Inappropriate fentaNYL patch prescriptions for opioid-naïve, elderly patients

We heard from a long-term care (LTC) pharmacy about an increase in the prescribing of transdermal fentaNYL patches for elderly patients and residents. In most cases, the pharmacists reviewing the orders determined that the fentaNYL patches had been inappropriately prescribed for opioid-naïve residents, sometimes to treat acute pain rather than chronic pain. In several cases, the fentaNYL patches had been prescribed because of a documented allergy to another analgesic, such as codeine. However, further investigation showed that the “allergy” was a minor intolerance to the analgesic, usually gastrointestinal, such as mild nausea or constipation.

The more common underlying cause of prescribing fentaNYL patches inappropriately appears to be a knowledge deficit about the dangers of prescribing this potent opioid analgesic to opioid-naïve patients and residents. FentaNYL is a powerful opioid that is 50 to 100 times more potent than morphine. Several of these events began in a hospital, with opioid-naïve residents receiving prescriptions for fentaNYL patches after treatment in an emergency department (ED) or upon discharge and transfer to a LTC facility. ISMP has written about this well-known problem for decades. Since it is STILL an ongoing problem, it is time to revisit this issue.

**Background**

In 1990, DURAGESIC (fentaNYL transdermal system) was approved by the US Food and Drug Administration (FDA). Years later, generic fentaNYL patches became available. As early as 2005, FDA published a public health advisory and information for healthcare professionals regarding the appropriate and safe use of the fentaNYL transdermal system, noting that serious, life-threatening, or fatal respiratory depression may occur. FDA followed up with another advisory in 2007, stressing that transdermal fentaNYL is only indicated for use in people who are opioid-tolerant with documented chronic, moderate-to-severe pain.

Today, the official prescribing information recommends use of fentaNYL patches only in opioid-tolerant patients for the management of pain severe enough to require daily, around-the-clock, long-term opioid treatment and for which alternative treatment options are inadequate. According to the prescribing information, patients considered opioid-tolerant are those taking, for 1 week or longer, at least one of the following:

- 60 mg of oral morphine per day
- 60 mg of oral HYDROcodone per day
- 30 mg of oral oxyCODONE per day
- 25 mg of oral oxyMORphone per day
- 8 mg of oral HYDROMorphone per day
- 25 mcg of transdermal fentaNYL per hour
- An equianalgesic dose of another opioid

In 2012, FDA approved an extended-release (ER) and long-acting (LA) opioid analgesic Risk Evaluation and Mitigation Strategy (REMS) to ensure the benefits of prescribing ER and LA opioids, including fentaNYL patches, outweigh the risks. In 2018, that
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REMS was modified to reduce the risk of abuse, misuse, addiction, overdose, and death due to all prescription opioid analgesics. The REMS strongly encourages specific training about the risks and safe use of opioids for all healthcare providers involved in the management of patients with acute or chronic pain. FDA believes that, with training, the proper analgesic will be selected and used with appropriate clinical oversight and monitoring. The agency has even created a blueprint to specify the content of an opioid educational program for healthcare providers. However, there is no mandatory federal requirement for REMS-compliant education about opioids, including fentaNYL patches, as a precondition to prescribing, as FDA concluded that monitoring compliance would be unduly burdensome.

Inappropriate prescribing of fentaNYL patches

The LTC pharmacy that reported the rise in inappropriate prescribing of fentaNYL patches provided numerous examples, several of which are described below. Again, most of these events demonstrated the prescribers’ lack of knowledge about avoiding this analgesic in opioid-naïve residents and/or an inaccurate classification of a drug intolerance as an allergy. Prescribing a fentaNYL patch to elderly, opioid-naïve residents can result in life-threatening or fatal respiratory depression and overdose. Additionally, with the elderly population, there are a number of risk factors, including age-related comorbidities, polypharmacy, and drug-drug interactions, that can further contribute to an unintentional overdose if opioids are inappropriately prescribed.

