What’s My Beef with Pharmacists

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Pharmacists don’t get any respect

Pharmacists CAN’T READ!

Pharmacists REALLY HATE 2 things

- **Sloppy prescriptions**
- **Prescribing errors**

The “TOP 3” Medical Errors

- 1. Failure to DX
- 2. Surgical Errors

3. DRUG/RX Errors

Phone # _____

Patients Name _____

Date _____

RX

THE RX LOOKS HARMLESS - DOESN'T IT-HOWEVER, MISTAKES CAN JUST KILL YA

Generic equivalent
unless otherwise noted
Do NOT substitute ☐

Refill _____ Times

_____

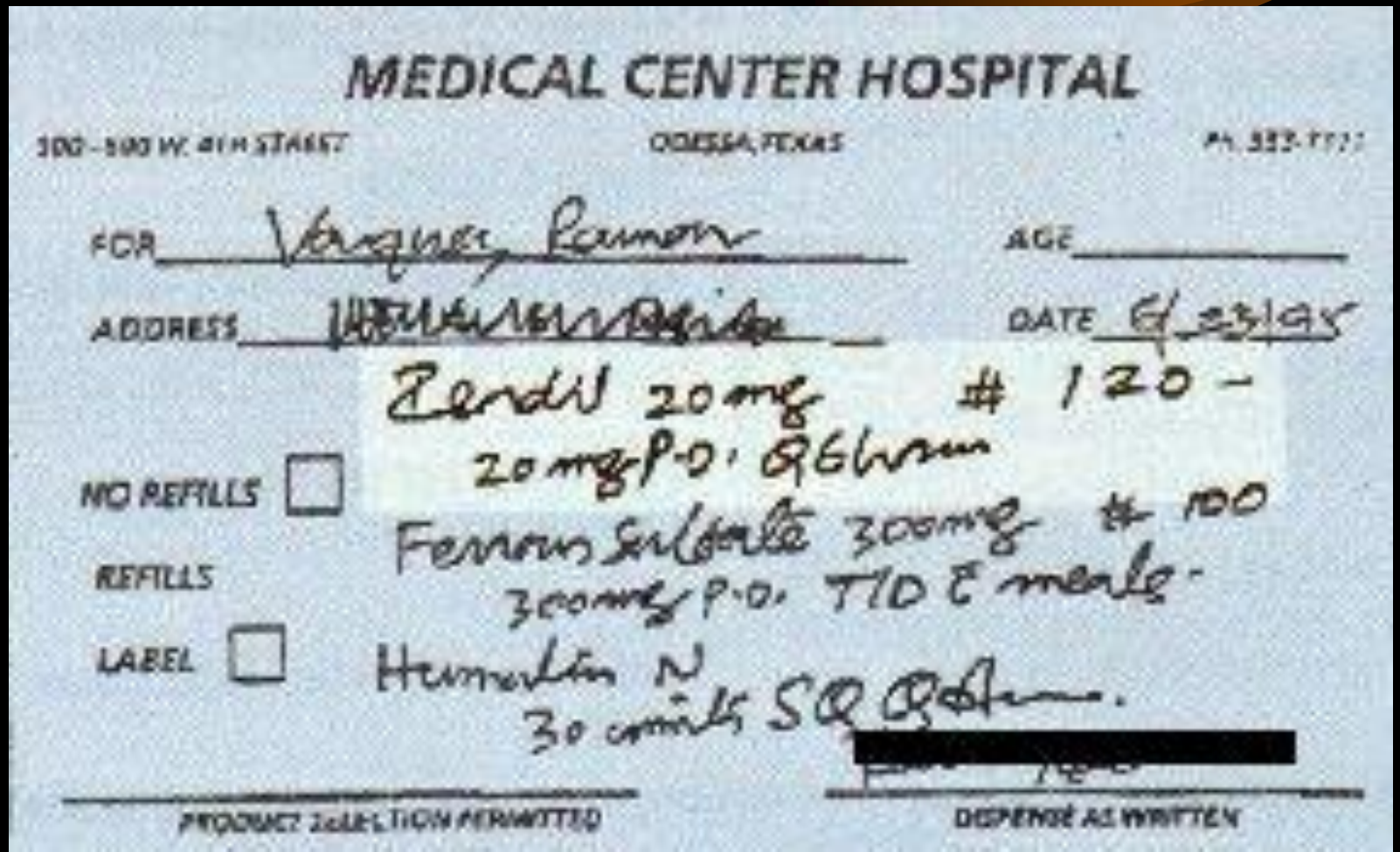
DEA NO _____

Phone NO _____

The Smoking Gun

- RX is a legal document
- Once it leaves your office you have lost control
- Any mistakes are now in hard print
- Pharmacy that fills script, owns the script
- Legal document can be ordered into court
- Mistake on glasses RX-remake the glasses
- Mistake on critical drug RX-lose

