

I'M NOT DEAD YET!

What to Know Before They Code

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What we need to think about



- Recognition
- Causes
- Intervention
- Communication
- Reassessment

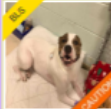


Recognition

- **Vitals**
 - Normal
 - Abnormal
 - What do they mean?
- **Trends**
 - How are they trending?
 - What to watch for
 - How to interpret
- **Mentation**
- **Medical Conditions**

Day 2 of 13 – 2020-09-12

GENERAL INFO	PATIENT	CLIENT	PROBLEM LIST
DVM: Dr. Joseph Ielapi (E... Deposit: 0 Template: Q4 Vitals Canine Patient File Number: 349990 Custom: 112536	Brutus Canine - Pitbull - MN Age: 3Y Critical: NO JUG STICKS Weight: 37.6 kg	Larson George Tel: Tel: 724-531-3490	Unknown trauma - suspect... Heat Stroke Possible head trauma



Time	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
MONITORINGS																									
TREATMENT PROTOCOL CREATED USING SMART FLOW																									
Weight									41.0																
Scale Location/Nurse									Sur...																
Initials									Dull																
Attitude	Dull			dull					Dull				Dull	Dull	Dull										Dull
Temperature									97.0				99.7	99.3	98.9										98.4
Pulse	100			88					110				110	120	130										100
Resp. rate	40			40					32				52	32	32										24
Resp. Effort	Eup			eup					eup				slight	slight	slight										eup
MM	Pink			Pink					Pink				Pink	Pink	Pink										Pink
CRT	<2			<2					<2				<2	<2	<2										<2
BP	114	108			114	85			130				142	140	130										104
BG	73	147	119		108		108		67	62	66		144		225		103			94				74	121
Daylight-Flow Baseline-Flow	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM	2LPM
ACTIVITIES																									
MEDVET - PITTSBURGH																									
Urination	None			+++					+++				760ml	150ml											u-cath
Defecation	Lar...			none					none																Diar...
Vomiting	None			none					pis...				none												none
Offer water	not			avail.					offer				HOLD												NI...
Offer food													HOLD												
Stack	Hold																								
Flush IVC	Patent			patent					patent				pat.												Both...
Doctor-Exam	SW			SW					J				J												J
Patient Recumbency	Star...			Left...					hps...				right...												hps...
Measure urine output													160ml	230ml	250ml		400ml	200ml	500ml	400ml	500ml	480ml	450ml	420ml	
Urinary catheter care																									kd
Aspirate NG Tube																									800
FLUIDS																									
CRITICAL: NO JUG STICKS																									
New Bag 1L Normosol													kd	kd	kd										
1L Normosol-220 mEq/L Dextrose 5 %	230				230																				
Fentanyl CRI (hourly rate)		2ml			2ml				2ml				2ml												2ml
250 Vetstarch Inj Per Bag																									
1L Normosol 200 mEq/L p-METOCLOPRA 16.65 mg/L									decr...	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
1L Normosol 200 mEq/L Dextrose 5 %													start...	200	230	280	540	540	550						
Fresh Frozen Plasma (rate only)																									
200 mEq/L																									
1L Normosol 250 mEq/L																									550
Fresh Frozen Plasma																									510
																									300
																									280
																									60ml
																									20ml





Situations that may lead to CPR

- Blood Pressure
- Shock
- Respiratory Distress
- Metabolic Disturbances
- Drugs/Anesthesia
- Cardiac



Shock

- Recognize the type of shock
- Clinical signs
- Stabilize- Supportive therapy
- Reassess



Shock

- Types of shock
 - Hypovolemic
 - Obstructive
 - Distributive
 - Cardiogenic



Blood Pressure

The blood pressure of our patients can be altered by one or more of the following:

- Heart rate (tachycardia or bradycardia)
- Volume status (overhydration or hypovolemia)
- Vasodilation
- Vasoconstriction

Normal systolic BP ~ 100- 140mmHg

Normal diastolic BP ~ 60-80 mmHg

Normal mean arterial pressure ~ 70 – 100 mmHg



Blood Pressure

- Blood pressure should not be allowed to drop below 60 mmHg
- Determine the underlying cause of the hypotension
 - Cardiac or Hypovolemia
- Continue to reassess- It is not "one and done"



Fluid Therapy

- Shock dose:

- Dogs – 60-90ml/kg
- Cats- 30-40ml/kg
- Start with $\frac{1}{4}$ of the shock dose then re-evaluate

- Re-evaluate

- Blood pressure
- Vitals
- Mentation

- Types of fluids

- Crystalloids
- Hypertonic saline
- Colloids
 - Hetastarch- 2.5 ml/kg in cats over 5-10mins up to 4 times or 20ml/kg rapid infusion at once
 - Vetstarch- 20mls/kg/day-40ml/kg/day

- Blood products

- Do not bolus fluid additives!

