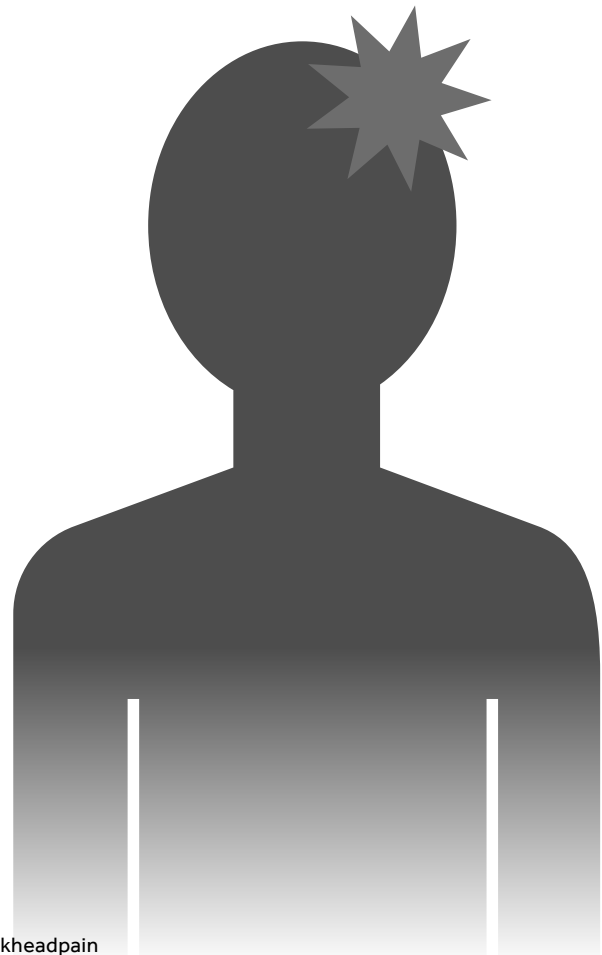
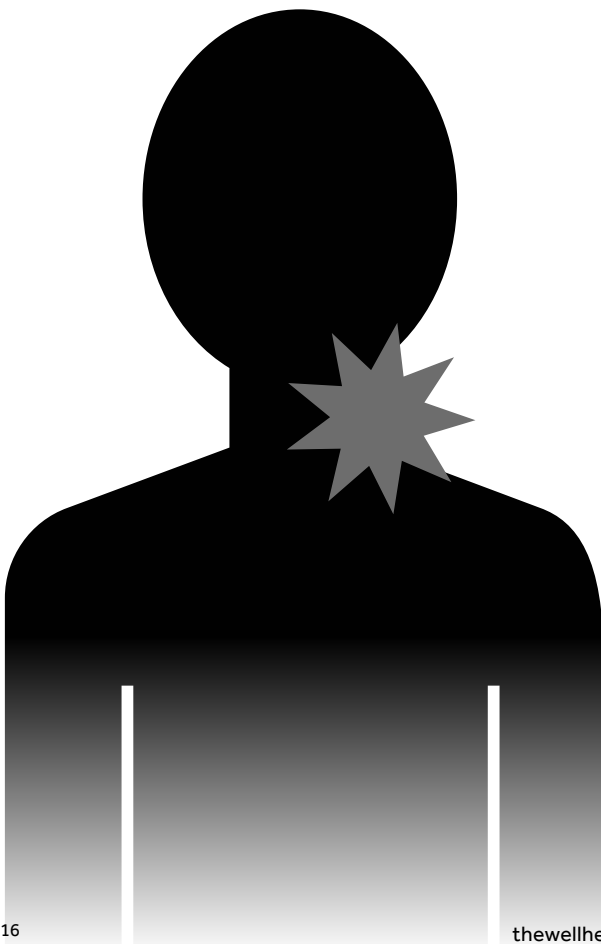


CORE NECK TOOL

This tool guides primary care providers to recognize mechanical neck pain and manage it effectively with medication and activity while identifying appropriate triggers for investigations and referrals. Mechanical neck pain can present with neck, shoulder and/or arm pain. If your patient has an accompanying headache, it is recommended that you treat the headache symptoms first using the Headache Navigator ([page 8](#)).

HEADACHE NAVIGATOR

The Headache Navigator ([page 8](#)) assists primary care providers in managing primary headache disorders. It is based on the guideline and quick reference algorithm for the Primary Care Management of Headache in Adults produced by Towards Optimized Practice (TOP).





The Key Education Points have been included in this tool to assist primary care providers in the application of the tool in their practice and/or teaching.

History Section A

- When you are determining the patient's dominant area of pain, consider where they describe their most intense and bothersome symptoms.
 - a. Neck dominant: Most intense pain is sub-occipital, trapezius, parascapular, shoulder paraspinal but may include intermittent arm pain.
 - b. Arm dominant: Most intense pain is in the shoulder, deltoid, upper arm, forearm, hand and often includes the neck area.
- Yellow flags ([page 4](#)) are psychological risk factors that indicate that patients have an increased risk of developing chronicity.
- Key questions can be asked at any visit in order to initiate appropriate management.
- Ask screening questions for headache, trauma, concussion and system inflammatory disease. If further assessment is required, exit the tool and pursue detailed assessment.
- Anterior chest pain can occur in the presence of neck pain and may be related to cardiac etiology. Therefore, a screening question for cardiac disease has been inserted in the tool.
- Cervical myelopathy is an important surgical condition that should not be missed and therefore, it is important to specifically assess gait disturbance, incoordination and loss of neuromotor function.
- The modified Japanese Orthopedic Association (mJOA) score is a valuable tool for surgeons to better adjudicate the urgency of the referral.
- **Do not** make the diagnosis of bilateral carpal tunnel syndrome, until cervical cord pathology has been excluded.

