



WINSPERT



# OSCE CASES

## BLUE SET

## BLUE SET-CLUSTER 1

(Clinical Information Gathering)

### CONGENITAL SYPHILIS (VERSION 1)



Mrs Kaur visits the clinic with eight year old Stevie. Mrs Kaur is a foster carer and has been with Stevie for about two weeks and will remain for another two weeks before transitioning to another family. Mrs Kaur has limited medical and dental information about Stevie. Mrs Kaur is primarily concerned about the condition of Stevie's teeth and gums. Upon examination and taking photographs, you suspect Stevie may have congenital syphilis, which could be contributing to motor disabilities, partial vision loss, and hearing loss.

Mrs Kaur needs to report to the Chief executive officer of foster care to update Stevie's schedule. She has the authority to consent to today's examination.

**Please explain periodontal and dental findings and any special investigations that need to be conducted.**

## BLUE SET-CLUSTER 1

(Clinical Information Gathering)

### CONGENITAL SYPHILIS (VERSION 2)



Mrs Kelly visits the clinic with eight year old Stevie. Mrs Kaur provides kinship care to Stevie. Stevie is with Mrs Kelly for two weeks and will continue to stay with her unless advised otherwise by authorities.

Mrs Kelly is primarily concerned about the condition of Stevie's teeth and gums. Upon examination and taking photographs, you suspect Stevie may have congenital syphilis, which could be contributing to motor disabilities, partial vision loss, and hearing loss.

Mrs Kelly needs to report to the authorities to update Stevie's schedule. She has the authority to consent to today's examination.

**Please explain periodontal and dental findings and any special investigations that need to be conducted.**

## CASE:

### Opening remarks/ introduction:

Greet the patient and explore the chief complaint of a patient/ an adult accompanied with the patient. Always ask an open ended and concise question.

Mrs Kaur, I see you are here for concerns regarding Stevie's teeth. So, tell me more about this.

(You could also add empathy here, mentioning Mrs Kaur, it's so nice to know you want to take active efforts for Stevie's teeth).

### Exploring the chief complaint:

Mrs Kaur, what concerns do you have regarding Stevie's teeth? Does Stevie have concerns too? Does she have any pain/ discomfort/ bleeding ?

Did you notice any change in Stevie's behaviour (eating habits, sleeping or playing affected) regarding her teeth?

### Relevant history:

#### 1 Medical History

In the scenario, it's mentioned she has limited information, so explore accordingly. What limited information do you have Mrs. Kaur? If she has any regular GP? Here target Hutchinson's triad difficulties. Ask, if Mrs. Kaur has noticed any motor difficulties, hearing or eye issues? Other than that you can ask, if she takes any medications?

#### 2 Dental History

Similarly, what is she updated with in terms of dental aspects. If she knows about any regular dental visits? Last dental visit? Any major dental treatments in the past?

#### 3 Oral Hygiene habits

I understand Stevie is with you for a limited time, but what are her oral hygiene habits? Ask about her brushing, flossing, supervision and toothpaste? If in any manner, she is not doing ideally, we will try to promote health in this section or later while explaining she could be at high risk of caries

#### 4 Diet and Water

What does Stevie's diet consist of mainly (ask about amount of sugars, consistency and frequency) ? What is her daily water intake? You can correlate here with the risk factor for caries or after explaining her tooth structure (mulberry molar

#### 5 Social history

(In this case, there could be chances of Mrs Kaur mentioning about Stevie getting bullied in the school because of her teeth appearance). In such situations, empathise yet affirm to have several aids and approaches to deal with bullying.

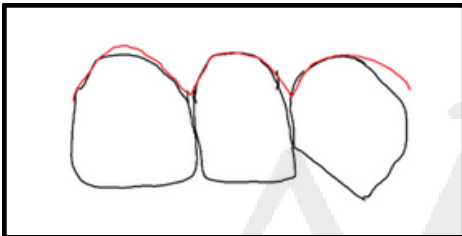
### Explanation of probable diagnosis:

Always explain the probable diagnosis with the history that you have taken and with the help of photos or x-rays taken or shown.

As we can see here from the photos that I have taken, Stevie's teeth have a particular appearance on the front teeth. There is a notch and spacing present on the front teeth and the back teeth have several elevations and depressions. These are peculiar characteristics of Hutchinson's teeth (Hutchinson's incisors and mulberry molars) that are manifested in congenital syphilis. Were you aware about these appearances Mrs Kaur?

Moreover, if Mrs Kaur mentions in the history about motor disabilities, eye or hearing issues, you can include that in description and conveying about the hutchinson's triad which is why you are leaning more towards Stevie having Congenital syphilis.

Also, we could appreciate that her gums are not conformed well to the tooth due to spacing in between her teeth. (mention about rounding off present with interdental papilla).



You can assure her by saying, I do understand you want the best for Stevie. However, we will need to go stepwise by starting with her examination today and do a few tests from my end. In terms of treatment, she will need a multidisciplinary approach or we can do everything for her under one roof by referring to a children's hospital (which is out of my scope of practice).

So, how about Mrs Kaur, I will do a detailed examination for Stevie today and give you a detailed report of her findings. You can then present this to the organisation and we can go from there.

### Investigations:

- 1 Start with an **Extraoral Examination** - check her Face Profile.
- 2 **Intraoral:** Detailed look around and count all teeth,  
Check the gum depths with the calibrated instrument
- 3 **Radiographs:** Bitewing to check decay  
Panoramic x-ray to understand the spaces and unerupted teeth.

In the meantime, how about Mrs Kaur, because Stevie is at risk of developing decay due to the complex structure of her teeth (and motor disabilities if the patient gives you this history), we can focus on preventive measures. Then advise on oral hygiene habits (brushing twice daily, flossing, supervision, electric toothbrush, fluoride toothpaste).

And then mention about diet chart to understand her eating habits influencing oral health. (Ideally according to Cameron, the diet chart needs to be detailed on 2 weekdays and 2 weekends, however, you can say get me a schedule of 7 days, as the bigger sample will give us a greater picture on eating habits).

