

TABLE 1 Scheme for Coding Chronic Pain Diagnoses based on AXES ¹⁶Axis Definition

- 1 Regions (eg, head, face, and mouth)
- 2 Systems (eg, nervous system)
- 3 Temporal characteristics of pain (eg, continuous, recurring irregularly, paroxysmal)
- 4 Patient's statement of intensity: time since onset of pain (eg, mild, medium, severe; 1 month or less; more than 6 months)
- 5 Etiology (eg, genetic, infective, psychological)

TABLE 2 IASP Regional Classification of Localized Syndromes of the Head and Neck¹⁶

Neuralgias of the head and face

Craniofacial pain of musculoskeletal origin

Lesions of the ear, nose, and oral cavity

Primary headache syndromes, vascular disorders, and cerebrospinal fluid syndromes

Pain of psychological origin in the head, face, and neck

Suboccipital and cervical musculoskeletal disorders

Visceral pain in the neck

TABLE 3 A Hierarchical International headache classification IHCD II ¹⁷

Part I: The Primary Headaches

- [1. Migraine](#)
- [2. Tension-type headache](#)
- [3. Cluster headache and other trigeminal autonomic cephalalgias](#)
- [4. Other primary headaches](#)

Part II: The Secondary Headaches

- [5. Headache attributed to head and/or neck trauma](#)
- [6. Headache attributed to cranial or cervical vascular disorder](#)
- [7. Headache attributed to non-vascular intracranial disorder](#)
- [8. Headache attributed to a substance or its withdrawal](#)
- [9. Headache attributed to infection](#)
- [10. Headache attributed to disorder of homoeostasis](#)
- [11. Headache or facial pain attributed to disorder of cranium, neck, eyes, ears, nose, sinuses, teeth, mouth or other facial or cranial structures](#)
- [12. Headache attributed to psychiatric disorder](#)

Part III: Cranial Neuralgias Central and Primary Facial Pain and Other Headaches

- [13. Cranial neuralgias and central causes of facial pain](#)
 - [14. Other headache, cranial neuralgia, central or primary facial pain](#)
-

Table 3 B Chapter 13 IHS Classification of cranial neuralgias and central causes of facial pain ¹⁷ (ICD-10 G44.847, G.44.848 or G44.8)

- 13.1. Trigeminal neuralgia
- 13.2. Glossopharyngeal neuralgia
- 13.3. Nervus intermedius neuralgia [G51.80]
- 13.4. Superior laryngeal neuralgia [G52.20]
- 13.5. Nasociliary neuralgia [G52.80]
- 13.6. Supraorbital neuralgia [G52.80]
- 13.7. Other terminal branch neuralgias [G52.80]
- 13.8. Occipital neuralgia [G52.80]
- 13.9. Neck-tongue syndrome
- 13.10. External compression headache
- 13.11. Cold-stimulus headache
- 13.12. Constant pain caused by compression, irritation or distortion of cranial nerves or upper cervical roots by structural lesions [G53.8] + [code to specify aetiology]
- 13.13. Optic neuritis [H46]
- 13.14. Ocular diabetic neuropathy [E10-E14]
- 13.15. Head or facial pain attributed to herpes zoster
- 13.16. Tolosa-Hunt syndrome 13.17. Ophthalmoplegic "migraine"
- 13.18. Central causes of facial pain

TABLE 3C Chapter 14. Other headache, cranial neuralgia, central or primary facial pain (ICD-10 R51)

- 14.1. Headache not elsewhere classified
- 14.2. Headache unspecified

TABLE 4 American Academy of Orofacial Pain classification.¹⁸
Taxonomy is based on a mixture of regional, temporal and Axes.

