Short Supply of Transdermal Fentanyl Patches

Issue

A short supply of **transdermal fentanyl patch** products has been identified by PharMerica's Purchasing and Inventory Management teams.

Patches contain fentanyl, an opioid agonist indicated for pain in opioid-tolerant patients, severe enough to require daily, around-the-clock, long-term opioid treatment, for which alternative treatment options are inadequate.

Notably, an official drug shortage alert has NOT yet been issued by the FDA or ASHP. Communication with manufacturers and distributors suggest short supply issues will resolve by March 24, 2023, though this is subject to change and stakeholders are encouraged to frequently check the provided FDA and ASHP drug shortage websites.

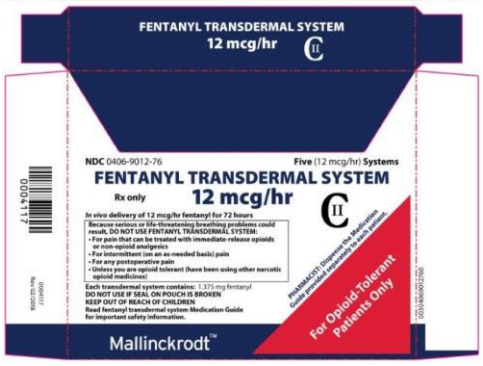
Pending further information published by these institutions, PharMerica is providing the following information.

Products Affected

Availability of patch strengths vary across pharmacies, with 12mcg/hr and 50mcg/hr patches being the most commonly available strengths. However, all strengths and manufacturers of fentanyl patch products may be affected, as short supply of any one version drives acute demand of other products available on market, including **12.5 mcg/hr**, **25 mcg/hr**, **37.5 mcg/hr**, **50 mcg/hr**, **62.5 mcg/hr**, **75 mcg/hr**, **87.5 mcg/hr**, and **100 mcg/hr transdermal fentanyl patches**.

Action Steps

PharMerica Pharmacies



- Monitor for availability of product and complete orders when possible, maximizing allocated amounts per wholesaler/distributor.
- Work with Central Inventory Management Team to internally redistribute supply across Distribution Centers as needed and feasible.
- Proactively notify serviced facilities of ongoing local supply status.
- Timely notify serviced facilities when prescription orders for transdermal fentanyl patches are unable to be fulfilled due to drug unavailability.
- Order alternative analgesics as needed per serviced facilities demand.
- Based on the indicated use of fentanyl patches, alternative therapies will generally be extended-release opioids.
- Recognize that drug shortages present unique circumstances for medication errors. As a class, opioids offer a number of safety risks, including serious, life-threatening, respiratory depression. Additional attention should be afforded to drug orders generated in response to this issue.

Facilities

- Solicit recommendations from prescribers and obtain orders for alternative pain management therapy to switch patients to when notified of fentanyl patch unavailability.
- Consult institutional guidelines for converting opioid therapies, and leverage expertise of pain specialists and palliative care specialists to guide clinical decision-making (See Abridged Clinical Considerations, on next page).

Short Supply of Transdermal Fentanyl Patches
Abridged Clinical Considerations

- ***Note: explicit guidance NOT to cut transdermal fentanyl patches has been issued by product manufacturers*[1]**
- To reduce the risk of conversion errors, use a uniform opioid conversion tool (such as this guiding document by AAFP) and consider cross-tolerance and duration of action of fentanyl after patch removal.
- Conventionally, when converting to new opioid therapy, best practice includes a reduction factor, to account for relative tolerance. For example, The American Academy of Family Physicians provides the following recommendation:
    - *Determine equivalent daily dose of new opioid by dividing the calculated MMEs of current opioid by new opioid's conversion factor.* ***Reduce this amount by 25-50%*** *and then divide into appropriate intervals.*
- After fentanyl patch removal, fentanyl remains in the subcutaneous tissue (see Pharmacokinetics below). If converting from fentanyl patches to a long-acting opioid, it is generally recommended to use only PRN opioids for the first 12 hours after removal, then start the new opioid approximately 12 hours later. For the first dose of the new opioid, a 50% reduction can be considered to account for the remaining fentanyl in tissue.
- Dysphagia considerations: Rectal administration of extended-release (ER) morphine or oxycodone tablets is possible and bioavailability is similar to the oral route. ER tablets should not be crushed or administered rectally via Macy catheter and instead should be administered as whole tablet(s). For patients with severe renal impairment, rotation to morphine is not recommended due to the potential for adverse effects from metabolite accumulation.
- **Pharmacokinetics[2]:**
    - **Fentanyl serum steady state concentrations** are reached after **two sequential 72-hour** patch applications.
    - **Continual fentanyl absorption** from the skin continues for **24 hours** or more following removal of the patch.
    - **Duration after removal of patch**: in relation to blood level, some effects may last **72 to 96 hours** due to extended half-life and absorption from the skin, fentanyl concentrations **decrease by ~50% in 20 to 27 hours**.
- All opioid dose conversions are approximate.
- Fentanyl manufacturers have issued varying dose conversion recommendations, as have drug regulatory bodies.
- For these reasons, patients should be monitored closely so that alternative therapy doses can be adjusted if necessary.
- Switching from a fentanyl patch to any other strong opioid by any other route is best done with pain specialist input.

Additional Resources:

- **American Academy of Family Physicians Opioid Conversion Table**
- **CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022**

References:

1. Product labeling and manufacturer inquiries – Feb 2023.
2. Lexicomp Online, Lexi-Drugs Online. FentaNYL. Waltham, MA: UpToDate, Inc.; February 9, 2023. https://online.lexi.com/lco/action/home. Accessed February 9, 2023.