



**Indian Health Service
National Pharmacy and Therapeutics Committee
Antidepressants for Management of
Neuropathic Pain
NPTC Formulary Brief
May 2014**



Background:

In May 2014, the Indian Health Service National Pharmacy and Therapeutics Committee (NPTC) reviewed the role of anti-depressants as part of a comprehensive integrated pain management strategy for the I.H.S. service population.

Discussion:

Peer reviewed publications comprising the work product of a variety of well-respected national and international review and guidelines committees were thoroughly reviewed. These included recommendations from the Cochrane Review Committee, British National Institute for Clinical Excellence, American Academy of Neurology, Canadian Pain Society, European Federation of Neurologic Societies, and International Association for the Study of Pain.

The review focused on the two anti-depressant drug classes, Tricyclic Anti-Depressants (TCAs) and Serotonin Norepinephrine Reuptake Inhibitors (SNRIs), for which reasonable clinical evidence exists regarding efficacy in the management of pain. Generally, both TCAs and SNRIs are advocated by experts as first line agents of equal efficacy in the management of neuropathic pain, particularly painful diabetic peripheral neuropathy and post-herpetic neuralgia.

Findings:

Systematic reviews of anti-depressants for neuropathic pain management revealed substantive deficits in the quality of supportive clinical data which was largely limited by poor study design subject to the influence of bias. Examples included high dropout rates, lack of intention to treat analysis, and inadequate study power.

The NPTC identified several important issues regarding the use of anti-depressant pharmacotherapy for neuropathic pain management.

- First, substantial opportunity for cost-avoidance was identified regarding use of tricyclic agents relative to more expensive and arguably less efficacious SNRIs such as Duloxetine.
- Second, some evidence supports selection of a secondary amine TCA (i.e. Imipramine or Nortriptyline) over a tertiary amine TCA (i.e. Amitriptyline) due to a better side effect profile.
- Thirdly, clinicians must be aware of the potential for harm when prescribing anti-depressants for pain management, particularly for elders or those prone to the anti-cholinergic, sedative, or arrhythmogenic side effects of these drugs.
- Finally, while TCAs and SNRIs remain an important part of the pharmacologic armamentarium for management of neuropathic pain, it must be understood that high-quality clinical evidence supporting their use is limited by bias.
- Based on clinical evidence and agency utilization data, the NPTC modified the National Core Formulary (NCF) to include one medication from each of the above classes; amitriptyline (tertiary amine), nortriptyline (secondary amine) and venlafaxine (serotonin norepinephrine reuptake inhibitor).

If you have any questions regarding this document, please contact the NPTC at IHSNPTC1@ihs.gov. For more information about the NPTC, please visit the [NPTC website](#).

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