FIRST-CAN YOU READ IT!!
THE $450,000 ERROR
Plendil VS Isordil



MEDICAL CENTER HOSPITAL

300-500 W. 4TH STREET ODESSA, TEXAS PH. 332-7777

FOR Vasquez Ramon AGE

ADDRESS DATE 6/23/95

Plendil 20 mg # 120 -
20 mg P.O. QGlucm

NO REFILLS ☐

Ferrous Sulfate 300 mg # 100
300 mg P.O. TID c̄ meals -

REFILLS

LABEL ☐

Humulin N
30 units SQ QAm.

[redacted]

PRODUCT SELECTION PERMITTED

DISPENSE AS WRITTEN

PRESCRIPTION ERRORS

Use of abbreviations coupled with poor hand writing can result in common drug prescribing mistakes that can potentially cause serious or even life threatening adverse effects

Magnitude of problem

"Americans are 10 times more likely to be hospitalized by a prescription rather than by a car accident"

Thomas Moore

Prescription for Disaster. Simon and Schuster

Medication Errors

- The institute of medicine report on medication errors estimates between 44,000 and 98,000 hospital patients die yearly as a result of medication errors
- Two out of every 100 hospital admissions experience a preventable drug event
- There is one medication error per patient per day of hospitalization

Medication Errors

- **Wrong Dosage**
  - Special populations
- **Inappropriate Medication**
  - Wrong drug
  - Contraindications
  - Side-effects
  - Adverse effects
  - Drug interaction
  - Failure to monitor

Accupril®	Accutane®
Alprazolam	Lorazepam
Cardene®	Cardura®
Flomax®	Fosamax®
Lamisil®	Lomotil®
Nizoral®	Neoral®
Plendil®	Prilosec®
Zantac®	Zyrtec®

LOOK ALIKE DRUGS

Pharmacists DON’T UNDERSTAND ENGLISH

WHY IS EVERYTHING WRITTEN IN A DEAD LANGUAGE (LATIN)?

1. It makes the Doctor look smarter
2. Pharmacists can only read Latin
3. It is code for “I GOT MY MONEY, NOW YOU GET YOURS”.
4. Doctors have bad hand writing
5. Julius Ceasar was the first pharmacist

- **Most prescriptions derive their terminology from LATIN phrases**

- **It avoids jargon and makes prescription language more precise and consistent**
- **Learn how to speak their language**

Abbreviation \ Meaning

a.c.	before meals
p.c.	After meal
cap	Capsules
g	gram
h.	hour
mg	milligram

Abbreviation \ Meaning

ml	milliliter
Bid	Twice daily
p.o.	by mouth, orally
p.r.n.	when necessary
q.d.	once a day
q.i.d.	4 times a day

Abbreviation \ Meaning

q.h.	every hour
q.2h.	every 2 hours
t.i.d.	3 times a day
IA	Intra-arterial
IM	Intramuscular
IV	intravenous

Cap	Capsule
Sup, supp	suppository
Susp	suspension
Tab	tablet

Stat	**At once**
D/C	**Discontinue**
CD	**Controlled drugs**

BE PRECISE AND BRIEF

The wrong way to write Dr. Hemingway

Patients Name Mary Edwards

Phone # _____

Date _____

RX

Xalatan Ophthalmic Sol 2.5cc

Sig: Instill QD OS at h.s. ut dictum

Generic equivalent unless otherwise noted

Do NOT substitute ☐

Refill 5 Times

_____

DEA NO _____

Phone NO _____

Never, ever use the term QD or qd-write once daily or daily

K.I.S.S.

MUCH BETTER

Patients Name Mary Edwards

Phone # _____

Date _____

RX

Xalatan Ophth. SOL
2.5cc

Sig: Instill OS at h.s. ut dictum

Generic equivalent
unless otherwise noted
Do NOT substitute ☐

Refill 5 Times

_____

DEA NO _____

Phone NO _____

YOU CAN DO BETTER THAN THIS!

Patients Name Mary Edwards

Phone # _____

Date _____

RX

Prednisone 1.0mg Tabs #30

Sig: i tab BID OU

Generic equivalent
unless otherwise noted
Do NOT substitute ☐

Refill 0 Times

_____

DEA NO _____

Phone NO _____

LOOKING GOOD!