Vascular and Nonvascular Intracranial Disorders

Primary Headache Disorders

Neurogenic pain disorders Episodic and Continuous Neuropathic Pain

PHN

Intraoral Pain Disorders

Temporomandibular Disorders

Cervicogenic Mechanisms of Orofacial Pain and Headaches

Extracranial and Systemic Causes of Head and Facial Pain

Axis II: Bio behavioural Considerations

Table 5 Temporomandibular Disorders RCD TMD ¹⁹
Temporomandibular disorders (TMDs) refers to three groups of conditions:
1. Myofascial pain (pain from the masticatory musculature): <ul style="list-style-type: none"> ▪ with limited opening ▪ without limited opening
2. Disc displacement (abnormal movement of the articular disc): <ul style="list-style-type: none"> ▪ with reduction of the disc [clicking], ▪ without reduction of the disc displacement: <ul style="list-style-type: none"> ○ with limited opening ○ without limited opening
3. Other joint disorders: <ul style="list-style-type: none"> ▪ arthralgia (pain from the Temporomandibular joint), ▪ osteoarthritis (painful crepitus) ▪ osteoarthrosis (an osteoarthritis that is now quiescent)
Other pathology that can affect the Temporomandibular joint complex can include:
Tumours – either primary or secondary Rheumatoid arthritis Hyper or hypomobility

Table 6 Woda et al 2005 classification for chronic orofacial pain adapted from ²⁰

Neurovascular and tension	Neuralgia	Persistent idiopathic
Tension headache Migraine Cluster headache	<i>Primary</i> Trigeminal neuralgia (Classical and Non classical) <i>Secondary neuropathy</i> Post herpetic neuralgia Diabetes mellitus Multiple sclerosis HIV Post traumatic neuropathy Lingual Inferior alveolar nerve injuries	Stomatodynia/Burning mouth syndrome BMS Persistent idiopathic PIFP (e.g. atypical facial pain) Arthromyalgia

Table 7: Differential diagnoses of Acute inflammatory Orofacial pain ⁵⁴

Condition	Prev M:F age	Location & radiation	Frequency and duration	Character/sev erity	Provoking factors	Associated factors autonomic
Acute inflammatory Dental structures conditions				Responds to NSAIDS and paracetamol	Responds to antibiotics if infection related	Caries = tooth decay
Dentine sensitivity	Common 1:1 >30yr	Well localised to a tooth at dento-enamel defect	Elicited less than seconds/minutes	Sharp pain 'neuralgic' seconds	Stimulus usually cold or touching the region less commonly. heat.	Defects at dento-enamel junction usually in association with abrasive lesions caused by inappropriate tooth brushing technique
Cracked cusp	Fairly common 1:1 >25yr	Localized to a tooth but can be very difficult to identify	Few seconds to a minute intermittent dependant on vector of fracture	Sharp pain that may mimic neuralgia. and duration depends on pulpal involvement	Biting on the tooth. Biting on a cotton wool roll on the affect tooth will induce pain and is a good diagnostic modality	Crack within the tooth. If extending to pulp the tooth has poor prognosis. This diagnosis must be eliminated before considering neuralgia.
Pulpal (reversible pulpitis)–exposed dentine due to caries, defective restoration and dental trauma	Very common 1:1	Well localised to a tooth	Elicited and can last for seconds to minutes	Sharp, stabbing, throbbing seconds	Cold or sweet foods provoke, it is rarely spontaneous.	Immediate relief on removal of stimulus Cold foods/drinks or Caries in tooth
Pulpal (irreversible)– chronic pulpitis	Common 1:1	Well -poorly localized intraorally	Elicited lasts minutes – hours	dull, throbbing moderate to severe minutes- hours	Heat and sugary foods rarely spontaneous	Often large restoration or caries. Tooth is tender to percussion in later stages.
Periodontal – chronic apical periodontitis =dental abscess	Common 1:1 >kids or adults	Poorly localised, intraoral Except on biting on affected tooth	Elicited by biting on tooth and spontaneous Intermittent minutes to hours	Mild-severe, dull, throbbing hours	Large carious lesions, restorations, recent trauma	Affected tooth is tender to bite on or induced percussion. Late stages a gum swelling and or sinus may be visible with bad taste related to discharge of pus
Gingivitis and periodontal	Common	Generalized or			Associated with poor	Inflammation of gums

