

New York City College of  
Technology  
Department of Dental  
Hygiene  
DEN 2300 Case Presentation

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NOVEMBER 18, 2019

# Patient Profile

- 31 years-old Caucasian female present for check up and cleaning.
- Middle class, working in health care facility, lives with fiancé, unfortunately she has not have dental insurance and has to pay out-of-pocket for dental care.
- Last dental check up was done June 2018. Panoramic radiograph was done on that day.
- Patient brushes and flosses after each meal, 3-4 times a day using a soft manual toothbrush. Rarely uses mouth rinse because of her gag reflex (mouth rinse with alcohol makes it worth).

## Chief Complaint:

“ I know I have very bad teeth, but I just want to have a second opinion about them. I wanted to know what I can possibly do to improve my dental health and I would like to have a dental cleaning, because currently, I don't have dental insurance.”

Besides cleaning patient wants to find out what she needs to do to stop recession that present in her oral cavity and also find out about crowns, if she need to place crowns on her molar teeth or fillings will be enough.

# Health History:

Blood Pressure: 121/90. Pulse: 91, ASA II

Medical Conditions:

Hypertension, tachycardia

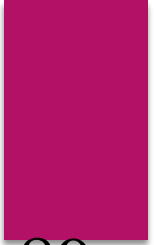
Seasonal allergy, codeine allergy

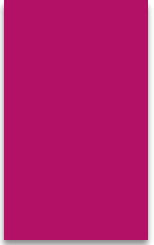
Current Medications:

Metoprolol (TOPROL-XL is 1 mg/kg once daily) to treat High blood pressure;

Fexofenadine (Allegra tablets is 60 mg twice daily or 180 mg once daily with water) as needed to treat allergy.

Sometimes patient experience migraines and taking OTC medication.

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- Normal values for blood pressure are  $<120/80$  mm Hg, and prehypertension is defined as a blood pressure of 120 to 139/80 to 89 mm Hg. The higher the blood pressure, the greater the chance of heart attacks, heart failure, stroke, and kidney disease.
  - Prehypertensive patients with family history of systemic arterial hypertension (FHSAH) have autonomic dysfunction and increased vascular conductance when compared to normotensive patients with the same risk factor.
  - When we have case of hypertension the other family members should be examined. For patients with positive family history, nutritional-hygienic recommendations to avoid overweight may be important in reducing the risk of becoming hypertensive.
  - Patient has family history of hypertension and tachycardia and in her 30<sup>th</sup> been on medication for couple of years, her condition was fully controlled.

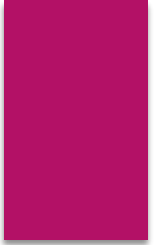
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- To manage hypertension patient need to take first-line medications that include diuretics, angiotensin-converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs), beta-blockers, and calcium channel blockers (CCBs). Some patients will require 2 or more antihypertensive medications to achieve their BP target. My patient is taking Metoprolol which is cardio selective B blocker.
  - There is no cure from allergy, but medications can significantly reduce allergy symptoms. The treatments usually include antihistamines and decongestants. Antihistamines treat the running nose and itching eyes and nose. Decongestants reduce the stuffiness. To reduce allergy symptoms patient is using Fexofenadine known as Allegra allergy, this is second generation of drugs and it's histamine H1 antagonist.

# Dental Hygiene Management of patients with hypertension and allergies

- A dental provider must have knowledge of the disease, know current therapeutic options, and possess the ability to educate and provide access to care for patients. To manage hypertensive patient blood pressure readings must be taken before every appointment and before the administration of local anesthesia. Anesthesia with vasoconstrictor has to be not more than 2 carpules (1/100000).
- Proper technique for blood pressure measurements: patient be seated quietly for at least 5 minutes in a chair, feet on the floor and arms supported at heart level. An appropriate-sized cuff, a cuff bladder that encircles at least 80% of the arm, should be used to ensure accuracy and at least two measurements should be taken during the visit.

