The **10-AM** Commandments

Exclusion notes

Several queries concerning the application of exclusion notes have recently been received by the NCCH.

ICD-10-AM is an adaptation of the World Health Organization (WHO) ICD-10 which is used in many countries for morbidity reporting. ACS 0033 *Conventions used in the tabular list of diseases* includes discussion of exclusion notes.

The exclusion note meanings were developed by WHO, and, as a basic ICD convention, have remained unaltered in ICD-10-AM. However, for morbidity coding in Australia, we practice multiple condition coding, which means that the type 1 exclusion note should not be followed in the way that it was intended (i.e. only a single code is required). The difference between type 1 and type 2 exclusions is not readily apparent and often causes confusion for the coder.

Type 1 exclusion notes

A **type 1 exclusion note** is intended for use in countries where only the single most important condition for an episode of care is reported. The loose interpretation is *'it' goes somewhere else*. Obvious examples of type 1 exclusion notes are those that follow the hierarchy of the classification. For example, if there is a code for a condition in one of the specialty chapters (e.g. musculoskeletal) but that condition can occur in pregnancy or the perinatal period, then it is likely that the code will have an exclusion note sending the coder to the appropriate 'in pregnancy' or 'in the perinatal period' code for that condition (note that the exclusion note may appear at the beginning of the chapter or block, not only at the code).

Sometimes the code in the pregnancy or perinatal chapter may not have enough detail to translate the diagnostic statement into code. For example, the code may say 'other conditions complicating pregnancy'. In such cases, coders should assign the pregnancy code AND the code where the exclusion note applies. The two codes translate the medical statement.

Ultimately, the coder's main aim is to translate medical statements into code – see ACS 0033 *Conventions used in the tabular list of diseases* which states:

"If the application of an exclusion note results in the medical statement not being fully represented by code(s), then you may need to re-examine the code assignments. A good way to test the appropriateness of your code assignments is to translate the codes back to the medical statement."

It is not critical that clinical coders identify the type of exclusion note, but, rather, that they apply the multiple coding principle. Coders also need to follow advice in standards ACS 0001 *Principal diagnosis*, ACS 0002 *Additional diagnoses* and ACS 0027 *Multiple coding*, as well as specialty standards such as ACS 0401 *Diabetes mellitus and impaired glucose regulation*, and point (f) in ACS 1802 *Signs and symptoms*.

Some examples follow which demonstrate how to interpret exclusion notes to ensure that the medical statement is appropriately captured.

Example 1

Diagnosis: Exhaustion during pregnancy

R53   **Malaise and fatigue**
        …
        Excludes: …
        exhaustion and fatigue (due to)(in):
        …
        • pregnancy (O26.88)

There is an exclusion note at R53 *Malaise and fatigue* which excludes pregnancy (O26.88). However, to fully translate this medical statement into code you need to assign both O26.88 *Other specified pregnancy-related conditions* and R53 *Malaise and fatigue*.

Example 2

Diagnosis: Raynaud's syndrome with gangrene

R02   **Gangrene, not elsewhere classified**
Excludes: gangrene in:
        • atherosclerosis (I70.24)
        • diabetes mellitus (E1-.52, E1-.69, E1-.73)
        • other peripheral vascular diseases (I73.-)

There is an exclusion note at R02 *Gangrene, not elsewhere classified* which excludes gangrene in other peripheral vascular diseases (I73.-). However, to fully translate this medical statement into code, you need to assign both I73.0 *Raynaud's syndrome* and R02, as I73.0 does not include detail about the gangrene. This is reinforced by advice in ACS 0027 *Multiple coding* and point (f) in ACS 1802 *Signs and symptoms*. ▶▶▶

Example 3

Diagnosis: Type 2 diabetes mellitus with a fatty change in liver (non-alcohol related).

K76.0 **Fatty (change of) liver, not elsewhere classified**
Excludes: with diabetes mellitus (E1-.72)

There is an exclusion note at K76.0 which excludes fatty liver with diabetes mellitus with features of insulin resistance. However, to fully translate this medical statement into code, you need to assign both E11.72 *Type 2 diabetes mellitus with features of insulin resistance* and K76.0 *Fatty (change of) liver, not elsewhere classified*. This is reinforced by advice in ACS 0401 *Diabetes mellitus and impaired glucose regulation.*

Type 2 exclusion notes

The loose interpretation of a type 2 exclusion note is *You might think 'it' goes here but it does not.* These notes are 'hints' to ensure correct code selection. We might think that a particular diagnosis should be coded within a particular category, but the exclusion note instructs you to go elsewhere. A good example of this is when two conditions cannot occur together, such as a congenital form versus an acquired form of the same condition. Another example of a type 2 exclusion note is example 2 in ACS 0033 *Conventions used in the tabular list of diseases.* In this example, bronchiectasis is an excluded concept at J44 *Other chronic obstructive pulmonary disease* because bronchiectasis could be mistakenly classified to J44. This does not mean that coders cannot use both J44 and J47 if documentation supports their assignment. Again, review the codes to ensure that the medical statement is fully translated by the assigned codes.