disease are not painful	1:1 adult	localised, intraoral			oral hygiene	Periodontitis (gum disease) does not occur in children unless related to systemic disease
Dry socket Alveolar osteitis Approx 5% post dental extractions Does not occur in children	Fairly common 1:1 adults	Well localized to extraction socket. Risk factors Increased in smokers Steroids Surgical mandibular extractions	Post surgical extraction 3-10 days Dull Continuous	Constant Throbbing, severe Does not respond to antibiotics	Touching or pressure on extraction socket	No localized signs of inflammation (no redness, swelling or lymphadenopathy) Observe unhealed socket with exposure of bone.
Pericoronitis 20-25 years coinciding with the eruption of mandibular third molar teeth Associated with poor oral hygiene	Common 1:1 adults	Pain localized to a partially erupted tooth most commonly wisdom teeth.	Continuous but resolves with good oral hygiene thus providing remission	Dull ache, which becomes throbbing as condition worsens.	Eating chewing around affected tooth and Mouth opening.	With local spreading infection trismus may occur. Local signs include soft tissue erythema, presence of operculum around affected tooth.
Local orofacial structures inflammatory pain						
Mucosal lesions						
Recurrent Herpes labialis	Common 1:1 adults	Usually crusted or ulcerated lesion on upper or lower lip. May have vesicles in the mouth.	Continuous lasts for about 2 weeks	Tingling initially then sharp, annoying and tender	Stress, sunlight, menstruation.	Tendency to get cold sores due to previous infection by herpes simplex virus.
Recurrent oral ulceration	common 1:1 adults	Localized to areas of ulceration	Intermittent, may last for hours,	Sharp, stabbing or throbbing	Catching ulcer when eating	Difficulty in mouth movement and eating. Crops of ulcers intra-orally
Lichen planus Secondary to drugs? If	Fairly common	Pain localized to areas of lesion	Intermittent may last for	Sharp, stabbing or throbbing,	Spicy food or eating and chewing when	Difficulty eating certain foods.

primary check haematinics autoantibodies	1:8 adults	usually bilaterak can be unilateral Gums and cheek mucosa	hours. Sometimes no pain for months	burning	severe.	
Other local structures						
Temporomandibular disorder RDC TMD criteria ¹⁹ I Arthritides Rare OA, Rheumatoid, Stills, Gout and Reactive arthritisP II Arthromyalgia Muscle pain with no joint pathology or dysfunction III TMJ dysfunction with associated crepitus and or clicking indicative of joint distruction and meniscal ericoronitis displacement during movement	Fairly common 1:1 20-38yrs risk factors include clenching, bruxism, gum chewing and hyperflexia	Unilateral. TMJ, intra-auricular, temporal, occipital, masseteric, Pain localized to a partially erupted tooth most commonly wisdom teeth.	Intermittent , may last for hours, may have severe exacerbations Continuous Worse in morning if associated with nocturnal clenching / bruxism, Worse at night if associated with gum chewing or daily clenching habit	Usually dull aching.affecting unilateral or bilateral temporal region Dull ache, which becomes throbbing as condition worsens.	Clenching and grinding, opening wide, chewing E Some occlusal factors for example interference or lack of dental support may be contributory ating, or chewing around affected tooth. Mouth opening.	Signs may include Joint tenderness on palpation (I,II and III) Limitation/ deviation on opening (I,II and III) Tenderness in muscles of mastication. (II) Clicking (III) (disc displacement) on rotational and or translational movements (III) Open or closed locking with/ without reduction in severe cases requiring hospital admission for sedation for reduction Crepitation suggests arthritis in TMJ. (I) Trismus, soft tissue erythema, presence of operculum around affected tooth.
Maxillary sinusitis	Common 1:1 adults	Pain or discomfort over the midfacial region with tenderness of maxillary teeth) unilaterally or bilaterally	Continuous Linked to upper respiratory infections or allergic reactions	Dull ache, with a sense of fullness and tenderness in the overlying cheek.	Worse on bending forwards	Purulent secretions from nose, recent history of cold that cleared up and returned, rhinorrhoea, foreign body in antrum.
Salivary gland disease Sialadenitis may be associated with	Rare 1:1 adults	Parotid glands Or submandibular	Intermittent Meal time syndrome	Can be dull constant or intermittent	If obstructive disease pain is worse on salivation at meal	Facial asymmetry Palpable masses of parotid or submandibular glands

obstructive disease (calculi and or infection) Or viral disease		glands (bi or unilateral) Neoplasia may be blocking duct	swelling and pain at meal times	with intense short episodas on salivation	times	Palpable calculi in Stensons or Whartons ducts or blockage or discharge from ducts Exclude Sjogrens disease
Tonsillar	Rare 8-34 yrs	Mouth / throat	Spontaneous lasting weeks	Intermittent episodes	Immune suppression	
Ear infections Otitis media	kids	auricular	Spontaneous lasting weeks	Intermittent episodes		
Referred pain Cervicogenic C2 C3 Cardiac	Older patients	Lateral face Left face	Intermittent	Dull constant Intense	Head move stress	Headaches Previous MI, angina