- Dental chair during procedures need to be moving slowly up and down.
- Side effects of antihypertensive medications can range from dry mouth, alterations in taste, gingival enlargement, and lichenoid reactions. Elevated blood pressure can lead to excessive intraoperative bleeding during surgical procedures, like preparations for crown and bridge. To prevent excessive bleeding during such procedures a retraction cord with epinephrine can't be used.
- The maxillary sinuses, the largest sinuses are located above Maxillary teeth. When pressure builds in these sinuses, it can push down on the roots of upper molars and patient can experience sensitivity to hot and cold or notice pain that shifts as patient sit, stand or lie down.
- Allergies can cause dry mouth in two ways. First, patient would mostly breathe through the mouth when nose is congested. Second, dry mouth is a side effect of the medication. This condition also increases chances of developing cavities, gum disease and bad breath. Because one of the main functions of saliva is to wash away harmful bacteria.



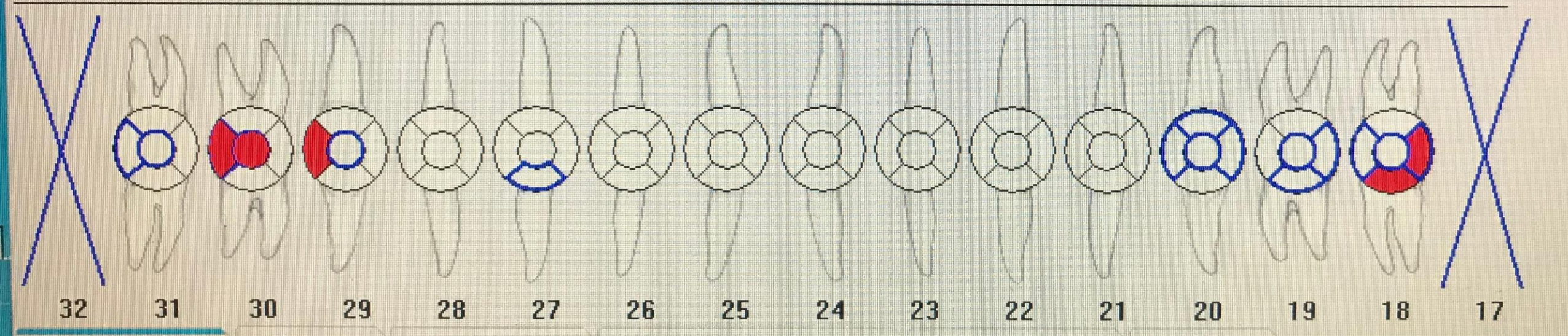
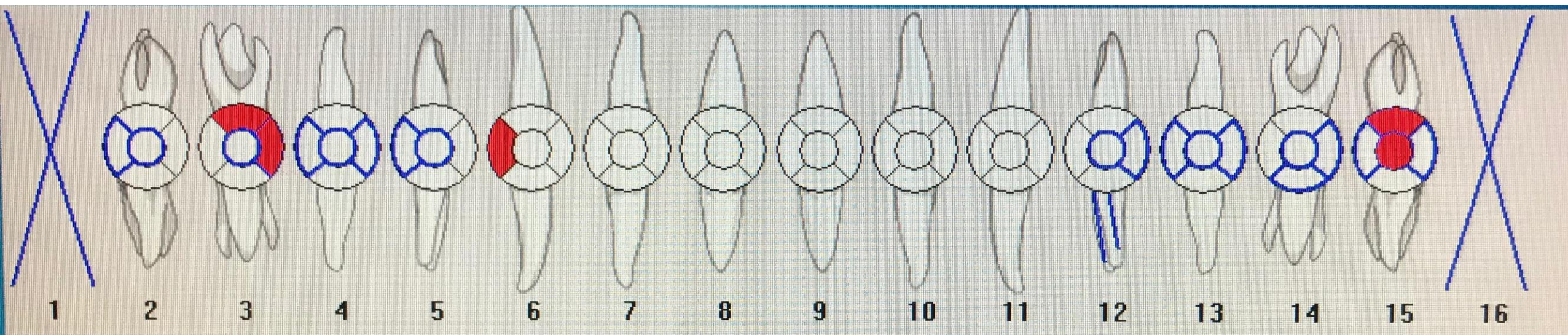