Physical Examination Section B

- The purpose of the neck physical exam is to identify any neurological abnormalities, or radicular signs that may require investigations and referrals.
- It is important to document the range of motion with accompanying pain in the neck as a baseline for determining future treatment response. The shoulder range of motion should be assessed and if abnormal, a full shoulder exam is recommended to determine potential shoulder pathology.
- Radicular pain is determined by the reproduction of arm dominant pain on the Spurling's cervical compression test and the alleviation of arm dominant pain with the cervical distraction test. In addition, there may be neurological deficits on testing reflexes, myotomes and dermatomes.
- In order to not miss early detection of infection and/or tumor (Red Flags, [page 4](#)) examine the cervical chain lymph nodes. Follow-up if there is any clinical suspicion of wider spread disease.
- If cervical myelopathy is suspected, tandem gait and Hoffman's reflex should be assessed for more complete neurological evaluation.
- The physical examination is organized according to the patient's position, however the examination can be approached in any logical manner.

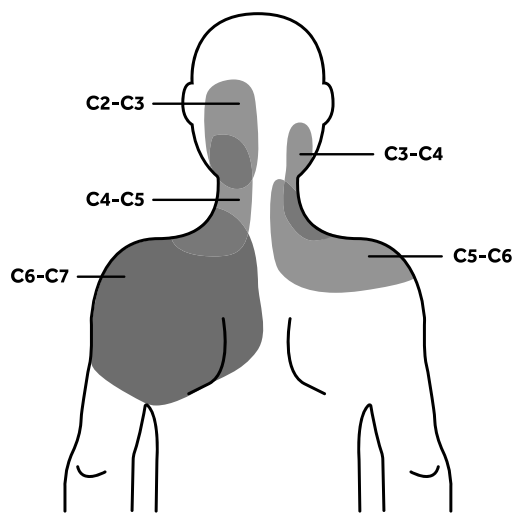
Management Matrix Section C

- Patient education and key messages are important components to patient management and can be woven into the assessment when opportunities are identified.
- The matrix is divided into neck and arm dominant pain since management differs with the pain dominance pattern. It is then divided into pharmacological and non-pharmacological interventions with the intention that all patients will benefit from receiving both approaches for best outcomes.
- An evidence based approach is integrated in the tool by clearly labelling "Recommended" and "Not Recommended" treatment interventions so that key messages and patient discussions can be easily undertaken.

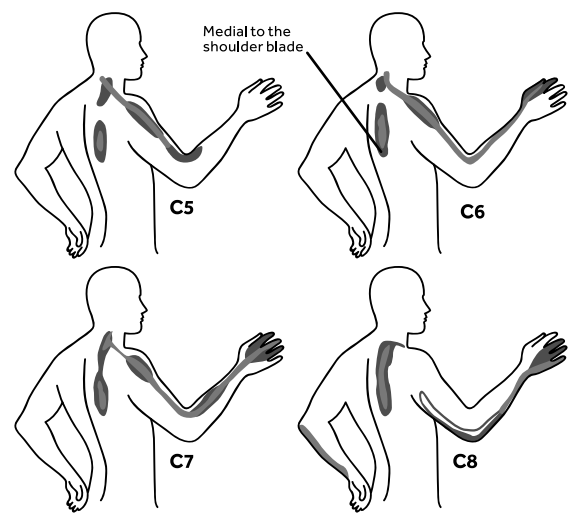
Referrals Section D

- When making a referral to a rehabilitation therapist for spine care (i.e. physiotherapist, chiropractor) , it is important to ensure that your patient is appropriate and ready to maximize treatment and that the therapy is evidence based active care.
- The emergency surgical criteria for cervical myelopathy are detailed in question 5 and the mJOA criteria¹, however, surgical consultation criteria for elective intervention have been listed in this section for appropriate referral.
- Pain management consultation is required when the patient’s pain is unstable, persistent and chronic. Pain management can be delivered by a pain specialist, a multi-disciplinary team or a hospital based intervention clinic. Appropriate identification of treatment options is outlined to ensure early referral to appropriate services.

CORE Neck Tool Reference Images



Neck Dominant Pain Patterns



Arm Dominant Pain Patterns

Shoulder pain may be referred from neck pathology or be due to concurrent shoulder pathology. It is important to exam both the neck and shoulder to determine the cause of pain.

Patient Key Messages

- Key messages for patients are embedded throughout the CORE Neck Tool as indicated by the symbol . The patient key messages are meant to guide providers in discussions with patients but should not be read verbatim.

Legend



Indicates a link to a website



- NIFTI is a mnemonic for common Red Flags ([page 4](#))
- Red Flags ([page 4](#)) indicate the potential presence of an underlying serious pathology
- Cervical myelopathy symptoms require urgent surgical evaluation



- Yellow Flags ([page 4](#)) indicate potential psychological risk factors for developing chronic pain
- If significant, cognitive behavioural therapy (CBT) or 1:1 psychoeducational counselling may be necessary for pain management



- Key patient messages

History

Section A

Patient Name: _____ Chart Number: _____

Date of Birth: _____ Visit Date: _____

This is a focused examination for clinical decision-making in primary care. This tool guides primary care providers to recognize common mechanical neck pain and screen for other conditions where management may include investigations, exercise referrals and specific medications. If your patient has an **accompanying headache**, it is recommended that you treat the headache symptoms first using the **Headache Navigator** (page 8).

1. Are you experiencing a headache related to your reason for today's visit?

- NO** Please proceed to Question 2
- YES** Please go to Headache Navigator (page 8)

2. Where is your pain the worst?²



- Neck**
Most intense over trapezius, sub-occipital, paraspinal, parascapular



- Arm**
Most intense distal of deltoid into upper arm, forearm, hand



- Shoulder**
Most intense over deltoid and anterior shoulder

3. Is your pain constant or intermittent?²

Dominant Location	Intermittent	Constant
Neck	Likely mechanical and should respond to exercise based therapy.	Rule out Red Flags
Arm	Referred pain from neck or shoulder, not nerve root compression or radiculopathy.	Rule out Red Flags Assess neurological status for radiculopathy
Shoulder	Requires a shoulder examination to determine diagnosis and management of potential concurrent shoulder pathology.	Rule out Red Flags for cervical pathology and/or non-musk pathology. Do full shoulder assessment if no neck pathology identified. Consider Non-MSK pathology.

