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ANESTHESIA GUIDELINES FOR SURGICAL PATIENTS

Dear Doctors, Nurse Practitioners, Physician Assistants, Nurses, and Schedulers,

AAPC would like to develop a better communication system on preoperative evaluation and testing for patients who are presenting for an operation. The goal is to provide consistent, cost-effective and high quality screening and evaluation so a patient can undergo an operation safely and have a full recovery without complications. Some guidelines from national societies cover some of the material being presented and other areas are an expert opinion. AAPC has developed these policies, procedures, and guidelines with the above in mind and we appreciate any feedback you can give us so we may adjust the policies, procedures and guidelines as we go forward. Our goal is to publish an updated set every Oct 1 and have them sent to your office.

The following material is included in this packet:

Preoperative Medications
Preoperative Testing
Patient Selection Criteria for ASCs
Pacemaker/AICD Policy

Sincerely,

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ANESTHESIA GUIDELINES FOR SURGICAL PATIENTS

All Pre-op patients require complete H&P within 30 days of surgery and an updated H&P within 24 hours of surgery.

Diagnosis	HCT	CBC	PT/INR /PTT	POC Glucose	BMP	CMP	TSH Free T4	ECG
Anemia	X							
Bleeding Disorder		X	X					
CV Disease		X			X			X
HTN		X			X			X
Cerebrovascular Disease		X			X			X
PVD		X			X			X
Diabetes				X	X			X(if Age > 35)
Diuretics					X			
Hepatic Disease		X	X			X		
Sleep Apnea								X
Pulmonary Disease (Mod/Severe)		X			X			X
Renal Disease (Cr > 1.5)		X			X			X
Sarcoidosis		X			X			X
Systemic Lupus		X			X			X
Thyroid Disease (Untreated)		X					X	X
Cancer/Chemo w/in 6 months		X						

Hct=Hematocrit, CBC=Complete Blood Count, BMP=Basic Metabolic Profile, CMP=Complete Metabolic Profile, TSH = Thyroid Stimulating Hormone, ECG=Electrocardiogram

Laboratory Results

-For all surgical patients follow specific order sets
-Good for **3 months** if **Outpatient Surgery** unless abnormality exists or patient is acutely ill
-Good for **1 month** if **Inpatient Surgery** unless abnormality exists or patient is acutely ill

ECTs – ECG (within 12 months) and BMP prior to the first of ECT series (see chart above)

Cataracts – No Preoperative Tests

ECG

- No routine age requirement (see chart above for disease specific requirement)
- Good for 6 months for all cases moderate or high risk
- Good for 12 months with low risk procedures such as
    - MAC cases
    - Endoscopies
    - Superficial Procedures
    - MRI/CT Scans

CXR – **Acute Process only** (Acute onset Shortness of Breath, Wheezing, Chest Pain)
-PCP determines if needed

Cervical Spine X-Ray – Rheumatoid Arthritis with neck pain and/or severe neck deformity
- PCP determines if needed

Urine Pregnancy Test – If menstruating female at risk of a possible pregnancy (ie. No BTL)
- Patient may sign waver of pregnancy test on anesthesia informed consent form

Pediatric – No Lab required if in good health

Reviewed & approved 3/21/18

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ANESTHESIA GUIDELINES FOR NPO and MEDICATIONS THE AM OF SURGERY

MEDICATIONS TO TAKE THE AM OF SURGERY WITH SIP OF WATER

Beta Blockers (see list)
Anti-Hypertension Medications (**except ACE-I or ARBs** (**see list**)
Cardiac Medications
Statins
GERD Medications (H2 Blockers, PPIs (see list)
Gabapentin or Lyrica
Respiratory Medications (PO or Inhaled) (Bring inhalers to ASC)
Seizure Medications
Parkinson Medications
Alzheimer Medications
Psychiatric Medications
Thyroid Medications
Steroid Medications
Pain Medications (take if having severe pain)
Birth Control Pills
ADHD Medications (Amphetamine/Dextroamphetamine (Adderall), Methylphenidate (Ritalin, Concerta)) (Can hold the day of surgery but take after surgery)

DO NOT TAKE THE AM OF SURGERY

INSULIN (Check with Family Doctor or Follow the next instructions)
IF Takes evening insulin:
take one-half of the normal dose the PM BEFORE Surgery
IF on INSULIN PUMP, continue with normal settings
ORAL DIABETES Medication – Hold Oral Meds

