



# Clinical Pharmacology & Toxicology Pearl of the Week

## ~ Good Prescribing Practices ~

### Case:

- ✓ A 55-year-old female with a history of alcohol and substance use disorder was admitted to hospital after ingesting a supratherapeutic amount of Tylenol #3.
- ✓ Review of her medication profile shows that she was dispensed 360 Tylenol #3 tablets all at once approximately one week prior to admission. The patient had a prior admission for a stable pelvic fracture and was transferred to a continuing care facility for rehabilitation.
- ✓ The prescription was written as 1-2 Tylenol #3 q4h PRN for one month, which was interpreted by the pharmacist as the patient needing one month of medication all at once. The prescription was then delivered to the patient's home without an in-person assessment and without a review of the patient's medical record.
- ✓ The patient was treated with IV NAC for a potentially toxic acetaminophen concentration and made a full recovery.
- ✓ The physician and the pharmacy were contacted and acknowledged the mistakes in this case.

### Ten Principles of Good Prescribing (Red highlights = pertinent to case above):

1. Be clear about the reasons for prescribing
  - Establish an accurate diagnosis whenever possible
  - Be clear in what way the patient is likely to gain from the prescribed medicines
2. Consider the patient's medication history before prescribing
  - Obtain an accurate list of current and recent medications (including over the counter and alternative medicines), prior adverse drug reactions, and drug allergies from the patient, their carers, or colleagues
3. Consider other factors that might alter the benefits and risks of treatment
  - Consider other individual factors that might influence the prescription (for example, physiological changes with age and pregnancy, impaired kidney, liver, or heart function, or substance use disorders)
4. Consider the patient's ideas, concerns, and expectations
  - Seek to form a partnership with the patient when selecting treatments, making sure that they understand and agree with the reasons for taking the medicine
5. Select effective, safe, and cost-effective medicines individualised for the patient
  - The likely beneficial effect of the medicine should outweigh the extent of any potential harms, and whenever possible this judgement should be based on published evidence
  - Choose the best formulation, dose, frequency, route of administration, and duration of treatment
6. Adhere to national guidelines and local formularies where appropriate
  - Be aware of guidance produced by respected bodies, but always consider the individual needs of the patient
  - Select medicines regarding costs and needs of other patients

- Be able to identify, access, and use reliable and validated sources of information and evaluate potentially less reliable information critically

7. Write unambiguous, legal prescriptions using the correct documentation

- Be aware of common factors that cause medication errors and know how to avoid them

8. Monitor the beneficial and adverse effects of medicines

- Identify how to assess the beneficial and adverse effects of treatment
- Understand how to alter the prescription because of this information
- Know how to report adverse drug reactions

9. Communicate and document prescribing decisions and the reasons for them

- Communicate clearly with patients, their caregivers, and colleagues
- Give patients important information about how to take the medicine, what benefits might arise, adverse effects (especially those that will require urgent review), and any monitoring that is required
- Use the health record and other means to document prescribing decisions accurately

10. Prescribe within the limitations of your knowledge, skills, and experience

- Always seek to keep the knowledge and skills that are relevant to your practice up to date
- Be prepared to seek the advice and support of suitably qualified professional colleagues
- Make sure that, where appropriate, prescriptions are checked (for example, calculations of intravenous and pediatric doses, duration of treatment, maximum number of tablets dispensed)

**References:**

British Pharmacological Society: <https://www.bps.ac.uk/education-engagement/teaching-pharmacology/ten-principles-of-good-prescribing>

CPSA MD prescribing practices: <https://cpsa.ca/physicians-competence/physician-prescribing-practices/>

WHO Guide to Good Prescribing:  
[https://apps.who.int/iris/bitstream/handle/10665/59001/WHO\\_DAP\\_94.11.pdf](https://apps.who.int/iris/bitstream/handle/10665/59001/WHO_DAP_94.11.pdf)

CPT pearl of the week on Appropriate Medication Prescribing:  
<https://cumming.ucalgary.ca/sites/default/files/teams/127/pearl-of-the-week/Appropriate%20medication%20prescribing%20pow%20July%202020.pdf>

CPT pearl of the week on Medication Errors and Solutions:  
[https://cumming.ucalgary.ca/sites/default/files/teams/127/Medication%20errors%20and%20solutions%20part%202%20March%202020\\_4.pdf](https://cumming.ucalgary.ca/sites/default/files/teams/127/Medication%20errors%20and%20solutions%20part%202%20March%202020_4.pdf)

**The Calgary Clinical Pharmacology physician consultation service is available Mon-Fri, 8am-5pm. The on-call physician is listed in ROCA. Clinical Pharmacology consultations are also available through the Netcare e-referral process and through Calgary Zone Specialist Link. Click [HERE](#) for more details.**

**The Poison and Drug Information Service (PADIS) is available 24/7 for questions related to poisonings. Please call 1-800-332-1414 (AB and NWT) or 1-866-454-1212 (SK).**