### Important points in this case:

- 1 **Consent by foster carer or kinship carer**
- 2 **Concerns of the carer or Stevie.**
- 3 **And if examination consent - please stick to relevant history and perform relevant investigations.**

### Important links to read to understand this case better:

#### Foster Care:

<https://services.dffh.vic.gov.au/foster-care>

#### Kinship Care:

<https://services.dffh.vic.gov.au/kinship-care>

#### Congenital Syphilis:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2819963/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4972761/>

[https://www.rch.org.au/dentistry/about\\_us/Eligibility\\_criteria/](https://www.rch.org.au/dentistry/about_us/Eligibility_criteria/)

<https://www.health.vic.gov.au/infectious-diseases/congenital-syphilis>

<https://www.health.vic.gov.au/publications/congenital-syphilis-important-information>

<https://www.healthline.com/health/hutchinson-teeth#pictures>

#### Flossing Fact Sheet:

<https://www.teeth.org.au/media/ecophwyy/ada2022-factsheet-tips-for-cleaning-between.pdf>

#### Bullying in Australia:

<https://www.aihw.gov.au/reports/children-youth/australias-children/contents/justice-safety/bullying>

#### Health Promotion Articles (dental care in kids):

<https://www.teeth.org.au/dental-care-for-kids>

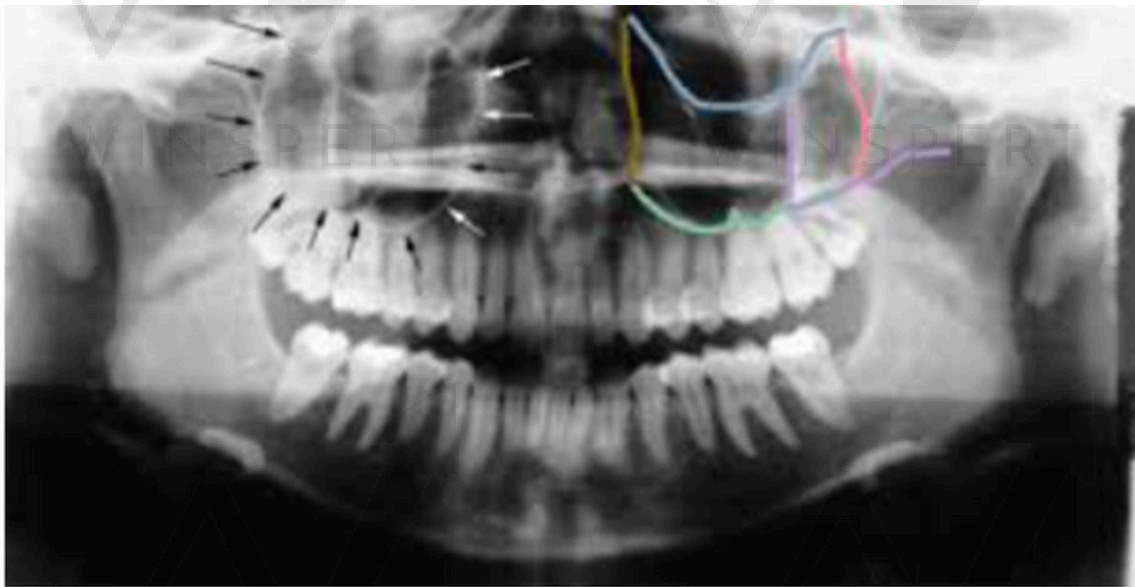
<https://www.teeth.org.au/watch-your-mouth-podcast/paediatric-dietician-advice-on-food-drink-for-infants-and-children>

<https://www.teeth.org.au/watch-your-mouth-podcast/dental-care-for-children-with-additional-needs>

## BLUE SET-CLUSTER 1

(Clinical Information Gathering)

### SINUSITIS CASE (VERSION 1)



Mr./Mrs. Argenti, a 62 year old patient, has come to your clinic today with complaints of severe pain originating from a tooth in the upper right quadrant. He also reports experiencing halitosis.

You took an OPG, revealing that all teeth in the upper arch have undergone root canal treatment. Missing teeth are 17, 16 and 15. Moreover, all the RCT treated teeth are capped except for the 14.

Mr. Argenti is visibly upset and is requesting the removal of the teeth in the affected area.

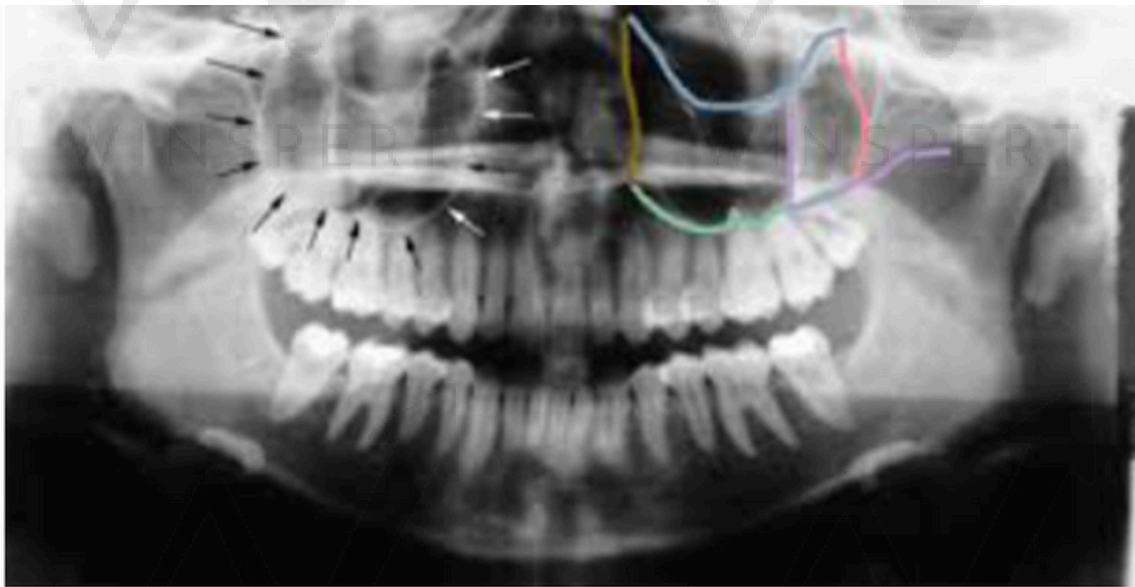
Patient also had recent episodes of cold flu that kept on happening over months.

