

Medication Expiration Dates

Carrie Allen PharmD, CGP

Not Something We Want to Choose

- * Do you want to be responsible for that?
- * You are responsible for vulnerable people & you work in a highly regulated environment with inherent risk
- * Contingent upon proper storage conditions
- * Following MFG recommendations, such as expiration dates

Not Something We Want to Choose

- * Conspiracy theory, planned consumerism
- * It *MAY* still work...but the risk (infection, stability, **consistency/efficacy**) is an issue
- * MFG Expiration dates based on stability & possibly sterility
- * When in doubt, I recommend following USP 797 recommendations, very focused on sterility

Messy house, Chaos Theory & Meds

- * Nothing stays the same: changes/degradation of the
 - * Active ingredients
 - * Inactive ingredients (binders) in medications
 - * Integrity of the med
 - * Changes in acidity (injections)
 - * Separations of ingredients in topicals (creams, ointments, eyedrops, patches, inhalers, nebulizers)
 - * Liquid evaporation...may INCREASE in potency for some meds

Messy house, Chaos Theory & Meds

Every time you open that med, puncture that vial-

- * Think about exposure to
 - * Bacteria, viruses, dirt
 - * Changes in temperature, pressure, humidity, light

Whenever you use a product

- * Check the EXP date
- * Check if it has been dated when opened
- * Understand the expiration date in relation to the opened date

Resistance

- * There is a lot of resistance to this concept, & somehow food is more of a big deal to health care professionals
- * Why isn't injecting or ingesting expired meds also a big deal?
- * Maybe because there aren't as many obvious signs/issues
- * Less horror stories

Meds are becoming more sophisticated and “delicate”

We use meds that are complicated, sophisticated, delicate:

- * Molecules are designed to face only one direction (Lexapro, Xopenex, levothyroxine)
- * Molecules are engineered to mimic human hormones or block human immune responses (insulin, Byetta, Humira, Calcitonin, Forteo)

Med Error

- * Giving a med beyond the expiration date is a medication error, should be written up and discussed
- * I get that money is an issue, still not our choice – RISK to you professionally, the organization, the resident

