



TITLE: Fentanyl Transdermal Patches in Palliative Care: Clinical Effectiveness, Safety, and Guidelines

DATE: 29 May 2014

RESEARCH QUESTIONS

1. What is the clinical effectiveness and safety of fentanyl transdermal patches for pain relief in palliative care patients?
2. What are the evidence-based guidelines for the use of fentanyl transdermal patches for pain relief in palliative care patients?

KEY MESSAGE

Two evidence-based guidelines regarding the use of fentanyl transdermal patches for pain relief in palliative care patients were identified.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2014, Issue 5), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No methodological filters were applied to limit retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2009 and May 14, 2014. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Two evidence-based guidelines regarding the use of fentanyl transdermal patches for pain relief in palliative care patients were identified. No relevant health technology assessment reports, systematic reviews, and meta-analyses, randomized controlled trials, or non-randomized studies were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Two evidence-based guidelines^{1,2} regarding the use of fentanyl transdermal patches for pain relief in palliative care patients were identified. Additional relevant guidelines with uncertain methodology are provided in the appendix.

The guidelines suggest that transdermal fentanyl patches may be suitable for palliative patients who meet the following criteria:

- have severe and stable pain^{1,2}
- are not opioid naïve²
- either prefer to use a patch² or would not be good candidates to receive oral opioid treatment.^{1,2}

Palliative care specialist advice should be sought if necessary,¹ such as in the case of patients with intractable pain or decreased kidney function.² The guideline from the National Institute for Health and Clinical Excellence (NICE)¹ also advised attention to dose equivalency comparisons between transdermal fentanyl and oral morphine.

REFERENCES SUMMARIZED

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Guidelines and Recommendations

1. NICE. Opioids in palliative care: safe and effective prescribing of strong opioids for pain in palliative care of adults. NICE Guideline 140. Manchester: National Institute for Health and Clinical Excellence; 2012. Available from:
<http://www.nice.org.uk/nicemedia/live/13745/59285/59285.pdf>
See: First line treatment if oral opioids are not suitable – transdermal patches, page 9
2. Cancer Care Ontario's Symptom Management Guides-to-Practice: Pain. Toronto: Cancer Care Ontario; 2010. Available from:
https://www.cancercare.on.ca/CCO_DrugFormulary/Pages/FileContent.aspx?fileId=97481
*See: Patients with Renal Impairment, page 16
Transdermal Fentanyl, page 19*

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-analyses

Reference from Journal of Palliative Care

3. Tassinari D, Sartori S, Tamburini E, Scarpi E, Tombesi P, Santelmo C, et al. Transdermal fentanyl as a front-line approach to moderate-severe pain: a meta-analysis of randomized clinical trials. *Journal of Palliative Care*. [Internet] 2009 [cited date: 2014 May 14];25(3):172-180. Structured abstract available from: <http://onlinelibrary.wiley.com/o/cochrane/cldare/articles/DARE-12010000444/frame.html>

Unclear Health Care Setting – Cancer Pain

4. Hadley G, Derry S, Moore RA, Wiffen PJ. Transdermal fentanyl for cancer pain. *Cochrane Database Syst Rev*. 2013;10:CD010270.

Comparison of Routes of Administration – Cancer Pain

5. Radbruch L, Trottenberg P, Elsner F, Kaasa S, Caraceni A. Systematic review of the role of alternative application routes for opioid treatment for moderate to severe cancer pain: an EPCRC opioid guidelines project. *Palliat Med*. 2011 Jul;25(5):578-96.

Non-Randomized Studies

No Comparator

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References from the American Journal of Hospice and Palliative Care

7. Takakuwa O, Oguri T, Maeno K, Yokoyama M, Hijikata H, Uemura T, et al. Analgesic effect of switching from oral opioids to a once-a-day fentanyl citrate transdermal patch in patients with lung cancer. *Am J Hosp Palliat Care*. 2013 Nov;30(7):726-9.
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Unclear Health Care Setting –Cancer Pain and No Comparator

9. Zhu YL, Song GH, Liu DQ, Zhang X, Liu KF, Zang AH, et al. Multicenter clinical study for evaluation of efficacy and safety of transdermal fentanyl matrix patch in treatment of moderate to severe cancer pain in 474 chinese cancer patients. *Chin J Cancer Res*. [Internet] 2011 Dec [cited date: 2014 May 14];23(4):317-22. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3551305>

10. Hoya Y, Okamoto T, Yanaga K. Evaluation of analgesic effect and safety of fentanyl transdermal patch for cancer pain as the first line. *Support Care Cancer*. 2010 Jun;18(6):761-4.
11. Mercadante S, Porzio G, Ferrera P, Aielli F, Adile C, Ficarella C. Low doses of transdermal fentanyl in opioid-naive patients with cancer pain. *Curr Med Res Opin*. 2010 Dec;26(12):2765-8.