**Please provide your differential diagnosis, outline the necessary investigations, and address the patient's concerns accordingly.**

## BLUE SET-CLUSTER 1

(Clinical Information Gathering)

### SINUSITIS CASE (VERSION 2)



Mr./Mrs. Argenti, a 62 year old patient, has come to your clinic today with complaints of severe pain in the upper right region. He also reports experiencing halitosis.

You took an OPG, revealing that all teeth in the upper arch have undergone root canal treatment. Missing teeth are 17, 16 and 15.

Most of the teeth are RCT treated in the upper quadrant.

Mr. Argenti is visibly upset and is requesting the removal of the teeth in the affected area.

Patient also has a history of hay fever.

**Please provide your differential diagnosis, outline the necessary investigations, and address the patient's concerns accordingly.**

## CASE:

### Opening remarks/ introduction:

Greet the patient and explore the chief complaint of a patient. Always ask an open ended and concise question.

Mr. Argenti, tell me more about the pain that you are experiencing in the upper right area. ("What's brought you in to see me today?" or "Tell me about the issues you've been experiencing.")

(Add empathy by saying: I'm so sorry to see you in this state, it's not the best day for you Mr Argenti)

### Exploring the chief complaint:

#### Site

- "Where is the pain?"
- "Can you point to the tooth or area in question?"

#### Onset

- "When did the pain start?"
- "Did it come on suddenly or gradually?"

#### Character

- "How would you describe the pain?" (e.g. achey, sore, throbbing, sharp)
- "Is the pain constant or does it come and go?"
- "Is it similar to the one experienced before getting any treatment?"

#### Radiation

- "Does the pain spread elsewhere?"

#### Associations

- "Are there any other symptoms that seem associated with the pain?" (e.g. bad taste, fever)
- "Any nasal congestion observed?"

#### Time course

- "How has the pain changed over time?"

#### Exacerbating or relieving factors

- "Does anything make the pain better?" (e.g. analgesics)
- "Does anything make it worse or trigger it?" (e.g. cold, touch, bending, lying down)

#### Severity

- "On a scale of 0-10, how severe is the pain, if 0 is no pain and 10 is the worst pain you've ever experienced?"

## Relevant history:

### 1 Dental History

In this section, take the dental aspect first as it will be more relevant to ask. Target on the previous dental appointments, ask how did he go with it? Also ask, if the treatment went well from his end? As the OPG has missing teeth in the area, how did he go with the extraction and when was it done? (This will hint at if OAC is present). The one RCT treated 14, which is not with the crown, ask the reason for the same? (The patient after this question, can ask you if the other dentist did a bad job?) Oral hygiene habits are important, yet not too relevant here if the time does not permit.

### 2 Medical History

(Mnemonic - **M**edical condition and **M**edication **B**lood test **A**llergy)(MBA)

Ask about the recent episodes of cold flu? If he went to the GP for the same? Did he take any medications? If yes, which and how?

Anything else if a patient wants to update his medical history?

### 3 Social History

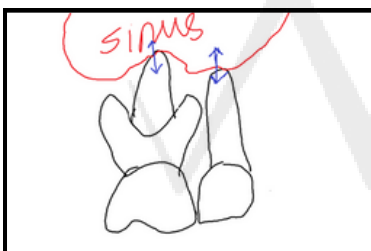
Ask if a patient is experiencing stress in life lately?  
If yes, does the patient grind his teeth?

## Explanation of probable diagnosis:

Always explain the probable diagnosis with the history that you have taken and with the help of photos or x-rays taken or shown.

Mr Argenti, I understand you are leaning more towards taking the tooth out, however, teeth could not be the most probable cause of the pain as there are few situations that mimic as a toothache. Moreover, after tooth removal if the pain doesn't settle, I do not want you to be without a tooth and the similar pain experience.

From the panoramic x-ray and your description of pain, I'm inclined towards the pain coming from one of the structures close to the teeth. Let me explain with the help of an x-ray. Can you appreciate the hollow dark spaces situated near cheek areas just above the upper teeth? They are in close approximation to each other, we call them as maxillary sinus (they are air filled cavities)



Also, I noticed white cloud appearing in one sinus. Along, with you having recent episodes of cold and significant pain on bending are characteristic features of maxillary sinusitis. There could be few reasons for the pain mimicking a toothache.

### Differential diagnosis:

There could be two most probable possibilities, either pain is coming from the maxillary sinusitis that never settled because of constant hay fever or cold episodes.  
Or it could be post endodontic sinusitis (as it is unilateral).

The rest are: Oro-antral communication, trigeminal neuralgia, pain from the post endodontic treated tooth, apical periodontitis of the teeth in the area.

The rest are: Oro-antral communication (because of missing tooth in the adjacent area and if the extraction was done recently, trigeminal neuralgia - rare cause, pain from the post endodontic treated tooth, apical periodontitis of the teeth in the area.

### Investigations:

To help you best in terms of pain today, is it okay if I perform a few tests?

I will start by checking the outside of the mouth on your face, by checking muscles on your cheek and gently touching the area on the upper right side.

Inside the mouth, I will carefully check the area of concern and also the rest of the teeth. Next, I will check the gum depths of the teeth. Also, I will feel the gums in the area by a procedure called palpation.

Radiograph: I will take a specific x-ray of the region called a periapical x-ray.

(If the teeth are not endo treated - you can perform vitality tests by explaining the procedure).

There could even be a possibility of a crack - you can do a Frac finder test

### Important points of this case:

- 1 Reassure the patient that pain will settle down if we find the root cause.
- 2 Validate his emotions regarding pain, as he will be frustrated because of unsettling pain, yet don't point out at anyone for doing wrong. Act neutral.
- 3 When asked about the other dentist doing a bad job, always say it's hard for me to comment as I do not have the records.
- 4 Differential diagnosis and reassurance if the patient is understanding each situation.

