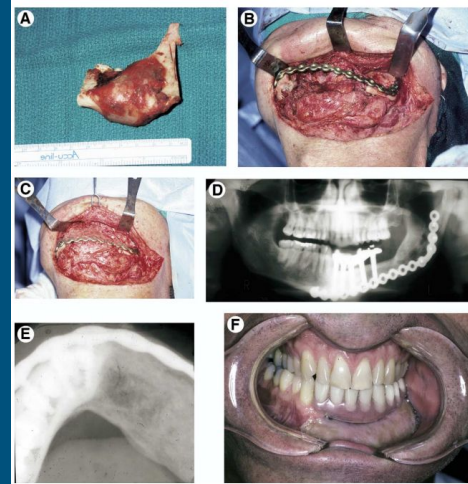
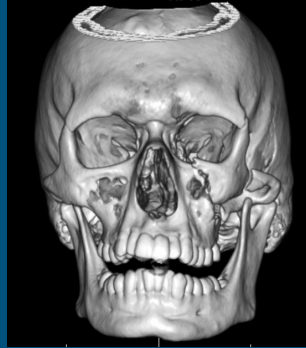
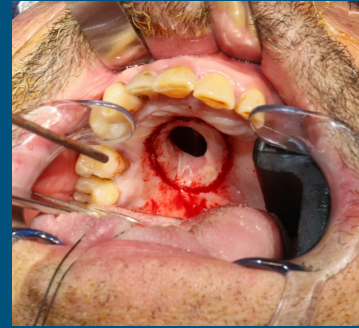




# Oral and Maxillofacial Surgery Virtual Anesthesia Simulator



# Scope of OMFS



# In office anesthesia, general anesthesia





# Emergency algorithms

## Adult Tachycardia With a Pulse Algorithm

Assess appropriateness for clinical condition.  
Heart rate typically  $\geq 150$ /min if tachyarrhythmia.

### Identify and treat underlying cause

- Maintain patent airway; assist breathing as necessary
- Oxygen (if hypoxic)
- Cardiac monitor to identify rhythm; monitor blood pressure and oximetry
- IV access
- 12-lead ECG, if available

### Persistent tachyarrhythmia causing:

- Hypotension?
- Acutely altered mental status?
- Signs of shock?
- Ischemic chest discomfort?
- Acute heart failure?

Yes

### Synchronized cardioversion

- Consider sedation
- If regular narrow complex, consider adenosine

No

### Wide QRS? $\geq 0.12$ second

No

Yes

### Consider

- Adenosine only if regular and monomorphic
- Antiarrhythmic infusion
- Expert consultation

- Vagal maneuvers (if regular)
- Adenosine (if regular)
- $\beta$ -Blocker or calcium channel blocker
- Consider expert consultation

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### Doses/Details

#### Synchronized cardioversion:

Refer to your specific device's recommended energy level to maximize first shock success.

#### Adenosine IV dose:

First dose: 6 mg rapid IV push; follow with NS flush.  
Second dose: 12 mg if required.

#### Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia

##### Procainamide IV dose:

20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases  $>50\%$ , or maximum dose 17 mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.

##### Amiodarone IV dose:

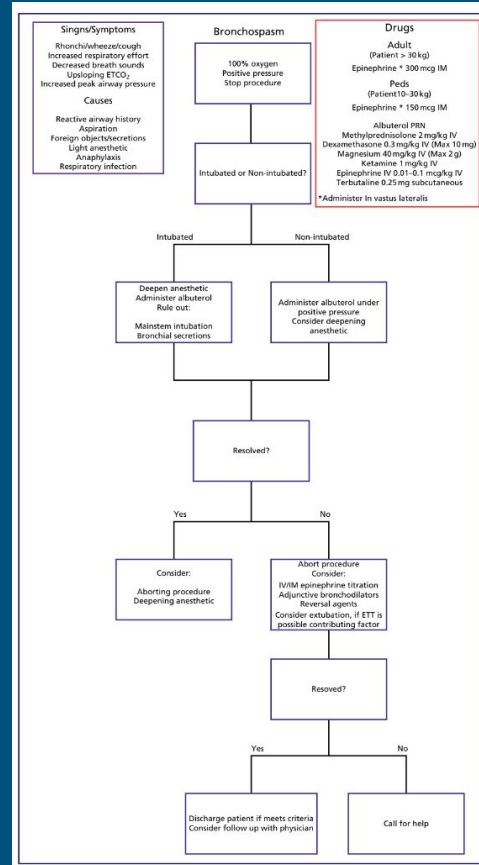
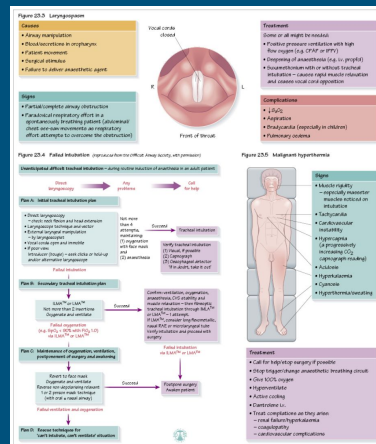
First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.

##### Sotalol IV dose:

100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.

### If refractory, consider

- Underlying cause
- Need to increase energy level for next cardioversion
- Addition of antiarrhythmic drug
- Expert consultation



# Current sim center vs. virtual sim anesthesia

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# Why?

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Scheduling in person simulations is logistically difficult to coordinate in a residency setting, even more so in private practice

Increase exposure to high yield information for residents and those in practice

Anesthesia is the crux of the OMFS practice and has been a subject of debate in the legal world

Practice, frequent exposure to anesthesia related emergencies will improve patient outcomes

# How it would look like

HeartCode® PALS

American Heart Association

03:47  
SCENARIO TIME

00:00  
CODE CLOCK

RESPONSE AIRWAY BREATHING CIRCULATION EXAMINATION & VITAL SIGNS DRUGS & MANAGE IV/IO TESTS & DIAGNOSTICS MISC

CIRCULATION

Switch providers CPR back board Capillary refill time CPR

Check carotid pulse Length-based tape

Ice to face Check brachial pulse Auscultate

ECG & defibrillator

CPR

15:2 CPR 15:2

30:2 CPR 30:2

Continuous CPR

OXYGEN RATE  
8 L/MIN

VENTILATION RATE  
16 /MIN

Temp -?- NIBP -?- SpO2 -?

PETCO2 -?

Medical record Transfer patient

HeartCode® ACLS

American Heart Association

00:07  
SCENARIO TIME

00:00  
CODE CLOCK

RESPONSE AIRWAY BREATHING CIRCULATION EXAMINE DRUGS & MANAGE IV/IO LAB & DIAGNOSTICS MISC

Questions: General

What happened?  
When did the symptoms start?  
What were you doing when the symptoms started?  
Do you have difficulty breathing?  
What other symptoms do you have?  
Are you allergic to anything?  
Do you take any medication?  
Do you have any medical problems?  
Have you had anything to eat or drink today?  
Do you feel better now?

Questions: Pain

Do you have any pain?  
Does anything lessen the pain or make you feel better?  
Does anything make the pain worse?  
Can you describe the pain?  
Does the pain go anywhere?  
On a scale of 0 to 10, how bad is the pain?

Questions: Orientation

Are you awake?  
What year is it?

Response

Tap and shout Check breathing and pulse

Check for normal breathing

Check carotid pulse

Call code Medical record Transfer patient

HR -?- PETCO2 -?

SpO2 -?- NIBP -?- Temp -?