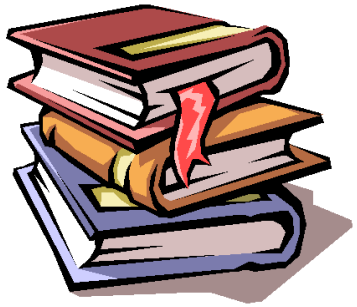
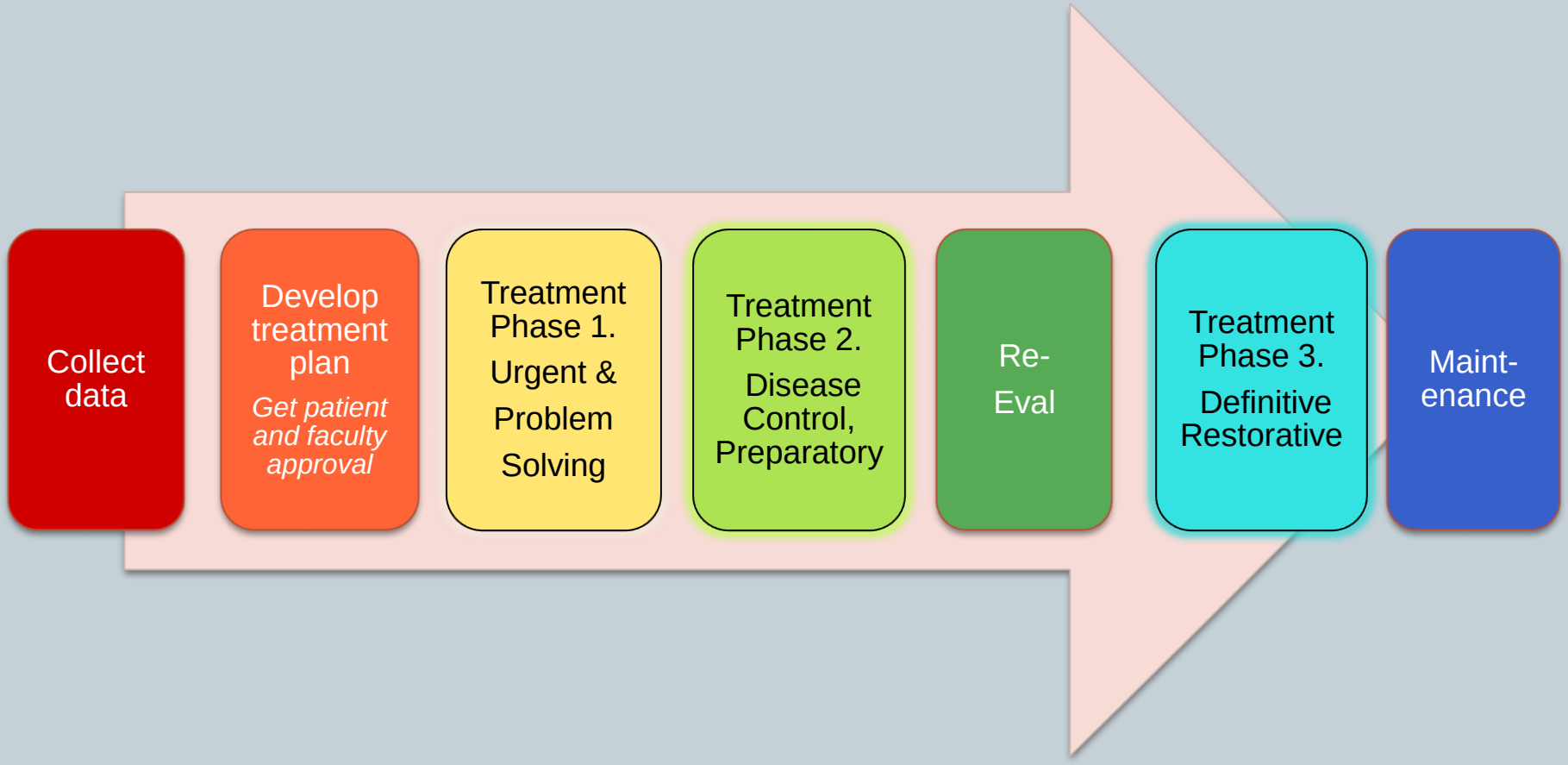


REFERENCE GUIDE

Collect Data, Develop Treatment Plan

JK Mitchell, DDS

Treatment Planning Process:



Sequence of Examination Process
(D0150, D0120, D0006, D0003, D0005)

Chief Concern
- Evaluate patient's problems, goals and desires ("**Chief Concerns**"). Will become first entry in **Treatment Plan** tab.

Health History
- Evaluate the **medical status** of the patient and how that may affect your treatment. Fill out Forms tab called **Medical History.** Determine the ASA classification

H&N Exam
- Do a **head and neck exam**, recording findings in the Forms tab **Head and Neck Exam** including the Oral Cancer Screening Exam.

Dental Exam
- Do the **dental exam.** Identify: 1. Missing teeth 2. Other conditions 3. Existing restorations 4. Caries visually. Record on the odontogram.

Perio
- **Perform** full mouth probing. **Record** with either full mouth **Perio charting** (D0150) or **PSR** (if appropriate when no previous hx of periodontal tx).

X-rays
- Based on dental and perio exam, identify which **radiographs** ("x-rays") are most appropriate for this patient. Record findings on odontogram and **Radiographic Interpretation** tab

CRA
- Evaluate patient's caries risk on the **Caries Risk Assessment Form**

The Parts of a Dental School Exam:

You might want to learn these terms now…

Term	Stands for:	Where is it done?
COE	**Comprehensive Oral Exam** (Can be a D0120, D0150, or D0006 depending on circumstances we will explore more fully later) in axiUm. Also called an OME (Oral Medicine Exam) or Workup	In Oral Medicine chair with OMed, DXR faculty.
DXR	Diagnostic Review	Done with Oral Rehab faculty in a DXR chair.
Treatment Planning Board	For select cases that will require RPDs or other complex restorative care, a board consisting of a periodontist, a prosthodontist, and a restorative dentist will meet with you and your patient to hash out the options and determine the best treatment plan.	

And what happens at each appointment?

APPT	What you accomplish:	Sign off at:
COE	Evaluate patient's **chief concerns, health history,** and **head and neck exam**	COE
	Complete **dental exam** (odontogram, caries, pathosis)	DXR
	Do **Caries Risk Assessment** using information from exam and interview	DXR
	Do complete **periodontal charting** (unless extensive calculus prohibits effective probing). Based on your findings, decide if pt's first perio visit should be Perio Debridement (D4355), Prophy (D1110) or Comprehensive Perio Exam (D0180).	Perio
	Make **impressions** for study casts	DXR
Between appt's	Pour up **casts**. After dry, trim and **mark** occlusion, smile line.	DXR
	Radiographic Interpretation. Make appt with Radiology faculty to review radiographs.	Radio
	Evaluate all data: **Create Problem List, Diagnosis List, Treatment Plans** (Phase 1, Phase 2, tentative Phase 3).	DXR
DXR	Review and verify **Dental Exam** with patient present.	DXR
	Review and sign off **Problem List, Diagnosis List, Treatment Plans**	DXR

Collect Data

CHIEF CONCERNS

HEALTH HISTORY

HEAD AND NECK EXAM

DENTAL EXAM

CARIES RISK ASSESSMENT

PERIODONTAL EXAM

STUDY CASTS

RADIOGRAPHIC INTERPRETATION

Overview: Collect Data

Collect data

COE Goals:

1. **Chief Concerns:** Concise summary of concerns (complaints) in patient's own words.
2. **Health History**: Either new patient record or a review of existing records.
3. **Head and Neck Exam:** Include Oral Cancer Screening Exam. See Checklist.
4. **Dental Exam**: Missing and Impacted Teeth, Conditions, Materials, and Decay.
5. **Caries Risk Assessment:** Based on radiograph and exam, complete CRA form.
6. **Periodontal Charting:** Note pocket depths
7. **Study Casts**: Make impressions so that you can fabricate a set of study casts.

Radiographic Review- In dental school, each NEW patient will already have a panoramic and full mouth series of radiographs. However, in practice, you should do a dental exam, including caries risk assessment and periodontal charting, prior to deciding which radiographs are most appropriate for each patient.

1. Chief Concerns

Collect data

Write your patient's **chief concerns** ("complaints") - in your patient's words. Not all of them…just get the main ideas.

Use part of your exam time to understand your patient's overall goals, situation, and financial constraints. Once you have some rapport with your patient, try open ended questions.

If you could wave a magic wand, what would you want for your overall oral health?

Insight into their priorities- Health? Esthetics? Function?

2. Health History: New Patients

Collect data

Print out the Medical History Checklist so you can talk to your patient face to face!

- When you contact your patient, ask them to bring a **list of their medications** or their pill bottles. Consider doing this over the phone- they can read the pill bottles!
- At the COE appt: Go to the Forms tab, then fill out the Medical History tab
- Instead of being at the computer (back to back with the patient) print out the Medical History Checklist and use it while facing the patient. Take notes, then quickly transcribe into axiUm
- **Every "yes" answer should generate follow up questions and should have a written comment.**

Now evaluate the patient's medical status….

- There is a classification system developed by the American Society of Anesthesiologists to record the overall health status prior to surgery.
- Based on general assessment of illness severity.
- Simple and widely used, understood
- Correlates with surgical outcomes and complication rates, overall morbidity and mortality rates.

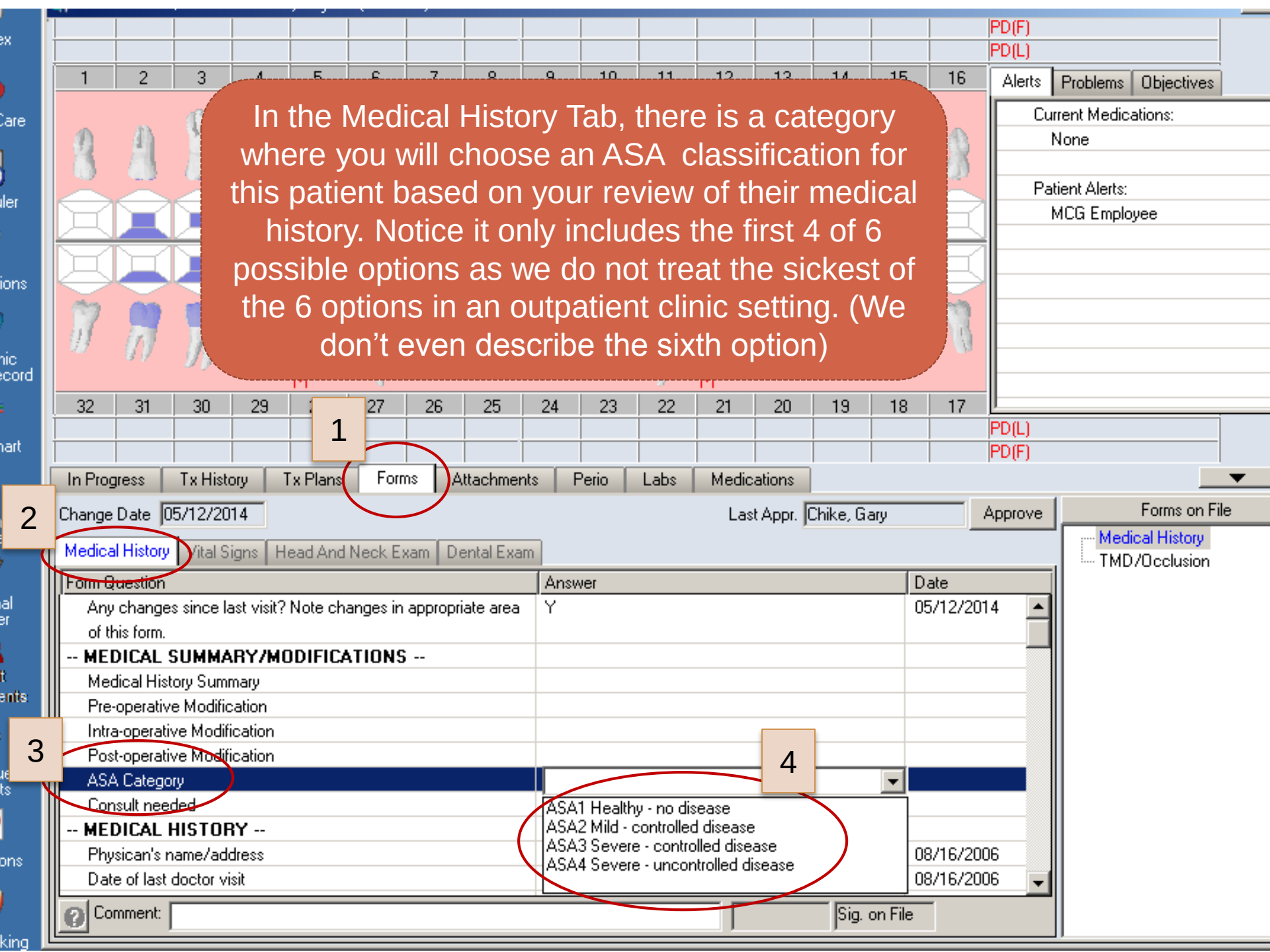
ASA Classification

American Society of Anesthesiologists physical status (ASA PS) Classification System *+n

From Malamed S, Knowing Your Patients, JADA 2010: 141 (suppl 1): 3S-7S

ASA PS*	DEFINITION*	EXAMPLE	TREATMENT
1	Normal healthy patient	–	No special precautions
2	Patient with mild systemic disease	Pregnancy Diabetes- well-controlled type 2 diabetes Epilepsy (well controlled) Asthma Thyroid dysfunction BP‡ 140-159/90-94 mm Hg§	Elective care OK; consider treatment modification
3	Patient with severe systemic disease that limits activity but is not incapacitating	Stable angina pectoris Post-myocardial infarction > six months Post-CVA > six months Exercise-induced asthma Type 1 diabetes (controlled) Epilepsy (less well controlled) Symptomatic thyroid dysfunction BP 160-199/95-114 mm Hg	Elective care OK; serious consideration of treatment modification
4	Patient with an incapacitating systemic disease that is a constant threat to life	Unstable angina pectoris Post-myocardial infarction < six months Epilepsy- uncontrolled seizures BP > 200/> 115 mm HG	Elective care contraindicated; emergency care: noninvasive (for example, drugs) or in a controlled environment
5	Moribund patient not expected to survive 24 hours without surgery	End-stage cancer End-stage hepatic dysfunction End-stage infectious disease End-stage cardiovascular disease	Palliative care

- **The ASA physical status classification system is adapted with permission of the American Society of Anesthesiologists, 520 N. Northwest Highway, Park Ridge, Ill. 60068-2573.9 † Sources: American Society of Anesthesiologists McCarthy and Malamed.**
- **‡ BP: Blood pressure. § mm Hg: Millimeters of mercury. ¶ CVA: Cerebrovascular accident.**


In the Medical History Tab, there is a category where you will choose an ASA classification for this patient based on your review of their medical history. Notice it only includes the first 4 of 6 possible options as we do not treat the sickest of the 6 options in an outpatient clinic setting. (We don't even describe the sixth option)
1
2
3
4
PD(F)
PD(L)
Alerts
Problems
Objectives
Current Medications:
None
Patient Alerts:
MCG Employee
In Progress
Tx History
Tx Plans
Forms
Attachments
Perio
Labs
Medications
Change Date
05/12/2014
Last Appr.
Chike, Gary
Approve
Forms on File
Medical History
TMD/Occlusion
Medical History
Vital Signs
Head And Neck Exam
Dental Exam
Form Question
Answer
Date
Any changes since last visit? Note changes in appropriate area of this form.
Y
05/12/2014
-- MEDICAL SUMMARY/MODIFICATIONS --
Medical History Summary
Pre-operative Modification
Intra-operative Modification
Post-operative Modification
ASA Category
Consult needed
ASA1 Healthy - no disease
ASA2 Mild - controlled disease
ASA3 Severe - controlled disease
ASA4 Severe - uncontrolled disease
-- MEDICAL HISTORY --
Physican's name/address
08/16/2006
Date of last doctor visit
08/16/2006
Comment:
Sig. on File

2. Health History: Recall Patients

Collect data

- Your first patients will be recall patients, so you will be told to "review the health history with your patient." What does this mean?
- You don't have to re-do the whole tab!

Before the appointment, look at your patient's list of medications, understand what they are usually prescribed for, and see if the list tallies with the health history.

At the appointment:

- "Has anything in your **health changed** since the last time you were in?"
- "Have you been **hospitalized** for anything since (date of last Health Questionnaire)?"
- "The last time we saw you, you were taking (go through **medications**). Are you still taking these? Has your doctor needed to change your dosage? Are you on any new medications?"
  Enter any changes and updates into the record. Look up what any new meds are usually prescribed for and make sure that use tallies with your patient's health history.

And schedule in OME *IF*….