**Important links to read to understand this case better:****Allergy or common cold responsible for sinusitis:**

<https://www.allergy.org.au/patients/allergic-rhinitis-hay-fever-and-sinusitis/sinusitis-and-allergy>  
<https://www.healthdirect.gov.au/sinusitis>

**Maxillary sinusitis of endodontic origin:**

<https://www.nernessendodontics.com/maxillary-sinusitis-of-endodontic-origin>

**Handling complaints in Australia:**

[https://www.dentalprotection.org/docs/dentalprotectioninternationallibraries/dental-advice-booklets/dental-advice---handling-complaints-\(au\).pdf](https://www.dentalprotection.org/docs/dentalprotectioninternationallibraries/dental-advice-booklets/dental-advice---handling-complaints-(au).pdf)

**Medical history relevance:**

<https://www.teeth.org.au/medical-history>

**Teeth grinding:**

<https://teeth.org.au/teeth-grinding>

## Date 24/06/24

Clark

Lutz

08/08/1969

**Reevaluation**

Clinician **Dr. ABC**

**Figure 1: Periodontal chart showing clinical data for patient 1 (left) and patient 2 (right).**

**Table 1: Clinical Data for Patient 1 (Teeth 15-11)**

Parameter	15	17	16	15	14	13	12	11
Mobility	0	0	0	0	0	0	0	0
Implant								
Furcation								
Bleeding on Probing	+	+		+				+
Plaque								
Gingival Margin	0	0	0	0	0	0	0	0
Probing Depth	10	8	12	10	7	4	4	5

**Table 2: Clinical Data for Patient 2 (Teeth 21-28)**

Parameter	21	22	23	24	25	26	27	28
Mobility	0	0	0	0	0	0	0	0
Implant								
Furcation								
Bleeding on Probing	+					+	+	
Plaque								
Gingival Margin	0	0	0	0	0	0	0	0
Probing Depth	8	8	12	10	10	2	2	1

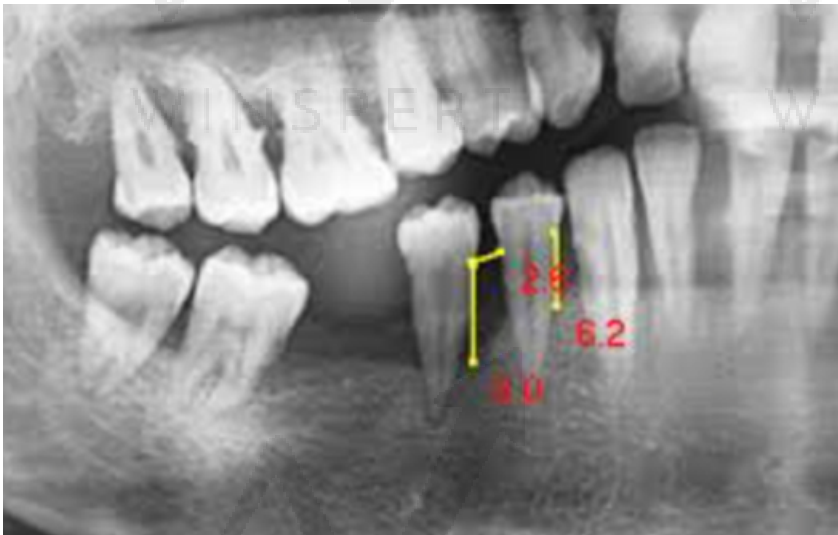
**Summary Statistics:**

- Mean Probing Depth = 1.9 mm
- Mean Attachment Level = -1.9 mm
- 1% Plaque
- 7% Bleeding on Probing

## BLUE SET-CLUSTER 2

(Diagnosis and Management)

### PERIODONTALLY AFFECTED LATERAL INCISOR



Mr/Mrs. Luiz, a 55-year-old school teacher, is visiting your clinic today with complaints of pain and mobility in the upper left lateral incisor. You do an examination and take an OPG. It reveals significant bone loss around most of the teeth, with up to 90% bone loss around the lateral incisor.

A periodontal chart is given with probing depths of 9, 11, 8 mm for most of the teeth, and 12 mm pocket around the lateral incisor.

Medical history includes hypothyroidism, bone pain, and gastrointestinal issues. The patient is taking thyroxine, vitamin D, and calcium. There is no history of smoking or alcohol consumption.

**Address the patient's concerns in terms of replacement options and explain both the short-term and long-term management plans.**

## CASE:

### Opening remarks/ introduction:

Mrs. Luiz, I can understand it must be uncomfortable for you with this wobbly front tooth and having to teach students with the risk of it falling. (Patient will have some comments after this). Can you tell me more about the pain experience with this tooth? Did you appreciate any bad taste or pus coming out?  
As you are keen for replacement options, do you have anything in mind?  
What are your expectations for today? Also do you have any price range in your head for this replacement option?

### Diagnosis

Mrs. Luiz, I have done my set of examination of your teeth. Let me explain with the x-ray taken here. Can you appreciate how the support of the tooth is varying for all the teeth, and specifically for this front tooth, it is lost to a greater extent making it very wobbly. When you mentioned, there was some pus coming from the area and how it became wobbly over the time.

It suggests you are experiencing:  
Periodontal abscess/ Localised advanced periodontitis with the generalised moderate periodontitis.

I apologise for using such jargon terminologies. Let me explain them with the help of the x-ray taken. Can you appreciate how the supporting bone is uneven throughout. That's why we term this as a generalised and moderate level of supporting structure loss. With the front tooth which is localised there is an advanced loss of supporting tissues on this front tooth. Hence, the term. Thus, it's not just one tooth of a concern but we need to address all your teeth Mrs Luiz.

And few things are coming to my mind to manage your situation. However, let's talk about the immediate replacement for this wobbly tooth as you urgently want to look into it.

### Short-term options:

These options are as the name goes short lived and serves temporary measures. For you:

#### 1 Fibre-reinforced bridge

It is aesthetic but not functional. Let me explain with the diagram. An acrylic tooth is going to be supported by taut fibres that run from the behind of each adjacent tooth. And these fibres are fixed in that position.

#### 2 Essix retainer

it is a clear mould of your teeth, like an aligner. Like this diagram. Advantage is that the appearance will be natural. However, you need to take it out while eating, which won't be comfortable for you in school, right ?

#### 3 Immediate denture

1.This option is good, however, not for an immediate purpose. The first step is to make an impression and then the lab will send us the dentures. It will take a week. In the meantime, we can splint the tooth with the flexible wire. And after the denture arrives, we can remove the tooth and place the denture in the same appointment.

