



# **CAPSTONE**

# **Simulated Complex Patient**

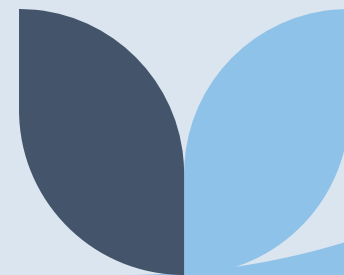
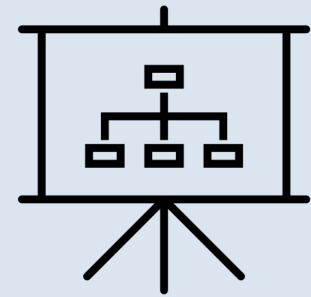
By: Nicolette Alvandian

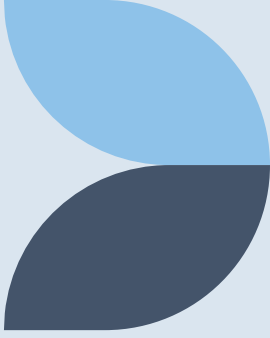


UNIVERSITY OF THE  
**PACIFIC**  
Arthur A. Dugoni  
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# Outline

- ❖ Patient Introduction
- ❖ Pre-treatment Condition
- ❖ Proposed Treatment Plan and Sequencing
- ❖ Treatment Process and Occurrences
- ❖ Final Treatment Outcome
- ❖ Alternative Treatment Plan
- ❖ Self Reflection

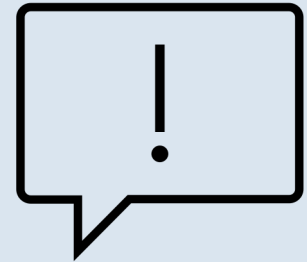




# Patient Introduction

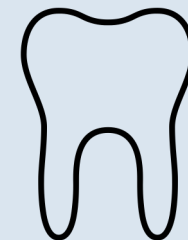


- ❖ Age: 39
- ❖ Sex: Male
- ❖ Race: Caucasian
  
- ❖ CHIEF COMPLAINT: “My upper back tooth is done-zo and my band is going on tour this summer, so I need to fix this trash smile, bro.”

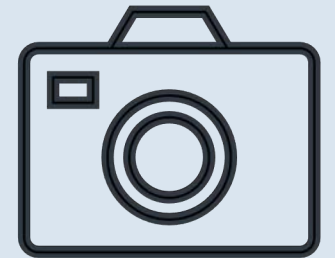


# Pre-Exam Consultation

- ❖ Medical History: high cholesterol
- ❖ Alerts: N/A
- ❖ Medications: Lipitor – 20mg/day
- ❖ Allergies: latex, cats
- ❖ Dental History:
  - ❖ Missing #7 - anterior trauma
  - ❖ Missing #13 - extracted due to caries-related fracture
- ❖ Caries Risk: high



# Intraoral Images



# Exam Findings

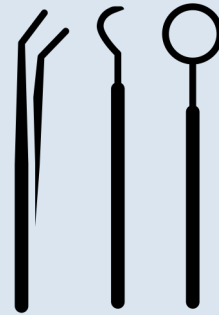
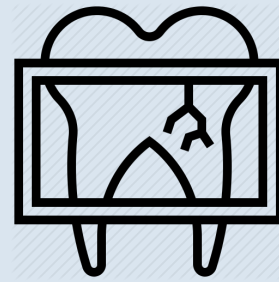


- ❖ Periodontal Diagnosis: Stage 1 Grade A
- ❖ Existing Restorations:
  - ❖ #6 DL composite
  - ❖ #8 MIFLD composite
  - ❖ #12 MO amalgam
  - ❖ #14 MOL amalgam
- ❖ Generalized wear and attrition due to bruxism