Table 8 Chronic Orofacial pain differential diagnosis ⁵⁵

Chronic OFP Neurological Conditions	Prev.	Major location & radiation	Timing	Character/sev erity	Provoking factors	Associated factors
Primary neuropathy Due to Neoplasia benign or malignant Central or peripheral lesions	Very rare 1:1 >50 yrs	Demonstrable neuropathy	Spontaneous Constant worsening	Sudden onset may be pain dysaesthesia. Paraesthesia, anaesthesia or a combination	Mechanical / thermal allodynia and or hyperalgesia	Previous Ca Older age Smoking history Alcoholism Weight loss Night sweats
Secondary neuropathy Many conditions can cause peripheral sensory neuropathies that may present with pain, ¹⁴ these include;	1:1 >50 yrs	Diabetes Viruses (HIV, herpes) Chemotherapy Multiple Sclerosis Parkinson's Malignancy Drugs - Growth Hormone injections Nutritional	After onset of disease or post trauma/infecti on	Can be of 2 types Constant dull moderate pain Intermittent elicited neuralgic pain	Stress, tiredness If elicited mechanical and/or cold allodynia	Functional difficulties Psychological impact
Post traumatic neuropathy ^{54, 56, 57} usually iatrogenic 70% have neuropathic pain Mostly caused by third molar surgery, local anaesthetics, implants and root canal therapy	Fairly common 1:1 >50 yrs	Any area related to previous surgery Demonstrable neuropathy	Post surgical intervention or LA injection Continuous variable intensity paraesthesia, dysthaesthesia	Burning and or neuralgic (mechanical /thermal allodynia and hyperalgesia)	Stimuli of wide variety of functional related pain (touch, cold air, certain foods, kissing, eating, application makeup, shaving, tooth brushing.	History of extraction of impacted teeth, LA, implants, endodontics, facial fractures, orthognathic surgery
Postherpetic neuralgia ⁵⁸ If treated acutely with high dose antiviral, steroids and tricyclic antidepressants PHN will be reduced	Rare >50 years increased prev	Commonly first division of trigeminal (ophthalmic). unilateral	Continuous pain	Burning, tearing, itching dysaesthesias. Moderate.	Tactile allodynia	More than 6/12 after acute herpes zoster. Cutaneous scarring Exclude immune suppression
Trigeminal neuralgia ⁵⁹⁻⁶¹ Primary no known cause Secondary associated with vascular compromise,MS	Rare patient>50 yrs 2:1	Intra or extraoral in trigeminal region. Usually	Each episode of pain lasts for a seconds to minutes	Sharp shooting, stabbing, electric shock like pain which	Light touch provoked e.g. eating, washing, talking	Discrete trigger zones, relief of pain at night. Mild flushing may be noted during paroxysms. If patient <50 yrs exclude MS

⁶² (classical/typical refers to clinical features) * ²		unilateral and V1 or V2	refractory periods and long periods of no pain	is moderate to very severe	Avoidance behavior sleep unaffected	MRI scan exclude central lesions, demyelination and vascular compromise of Vth cranial nerve
Non classical /Atypical clinical features trigeminal neuralgia * ⁶⁰	Rare > 50yrs	Intraoral or extraoral in trigeminal region	Sharp attacks for seconds to minutes, may have persistent or constant background pain with little remission	Sharp, shooting moderate to severe but also dull, burning continuous mild background pain	Light touch provoked but continuous type pain not so clearly provoked	May have small or no trigger areas, variable pattern MRI see above
Glossopharyngeal neuralgia ⁶³	Very rare	Intraoral in distribution of glossopharyngeal. May radiate to ear.	Each episode last for seconds to 2 mins,	Sharp, stabbing, severe	Swallowing or ingestion of cold or acid fluids	Cardiac arrhythmias or syncope may occur in some cases.
Burning mouth syndrome ^{55,64}	5-11% > 60yr Females	Tip and lateral borders of tongue. Also other mucosa may be involved	Continuous May fluctuate	Burning, tender, annoying, tiring nagging pain. Varies in intensity.	Dry mouth, spicy foods.hot foods	Altered taste, denture intolerance
Chronic OFP Neurovascularl Conditions						
Giant cell arteritis ⁶⁵	Rare >50 4:1	May be bilateral mostly over temporal areas scalp tenderness	Continuous, new sudden onset	Aching, throbbing, boring, sharp, moderate/severe	Chewing	Jaw claudication, neck pain, anorexia, visual symptoms, age systemic symptoms, decreased pulse in temporal artery
Chronic tension headache ⁶⁶	Common 1:2 >30 yrs	Usually bilateral over frontal, orbital, fronto-occipital,	Continuous. Daily for at least 15 days a month	Dull aching head pain symmetrical and frequently	Muscle tension and stress. Anxiety, depression	Mild ache which becomes more intense and chronic. Fluctuates during the day. Little nausea or vomiting. Tight band like pain,