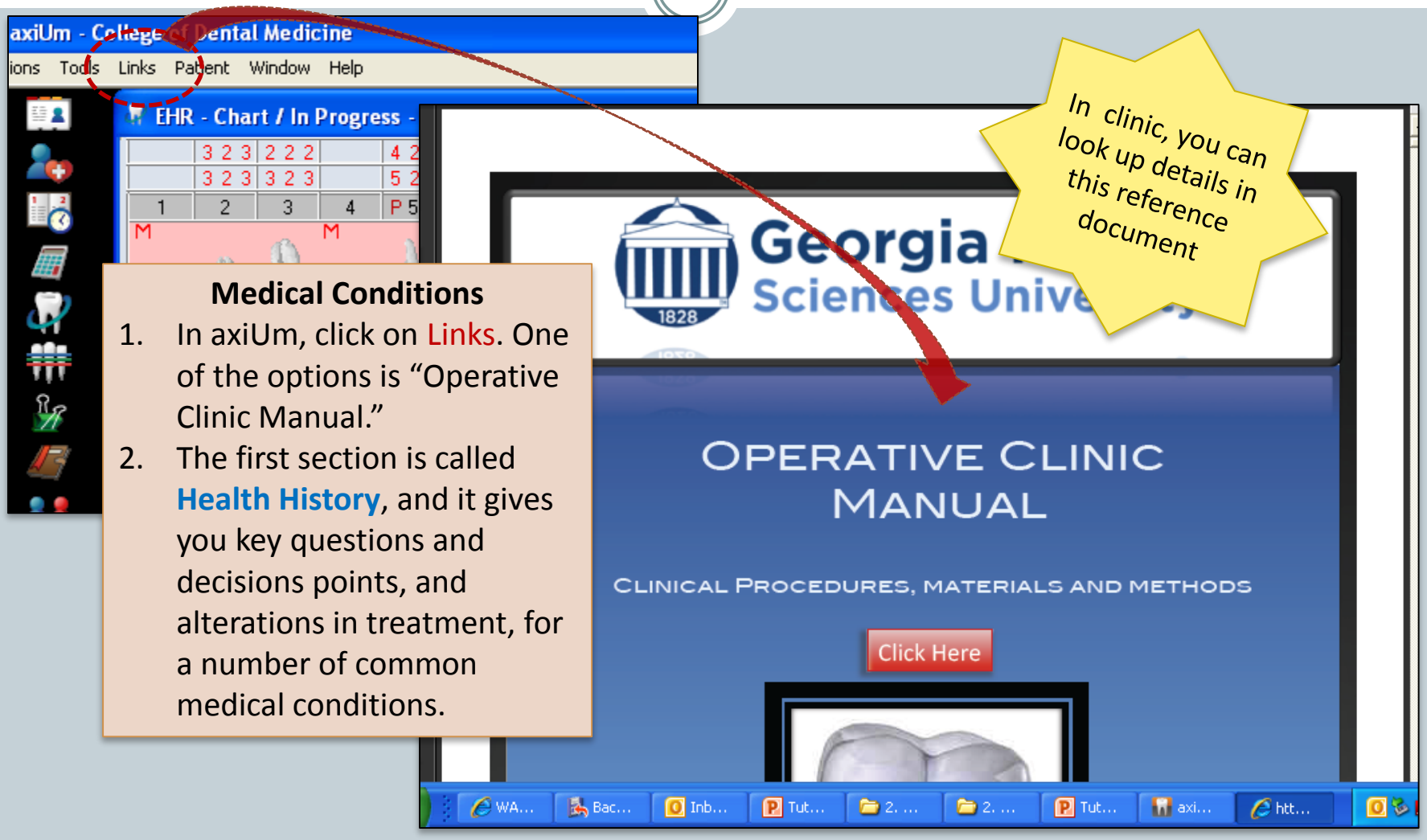
At the recall exam appointment, patients must have their medical history reviewed and approved by an **ORAL MEDICINE** faculty, if they

- Are an ASA III patient
- Have had a change in ASA status
- Have had a significant change in health history (i.e., hospitalization, surgery or new systemic disease diagnosis)
- Have had a significant change in medications
- Have a new oral mucosal lesion(s)

All other patients' histories may be reviewed and approved by the faculty in the department where dental care is delivered, ie, Operative, Fixed, or Removable Pros.

Back to Review

Health Hx Resource: Operative Manual



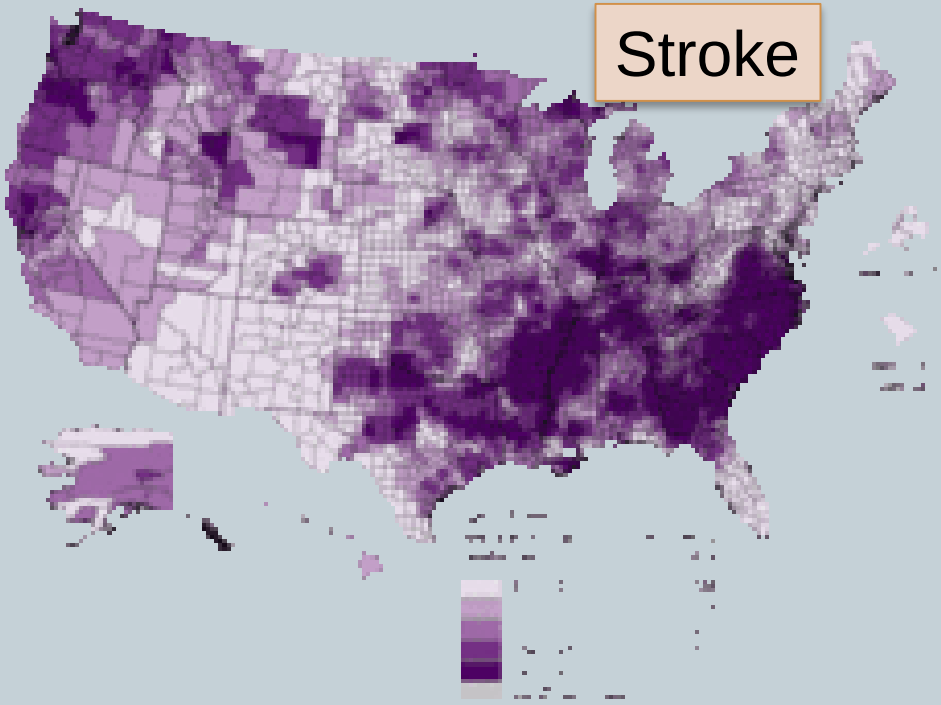
Medical Conditions

1. In axiUm, click on Links. One of the options is "Operative Clinic Manual."
2. The first section is called **Health History**, and it gives you key questions and decisions points, and alterations in treatment, for a number of common medical conditions.

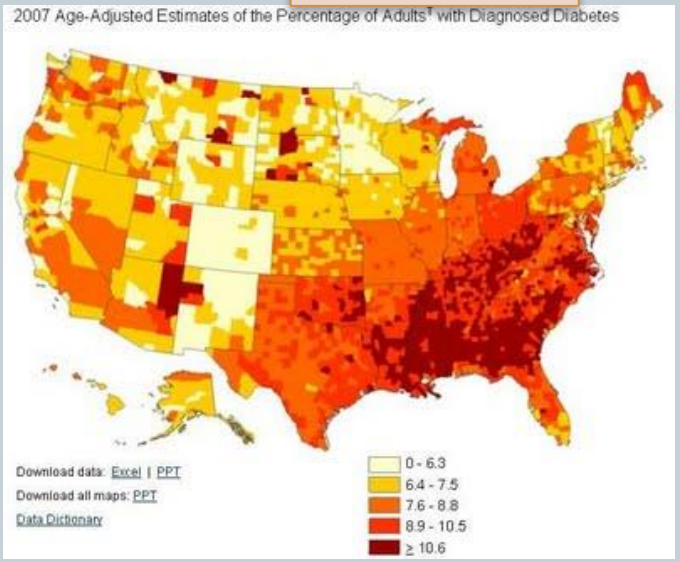
Med Hx: Concerns in the Stroke Belt

Take a look at these maps. Our patients have a significant risk for certain diseases:

Stroke



Diabetes



Common Significant Medical Conditions

- Diabetes
- Hypertension
- Angina
- Anti-coagulation

Because these are so common, and the medical management is a little tricky, we are going to spend time NOW getting comfortable with them.

Four Conditions: Diabetes

Collect data

Diabetes is a disease of poor regulation of blood sugar. It's complicated, and you will learn much more about the physiology in other courses. These are the questions you will ask your patients ***in clinic*** and what the answers mean.

Question	Then
Did you take your medication and eat (breakfast/lunch) within the past two hours? Are you taking a long acting insulin? Most likely emergency is hypoglycemia- too much insulin, too little food.	• **If they have not taken medication**, have them take it. • **If they have not eaten**, have them eat something (ie. granola bar) especially if on long-acting insulin.
How often do you check your blood sugar? What was the last reading? (Indicates current blood sugar level; also general sense on patient's level of compliance)	Should be within **last few days** to verify control. Chart the current number. **NO GO** if **blood sugar > 400**, refer to MD.
When was your last HbA1c, and what was the number? (Indicates long term blood sugar control)	Should be within **last 3 months**. Results indicate long term blood sugar control: **<6--------6-10-------→10** **Very good Fair Not controlled**

MD*= Medical care provider, whatever the degree

Four Conditions: Diabetes

Collect data

But think about the common thread between diabetes and caries… ***sugar.***

- When we know a patient's **HbA1c**, we also have a clue to their dietary habits, at least with simple carbs, right? Couldn't that help us know how likely they are to continue to decay?

- And when we counsel them to reduce sugar intake, we are singing the same song that they are hearing from their other health providers as well. We may be able to provide the extra motivation to get their diet under control.

Four Conditions: Hypertension

Collect data

- Before we put a cuff on a patient for the first time and at each annual exam we always ask three questions.

Why?

If you take blood pressure on the same arm as any of these, you will damage, ruin or "blow out" an expensive surgical site, causing this patient unintended and completely preventable harm.

The "Three Questions"

1. Have you had a **mastectomy**?
   - If yes, ask which side and take it on the other side
   - If bilateral, ask if one side did not have a node resection and use it.
   - If both had node resections, use a wrist cuff
2. Do you have an **IV line or heplock** in place?
   - If yes, ask where!
3. Do you have a **dialysis or fistula/shunt** in your arm?
   - If yes, ask where!

Four Conditions: Hypertension

Collect data

So how often do we take *and record* blood pressure?

- **Every 6 months** no matter what
- **If BP has been**

  > 140/ or /90, record at **every** appointment

Four Conditions: Hypertension

Collect data

Defer elective Dental tx

Systolic

140

160

>180

180-210 with signs and symptoms

>210

Follow up with MD* 60 days

Follow up with MD* 30 days

Follow up with MD* Immediately

Refer to Emergency Department

Refer to ED Immediately

Diastolic

100

110

>110

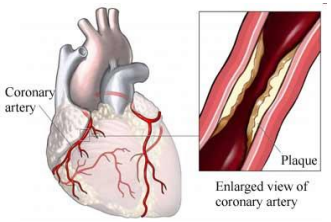
110-120 with signs and symptoms

>120

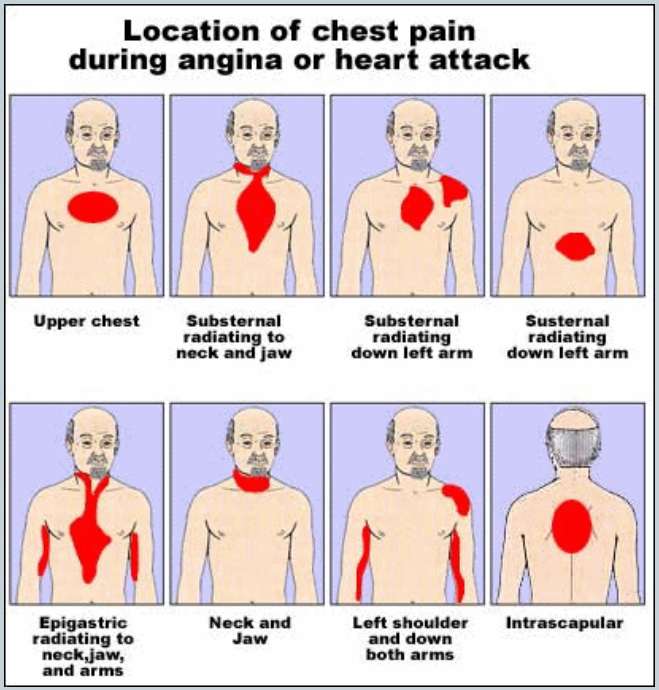
Signs and Symptoms include:

- Headache on awakening, fatigue, confusion, vision problems
- Chest pain, trouble breathing, irregular heartbeat,epistaxis, hematuria

MD*= Medical care provider, whatever the degree



Four Conditions: Angina

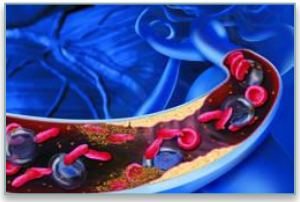


Think about it…we take people and scare them (stress) and give them anesthetic with epinephrine (adrenaline) in it (more stress). Think that might be a problem for someone with compromised blood flow to their heart??? *We need to be careful here*.

Angina is pain caused by heart muscle that is starved of oxygen because of a blocked artery that feeds it.

CABG ("cabbage" or Cardiac Artery Bypass Graft) is a surgical procedure that takes a vessel from somewhere else in the patient and replaces the blocked heart vessel.

Question	Then
Is angina stable? No pain or need for NTG in last month, no distress to normal activities like walking, stairs, etc.	If unstable, **NO GO** until stabilized. Refer to MD
Taking non-selective beta blocker? Examples: propranolol, nadolol, timolol maleate, penbutolol sulfate, sotalol hyrochloride, pindolol.	**Limit** use of epinephrine.
Date of CABG or Stent placement?	<2 weeks, **NO GO** without written MD consult. Premed with antibiotic regimen. > 2 weeks, no mods.



Four Conditions: Anti-Coagulation

Collect data

- Patients with cardiovascular disease and some kinds of heart disease (ie, atrial arrhythmias) are at risk for blood clots, which can cause heart attacks, strokes, or pulmonary emboli, all of which are life threatening. Often they are treated with anti-coagulation medication, usually Coumadin. These medications cannot be stopped for dental treatment, so we have to deal with them.

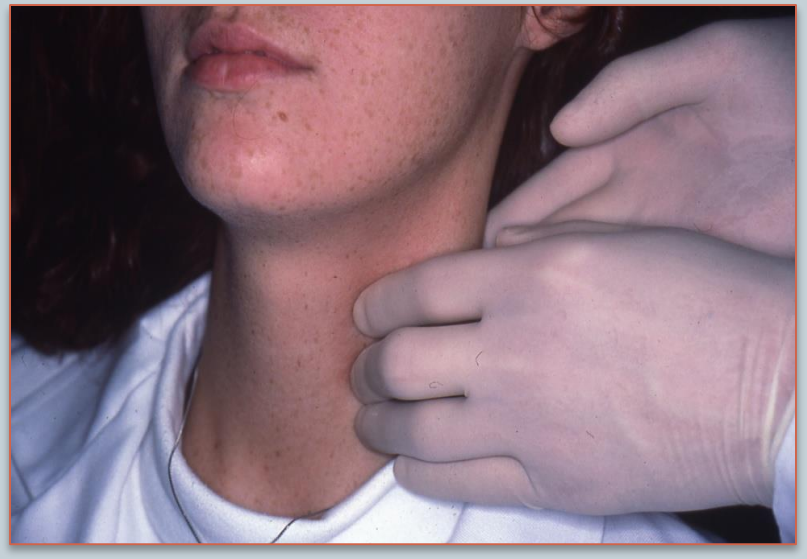
Question	Then
What medication are you taking?	If patient is on Coumadin, **avoid block anesthesia**
When was your last INR test?	**INR*** is the name of the test that shows the patient's clotting time. It should be within 1-2 weeks, 2 days for surgical procedures.
What was the number?	They must know the number- "My doctor said I was OK" is not good enough. Generally, an **INR < 3.5** is OK for routine operative dentistry.

Back to Review

INR*= International Normalized Ratio

3. Head and Neck Soft Tissue Exam

Collect data



- There is a **detailed checklist** for this exam on the class web site.
- Pull it up- print a copy and tuck it into a sheet protector so you can use it in the operatory.

1. **Extraoral Exam**:
   - Facial symmetry; skin of the face and neck
   - Palpate TMJ's on opening and closing
   - Neck and Thyroid exam- start extraoral, then go intraoral for bimanual exam.
2. **Intraoral exam**:
   - Have patient stick out tongue- grasp with gauze, examine borders. Dispose of gauze. Pick up mirror.
   - Soft tissue: Have patient lift tongue. Inspect floor of mouth, palate, buccal mucosa, gingiva.

But what are you looking for??

And ask these questions!

Collect data

Ask patient if they have:

- A "**sore" in the mouth**, especially a painless one, that has lasted longer than 2 weeks, or bleeds spontaneously.
- A **lump, thickened, crusted, or eroded area** that doesn't heal.
- **Difficulty chewing**, swallowing, speaking (hoarseness) or moving the tongue. A **sore throat** or a feeling that something is caught in their throat.
- **Numbness** of the tongue or other area of the mouth.