What are your thoughts Mrs Luiz? Are you leaning towards any option ? Please do not hesitate if you want me to explain about these options again.

Mrs Luis, just like our teeth, replacement options also need care from us and the dentist. Hence, regular visits are important to improve the longevity of our teeth and the replacement options.

Now coming to the long term option for you, as we know, we will need a permanent option after the temporary measure. And our gums and the bone are the foundation of our teeth. If they are compromised, our efforts towards teeth and replacement will go in vain. Hence, my concern for your rest of the teeth, gums and the bone is something I would want to talk about. The gum depths and the bone levels from my examination do not look at the healthy levels. What could be done for those is something we need to understand after we know what is the reason for this to happen. To understand that, can I ask you a few relevant questions?

### Relevant history and explanation of risk factors:

#### 1 Medical History

Is your GP aware of all the medical conditions and medications that you are taking? Is everything under control? Is any of the medication over the counter? When was your last blood test?

Have you got your bone pain checked? We could check with your GP for any bone condition.

The reason I ask is, our mouth is a reflection of our general health and few medical situations and medications impact our oral health.

#### 2 Dental History

When was your last dental visit? What is your routine to maintain your teeth and gums? (ask about interdental aids)

Our efforts to maintain oral hygiene have the most vital role on oral health.

#### 3 Social History

Do you smoke or have you smoked in the past Mrs Luiz?

(If no, then no need to give reference.) If yes, then, Mrs. Luiz smoking has a powerful impact on supporting tooth structures in the long run by increasing the load of gum eating bacteria, reducing the saliva flow and increasing their count and reducing the healing potential by compromised blood supply.

Moreover, stress also has a role on gum health by reducing healing potential. And I understand being a teacher is not easy. Do you think you are stressed more lately?

### Long-term options:

They range from removable to fixed options. What are your thoughts on them? I will give you detailed brochures on them to read about. But, as I mentioned, the best for Mrs Luiz is to manage and stabilise your current gum condition.

For her: no replacement in terms of long term is ideal as,

- Implant is the best single tooth replacement. However, it's not the best option for her. But because it involves surgical procedure and needs bone for its support. Patient has minimal bone in the area. Also, she would require stabilising her periodontitis and do a bone grafting procedure before considering implant as an option.
- Fixed option: Fixed conventional bridge or Maryland bridge they will not be ideal as well. Her adjacent teeth are also compromised with their bone support.
- Removable denture: This could possibly be the best option for her, as she could be at risk of losing more teeth, which could be added on to the denture later. However, keeping up with the oral hygiene should be on priority list.

### Management:

- 1 And thus best would be to see a gum specialist we call that as periodontist. He/ she will provide detailed management for you.
- 2 Other than that, everything starts at home, so we need to prioritise our oral hygiene. I will go through all the effective techniques to best look after our teeth.
- 3 Referral to your GP, regarding your medical conditions and to get the baselined blood test records.
- 4 If smoking is present, then educate on how we want to prevent this tooth condition from deteriorating further and save the natural teeth. I understand quitting smoking is easy to say, however it's difficult to implement. And thus, I will be with you in this journey and there are several ways to make it happen. Social groups, few applications on phone and some active intervention from GP and your dentist to provide prescriptions if necessary.

What do you think of all this, Mrs. Luiz?

### Important points for this OSCE:

- Understanding the patient needs first (she is keen on knowing the replacement options). Focus on that and which option is suitable for her.
- Then explanation of diagnosis and correlating to the finding of examination.
- Short term replacement options detailed explanation, taking into consideration patient demands.
- Risk factors discussion with relevant history.
- Stressing the importance of management of the gum condition before considering long term options.

### **Important links to read to understand this case better:**

#### **Thyroid problems and oral health:**

<https://www.myperiopro.com/about-us/blog/2021/december/the-connection-between-thyroid-problems-oral-hea/>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6305095>

#### **Periodontitis and gastrointestinal diseases:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10462160/>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8955434/>

#### **Fibre-reinforced bridge:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7030968/>

#### **Essix retainer:**

<https://vivantdental.ca/blog/essix-retainers/>

#### **Immediate dentures:**

<https://portal.ada.org.au/watch?v=438>

#### **Tooth replacement options explained very well:**

<https://pashadental.com/resource/tooth-replacement-options/>

#### **Smoking: it's effects on the body and quitting guidelines:**

<https://www.health.gov.au/give-up-for-good?>  
<https://www.quit.org.au/>

#### **Periodontitis (By ADA):**

<https://www.teeth.org.au/watch-your-mouth-podcast/gum-disease-periodontitis>

**BLUE SET-CLUSTER 2**  
(Diagnosis and Management)  
**PEG LATERAL CASE (VERSION 1)**



Ms Nguyen, an 18 year old new patient, has come to your clinic today with concerns about the appearance of her front tooth. She recently graduated from high school and has begun studies in the university. She also works part-time at a pub. She has generalised anxiety and is taking diazepam 10mg twice daily.

**Diagnose and formulate a management plan to address her concerns.**

## BLUE SET-CLUSTER 2

(Diagnosis and Management)

### PEG LATERAL CASE (VERSION 2)



Ms Nguyen, an eighteen year old new patient, has come to your clinic today with concerns about the appearance of her front tooth. She recently graduated from high school and has begun studies in the university. She also works part-time at a pub and has a new partner who constantly tells she looks like a vamp. She has generalised anxiety because of changes in her life and is taking diazepam 10mg twice daily as prescribed by GP.

**Diagnose and formulate a management plan to address her concerns.**

## CASE:

### Opening remarks/ introduction:

**Patient name**, I understand you are here because of the few concerns regarding your front tooth. Tell me more about it?

(In the version 2 case, the patient will say she has no concerns but the partner calls her vampire and thus its appearance has been brought to attention).

After listening to her - you could add saying I'm so sorry **patient name**, I understand it's not something nice to hear like this, especially from your loved ones. **Patient name**, this is a safe space and if you want to be heard, I assure you to be there.

### Exploring the chief complaint:

**Patient name**, what are your thoughts about this tooth? Did you have any issues in the past or now (like pain, bleeding in the area or any sensitivity?)