Assessment of intermittent pain requires an alert, aware and not-medicated patient to confirm a complete absence of pain for a period of time (no matter how brief). It is critical to rule out Red Flags (page 4) for patients with constant pain. If it is challenging for patients to determine whether pain is constant or intermittent, rule out Red Flags (page 4).

4. Have you experienced unexplained chest pain, dizziness or shortness of breath during this episode of neck pain?




- No
- Yes → Consider cardiac etiology (including history, physical and appropriate investigation)

5. Have you noticed any of the following symptoms since the onset of your neck pain:

- Do you feel that your walking (gait) has changed and that you are experiencing clumsiness or imbalance?
- Do you have difficulty with fine motor tasks such as doing up a clasp or small buttons?
- Are you experiencing new onset tingling or numbness in your arms or hands?


If **YES** to any of the above:

- Surgical evaluation is recommended to rule out degenerative cervical myelopathy and determine treatment and monitoring regime.
- Modified Japanese Orthopedic Association (mJOA) Score for Cervical Myelopathy¹

6. Did your neck pain begin with a trauma, accident or fall?
- No
 - Yes → Consider C-Spine Imaging Rules³
-  Check for concussion related symptoms⁴
7. If you are ≤ 60 years old, are you experiencing prolonged morning stiffness in your neck for longer than 30 minutes?
- No
 - Yes →  Consider Systemic Inflammatory Arthritis Screen⁵
8. Is there anything you cannot do now that you could do before the onset of your pain?
- No
 - Yes →  Rule out Yellow Flags (page 4)

What has changed?

Why?


 **RED FLAGS**^{9,10,11,12}


Below are a list of serious pathologies to consider and rule out in assessing neck pain.

	Indication	Investigation
NEUROLOGICAL	Cervical cord compression, demyelinating process. Progressive neurological deficits	MRI
INFECTION	Fever, meningism, history of immuno-suppression or intravenous drug use	X-ray and MRI
FRACTURE	Osteoporotic fracture, traumatic fall with risk of fracture	X-ray, may require CT
TUMOUR	Hx of cancer, unexplained weight loss, significant night pain, severe fatigue	X-ray and MRI
INFLAMMATORY	Rheumatoid arthritis, Polymyglia rheumatica, Giant cell arteritis	Rheumatology Consult

If **NO** Red Flags, continue with CORE Neck Tool

Cardiovascular pathology (carotid arterial dissection, concurrent chest pain, myocardial ischemia) can present with neck and shoulder pain.

 **Imaging tests** like x-rays, CT scans and MRIs are not helpful for recovery or management of acute or recurring neck pain unless there are signs of serious pathology.⁹

 **YELLOW FLAGS**⁶


Psychological Risk Factors for Developing Chronicity

For patients with neck pain consider using the following questions (or the assessment tools listed below) to help explore your patients' risk of developing chronicity.

Questions To Ask	Listen/Look For
Do you think your pain will improve or become worse?	Belief that neck pain and activity are harmful or potentially severely disabling (e.g. catastrophizing).
Do you think you would benefit from activity, movement or exercise?	Fear and avoidance of activity or movement.
How are you emotionally coping with your neck pain?	Tendency to low or negative mood and withdrawal from social interaction.
What treatments or activities do you think will help you recover?	Unrealistic expectations of treatment. Expectation of passive treatment(s) rather than a belief that active participation will help.

If **NO** Yellow Flags, continue with CORE Neck Tool

A patient with positive Yellow Flag(s) may benefit from education, support and targeted therapies to reduce risk of chronicity and could be screened for psychological conditions (e.g. anxiety, depression). Consider the following resources to support assessment and management of risk factors for chronicity; The Patient Health Questionnaire for Depression and Anxiety (PHQ-4)⁷; Pain Self Efficacy Questionnaire (PSEQ).⁸


 If you are feeling symptoms of sadness or anxiety, they could be related to your condition and could impact your recovery. Schedule a follow-up appointment.

Physical Examination^{13,14}

Section B

This is an examination which supports or refutes the differential diagnosis while assessing the severity of symptoms for prognosis and treatment planning. This examination should take 5 minutes of the clinical assessment. **The examination has been developed for primary care providers.**

Patient Position		Abnormal	Normal	Comments
Standing	Observation			
Sitting	Palpation			
	Movement			
	Neurological			
Radiculopathy				
Supine				

 Your examination today does not demonstrate that there are any Red Flags ([page 4](#)) present to indicate serious pathology, but if your symptoms persist for >6 weeks, schedule a follow-up appointment.