Any of these should make you nervous…

General guidelines for Oral Lesions

More ominous…

- Solitary lesion
- Fixed to surrounding tissue
- Indurated lesion
- Asymmetrical lesion
- Mixed color lesion (red and white)

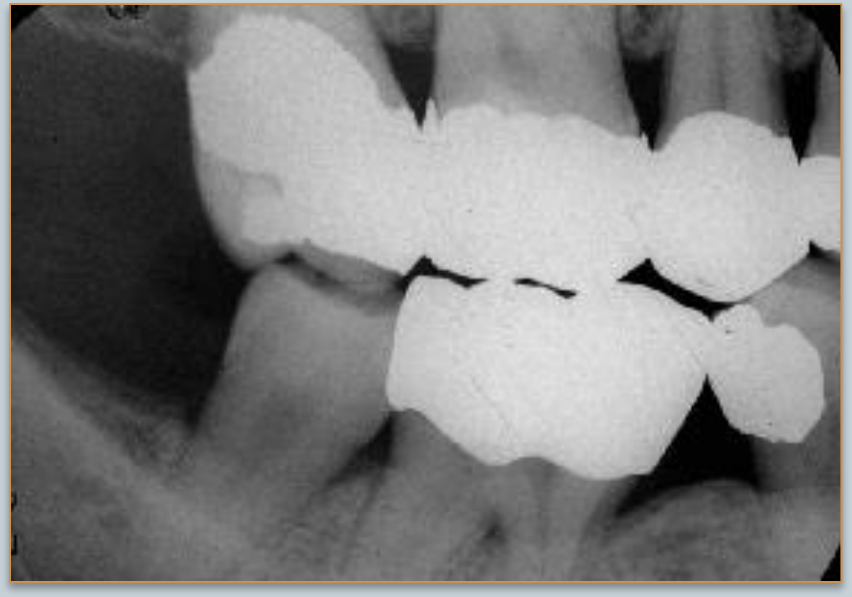
More reassuring…

- Multi-focal lesions
- Generalized lesions
- Symmetrical
- Long duration (years)Well-demarcated borders

Back to Review

4. Dental Exam

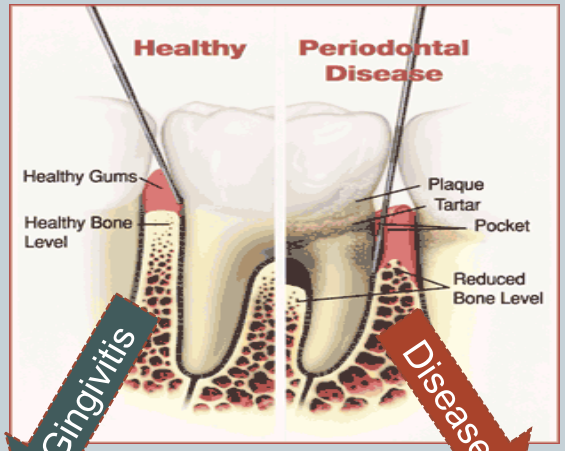
Collect data



- Chart in this order:
  1. Missing and Impacted teeth
  2. Orientation, position
  3. Materials (existing restorations)
  4. Caries
- Get as much as possible charted before the patient arrives, using radiographs.
- Perform a clinical exam to complete the picture.

5. Periodontal Charting

Collect data



Supragingival calculus and/or Stain and/or Pocket depth <4mm

Prophylaxis D1110

1.Subging Calculus + Bleeding on probing and/or 2. Pocket depth > 4mm in several areas + Radiographic bone loss or 3. MG defects

Comprehensive Periodontal Evaluation D0180

Really heavy calculus? You may need to do a **Full mouth debridement** (D4355) to remove the calculus so you can do accurate probing.

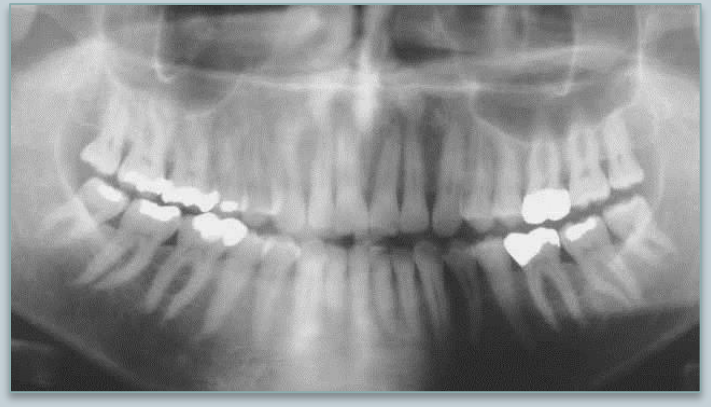
- **Do full mouth probing**. (*Clinical tip: recite the probing depths into a recording device and transcribe after patient dismissed)*
- **Decide** if patient needs a **Comprehensive Periodontal Evaluation (D0180)** or a **Prophylaxis** (D1110) next- see criteria on left.

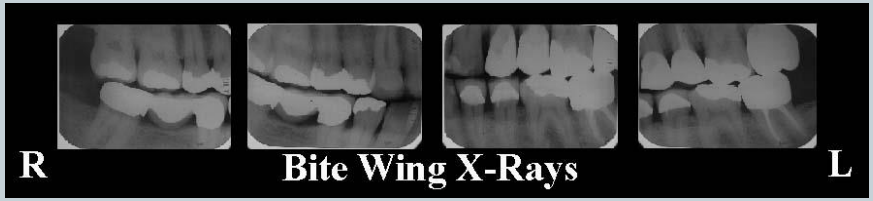
Back to Review

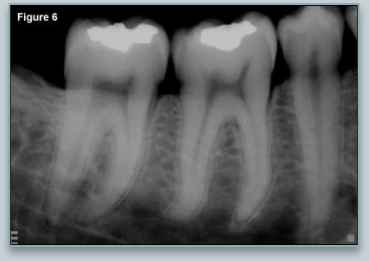
Recall Patients:
What radiographs does your patient need?

Collect data

40







- Your recall patients (those who have been patients here at the school with other students) will need to be evaluated for whether or not to take new radiographs, and if so, which ones.
- First, look at the existing radiographs. The patient may have to get an updated panoramic radiograph- within 5-7 years old- based on the clinical evaluation.
- **After that, it gets more complicated….**

6. Radiographs

Collect data

Type of Exam			Adolescent	Dentate adult	Edentulous
D0150	**New Patient exam**		**1. Pan + BW, selected PA's 2. If clinical shows generalized dental disease, tx, then FMX**		**Based on individual**
D0120	**Recall Patient- Mod-High Caries Risk**		**BW q 6-12 mo**	**BW q 6-18 mo**	**NA**
D0120	**Recall Patient- Low Caries Risk**		**BW q 18-36 mo**	**BW q 24-36 mo**	**NA**
D0180	Recall Patient with Perio Disease		Based on severity, location of disease		NA
Any	Implants	Planning	Usually: Girls age 16 Boys age 18	Consider ConeBeam CT for 3D image of bone and scary stuff (nerve, blood vessels, bony defects)	
		Follow-up	Usually annual PA radiographs		
Any	**Endo- dx, planning, follow-up**		**Post-endo: 6 mo, 6 mo, then q year.**		**NA**
Any	Perio- Tx follow-up		Usually take perio BW's every year		NA
Any	**Caries remineralization therapy**		**Usually BW's every year**		**NA**

Modified from ADA recommendation 2004

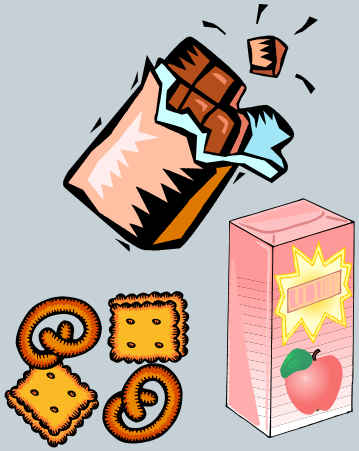
Vocabulary q= every, dx= diagnosis

Back to Review

7. Caries Risk Assessment

Collect data

- Go through the Caries Risk Assessment Tab.
- At this point, you should have a good sense for whether your patient is caries active or not from clinical and radiographic exam.
- If your patient is caries active, let's figure out why:
  - You know from the medical history and the oral exam if it's a salivary issue.
  - If not, it's probably dietary. Now it's up to you to tactfully figure out, with your patient, what the issues are.



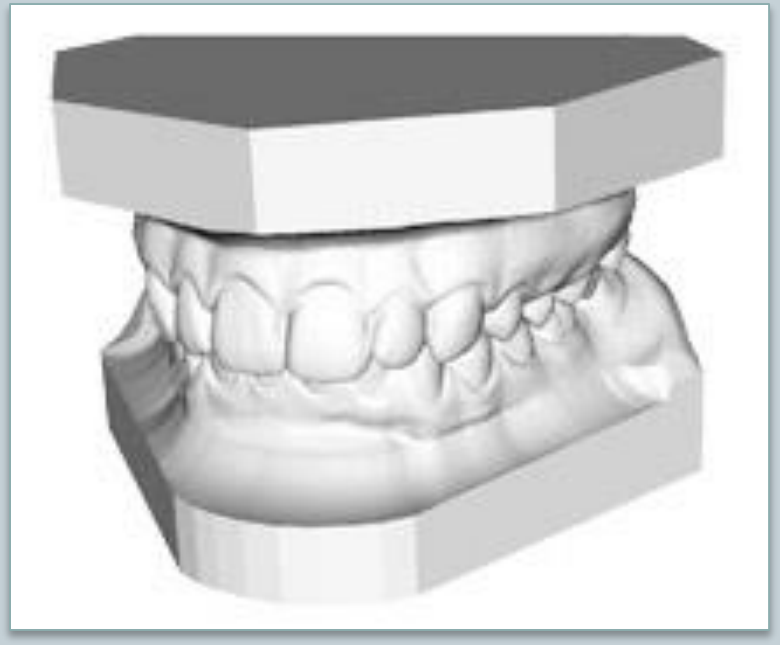
or

or both?

8. Study Casts

Collect data

- You will make a set of study casts so you can, well, *study* them when the patient isn't there.
- To do this, you use alginate impression material to make maxillary and mandibular impressions.
- You'll learn how to do this in your Occlusion course.

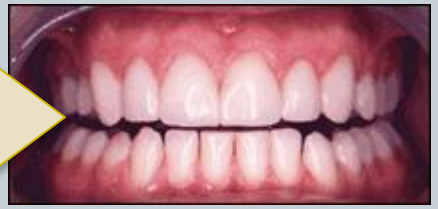


This is what your casts should look like- especially the gingival and mucosa!

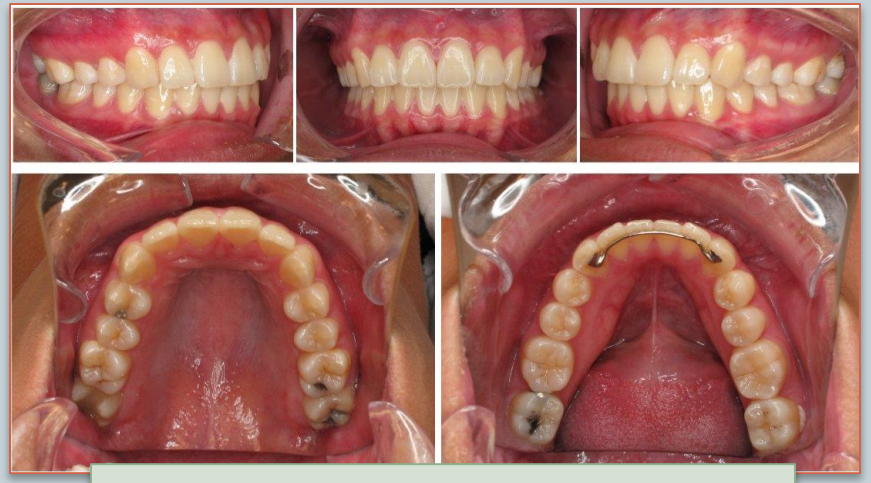
9. Photos

- Clinical photos are a tremendous adjunct to treatment planning, not to mention **legal documentation**.
- It will help you remember details, and as you think through options, will answer questions that never occurred to you earlier!
- In the clinic, there is a camera you can check out. You just need your own 2GB (no larger!) SD card. **Use it, it will help you learn to take photos, which is harder than it looks!!!**

If you have an occlusal plane issue, take this type of photo for your Phase 3 Fixed consult.



Along the plane of occlusion, show teeth slightly apart



Basic set of intraoral photos

Key Clinical Take-Aways

- Obtain as much information as possible (and as appropriate!) prior to the appointment from the telephone interview (if patient agrees, medications, history) and radiographs.
- Use other recording mechanisms prior to entering in axiUm for convenience:
  - Chart on a paper form with disposable pencil (no patient names)
  - Record perio numbers in a voice recorder (NO patient information!)
- Do not use axiUm as scratch paper. Be ***certain*** of any entries made in axiUm. If not sure (ie, caries), keep on paper until the DXR appt. No entry in axiUm can ever be truly deleted, and guesses just clutter up the record!

Dismiss the patient…

- If you have been organized, efficient, and skillful, you will have accomplished what you need to accomplish in this first examination appointment.
- You will write up your chart entry and place the exam code “in progress” (it will show up as an “I”) to be completed at the DXR Diagnostic Review appointment.
- Thank your patient for their cooperation and patience! Let them know how important this is to your education. For many of them, this is an important part of why they come here- to help educate the next generation- corny as that sounds. *Appreciate their effort.*

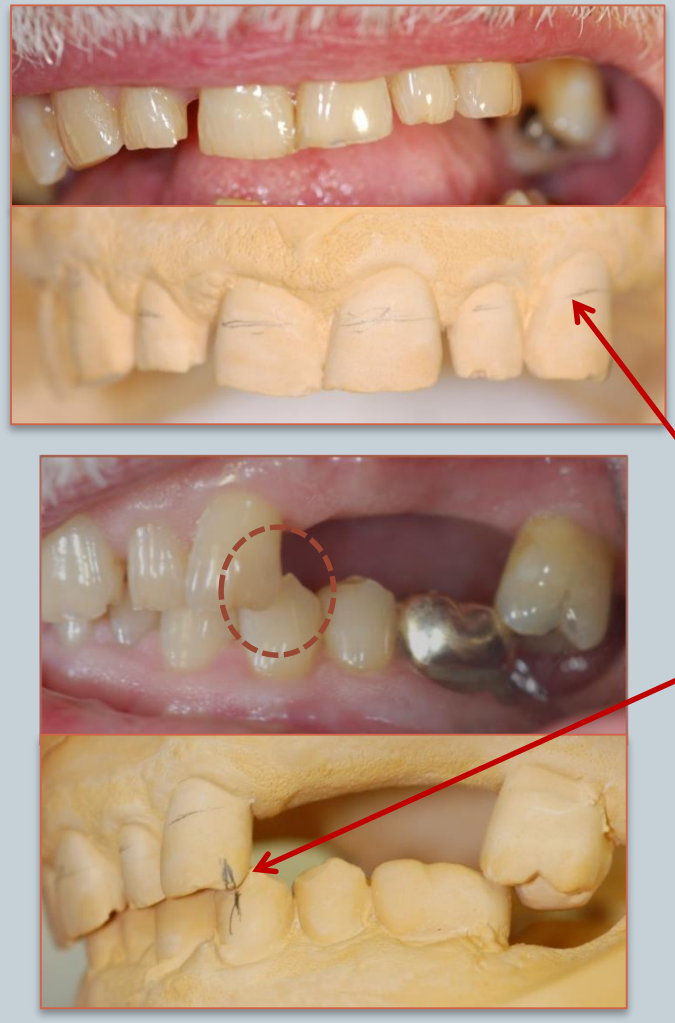
After the Exam Appointment

STUDY CASTS

RADIOGRAPHIC INTERPRETATION

START DEVELOPING PROBLEM LIST, DIAGNOSIS LIST, AND TREATMENT PLANS

Marking Study Casts

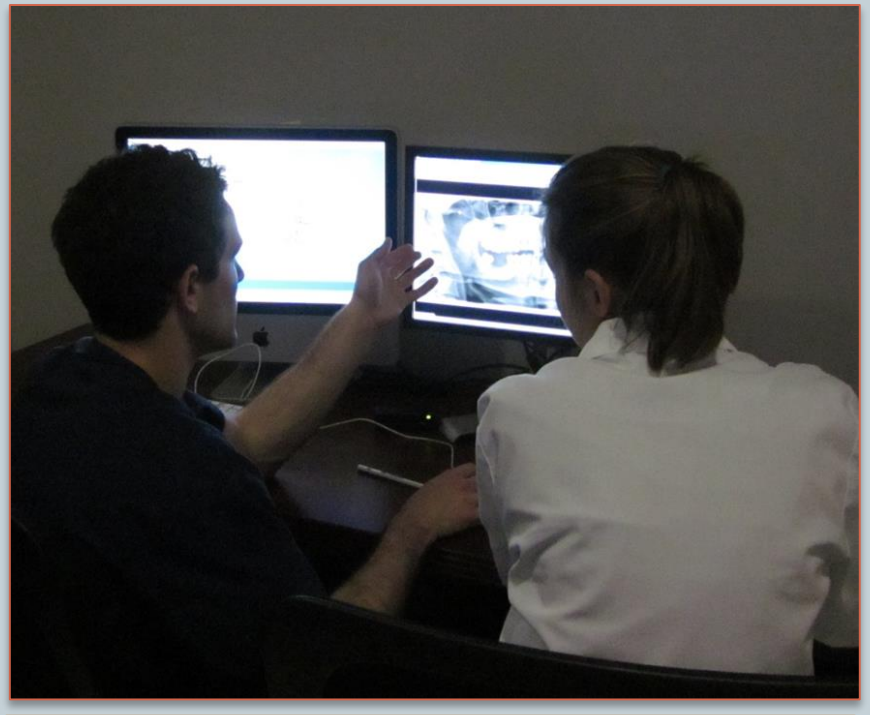


1. First, make sure the study casts articulate correctly. Usually the problem is:
   - Bubbles of extra stone on the occlusal surfaces
   - Not trimming the heels of the mandibular cast enough
2. Lightly mark the location of the **smile line** on the cast (See why photos are so useful?)
3. Mark the **maximum intercuspation** location (normal bite location) with little pencil marks from maxilla to mandible on both sides.

New Patients: Radiographic Interpretation

Collect data

- Because all of our patients need radiographs for screening, they already have pans and FMX's. Do the Radiographic Interpretation tab on your own, then make an appointment with a **Radiology faculty member** to go over it with them- they will sign if off.
- The **Radiology requirement** is:
  - Do **4 interpretations** with Radiology faculty (with a passing grade on each)
  - Challenge the 5th full mouth interpretation as a **competency** in the spring semester.
- After that, you will fill out a radiology form and send it to the Radiology faculty.



