Guide

Identifying TMD in primary care

A guide for clinicians



TMJ Clinics

tmjclinics.com.au



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Chapter One

Why Think of Temporomandibular Disease?

Temporomandibular disease (TMD) can frequently mimic problems like dental issues, otologic conditions, cervical spine problems, and even psychiatric disorders. Yet, despite its prevalence, TMD remains underdiagnosed and undertreated across many healthcare settings.

As clinicians, we must ask:
Why are we not thinking about TMD more often?

1.1 A Prevalent, Often Misunderstood Condition

It represents the second most common musculoskeletal disorder (after back pain) resulting in pain and disability. Despite this, many patients spend years navigating between dental, medical, and allied health professionals without a definitive diagnosis.

These patients may present with:

- Jaw pain or stiffness
- Teeth pain
- Clicking, popping, or grating sounds during jaw movement
- Limited mouth opening
- Headaches, neck pain, and ear discomfort
- Orofacial pain without clear aetiology.

The challenge lies in the multifactorial nature of TMD: it is often overlooked because clinicians think it might be another specialty's diagnosis to make. In reality, we can all diagnose TMD.

1.2 The Cost of Missed or Delayed Diagnosis

Mismanaging TMD is not benign. When left unrecognised, it can:

- Progress from acute to chronic pain
- Progress from an easily manageable condition to something irreversible and requiring surgery
- Lead to unnecessary dental procedures (e.g., extractions, root canals)
- Contribute to psychological distress, anxiety, and reduced quality of life
- Generate significant healthcare costs through repeat consultations and imaging.

Many patients end up in a cycle of frustration, where symptoms are attributed to stress alone or are dismissed entirely. As clinicians, thinking of TMD means opening a door to holistic, multidisciplinary management that can dramatically improve patient outcomes.

TMD affects an estimated

5%-12%



of the population, with a higher incidence among women aged 20 to 40.

1.3 Why Should General Practitioners and Allied Health Professionals Care?

TMD is not just a dental issue. It sits at the intersection of **medicine, dentistry, psychology, physiotherapy, and pain management**. General practitioners, physiotherapists, nurse practitioners, speech pathologists, and psychologists are uniquely positioned to detect early warning signs of TMD, often well before patients see a dentist.

Common "red flag" presentations in general clinical practice include:

- Chronic tension headaches across the temple region
- Referred ear pain without infection
- Facial pain misattributed to trigeminal neuralgia
- Sleep disturbances due to clenching
- Jaw pain on waking
- Jaw dysfunction post-dental procedures or intubation.

By thinking of TMD, clinicians can facilitate appropriate referrals, initiate conservative management early, and educate patients about behavioural and lifestyle modifications that can prevent progression.

1.4 The Case for Interdisciplinary Education and Awareness

Medical and dental curricula often address TMD only briefly, if at all. As a result, many clinicians enter practice without confidence in identifying or managing TMD-related complaints.

Building awareness among clinicians can:

- Reduce diagnostic delays
- Improve cross-disciplinary referrals
- Optimise non-invasive management strategies
- Foster empathy for patients with chronic orofacial pain.

Clinical education is therefore essential to bridging this gap. By equipping ourselves and our peers with the knowledge and tools to recognise TMD, we are better prepared to support patient care in both primary and specialty settings.

Key Takeaway: Approaching TMD

Thinking of TMD means thinking beyond the teeth or jaw. It means recognising a common, often overlooked condition that can masquerade as many others — and using a patient-centred, interdisciplinary approach to manage it effectively.



Chapter Two

Common Signs and Symptoms of Temporomandibular Disease

Temporomandibular disease (TMD) presents with a wide spectrum of signs and symptoms, often overlapping with other orofacial and musculoskeletal conditions. This variability can make diagnosis challenging, but certain hallmark features should raise clinical suspicion.

2.1 Pain — The Cardinal Symptom

Pain is the most common reason patients seek help for TMD. It can be:

- **Localised** in the jaw joint (preauricular area)
- **Diffuse** throughout the face, head, or neck
- **Referred** to the ear, temple, or teeth
- **Focal** over the masseter or temporal muscles.

TMD pain is characteristically:

- Dull and aching in nature
- Worsened by jaw movement (e.g., chewing, talking, yawning)
- Often unilateral, but may become bilateral
- Fluctuating in intensity and duration
- Often present on waking.

