Fentanyl Transdermal Patch - A Review
By Suzy Stever, Pharmacist Lead

The Institute for Safe Medication Practices (ISMP) recognizes the fentanyl transdermal patch as a high-alert medication that deserves special consideration. Despite ongoing education and warnings from safety agencies, fentanyl transdermal patches continue to be prescribed inappropriately to treat unstable or acute pain in opiate-naïve patients, sometimes in high doses or in combination with other oral or intravenous opiates (“Ongoing, Preventable Fatal Events”, 2007). Unfortunately, these orders are processed by pharmacists and applied by nurses without recognizing the prescribing error.

ISMP suggests safe practice recommendations around prescribing the fentanyl transdermal patch that includes healthcare practitioner education and creating standardized guidelines. There are a variety of resources and guides available through Northern Health that align with these recommendations and they will be highlighted throughout this article.

Healthcare Practitioner Education
In order to improve safe prescribing, the following should be taken into consideration by healthcare practitioners.

- Fentanyl is a very potent (80 to 100 times more potent than morphine), highly lipid soluble, synthetic, pure mu opioid agonist. Since it is highly lipophilic, fentanyl is available in several dosage formulations and may be administered via the following routes: parenteral, transdermal and buccal/transmucosal.

- Fentanyl transdermal (FTD) is indicated to manage stable pain in adults that is severe enough to require continuous, daily, long-term opioid treatment. It is for use with opioid tolerant patients, defined as taking a total daily dose of at least 60 mg/day of oral morphine equivalent.

- FTD may lead to serious or life-threatening hypoventilation if used.

(Continued on page 2)
inappropriately and is contraindicated if:
- used in acute or perioperative pain;
- patients have mild, intermittent or short duration of pain;
- patients are opioid naïve;
- patients have acute or severe bronchial asthma;
- patients have severe CNS depression or a head injury.
This list is not exhaustive, and a complete list can be found by reviewing the drug product monograph.

- FTD should NOT be cut or altered since exact dosing is critical. If a patch becomes loose or does not adhere to skin, use first-aid tape on the edges or cover with transparent adhesive film dressing (i.e. Tegaderm).

- Dispose of used patches by folding in half (sticky sides together) and either flush down the toilet or store securely until patches can be brought to pharmacy for safe disposal.

- Avoid exposure to heat sources (i.e. heating pads, saunas or hot tubs) as this can increase fentanyl release from the system and possibly lead to toxicity and/or overdose and death. Patients with a fever may also experience an increase in serum fentanyl concentration.

- FTD may not be appropriate for cachectic patients or those lacking adipose tissue. FTD requires an adequate subcutaneous depot to allow medication to reach therapeutic serum levels.

- Fentanyl lacks active metabolites; therefore, it is a good choice for treatment in patients with renal insufficiency.

- FTD may be preferred over an oral opioid if a patient has poor gastrointestinal tract absorption, dysphagia or if adherence is a concern and may be improved with the transdermal route.

- Fentanyl is extensively metabolized mainly by cytochrome P450 3A4; therefore, fentanyl serum concentrations may be affected when given concurrently with medications that inhibit or induce this enzyme. Consider a medication review by a pharmacist.

- After initial application, the onset of analgesic effects is 12 to 24 hours and lasts 48 to 72 hours. After removal of the patch, medication continues to be released from the deposit below the skin, leading to a delayed decrease in blood levels and persistent analgesic effects for up to 12 hours. If removed prior to reaching peak fentanyl exposure plasma levels may continue to increase. The serum half-life following patch removal is around 20 hours.

- With initial application, the dose may be titrated after 3 days. With ongoing treatment, do not titrate dose more frequently than every 6 days as steady state serum concentrations are not reached until after two sequential 72-hour applications of the patch.

- Always provide a short-acting opioid for breakthrough pain selecting the appropriate dose.

---

**Northern Lights in Palliative Care**

What I enjoy most about working in palliative care is providing education to clients about the medicines we ask them to use. When people have knowledge, I find that instead of feeling like their medications are a burden, they feel empowered to use the medication to give themselves control over their symptoms to live their lives comfortably.

~ Val Weber, Primary Care Pharmacist, Fort St. John

**Standardized Guidelines**

When prescribing FTD, use the *Northern Health Fentanyl Transdermal Patch order set*. The first page of this order set guides the prescriber to include:

- Indication, including prescribing criteria and whether this is a new start, a continuation of the patient’s current dose, or a dose change;
- Patch dose;
- Appropriate breakthrough opioid dose.

The second page of the order set provides standardized tables, including:

- **Table 1. Fentanyl transdermal patch equianalgesic conversion.**
- **Table 2. Approximate breakthrough doses recommended for fentanyl transdermal patch;**
- **Table 3. Switch schedule for initiation of fentanyl transdermal patch and discontinuation of prior opioids.** When using this chart, write an exact time for dosing rather than using “0 hour, 4 hour” etc.