Radiology faculty member doing a radiographic interpretation with a student

Now you THINK

- Find a nice quiet spot where you can lay out your models and have access to axiUm.
- If you think you might want to alter your models- wax up or modify teeth- make a duplicate set! You always keep your original set untouched.
- You might want to be in a lab where there are loose sets of denture teeth and wax to try out your ideas. We're dentists- we think with our hands!

Treatment Planning in Axium

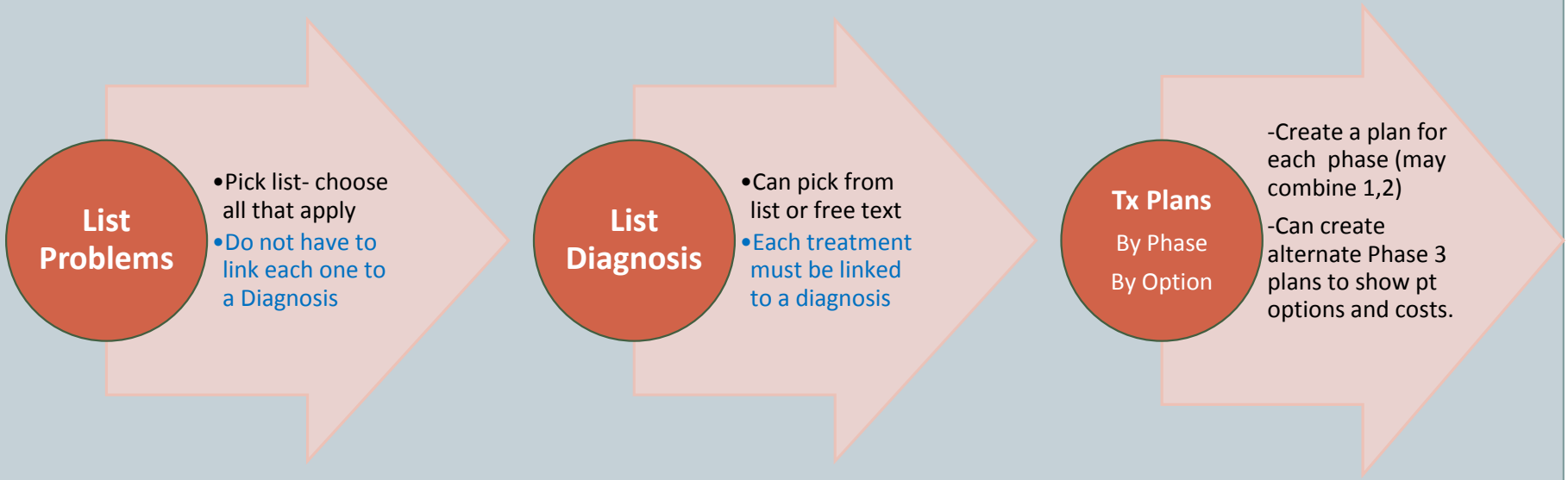
PROBLEM LIST

DIAGNOSIS LIST

CREATING MULTIPLE TREATMENT PLANS

Overview on Treatment Planning

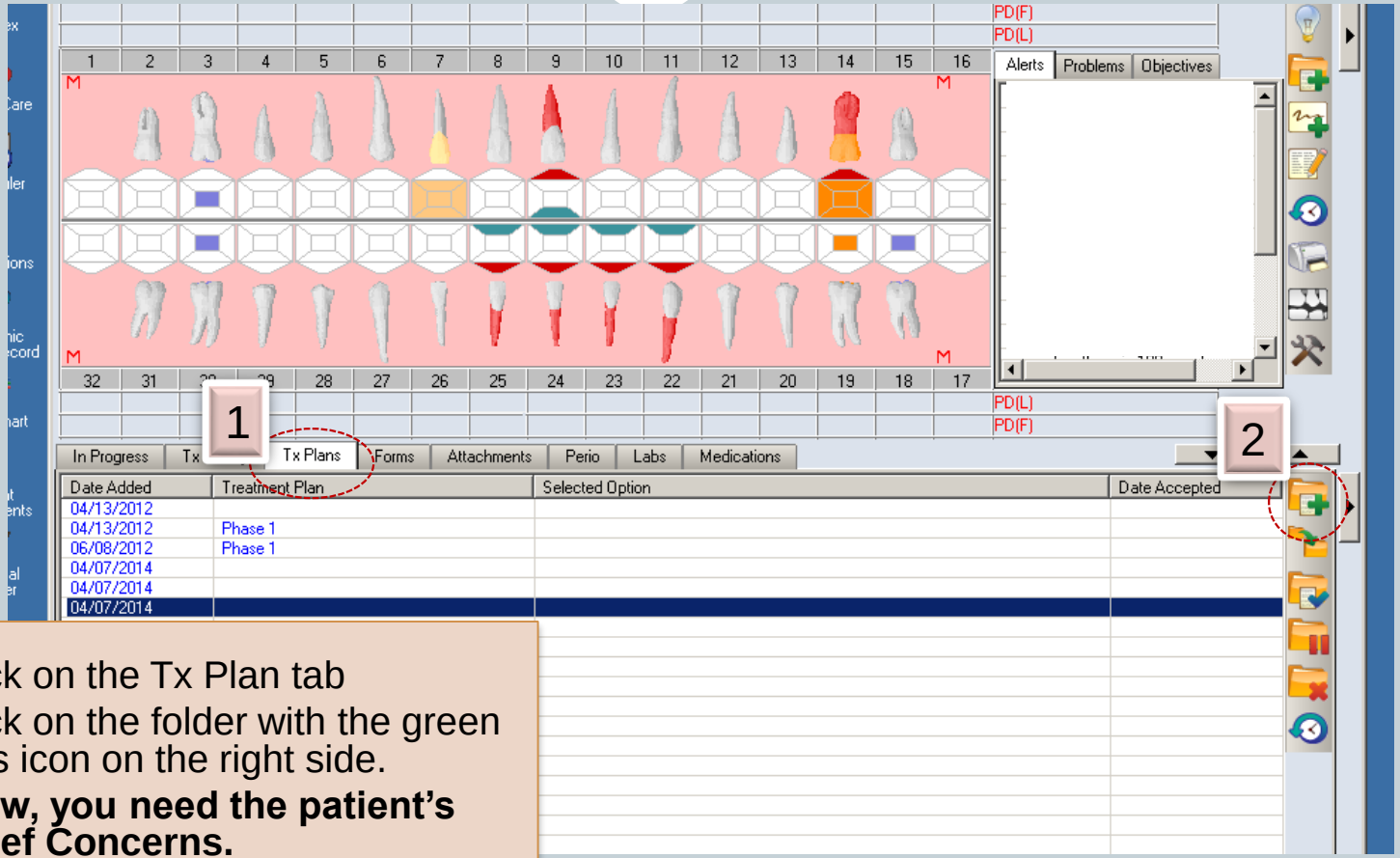
- You will probably not be surprised to hear that treatment planning in axiUm is a *little* complicated. Stay with me here, because it has to be done.
- Start a new treatment plan by entering the Chief Concern. Then the process works like this:



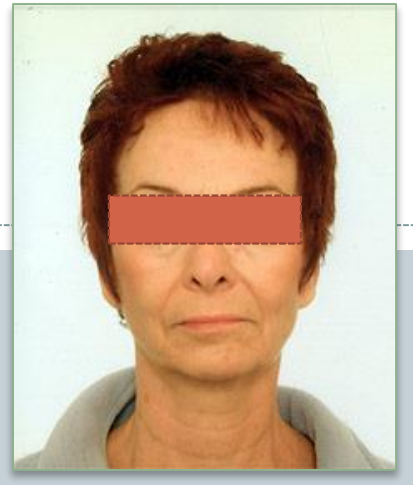
Creating a New Treatment Plan

Develop treatment plan

5



1. Click on the Tx Plan tab
2. Click on the folder with the green plus icon on the right side.
3. **Now, you need the patient's Chief Concerns.**



Case 1: Jill- Chief Concerns

Develop treatment plan

"My teeth are so ugly, I feel like I just don't even want to smile any more. When I went to my family reunion last week, I was just so embarrassed I stayed in the kitchen the whole time. I'm really sure they all saw it anyway, but I tried to hide. Sometimes, my back tooth on the bottom left hurts….sometimes for a long time after I eat anything hot or cold. I would just like all my teeth fixed so I don't have all these problems."

Use your patient's own words... but not *all* the words. You might use the following three sentences to capture her concerns. Be thinking how this affects this person and what is most important to her...

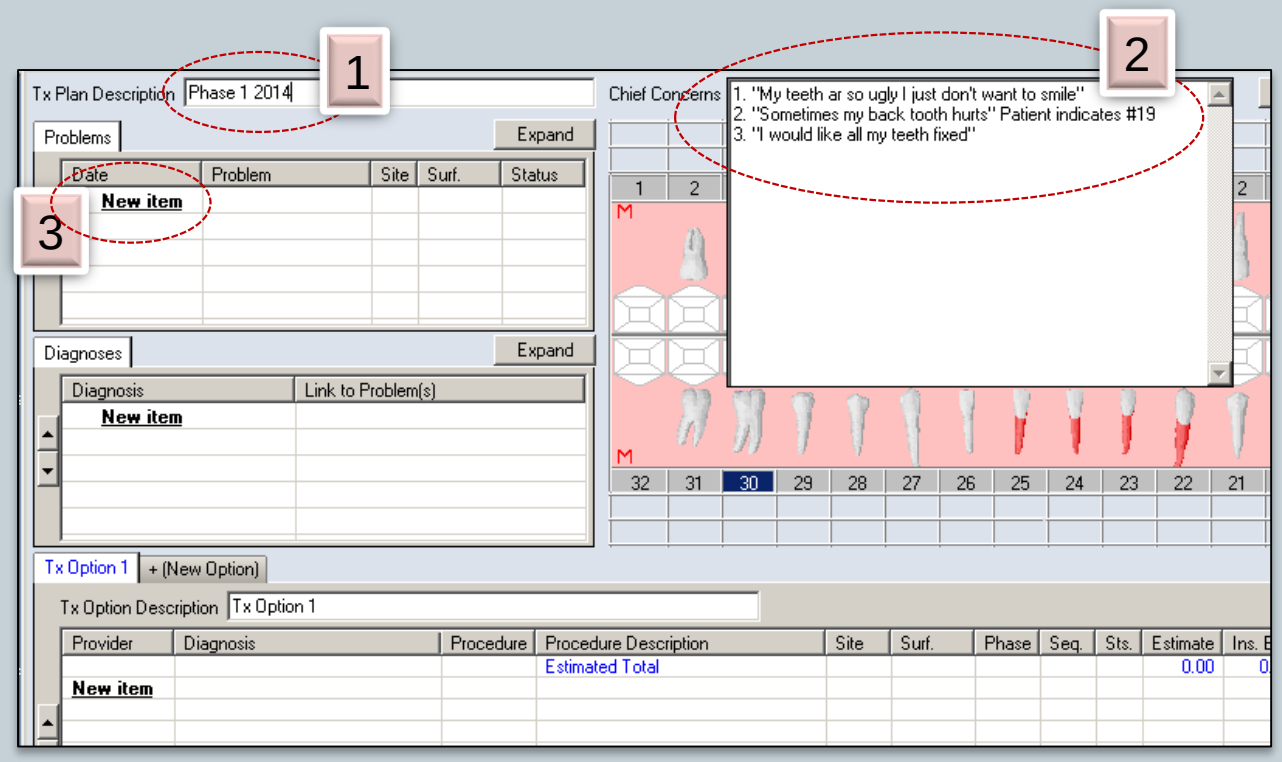
- "My teeth are so ugly, I don't want to smile" affects social interaction, and this is clearly a prime motivation. Reassure your patient that you value this concern and will address it as soon as possible, even though you may end up treating the painful molar first. If you must deviate from your patient's priorities, always explain why!
- "Sometimes my back tooth hurts" will require testing and diagnosis before treatment can be planned. Clearly, this could be an immediate concern. Note the most likely tooth!
- "I would like all my teeth fixed." This is a vague comment, but it does indicate that your patient is interested in more than just episodic care.

Back to Review

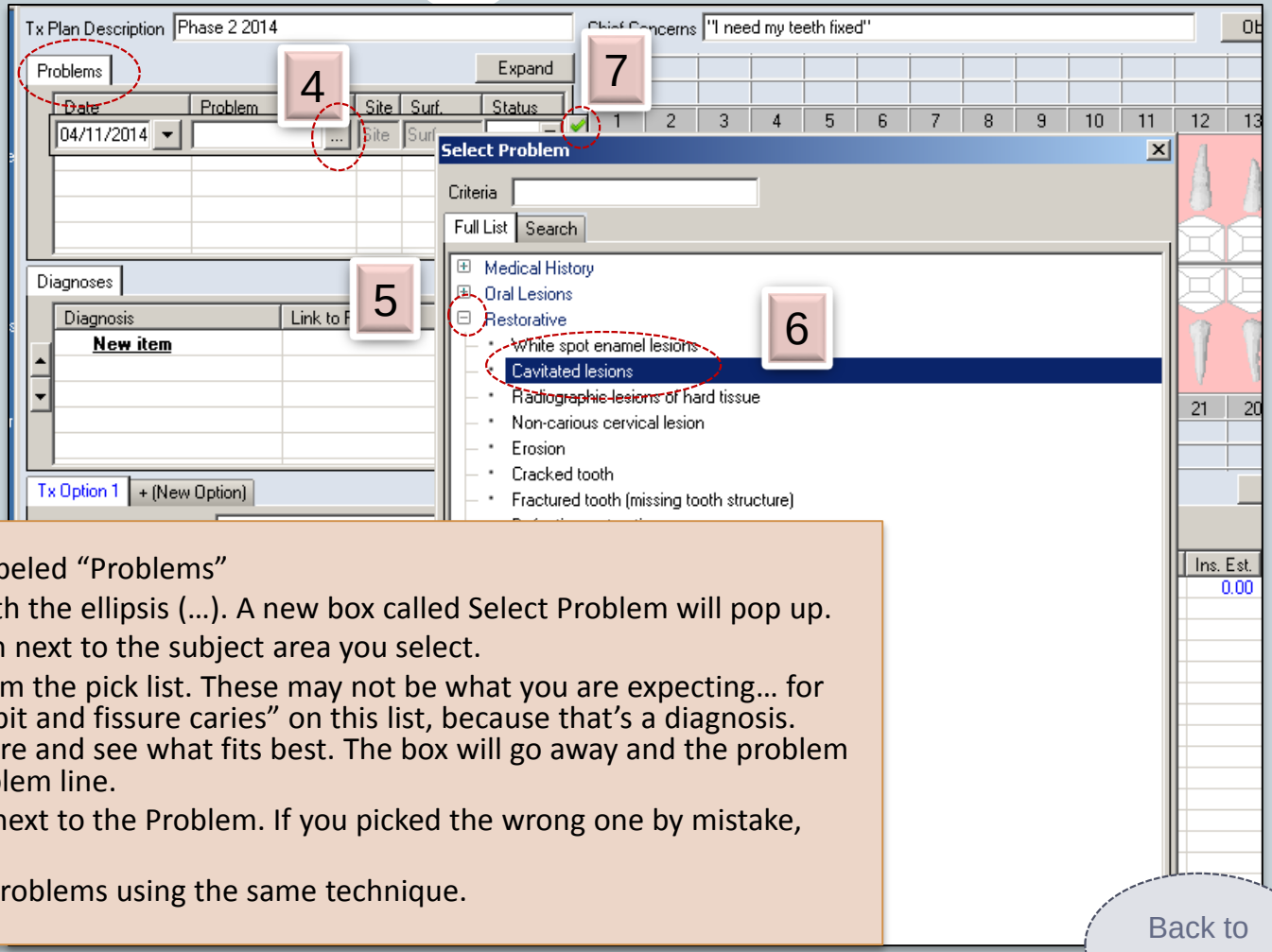
Name the New Treatment Plan

Develop treatment plan

1. Name your plan. Example: “Phase 1 2014”
2. Write patient’s Chief Concerns in their own words.
3. Click on New item in the Problems box



Adding Problems



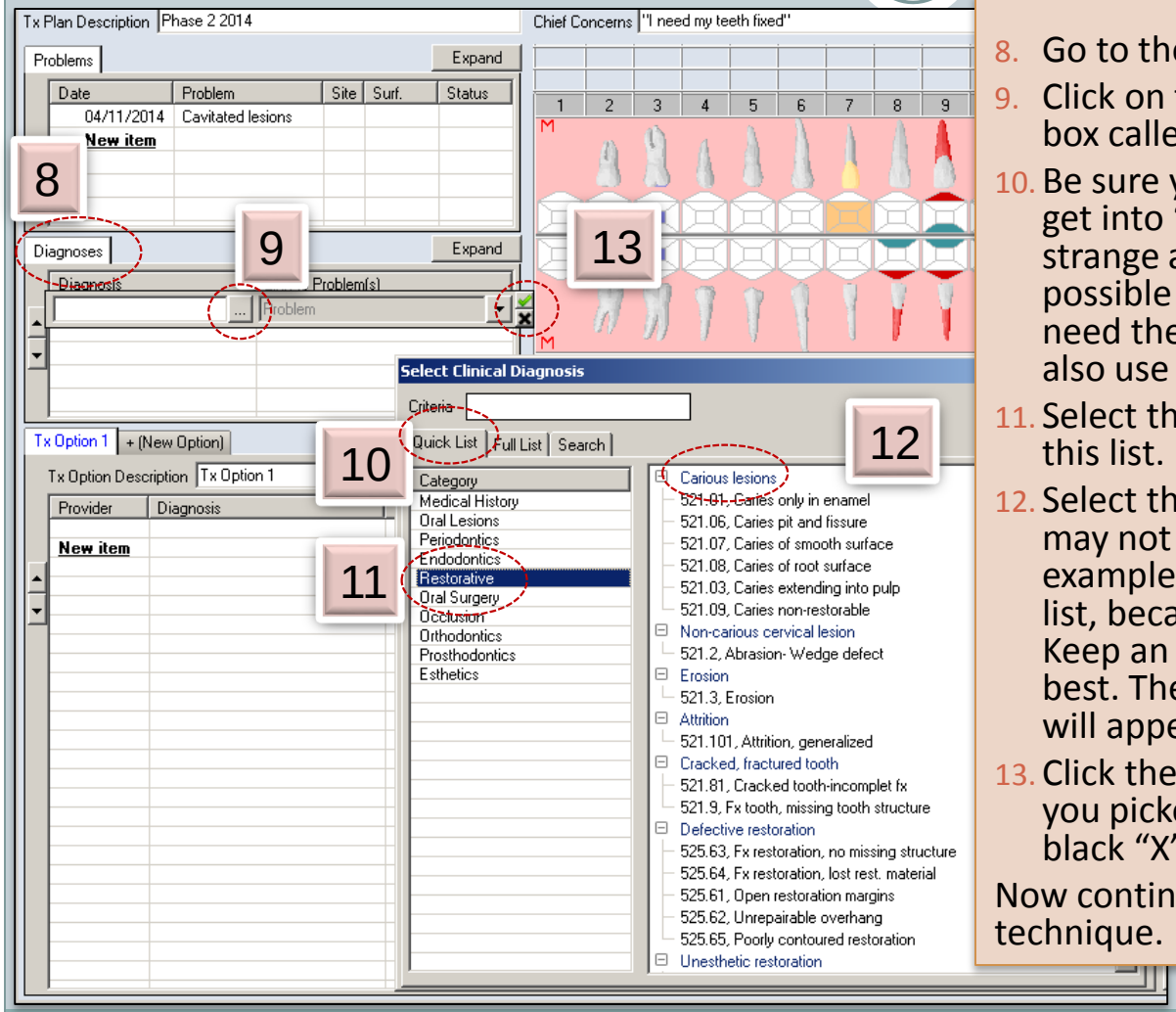
So …You're in the block labeled "Problems"

4. Click on the button with the ellipsis (…). A new box called Select Problem will pop up.
5. Click on the "plus" sign next to the subject area you select.
6. Select the problem from the pick list. These may not be what you are expecting… for example, there is no "pit and fissure caries" on this list, because that's a diagnosis. Keep an open mind here and see what fits best. The box will go away and the problem will appear in the Problem line.
7. Click the green arrow next to the Problem. If you picked the wrong one by mistake, click the black "X".