Guidelines and Recommendations

Not Exclusive to Palliative Care

12. Cancer pain management (general). In: Bader P, Echtele D, Fonteyne V, Livadas K, De Meerleer G, Paez Borda A, et al. *Guidelines on pain management*. Arnhem, The Netherlands: European Association of Urology (EAU); 2010 Apr. p. 13-42. [Internet]. [cited date: 2014 May 14]. Available from: <http://www.uroweb.org/gls/pdf/Pain%20Management%202010.pdf>
See: *Transdermal routes, page 29*

Unclear Methodology

13. Clinical Guidelines Manual: Fentanyl Transdermal Patch in the palliative context. [Internet]. Hastings (NZ): Hawke's Bay District Health Board, Cranford Hospice; 2013. [cited date: 2014 May 14]. Available from: http://www.cranfordhospice.org.nz/docs/cranford/current%20programmes/fentanyl_transdermal_patch_in_the_palliative_context_ivtg911_dec13.pdf
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15. ABHB Prescribing Guideline: Use of Transdermal Fentanyl Patches. [Internet]. Cardiff: NHS Wales; 2011. [cited date: 2014 May 14]. Available from: <http://www.wales.nhs.uk/sites3/documents/814/ABHBprescribingGuidance-FENTANYLpatchesMay2011Update.pdf>
See: *Advice for End of Life Care, page 2*
16. General Palliative Care Guidelines for the Management of Pain at the end of life in adult patients. [Internet]. Belfast: Guidelines & Audit Implementation Network; 2011. [cited date: 2014 May 14]. Available from: <http://www.gain-ni.org/images/Uploads/Guidelines/Gain%20pain%20final.pdf>
See: *Transdermal Fentanyl, pages 32-36*
17. Guidelines & Protocols Advisory Committee. Palliative Care for the Patient with Incurable Cancer or Advanced Disease Part 2: Pain and Symptom Management. Pain Management. [Internet]. Victoria (BC): Ministry of Health; 2011. [cited date: 2014 May 14]. Available from: http://www.bcguidelines.ca/pdf/palliative2_pain.pdf

18. Hospice Palliative Care Program Symptom Guidelines: Principles of Opioid Management. [Internet]. Surrey: Fraser Health; 2009. [cited date: 2014 May 14]. Available from: <http://www.fraserhealth.ca/media/16FHSymptomGuidelinesOpioid.pdf>
See: *Fentanyl Information, page 8*
Appendix A Fentanyl Transdermal, pages 21-26

Unclear Methodology – Not Exclusive to Palliative Care

19. VHA Pharmacy Benefits Management Service and the Medical Advisory Panel. Criteria for Use Fentanyl Transdermal Systems. [Internet]. Washington: U.S. Department of Veteran's Affairs; 2009. [cited date: 2014 May 14]. Available from: <http://www.pbm.va.gov/clinicalguidance/criteriaforuse/FentanylTransdermalPatchCriteriaforUse.doc>

Review Articles

20. Analgesia for terminally ill adult patients. Preserve quality of life. *Prescrire Int.* [Internet]. 2011 Nov;20(121):268-73. [cited date: 2014 May 14]. Available for purchase from: <http://english.prescrire.org/en/SummaryDetail.aspx?IssueId=121>

Unclear Health Care Setting – Cancer Pain

21. Cachia E, Ahmedzai SH. Transdermal opioids for cancer pain. *Curr Opin Support Palliat Care.* [Internet]. 2011 Mar;5(1):15-9. [cited date: 2014 May 14]. Available for purchase from: http://journals.lww.com/co-supportiveandpalliativecare/Abstract/2011/03000/Transdermal_opioids_for_cancer_pain.4.aspx
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Safety

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Additional References

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