MEDICATION ERRORS: ERROR-PRONE NOTATION & CORE SAFEGUARDS

⚠ Error-Prone Abbreviations to Avoid

Instead of...	Write out...	Why it matters
U or u	**units**	**"U" can be misread as "0" → 10× overdose**
Q	**every**	**Ambiguous in handwritten orders**
HS	**at bedtime** *or* **half-strength** (spell out the meaning)	**Same abbreviation, two different meanings**
Trailing zero: `1.0 mg`	**1 mg**	**Decimal may be missed → 10× overdose**
No leading zero: `.5 mg`	**0.5 mg**	**Decimal may be missed → 10× overdose**

Rule of thumb: If an abbreviation has more than one possible meaning in common use, spell it out — every time, in every context.

Common Written & Digital Contexts

Avoid error-prone abbreviations in:

- prescription orders
- internal communications
- computer-generated labels
- medication administration records (MARs)
- shelf/bin labels
- protocols
- computer order entry screens

Core Safeguards at a Glance

1. STANDARDIZE

- Use commercially available formulations and concentrations whenever possible
- Prepare and dispense pediatric medications in patient-specific unit-dose containers
- Establish and follow standardized protocols and procedures

2. CLARIFY

- Spell out drug names fully — use both brand and generic names when possible
- Clarify any questionable or ambiguous order before dispensing or administering
- Address look-alike/sound-alike (LASA) medication risks proactively

3. VERIFY

- Apply independent double-checks for high-risk medications (e.g., chemotherapy, insulin, opioids)
- For pediatric patients: require documented weight and calculated dose (mg/kg or BSA) on all orders; do not dispense high-risk drugs without a current weight except in emergencies
- Use the medication administration rights (right patient, drug, dose, route, time)

4. USE TECHNOLOGY THOUGHTFULLY

- Leverage bar-code systems, e-prescribing, and infusion-pump safeguards to reduce risk
- **Remember:** technology reduces but does not eliminate risk — clinical review remains essential

Pediatric & High-Risk Populations — Extra Steps Required

- Most medications are formulated for adults; off-label pediatric dosing is common and pharmacists may be unfamiliar with standard pediatric doses
- Always confirm weight before dispensing high-risk medications
- Clearly label repackaged stock to differentiate pediatric from adult formulations
- High-alert medications (chemotherapy, insulin, opioids) require heightened caution in all patients

Bottom Line

Errors are systemic. Abbreviations, unclear orders, calculation steps, and patient-specific factors all create risk. Standardization, clear communication, and verification at every handoff are the foundation of safe medication practice.