- Example : KCL



Vasopressors

- Dobutamine
 - Dose: 2-10mcg/kg/min
- Norepinephrine
 - Dose: 0.1-3 mcg/kg/min
- Vasopressin
 - Dose: 0.002-0.008 U/kg/min



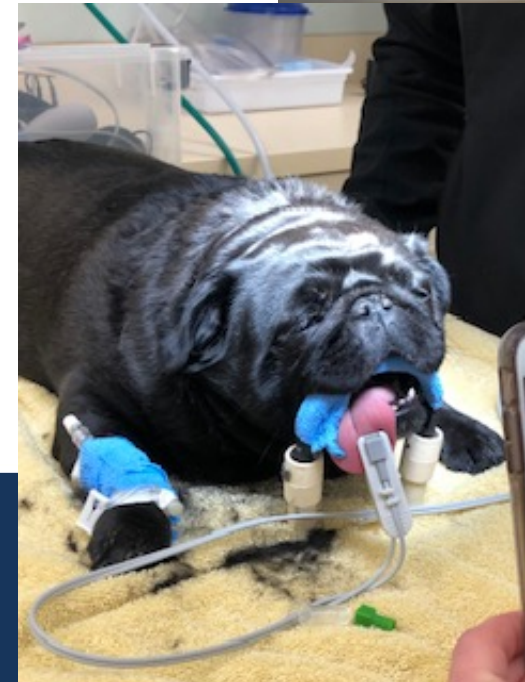
Metabolic Disturbances

- Electrolytes
 - Hypokalemia/Hyperkalemia
 - Hyponatremia/Hyernatremia
- Blood Glucose
 - Hypoglycemia
- Acid Base Status
 - Metabolic Acidosis & Metabolic Alkalosis
 - Respiratory Blood Gas
 - Ventilation
 - Hypoxemia