Example 1

Diagnosis: Intussusception of appendix

K56.1 **Intussusception**
Excludes: intussusception of appendix (K38.8)

This exclusion note directs coders to assign K38.8 where the intussusception is of the appendix. K38.8 is the only code required as intussusception of appendix is an inclusion term at this code.

Note also that proper use of the alphabetic index avoids this situation as the index entry of 'Intussusception of appendix' indicates K38.8.

Interesting background information: Exclusion notes were developed for ICD-10 as a means of moving around the tabular list without an index. WHO developed the index after the ICD-10 tabular list was developed which accounts for why some exclusion notes are like this one above. Essentially, this exclusion note is only useful if one is browsing the tabular list.

Example 2

Diagnosis: Cholelithiasis with obstruction

K82.0 **Obstruction of gallbladder**
Excludes: with cholelithiasis (K80.-)

This code has an exclusion note which directs coders to assign the appropriate code from category K80 *Cholelithiasis.* ICD-10-AM classifies the obstruction with a fifth character subdivision for use with conditions listed under category K80, for with or without mention of obstruction. K80.21 *Calculus of gallbladder without cholecystitis, with obstruction* fully describes the medical statement and there is no need to assign K82.0.

Remember, it isn't essential that you can identify the type of exclusion note but that you ensure the codes you select fully translate the medical statement.

The NCCH is contributing to the development of ICD-11, and ensuring that exclusion notes are easy to understand is a desirable outcome of that work. We are particularly encouraging WHO to develop the index in conjunction with the tabular list as this ensures that concepts are included in the index with the appropriate code assignment and thus minimises the use of exclusion notes in the tabular list.

Fulguration of bladder lesion

What is the correct procedure code to assign for fulguration of bladder lesion?

Fulguration is defined as destruction of a lesion by burning. Fulguration may be performed by a variety of methods. However, the most common is that using electrocautery or laser.

Fulguration of bladder lesions is usually performed for treatment of bladder cancers or, in the case of interstitial cystitis, for inflamed areas, called Hunner's ulcers.

Assign an appropriate code from block [1096] *Destruction procedures on bladder* or [1097] *Endoscopic destruction of bladder lesion or tissue.*

Lateral canthal sling

What is the correct procedure code to assign for a lateral canthal sling?

A lateral canthal sling is a relatively new procedure performed for repair of ectropion/entropion.

Block [239] *Procedures for ectropion or entropion* contains several procedures which are specifically used to repair ectropions and/or entropions. However, ACS 0741 *Ectropion/Entropion* also advises that *"Other procedures classified elsewhere in the ACHI Tabular List may be performed to repair an ectropion or entropion, such as grafts, canthoplasty and tarsal strip procedure".*

The correct code to assign for lateral canthal sling is 45614-01 [1684] *Tarsal strip procedure* with additional codes 42590-00 [235] *Lateral canthoplasty* and/or 45626-00 [239] *Correction of ectropion or entropion by suture technique,* as appropriate (Hennessy, Michael, personal communication, 23 October 2007).

Ovarian stimulation/hyperstimulation syndrome

What codes should be assigned for ovarian stimulation/hyperstimulation syndrome?

Ovarian hyperstimulation syndrome (OHSS) is a side effect that can occur in some women who have had follicle stimulating hormone (FSH) injected for egg growth.

Some patients respond excessively to the drug and the dose given. If large numbers of eggs grow and are subsequently released, the high hormone levels emanating from these hyperstimulated ovaries, combined with the increased size of the ovaries, may cause a series of side effects. This combination of symptoms and signs is called ovarian hyperstimulation syndrome.

Assign N98.1 *Hyperstimulation of ovaries,* by following the index pathway: *Hyperstimulation, ovaries (associated with induced ovulation).*

Assign an external cause code by referring to the Table of Drugs and Chemicals and selecting a code for 'adverse effect in therapeutic use' for the specific drug.