2.2 Joint Sounds: Clicking, Popping, or Crepitus

Audible or palpable sounds during jaw movement often indicate disc displacement (disorientated movement) within the temporomandibular joint. These can include:

- **Clicking or popping:** Often associated with anterior disc displacement with reduction (the sound of the disc 'popping' back into the correct position)
- **Crepitus:** A grating or gravel-like sound, more common in degenerative joint disease or osteoarthritis (the sound of bone grating on bone where the disc has perforated or is no longer present).

While joint sounds are not always pathological, when combined with pain or restricted movement, they warrant further evaluation.



2.3 Jaw Movement Limitations

Functional disturbances in mandibular movement are hallmark signs of TMD. These may present as:

- Limited mouth opening (trismus), often less than 35–40 mm
- Jaw locking, either open (dislocation) or closed (disc displacement without reduction)
- Deviation or deflection of the jaw on opening or closing
- Deviation: Jaw moves away and returns to midline
- Deflection: Jaw moves to one side and stays there.

These issues often interfere with basic daily functions like eating, speaking, and oral hygiene.

2.4 Muscle Symptoms: Tension and Tenderness

TMD frequently involves the muscles of mastication, particularly:

- Masseter
- Temporalis
- Medial and lateral pterygoids.

Patients may report:

- Facial muscle fatigue
- Stiffness in the morning (especially with night-time bruxism)
- Myofascial trigger points
- Pain with palpation of the masticatory muscles
- Pain on mouth opening.

Muscle-related TMD is sometimes classified under myalgic TMD, and it can exist with or without joint involvement.



2.5 Ear-Related Symptoms (Otic Symptoms)

Because of the anatomical proximity of the TMJ to the ear, patients with TMD may experience:

- Earache or pressure
- Tinnitus
- A sensation of fullness in the ear
- Dizziness or vertigo.

These symptoms are often misdiagnosed as otologic in origin, especially in the absence of visible ear pathology. A high index of suspicion of TMD is needed.

2.6 Headache and Neck Pain

TMD-related headaches often present as:

- Temporal headaches
- Tension-type headaches
- Pain referred to the occiput, neck, or shoulders.

Cervical muscle tension and poor posture (especially forward head posture) can exacerbate or mimic TMD. These overlapping symptoms require careful examination and patient history.

2.7 Dental Symptoms and Presentations

TMD-related dental symptoms can include:

- Tooth pain without dental pathology
- Difficulty chewing or biting
- Jaw fatigue
- Altered bite or occlusion
- Sleep disturbances from nocturnal bruxism or discomfort.

2.8 Psychosocial Symptoms

Psychosocial symptoms such as anxiety, stress, and sleep disturbances are frequently associated with chronic TMD and may contribute to symptom exacerbation.

Quick Clinical Checklist: Red Flags for Suspected TMD

- Pain around the TMJ or muscles of mastication
- Clicking, popping, or grating during jaw movements
- Jaw locking or restricted range of motion
- Ear symptoms without otologic cause
- Headaches or facial pain that worsen with chewing or speaking
- Bruxism or clenching behaviours (often stress-related)
- Changes in bite



Key Takeaway: Signs and Symptoms

Recognising the wide range of signs and symptoms of TMD — from joint noises and jaw locking to unexplained ear pain and chronic headaches — is critical for early identification and comprehensive management.



Chapter Three

How We Diagnose TMD at TMJ Clinics

At TMJ Clinics, we use the following tools to diagnose TMD patients:

- The Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) questionnaire combined with proprietary TMJ Clinics sleep apnoea, pain maps, and psychology screening tools
- Clinical examination and palpation
- Jaw movement measurement and analysis
- Chairside ultrasound
- Physiotherapy assessment
- Digital intraoral scanning
- Digital imaging (OPG / CT) where required
- MRI scanning where required
- Multidisciplinary team discussion including our TMJ dentists, physiotherapists, maxillofacial surgeons, and splint engineers.

3.1 Overview of the DC/TMD TMJ Clinics Questionnaire

The TMJ pre-visit questionnaire forms the backbone of clinical diagnosis. All patients must complete the questionnaire prior to visiting TMJ Clinics.



Patients are asked over 140 questions utilising smart logic to follow their symptoms and focus on credible disease signs.