You can continue to add problems using the same technique.

Back to Review

Adding Diagnoses

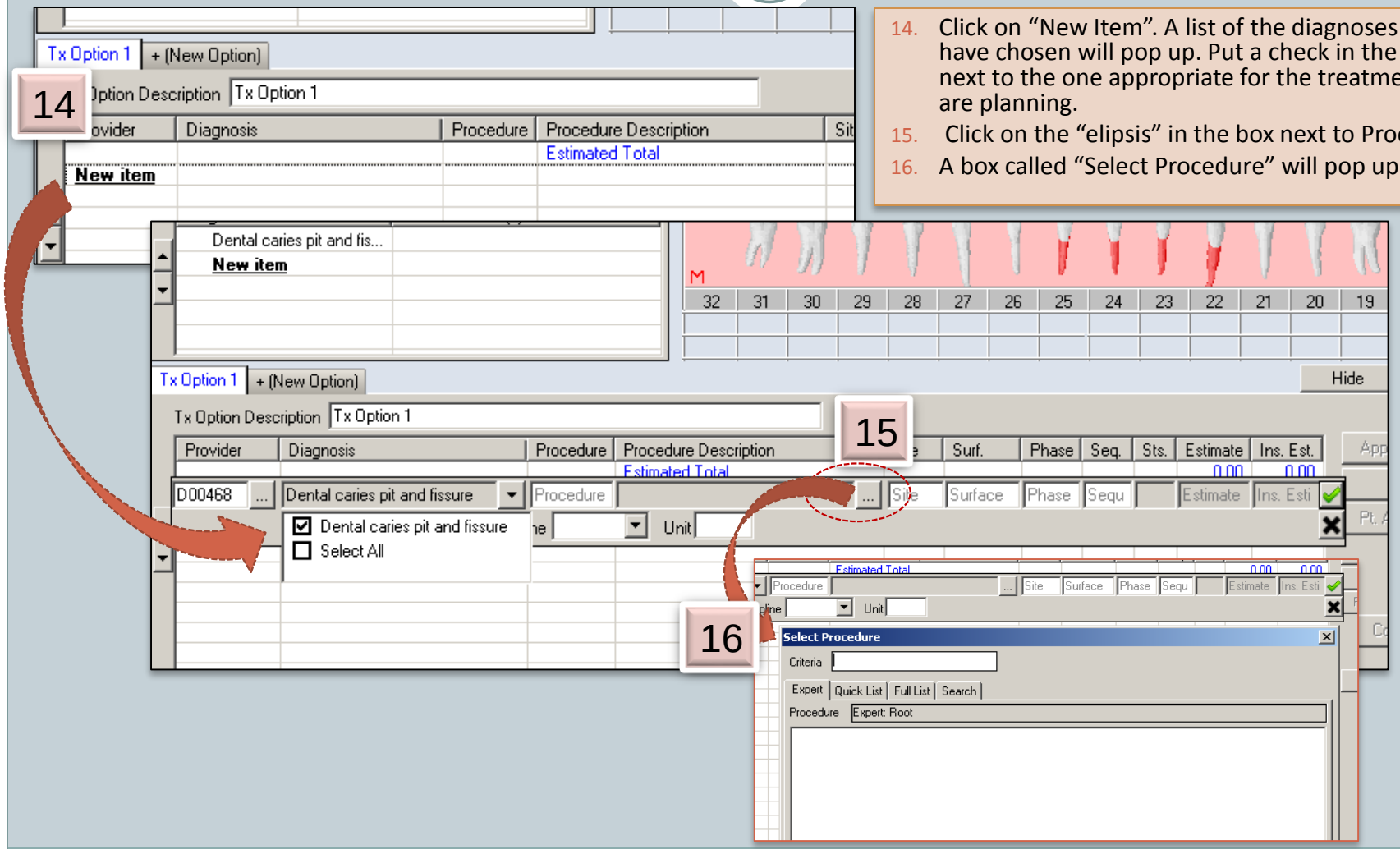


8. Go to the block labeled “Diagnoses”
9. Click on the button with the ellipsis (…). A new box called Select Clinical Diagnosis will pop up.
10. Be sure you are in the “Quick List” tab! If you get into “Full List” everything will look very strange and confusing. It has every ICD-9 code possible for the faculty and residents who need them. Generally, students don’t. You can also use the search function.
11. Select the correct category of treatment from this list.
12. Select the diagnosis from the pick list. These may not be what you are expecting… for example, there is no “secondary caries” on this list, because that’s unimportant as a diagnosis. Keep an open mind here and see what fits best. The box will go away and the problem will appear in the Diagnosis line.
13. Click the green arrow next to the Problem. If you picked the wrong one by mistake, click the black “X”.

Now continue to add problems using the same technique.

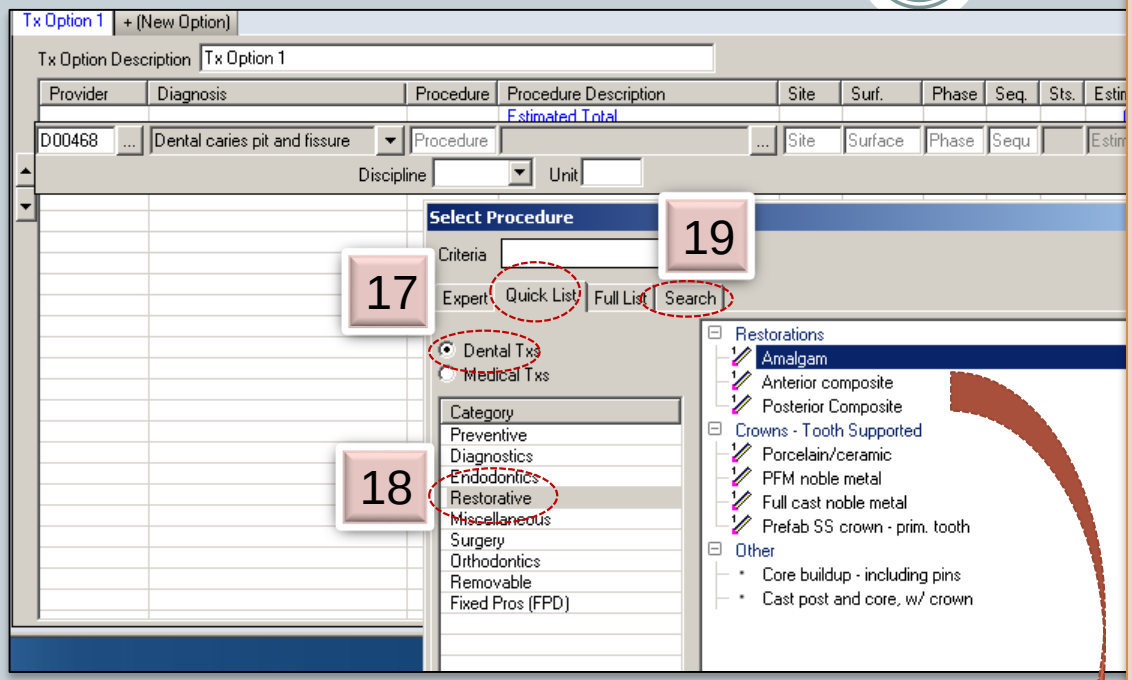
Back to Review

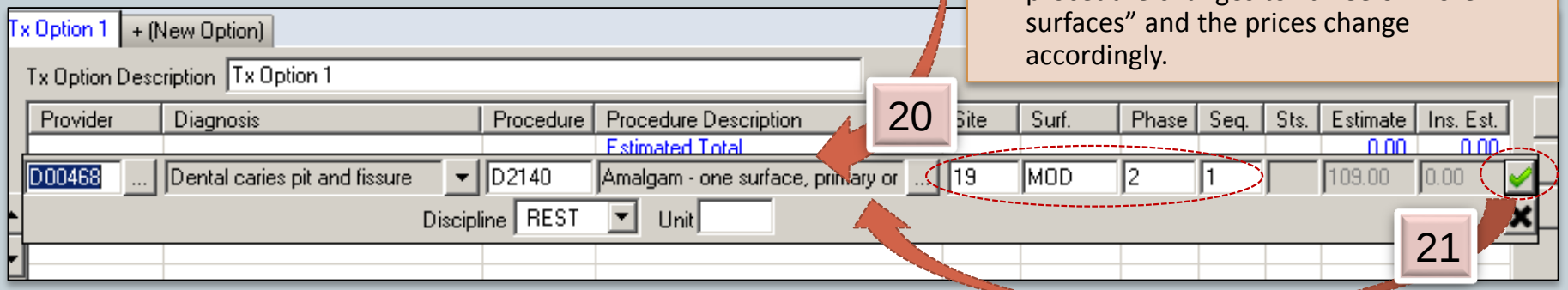
Adding Treatment to Option 1



14. Click on “New Item”. A list of the diagnoses you have chosen will pop up. Put a check in the box next to the one appropriate for the treatment you are planning.
15. Click on the “elipsis” in the box next to Procedure.
16. A box called “Select Procedure” will pop up.

Adding Treatment to Option 1





17. Again, be sure you are in the "Quick List" tab! These Quick Lists were developed to make your life easy- they are simple and organized. Make sure "Dental Txs" button is checked.
18. Select the correct treatment category. A list of possible treatments will pop up on the right… here we've selected amalgam.
19. There is also an excellent search function under the Search Tab. Just start typing and the options will appear. Play with it!
20. We clicked on amalgam, then typed in "19" under Site, "MOD" under Surf, and then decided this would be in Phase 2, and Sequenced first. More on that later in the course.
21. When the green check is clicked, the procedure changes to "three or more surfaces" and the prices change accordingly.

Moving to Diagnosis

- That's the mechanics of how to do it, but at this point it's a little tough because you haven't had all the training you need to know how to diagnose all these diseases, and that is certainly beyond the scope of this course.
- So for now, just go over how the process works, and don't get too bogged down in the details.
- But to help you see the big pictu we're going to help….

There's a list!

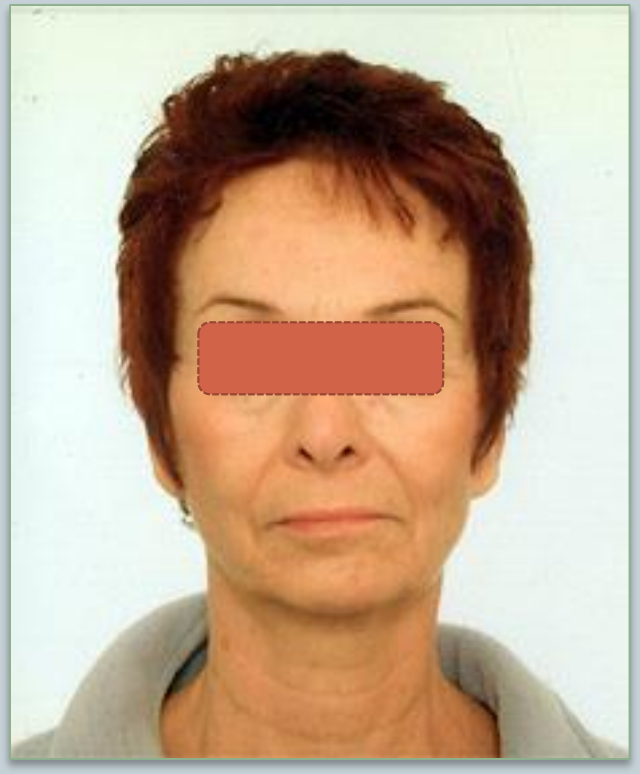
Diagnoses in AxiUm

Subject Area	Problem List	Diagnosis Quick List
Medical History	TM Joint pain/masticatory muscle pain	524.6 TMJ Disorders (details- Full List) *Temporo Mandibular Joint. Complex pain cluster of the face and joint. Usually not caused by occlusion unless iatrogenic.*
	Reduced salivary flow Xerostomia	527.7 Dist salivary secretion
	Halitosis	784.99 Halitosis
	Alcohol use Autoimmune Disease Bleeding disorder/Anticoagulation medication Cardiovascular disease Diabetes Head and Neck pain Neurological disease Respiratory disease Tobacco use	*No specific codes that correspond as a diagnosis. Just note in the problem list so you take it into account, and document that you noted it.*
Oral Lesions	Radiographic lesion of the jaw	526 Radiographic jaw lesion *Describes radiolucent, radiopaque, or mixed lesions of bone.*
	Lesion of skin of face or neck	744.9 NOS anomaly of face/neck *Skin lesions on the head and neck region other than lips or oral tissues.*
	Salivary gland disease (except xerostomia- see Med Hx)	527 Diseases of the salivary glands. *General code. Specific codes describe atrophy, overgrowth, inflammation, infection, fistula, stone or ranula.*
	Vesiculobullous lesion	528.0 Stomatitis, ulcer mucositis 694.60 Pemphigoid 694.4 Pemphigus vulgaris
	Ulcer	528.2 Oral aphthae (ulcers)
	Lesion of the lip	528.5 Diseases of lips
	White Lesion	528.6 Leukoplakia of oral mucosa 697.0 Lichen planus
	Red Lesion Pigmented Lesion	528.79 NOS soft tissue disturb
	Surface soft tissue swelling	523.8 Ging cysts,polyps 527.6 Mucocele
	Deep soft tissue swelling	528 Soft tissue develop cysts
	Tongue Lesions	529.1 Geographic tongue 529.2 Median rhomboid glossitis 529.4 Atrophy of tongue papillae 529.5 Plicated tongue

- We've made a list of the Quick Lists for Problems and the Diagnoses that most commonly correspond to those problems.
- Once you see what the choices are, I think it will be clearer to you what we are talking about.
- So print out a copy from the D2L class site.
- Keep it handy, and as you go through your courses, keep checking it out….

Jill's Problem List

Develop treatment plan



Let's look at Jill's case in more detail. See if you can find Jill's findings on the Problems side of the list. We'll do this one for you:

1. Chief concern identified as "stained teeth" and "spaces between teeth. (Esthetics)
2. Jill's medical history includes Type 1 diabetes.(Medical)
3. Pain "pain with thermal stimuli" in site 19. (Endodontic)
4. You also noted periodontal problems, caries, restorative problems, and missing teeth with some occlusal plane problems (Periodontal, Restorative, Prosthodontics, Occlusion)

What are the Diagnosis options?

