

CDSS GUIDELINES FOR THE MANAGEMENT OF PATIENTS WITH TEMPOROMANDIBULAR DISORDERS (TMD)



Updated October 2023

In the management of patients with temporomandibular disorders (TMDs), the dentist should:

1. Recognize that the management of patients with temporomandibular disorders involves the utilization of a biopsychosocial/medical model as opposed to a traditional dental framework.
2. Understand that not all pain in the head, neck and temporomandibular joint (TMJ) regions is related to TMDs and that odontogenic/dentoalveolar pain and other pathologies (including, but not limited to, neuralgias, demyelinating diseases, CNS tumours, peripheral tumours, vascular headaches, muscle contraction-type or tension-type headaches, sinus disease, ear disease, salivary gland disease and psychiatric/psychological disorders) should be carefully considered prior to the initiation of management of a patient with a presumed TMD. In order for this to be accomplished, as with all patients, a thorough history (including TMD-related pain and dysfunction, as well as careful medical, dental and psychosocial histories – this could include assessing factors such as pain-related disability, a complete assessment of the patient’s pain locations, such as local, regional or widespread, and others) and clinical examination (including not only TMD-related muscle and joint findings, but also careful head and neck, oral soft tissue, periodontal and dentition examinations) should be undertaken and recorded prior to beginning treatment. Diagnostic imaging should be utilized as indicated according to the individual patient.
3. Recognize the possible existence of comorbidities, with other systemic disorders producing multiple symptoms, including those mimicking or contributing to TMD symptoms in susceptible patients. In such patients, it should be realized that TMD symptoms may be only a subset of the musculoskeletal pain condition requiring a medical perspective for management.
4. Understand that an inability to identify precise etiologies and pathophysiological processes or the lack of a perfect theoretical model does not prevent the rendering of reasonable and effective initial management approaches.
5. Understand that both diagnostic tests and management strategies should be undertaken utilizing evidence-based methods that are based on accepted scientific analysis (for example, use of meta-analyses, systematic reviews of the literature and randomized controlled trials in clinical decision making).
6. Understand that TMJ imaging is considered a special investigation and may be included in the initial diagnostic evaluation of a patient, based on clinical signs and symptoms. Initial or additional TMJ imaging may also be indicated if a patient is unresponsive to initial conservative, non-invasive, reversible and evidence-based approaches and is warranted based on the clinical signs and symptoms. The standard of care to potentially screen for or identify gross osseous change of the TMJs is panoramic radiography. Consultation with and/or referral to an appropriate radiologist is recommended when the radiographic investigation is not normally performed in a dental office (e.g., cone beam computed tomography/CBCT for detection of osseous changes of the mandibular condyles and magnetic resonance imaging/MRI for the morphologic condition and position of the TMJ disc) in order that procedures can be undertaken with the most efficacy while yielding the most useful information. All CBCT images that measure larger in size than 8 cm (in any dimension) should be interpreted by a

professional who meets one of the following criteria: i) Completion of a post-graduate program in Oral and Maxillofacial Radiology or Medical Radiology and holds a current license in his or her designated specialty in any Canadian jurisdiction. ii) Completion of a post-graduate program in Oral and Maxillofacial Surgery or Orthodontics and holds a current license in his or her specialty in any Canadian jurisdiction.