### Short relevant history: (MH, DH, FH, and stress)

Focus on medical history. Ask (**patient name**) about the M/H that's mentioned in the history. I happen to see you are taking diazepam. Is that helping you? Since how long are you taking diazepam? Is it prescribed by the GP?

I'm glad to know that diazepam is working for you. Have you tried any other methods previously? (If a patient says yes, then mention saying I'm happy that diazepam works good for you. In the end, we want the best for you) If not then - Ms. **patient**, relying on medications in the long run is not ideally suggested as it could have few repercussions on our body. There are several ways to mitigate and work towards anxiety, I can provide you with brochures explaining the same. You can go through the same and discuss in detail with your GP (I can provide a referral to GP).

Also, when was the last time you visited a dentist? And what was the reason? (**Patient might say, I have anxiety with respect to the dental settings and hence I avoid it unless it's really urgent**). Assure her by saying, I can totally understand because you are not alone with the same thoughts. Ancient dentistry and the noise of drills with no direct vision of what's happening inside your mouth can make anyone anxious.

Because of such understanding, we have few ways to mitigate it. You can bring your loved ones with you for the appointment, also you can get your headphones and listen to calming music or we can play something for you on the TV screen.

I believe building a positive and trustworthy relationship with patients will be beneficial. I want to build the same with you, as visiting dentists regularly is important to avoid complications of late disease and prevent it at an early stage.

Also, I happen to notice, you are juggling between work, university, studies and personal life. A lot is going on, how are you coping with everything? (**Manage stress here, reference from the links provided**)

Are you aware, if you grind your teeth (because of stress)?

### Explanation of probable diagnosis:

Ms. (**patient name**), let me explain with the help of a photo taken by me. Can you appreciate how distinctly small this tooth is? This form of tooth is infrequent yet familiar, we call it **microdont** and based on the shape, **peg lateral tooth**.

(patient will have comments after this, if not then you ask - are you following so far? Do you want me to explain again?)

Microdont means a tooth is smaller than it should be.

(You can explain the reason - It could be because of several reasons most commonly to be inherited from parents).

### Management:

What are your hopes with today's appointment? (**Patient will say i just want to know about options today or will mention to do something for today's appointment - In both the options it is wise to do a mock up for the patient and give brochures to understand all the options and be given some time to think before going ahead with treatment**).

I can lay out a few options for you. (Patient could demand for no drilling and no anaesthetic options) I would want to take one periapical x-ray to understand what could be happening below the gums in this tooth region.

To begin with, let's go from minimally invasive options. I also want you to understand there's always an option of no treatment.

- **Composite filling** (Tooth coloured filling) - Advantage of chairside, quick results and economical. Disadvantages - It could stain (So ask, how's the patient's diet here)
- **Lumineers** (Like a tooth clip ons) - Advantages - Minimal prep required and aesthetic. Disadvantages - Expensive, not durable.

Once, you are comfortable with dental settings and want to look into permanent options:

- **Veneer** - Advantages: Natural looking option, some adjustments to the teeth are done. Disadvantages: It costs more.
- **Crowns** - Advantages: Long lasting option, Disadvantages - More cutting of the tooth involved.

After explaining everything, ask the patient if she is following everything or she wants you to repeat any information. I will provide you with brochures to understand each option better pictographically.

**Important points for this case:**

- Patient's thoughts about this tooth, rather than her partner's.
- Patient factors for management like: vulnerability in a new relationship, exams and new university life, juggling between part-time job, studies and new relationship.
- Diazepam medication for her anxiety- understand that if her anxiety is general or dental related. If it's prescribed by GP, there are higher chances she has tried all other alternative methods. So, understand the reason for diazepam first, then help her understand its effects.
- In management, after knowing from her history if she doesn't want to change actively. Assure her, we can discuss all the options and then think about it after having a detailed knowledge about them. Also, ask how she feels about dental experiences, if she is anxious, focussing on creating a trustworthy relationship with a patient is important. Giving options to make her dental experience at ease and a positive one.

**Important links to read to understand this case better:****Management of anxiety:**

<https://www.betterhealth.vic.gov.au/health/healthyliving/Generalised-anxiety-disorder#self-help-strategies-for-generalised-anxiety-disorder>

**Management of stress in general:**

Free support within respective universities.

<https://www.studymelbourne.vic.gov.au/living-here/health-safety-and-wellbeing/archived/study-well/how-to-manage-stress>

<https://www.mhfa.org.au/>

<https://www.betterhealth.vic.gov.au/health/healthyliving/stress>

**Management of the peg lateral:**

<https://www.aihw.gov.au/family-domestic-and-sexual-violence/resources/fdsv-summary>

**Abuse and their types, also approach towards abuse:**

<https://fullstop.org.au/get-help/about-violence-and-abuse/types-of-domestic-and-family-violence>

<https://www.racgp.org.au/FSDEDEV/media/documents/Clinical%20Resources/Guidelines/Whitebook/Abuse-and-violence-working-with-our-patients-in-general-practice.pdf>  
(suggested in ADC practical handbook)

**Lumineers:**

<https://www.healthline.com/health/veneers-vs-lumineer>

## BLUE SET-CLUSTER 3

(Clinical Treatment and Evaluation)

### INCISORS AFFECTED BECAUSE OF SPORTS TRAUMA



#### (PA X-ray of teeth is given)

Amelia John, a 12-year-old patient, has arrived at your clinic accompanied by her father. Her father reports that Amelia was struck in the face with a hockey stick approximately 30 minutes ago and was not wearing her mouth guard at the time. She did not lose consciousness and has not experienced any vomiting.

Upon examination, you observe that tooth 11 is displaced palatally, and tooth 21 is fractured up to the dentine level, although the pulp is not exposed. Additionally, she has a minor cut on her lip resulting from the trauma.

Further investigations reveal that tooth 11 did not respond to vitality testing, while tooth 21 elicited a painful response that subsided after a short period.

**Explain the situation to Amelia's father and discuss both the immediate and long-term management plans.**

## CASE:

### Opening remarks/ introduction:

Mr. John, it's not easy for you to see your daughter go through this. Especially, when the incident did not happen in front of you. (Patient will comment something after this). I have had a look inside the mouth, and I happened to notice a broken piece of tooth, was it found at all Mr. John? (Did the school nurse notice it?) I'm glad she did not lose consciousness or have any signs of concussion. But, did she cough at all?