Management Matrix

Section C

		Non Pharmacological Options ^{10,16}		Pharmacological Options ^{9,10,16,18}	
		ACUTE (<3 months)	CHRONIC (>3months)	ACUTE (<3 months)	CHRONIC (>3months)
Neck Dominant Pain	Recommended	<p>Patient education and exercise should be included as part of active management and may be delivered solely within primary care office visit.</p> <ul style="list-style-type: none"> Reassurance of good prognosis and full recovery Early return to non-painful activities of daily living and work Independent stretch, strengthen and aerobic exercise Refer to active therapy if education and exercise does not alleviate symptoms. <p><i>Treatment may include:</i></p> <ul style="list-style-type: none"> Short-term cervical mobilization/ manipulation Cervical stretching and strengthening exercise Endurance and balance exercise Short term mechanical cervical traction as adjunct treatment for pain relief <p>Recommended number of treatment sessions = 1-6</p>	<p>Recommended</p> <p>Multimodal therapy and/or goal directed therapy including:</p> <ul style="list-style-type: none"> Patient education and counselling with reassurance for good recovery and encouragement for increased activity levels <p><i>Active Rehabilitation therapy may include:</i></p> <ul style="list-style-type: none"> Short term cervical mobilization/ manipulation Cervical stretching, strengthening and aerobic exercise Therapeutic clinical massage Low level laser therapy <p>Recommended number of treatment sessions = 6-12 sessions</p>	<p>Recommended</p> <p>Start with:</p> <ul style="list-style-type: none"> Acetaminophen NSAIDs <p><i>Add or replace with</i></p> <ul style="list-style-type: none"> Muscle relaxants (e.g. cyclobenzaprine) for a short duration (few weeks) 	<p>Recommended</p> <p>Start with:</p> <ul style="list-style-type: none"> Acetaminophen NSAIDs <p><i>Add or replace with</i></p> <ul style="list-style-type: none"> Antidepressants <ul style="list-style-type: none"> TCA (amitriptyline, nortriptyline) SNRI (duloxetine, venlafaxine) Antiepileptics <ul style="list-style-type: none"> Topiramate Pregablin Gabapentin
	Not Recommended	<p>There is inconclusive evidence for the following:</p> <ul style="list-style-type: none"> Rest and immobilization Cervical collars Neck pillows Electrical modalities Relaxation massage 	<p>Not Recommended</p> <p>There is inconclusive evidence for the following:</p> <ul style="list-style-type: none"> Rest and immobilization Strengthening exercises in isolation from other treatment Relaxation therapy or relaxation massage Electro-acupuncture Cervical collar/neck Pillow Mechanical or Manual Traction 	<p>Not Recommended</p> <p>Routine use of opioids:</p> <ul style="list-style-type: none"> Consider judicious use in select patients if other options fail. Glucocorticoids for mechanical neck pain. <p>Inconclusive:</p> <ul style="list-style-type: none"> Topical NSAIDs 	<p>Not Recommended</p> <p>Routine use of opioids:</p> <ul style="list-style-type: none"> Consider judicious use in select patients if other options fail (please refer to the Canadian Guideline for the safe and effective use of opioids for chronic non cancer pain)¹⁹ SSRIs Glucocorticoids for mechanical pain Muscle relaxants <p>Inconclusive:</p> <ul style="list-style-type: none"> Topical NSAIDs
Arm Dominant Pain	Recommended	<p>In addition to the above treatment regimes for neck dominant pain, patients with arm dominant pain may find additional relief with the following:</p> <ul style="list-style-type: none"> Relieving positions (arm abduction and supported elevation) Frequent rest positions Manual and Mechanical traction Enhance Pharmacological pain management including use of opioids in conjunction with non-pharmacological treatment. 	<p>Recommended</p> <p>In addition to the above treatment regimes for neck dominant pain, patients with arm dominant pain may find additional relief with the following:</p> <ul style="list-style-type: none"> Trial of Acupuncture Relieving positions (arm abduction and supported elevation) Frequent rest positions Manual and Mechanical traction Enhance Pharmacological pain management including use of opioids in conjunction with non-pharmacological treatment. 	<p>Recommended</p> <p>Start with:</p> <ul style="list-style-type: none"> Acetaminophen NSAIDs Opioids for select patients¹⁹ Muscle relaxants (e.g. cyclobenzaprine) – short duration 2 weeks <p><i>Add or replace with:</i></p> <p>Antidepressants</p> <ul style="list-style-type: none"> TCA SNRI <p>Antiepileptics</p> <ul style="list-style-type: none"> Carbamazepine Gabapentin Pregablin <p>For severe radiculopathy consider methylprednisolone or dexamethasone for 5-7 days.</p> <ul style="list-style-type: none"> Caution in patients with concurrent infections or in type 1 diabetics with a large swing in blood sugars. 	<p>Recommended</p> <p>Start with:</p> <ul style="list-style-type: none"> Acetaminophen NSAIDs Opioids for select patients¹⁹ <p><i>Add or replace with :</i></p> <p>Antidepressants</p> <ul style="list-style-type: none"> TCA SNRI <p>Antiepileptics</p> <ul style="list-style-type: none"> Carbamazepine Gabapentin Pregablin
	Not Recommended	<p>There has been no proven effectiveness of the following:</p> <ul style="list-style-type: none"> Cervical collars Electrical modalities Relaxation massage 	<p>Not Recommended</p> <p>There has been no proven effectiveness of the following:</p> <ul style="list-style-type: none"> Cervical Collars Electrical Modalities Relaxation Massage 		

Referrals

Section D

Rehabilitation Referral provided to Patient	
<p>Patient readiness criteria for spine therapy:</p> <ul style="list-style-type: none"> Absence of Red Flags (page 4) Pain is managed well and patient can tolerate treatment regime¹⁶ Pain has mechanical directional preference indicated by movement, position or activity Patient is ready to be an active partner in goal setting and self-management 	<p>Rehabilitation therapist skills for evidence-based treatment include:</p> <ul style="list-style-type: none"> Ability to prescribe and progress exercise²⁰ Ability to modify, assess and treat limitations pertaining to work, home or fitness pursuits Ability to provide manipulative and soft tissue therapy including massage, mobilizations, myofascial release techniques, contract-relax muscle work^{16,20} Ability to provide education and facilitate patient self-management²⁰

Recommendations in the above table have been developed in part from a consensus of expert opinion.