MEDICATIONS TO STOP BEFORE Surgery

Medication	**# Days to Stop Before Surgery**
Glucophage (Metformin)	1 Day
Check with Primary Care for Order for Anti-coagulants	
Lovenox (Enoxaparin)	1 Day
Aggrastat (Tirofiban)	1 Day
Brilinta (Ticgrelor)	7 Days
Arixtra (Fondaparinux)	3 Days
Heparin	8 Hours
Effient (Prasugrel)	7 Days
Fragmin (Dalteparin)	1 Day
Integrilin (Eptifibatide)	1 Day
Eliquis (Apixaban)	3 Days
Pradaxa (Dibigatran)	5 Days
Xarelto (Rivaroxaban)	3 Days
Plavix (Clopidogrel)	7 Days
Ticlild (Ticlopidine)	14 Days
Pletal (Cilostazol)	14 Days
Coumadin (Warfarin)	5 Days
Trental (Pentoxifylline)	5 Days
Anti-Inflammatories (ASA,NSAIDS,Celebrex*) *May continue if approved by Surgeon	7 Days
Phentermine (Fastin, Adipex, Atti-Plex, Lomaira, OraVerse, Osymia, Regitine)	7 Days
Contrave (Naltrexone)	3 Days
Herbal Medications	14 Days
MAO Inhibitors (Nardil, Parnate, Eldepryl)	7 days
ACE Inhibitors or ARBs	**1 day**

NPO POLICY

8 Hrs for Heavy Meal
6 Hrs for Light Meal (toast, coffee)
4 Hours for Breast Milk
2 Hours for Clear Liquid (tea, coffee, NO dairy)
**If AM operation – should be NPO after midnight
**If a PM operation – can have a light meal and finish before 6 hrs before operation schedule time, cannot move up

BREAST FEEDING POLICY

Breast Feed when patient is able. No pump and dump.

Beta Blockers

Cardioselective (more B1 than B2)

Generic	**Brand Name**
Acebutolol	Sectral
Atenolol	Tenormin
Betaxolol	Kerione
Bisoprolol	Zebeta
Esmolol	Breviblock
Metoprolol	Lopressor
	Topprol XL
Nebivolol	Bystolic

Intrinsic Sympathomimetic Activity

Acebutolol	Sectral
Penbutolol	Levatolol
Pindolol	Visken

Alpha Blocker Activity

Carvedilol	Coreg (CR)
Labetalol	Trandate

Nonselective Beta Blocker

Nadolol	Corgard
Corzide	Nadolol
Propranolol	Inderal (XL)
	InnopranXL
Sotalol	Betapace

ACE Inhibitors

Generic	**Brand Name**
Benazepril	Lotensin (HCT), Lotrel
Captopril	Capoten
Enalapril	Vasotec, Vasoretic
Fosinopril	Monopril
Lisinopril	Prinivil, Zestril, Zestoretic
Quinapril	Accupril, Accuretic
Ramipril	Altace
Trandolapril	Mavik, Tarka

ARBs (Angiotensin Receptor Blockers)

Generic	**Brand Name**
Candesartan	Atacand (HCT)
Eprosartan	Teventen (HCT)
Irbesartan	Avapro, Avalide
Losartan	Cozaar, Hyzaar
Olmesartan	Benicar (HCT), Azor
	Tribenzor
Telmisartan	Micardis (HCT)
	Twynsta
Valsartan	Diovan (HCT)
	Exforge

ASC PATIENT SELECTION CRITERIA

OSA **STOP BANG** (**S**nore, **T**ired, **O**bserved Apnea, **P**ressure(HTN))
BMI > 35 kg/m2, **A**ge > 50, **N**eck > 17/16 (Male/Female), **G**ender = Male
- if >5/8 on STOP BANG—need EKG & consider nocturnal oximetry testing for hypoxia

BMI < 40 kg/m2 => Proceed to Surgery
40-45 kg/m2 => OSA Precautions, Use CPAP, Evaluation for OSA
Optimized Comorbid Conditions => Proceed with surgery
Non-optimized Comorbid Conditions => Not suitable for ASC
> 45 kg/m2 =>Not suitable for ASC
- BMI < 50 For RFNs/ESI – if can lay flat for 1 hr and receiving minimal sedation (not a heavy MAC) then surgeon will determine if suitable for ASC

ASA Physical Status ASA Physical Status 1,2,3.
ASA Physical Status 4 => Usually not suitable for ASC,
OK for MAC (if surgeon/anesthesia agree),
OK for local only

AGE Age > 80 has higher incidence of readmission/transfer => surgeon approval for ASC
Age < 12 months => Not suitable for ASC except PSC
PSC ONLY: Age ≥ 6 months gestational age: BMT and Adenoids only
SWLSC : Age ≥ 6 for Lacrimal Duct
Tonsillectomy < 3 yrs old=> Not suitable for ASC
Tonsillectomy 2-3 yrs old=>Requires performing surgeon approval
(if the age is between 2 and 3 years old, the performing surgeon needs to be informed by the scheduling surgeon)
LOC: Age < 2 not suitable for ASC

ICD/Pacemaker => ICD/Pacemaker=>See Pacemaker Policy

Malignant Hyperthermia
MH History => Not suitable for ASC
MH Susceptible => Not suitable for ASC
Family History of Malignant Hyperthermia
If > 2 steps removed from MH source, then there is no perceived risk
(i.e. **great** grandparent of patient has MH, OK to do at ASC)
If a closer relative, then needs to be done at a hospital unless the surgeon and the anesthesiologist doing the case agree to proceed