Event 1

An 85-year-old resident from a LTC facility fell and was taken to a local hospital ED, where multiple rib fractures were diagnosed. Upon discharge from the ED, the resident was prescribed a transdermal fentaNYL patch, 25 mcg/hour, every 72 hours. When the resident returned to the LTC facility, a consultant pharmacist reviewed the medication orders. Looking at the resident's medication history, the pharmacist determined that the resident had not received a prescription for opioids in the past year, revealing he was opioid-naïve. The consultant pharmacist contacted the prescribing ED physician to discuss the order for the fentaNYL patch. The ED physician reported that the resident had received “3 small IV push doses” of fentaNYL in the ED, mistakenly believing this to mean the resident was opioid-tolerant.

Additionally, the ED physician had prescribed the fentaNYL patch because the resident had a documented allergy to codeine. Thus, the ED physician mistakenly believed the fentaNYL patch was the only viable option. The consultant pharmacist clarified that the LTC records indicated that the resident had experienced mild nausea and stomach upset while taking HYDROcodone and acetaminophen (VICODIN) when he was younger, which is not an allergy but rather a mild intolerance. The ED physician changed the resident's analgesic to oral oxyCODONE 5 mg as needed every 4 hours.

Event 2

An 80-year-old hospitalized patient with persistent pain from a recent fall was discharged with orders for HYDROmorphine 1 mg by mouth every 4 hours as needed for pain, which he had received during his 3-day hospitalization. Before the patient was transferred to a LTC facility for rehabilitation, the physician also prescribed a 50 mcg/hour fentaNYL patch to be applied at discharge for pain management. When reviewing the transfer orders, a LTC pharmacist noticed that the newly admitted resident did not have a history of taking opioids prior to his 3-day hospitalization and continued on page 3 — Inappropriate fentaNYL patches —

Your Reports at Work

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Expiration date-related problems reported to the ISMP National Mediation Errors Reporting Program (ISMP MERP) include confusion with 2-digit year formats, such as 20MAR21, which can be interpreted as March 20, 2021 or March 21, 2020. Also, 2-letter months have been a problem. Does MA indicate March or May? How about JU? June or July?

While USP will allow both all-numeric and alphanumeric formats for expiration dates, the new standard dictates a consistent format for the year, month, and day to prevent confusion. To help healthcare workers, patients, and consumers distinguish between the year and the day, USP will require a 4-digit year format. Also, the use of hyphens or forward slashes is required to separate the year, month, and day to help improve readability. For example, when all-numeric dates are used, they must be formatted using the year, the month, and, if applicable, the day, separated by hyphens or forward slashes in one of the following formats: YYYY-MM-DD (e.g., 2019-06-30, 2019/06/30) or YYYY-MM (e.g., 2019-06, 2019/06). When alphanumeric dates are used, months must be displayed using at least 3 letters (e.g., 2019-JUN-30, 2019/JUN/30, 2019-JUN, 2019/JUN).

The USP standard also harmonizes with the International Organization for Standardization (ISO) expiration date standard, with minor modifications. A summary of the changes is available at: www.ismp.org/ext/532.

SAFETY briefs

Pharmacist makes a good catch and prompts system improvement. A physician prescribed olopatadine (PATADAY) 0.2% ophthalmic solution with instructions to instill one drop into each eye twice daily. However, the approved administration frequency for the 0.2% solution is once daily. The pharmacist provided the proper instruction and recommended a prompt system improvement.
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was concerned about the fentanyl patch that had been applied prior to transfer, particularly in combination with the prescribed hydrocodone. The pharmacist contacted the LTC physician, who initially did not want to discontinue the fentanyl patch since it had been recommended by the hospital physician. The pharmacist was persistent and convinced the LTC physician that the fentanyl patch was unsafe in the elderly, opioid-naïve resident. The patch was removed and discarded.