Develop treatment plan

Subject area | Problems | Diagnoses

	White spot enamel lesions	
Restorative	Cavitated lesions Radiographic lesions of hard tissue *(Visible on exam vs visible on radiograph)*	521.03 Caries- extending into pulp *(think of vital pulp therapy)* 521.06 Caries- pit and fissure 521.07 Caries- smooth surface 521.08 Caries- root surface 521.09 Caries- unspecified *We are going to use this code to describe non-restorable caries*
	Non-carious cervical lesion	521.2 Abrasion- Wedge defect NOS (Non-carious cervical lesion) *NOS=Not otherwise specified*
	Erosion	521.3 Erosion (ie acids, vomiting)
	Cracked tooth	521.81 Cracked tooth- incomplete fx *Used for symptomatic or asymptomatic cracks into dentin.*
	Fractured tooth *(missing tooth structure)*	521.9 NOS-Fx, missing tooth structure
	Defective restoration	525.61 Open restoration margins 525.62 Unrepairable overhang 525.65 Poorly contoured restoration
	Fractured restoration	525.63 Fx restoration *Fracture seen but no lost tooth structure or restorative material* 525.64 Fx restoration, lost rest. material
	Unesthetic restoration	525.67 Unesthetic restoration
	Dentin hypersensitivity	521.89 Dentin hypersensitivity, NOS
	Provisional restoration Previously endodontically treated tooth Mod-High Caries Risk	*No specific codes that correspond as a diagnosis. Just note in the problem list so you take it into account, and document that you noted it.*
Endodontics	Spontaneous pain Pain to thermal stimulus Pain, patient unable to specify Pain to biting/percussion Palpation tenderness Periapical radiolucency Sinus tract *(These problems are evaluated together with test findings to develop a precise diagnosis from the list on the right)*	522.0 Pulpitis 522.1 Pulp necrosis 522.4 Acute apical perio, pulpal origin 522.5 Periapical abscess w.o. sinus 522.7 Periapical abscess w sinus tract
	Swelling of suspected endodontic origin	528.3 Cellulitis and abscess
	Discolored tooth	521.7 Post eruptive color changes *(Those changes attributable to a history of trauma)*
	Failing endodontic therapy	526.6 Pathosis of previous endo tx

- Now look at the corresponding Diagnoses next to each problem on the Quick List.
- There are notes on this printout that are not in axiUm to help you, too. They are in blue.
- As you go along in clinic, if you find problem areas, email the Treatment Planning course director with questions and concerns so these can be incorporated and shared. Help the next generation of students!

What are the Diagnosis options?

Develop treatment plan

- If you don't find the item on the Quick List, go to the Full List. On the right is an overview of the topics. It's hard to navigate, though- you've been warned.
- If you're lazy, you can "free text" into the box below the pick list. *Do this only as a last resort*, however, since free text can't be searched electronically, and this compromises the value of our records for research.
- If there are diagnoses you don't find on the list, email the Tx Planning course director so we can modify the list.

ICD-9 Categories (Full List)

520 Disorders of tooth development and eruption

521 Disorders of hard tissue of teeth

522 Diseases of pulp and periapical tissues

523 Gingival and periodontal diseases

524 Dentofacial anomalies, including malocclusion

525 Other diseases and conditions of the teeth and supporting structures

526 Diseases of the jaws

527 Diseases of the salivary glands

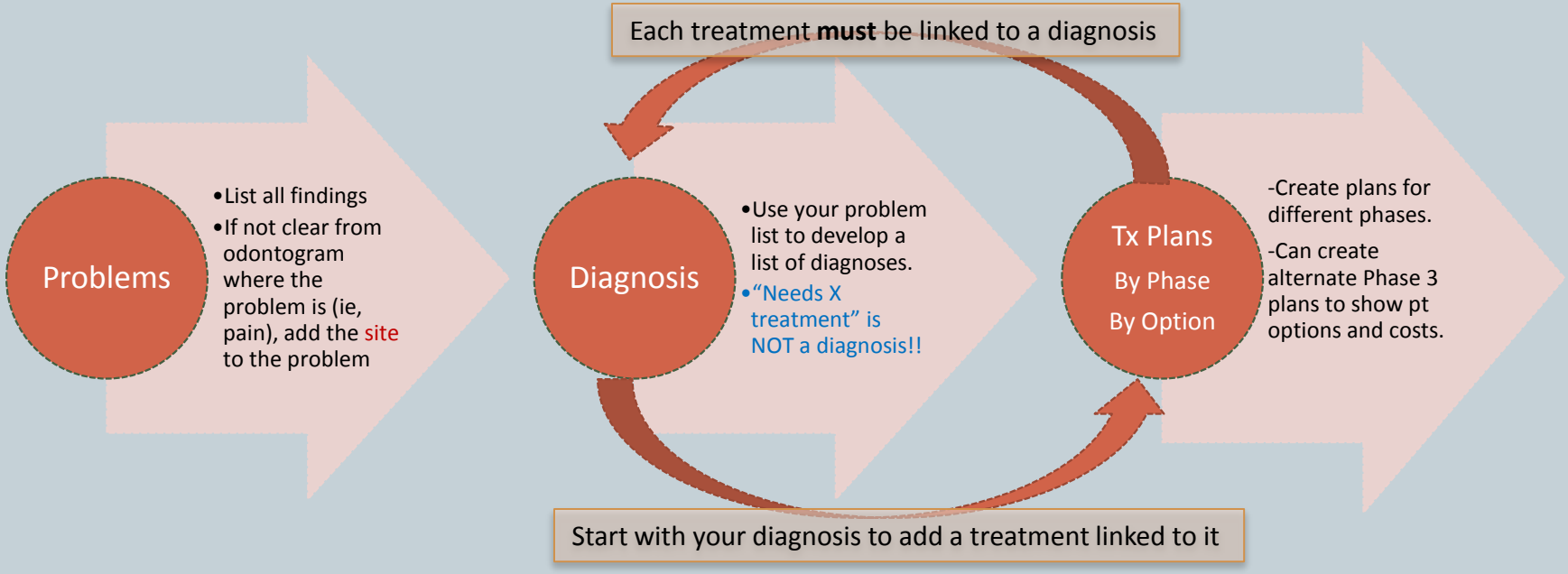
528 Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue

529 Diseases and other conditions of the tongue

Summary

Develop treatment plan

1. List all your Findings in the Problems List so you don't forget anything.
2. Use the Problem List to create the Diagnosis List for those problems you plan to treat. Remember, every treatment will need to be linked to a diagnosis.
3. The next step will be to create treatments linked to each diagnosis and place them in Treatment Plans by phase.



Moving from Diagnosis to a Treatment Plan with Phases

MATCHING DIAGNOSES AND TREATMENTS

DEVELOPING PRIORITIES WITH PATIENT

WHAT GOES IN WHICH PHASE

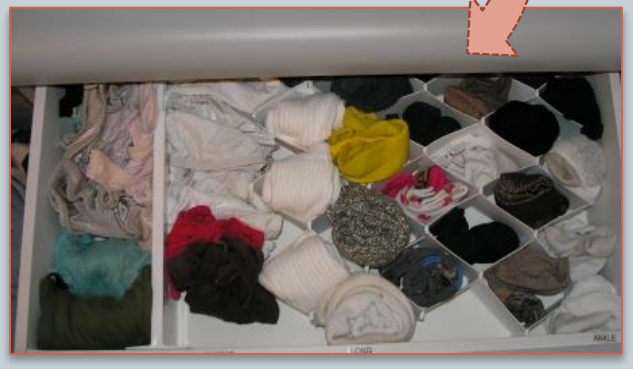
JK Mitchell, DDS

With a treatment plan…

- You dump out all the **diagnoses** and in the light of the patient's:
  - Medical concerns
  - Personal preferences
  - Economic resources

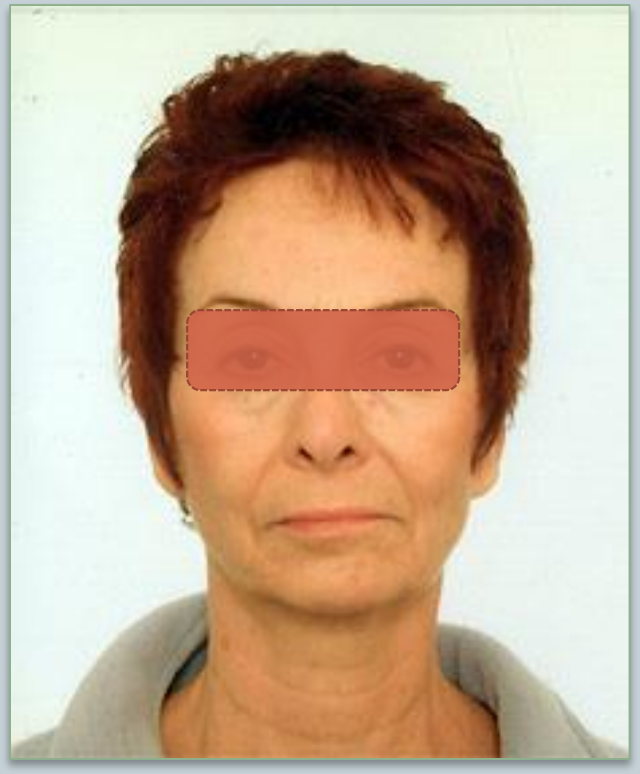
  you plan at least one (usually several) reasonable **treatment options** for each one.
- Looking at all your **socks,** you might sort them by function…maybe Workout socks vs Dress socks vs Crazy color socks, whatever.
- Once you've paired up **diagnoses with treatments**, decide which **phase** each of these treatments belongs in.

Let's try an example. Remember Jill?



Remember Jill's Problem List?

Develop treatment plan



1. Chief concern identified as "stained teeth" and "spaces between teeth."
2. Jill's medical history includes Type 1 diabetes. Last HbA1c was 4 mo ago.
3. Pain "pain with thermal stimuli" in site 19.
4. You also noted:
   - Periodontal problems
   - Caries
   - Missing teeth
   - Occlusal plane problems

Start thinking of possible treatments

1. Chief concern identified as "stained teeth" and "spaces between teeth."
2. Jill's medical history includes Type 1 diabetes. Last HbA1c was 4 mo ago.
3. Pain "pain with thermal stimuli" in site 19.
4. You also noted:
   - Periodontal problems
   - Caries
   - Missing teeth
   - Occlusal plane problems

1. Several options…. Porcelain veneers? Orthodontics? Bleaching and direct bonding?
2. Get current HbA1c
3. Diagnose pain #19, then go from there to develop tx plan.
4. Other problems:
   - Perio- D0180, scale, root plane
   - Caries- list needed restorations
   - Missing teeth- options… implants? RPDs?
   - Occlusal plane problems. *Wild card!* How are we going to manage this??

=land mine. Keep an eye on this!

And focus on the Key Decision Points

Develop treatment plan

Knowing Jill's problems, you look at her study casts, and start thinking. Some problems don't have any real options…her diabetes is going to be followed up with an HbA1c. But other problems have options, and the **big decisions that are going to determine the overall direction of the case are key decision points.** Examples:

Problem	Possible Treatments	Advantages	Disadvantages
Esthetic Concerns	Porcelain Veneers	Best Esthetics Usually last longer	More expensive Requires tooth prep
	Vital Bleach + Composite Bonding	Less expensive No prep /reversible	Not as long lasting
Missing 29-32	Implants, fixed partial denture ("bridge")	Very functional Not removable	Expensive, requires surgery Takes up to a year to complete (healing,etc)
	Removable partial denture (RPD)	Less expensive No surgery required Reasonably quick treatment	Less effective chewing, loose Has to be taken out at night. Tends to increase caries, perio risk

What if you can't tell if there's enough space? Or how it might work? To help you see which *might* be possible, you will often do a diagnostic set-up in wax.

Back to Review

But which would work for Jill?

Develop treatment plan

- You've had a chance to talk to Jill. You know her concerns pretty well, and you have a sense for her **priorities**.
- **BUT**…**You always want to offer all *feasible* treatment plans!** Maybe she hasn't said she's interested in implants because she's heard they cost $50,000. If she finds out that here they are only $10,000, she might be delighted to do that. Maybe not. Maybe she just doesn't want screws in her jaw. You really never know unless you offer all the options with estimates.
- Bottom **line…*never* assume you know what people can or can't afford.** Every dentist has a story of some poorly dressed patient who paid cash for the highest end treatment plan. (Go read the story of why Stanford University was founded for a useful lesson on *that* idea.) And ***never*** talk down to a patient.
- After you give Jill some ball-park estimates and talk over the advantages and disadvantages of each treatment, she gives you some **direction** on what she wants.
- Now you can **start matching up problems** with her ***preferred*** treatments.

Matching up Jill's preferred treatments:

Develop treatment plan

Medical History
Type 1 diabetes

Verify control with current HbA1c

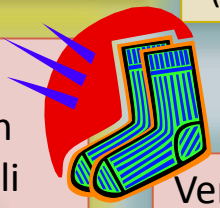
Esthetic Concerns
Stained teeth and "spaces between teeth"

Vital Bleaching (lighten color)

Direct Bonded Composites (close spaces)

Occlusal plane
#2,3,4
supraerupted

Crown
#3,4
Extract 2



Endodontic
#19- pain with thermal stimuli

Verify diagnosis, RCT #19

High Caries
CRA=22,
#8,9
2,4

Dietary counseling
Daily Fluoride x4
Office Fluoride q 3 mo
Xylitol 3x/day

Composites 8,9
Amalgam 2,4

Missing #29-32

Mandibular RPD

Periodontal
Dx Moderate

D0180
Scl/RP

= Land mine. Be careful!!!

What order do we do these things in?

Develop treatment plan

It helps to think about what our priorities are…

1. First Priority. Address *urgent* problems, like relieving pain, following up on health concerns, and making sure a suspicious lesion isn't cancer. You also need to get areas of uncertainty cleared up before you can formulate a final treatment plan.
2. Control Disease and Preparatory Treatment. Caries and Periodontal disease need to be controlled before we move on to any other treatment. Any other treatment to prepare the dentition for final rehabilitation treatment is done here.
3. Rehabilitation. Now we can turn to providing restoration of form, function, and esthetics.

What fits in each phase:

Develop treatment plan

Phase 1.

Urgent & Problem Solving

Address urgent problems and answer key questions that will affect the final direction of treatment plan.

Urgent problems:

Answer medical questions; Relieve pain; Biopsy suspicious lesions; Provisional replacement of missing anterior teeth

Sample Key Questions:

Determine perio status (D0180). Is this tooth restorable? Does endo need to be redone? Can an implant be placed there? Should we do ortho first?

Phase 2.

Disease Control

Control disease and prepare patient for Phase 3. Usually does not leave pt worse if do not progress to Phase 3.

Caries- Control dx with diet counseling, fluoride, etc. Operative to restore carious lesions.
Endo- treat pulpal pathosis

Ortho- arrange teeth to prepare for prosthetic care.

Perio- treat perio disease: prophy, init. therapy, surgery

Surgery- remove hopeless teeth, place implants, shape bone for denture placement

Phase 3.

Definitive Restorative

Restore form, function, and esthetics.

Ortho- definitive care

Endo- when done for restorative reasons

Perio- Esthetic, mucogingival, or changing ridge shape in conjunction with prosthetic treatment.

Fixed Pros- Crowns, fixed partial dentures

Removable Pros- RPD, complete dentures.

Back to Review

Now start sorting!!

Develop treatment plan

So which category-which bin- do you throw each of Jill's treatments into?

Sort the socks by function:

Develop treatment plan

29

Medical History
Type 1 diabetes

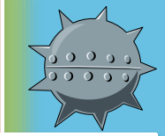
Verify control with current HbA1c

Esthetic Concerns
Stained teeth and "spaces"

Vital Bleaching (lighten color)

Direct Bonded Composites (close spaces)

Occlusal plane
#2,3,4 supraerupted



Crown #3,4
Extract 2

Composites 8,9
Amalgam 2,4

Caries
CRA=22
#8,9
2,4

Dietary counseling
Daily Fluoride x4
Office Fluoride q 3 mo
Xylitol 3x/day

Endodontic
#19- pain with thermal stimuli

Verify diagnosis, RCT #19

Missing #29-32

Mandibular RPD

Periodontal
Dx Moderate

D0180
Scl/RP

Phase 1.
Urgent & Diagnostic

Phase 2.
Disease Control, Preparatory

Phase 3.
Rehabilitation

But wait…

Develop treatment plan

- You're probably thinking "since when are stained teeth and spaces part of Disease Control?" and you'd be right.
- **But-** That was her chief concern! If we don't address that fairly soon, we aren't being responsive to her needs.

Besides, since we're going to be doing composites on #8 and 9, we would need to do the vital bleaching first (so we would be selecting the correct shade, right?) so why not go ahead and meet her esthetic needs? A happy patient refers her friends…

Begin with the end in mind.

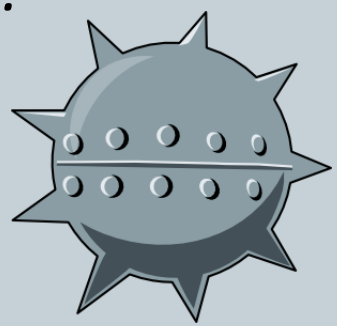
Develop treatment plan

The complexity comes when you learn how many options there are to treat any particular diagnosis.

Take a look at Jill:

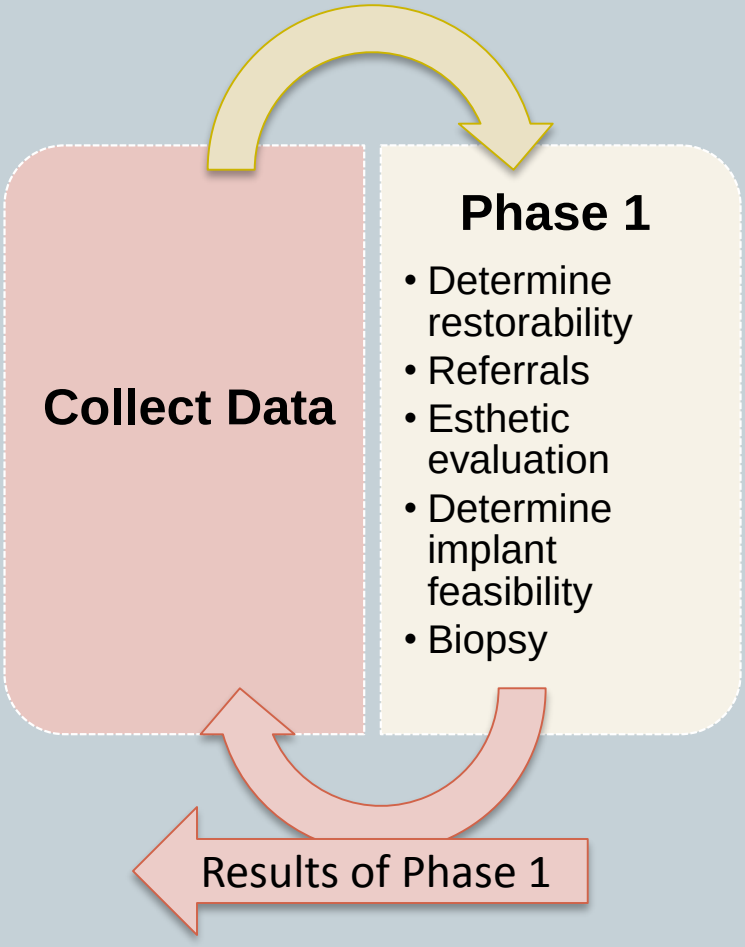
- Her carious lesions in #2, 4 could be restored with either composite or amalgam. Which is best? *Depends.*
- *But wait*, didn't you say you're going to extract #2 because it's supraerupted and there isn't enough space for an RPD? Or crown it to make it shorter so the RPD will fit? *Yep.*
- You need to figure all that out before you start drilling away on anything.
- Occlusion always has to be part of the plan!