Surgical Referral ¹⁷
<ul style="list-style-type: none"> Failure to respond to evidence based compliant conservative care of at least 12 weeks Intolerable constant arm dominant pain Worsening nerve irritation tests (Spurling's compression test) Expanding motor, sensory or reflex deficits Suspected cervical myelopathy

Pain Management Referrals ^{9,10,18}
<p>Consider a referral to the pain management options listed in the table below, if the following criteria are met:</p> <ul style="list-style-type: none"> The recommended non-pharmacological and pharmacological options have been trialed with reasonable compliance for a minimum of 4 weeks. And one or more of the following: <ul style="list-style-type: none"> The patient has high constant pain levels interfering with their function despite treatment The patient requires escalating/high doses of opioids

Pain Management Referral Options

	Pain Specialist	Multidisciplinary pain clinic focused on improved functional outcomes through CBT, occupational & activity based approaches	Hospital based interventional pain clinic with a specialist skilled in cervical epidurals
Acute Neck Dominant Pain	✔	-	-
Chronic Neck Dominant Pain	✔	✔	-
Acute & Chronic Arm Dominant Pain	✔	-	✔





Imaging

Refer to red flags ([page 4](#))

Laboratory Tests

Refer to red flags ([page 4](#))

PATIENT MANAGEMENT & REFERRAL KEY MESSAGES

-  You may need pain medication to help you return to your daily activities and initiate exercise more comfortably. It is activity; however, and not the medication that will help you recover more quickly.²⁰
-  Short acting opioid medication may be used for intense pain such as neck dominant constant symptoms related to nerve compression.^{9,21}
-  Neck pain often recurs. You can learn how to manage neck pain when it happens and use this information to recover without having to see your healthcare provider each time it happens.
-  Movement and activity can help reduce pain and recover function.²⁰

Notes:



The Headache Navigator is designed to provide guidance to primary care providers in an office based setting to manage primary headache disorders (e.g. **migraine, cluster, tension type headache**).

It does **not** provide guidance for:

- Secondary headaches (e.g. **cervicogenic headaches, post-traumatic headaches, temporomandibular joint disorder**).
- Combined assessment and management of **headache and neck pain** due to the complexity of separating out the underlying pathologies. Use the Headache Navigator to start in assessing and managing the headache elements while also seeking early consultation with a headache specialist.

Neuro-Imaging^{1,2,3,4}

- **Do not** refer patients for routine neuro-imaging (CT and MRI) for the assessment of primary headaches.
- **Do not** refer patients for neuro-imaging solely to reassure patients.
- **Do** reassure and educate patients about neuro-imaging. Consider using patient education tools if necessary.
 - Use patient education resources (general headache information)
- Refer to the imaging recommendations in the tool for a quick summary. For more detailed guidance refer to the full Guideline for the Primary Management of Headache in Adults.

Headache Management Highlights^{2,3}

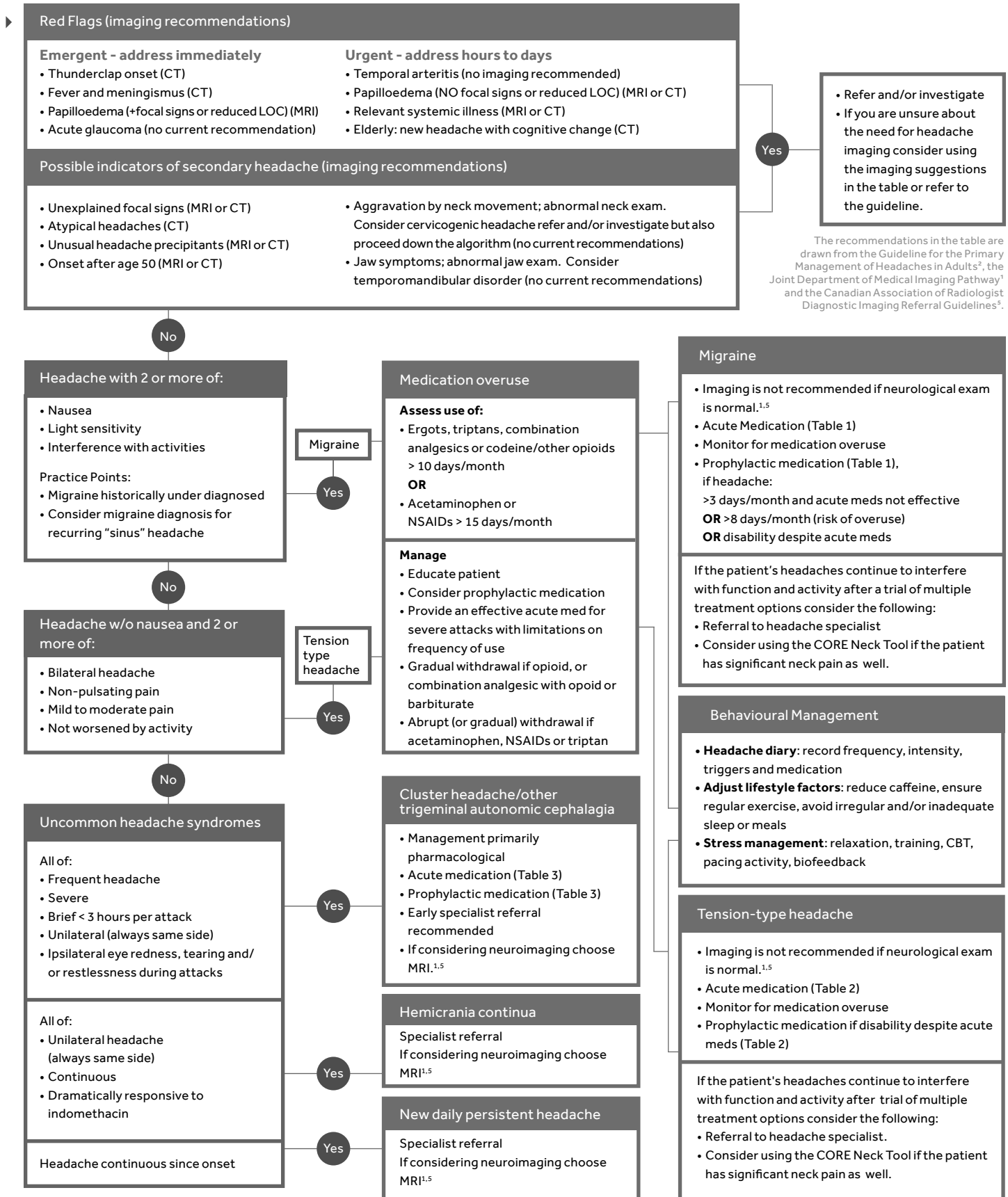
- Screen for Red Flags ([page 4](#)) in new onset headaches or changes to headaches.
- Acute management of cluster headaches should include the use of intranasal and subcutaneous triptans rather than NSAIDs and acetaminophen.
- Migraine prophylaxis can include topiramate, amitriptyline, propranolol, acupuncture and/or riboflavin.
- **Do not** recommend first line or routine use of opioid based medications for the management of acute migraine, tension type and cluster headaches.
 - Use patient education resources to reassure patients (treating frequent headaches with pain relievers).
- Consider medication overuse headache in patients who have chronic daily headaches (≥ 15 days a month for 3 months) that may be related to chronic migraine or chronic tension type headaches. See TOP guidelines for detailed guidance.
 - Headache diaries can help to monitor, prevent and diagnose (see supporting materials)
 - Use patient education resources to help reassure patients (medication overuse headache)