7. Understand that it is acceptable in the initial management of patients with temporomandibular disorders to provide, if necessary, a presumptive diagnosis that is probably correct and to deliver only conservative, non-invasive, reversible and evidence-based approaches allowing for treatment to be modified on an as-needed basis should the diagnosis be revised over time.
8. Manage TMD-related pain and dysfunction utilizing conservative, non-invasive, reversible and evidence-based biopsychosocial approaches, encouraging rehabilitation, rather than providing an unrealistic expectation of a permanent cure. Management modalities should address the pathophysiological process of joint and muscle pain as well as the psychosocial aspects of chronic pain, customizing management to each patient's individual problems. This individualized approach could include management strategies such as patient education, medications, physical therapy, behavioural psychological therapy and the use of occlusal appliances that do not alter the shape or position of the teeth or the alignment of the jaws (this would normally mean appliances that have full-arch coverage, full-arch contacts and a flat occlusal plane and would be made of a "hard" and/or thermoplastic material; however, in some circumstances such as, but not necessarily limited to, pediatric patients, patients with financial constraints, patients with a preference for this design, or for "temporary" use, custom-fitted "soft"/"vinyl" appliances that follow these same design principles could be utilized; regardless of the material used, patient follow-up is mandatory to monitor for, but not limited to, changes in the occlusion of the appliance and/or the patient's natural occlusion).
9. Understand that there is substantial evidence that in many cases, clinical remission of TMD symptoms occurs without treatment or with only self-care instructions.
10. Understand that asymptomatic TMJ noises receive no demonstrable value from treatment.
11. Understand that the concept of routine irreversible alteration of the patient's TMJs, jaws, occlusion or dentition by oral appliances is not validated by well-controlled, well-designed scientific research and if such appliances are to be considered, patients should be made well aware of this, along with a documented informed consent indicating that they understand that there is no scientific support for their use, and that reversible treatment can be equally effective for relieving pain and dysfunction. While not required, it is best practice in this situation to have not only documented informed consent, but a signed consent form that clearly lists the items noted above. Furthermore, referral to a specialist – see 13. below – should be considered prior to initiating the treatments listed above.
12. Understand that prior to proceeding to a more aggressive, invasive, potentially irreversible treatment (including, but not limited to, injection of neuromuscular blocking agents, neuromuscular dentistry, and oral appliances that could result in permanent changes in the structure or position of the jaw or teeth), initial conservative, non-invasive, reversible and evidence-based approaches as outlined in 8. above should be clearly demonstrated and well chronicled within the patient's treatment notes (botulinum toxin A/Botox as a management strategy for patients with bruxism is outlined in the Standards of Practice: Advanced Facial and Esthetic Therapies and Adjunctive Considerations

document). A clearly documented informed consent indicating that the patient fully understands the complete implications, potential complications and potential costs should be obtained prior to initiation of treatment. While not required, it is best practice in this situation to have not only documented informed consent, but a signed consent form that clearly lists the items noted above. In addition, the patient should understand that failure to manage signs and symptoms with conservative, non-invasive, reversible and evidence-based approaches does not imply or guarantee success with more aggressive or invasive techniques. Furthermore, referral to a specialist – see 13. below – should be considered prior to initiating the treatments listed above.

13. Understand that with complex, multifaceted, multimodal TMJ, head, face and neck pain, a referral for consultation and/or treatment to a specialist (or specialists) in the field of, or any combination of, Oral Medicine, Oral and Maxillofacial Surgery, Prosthodontics, Orthodontics or appropriate medical specialities, may be necessary.
14. Understand that if symptoms and clinical findings from head and/or neck pain are not entirely consistent with TMDs or if the patient's pain is not responding to conservative, non-invasive, reversible and evidence-based approaches, a referral to one of the specialists above may be necessary.

In summary, the process of achieving a diagnosis utilizing sound, scientifically based measures and methods (for example, the Diagnostic Criteria for Temporomandibular Disorders, including Axis I and Axis II considerations) should be implemented prior to initiating conservative, non-invasive, reversible and evidence-based strategies that may include the following:

1. Patient education, reassurance and self-care.
2. Pharmacologic therapy, including, but not

limited to, anti-inflammatories, analgesics and muscle relaxants (collaboration with other health care professionals, particularly when appropriate pharmacotherapy involves the use of medications with which the dentist lacks experience or complications begin to exceed their competence to manage independently, should be considered).

3. Physical therapy, as directed by a qualified physical therapist.
4. Oral appliances that do not produce any irreversible changes to the dentition or the jaws (full-arch coverage, full-arch contact, flat-plane design).
5. Behavioural/psychological therapy, provided by appropriately qualified practitioners.

Failure to achieve relief with the above options may necessitate a referral to the above specialities for further consulting, evaluating, investigating and/or treatment.

References

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- 2) <https://ubwp.buffalo.edu/rdc-tmdinternational/tmd-assessmentdiagnosis/dc-tmd/> (Diagnostic Criteria for Temporomandibular Disorders web site)
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- 4) Orofacial pain: guidelines for assessment, diagnosis, and management. 7th Edition. American Academy of Orofacial Pain. GD Klasser and MR Reyes (editors), Quintessence Publishing Co, 2023.
- 5) Greene CS, et al. Recently released report by major scientific academy proposes significant changes in understanding and managing temporomandibular disorders. J Oral Maxillofac Surg 80:8-9, 2022.
- 6) Royal College of Dental Surgeons of Ontario (RCDSO), Guidelines, diagnosis and management of temporomandibular disorders, Revised 2019.
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(September 26, 2022)

(Revised April 28, 2023)

(Revised June 23, 2023)

(Revised October 4, 2023)