"Boom"



It's not always neat and tidy

Develop treatment plan



Sometimes you need to **do** a certain treatment or **obtain** a specialty opinion or do a more specialized type of data collection before you can create your final treatment plan.

Phase 1 has a place for that kind of critical treatment and evaluation. It is the mechanism for collecting the second tier of data outside the normal examination. It can help you prioritize:

- **What treatments** do I have to do (see if a tooth can be restored) before I can finalize my treatment plan?
- **Who** do I need to consult with before I can finalize my treatment plan?
- **What additional data** do I need to collect (Esthetic evaluation) for this patient before I can finalize the plan?

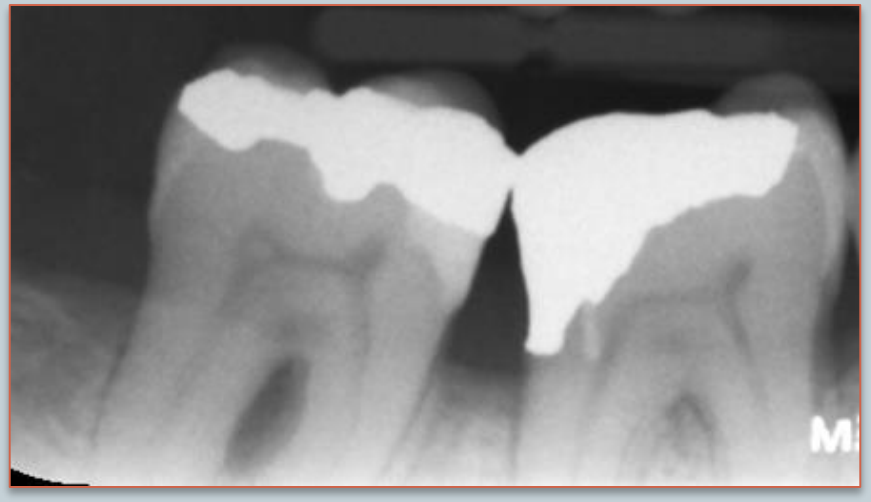
Depending on how important these questions are, a separate Phase 1 plan may be necessary before the Phase 2 plan is created. Otherwise, Phase 1,2 can be together.

Treatment *before* Treatment Planning Board

- There are going to be times when you can't get a Treatment Planning Board appointment for a few weeks and you're going to ask "**can I start on the direct restorations** while I'm waiting for Treatment Planning Board?"
- Well yes, **if you know the difference** between directs that will be done in ***any*** treatment plan, and those ***that depend on which Phase 3 plan is chosen.***
- So- **do your homework**. In your Phase 2 Treatment Plan (which will be approved at DXR) sequence it so that you know which **direct restorations will not be affected** by decisions made at Treatment Planning Board.

Case 2: Virgil

What do you see on this radiograph? This is a patient treated in the Junior clinic by students.



- Take a look at **tooth #30**. Like the location of the pin? What about the distal margin on the amalgam? Think you could do better?

Restoration clinically acceptable

Restoration NOT clinically acceptable

- Now look at **#31**. What material do you think was used on the MO? (Look closely…) Do you see another problems on this tooth?

Caries

Perio

Endo

No Problems

So let's develop a Problem and Diagnosis List:

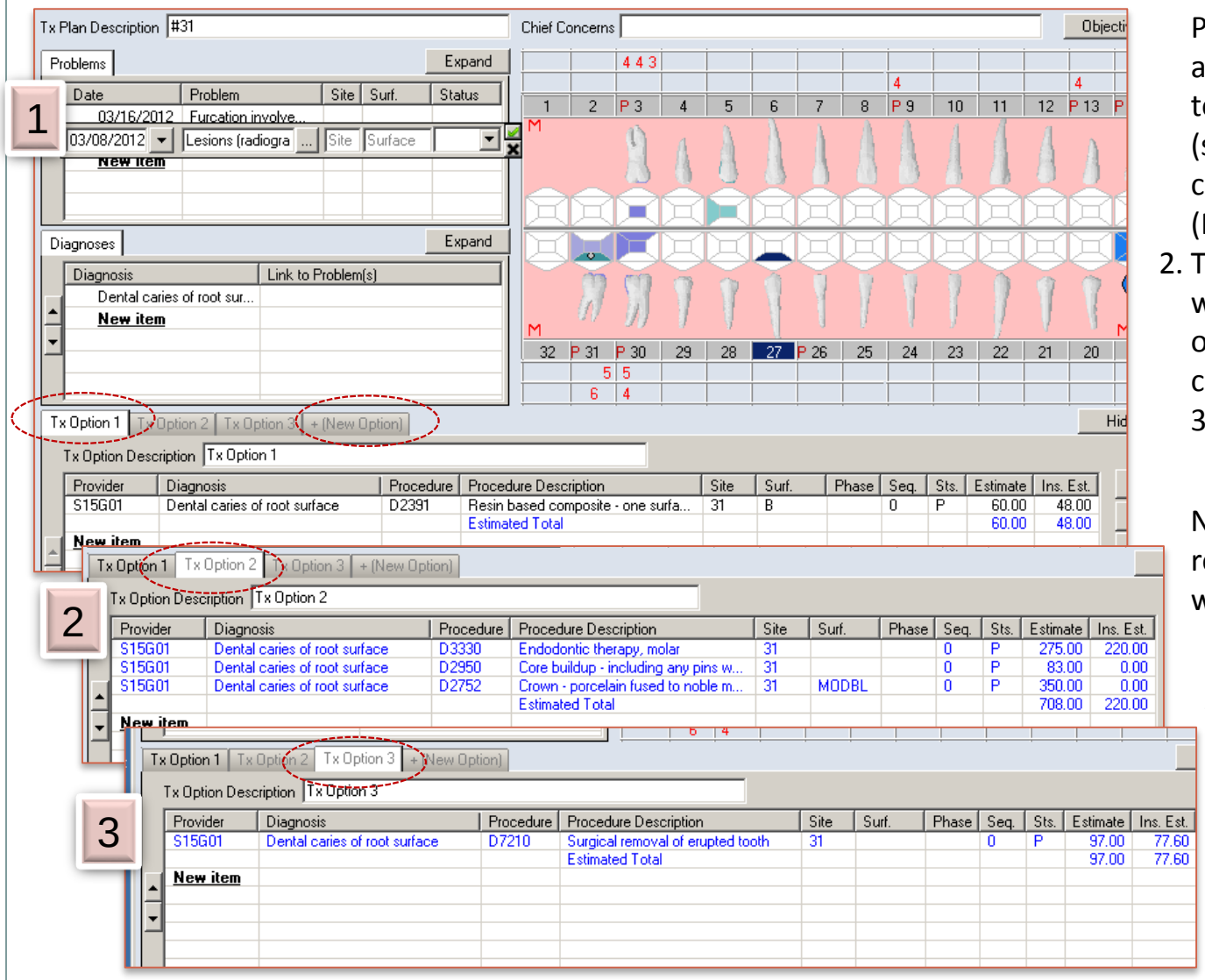
Problem	Diagnosis
• Perio-Furcation involvement	• Perio *diagnosis would depend on probing depths, and level of inflammation present*
• Restorative- Cavitated lesions or radiographic lesions (either is fine, no need to clutter your list with both!)	• Restorative- Caries-root surface

Now let's develop the Treatment Plan

- What are our options? Virgil has already been offered perio surgery and refused it, so that leaves the following:
  1. Restore the carious lesion
  2. Wait until it hurts, then do Endo, core, and crown
  3. Wait until it hurts, then extract
  4. Extract the tooth, place an implant (not offered since tooth is unopposed)
- Virgil initially wanted to wait until it hurt to make a decision. (It happens) But how would we document that we explained what the implications of that decision to wait would "cost" him in terms of treatment severity as well as actual dollars?
- In the Treatment Planning tab, you can create multiple options within the same treatment plan.

Take a look….

Creating Multiple Treatment Plans



1. Here we have created the Problem and Diagnosis lists, and the first Tx Option, which is to restore the caries with RMGI (same as Resin to axiUm). To create another option, click (New Option) tab.
2. This option explains what it would cost to save the tooth once it hurts… Endo, core, and crown.
3. And finally, the third option lists the extraction option.

Note that of all the options, the restoration is the "cheapest" as well as the most conservative.

Once Virgil saw this laid out, he chose the restoration!

This can provide the basis for an **informed consent** discussion, as well as documenting it.

(Once he signed the plan, it turned black while the other plans stayed in blue)

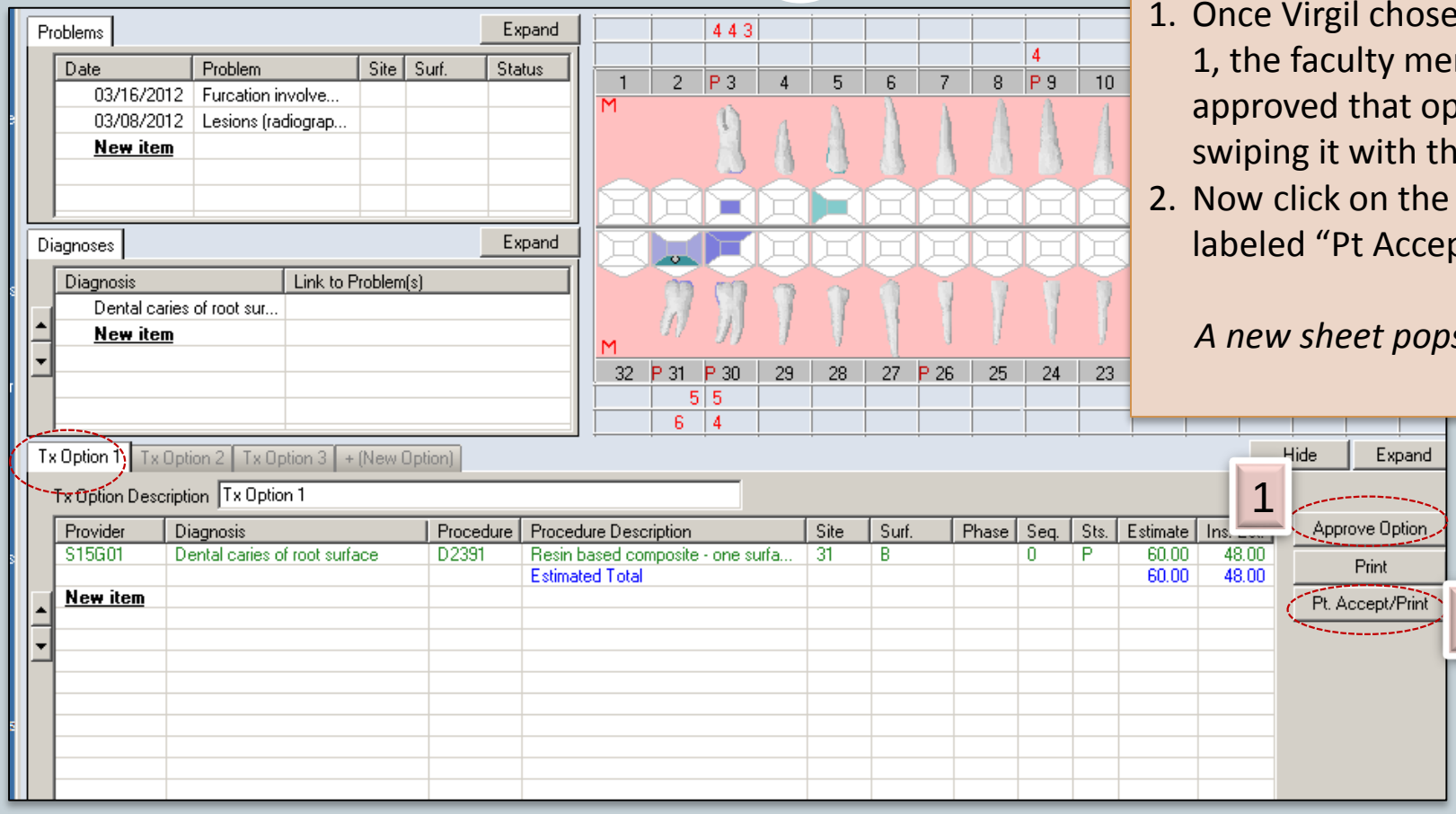
Creating Multiple Treatment Plans

When?

- Normally, create multiple treatment plans for situations that have a **wide range of either monetary value or long term implications.**
- Create multiple treatment plans for **Phase III** treatment options.
- NOT generally for routine situations where there is little choice in options except material selection (Phase II treatment).

Back to Review

Virgil: Signing Treatment Plans



1. Once Virgil chose Option 1, the faculty member approved that option by swiping it with their card.
2. Now click on the box labeled “Pt Accept/Print”