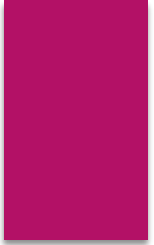
Codeine sulfate is an opioid analgesic (pain reliever) drug used to treat mild to moderate pain. Codeine sulfate is available in generic form. Common side effects of codeine sulfate include: drowsiness, lightheadedness, dizziness, sedation, shortness of breath, nausea, vomiting, stomach pain, sweating, constipation, dry mouth, flushing, itching, or rash.



# Assessments

- ▶ Extra oral examination: tenderness of right facial submandibular lymph node.
- ▶ Intra oral examination: redness in the tonsils.
- ▶ Dental charting: all third molars were extracted, composites on posterior teeth are present. Detected few suspicious caries lesions.
- ▶ Class I of occlusion bilaterally.
- ▶ Overjet 5 mm, Overbite 30%.
- ▶ Calculus and biofilm deposits: localized supragingival deposits on the lingual side of anterior teeth, localized supragingival interproximal calculus, localized subgingival calculus on posterior teeth. Patient is M case value.
- ▶ Soft biofilm mostly interproximal, and on the lingual side.



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- Dental charting: all wisdom teeth were removed, composite restorations on teeth #2, #3, #4, #5, #12, #13, #14, #15, #18, #19, #20, #27, #29, #30, #31.
  - #27 class V restoration, all restorations on posterior teeth MO, DO or MOD.
  - RCT treatment done on tooth number 12.
  - No amalgam restorations or crowns present in the mouth.
  - Tooth #20 mispositioned and cause premolar crowding (can be seen on x-rays).
  - Tooth #14 has a defected composite restoration.
  - Tooth #12 – radiolucency on the apex (can be seen on x-rays).

# After discussing CAMBRA with patient, it was established that patient is high caries risk

- ▶ Clinical findings detected caries on teeth #3, #6, #15, #18, #29, #30.
- ▶ Radiographic findings helped to detect caries on teeth #3, #4, #5, #6, #10, #11, #14, #18, #19, #21, #29, #30.
- ▶ Radiographic findings supported clinical findings and helped detect more carious lesions.
- ▶ Radiographs showed generalized 10% horizontal bone loss, localized vertical bone loss on posterior teeth.
- ▶ Referral with printed x-rays and on CD was given to the patient.

Birth Date: 08/03/1988		Date: 10/28/19	
Age: 31		Initials:	
	Low Risk	Moderate Risk	High
Check or Circle the conditions that apply			
<b>Contributing Conditions</b>			
I.	Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
II.	Sugary Foods or Drinks (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)	Primarily at mealtimes <input type="checkbox"/>	Frequent or prolonged between meal exposures/day <input checked="" type="checkbox"/>
III.	Caries Experience of Mother, Caregiver and/or other Siblings (for patients ages 6-14)	No carious lesions in last 24 months <input checked="" type="checkbox"/>	Carious lesions in last 7-23 months <input type="checkbox"/>
IV.	Dental Home: established patient of record, receiving regular dental care in a dental office	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Check or Circle the conditions that apply			
<b>General Health Conditions</b>			
I.	Special Health Care Needs (developmental, physical, medical or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)	<input checked="" type="checkbox"/> No	Yes (over age 14) <input type="checkbox"/>
II.	Chemo/Radiation Therapy	<input checked="" type="checkbox"/> No	Yes (ages 6-14) <input type="checkbox"/>
III.	Eating Disorders	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
IV.	Medications that Reduce Salivary Flow	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
V.	Drug/Alcohol Abuse	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Check or Circle the conditions that apply			
<b>Clinical Conditions</b>			
I.	Cavitated or Non-Cavitated (incipient) Carious Lesions or Restorations (visually or radiographically evident)	No new carious lesions or restorations in last 36 months <input type="checkbox"/>	1 or 2 new carious lesions or restorations in last 36 months <input type="checkbox"/>
II.	Teeth Missing Due to Caries in past 36 months	<input checked="" type="checkbox"/> No	3 or more carious lesions or restorations in last 36 months <input checked="" type="checkbox"/>
III.	Visible Plaque	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
IV.	Unusual Tooth Morphology that compromises oral hygiene	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
V.	Interproximal Restorations - 1 or more	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
VI.	Exposed Root Surfaces Present	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
VII.	Restorations with Overhangs and/or Open Margins; Open Contacts with Food Impaction	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
VIII.	Dental/Orthodontic Appliances (fixed or removable)	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
IX.	Severe Dry Mouth (Xerostomia)	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
<b>Overall assessment of dental caries risk:</b>		<input type="checkbox"/> Low	<input type="checkbox"/> Moderate
		<input checked="" type="checkbox"/> High	