Provider Clinical Pearls^{2,3,4}

- Migraine is the most common headache type and should be considered in patients with recurrent moderate or severe headaches and a normal neurological examination.
- Rule out secondary headache when making a diagnosis of a primary headache disorder.
- Neuroimaging, sinus x-rays, cervical spine x-rays, and EEG are not recommended for the routine assessment of the patient with headache. History and physical / neurological examination is usually sufficient to make a diagnosis of migraine or tension-type headache.
- Comprehensive migraine therapy includes management of lifestyle factors and triggers, acute and prophylactic medications, and migraine self-management strategies.
- ASA, acetaminophen, NSAIDs, and triptans are the primary medications for acute migraine treatment.
- **Do not:**
 - prescribe opioid analgesics or combination analgesics containing opioids or barbiturates as first line therapy for the treatment of migraine.
 - prescribe acute medications or recommend an over-the-counter analgesic for patients with frequent migraine attacks without monitoring frequency of acute medication use with headache diary.
 - offer opioids for the acute treatment of tension-type headache.
 - offer paracetamol, NSAIDs, opioids, ergots or oral triptans for the acute treatment of cluster headache.
- Medication overuse is considered present when patients with migraine or tension-type headache use combination analgesics, opioids, or triptans on 10 or more days per month or acetaminophen or NSAIDs on 15 or more days a month.

Guideline for Primary Care Management of Headache in Adults

Quick Reference



The recommendations in the table are drawn from the Guideline for the Primary Management of Headaches in Adults², the Joint Department of Medical Imaging Pathway¹ and the Canadian Association of Radiologist Diagnostic Imaging Referral Guidelines⁵.

Adapted with permission from: Towards Optimized Practice. Guideline for primary care management of headache in adults. Edmonton, AB: Towards Optimized Practice. 2012 July. Available from: www.topalbertadoctors.org

Medications Recommended for Headache Management in Adults

Quick Reference

Table 1 Migraine

Acute Migraine Medication					
1 st line	ibuprofen 400 mg, ASA 1 000 mg, naproxen sodium 500-550 mg, acetaminophen 1 000 mg				
2 nd line	Triptans: oral sumatriptan 100 mg, rizatriptan 10 mg, almotriptan 12.5 mg, naratriptan 2.5 mg • Subcutaneous sumatriptan 6 mg if vomiting early in the attack. Consider for attacks resistant to oral triptans. • Oral wafer: rizatriptan 10 mg, zolmitriptan 2.5 mg, if fluid ingestion worsens nausea • Nasal spray: zolmitriptan 5 mg, sumatriptan 20 mg, if nausea Antiemetics: domperidone 10 mg, metoclopramide 10 mg, for nausea				
3 rd line	500 - 550 mg naproxen sodium in combination with triptan				
4 th line	Fixed-dose combination analgesics (with codeine if necessary - not recommended for routine use)				
Prophylactic Migraine Medication		Starting Dose	*Titration: Daily Dose Increase	Target Dose/ Therapeutic Range	Notes
1 st line	propranolol	20 mg bid	40 mg/week	40-120 mg bid	Avoid in Asthma
	metoprolol	50 mg bid	50 mg/week	50-100 mg bid	
	nadolol	40 mg daily	20 mg/week	80-160 mg daily	
	amitriptyline	10 mg hs	10 mg/week	10-100 mg hs	Consider if depression, anxiety, insomnia or tension-type headache
	nortriptyline	10 mg hs	10 mg/week	10-100 mg hs	
2 nd line	topiramate	25 mg daily	25 mg/week	50 mg bid	Consider 1st line if overweight
	candesartan	8 mg daily	8 mg/week	16 mg daily	Few side effects; limited experience in prophylaxis
	gabapentin	300 mg daily	300 mg/3-7 days	1200 - 1800 mg daily, divided tid	Few drug interactions
Other	divalproex	250 mg daily	250 mg/week	750-1500 mg daily, divided bid	Avoid in pregnancy or where pregnancy is possible
	pizotifen	0.5 mg daily	0.5 mg/week	1-2 mg bid	Monitor for somnolence and weight gain
	OnabotulinumtoxinA	155-195 units	No titration needed	155-195 units every 3 mos.	For chronic migraine only: headache on > 15 days/month
	flunarizine	5-10 mg hs		10 mg hs	Avoid in depression
	venlafaxine	37.5 mg daily	37.5 mg/week	150 mg daily	Consider in migraine with depression
Over the Counter	magnesium citrate	300 mg bid	No titration needed	300 mg bid	Efficacy may be limited; few side effects
	riboflavin	400 mg daily		400 mg daily	
	butterbur	75 mg bid		75 mg bid	
	co-enzyme Q10	100 mg tid		100 mg tid	
* Titration: Dosage may be increased every two weeks to avoid side effects For most drugs, slowly increase to target dose • Therapeutic trial requires several months • Expected outcome is reduction, not elimination of attacks • If target dose not tolerated, try lower dose • If med is effective and tolerated, continue for at least 6 mos. • If several preventive drugs fail, consider specialist referral					

Refer to full guideline for migraine treatment in pregnancy.