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16																Alerts	Problems
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17																PD(L)	
																PD(F)	
Tx Plans		In Progress	Perio	Tx History		Forms		Attachments/Consents		Labs	Medications						
Date	Prov./User	Code	Site	Surf.	Stat	Pre-Auth	Phase	Clinic	Bill Statu	Testing	Description						
04/08/23	N. Alvandi	C4002	14		A		0				Fractured tooth						
04/08/23	N. Alvandi	C5240	18	M	A		0				D2 Lesion (Middle 1/3 of Dentin by Radiograph)						
04/08/23	N. Alvandi	C5240	19	D	A		0				D2 Lesion (Middle 1/3 of Dentin by Radiograph)						
04/08/23	N. Alvandi	C5430	14	D	A		0				Recurrent Caries Lesion (related to existing restoration)						
04/08/23	N. Alvandi	M-AMAL	12	MO	E		0				Amalgam						
04/08/23	N. Alvandi	M-AMAL	14	MOL	E		0				Amalgam						
04/08/23	N. Alvandi	M-COMP	6	DL	E		0				Composite						
04/08/23	N. Alvandi	M-COMP	8	MIDFL	E		0				Composite						
04/08/23	N. Alvandi	M-COMP	6	DL	E		0				Composite						

# Exam Findings – Restorative Problems List

- ❖ #7 - missing (trauma)
- ❖ #13 - missing (extracted due to caries-associated fracture)
- ❖ #14 - fractured DL cusp with recurrent D decay
- ❖ #18 – M D2 carious lesion
- ❖ #19 – D D2 carious lesion



# Treatment Phases

URGENT → DISEASE CONTROL → RECONSTRUCTIVE → MAINTNANCE

❖ N/A



❖ OHI

❖ Prophy

❖ High fluoride toothpaste

❖ #14 build-up

❖ #18 MO/#19 DO composite



❖ #12 build-up

❖ #12-#14 MZ FDP

❖ #6 build-up

❖ #8 build-up

❖ #6-#8 BZ FDP



❖ Night guard





# Proposed Treatment Plan - Sequenced

Tx Plan Description: 2x FPD, 18/19 comp, nt grd      Chief Concerns:

Tx Option 1 + (New Option)