# Periodontal charting

## Gingival statement

- ▶ Gingiva pink, fit around the teeth, minimal bleeding during probing and calculus detection, minimal inflammation.

## Periodontal charting

- ▶ Generalized 1 mm recessions on all teeth, localized recessions 2-3 mm.
- ▶ Minimal bleeding during probing.
- ▶ Type II perio due to resections and some probing depth up to 5 mm.

Plaque																
Mobility																
Bone Loss																
GM			2 2 2	3	3					1	4					
CAL			5 3 5	5	5					2	6					
MGD																
PD			3 3 4	4 2 3	3 1 3	2 2 3	2 2 3	2 1 2	2 1 2	2 1 2	2 2 2	2 1 2	2 2 3	3 1 4	5 3 3	4 3 3
Furcation																
PD			3 5	5 3 5	5 3 5	4 2 3	3 2 2	2 1 2	3 1 3	2 2 3	2 2 2	2 2 2	4 2 4	4 2 4	3 2 3	2 2 2
GM																
CAL																
			2	3	4	5	6	7	8	9	10	11	12	13	14	15

Buccal  
Lingual

1	2	3	<input type="checkbox"/> Bleeding	<input checked="" type="radio"/> PD	Probing Depths	Furcation: 0 0 0	Mobility: 0	<input type="checkbox"/> MGD
6	5	4	<input type="checkbox"/> Suppuration	<input type="radio"/> GM		Plaque: <input type="text"/>	Bone Loss: <input type="text"/>	
				<input type="radio"/> CAL				

Plaque																
Mobility																
Bone Loss																
GM																
CAL																
PD			4 4 4	3 2 3	3 2 4	4 2 2	3 1 2	2 1 2	2 1 2	2 1 2	2 1 2	2 1 2	3 1 4	2 1 3	5 2 3	4 3 4
Furcation																
PD			5 3 4	3 1 1	1 1 2	3 1 2	2 1 2	2 1 2	3 1 2	2 1 2	2 1 2	3 1 2	3 1 2	2	2 1 2	2 2 2
GM				1 1 1	2 2 2	2 2 2	2					2 2 2	2		1 1 1	1 1 1
CAL				4 2 2	3 3 4	5 3 4	3					5 3 4	3		3 2 3	3 3 3
MGD																
			31	30	29	28	27	26	25	24	23	22	21	20	19	18

Lingual  
Buccal



# Dental Hygiene Diagnosis

- ▶ Patient is in the high risk of caries due to lack of fluoride exposure during life, soft sugary drinks that patient sometimes drinking at work, crowding in some areas that makes brushing and flossing more difficult. Clinical and radiographic findings showed multiple caries lesions that need to be restored or evaluated.
- ▶ Perio type II, active, because patient has generalized recession 1 mm, localized 2-3 mm, some probing depth up to 5 mm, generalized horizontal bone loss an some vertical localized bone loss.