Table 2 Tension Type Headache

Acute Medication	
<ul style="list-style-type: none"> ibuprofen 400 mg ASA 1000 mg naproxen sodium 500-550 mg acetaminophen 1000 mg 	
Prophylactic Medication	
1 st line	amitriptyline 10-100 mg daily OR nortriptyline 10-100 mg daily
2 nd line	mir tazapine 30 mg daily OR venlafaxine 150 mg daily

Abbreviations

hs - at bedtime bid - twice a day tid - three times a day

Table 3 Cluster Headache Consider early specialist referral

Acute Medication	
<ul style="list-style-type: none"> subcutaneous sumatriptan 6 mg intranasal zolmitriptan 5 mg OR • 100% oxygen at 12 litres/minute for 15 minutes through non-rebreathing mask	
Prophylactic Medication	
1 st line	verapamil 240-480 mg daily (higher doses may be required)
2 nd line	lithium 900-1200 mg daily
Other	topiramate 100-200 mg daily OR melatonin up to 10 mg daily
*Note	If more than two attacks per day, consider transitional therapy while verapamil is built up (e.g. prednisone 60 mg for 5 days, then reduced by 10 mg every 2 days until discontinued)

These recommendations are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. They should be used as an adjunct to sound clinical decision making.

Adapted with permission from: Towards Optimized Practice. Guideline for primary care management of headache in adults. Edmonton, AB: Towards Optimized Practice. 2012 July. Available from: www.topalbertadoctors.org

Supporting Materials*

CORE Neck Tool

Opioid Risk Tool

This tool identifies patients who may be at risk for opioid dependency so that appropriate medication management can be planned.

URL: https://thewellhealth.ca/wp-content/uploads/2016/07/4._opioid_risk_tool_eng.jpg

The Keele STarT Back Screening Tool

This screening tool categorizes patients by risk of persistent symptoms (low, medium or high), which allows the clinician to tailor interventions appropriately.

URL: https://thewellhealth.ca/wp-content/uploads/2016/07/7._startback_tool_eng-1.jpg

Neck Pain Information and Exercise Sheet

The exercise sheet includes images to help identify correct and incorrect posture positions, and lying positions, as well as flexion/extension, rotation, side flexion, and retraction exercises.

URL: <http://www.arthritisresearchuk.org/health-professionals-and-students/reports/hands-on/hands-on-spring-2011-exercise-sheet.aspx>

Headache Navigator

Headache Diary Sheets

These can be completed by patients to help with headache diagnosis.

URL: http://www.ihe.ca/download/ambassador_headache_diary_short_form_06_nov_2013.pdf

*These supporting materials are hosted by external organizations, and as such the accuracy and accessibility of their links are not guaranteed. CEP will make every effort to keep these links up to date.

References

CORE Neck Tool References

- [1] Kopjar B, Tetreault L, Kalsi-Ryan S, Fehlings M. Psychometric properties of the modified Japanese orthopaedic association scale in patients with cervical spondylotic myelopathy. *Spine*. 2014. 40(1): E23-28.
- [2] Hall H. Effective spine triage: Patterns of pain. *Ochsner J*. 2014 Spring; 14(1): 88-95.
- [3] Stiell IG, et al. The Canadian C-spine rule for radiography in alert and stable trauma patients. *JAMA*. 2001 Oct; 286(15):1841-8
- [4] Concussions Ontario [Internet]. 2015 [cited 2016 May 30]. Available from: <http://concussionsontario.org/>
- [5] British Columbia Ministry of Health, British Columbia Medical Association. Rheumatoid arthritis: diagnosis, management and monitoring [Internet]. 2012 Sep [cited 2016 Mar 8]. [Figure]. Differentiate inflammatory from non-inflammatory arthritis; p. 2. Available from: <http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/rheumatoid-arthritis>
- [6] New Zealand Guidelines Group. New Zealand acute low back pain guide: Incorporating the guide to assessing psychosocial yellow flags in acute low back pain [Internet]. 2004 Oct [cited 2015 Nov 25]. Available from: http://www.acc.co.nz/PRD_EXT_CSMP/groups/external_communications/documents/guide/prd_ctrb112930.pdf
- [7] Kroenke K, Spitzer RL, Williams JBW, Lowe B. An ultra-brief screening scale for anxiety and depression: the PHQ-4. *Psychosomatics* [Internet]. 2009 Nov-Dec [cited 2015 Nov 20]; 50(6): 613-621. Available from: <http://www.psychiatrytimes.com/all/editorial/psychiatrytimes/pdfs/scale-PHQ4.pdf>
- [8] Nicholas MK. The pain self-efficacy questionnaire: Taking pain into account. *Eur J Pain*. 2007 Feb; 11(2): 153-63.
- [9] Cervical and thoracic spine disorders. In Hegmann KT, editor. *Occupational medicine practice guidelines. Evaluation and management of common health problems and functional recovery in workers*. 3rd ed. Elk Grove Village, IL: American College of Occupational and Environmental Medicine; 2011.
- [10] National Institute for Health and Clinical Excellence. Neck pain – non-specific. *Clinical Knowledge Summaries*. 2015 Apr.
- [11] Canadian Association of Radiologists. Section D: Musculoskeletal system. *Diagnostic Imaging Referral Guidelines*. 2012. Available from: <http://www.car.ca/en/standards-guidelines/guidelines.aspx>
- [12] Canadian Association of Radiologists. Section J: Trauma. *Diagnostic Imaging Referral Guidelines*. 2012. Available from: <http://www.car.ca/en/standards-guidelines/guidelines.aspx>
- [13] Cook C, Hegedus E. *Orthopedic physical examination tests: An evidence-based approach*. Upper Saddle River, N.J.: Pearson Education, 2013.
- [14] Yung E, Asavasopon S, Godges JJ. Screening for head, neck, and shoulder pathology in patients with upper extremity signs and symptoms. *J Hand Ther*. 2010 Apr-Jun; 23(2): 173-85.
- [15] Wainner RS, et al. Reliability and diagnostic accuracy of the clinical examination and patient self-report measures for cervical radiculopathy. *Spine*. 2003 Jan 1; 28(1): 52-62.

