SECTION **EDUCATION-06a**	PAGE Page **1** of **4**
SUBJECT/TITLE **Opioid Patch Handling**	ORIGINAL DATE **January 24, 2013** REVISION DATES **January 28, 2016** **April 29, 2021**

PURPOSE

This document address some of the specific differences, handling, and disposal procedures for opioid patches, including fentanyl and buprenorphine***** patches.

Note: This document will not address the therapeutic use or interchangeability of the various forms of opioid patches; it addresses the practical physical application, potential hazards, removal, and disposal of the physical drug product. Full prescribing information can be found in the medication product monographs[1,3]

*****Buprenorphine is not a benefit on the Calgary Zone Long Term Care Formulary, however this does not limit the applicability of the document.

APPLICATION TIPS[1,2]

1. Only commercially available doses should be prescribed.

2. Patches should not be used if the seal is broken or damaged.

3. As indicated by the Institute for Safe Medication Practices (ISMP) Canada and the product monographs, opioid patches should not be cut** or changed in any way. Do not fold patches or cover the back of patches in attempt to alter the dose delivered. Modification of the patch in any way can result in an overdose of fentanyl or buprenorphine that may be fatal.

   - ******With opioid medication, accurate dosing is critical. Theoretically, matrix-type patches may be cut or partially occluded and the amount of drug delivered would be proportionate to the reduced size, however, cutting or modifying the patch could lead to innacurate dosing or erratic drug delivery rate. It could affect the adhesiveness, or cause local irritation from the drug itself or the occluding material. Finally, the practice could result in accidental exposure to the drug by staff manipulating the patch.

   - Healthcare professional should use clinical judegment if opioid patch modification is required only if no other therapeutic alternative is feasible. Following a risk evaluation, risk mitigation strategies (e.g. communication plan, education) should be established and followed. Instructions must be clearly indicated on the MAR and medication orders should be verified with pharmacy if needed.

4. Patches must only be applied to dry, intact, non-irritated, and non-irradiated skin on a flat surface such as the chest, back, flank, or upper arm. In persons with cognitive impairment, the patch should be put on the upper back to lower the chances that the patch will be removed. Hair at the application site may be clipped (not shaved) prior to patch application. Do not use soaps, oils, lotions, alcohol, or any other agent that might irritate the skin or alter its characteristics.

5. Apply the patch immediately upon removal from the sealed package. Remove the protective backing and apply by pressing firmly with the palm of the hand for 30 seconds, making sure edges are sealed. The patch is to be worn continuously for the prescribed period. Only after removal and disposal of the previous transdermal patch can a new patch be reapplied to a **different** skin site (avoid reusing the same application site within a 3-week period[3]). Should a patch fall off before the end of the prescribed period, a new patch may be applied to a different skin site. **See "management strategies" below for other application strategies.**

6. Use only water to wash hands or skin after contact with medication patch.

SAFETY CONSIDERATIONS

Fentanyl is a highly potent opioid –ISMP Canada has received over 3000 fentanyl patch-related incidents, hundreds resulting in harm, including 8 deaths[3]. Ensure healthcare practitioners are knowledgeable regarding indications, potency and the pharmacokinetic parameters of transdermal medication patches.

Possible mechanisms of risk, and associated management strategies:

Potential Risk	**Management Strategy[1,4]**
Initating **fentanyl** patches on opioid naïve patients (leading to overdose due to high relative potency of patch)	Used only for chronic pain and with previous exposure to high doses of alternate opioids. Previous exposure defined as receiving a week or longer* of at least one of (or equivalent): - 60 mg of oral morphine daily - 30 mg of oral oxycodone daily - 8 mg of oral hydromorphone daily *Insufficient cross-tolerance or no tolerance may lead to severe or fatal respiratory depression
Accumulation of **fentanyl** due to rapid dose increases (possibly due to high PRN use, concurrent opioid therapy, and not waiting until steady state for dose adjustment)	Concentrations of fentanyl increase gradually after application, levelling of after 24-72 hours. It is expected that short-acting PRN opioids may be required during this period, and these supplemental amounts may be used to guide the initial dose increase after the 3rd day of therapy if needed. Based on the product monograph's conservative morphine conversion scale, up to 50% of patients are likely to require a dose increase from the initial application[1]. Initial (first) dose increase: may be considered after **3 days** Subsequent dose increase: it takes up to another **6 days** to reach equilibrium; wait through two applications before further dosage increase

Applying patch to the wrong patient	**Two person-specific identifiers**[6] should be used to verify patient before administration.
Patch does not stay on for entire treatment period	Not all adhesive products stick to all patients. If the patch does not stick well, or loosens after application, the edges can be taped down with first aid tape. If problems with the patch not sticking persist, the patch may be covered with a transparent film dressing (e.g.Tegaderm™)[1]. There may still be an unknown risk of altered drug absorption due to possible temperature change under the dressing or interaction between the dressing adhesive and the patch material. Never cover a patch with an opaque bandage or tape, with the risk being the patch may not be seen to be removed (since it's hidden under a bandage).
Applying multiple patches to the same client/not removing previous patch	Ensure each medication patch and strength have **three** separate and discrete fields on the Medication Administration Record (MAR); application time, removal time and physicial location of patch on the body. Ensure that the medication storage area (e.g. pouch porter or blister pack) clearly indicates the patient has a medication patch in addition to oral meds If patches are difficult to see on the patient (e.g. patch is clear or beige) or have no markings, a small auxiliary sticker may be applied to the patch to convey important information (taking care not to obscure any existing information). Include the date and time the patch was applied if possible, and name and strength of the medication (if not marked by manufacturer). Writing directly on the patch is generally not advised by manufacturers. The practice may have unknow risks, including risk of puncture by the pen or marker or interaction of the patch material with the ink[5]
Altered release of medications from patch due to heat	Exposure of the application site to external heat sources (heating pads, prolonged hot bathes etc) should be avoided. Medication patches should not be applied after hot baths or showers. Opioid concentrations could theoretically increase in patients in acute illness with high fever. Monitor for opioid side effects and adjust dose if necessary.

DIVERSION RISK

Fentanyl and buprenorphine patches are designed to retain a substantial amount of the original drug content in the patch after the three or seven day application period (studies show that the actual amounts remaining in patches range from 10-95%)[7]. This is in part due to the drug-release mechanism of the patch; excess medication is needed to ensure steady, regular rate of release during the administration period. In addition to the aforementioned safety risk, there is potential for theft and abuse of "used" patches.

At a facility level, policies and procedures (which may including double-signing) should be in place to safely and securely receive, store, administer, and disposal of opioid patches.

DISPOSAL

Of priority in the disposal of opioid patches is removing the possiblity that patches may be recovered from the disposal site. Diversion and/or accidental exposure to others, including staff, other residents, children, and pets are risks of improper disposal.

a) Medication patches should not be disposed of in household/common garbage.
b) Nursing staff are instructed to dispose of medication patches immediately after removal by folding the patch on itself in half (so the adhesive sides stick together) and dispose in a securable container (such as a designated **biohazard** container). The container should prevent against anyone intentionally or accidentally removing the used patches.
c) Policy and procedures should include removal of the secured container of disposed patches from the facility back to pharmacy.

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