3.2 Clinical Examination, Analysis, and Ultrasound

Our TMJ clinicians are specially trained dentists who complete a full-time induction training and then continue to train throughout their time with TMJ Clinics. Our clinicians regularly present and discuss cases at multidisciplinary team meetings or MRI meetings. The clinical examination includes assessment of basic facial patterns and structures, dynamic movement assessment, signs of bruxism, pain trigger points, and ultrasound of the masseter muscles (chairside).

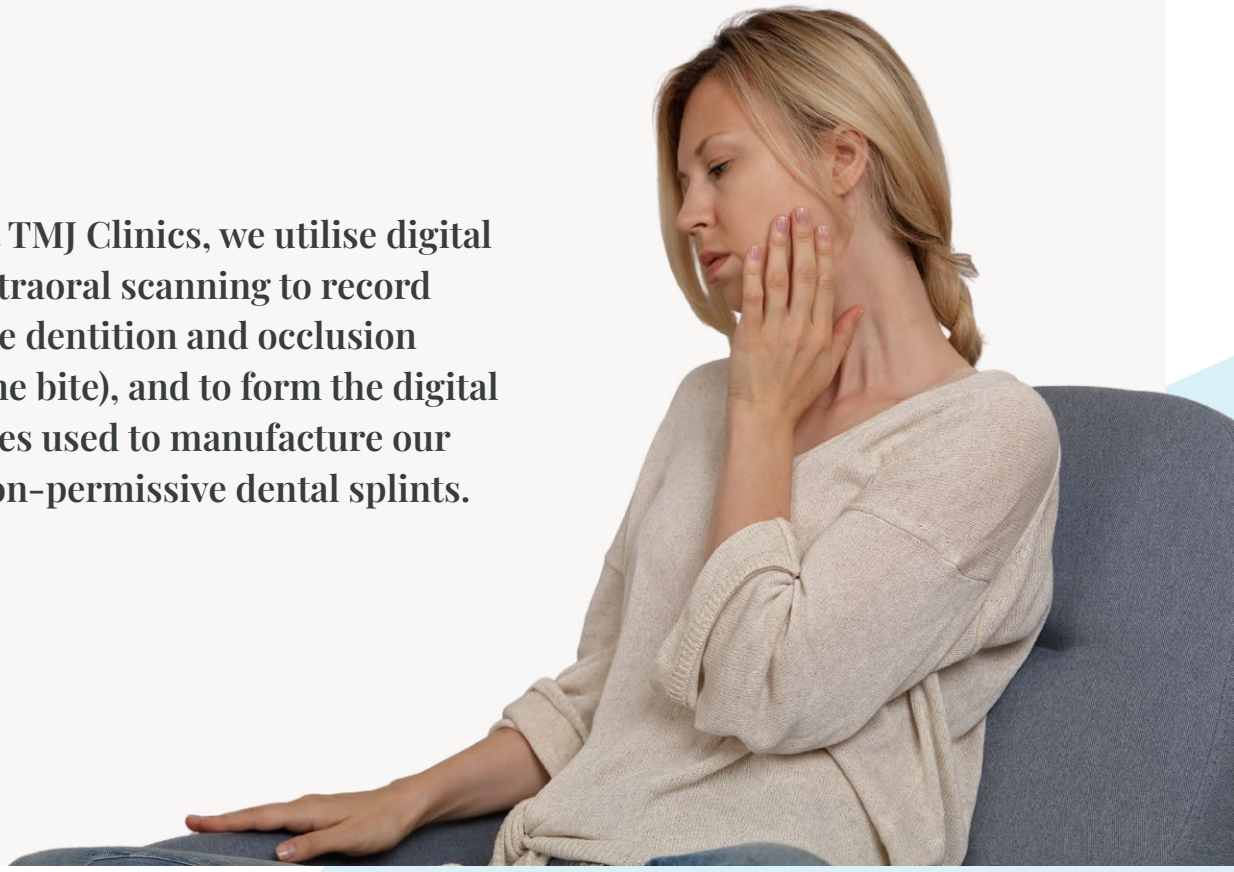
3.3 Physiotherapy Assessment

Our TMJ Clinics physiotherapists undergo an induction package and regular clinical review to assist them in providing targeted TMJ physiotherapy. They will assess muscle strength, movement, and coordination along with the supporting structures in the head and neck to maximise the speed of recovery for TMD patients.