Patient Education Resources

General headache information

A resource that provides answers to patients' commonly asked questions about headache.

URL: http://www.ihe.ca/download/ambassador_headache.pdf

Medication overuse headache

A resource that provides answers to patients' commonly asked questions about medication overuse headache.

URL: http://www.ihe.ca/download/ambassador_medication_overuse_headache.pdf

Acute migraine management

A resource that provides answers to patients' commonly asked questions about migraine management.

URL: http://www.ihe.ca/download/ambassador_migraine_headache.pdf

Migraine prophylaxis

A resource that provides answers to patients' commonly asked questions about migraine preventive medications.

URL: http://www.ihe.ca/download/ambassador_migraine_preventive_medications.pdf

Tension headache management

A resource that provides answers to patients' commonly asked questions about managing tension-type headaches.

URL: http://www.ihe.ca/download/ambassador_tension_type_headache.pdf

Treating frequent headaches with pain relievers

Provides tips to help manage frequent headaches and discourages patients from taking pain relievers too often.

URL: <http://www.choosingwiselycanada.org/wp-content/uploads/2015/10/Headaches-EN.pdf>

- [16] Cote P, et al. Management of neck pain and associated disorders: A clinical practice guideline from the Ontario Protocol for Traffic Management (OPTIMA) Collaboration. Eur Spine J. 2016 Mar 16.
- [17] Rampersaud YR, Alleyne J, Hall H. Managing leg dominant pain. J Current Clinical Care. 2013 Jan; Educational Suppl.: 32-39.
- [18] National Institute for Health and Clinical Excellence. Neck pain – cervical radiculopathy. Clinical Knowledge Summaries. 2015 Apr.
- [19] National Opioid Use Guideline Group. Canadian guideline for safe and effective use of opioids for chronic non-cancer pain [Internet]. 2010 [cited 2016 May 30]. Available from: <http://nationalpaincentre.mcmaster.ca/opioid/>
- [20] Childs JD, et al. Neck pain: Clinical practice guidelines linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association. 2008. J Orthop Sports Phys Ther. 38(9):A1-A34.
- [21] Hall H, Alleyne J, McIntosh G, Cote P. A pain in the neck. Journal of Current Clinical Care. 2015; 5(1):24-34.

Headache Navigator References

- [1] Headache Imaging Pathway. Developed as part of the Diagnostic Imaging Appropriateness (DI-APP) Tools in Primary Care project by University Health Network, Health Quality Ontario, Ministry of Health and Long-Term Care. 2015.
- [2] Toward Optimized Practice. Guideline for primary care management of headache in adults. Edmonton, AB: Toward Optimized Practice. 2012 July. Available from: www.topalbertadoctors.org
- [3] National Institute for Health and Clinical Excellence. Headaches: Diagnosis and management of headaches in young people and adults. Clinical guideline 150: Methods, evidence and recommendations. 2012 Sep.
- [4] Choosing Wisely Canada, Canadian Association of Radiologists. Imaging tests for headaches: When you need them – and when you don't. 2014. Available from: <http://www.choosingwiselycanada.org/>
- [5] Canadian Association of Radiologists. Section A: Central nervous system. Diagnostic Imaging Referral Guidelines. 2012. Available from: <http://www.car.ca/en/standards-guidelines/guidelines.aspx>

This Tool was developed as part of the Knowledge Translation in Primary Care Initiative which is led by CEP with collaboration from Ontario College of Family Physicians and Nurse Practitioners' Association of Ontario. Clinical leadership for the development of the tool was provided by Drs. Julia Alleyne MD, CAC(SEM), FCFP and Arun Radhakrishnan MSc, MD, CM CCFP and was subject to external review by primary care providers and other relevant stakeholders. This Tool was funded by the Government of Ontario as part of the Knowledge Translation in Primary Care Initiative.

This Tool was developed for licensed health care professionals in Ontario as a guide only and does not constitute medical or other professional advice. Primary care providers and other health care professionals are required to exercise their own clinical judgment in using this Tool. Neither the Centre for Effective Practice ("CEP"), Ontario College of Family Physicians, Nurse Practitioners' Association of Ontario, Government of Ontario, nor any of their respective agents, appointees, directors, employees, contractors, members or volunteers: (i) are providing medical, diagnostic or treatment services through this Tool; (ii) to the extent permitted by applicable law, accept any responsibility for the use or misuse of this Tool by an individual including, but not limited to, primary care providers or entity, including for any loss, damage or injury (including death) arising for or in connection with the use of this Tool, in whole or in part; or (iii) give or make any representation, warranty or endorsement of any external sources referenced in this Tool (whether specifically named or not) that are owned or operated by third parties, including any information or advice contained therein.



CORE Neck Tool and Headache Navigator is a product of the Centre for Effective Practice. Permission to use, copy, and distribute this material for all non-commercial and research purposes is granted, provided the above disclaimer, this paragraph and the following paragraphs, and appropriate citations appear on all copies, modifications, and distributions. Use of CORE Neck Tool and Headache Navigator for commercial purposes or any modification of the tool are subject to charge and use must be negotiated with Centre for Effective Practice (Email: info@effectivepractice.org).

For statistical and bibliographic purposes, please notify the Centre for Effective Practice (info@effectivepractice.org) of any use or reprinting of the tool. Please use the below citation when referencing the tool:

Reprinted with Permission from Centre for Effective Practice (Summer 2016). CORE Neck Tool and Headache Navigator. Toronto. Centre for Effective Practice.

Developed by:



In Collaboration with:



Ontario College of Family Physicians