Where the type of drug is not specified, assign Y42.8 *Other and unspecified hormones and their synthetic substitutes* by following the pathway in the Table of Drugs and Chemicals: *Hormone NEC, adverse effect in therapeutic use.*

Assign also Y92.22 *Health service area* for place of occurrence.

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Clinical Coder's Guide to Dental Services
## – Part One

Coding of dental procedures is a very specialised area that requires an understanding of dental terminology and anatomy. This article is part one of a two part article written to assist coders to understand common procedures and terms used in dental services.

In ACHI, Sixth Edition dental intervention codes are based on *The Australian Schedule of Dental Services* (Eighth Edition) published by the Australian Dental Association incorporated.

Tooth anatomy

Knowledge of the anatomy of teeth is important in the understanding of both the disease processes and interventions required for the treatment of dental diseases (see Figure 1).

Figure 1 – Tooth anatomy
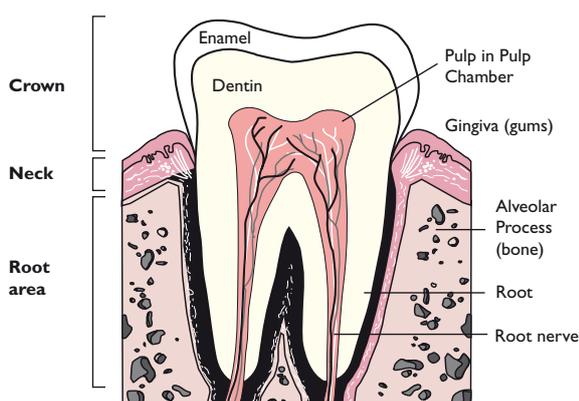
Definitions

Enamel – the tough, shiny, white outer surface of the tooth.

Dentin – the hard but porous tissue located under both the enamel and cementum of the tooth. Dentin is harder than bone.

Cementum – the layer of tough, yellowish, bone-like tissue that covers the root of a tooth. It helps hold the tooth in the socket. The cementum contains the periodontal membrane.

Crown – the visible part of a tooth.

Tooth root – the portion of the tooth that lies beneath the gum line and is embedded in bone. The tooth root serves as an anchor to hold the tooth in position.

Pulp – the soft inner structure of a tooth consisting of nerve and blood vessels.

Gingiva – the gum.

Deciduous teeth – the primary or baby teeth; the first set of teeth that are later replaced by permanent teeth.

Exfoliation – the process by which the deciduous teeth fall out to make way for the eruption of permanent teeth.

Eruption – the process by which the teeth break through the gums.

Figure 2 – Types of teeth

incisor   canine   premolar   molar
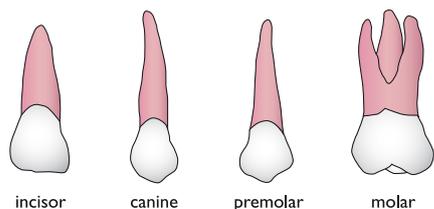
Incisors – the four front teeth in the lower and upper jaw are called incisors. The central pair in the lower and upper jaw are called central incisors and the teeth on either side of the central incisors are called lateral incisors. These teeth are broad and flat with a narrow edge that is used for cutting or snipping off pieces of food.

Canines – the four canine teeth are situated next to the lateral incisors on the lower and upper jaw. They are also referred to as eyeteeth or cuspids. Canines are the longest and most stable teeth in the mouth. They are used to rip and tear food and have a single long root.

Premolars – next to each of the canine teeth are two premolars, also referred to as bicuspids. These teeth are a cross between canines and molars. Like the canine teeth, premolars have sharp points for ripping; however, they also have a broad surface, like molars, for chewing and grinding.

Molars – these are the last three teeth on both sides of the mouth, in the upper and lower jaw. They are numbered first, second or third molar according to their location.