(The reason is if the broken piece is not found, sometimes it could be swallowed and the person can start coughing).

I have done my set of examinations for Amelia, however, it's best to be seen by a GP as well to check if she will need any booster dose for tetanus.

### Explanation of the affected teeth:

After examining her thoroughly and doing a few tests, I have come to a diagnosis. Let me explain to you with the help of a photo taken by me. Can you appreciate how this tooth is broken? The good news is when I was doing a test of response, Amelia felt cold which means it hasn't affected the tooth nerves and blood vessels and this is what we call an uncomplicated fracture just affecting the outer layers of the tooth.

And with the tooth affected besides it, has moved out of its position and gone more inside the mouth as you could see it. Moreover, it did not respond to the sensitivity test and thus we call this as palatal luxation. In this situation, it is less likely to gain the sensation back. And thus it would need a nerve treatment which we call as root canal treatment. However, with the trauma I want to give this time to be fixed in one position for sometime, and then in one week we could start the procedure. It means we clean the nerves and place a filling within the tooth. (Draw and show).

Are you able to understand Mr. John? Please do not hesitate to stop and ask at any time.

### Manage:

Let's understand how best we could manage her. I will apply some numbing gel and give her anaesthetic/ numbing solution. So, she will be in a comfortable state while I manage her.

As we can see there is blood on her lips and around the gums. I will begin by wiping it gently with a gauze piece. For her lips, I will suture this portion that has been cut and review it in a week. Also before suturing I will carefully look for the piece of a broken tooth or remove all the superficial impurities. Later I will take one x-ray of the lip to look for any small broken pieces deep in the cut that were not appreciated by my eyes.

Then, with my gloved finger, I will move the tooth out of position into the place where it should be. Now to fix it in this position, I will take help of a splint which is a stainless steel wire, extending from the teeth adjacent to it on the lip side. (Explain in the photo, how you will extend that from 12 to 22 and glue it) The reason for the placement on the lip is because she can clean if any food gets stuck clearly and to avoid interference from the bottom teeth on biting. I will take an x-ray to confirm the position below the gums after placing the wire. The wire needs to be in place for 4 weeks.

Do you have any questions so far Mr. John?

Now, for this tooth which is broken, for today I will place a temporary similar to the tooth shade filling. (Patient will ask why temporary?) The reason for that is she has bleeding and the conditions are not ideal for a permanent filling to be placed. So, when she comes back to visit within a week for a removal of suture, I will place a permanent tooth coloured filling which we call as composite. This filling is a replacement, thus advising to drink water after stain continuing drinks to avoid stains and avoid eating apples, carrots or corn with front teeth to avoid load on these teeth.

### Recalls:

Mr. John, is everything okay so far? I understand it's a lot of information that's why I'm going to give you everything written about what steps to follow in her management.

For a tooth that sustains trauma, it has to be followed up for a longer time, because there could be situations of infection that could arise later on. Thus you and I will keep an eye for wobbly teeth, pimples on the gums, teeth becoming discoloured or any pus discharge. Additionally, recall by me on the following (write on the paper and show - 2, 4, 6, 8 weeks then 6 months followed by a year and yearly for 5 years) to check with x-rays and to check with the tests performed today.

X-rays of the specific area which we call as periapical x-ray give us an indication of things that could happen below the gums. There could be few situations where the root of the tooth gets fixated within the adjacent bone or can get infected; we call that situation as ankylosis or resorption.

And thus to prevent such complications we need regular follow up visits. (you can talk about each complication in detail if time permits).

For a tooth coloured filling on an adjacent tooth, it can become stained over time, thus will require polishing or minor repairs. And if it chips over time, we can repair or replace the filling.

### Post-operative instructions:

Also, you mentioned she wasn't wearing her mouthguard. Why was it so Mr. John? We advise to wear the mouthguards even for practice matches as the trauma could happen even within these situations. With the wire on, she won't be able to fit her mouthguard in, so she will need to wait for 4 weeks to play.

So for now, after today's procedure. We will be careful with the area, by continuing routine hygiene of the teeth and keeping the wire clean. How often does she brush her teeth? She can use mouthwash for today if she is unable to clean her teeth because of pain.

I would advise a soft diet for a couple of days.

**Important points for this case:**

- Reassure and ask about signs of concussion and broken tooth (coughing). Dental evaluation and GP evaluation for tetanus booster dose.
- Diagnosis and immediate management for each tooth.
- Long term prognosis and importance of recall.
- Long term management.
- Mouthguards and post-operative instructions.

**Important links to read to understand this case better:****Management of the tooth resorption:**

[Endo 9 Heithersay \(adelaide.edu.au\)](http://Endo9Heithersay.adelaide.edu.au)

**Explanation of all the dental traumas and it's management:**

<https://teeth.org.au/dental-trauma>

International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 1. Fractures and luxations - Bourguignon - 2020 - Dental Traumatology - Wiley Online Library

**Mouthguards:**

<https://www.teeth.org.au/sports-mouthguards>

[https://www.ada.org.au/getmedia/595ad4e4-9889-4e66-9be6-d433140f4d71/ADA\\_Guidelines\\_Mouthguard-Fabrication.pdf](https://www.ada.org.au/getmedia/595ad4e4-9889-4e66-9be6-d433140f4d71/ADA_Guidelines_Mouthguard-Fabrication.pdf)

**Tetanus:**

<https://immunisationhandbook.health.gov.au/recommendations/people-with-uncertain-vaccination-history-and-a-tetanus-prone-wound-are-recommended-to-receive-tetanus-toxoid-vaccine-and-tetanus-immunoglobulin>

**Emergency hospital in Australia:**

<https://www.betterhealth.vic.gov.au/health/ServicesAndSupport/emergency-department-what-to-expect>

<https://www.healthdirect.gov.au/hospital-emergency-departments>

## **BLUE SET-CLUSTER 3**

(Clinical Treatment and Evaluation)

### **PAIN AND SWELLING AFTER EXTRACTION**

Mrs. Joshi, 63 years old, a regular patient at our clinic, had her severely decayed and broken upper left first molar removed on Monday afternoon. Today is Friday afternoon, and she has come in for an emergency appointment, reporting pain, swelling, and bad breath that began two days after the extraction. Upon examining her mouth, you suspect a post-surgical infection.