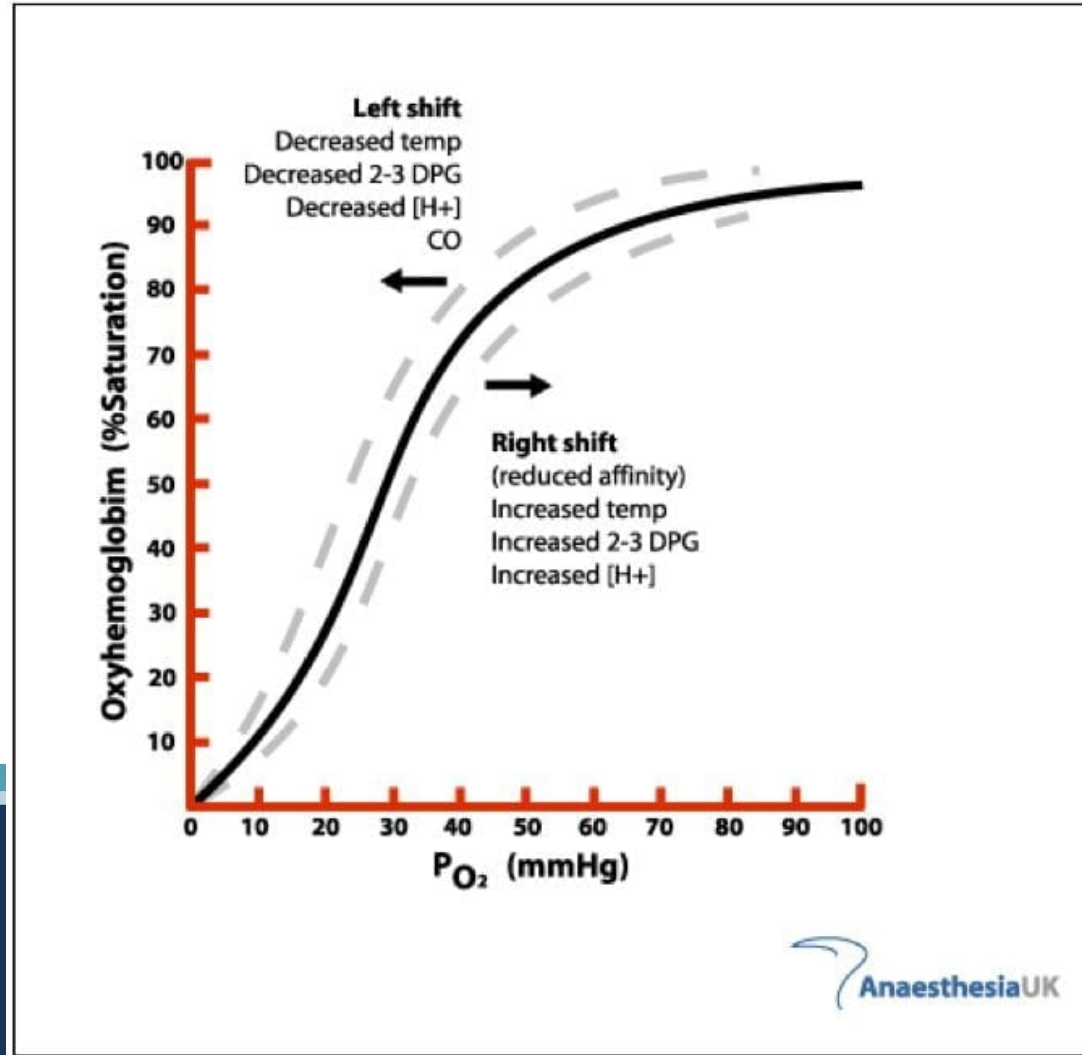


Respiratory Distress

- Oxygen
 - Minimize stress
 - Use the least stressful route to administer
- Patent airway
- Respiratory rate and pattern
 - Abdominal breathing
 - Paradoxical breathing
 - Shallow or poor chest expansion
- Oxygenation and ventilation status
- Mucus membrane color
- Lung auscultation
- TFAST
- Radiographs (once the patient is stable enough)