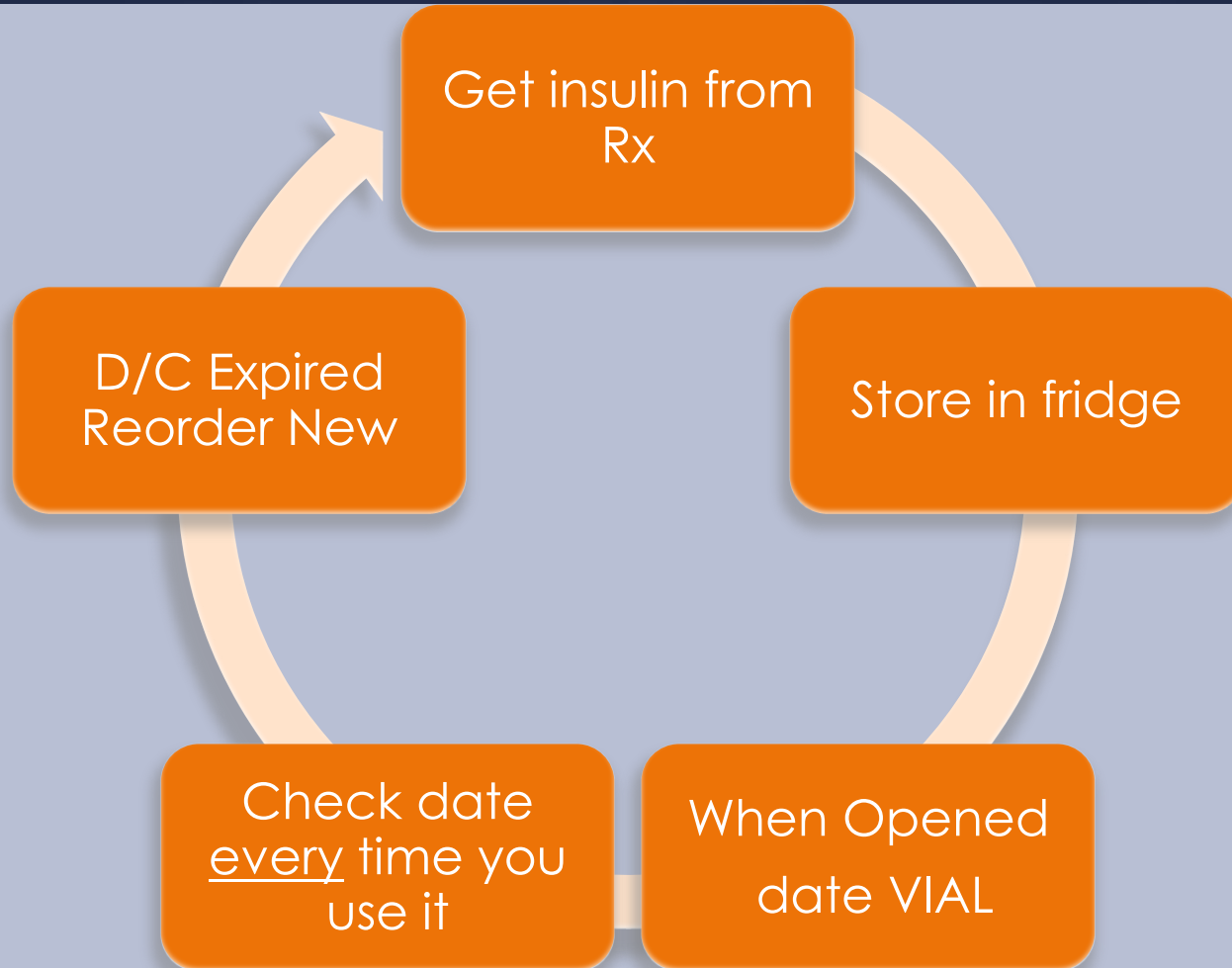
Common “Short Dates” Injectables

- * What kind of injectable is it?
 - * Check if single dose vial (SDV) or multi-dose vial (MDV), multi-use syringe (insulin pen, Forteo)
- * MDV, syringe: Usually 28 days (Lantus, most insulin), TB/PPD usually 30 days, Byetta 30 days
- * SDV – DON'T use it more than once, sterility
 - * Some wound or bladder irrigation stuff (acetic acid), even in big bottles is ONE use ONLY
 - * Often the agents used to reconstitute antibiotics for injection are single dose

Common “Short Dates” Injectables (insulin & others):

- * Some shorter: Procrit MDV 21 days
- * Some mixes are shorter & trickier:
 - * Novolog MIX Flex-pen (14 days & cannot be refrigerated ONCE IN USE – tricky)
 - * Some longer: Levemir = 42 days, Novolin N = 42 days

Insulin Process



Common “Short Dates”

Inhalers

- * READ packaging, DATE the sprayer when opened,
- * Counter: count may not matter (hospital excursions)
- * Proventil (>12m...toss)
- * Ventolin 12m usually, if removal from overwrap - 6months

Stuff in Foil/Overwrap

- * Drug MFG are greedy, they won't use expensive packaging unless necessary
 - * Xopenex (14D w/ overwrap, 7D no overwrap)
 - * Pulmicort (14D)
 - * Advair (30D)
 - * Serevent (42D)
 - * Albuterol & Ipratropium combo nebs (protect from light, some 14D)
- * READ the package, READ rx ancillary labels
- * WRITE NAME (in foil , rx can't)
- * DATE opened on dispenser (even with actuations, this is a "whichever comes 1st situation")

REFRIGERATED EYEDROPS, NASAL SPRAYS & OTHER STUFF

- * Nasal Sprays: Calcitonin, Fortical (manage like insulin, but 30D)
- * Eyedrops Xalatan
 - * Same concept as insulin, store in fridge, then
 - * 42 days once opened/stored out of fridge
- * Phenergan is confusing
 - * Suppository yes refrigerate, EXP is MFG date
 - * Injection not refrigerated FYI – EXP is MFG date
- * Pulmozyme-
 - * Company that makes it : GENENTECH
 - * EXP is stamped on ampule...but contingent on STAYING refrigerated until use

DATE EYEDROPS & read the box

- * USP 797 doesn't have much guidance
- * No preservatives: 30 days (unless mfg specifies otherwise – Xalatan = 42 days out of fridge)
- * Preservative:
 - * starts with “Benz”, or “BAC”, “ADBAC”
 - * Less conservative: 90 days (unless mfg specifies otherwise)
- * SAFEST/Conservative: 30 days for all unless MFG specifies otherwise (Europe) ...think about this for your nasal sprays too.

Suspensions & Liquids

- * Suspensions are where tiny particles are mixed & suspended in liquid (shake well)
- * Suspensions are not stable by nature or they'd come premixed
- * Usually good for 10-14 days, then no longer stable (less effective...drug resistance)
- * Examples Tamiflu (10 days), Valcyte oral **solution** (49 days), Keflex suspension 14 days

Learn it, Live it , Do it

- * When in doubt read the package
- * Still in doubt – ask your pharmacist
- * Questions – ask us.