A new sheet pops up…

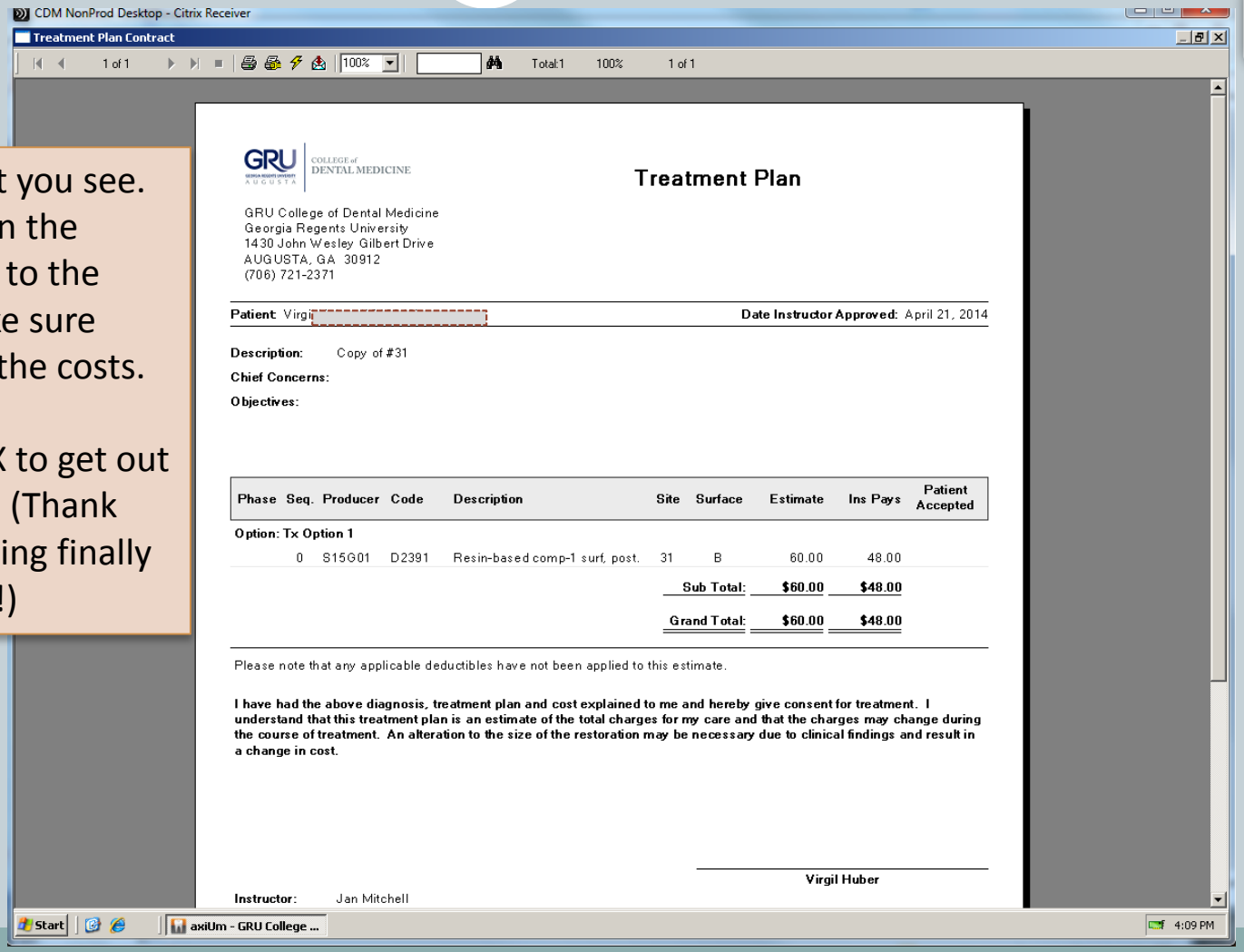
Virgil: Signing Treatment Plans

77

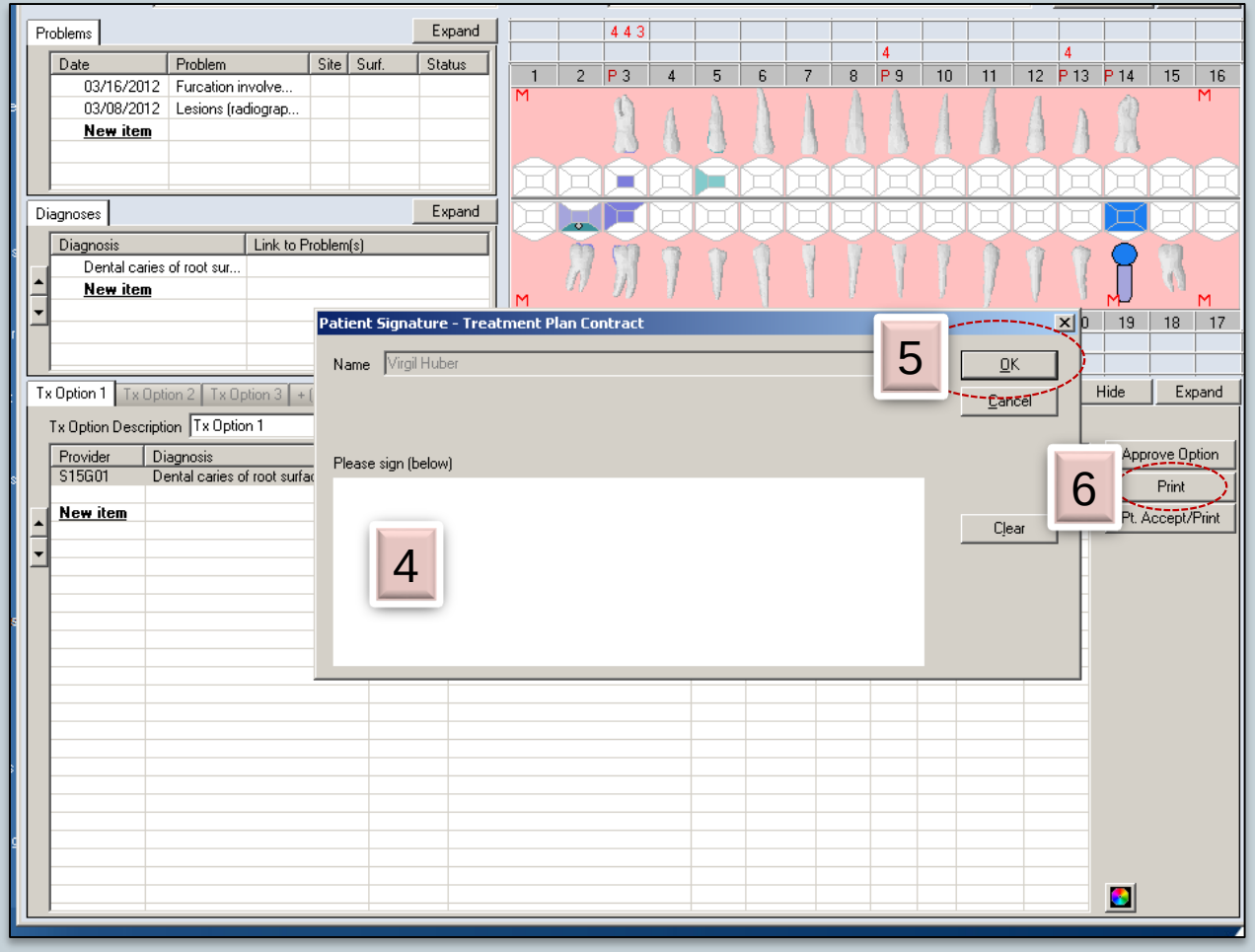
3

This sheet is what you see. It's big enough on the screen to show it to the patient and make sure they understand the costs.

3. Now click the X to get out of the document. (Thank heavens! Something finally familiar in axiUm!)



Virgil: Signing Treatment Plans



When you click out of the Pt Accept/Print screen, this block pops up.

4. Now, have them sign on the signature pad. Nothing will show up on their pad! (it bugs them…) By the way, don't wrap the cord around the signature pad… they are delicate!
5. Click OK
6. Click Print and give them a copy.

"Informed Consent"

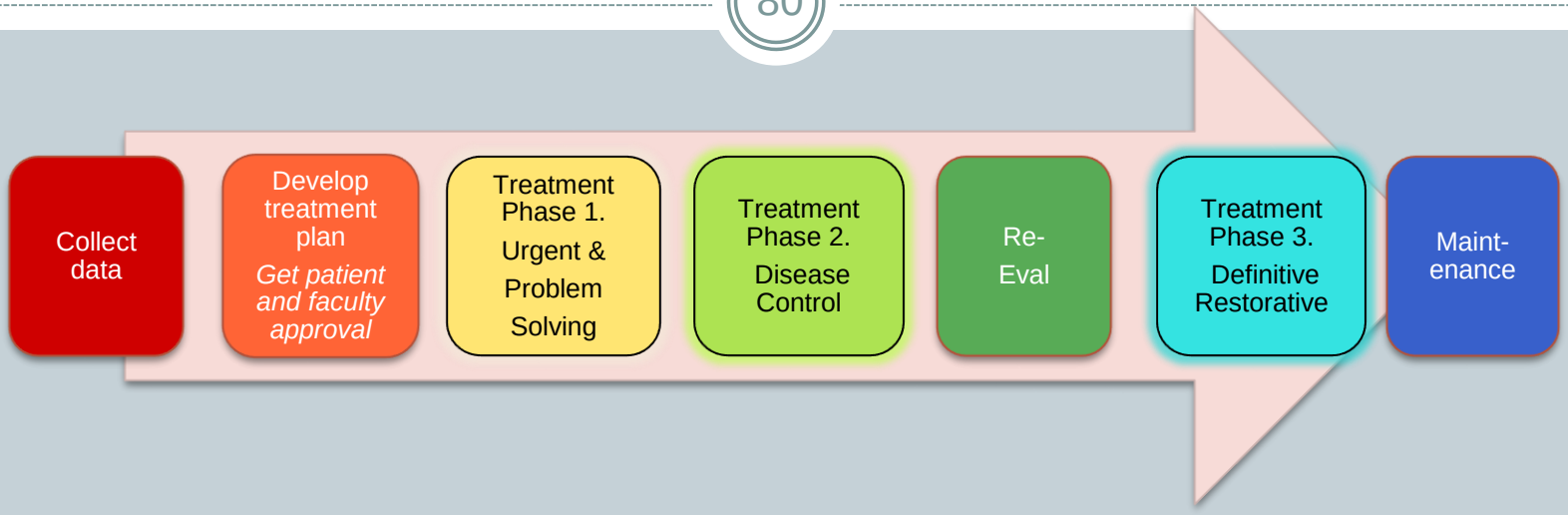
"The process of getting permission before conducting a healthcare intervention on a person."
-Wikipedia

What does it take before you can have true **informed consent**?

- **Capability**-Patient must have adequate reasoning faculties
- **Disclosure**-Patient must be in possession of all relevant facts, as well as a clear appreciation of the facts, implications and future consequences of an action (this discussion is easier when there are written treatment plan options to show them). This requires the dentist to have comprehensive knowledge so they can judge all viable options as well as being completely honest, self-aware and vigilant to provide an unbiased presentation of the advantages and disadvantages of each option.
- **Voluntariness**- Patient must exercise their own judgment free of external pressure, including manipulation.

Back to Review

Summary

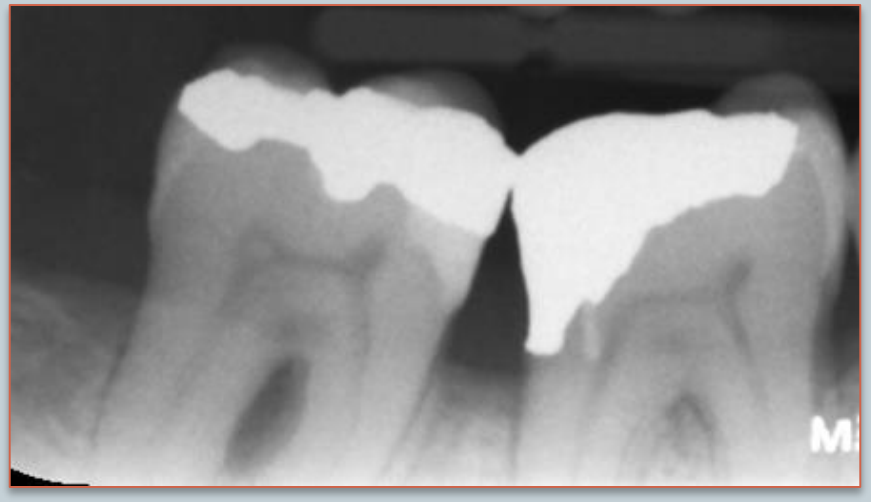


- So before any treatment is started, you collect data on the patient's chief concerns and medical and dental situation, then develop treatment plans.
- You will review these plans with faculty and obtain their approval through collaborative exams.
- Finally, you will present your plans to the patient and obtain their informed consent through a signature on the plan they choose.


Nice work!
Finish

Case 2: Virgil. You said "Acceptable"

What do you see on this radiograph? This is a patient treated in the Junior clinic by students.



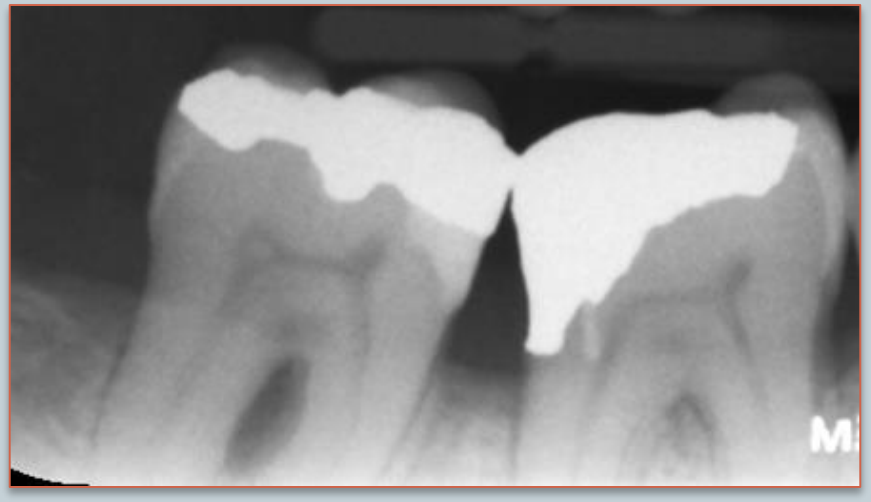
Correct!

- Tooth #30 was treated reasonably well. The distal margin on the amalgam, while slightly under contoured, is closed.
- The pin appears to be well placed- remember, you're seeing it superimposed over the pulp, not in it!
- Nice job.

Back

Case 2: Virgil. You said "Not acceptable"

What do you see on this radiograph? This is a patient treated in the Junior clinic by students.

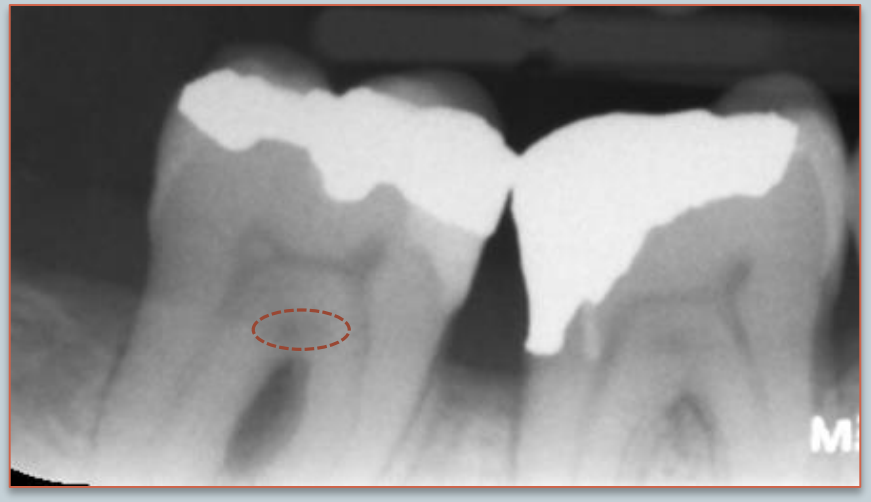


- While the margin on #30 is a little under contoured, it is closed and looks pretty good. Not sure most of us could do any better!
- The pin looks fine, considering we can only see two dimensions.

Back

Case 2: Virgil. You said "Caries"

What do you see on this radiograph? This is a patient treated in the Junior clinic by students.



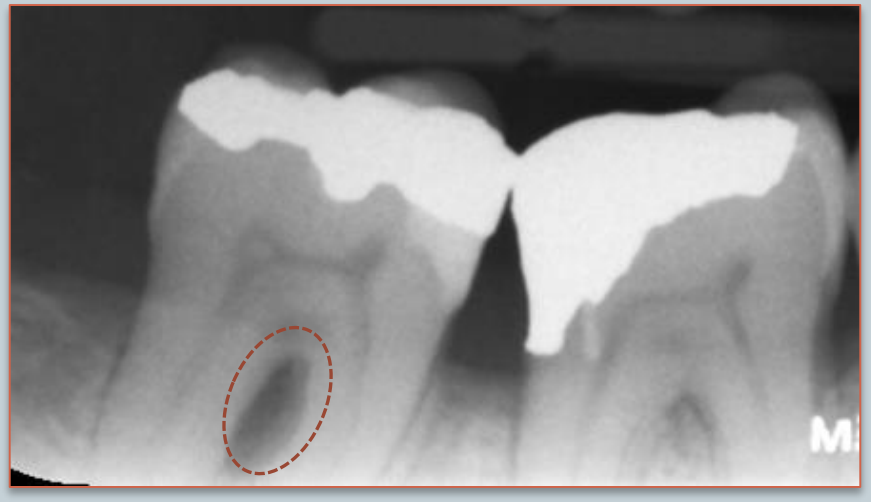
Correct!

- If you spotted the caries in the furcation, you have a very good diagnostic eye! It was confirmed clinically with an explorer.
- When questioned carefully, we learned the patient sips on coffee with sugar most of the morning.

Back

Case 2: Virgil. You said "Perio"

What do you see on this radiograph? This is a patient treated in the Junior clinic by students.



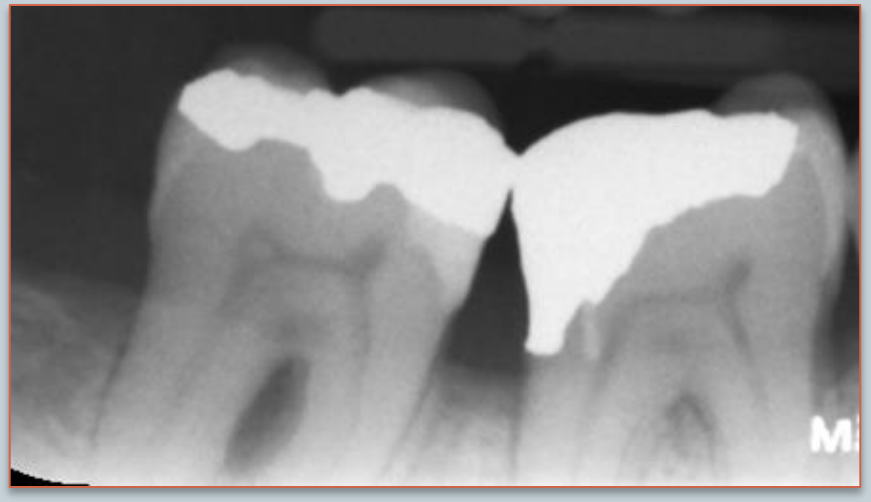
Correct!

- There is a furcation involvement visible here in the radiolucency circled.
- The patient is able to clean the area and the tooth is very stable, with no mobility.

Back

Case 2: Virgil. You said "Endo"

What do you see on this radiograph? This is a patient treated in the Junior clinic by students.

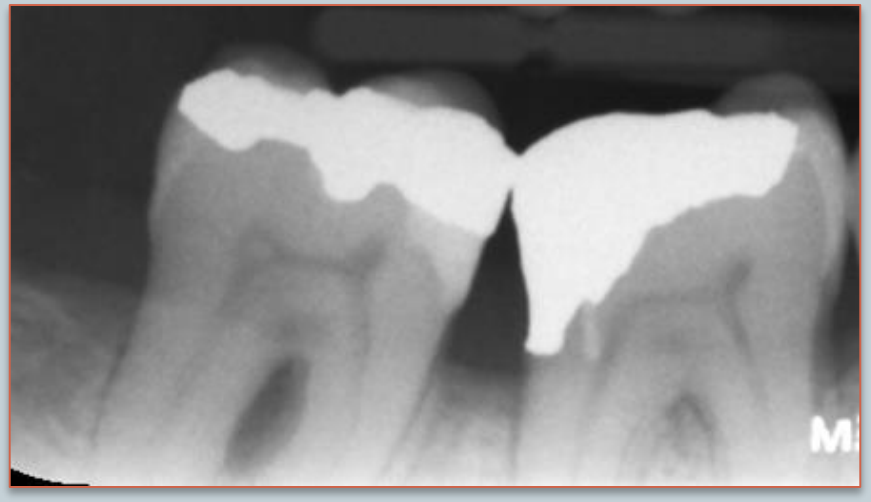


- No, we don't have any diagnostic signs that Endo might be indicated on this radiograph, and the patient is asymptomatic.

Back

Case 2: Virgil. You said "No Problems"

What do you see on this radiograph? This is a patient treated in the Junior clinic by students.



- Look closely and try again!

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