Patients Name Mary Edwards

Phone # _____

Date _____

RX

Prednisone 1mg Tabs

#30

Sig: i tab q 12h PO

Generic equivalent
unless otherwise noted
Do NOT substitute ☐

Refill 0 Times

_____

DEA NO _____

Phone NO _____

Written Medication Orders: Decimals

- Avoid whenever possible[1]
  - Use 500 mg for 0.5 g
  - Use 125 mcg for 0.125 mg
- Never leave a decimal point "naked" [1, 2, 3]
  - Haldol .5 mg → Haldol 0.5 mg
- Never use a terminal zero
  - -Colchicine 1 mg not 1.0 mg
- Space between name and dose[1,3]
  - Inderal40 mg → Inderal 40 mg

MR. DECIMAL POINT

You want M.E. to use Pred Forte 1% every hour OD for 3 days, then 2 hours for 3 days, then 4 times daily for 3 days, then twice daily for 3 days, then once daily for 3 days

Phone # _____

Patients Name _____ Date _____

RX

TRY TO FIT THAT ON A 2 X 2 LABEL!

Generic equivalent
unless otherwise noted
Do NOT substitute ☐

_____

DEA NO _____

Refill _____ Times

Phone NO_____

THE RIGHT WAY- FOR THE PHARMACIST

You want M.E. to use Pred Forte 1% every hour OD for 3 days, then 2 hours for 3 days, then 4 times daily for 3 days, then twice daily for 3 days, then once daily for 3 days

Phone # _____

Patients Name _____ Date _____

RX

Pred Forte Ophthal. Susp.
10 CC
Sig: Instill ii gtts OD UT Dict
SHAKE WELL

Generic equivalent
unless otherwise noted
Do NOT substitute ☐

_____

DEA NO _____

Refill _____ Times

Phone NO_____

FOR THE PATIENT

Pred forte Drops
SHAKE WELL

1 drop Every 1 Hour Till Sleep for 3 Days
1 drop Every 2 Hours " " " " "
1 drop 4 Times daily for 3 Days
1 drop 2 Times " " " "
1 drop daily " " "

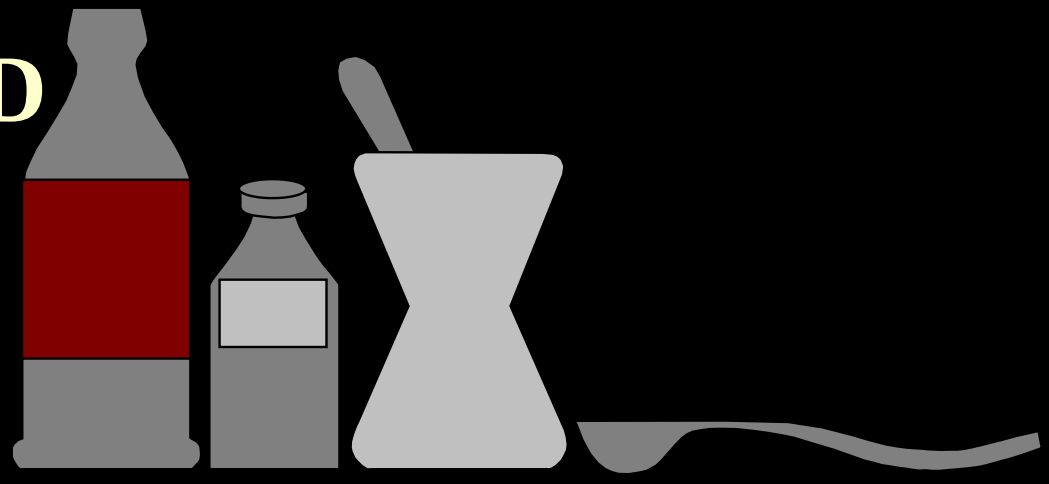
— STOP Medicine

CALL IF Problems or Questions
505 ----

Pharmacists DON’T BELIEVE IN AMERICAN VALUES!