Respiratory Distress





Drugs/Anesthesia

- Can you reverse it?
- Pain Management
- Anxiety
- Emergency Drugs



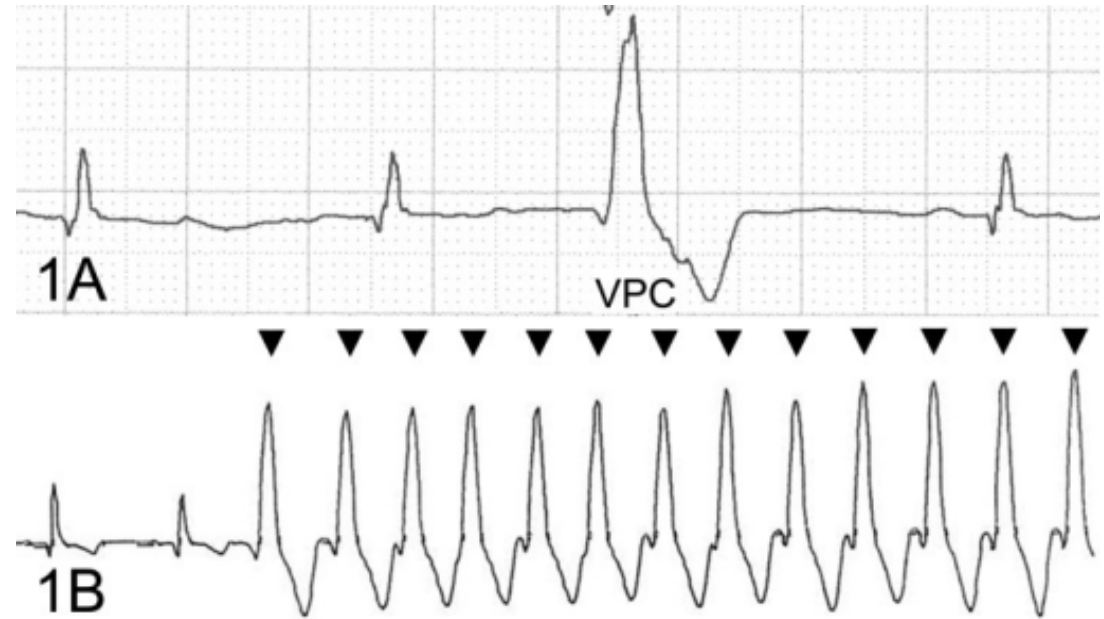
Drugs/Anesthesia

- Reversals:
 - Dexmedetomidine (Alpha2-Agonist) - Atipamezole
 - Benzodiazepines – Flumazenil
 - Opioids – Naloxone
- Pain/Anxiety
- Emergency Drugs