		occipital or whole scalp area.		global.		pressing, mild/moderate
Migraine with and without aura ⁶⁷⁻⁶⁸	Common 1:3 10-50	Unilateral with pain beginning in fronto-temporal area within 60 mins of aura	Continuous from 2 hours to one or two days. Less frequent	Throbbing, pulsating pain in attacks. Moderate/severe	Stress, anxiety, dietary (cheese, chocolates), flashing lights, weather changes physical activity.	Aura - visual disturbance. Nausea vomiting, photophobia, better on lying down, numbness or weakness in mouth and hands.
Trigeminal autonomic cephalgias ⁶⁹						
Cluster headache ⁶⁹ Episodic pain free periods Chronic no remissions	Rare 5:1 20-40 yrs	Ocular, frontal and temporal areas.	15 -180 minutes to several hours, from 1 every other day to 8/day	Hot, searing, punctate, very severe	Vasodilators e.g. alcohol during the bout. Stress. GTN, Exercise Relieved drinking water and	Conjunctival injection, lacrimation, nasal congestion, rhinorrhoea, sweating, miosis, ptosis, eyelid oedema,. No nausea Seasonal spring / autumn (weeks to months) Remissions last 6-18 months.
Chronic paroxysmal hemicrania ⁷⁰	Very rare 1:2 30yrs	Ocular, frontal and temporal areas. Unilateral	Pain lasts 2-30 mins, 5-10 daily	Stabbing, throbbing, boring	Head movements Responds to indomethacin	Autonomic symptoms as for SUNCT
SUNCT ⁷⁰ Short lasting, unilateral neuralgiform , conjunctival injection and tearing	Very rare 2:1 40-70 V1 and V2	Ocular, periocular but may radiate to frontotemporal area, upper jaw and palate	Each episode last up to 2mins. Intermittent, several attacks a day and then may remit.	Burning, electrical, stabbing, severe	Neck movements Cutaneous stim mechanical allodynia	Conjunctival injection, lacrimation, nasal stuffiness, rhinorhea and facial flushing
SUNA ⁷⁰ Short-lasting, unilateral neuralgiform headache attacks with autonomic symptoms	Very rare 2:1 40-70 V1 and V2	See above	See above	See above	See above	Conjunctival injection, lacrimation, nasal stuffiness, rhinorhea and facial flushing with scalp sensitivity

Chronic OFP Idiopathic						
Chronic idiopathic oro-facial pain ⁷¹⁻⁷³ <ul style="list-style-type: none"> ➤ 40 years ➤ Female ➤ +/- precipitative event 	Fairly common 1:8 >40 yrs	Poorly localized and presents both intra and extra-orally and variants like atypical odontalgia may be localized to specific teeth/ tooth	Continuous > 2 years No fluctuation No response to multiple medication	Nagging, aching Non compliant with neurological boundaries	Stress, fatigue Associated pan chronic pain conditions Fibro myalgia	Other idiopathic pain disorders and somatic symptoms e.g. chronic widespread pain, irritable bowel syndrome, chronic fatigue. Psychosocial factors – anxiety, depression, adverse life events.
Atypical odontalgia ^{74,75} Persistent dentoalveolar pain (PDAP) Increasing belief that this is post traumatic neuropathic pain	Rare 1:2 >40 yrs	Precisely localized in tooth socket	Continuous > 2 years No fluctuation No response to multiple medication	Nagging, aching No neuropathic zone Neuralgic or burning	Stress and tiredness	Previous surgical or dental event Multiple interventions may have provided temporary relief for weeks months then the pain returns