PHARMACEUTICAL WEIGHTS AND MEASURES OR HOW BIG IS GRANDMAS TABLESPOON

- METRIC@@@@
- APOTHECARY
- HOUSEHOLD



PHARMACEUTICAL MEASURES

Household Notation	Metric Notation	Apothacary Notation
One Drop	1/20 ml.	gtt i
One Teaspoonful	5 ml.	f ʒ i
Two Teaspoonfuls	10 ml.	f ʒ ii
Three Teaspoonfuls = One Tablespoonful = 1/2 ounce	15 ml.	f ʒ iii = f ℥ ss
Two Tablespoonfuls = One Ounce	30ml.	f ℥ i
One cupful = Eight Ounce = 1/2 pint	240ml.	f ℥ viii = pt ss

DON'T ask the Pharmacist to do YOUR MATH homework

- They will think that you are an IDIOT
- You are responsible for calculating concentrations and dosages in liquid form
- They should check the math, but you are responsible for any errors in your calculations

Special dosing formulas

- Age
- Weight-most common
- Body Surface Area

Clark's Rule

- Based on weight- Used as an estimate for children and anyone under 40 kg-major problem-overdoses overweight kids

WT (Kg)/70Kg or

- Wt (Lbs) / 150 lbs X adult dose = Pediatric dosage
- Example: 50/60/70 lb 6 Y/O's/ acetaminophen at adult dose of 650mg q 4h
- 50/60/70 / 150 X 650mg = 216/260/303mg

PHARMACIST KNOW HOW TO CONCENTRATE

- **SO DO YOU-know your drug concentrations**
- **If you write an RX for a liquid dosage form you must know how much volume of drug to administer to achieve the proper dosage**

Example

- Osmoglyn (oral glycerin) and Ismotic, an oral hyperosmotic for angle closure glaucoma are no longer produced by Alcon, however 50% oral glycerin is available-the adult dose is 1.5gm/kg
- What volume of glycerin should be administered to a 154lb man for a narrow angle glaucoma attack?

First-what the hell is a 50% W/V solution?

- The classic 1% w/v is 1 gram of drug/100 ML of solution, or $\frac{1000\text{mg/Gm}}{100\text{ml}}$ = 10mg/ml

Therefore a 50% solution of glycerol = 50Gm/100ML

Or

0.5 Gm/ML

What is his weight in kilos-I'm an 'merican we don't do that metric thing around here

- 2.2lb/kilo,therefore

- 154lb/2.2lb/kilo = 70 kilograms = 70Kg

- 70Kg X 1.5 Gm/Kg = 105 Gm total dose
- 105 Gm = 210 ML of 50% oral glycerin
- 0.5 Gm/ML or 210Ml = 7oz
- 30 ML/oz

Special dosing formulas

- Age
- Weight-most common
- Body Surface Area

Best Dosing: Weight/dose calculations

- PDR/package insert/facts and comparisons lists dose by weight
- Weight is almost always in Kg
- Dose is the full 24 hour dose
- Must know the frequency of dosing/D
- Must know the concentration of liquid dosage forms
- Must know the strengths of all solid dosage forms
- Must know max pediatric dosage

If the standard pediatric DAILY dosage of prednisolone is 1mg/kg in divided dosage

Prescribe a standard dose for a 33 lb child to be administered TID

NOTE pediapred syrup contain 5mg/5ml prednisolone

PEDIATRIC DOSAGE CALCULATION

- CONVERT WEIGHT TO KILOS LBS/2.2 = KILO 33/2.2 = 15 KILOS
- DOSE OF 1MG/K X 15 K = 15MG TOTAL DAILY DOSE
- DIVIDE DAILY DOSE BY NUMBER OF DAILY DOSAGES 15MG/3 = 5MG PER DOSE
- CONC = 5MG/5CC ADMINISTER 5 CC TID PO

Pharmacists love being yelled at!

- Particularly when you're upset about not getting the drug you want
- Or
- A generic instead of the brand produce

Pharmacists will change your brand to a GENERIC

- Only if the doctor approves it

Dispense generic equivalent unless otherwise noted
Do NOT substitute

Pharmacists ALWAYS give BAD NEWS

- Don’t shoot the messenger
- The bad guys are the insurance companies that won’t cover the branded product or assign it a high co-pay
- AND
- The drug companies that try to wring out as much money as the system will allow

Pharmacists CAN'T SEE GRAY

- It's all black and white
- Their computerized systems will highlight a patient contraindication and they will call you on it
- Example: No beta-blockers for diabetics?

The Pharmacist is a POOR SOURCE of clinical information

Pharmacists are NOT Clinicians

- They are not diagnosticians
- They know their pharmacology, but drug selection is not just a science, it is an art as well
- Selecting a drug or a combination of drugs is your responsibility

Pharmacists DON'T Fill Prescriptions

- Technicians fill and dispense most prescriptions
- Their previous job-yep. You guessed it
- DO YOU WANT FRIES WITH THAT?