Tx Option Description: Tx Option 1

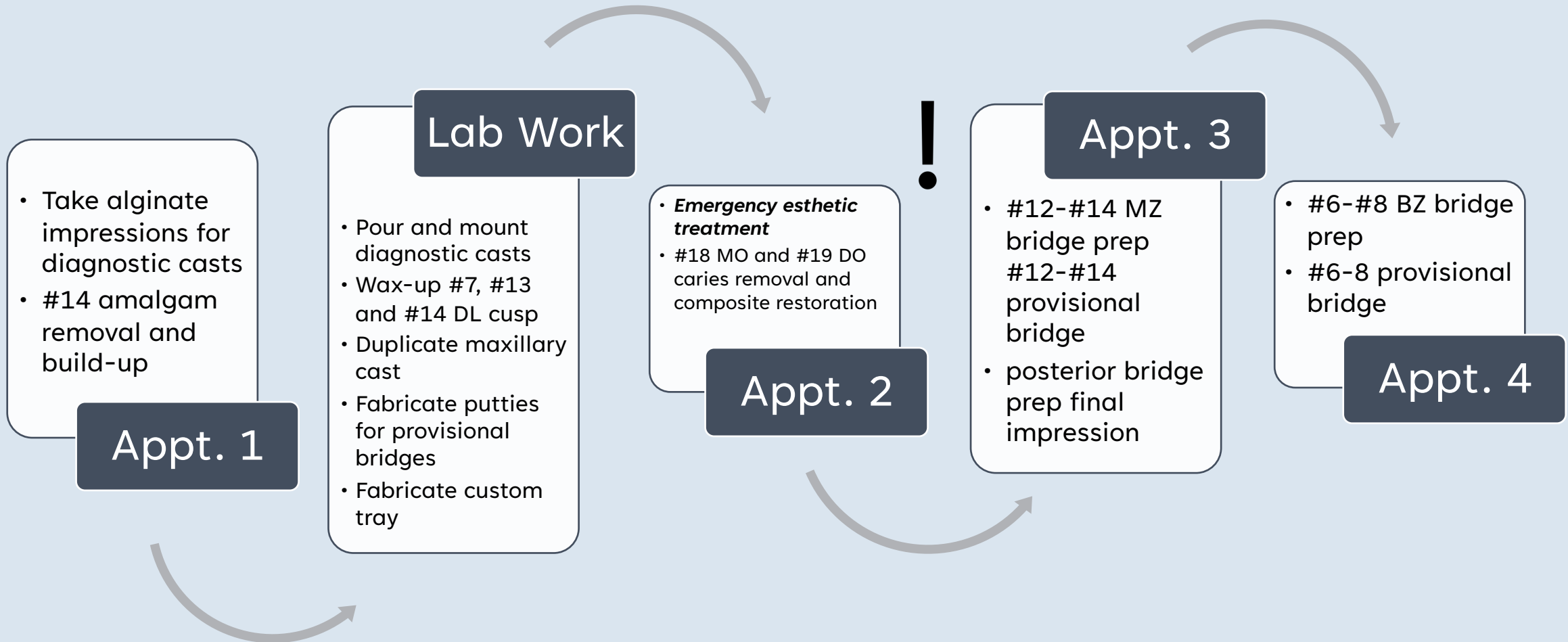
Provider	Diagnosis	Procedure	Procedure Description	Site	Surf.	Phase	Seq.	Sts.	Estimate	Ins. Est.
D25007	Caries risk high	D1330	Oral hygiene instructions				1	P	0.00	0.00
D25007	Generalized Moderate	D1110	Prophy - adult / tooth structures and implants				2	P	105.00	0.00
D25007	Caries risk high	D0015	High Fluoride Toothpaste (D/C)				3	P	10.00	0.00
D25007	Enamel and dentin fr	D2950	Core buildup - including pins	14			4	P	115.00	0.00
	Recurrent active mod									
D25007	Primary active moder	D2392	Resin-based comp-2 surf, post.	18	MO		5	P	189.00	0.00
D25007	Primary active moder	D2392	Resin-based comp-2 surf, post.	19	DO		6	P	189.00	0.00
D25007	Loss of teeth due to	D2950	Core buildup - including pins	6			7	P	115.00	0.00
D25007	Loss of teeth due to	D2950	Core buildup - including pins	8			8	P	115.00	0.00
D25007	Loss of teeth due to	D6245	Pontic-porcelain/ceramic	7			9	P	909.00	0.00
D25007	Loss of teeth due to	L6245-1	pontic-porc-Mastercast	7			9	P	0.00	0.00
D25007	Loss of teeth due to	D6740	Retainer crown - Porcelain/ceramic	6	MIDFL		9	P	909.00	0.00
D25007	Loss of teeth due to	L6740-1	retainer-crown-porc-Mastercast	6	MIDFL		9	P	0.00	0.00
D25007	Loss of teeth due to	D6740	Retainer crown - Porcelain/ceramic	8	MIDFL		9	P	909.00	0.00
D25007	Loss of teeth due to	L6740-1	retainer-crown-porc-Mastercast	8	MIDFL		9	P	0.00	0.00
D25007	Loss of teeth due to	D2950	Core buildup - including pins	12			10	P	115.00	0.00
D25007	Enamel and dentin fr	D6740	Retainer crown - Porcelain/ceramic	14	MODBL		11	P	909.00	0.00
	Recurrent active mod									
	Loss of teeth due to									
D25007	Enamel and dentin fr	L6740-1	retainer-crown-porc-Mastercast	14			11	P	0.00	0.00
	Recurrent active mod									
	Loss of teeth due to									
D25007	Loss of teeth due to	D6245	Pontic-porcelain/ceramic	13			11	P	909.00	0.00
D25007	Loss of teeth due to	L6245-1	pontic-porc-Mastercast	13			11	P	0.00	0.00
D25007	Loss of teeth due to	L6740-1	retainer-crown-porc-Mastercast	12			11	P	0.00	0.00
D25007	Loss of teeth due to	D6740	Retainer crown - Porcelain/ceramic	12	MODBL		11	P	909.00	0.00
D25007	Attrition of teeth	L9940	Night guard	LA			12	P	0.00	0.00
	Occlusal wear									
D25007	Attrition of teeth	L9940	Night guard	UA			12	P	0.00	0.00
	Occlusal wear									
			Estimated Total						6407.00	0.00