Her medical history includes an allergy to penicillin. She does not smoke or consume alcohol.

**Address her condition and manage it, explain the possible causes, and outline the further investigations needed.**

## CASE:

### Opening remarks/ introduction:

Mrs. Joshi, it's not the best few days for you with the pain and swelling persisting still. I'm glad you are here for the same before the weekend starts. I have had a look inside your mouth, but could you describe how did you go after tooth removal? How would you describe the swelling in the last 24 hours? Do you feel the swelling is affecting your swallowing or opening of mouth? Do you feel hesitancy in breathing or closing eyes at all? Any fever (have you felt unwell) at all Mrs. Joshi?

I understand it must not be easy to eat, but hope you have eaten and are well hydrated Mrs. Joshi? Please do not hesitate if you want anything.

### Immediate actions:

Mrs. Joshi, from your explanation and because the swelling hasn't settled after 3 days and it's increasing I'm suspecting it to be a post-surgical infection. Thus, to begin with I will do important set of tests to understand a state of medical emergency. To begin with I need to feel the swelling extent with my gloved hands and will also check if any swellings in the neck area. I will also check the opening of your mouth by placing your two fingers and checking the extent of opening based on it. If any of these signs look concerning to me, Mrs. Joshi, I will call ambulance and get these looked at first.

Other than that I will check your temperature if it's above 38 degree Celsius as you mentioned you are feeling unwell. And look for the signs of pallor, if you are having heart palpitations or sweating as these would suggest the infection has reached within your body system and needs antibiotics.

Other than that, I will carefully look near the area to look for any food being lodged in it or any discharge coming?

Then, I need a specific x-ray for this area which we call a periapical x-ray. Because what is happening below the gums cannot be appreciated visibly.

You okay Mrs. Joshi so far?

### Relevant history and explanation of risk factors:

#### 1 Tooth removal related:

Mrs. Joshi, with to help you best, will you be comfortable to answer a few relevant questions for me?

You had a broken down tooth and the removal was not easy, so how did you go immediately after tooth removal?

There were a lot of instructions to follow, and it's a lot to understand, so how was it for you?

What did you eat after the procedure? And when did you rinse first?

Did you take any medications? What were they and did they help you?

How about the warm salt water rinses? Any difficulty experienced with those?

Have you experienced this for any tooth removed previously?

## 2 Medical History

Now, just double checking Mrs Joshi, your medical history was allergy to penicillin, anything else you want to update ? And when was your last blood test done?

## 3 Dental History

Did you have any restrictions because of swelling to clean your teeth? Especially near the tooth removal site?

## 4 Social History

You do not smoke or drink alcohol, that's great on you Mrs. Joshi

## Possible Causes

After tooth removal, the first 24 hours are crucial for healing. And several factors are responsible for it. Let me explain to you with a diagram.

External factors like instructions followed by the patient including smoking, alcohol, food eaten, rinsing instructions. Also, oral hygiene habits or the amount of food lodged in that area that would hamper healing.

In terms of internal factors, they are the internal capacity to promote healing which could be interrupted if the body's low immunity or healing potential is affected by underlying medical conditions. Hence, I wanted to know when was your last blood test done?

Another reason in your case is because it was a broken tooth, and the removal was not straight in one piece. Sometimes in such situations there are possibilities that a small portion of bone or tooth can be appreciated on x-ray being responsible for delayed healing.

## Management:

After inspecting the area carefully and having an x-ray, I would get a clear picture.

If I appreciate food being lodged in this area, I will use my special instrument to flush it, we call that as monojet. And after that I will add a dissolvable medication (we call that as alvogyl consists of eugenol, which will be irritant for a few seconds then it will settle - to improve healing).

And I will review you after 2 days.

If I notice something like a tooth in the healing area on an X-ray then depending on the complexity of removal, I will myself try to take the portion out or will need to refer to an experienced colleague or an oral surgeon.

What are you comfortable with Mrs Joshi?

Now, because it's a Friday afternoon, getting a surgeon's appointment is tough. I will make a few calls to see if any surgeon is open over the weekend and can fit you in. As with surgeons, they usually have a longer waiting time.

However, I'm going to prescribe you an antibiotic for the swelling and pain killer too.

**Antibiotic:**

- Clindamycin 300mg 8 hourly for 5 days.

**Pain killer:** I will prescribe you the same that I gave you after tooth removal.

- Ibuprofen 400 mg 3 times a day until 3 days.
- Paracetamol 1000 mg 4 times a day until 3 days.

But, if at all the swelling becomes extensive such that you cannot breathe, swallow food, open your mouth, have significant pain. Then Mrs Joshi, I will give you an ambulance number, please call 000 and you will need medical attention urgently.

I understand, all of this is overwhelming. Please be assured, I'm with you until you feel better and are out of this situation.

I will review you on Monday morning. If you do not get any appointments with an oral surgeon until then, then there is an option to visit a dental hospital, where an onboard oral surgeon can help you. Again with hospitals there could be waiting times. I will be with you Mrs Joshi, and you will feel better.

Are you alright, do you have any questions for me?

**Important aspects in this case:**

- Primarily, patient need to be asked about severe and systemic features as mentioned in therapeutic guidelines. To understand the severity of the post surgical infection. If a patient gives a positive history of anything, please refer to the hospital by calling an ambulance.
- Do your set of investigations and look for the signs of systemic and severe features. Relevant questions only. Post-extraction instructions to be asked very sensitively, not to blame on patient, but saying its a lot to remember, how did you with following them?
- Assurance and right guidance to the management along with the prescription.

**Important links to read to understand this case better:**

**Management:**

Therapeutic guidelines is the primary source of management. Reading the TC chapters of acute odontogenic infections thoroughly.

**Emergency hospital in Australia:**

<https://www.betterhealth.vic.gov.au/health/ServicesAndSupport/emergency-department-what-to-expect>  
<https://www.healthdirect.gov.au/hospital-emergency-departments>