Event 3

A 70-year-old man with back pain had been taking hydrocodone with acetaminophen 5 mg/325 mg once or twice daily for the past week. When he was hospitalized for a different reason, he mentioned taking this oral analgesic periodically for back pain when asked about his medication history. The patient was concerned that his back pain would worsen during hospitalization and asked the nurse if he could try a “pain relieving narcotic patch.” The nurse documented this request. When the patient was discharged the next day to a LTC facility for rehabilitation, the physician noticed the patient’s request to try a “pain relieving narcotic patch” and prescribed a fentanyl patch 25 mcg/hour every 72 hours for back pain, which he included on the patient’s transfer orders. A LTC pharmacist reviewing the transfer orders contacted the prescriber, who stated that the patient did not want to take analgesic tablets any longer and had personally requested the patch. Through further discussion with the pharmacist, the prescriber realized the resident was not an appropriate candidate for a fentanyl patch and instead ordered oral hydrocodone with acetaminophen 5 mg/325 mg every 4 hours for back pain.

Event 4

A 78-year-old nonverbal resident with dementia and osteoarthritis was receiving acetaminophen 500 mg every 4 hours as needed for pain. When a LTC physician was notified that the resident was experiencing increased pain from the osteoarthritis that did not seem to be resolved with the prescribed acetaminophen, the physician ordered a fentanyl patch 12 mcg/hour every 72 hours. A consultant pharmacist contacted the physician, who mistakenly believed it was safe to order the lowest dose fentanyl patch for this opioid-naïve resident. Ultimately, the physician discontinued the fentanyl patch, increased the resident’s acetaminophen dose to 650 mg every 4 hours as needed for pain, and stated that he would change the resident’s pain management to immediate-release tramadol 25 mg every 6 hours as needed if the increase in acetaminophen dosing was ineffective.

Recommendations

ISM P is concerned about these and other reports of inappropriate prescribing of fentanyl patches for opioid-naïve, elderly patients and residents. Fentanyl patches should only be prescribed for patients and residents who are opioid-tolerant with persistent, moderate-to-severe chronic pain that requires around-the-clock, long-term opioid administration. This is so critical to safety that, in 2018, ISMP called for the elimination of prescribing fentanyl patches for opioid-naïve patients and/or patients with acute pain in the ISMP Targeted Medication Safety Best Practices for Hospitals (www.ismp.org/node/160). For the 2020 – 2021 update of the Targets, this Best Practice was incorporated into a new Best Practice (#15) to verify and document the patient’s opioid status and type of pain before prescribing and dispensing ER or LA opioids.

The most recent stream of reports, some of which are described above, are closely associated with a knowledge deficit about pain management, end-of-life care, and proper prescribing of fentanyl patches. These examples and others help substantiate

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> There is an olopatadine 0.1% ophthalmic solution for which the approved administration frequency is twice daily. Olopatadine ophthalmic solution is used to relieve ocular itching and redness associated with allergic conjunctivitis. Noticing the mismatch between the ordered product concentration and frequency of administration, the pharmacist contacted the physician’s office. The prescriber clarified the prescription to the intended olopatadine 0.1% ophthalmic solution with instructions to instill one drop into each eye twice daily.

During that call, the prescriber also noted that they would update resources in their computer system to help guide the proper dosing of these products. This is a good example of how, by fully investigating drug-related issues and then talking with prescribers, pharmacists can identify and prevent immediate medication errors as well as prompt system changes to hopefully prevent future errors.

Can a product have two different expiration dates? Apparently so. An expiration date printed on a prefilled syringe of Depo-Provera (medroxyprogesterone) by Pfizer (Figure 1) did not match the expiration date on the outer carton containing the syringe. The expiration date listed on the outer carton was earlier. A company representative said that the product has two separate components: a drug syringe and a 22-gauge, 1½ inch needle for deep intramuscular (IM) injection.

