Medication Expiration Dates

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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
There is a lot of resistance to this concept, & somehow food is more of a big deal to healthcare 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

Get insulin from Rx

D/C Expired Reorder New

Store in fridge

Check date every time you use it

When Opened date VIAL

Reorder New
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 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.