3.4 Intraoral Scanning

At TMJ Clinics, we utilise digital intraoral scanning to record the dentition and occlusion (the bite), and to form the digital files used to manufacture our non-permissive dental splints. These scans provide a baseline and are a useful diagnostic tool to assess wear facets related to bruxism (grinding).

At TMJ Clinics, we utilise digital intraoral scanning to record the dentition and occlusion (the bite), and to form the digital files used to manufacture our non-permissive dental splints.

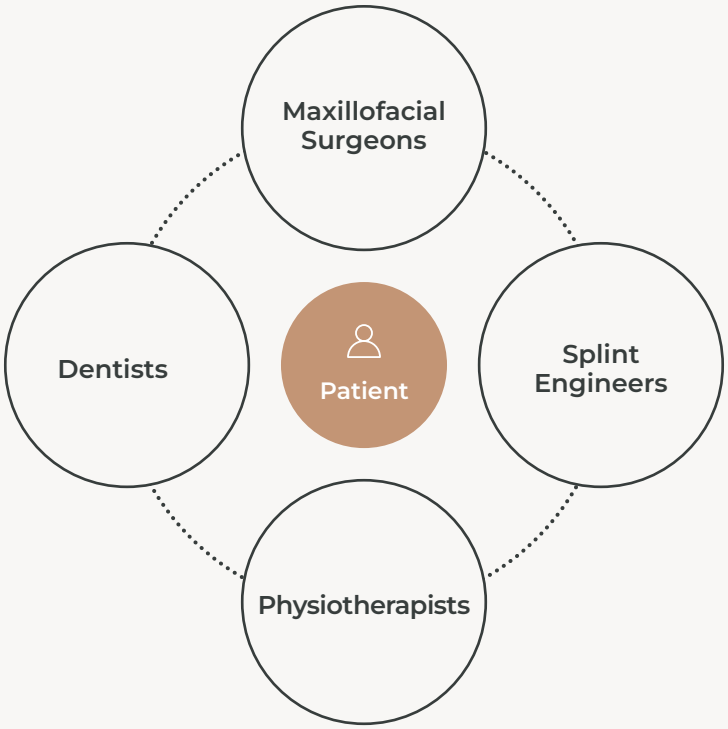


3.5 Imaging (OPG, CT, MRI)

At TMJ Clinics, we are judicious with our scanning, radiation, and associated costs. If there are signs of joint disease, we may order imaging. If there is evidence of disc damage, we may order MRI scans (after surgical consultation). All MRI scans are reviewed as part of our MRI meetings with surgeons to ensure patients have the most accurate and efficient diagnosis.

3.6 Multidisciplinary Meetings

The cornerstone of TMJ Clinics' care is multidisciplinary consultation. We involve our dentists, physiotherapists, maxillofacial surgeons, and splint engineers in the design of care, coordinated delivery and multi-modal treatment. This allows TMJ Clinics patients to access all types of care through one clinical portal.



Key Takeaway: Diagnosis

Diagnosis of TMD requires a comprehensive history and assessment along with targeted investigation. Delivering care through a multidisciplinary setting saves patients time, money, and frustration.



Chapter Four

Treatment Options for Temporomandibular Disease

Effective management of Temporomandibular Disease (TMD) requires a **multidisciplinary approach**. Treatments must be tailored to the individual based on the severity of the disorder, the underlying causes, and the patient's preferences. AT TMJ Clinics, we offer multi-modal conservative care with an absolute goal of avoiding invasive surgery. If surgery is indicated (which is rare), patients are referred to one of our affiliated surgeons.

At TMJ Clinics we combine the mainstream conservative therapies into our 'Load Reduction Program'. This program de-loads the TMJ and allows for disc repositioning and healing, as well as preventing further damage. The load reduction strategies include:

4.1 Non-Permissive Occlusal Splints (Night Guards) – A more comprehensive dental splint

An **occlusal splint**, also known as a **night guard**, is a dental device that fits over the upper or lower teeth to prevent bruxism (grinding) and reduce jaw clenching. **We utilise a state-of-the-art non-permissive splint made in the TMJ neutral position**.