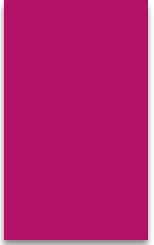
# Dental Hygiene Care Plan

- ▶ Treatment plan for the patient: FMS, oral hygiene instructions: first visit – flossing, next visit - brushing. Scaling with ultrasonic and hand instruments whole mouth, engine polishing, fluoride 5% varnish treatment. Given adult referral to patient for evaluation with specialist and handed printed and CD copy of x-rays. CAMBRA form was discussed with patient.

Visit 1: assessments, OHI – flossing, scaling teeth #6 - #8.

Visit 2: FMS, OHI – brushing, scaling QI – QIV, engine polishing, fluoride treatment, referral to specialist, CAMBRA form.

- During first visit discussed with patient correct flossing techniques, let her demonstrated to me the method I taught her. Also discussed with patient findings during assessments.
- During the second visit discussed radiographic findings, gave patient referral with copy of x-rays. We went over CAMBRA questions and discussed patient diet, and limitation of soft drinks at work. Also went over brushing techniques, suggested patient not to apply too much pressure during brushing, because it will cause even more recession, and not brush right after the meal, because Ph in our mouth getting back to normal 30 minutes after meal. Suggested to the patient brush with fluoride tooth paste and use mouth rinse with fluoride. Gave patient coupon from the clinic.
- My patient is very nice and she is trying to follow all suggestions that she received during these 2 visits.

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- Debridement Performed: during scaling I did not have a lot of complications. A had only 2 areas that I can admit need extra attention from me. The first area is Mandible premolar area tooth #20 due to crowding was harder to adapt the instrument, and tooth #14, because of composite restoration that patient has was harder to go interproximal.
  - My patient is very responsible, I am sure she will follow all suggestions that she received. She will do good home care. Proper brushing, flossing and using fluoride oral rinse will help to arrest incipient decay and will prevent from occurring a new caries lesions.
  - No anesthesia or any other pain management were used on patient.
  - I scheduled patient to 4 month recare because of periodontal status, caries risk and necessity of fluoride treatment.
  - All treatment went according to treatment plan and patient will come back at the beginning of next semester.

Pat # 10015000

The patient is being referred to you for consultation and treatment in the following areas:

- Caries: PLEASE evaluate #314, #40, #60, #51, #100  
#14 M comp-dif., #190, #180, #290, #3000, #21F, #6F, #11F
- Restorative Care: \_\_\_\_\_
- Oral Pathology: \_\_\_\_\_
- Oral Surgery: \_\_\_\_\_
- Periodontal Disease: \_\_\_\_\_
- Elevated Blood Pressure: 1<sup>st</sup> reading: \_\_\_\_\_ 2<sup>nd</sup> reading: \_\_\_\_\_
- Other: Please evaluate radiolucent area on tooth #12 (PA)  
Patient has a copy of Flls exposed on 10/28/19

Thank you,

Dental Hygiene Student: [Signature]

Attending Faculty: [Signature] RDH

I, (the patient), have been informed of the clinical findings and recommendations. I understand that failure to comply with referral recommendations may result in permanent, irreversible long-term damage in the areas indicated. I further understand that failure to comply with recommendations may result in discontinuation of treatment at the dental hygiene clinic.

# Referral to the dentist

# Work cited

1. Amaral, Josária Ferraz, et al. "Autonomic and Vascular Control in Prehypertensive Subjects with a Family History of Arterial Hypertension." *Arquivos brasileiros de cardiologia* 110.2 (2018): 166-174.
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4. Southerland, Janet H., et al. "Dental management in patients with hypertension: challenges and solutions." *Clinical, cosmetic and investigational dentistry* 8 (2016): 111.
5. Stamler, Rose, et al. "Family (parental) history and prevalence of hypertension: results of a nationwide screening program." *Jama* 241.1 (1979): 43-46.
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