Figure 3 – FDI tooth notification method for permanent teeth and deciduous teeth
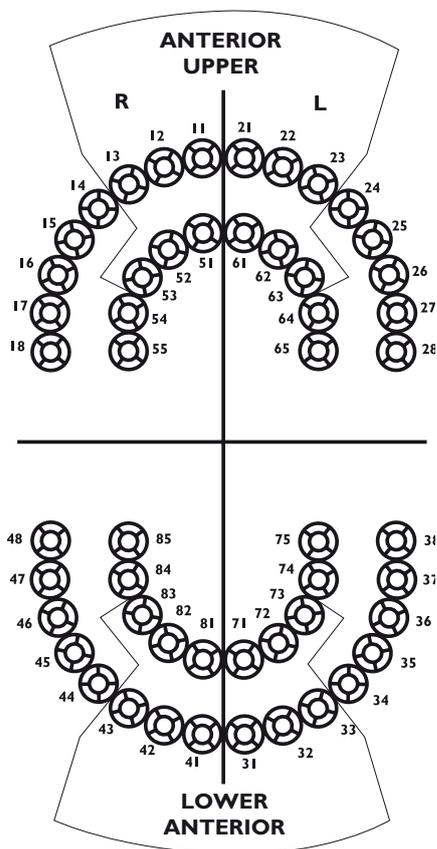
The third molars are also referred to as wisdom teeth. Wisdom teeth are the last teeth in the mouth and are the last teeth to erupt. Molars are the largest teeth in the mouth. They have a broad surface that is used for crushing, grinding and chewing food.

Dental notation

Tooth numbering systems are used by dentists to associate information to a specific tooth. These notation systems are used in medical records and operation reports to help to identify which specific tooth is being treated. Two common tooth numbering systems used in Australia are the Federation Dentaire Internationale (FDI) Two Digit Notification method and the Palmer notification method.

FDI Two Digit Notification Method

This notification method is a combination of two numbers. The first number indicates the tooth's location (upper left or right, lower left or right) and the second number indicates the specific tooth (see Table 1).

Table 1 – Quadrant codes

Adult Teeth	Deciduous Teeth
1 – upper right	5 – upper right
2 – upper left	6 – upper left
3 – lower left	7 – lower left
4 – lower right	8 – lower right

Each quadrant contains eight teeth. The teeth are assigned a number from 1 to 8 starting at the central incisor (1) and working toward the 3rd molar (8) (see Table 2).

Table 2 – Tooth codes

Tooth Codes	
1 – central incisor	5 – 2nd premolar
2 – lateral incisor	6 – 1st molar
3 – canines	7 – 2nd molar
4 – 1st premolar	8 – 3rd molar

The combination of these two numbers make up the FDI two digit notification number (permanent teeth and deciduous teeth – see Figure 3).

Palmer notification method

Permanent teeth

In this method, the teeth are also divided into quadrants and are numbered from 1 to 8 in the same manner as the FDI notification method. The method of identifying the specific quadrant however is different. Each quadrant is identified by an ∟ shaped symbol. The number of the tooth then sits inside the ∟ shaped symbol. The ⌐ refers to teeth in the upper right quadrant, the ∟ refers to teeth in the upper left quadrant. The lower quadrants are identified by the upside down ⌐⌐ shaped symbols. The ⌐ refers to the lower right quadrant and the ⌐ refers to the lower left quadrant (see Figure 4 and Example 1).

Figure 4 – Palmer notification method for permanent teeth

Upper right   Upper left

8 ⌋ 7 ⌋ 6 ⌋ 5 ⌋ 4 ⌋ 3 ⌋ 2 ⌋ 1 ⌋ ⌊ 1 ⌊ 2 ⌊ 3 ⌊ 4 ⌊ 5 ⌊ 6 ⌊ 7 ⌊ 8

Lower right   Lower left

8 ⌉ 7 ⌉ 6 ⌉ 5 ⌉ 4 ⌉ 3 ⌉ 2 ⌉ 1 ⌉ ⌈ 1 ⌈ 2 ⌈ 3 ⌈ 4 ⌈ 5 ⌈ 6 ⌈ 7 ⌈ 8
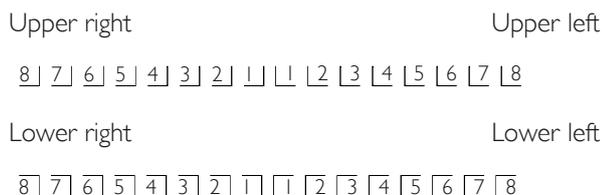
Example 1:

4 ⌋ – Using the Palmer notation, this symbol identifies an upper right first premolar tooth.

Deciduous teeth

The Palmer notification method has a different method of numbering deciduous teeth. The teeth are identified by the letters A to E. The teeth are assigned a letter starting at the central incisor (A) and working toward the 3rd molar (E). The system for the identification of the tooth's position is exactly the same as for permanent teeth (see Figure 5 and Example 2)

Figure 5 – Palmer notification method for deciduous teeth

Upper right   Upper left

E ⌋ D ⌋ C ⌋ B ⌋ A ⌋ ⌊ A ⌊ B ⌊ C ⌊ D ⌊ E

Lower right   Lower left

E ⌉ D ⌉ C ⌉ B ⌉ A ⌉ ⌈ A ⌈ B ⌈ C ⌈ D ⌈ E

Example 2:

A ⌉ Using the Palmer notation method, this symbol identifies a deciduous lower right central incisor tooth.