Cardiac

- Auscultation
- Pulse quality
- Heart rate
- ECG
- Arrhythmias



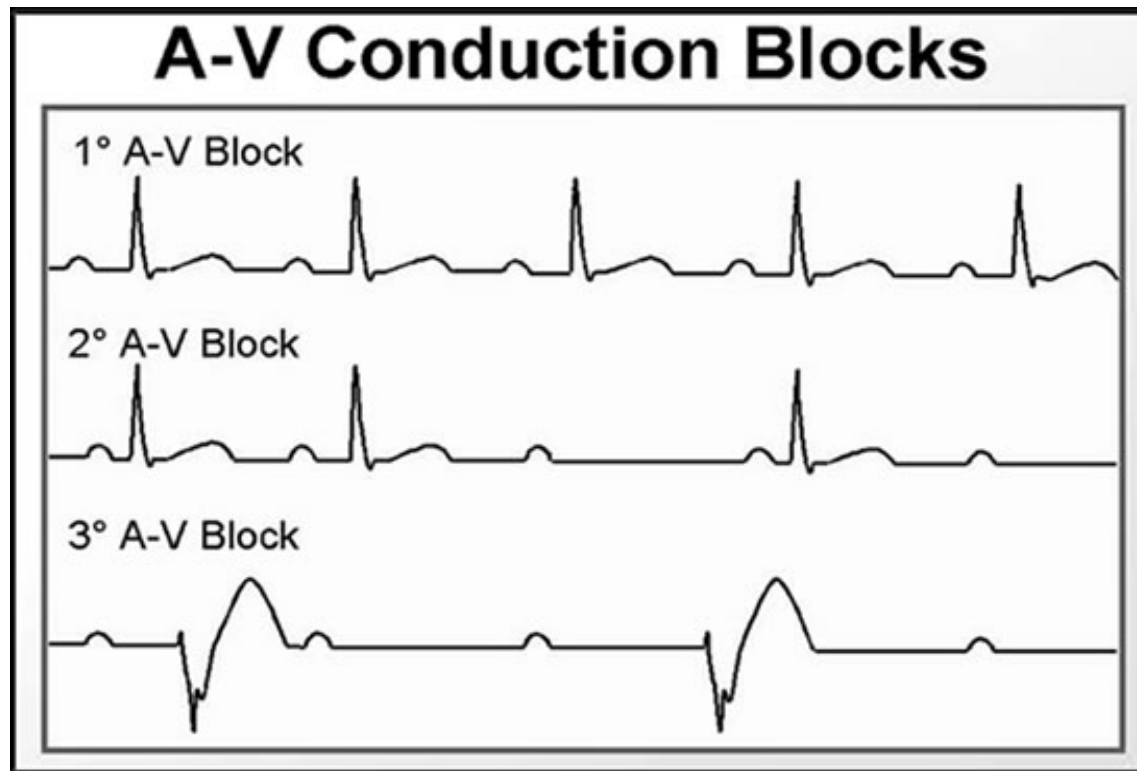
Cardiac- Arrhythmias



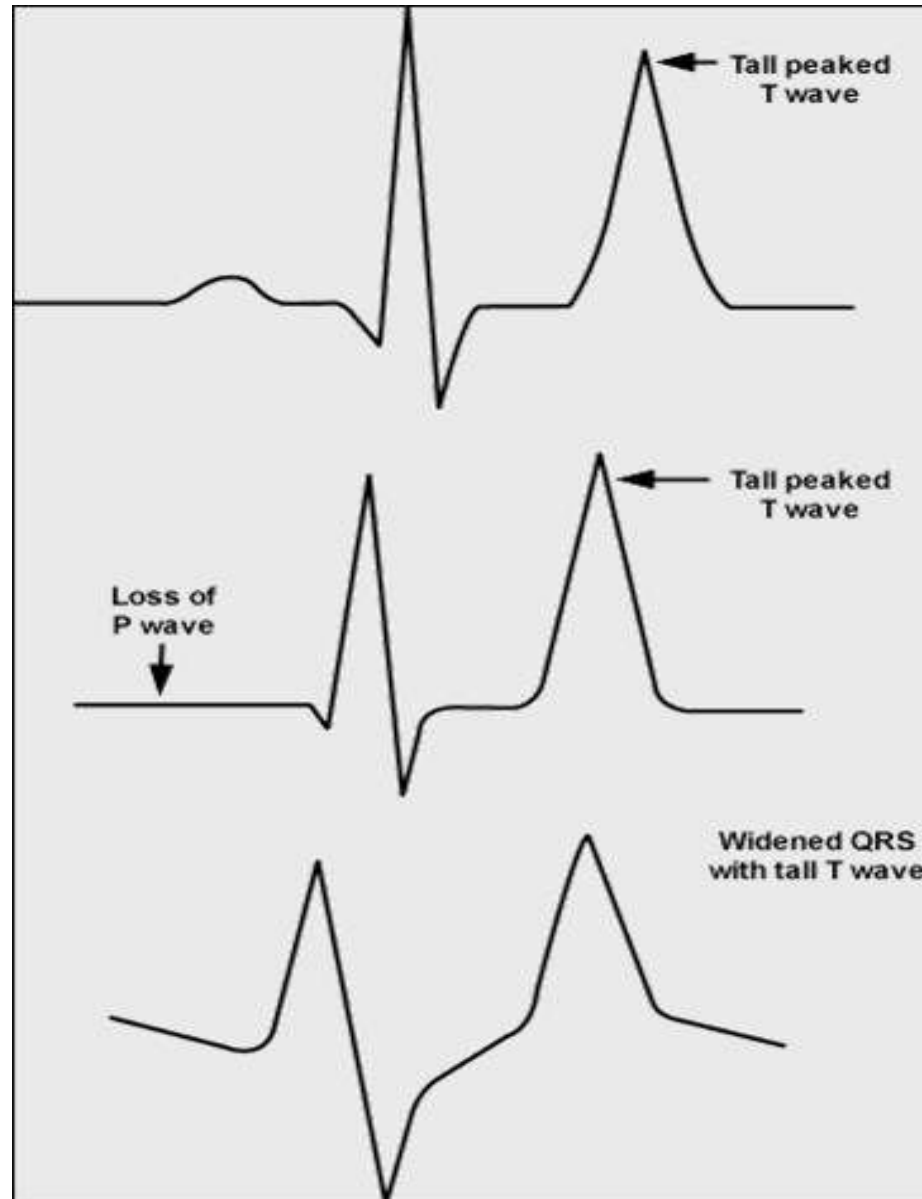
Cardiac- Arrhythmias



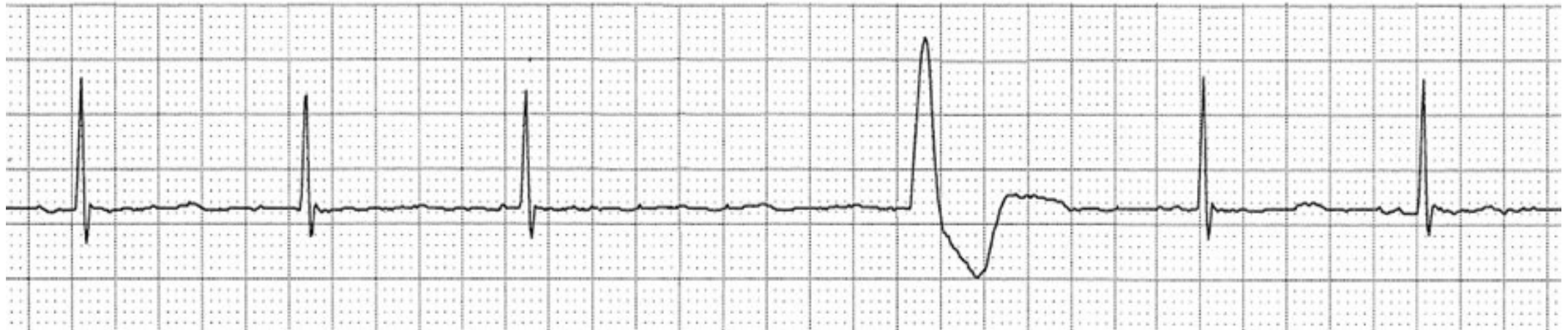
Cardiac- Arrhythmias



Cardiac- Arrhythmias



Cardiac- Arrhythmias



Intervention



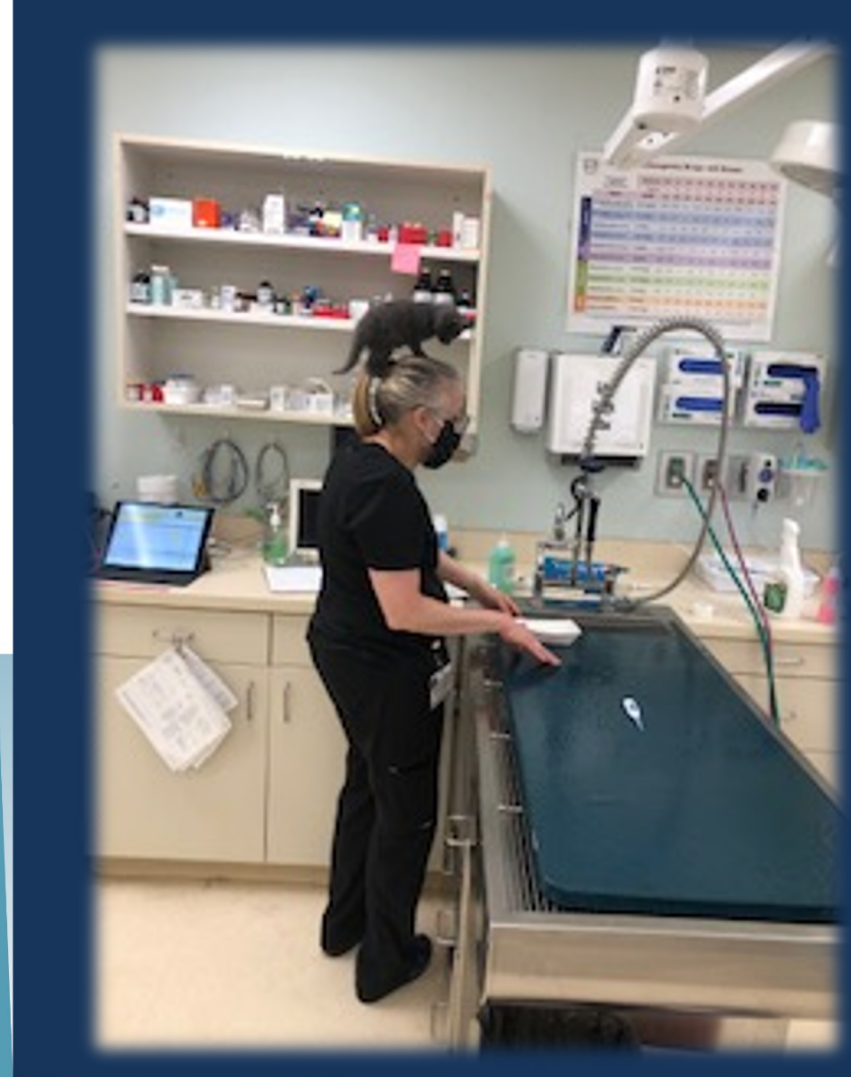
When?

How?



Intervention

- Evaluate the patient
- Observe and monitor
- Oxygen or intubate
- Fluids – bolus
- Vasopressors
- Blood work
- Reverse any drugs or anesthesia
- Antiarrhythmics
- Reassess
- And Reassess some more!



Communication



- **Co-workers**
 - Doctors
 - Technicians
 - Front desk
- **Triage/Hospitalization**
 - Owners
 - Procedures
 - Code status



You are your patient's advocate!



QUESTIONS?

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