Figure 1. Expiration date (August 31, 2024) on Depo-Provera syringe does not reflect the actual expiration date of the assembled syringe and needle; the expiration date on the carton (October 31, 2023) is correct.

The two components may have different manufacturer expiration dates. Each assembled syringe and needle are packaged in an individual carton. Therefore, when assigning an expiration date to the
While all of these instances of inappropriate prescribing were thankfully detected by pharmacists, thus preventing serious resident harm, additional strategies should be implemented. For example, when entering orders for fentaNYL patches, interactive alerts requiring confirmation that the patient or resident is opioid-tolerant and experiencing chronic pain might help prevent inappropriate prescribing, as might hard stops if patients or residents do not meet prescribing criteria. Similarly, pharmacy computer systems should help pharmacists ensure that a fentaNYL patch is appropriate for the patient or resident. Consultant or LTC dispensing pharmacists should review daily lists of transfer and admission orders to verify that residents prescribed a fentaNYL patch are opioid-tolerant and have chronic pain. Pharmacists and nurses must ensure patients, residents, and/or caregiver receive complete education regarding safe and proper use, storage, and disposal of the patch. In fact, ISMP has long promoted that community pharmacist provided patient counseling for targeted high-alert medications like fentaNYL patches be scripted and mandatory.

In addition, distinguishing between true allergies and drug intolerances is critical to the proper selection of analgesics. When allergy information is collected, include prompts to obtain and document in a standardized manner the reaction type (e.g., side effect, intolerance, toxicity, immune response) and description (e.g., nausea, rash, pruritus, swelling, anaphylaxis). Before prescribing medications, allergy information without a documented reaction type and description should be reconciled with the patient, resident, or family so crucial medications are not avoided simply due to mild intolerances. Community and LTC pharmacy computer systems should require a patient’s allergies (or “no known allergies”) to be entered and coded in the pharmacy computer system and then each prescription to undergo electronic clinical decision support allergy screening before being dispensed.

References

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the fact that reliance on product labeling and practitioner education alone will not do enough to solve this life-threatening problem. Yes, prescribers should be educated about pain management, including end-of-life care and safe fentaNYL patch prescribing. Also, prescriber competency should be verified as a prerequisite to prescribing this potent opioid. However, education alone is a weak safety strategy, and there will always be some who are unaware of the great risks they take when prescribing fentaNYL patches to opioid-naïve patients and residents to treat pain. Thus, system safeguards must be established for this high-alert medication to avoid the risk of harm.

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combined product, the manufacturer uses the earlier of the two expiration dates and prints that date on the carton. According to the manufacturer, the date printed on the outer carton of the combination pack is the actual expiration date.

> Use brand names to help differentiate tacrolimus formulations. An order for oral tacrolimus extended-release (ASTA-GRAF XL) 3 mg daily was to be dispensed from a hospital outpatient pharmacy using three 1 mg extended-release capsules for each dose. However, the pharmacist accidentally selected tacrolimus 1 mg immediate-release (PROGRAF) capsules instead of Astagraf XL. All tacrolimus products were in the same drop-down menu because the hospital’s computer system displayed all strengths of an active ingredient in a single list. Also, immediate-release and extended-release tacrolimus products are available in similar 0.5 mg, 1 mg, and 5 mg strengths, which may increase the potential for confusion between the two dosage forms. In this case, the patient noticed a difference in the capsule appearance compared to prior refills and reported it to the pharmacy. The error was then discovered.

ISMP reviewed multifactorial causes of tacrolimus medication errors, including confusion with the various strengths and formulations, look-alike names, preparation errors, and more in our August 2017 newsletter. To prevent errors similar to the one described above, we recommended displaying the brand name of tacrolimus extended-release formulations (i.e., Astagraf XL, ENVARSUS XR) on medication ordering and verification screens to help differentiate them from immediate-release tacrolimus (i.e., Prograf, generics).