Position of teeth
Figure 6 – Names of the anterior and posterior teeth.
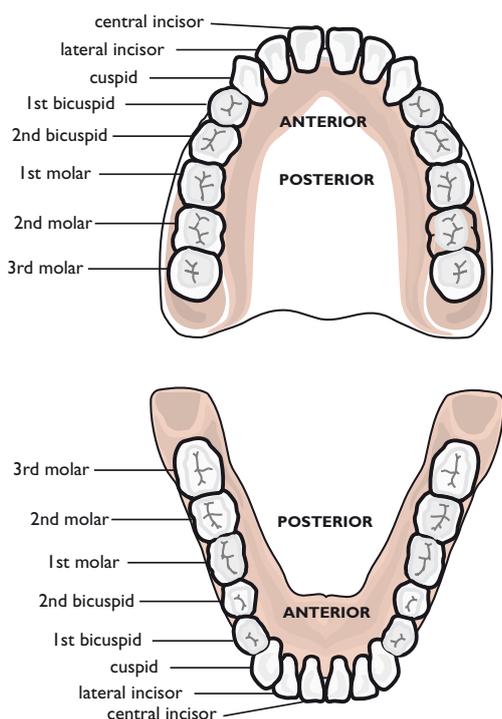
Tooth surfaces

Anterior – are the teeth in front of the mouth, e.g. central incisors, lateral incisors and cuspids.

Posterior – are the teeth at the back of the mouth including molars and bicuspids.

Tooth surfaces

There are five possible tooth surfaces that can be restored – buccal, distal, lingual, mesial, and occlusal/incisal (see Figure 7).

Figure 7 – Tooth surfaces for posterior and anterior teeth
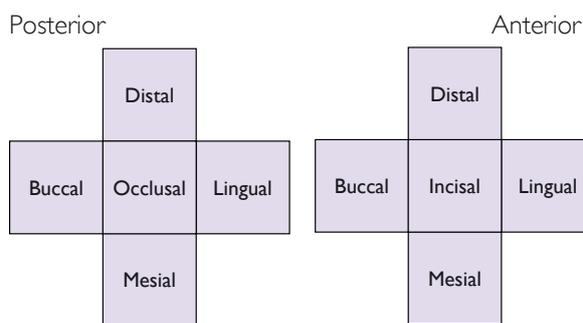
Buccal – is the surface of the tooth that faces toward the cheek.

Distal – is the proximal surface that is orientated away from the midline of the dental arch. It is the opposite of mesial.

Lingual – is the tooth surface next to the tongue.

Mesial – is the proximal surface that is closest to the midline of the dental arch.

Occlusal – is the surface of the tooth that has contact with the opposing tooth.

Incisal – is the surface of the tooth that has contact with the opposing anterior teeth. It refers to the cutting edge of an incisor or canine tooth.

Dental arch – is the curved structure that is formed by the teeth in their normal position.

Dental restorations

Dental restorations or fillings are used to restore function and integrity to the structure of teeth. The most common causes for the loss of tooth structure are dental caries or tooth trauma.

Dental restorations are classified into two types, *direct* and *indirect* (see Table 3).

Direct restorations are performed by placing the restorative material directly onto the tooth. These types of restorations are usually performed in one visit and examples include dental amalgam, glass ionomers, resin ionomers and resin composite fillings.

Indirect restorations involve materials that have been fabricated outside the mouth. Examples include: inlays, onlays, veneers, crowns and bridges.

Table 3 - Restorative material

	Direct	Indirect
Adhesive or tooth-coloured	compomer composite resin (e.g. CR, Z100, AECR) glass ionomer (Ketac, Photac, GIC, Dyract) polymer glass porcelain/ceramic, acrylic	
Metallic	Amalgam (mercury based alloy) Galloy (gallium based alloy) gold foil	chrome cobalt gold non-precious metal

Removal of teeth

Non-surgical extraction – also referred to as simple extraction, is generally performed under local anaesthetic and is performed on teeth that can be seen in the mouth. The tooth is held with forceps which are then moved back and forth to loosen the tooth until it is removed. Sometimes a luxator is used to help loosen the tooth before it is extracted.