Disease Control

Reconstructive

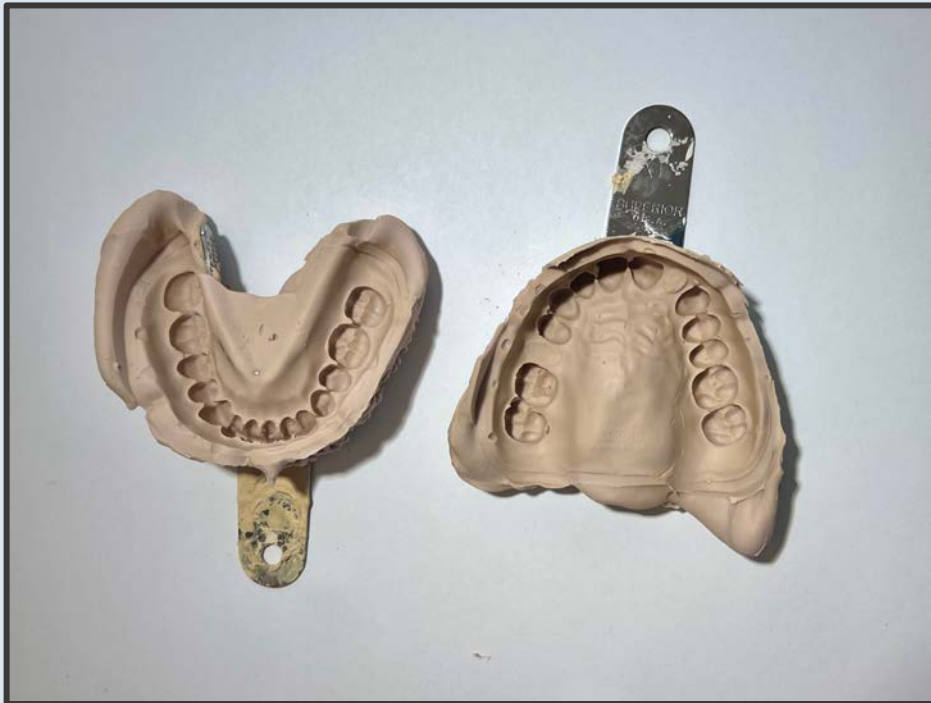
Maintenance

# Schedule – Appointments & Lab Work



# Appointment 1

Alginate Impressions



#14 Amalgam Removal &  
Photocore Build-Up



# Lab Work & Preparation

Mount Diagnostic Casts & Wax-Up #7, #13 and #14 DL Cusp



Duplicate Maxillary Cast and Fabricate Provisional Putties and Custom Tray



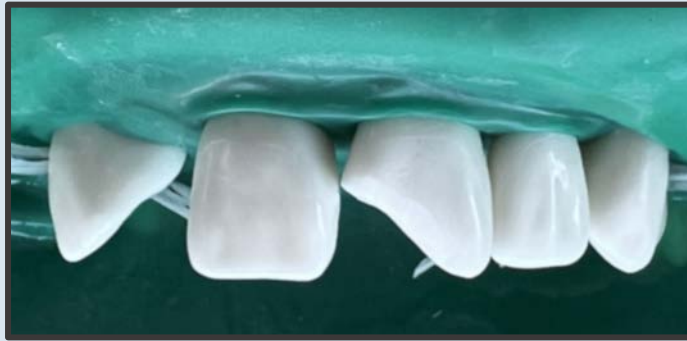
# Appointment 2



ESTHETIC EMERGENCY  
- anterior trauma & incisal fracture -



#9 Class IV Composite Restoration



#18 MO and #19 MO  
Composite Restoration



# Appointment 3

#12-#14 Monolithic Zirconia Bridge Preparation



#12-#14 Provisional Bridge – Modified Ridge-Lap Pontic

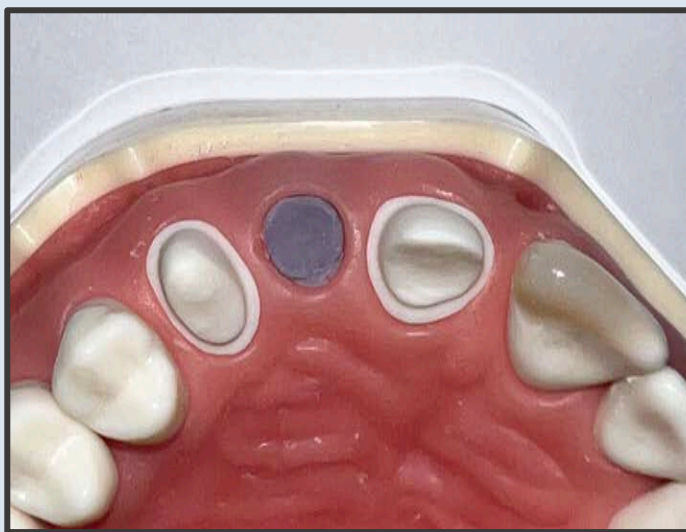


Posterior Bridge Final Impression



# Appointment 4

#6-#10 Bilithic Zirconia  
Bridge Preparation



#6-#10 Provisional Bridge –  
Ovate Pontic



# Alternative Treatment Plan - Changes to Initial Plan

Diagnosis/Problem	Original Treatment	Alternative Treatment
#7 - missing (trauma)	3-unit bridge BZ (#6-#8)	Cantilever bridge BZ (#6-#7)
#13 - missing (extracted)	3-unit bridge MZ (#12-#14)	Implant-supported crown
#14 - fractured DL cusp	Build-up & crown (bridge retainer)	Gold onlay