Splints work by:

- Reducing tooth wear caused by grinding
- Relieving pressure on the temporomandibular joint and surrounding muscles when designed correctly
- Helping to reposition the jaw to a more neutral position, which can alleviate pain
- Allowing for cognitive retraining and reduced bruxism and muscle hyperactivity.

Our non-permissive splints achieve an almost double reduction in joint loading compared to standard dental occlusal splints.

4.2 Muscle Injections

If there is clinical evidence of muscle enlargement (ultrasound proven masseteric hypertrophy), we may recommend targeted muscle injections to achieve a permanent reduction in muscle size and activity. We find patients usually only need a single injection session to achieve significant results and reduce muscle damage.

4.3 Dry Needling

Dry needling is often utilised to achieve targeted inflammatory response healing in overactive and damaged muscles. By inciting deliberate microtrauma in areas of damage, the following healing response can accelerate muscle repair and healing.



4.4 Physiotherapy

Physiotherapy is a cornerstone of non-invasive TMD management. It can include:

- **Manual therapy:** Hands-on techniques to mobilise the TMJ and surrounding muscles, improving joint function
- **Stretching exercises:** These exercises target the muscles of mastication and surrounding musculature to improve flexibility, reduce spasms, and increase range of motion
- **Postural training:** Exercises designed to improve head and neck posture can significantly reduce muscle strain that exacerbates TMJ symptoms
- **Heat or cold therapy**: Applying heat or ice to the affected area can reduce inflammation and muscle spasm, providing symptomatic relief.

Physical therapy addresses muscle imbalances, joint mobility, and posture. It improves overall TMJ function and can significantly reduce pain over time.

4.5 Behavioural and Lifestyle Modifications

One of the first approaches in managing TMD is **modifying behaviours** that contribute to the disorder. These may include:

Stress management	High stress levels can lead to bruxism (teeth grinding), jaw clenching, and increased muscle tension. Techniques such as cognitive-behavioural therapy (CBT), mindfulness, and relaxation exercises (e.g., deep breathing, progressive muscle relaxation) can help patients reduce stress and muscle tension.
Sleep hygiene	Bruxism is commonly associated with sleep disorders. Educating patients on good sleep hygiene can help mitigate teeth grinding during the night.
Dietary modifications	A soft-food diet for a few days or weeks can reduce the strain on the jaw and help alleviate pain from chewing. Hard, chewy foods can aggravate TMJ dysfunction.
Postural improvements	Poor posture, particularly forward head posture, can exacerbate TMJ pain. Correcting posture and incorporating neck and shoulder exercises can reduce tension in the jaw muscles.

These modifications address the root causes of TMD (like stress or muscle overuse), reducing the frequency and intensity of the symptoms.

Key Takeaway: Treatment Modalities

- **Conservative treatments** (such as splints, physical therapy, and stress management) are typically the first line of treatment and can be effective for early-stage TMD
- **Interventional treatments** and **surgical options** (such as TMJ arthroscopy or total joint replacement) are considered only in cases of **severe or refractory TMD** that do not respond to less invasive treatments.

The goal of any TMD treatment is to reduce pain, improve function, and prevent further joint damage. A multidisciplinary approach is the gold standard, with input from dentists, physiotherapists, and surgeons for the best outcomes.



Chapter Five

Why Refer to TMJ Clinics?

Temporomandibular joint (TMJ) disorders (TMD) often require a **multidisciplinary approach** to diagnosis and treatment. While many cases can be managed effectively in primary care settings, there are instances where referring a patient to an expert-led **TMJ Clinic** is essential for optimal care.

In this chapter, we will explore the key reasons why referrals to TMJ Clinics are critical, and how these focused centres contribute to the overall management of TMD.

One of the primary reasons to refer a patient to a TMJ clinic is access to all available conservative treatment options in one clinic.

5.1 Complexity of TMD

TMD is a multifactorial condition that often involves a combination of **musculoskeletal, neurological, dental**, and **psychosocial factors**. The complexity and diversity of symptoms can make it challenging to arrive at an accurate diagnosis, let alone formulate an appropriate treatment plan.

Patients may have already seen multiple clinicians and specialties before having an accurate TMD diagnosis made.