When transitioning from FTD to another opioid do not use the above mentioned **Table 1** as the table is unidirectional with a built-in dose reduction. If used in reverse, the table’s associated opioid dose is higher than an equivalent dose to FTD. Calculate the dose longhand to see what the difference would be, using the ratio of morphine PO: fentanyl transdermal 100:1. When stopping FTD, as with initiating, there must be a timed transition between removing the patch and starting the new opioid. Refer to the *NH Palliative Care Program Symptom Guidelines, Appendix A: Fentanyl Transdermal* for more information on this rotation.

Pain is a common symptom in palliative patients, and effective pain control relies on comprehensive pain assessment and management. While the fentanyl transdermal patch offers many benefits, it may not always be the best pain management option for palliative patients. Assess the patient and consider any contraindications to using FTD, especially if they are opioid naive or experiencing uncontrolled pain. When prescribing FTD, it is strongly encouraged that prescribers utilize resources provided by Northern Health, including the Fentanyl Transdermal Patch order set. For complex or difficult to manage pain, consider consulting the Palliative Care Consultation Team.

**Resources**

- **Hot Tip: NH Palliative Care Fentanyl Transdermal Patch Regional Order Set**
- **NH Fentanyl Patch Application Record** *(10-110-5016)*
- **NH Fentanyl Transdermal Patch Regional Order Set** *(10-111-5338)*
- **NH Palliative Care Program Symptom Guidelines, 4th Edition** *(10-513-6034)*
- **Webinar: Jan 2020- Fentanyl Transdermal Patch Order Set**
Upcoming Palliative Education Opportunities

Project ECHO

Starting in October, the Palliative Care Team will be running Project ECHO. This newer approach to education will help build capacity in primary care providers through case-based learning and the sharing of best-practices by specialists from the Palliative Care Team via video-conferencing. More details to follow. If you have questions or would like to be put on our contact list, please email: Palliative.Care.Consult.Team@northernhealth.ca

Kath Murray’s Integrating a Palliative Approach for Personal Support Workers - Online Self-Study via LearningHub

We’re pleased to offer education for personal support workers. In partnership with Kath Murray, this pilot project will run over 4 months through the LearningHub. It’s primarily self-directed with support by the Palliative Care Consultation Team. More details to come, but if you have questions or would like to be put on our contact list, please email: Palliative.Care.Consult.Team@northernhealth.ca

Pallium’s LEAP

<table>
<thead>
<tr>
<th>REGION</th>
<th>CITY</th>
<th>COURSE DATE</th>
<th>REGISTER BY</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
<td>Terrace</td>
<td>September 15 8 am to 4:30 pm</td>
<td>August 7</td>
<td><strong>LEAP Mini</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For physicians, nurses, and allied health.</td>
</tr>
<tr>
<td>NI</td>
<td>Prince George</td>
<td>September 22 &amp; 23 8 am to 4:30 pm</td>
<td>August 14</td>
<td><strong>LEAP Core</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For nurses, social workers, pharmacists, etc.</td>
</tr>
</tbody>
</table>
Palliative Care COVID-19 Documents & Resources

All of the documents below can be found in two different ways:

1. NH Staff - on OurNH go to COVID - 19 site > Clinical Care > Palliative Care
   https://ournh.northernhealth.ca/AboutNH/Emergency/Coronavirus/Pages/default.aspx#stafftoolkit

2. External - Northernhealth.ca > Physician Resources > COVID - 19 > Long-term and palliative care
   https://physicians.northernhealth.ca/physician-resources/covid-19#clinical-guidelines

You can find the following documents under COVID-19 Resources on Our NH:

<table>
<thead>
<tr>
<th>Title</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathlessness at Home During COVID-19</td>
<td>Patient handout</td>
</tr>
<tr>
<td>End-of-Life Symptom Management Algorithm</td>
<td>Resource to be used with the Order Set</td>
</tr>
<tr>
<td>Grief &amp; Bereavement During COVID-19</td>
<td>Patient Handout</td>
</tr>
<tr>
<td>Guide for Serious Illness Conversations with High Risk, Community-Based, COVID-19 Patients</td>
<td>Staff Education</td>
</tr>
<tr>
<td>Guide for Serious Illness Conversations with Hospitalized, High Risk, COVID-19 Patients</td>
<td>Staff Education</td>
</tr>
<tr>
<td>Guide for Serious Illness Conversations with Patients in Long-term Care at Risk of COVID-19</td>
<td>Staff Education</td>
</tr>
<tr>
<td>Guiding Principles for Palliation of COVID-19 Patients in Community</td>
<td>Staff Education</td>
</tr>
<tr>
<td>Guiding Principles for Palliation of COVID-19 Patients in Facility</td>
<td>Staff Education</td>
</tr>
<tr>
<td>Guiding Principles for Palliation of COVID-19 Patients in Long-term Care</td>
<td>Staff Education</td>
</tr>
</tbody>
</table>

These documents can be ordered on the Document Source website:

<table>
<thead>
<tr>
<th>Title</th>
<th>DocuSource</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID - 19 Adult Palliative Care Orders (non-ICU)</td>
<td>10-800-5004</td>
<td>Order Set (not available externally)</td>
</tr>
<tr>
<td>COVID - 19 Palliative Sedation and End-of-Life Orders</td>
<td>10-800-5005</td>
<td>Order Set (not available externally)</td>
</tr>
</tbody>
</table>