#18 MO D2 lesion	Composite MO restoration	Gold inlay
#19 DO D2 lesion	Composite DO restoration	Gold inlay

**\*\*It is important to note that the patient's periodontitis must be well-controlled, and his bone level assessed if the alternative treatment plan is considered as an option\*\***





# Alternative Treatment – Fully Sequenced

PROCEDURE	TOOTH	SURFACE	SEQUENCE	RATIONALE
Oral Hygiene Instruction	ALL	ALL	1	High caries risk patient, very important if implant is placed
Prophy	ALL	ALL	2	Routine cleaning, high caries risk patient
High Fluoride Toothpaste & CAMBRA cTx4	N/A	N/A	3	High caries risk patient
Onlay (gold)	14	DOL	4	Bruxism -> gold wears opposing teeth less
Inlay (Gold)	18	MO	5	Margin adaptation, less wear on opposing teeth, durable
Inlay (Gold)	19	DO	6	Margin adaptation, less wear on opposing teeth, durable
Retainer-Cantilever bridge (porcelain/ceramic)	6	MIDBL	7	Canine tooth -> sturdy abutment for lateral
Pontic-Cantilever bridge (porcelain/ceramic)	7	MIDBL	8	More esthetic, hygienic and conservative
Implant	13	N/A	9	Ideal treatment option, patient cooperation required
Implant Crown (porcelain/ceramic)	13	N/A	10	Esthetic, hygienic and durable option to replace teeth
Night Guard (upper arch)	UA	ALL	11	Patient is a bruxer, nightguard to prevent wear