PHARMACISTS DON’T MESS AROUND

Classification of controlled substances. Based on estimated addiction liability

Class	Potenti -al for abuse	Rationale for category & Rx rules	Examples
I	High abuse potential	No accepted medical use, All no research use forbidden, can Not be prescribed lack of accepted safety as drug	Heroin, LSD (Lysergic Acid Diethylamide), marijuana
II	H	Current accepted medical use but abuse may lead to severe physical/ psychic dependence	Opioids as morphine, amphetamines, hydrocodone
III	< class II	Current accepted medical use. moderate or low potential for physical & high potential for psychologic dependence, No refills, Rx must be rewritten after 6 months	Weaker opioids such as codeine, tramadol some amphetamine-like drugs

IV	< III	Medical use is accepted. Limited / low potential for dependence	Diazepam, phenobarbital, chloral hydrate etc
Schedule V	< IV	Medical use is accepted. ! least potential for abuse	cough syrups e codeine , antidiarrheal e diphenoxylate etc

Rx for controlled drugs:

- **Should not be typed -written by hand**
- **Written in ink**
- **Signed & dated**
- **Prescriber's full name, address**
- **State ! form of ! drug**
- **State ! total quantity of ! drug or ! number of doses units (10.0 mg i.e. ten milligrams)**

Not be refillable > than 5 times in a 6 months period for schedule III-IV-V Rx;

- **No refilling for schedule II Rx.**

The pharmacists job is not to make you happy

- It is to protect the patient
- Correctly fill the medication ordered
- Educate patient on proper use
- Monitor for drug interactions****
- Monitor for inappropriate drug prescribing ****
- Act as a advisor on OTC drug use
- Act as a first line source of referral to a doctor for patients seeking to self-medicate
- Monitor for drug abuse
- TO PROTECT YOU FROM YOURSELF

Conclusions
Types of Prescribing Errors

- Prescription errors 49%
- Transcription errors 11%
- Dispensing errors 14%
- Administration errors 26%

Conclusions

Root Causes of RX Errors: Prescription error

- Wrong Drug
- Wrong dosage
- Unidentified drug allergies
- Cross sensitivity
- Drug interactions
- Drug error from patient's other doctors
- Poor RX writing skills
- Limited Drug knowledge
- Limited knowledge of patient's medical HX

Conclusions
Prescription error: Prevention

- Know your patient: Careful HX taking
- Know your drug: Pharmacology and proper dosing
- Use pre-printed drug pad to eliminate poor hand-writing skills
- Keep up with the latest drug information
- Have access to a digital drug information database
- Keep a duplicate of your written drug order to recheck accuracy of the RX

Conclusions

Root Causes of RX Errors: transcription

- Poor handwriting
- Similar names of drugs
- Untrained technicians
- Distractions during writing or reading of the RX
- Misread or confusing units of dose

Conclusions
Transcription error prevention

- Avoid delegating drug orders to office technicians
- Dbl check all drug refill orders for accuracy
- Avoid distractions when writing or transcribing drug orders
- Pharmacist should double check RX filled accurately
- Prescribe generically to avoid confusing drug brand names
- Print RX to avoid poor handwriting induced errors
- Avoid “phone in” scripts-Fax it instead
- Use proper writing techniques that avoid dosing or dosing unit errors
- Insure that technicians are properly trained
- Always verify technicians work

Conclusions

Dispensing error prevention

- Avoid in-office samples without specific written directions
- Keep accurate records of any samples dispensed to patients
- Write name of drug and directions for patient so that they can double check the drug they receive from pharmacy and the accuracy of the directions
- If need be, verify actual drug dispensed with pharmacy

Conclusions

Root Causes of RX Errors: Administration

- Inadequate patient education with regard to handling and drug usage
- Inadequate counseling with regard to drug-food and drug-drug interactions
- Inadequate counseling on drug benefits and drug side-effects (compliance issues)
- Inadequate evaluation of patient refills and drug usage (overuse vs underuse)
- Inadequate education of patient caregivers (particularly those in assisted living or nursing home environments)

Conclusions

Administration error prevention

- Educate, educate, educate
- Write out specific instructions for the patient, separate from the pharmaceutical prescription
- Ensure that the patient can demonstrate proper medication usage
- Have a spouse or other family member present during the instruction phase of drug use
- Inform the patient of all benefits and side-effects of the drug
- Fax very specific drug orders to all institutional caregivers and discuss proper drug administration with the staff

Conclusions
Patient safety

- Educate your staff
- Educate yourself
- Educate your patient
- Be vigilant
- Train staff to recognize patient complaints that may be related to inappropriate drug use
- Avoid communication problems with the pharmacy
- Analyze your practice for any quality related issues
- Implement quality improvement programs

THE END

Thank You