

While drug inflation is increasing the overall cost, managing the proper utilization of medications is what will have the greatest impact on decreasing drug spend over time.

Emerging Pathogens ... New Strains of Some Common Names

Marilyn Hornig, Microbiologist, M.T.-A.S.C.P, Customer Onboarding/Software Application Specialist

Resistant microbes have been on the rise since the advent of antibiotics. Since the introduction of initial resistant microbes such as MRSA and VRE, infection control measures have changed to prevent bacteria from spreading in patient care settings. Nevertheless, the continued overuse of antibiotics will keep these bacteria mutating and increasing in resistance as time progresses.

In the past few years, three new resistant microbes have been discovered:

- Escherichia coli-ESBL
- Klebsiella Pneumoniae- ESBL
- Proteus Mirabilis-ESBL

ESBL is an Extended Spectrum Beta Lactamase enzyme produced by these microbes and is considered highly virulent because of the multiple resistance patterns against many antibiotics and antibiotic classes. Microbiologists have seen beta-lactamase producing gram negative bacteria since the mid 1980's but due to their changing drug sensitivity patterns, these bacteria are now classified as multiple drug resistant organisms (MDRO's). Current MDRO's include the following:

- MRSA
- VRE
- C. Difficile
- ESBL
- A. Baumanii

Since ESBL antibiotic therapies are limited, concern is escalating regarding proper treatment, but ESBL strains are now noted on laboratory culture reports and treated with appropriate infection control measures.

- ESBL bacteria are normal enterics (intestinal microbes) and due to high exposure of broad spectrum antibiotics they are vigilant in their techniques to stay active. When the beta lactamase enzyme was first produced by these bacteria, it was resistant to just a few beta lactam drugs - first generation Cephalosporins (e.g., cephalexin).
- ESBL producers have now become resistant to a much broader class of drugs including:
    - Extended spectrum penicillins (azlocillin, carbenicillin, ticarcillin, mezlocillin, piperacillin)
    - Third and fourth generation Cephalosporins (ceftriaxone, cefotaxime, cefepime)

Collectively, this makes antibiotic therapy choices challenging and critical.

- ESBL microbes are typically found colonized in patients >60 years old who have had hospital use of piperacillin-tazobactam (Zosyn) and therapy with vancomycin.
- Research data showed that 25% of patients colonized with ESBL turned into clinically positive cultures / infections, and furthermore 35% of patients colonized with ESBL had previous MRSA or VRE infections.

Contact precautions are recommended for a microbiology report of ESBL, but it must be determined if the resident is colonized or infected and then treated accordingly. The Carbapenems (imipenem-cilastatin, doripenem) are usually drugs of choice for ESBL yet other drug therapies e.g., tigecycline, amikacin and/or gentamicin, may also be used according to the drug sensitivity test listed in the microbiology report.

TO ASSIST IN PREVENTING A HOSPITAL READMISSION:

- Be vigilant in monitoring for signs and symptoms of infection
- Adhere to appropriate hand hygiene and Standard Precautions when caring for patients
- Follow facility policy for appropriate notification of the licensed independent practitioner (LIP) if an infection is suspected and/or occurs
- Ensure prompt and appropriate treatment and follow-up as ordered by LIP

Reference:
Harris, Anthony D, et al. "Risk factors for colonization with extended-spectrum β -lactamase-producing bacteria and intensive care unit admission." Emerging Infectious Diseases (2007): 1144-1149. 13 March 2015. http://www.nc.cdc.gov/eid/article/13/8/07-0071-t1.

Preventing Hospital Readmissions

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DUPLICATE THERAPIES: As residents navigate through the healthcare system, formulary interchanges may result in duplication of therapy on hospital discharge summaries. Common offenders are:

- Beta-Blockers (Carvedilol, Atenolol, Metoprolol, Propranolol)
- Calcium Channel blockers (Nifedipine, Diltiazem, Amlodipine)
- Proton Pump Inhibitors (pantoprazole, omeprazole, rabeprazole)
- Alpha-blockers for BPH (Doxazosin and Tamsulosin)

RED-FLAG MEDICATIONS: Extra vigilance should be observed when these drugs are ordered, as they are common sources of error or miscommunication.

- Warfarin
- Sotalol
- Synthroid
- Methotrexate ordered QD instead of weekly for RA
- Specialty drugs that have restrictive requirements (Clozaril, Tikosyn, Revlimid)
    - Prescriber, pharmacy, and or patient must register
    - Specific labs required
    - Drug only available from specialty mail-order pharmacy

Next month's issue will include basics of medication reconciliation.

Nurse of the Month

TRACEY CREVELING, LPN at the Laurels of New London, OH

CONGRATULATIONS to Tracey Creveling, LPN at the Laurels of New London (Ohio) for being chosen as the Remedi "Nurse of the Month." Tracey was nominated by her DON, Laura Dye. Per Laura, "Tracey has been a nurse for eight years, seven of which she has worked in our facility. She is very dedicated and has a perfect attendance record. Tracey provides excellent care to our guests and the quality of her work is outstanding. She is very caring and compassionate and our guests, staff, and family members adore her. Tracey goes above and beyond to take care of our guest's needs. She takes time to get to know everyone and genuinely cares about each individual she cares for as well as their family. It has been a real pleasure having her working with me. She will do anything, with a smile, that is asked of her. Tracey is a gem and I feel she deserves a 'spotlight' for all of her hard work and dedication to ensure our guests receive exceptional care."

Remedi acknowledges a "Nurse of the Month" in each of our newsletters. DONs/ADONs/LNHAs, NOW is the time for you to reward the nurse(s) at your facility, who exemplify excellence in nursing practice. The "Nurse of the Month" will receive an award and a certificate of commendation from Remedi. Please submit the following information: nominated nurse's name/title, facility name, state, years at facility, years of experience and why this nurse should be chosen, such as leadership abilities, clinical expertise, teamwork, professional and personal strengths.

Email your Nurse of the Month nomination(s) by the 30th of the month to Rebecca.Ogden@RemediRx.com. Nurses Rock!!

UPCOMING EVENTS

DATE	EVENT	LOCATION
April 20-22	Exhibiting at LeadingAge MD Annual Conference	Ellicott City, MD
April 27-30	Exhibiting at OHCA Convention & Exposition	Columbus, OH
April 29	OHCA Convention presentation by Rob Shulman R.Ph., FASCP CGP, Director of Clinical Services; William Vaughan, RN, BSN, VP of Education and Clinical Affairs; Rebecca Ogden, BSN, RN, CRNI, Corporate Account Manager	Columbus, OH
April 29	ASCP Forum presentation by Jennifer Hardesty Pharm D., FASCP, Chief Clinical Officer	Baltimore, MD
May 5	Exhibiting at PALA Spring Show	Harrisburg, PA