# Self-Reflection

## What were the GOALS of the simulated patient project? (from my perspective)

- ❖ To have the opportunity to work through a complex treatment plan from start to finish
- ❖ To encounter the common obstacles and unexpected events that are destined to be a reality in clinic and everyday practice
- ❖ To hone our self-assessment skills when analyzing our work for errors and improvements

## What errors or mistakes could have been avoided?

- ❖ Multiple (~9) posterior provisionals were attempted due to an undercut caused by the anatomy of the adjacent tooth preventing removal and leading to consistent tearing of the molar retainer portion of the bridge
  - ❖ this frustrating process could have been avoided if I noticed this small complication early on and therefore could have developed/adopted a more effective method of removal
- ❖ The back-to-back fill was attempted twice due to improper technique
  - ❖ I have now learned the Teflon-packing technique that allows for appropriate contour to be built while preventing bulging of one box into the other

# Self-Reflection

## What exercises pushed the boundaries of my comfort?

- ❖ The unexpected "esthetic emergency" that needed to be addressed immediately took up a chunk of time that I was planning to spend doing the back-to-back prep and fill

## What are the strengths in my case presentation?

- ❖ I am happy with how my wax-ups turned out and the way they translated as pontics in the provisional bridge restorations
- ❖ I am proud of my organization throughout the process and my final project presentation

## What are the limitations or shortcomings in my case presentation?

- ❖ I found myself very frustrated during both the back-to-back restoration as well as during the process of temporizing the posterior restoration
- ❖ The frustration got to me in the heat of the moment and under the time pressure and I made mistakes that could have been prevented had I just taken a step back and looked at the bigger picture
- ❖ However, I am grateful for the opportunity to have made the mistakes I did as I not only learned technical skills, but I also sense my mindset is strengthened for the next time I inevitably run into a particularly frustrating situation

# Self-Reflection

## **What were the challenges with the initial session and alginate impressions and models?**

- ❖ Reflecting on the fact that the first time we did alginate impressions during Q1 it took me over 15 attempts to get a decent impression, I am going to consider my 2 attempts this time around a major improvement
- ❖ The challenge I faced was the onlay prep design since it was the first time we had performed an onlay prep

## **Regarding direct and indirect preparations, which of the following was most challenging to prepare?**

- ❖ **Back-to-back preps # 18 MO and #19 DO**
- ❖ I felt rushed and under pressure since we had the esthetic emergency that day
- ❖ In hindsight, I absolutely had more than enough time to do the prep and fill, with time to spare, but I let the pressure get the best of me

## **Which Direct Restorations or provisional restorations were the most challenging?**

- ❖ **#18 and #19 back-to-back Restorations and #12 – #14 provisional bridge**
- ❖ The same reasons as previously stated

# Self-Reflection

## **How did Capstone case help you in terms of Skills, organization, efficiency, and planning?**

- ❖ Throughout this project I learned new clinical techniques and useful practical skills, however I am walking away from this entire experience with a new sense of perseverance. There were days of this project that truly drained me emotionally due to sheer frustration, but I pushed through, and I am so glad I did because I learned so much through the moments of struggle. I also learned that sometimes the problem is staring you right in the face and all it takes is a quick break to be able see it.

## **If you had the chance to redo this exercise, what would you do differently?**

- ❖ I would go into it still aware of the time limit, but with the understanding that faster does not always mean better. It can seem like a race against the clock, especially at the beginning of the project with such a long list of tasks. However, if things are done properly and with the right technique, even if that means taking the extra time, mistakes are much more likely to be avoided all together.



**Thank you for  
your time!**