Surgical extraction – an incision is made into the mucosa and a mucoperiostial flap is raised in order to extract the tooth. In some cases, the tooth will need to be broken into sections to be removed. Surgical extractions may involve teeth that are not visible in the mouth either because the tooth has broken off or has not yet erupted through the gum. Surgical extractions are also performed if a tooth is impacted.

Tooth impaction – occurs when a tooth fails to erupt through the gum (or only partially erupts) at the expected time. Wisdom teeth, the last teeth to erupt, are the most common teeth to become impacted.

There are four types of tooth impaction – erupted (already in the mouth), full bony impaction (see Figure 8), partial-bony impaction (see Figure 9), and soft tissue impaction (see Figure 10). An impacted tooth may be painless. However, pain and swelling occurs when the tooth tries to erupt through the overlying gum. Pain may be felt in nearby teeth or the ear on that side. A partially erupted tooth may collect food and debris leading to gum swelling and pericoronitis

Types of tooth impaction

Figure 8 – Full bony impaction

wisdom tooth
bone
bone
main nerve supplying lower teeth
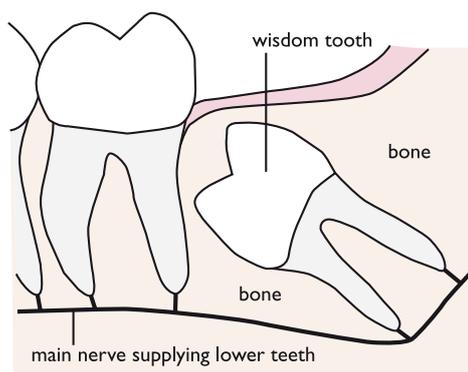
Figure 9 – Partial bony Impaction

impacted low wisdom tooth
inflammation
bone
bone
main nerve supplying lower teeth
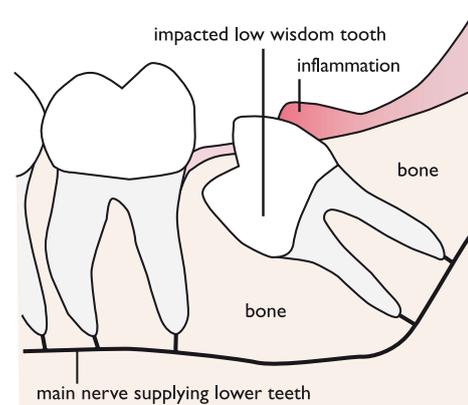
Figure 10 - Soft Tissue Impaction
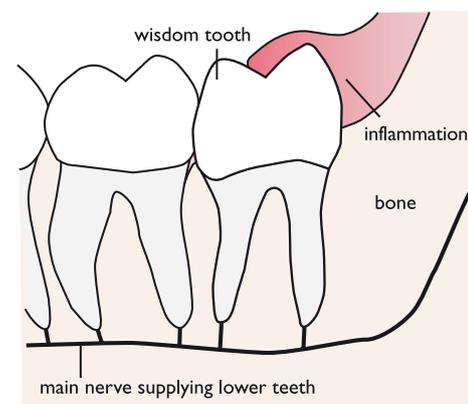
wisdom tooth
inflammation
bone
main nerve supplying lower teeth

Removal of impacted teeth

The procedure for the removal of wisdom teeth varies according to the type of impaction. Wisdom teeth may grow in different directions due to lack of space in the jaw. As a result, the complexity of the surgery depends on the type of impaction. If the tooth has erupted fully, it may be removed by a simple extraction. However, a full bony impaction will require a complex surgical extraction.

Impacted wisdom teeth are generally removed by surgical extraction. An incision is made into the gum and the gum tissue is moved out of the way. This exposes the tooth and the bone overlying it. In order to access the tooth, any bone in the way needs to be carefully removed. Once the tooth is exposed, it may need to be broken into pieces or sectioned in order to be removed. Sectioning the tooth enables the tooth to be removed through the smallest possible incision, with the loss of the least amount of bone. Sectioning the tooth also protects important nerves and blood vessels that surround the tooth. Once the tooth has been removed, the gum tissue is replaced and the wound is sutured.

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Australian Refined Diagnosis Related Groups (AR-DRG)

Version 5.2

AR-DRG is a patient classification scheme based on ICD-10-AM/ACHI/ACS codes. It provides a way of grouping the patients treated in a hospital according to clinical characteristics and resource use.

AR-DRG Version 5.2 incorporates ICD-10-AM/ACHI/ACS Fifth Edition codes.

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