Since TMD can overlap with many other conditions, it often requires **specialised diagnostic tools** (such as **MRI, CT scans,** or **joint imaging**) and a multidisciplinary team of healthcare providers to manage it effectively. TMJ clinics have the expertise, equipment, and protocols in place to address these complexities, which may be beyond the scope of general clinical practice.

One of the primary reasons to refer a patient to a TMJ clinic is **access to all available conservative treatment options in one clinic**. There is no need for patients to travel, see multiple clinics, and have multiple confusing opinions.

5.2 Access to Multidisciplinary Care

At TMJ Clinics, a team of skilled practitioners works together to address the various aspects of TMD. This multidisciplinary approach is particularly beneficial for patients with complex or refractory symptoms.

The team may include:

- **Dentists** (especially those with a focus on TMD): Dentists who focus on TMJ disorders can offer occlusal therapy, create custom splints, and provide advice on bite alignment
- **Physiotherapists:** Physical therapists with TMJ expertise can design exercise programs to improve joint function, alleviate muscle tension, and improve range of motion
- **Oral and maxillofacial surgeons:** Surgeons with TMJ experience can provide surgical interventions when necessary, such as arthroscopy or joint replacement
- **Australian splint engineers who manufacture specifically to TMJ Clinics' designs:** At TMJ Clinics, we design and manufacture every appliance in-house, in Australia. We will make sure the perfect design is made for patients to expedite their recovery.

By referring to TMJ Clinics, patients benefit from the collective expertise of multiple healthcare providers, ensuring a more holistic and comprehensive treatment plan.



5.3 Why Referring Early Can Improve Outcomes

Referring patients to a TMJ clinic **early in the disease process** can lead to better outcomes. Early intervention allows for:

- **Timely diagnosis:** Catching the problem in the early stages (such as disc displacement with reduction) allows for more conservative management options, which are often effective at this stage
- **Prevention of long-term complications:** Early treatment can help prevent the development of severe joint degeneration, arthritis, or permanent damage to the TMJ structures
- **Reduction of chronic pain:** Effective management early on can prevent the development of chronic pain syndromes, which are more difficult to treat.

5.4 Maximise your clinical time with a patient whose TMD has been managed efficiently

When you refer a patient with temporomandibular disorder (TMD) to TMJ Clinics, you can be confident they'll be managed well and you'll be kept fully informed. Your patient returns to you ready for their ongoing general or specialist care, allowing you to use your time more efficiently.

Key Takeaways: Why Refer to a TMJ Clinic?

1. **Specialised Diagnosis:** Access to advanced imaging and diagnostic tools that allow for a comprehensive and accurate diagnosis of TMD
2. **Multidisciplinary Approach:** Collaboration between dentists, physiotherapists and oral and maxillofacial surgeons ensures a holistic treatment plan
3. **Access All Conservative Treatment Options:** TMJ clinics offer the full spectrum of conservative measures that may not be available in general clinical practice
4. **Improved Outcomes:** Early referral to a TMJ clinic can result in better treatment outcomes, prevention of long-term complications, and improved quality of life for patients.

Catching the problem in the early stages (such as disc displacement with reduction) allows for more conservative management options, which are often effective at this stage.

Conclusion

Temporomandibular disorders can masquerade as dental, otologic, or musculoskeletal issues – often slipping under the radar in busy general or dental practice.

GPs and dentists are encouraged to maintain a high index of suspicion for temporomandibular disorder (TMD), particularly when patients present with overlapping symptoms that lack clear pathology, such as ear pain, facial tension, headaches, or unexplained dental discomfort.

Referral to a practice like TMJ Clinics, which focuses exclusively on the TMJ, is crucial for managing complex, severe, or chronic cases of TMD. TMJ Clinics provide access to specialised diagnostic tools, advanced treatment modalities, and a multidisciplinary team that can offer comprehensive care.

Early referral is essential to achieving the best possible outcomes, reducing pain, and preventing long-term joint damage. With their TMD well-managed, your patient can return to you for their ongoing general or specialist care.

To refer your patient, visit **tmjclinics.com.au/referrals**

Phone: 1300 123 865



Disclaimer: This information is intended for healthcare professionals.

Find a TMJ Clinics location near you

TMJ Clinics provides an extensive range of evidence-based treatments for TMJ disorders, with a growing number of clinics located in major Australian cities.

Find your nearest TMJ Clinic to refer your patients.

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