Difficult Airway
Definition: Proven Difficult Airway
– Unable to secure the airway by regular laryngoscope ~~or a CMAC or CMAC view grade 3 or 4~~
Proven Difficult Airway and Listed as a General => Not suitable for ASC
Proven Difficult Airway and Listed as a Block => Suitable for ASC if Surgeon willing to convert to a MAC
Proven Difficult Airway and Listed as a MAC => Suitable for ASC
Definition: **Suspected Difficult Airway**: Class 4 Airway or Symptoms consistent with a Class 4 Airway
Suspected Difficult Airway and Listed as a General => Evaluation by Anesthesiologist
Suspected Difficult Airway and Listed as a Block => Suitable for ASC if Anesthesiologist Agrees
Suspected Difficult Airway and Listed as a MAC => Suitable for ASC

Recreational Drugs=> If suspected of taking recreational drugs the day of surgery=>Not suitable for ASC
Hyperglycemia=> If uncontrolled hyperglycemia, Glucose > 300 => Not suitable for ASC
Liver Failure=> Suitable for ASC for local only
Renal Failure=> Suitable for ASC for local only
Heart Disease=> Heart Failure (Asymptomatic) with EF > 40% for GEN, > 30% for MAC/Block => Suitable for ASC
=>DES (Drug Eluting Stent) => Approval from Cardiologist
< 6 months emergent =>Not Suitable for ASC
6-12 urgent/months elective =>Suitable for ASC if elective
=>BMS (Bare Metal Stent) => Approval from Cardiologist
< 30 days emergent =>Not Suitable for ASC
> 30 days urgent/elective => Suitable for ASC if elective

Fever > 101 => Not suitable for ASC unless surgeon approves and is an I&D of abscess
Acute URI => Not suitable for ASC if a General
Lower Respiratory Infection (i.e. RSV, Influenza, Pneumonia) =>To be suitable for ASC:
4 weeks after Lower Respiratory Infection Diagnosis **AND** asymptomatic for 2 weeks
If took Tamiflu, then OK after 2 weeks after Tamiflu & asymptomatic for 2 weeks
Hand/Foot/Mouth Disease => 2 weeks after Dx => Suitable for ASC
Asthma =>not suitable for ASC if unstable (change in Rx or Sx) until on normal maintenance Rx for 2 weeks
Pink Eye=> Suitable for ASC if treated for 24 hours
Downs Syndrome – No Tonsillectomy. BMT and Adenoidectomy OK
Autism – No Tonsillectomy. BMT and Adenoidectomy OK – caution violent patient - may consider Hospital b/c increased personnel needed to care for patient.
Pregnant => Not Suitable for ASC
Seizure: ok for ASC if stable on medications & seizure free 1 month

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CARDIC INTERNAL ELECTRONIC DEVICE (CIED) POLICY

Automatic Internal Cardiac Defibrillators

ASCs:

Incision above the umbilicus:
Unipolar Cautery: Not appropriate for the ASC
Bipolar Cautery: Appropriate for ASC
No Cautery: Appropriate for ASC
Incision below the umbilicus: No changes for the AICD, Appropriate for ASC

Hospital:

Incision above the umbilicus: Shut off AICD, Put pacemaker in asynchronous mode (VOO, DOO)
Incision below the umbilicus: No changes for the AICD
ESWL: Use ECG triggered ESWL. Shut off AICD, Put pacemaker in asynchronous mode (VOO, DOO)

At a hospital, if needed, the Automatic Internal Cardiac Defibrillators (AICDs) will turned off preoperatively in the PSCU and turned back on/interrogated in the PACU. If a magnet was used, then the AICD must be interrogated in the PACU.

Process:

1 – Determine if EMI is likely to occur
EMI – Electrocautery (Monopolar), Radiofrequency Ablation, MRI, Lithotripsy(?)
2 – Determine if preoperative programming is needed (incision is above the umbilicus)
3 – Suspend anti-tachyarrhythmia functions OR place a magnet to turn off the AICD
Note: A magnet will turn off the AICD but will not place the pacemaker in asynchronous mode
4 – Advise surgeon to consider using bipolar cautery (**1 second bursts if a magnet is used**)
5 – Assure availability of temporary pacing (Code cart can do temporary pacing)
6 – Evaluate possible effects of anesthetic techniques on CIED
7 – Interrogate and set the settings to preoperative settings if the AICD was turned off or if a magnet was used

Pacemakers (ASCs and Hospital)

Pacemaker in operative field: Not appropriate for the ASC if monopolar cautery is going to be used.
Pacemaker not in operative field: No changes for the Pacemaker but have a magnet available.
ESWL: Put pacemaker in asynchronous mode (VOO, DOO), Postop reprogram pacemaker

Patients with pacemakers can be done at the ASCs. At an ASC, if no cautery or only bipolar cautery is used, then interrogation will not need to be done. At the hospital a pacemaker in the surgical field, such as a head/neck/ipsilateral shoulder surgery will need to be **interrogated before and after** the operation. If a pacemaker is to be interrogated, then the pacemaker should be placed in a non-sensing mode – VOO or DOO. **A pacemaker can be inhibited by the unipolar electrocautery**. If the inhibition occurs, a magnet can be placed on the pacemaker to prevent the inhibition. **After the case is over the magnet is removed. If the pacemaker is not in the surgical field, Interrogation does not need to be performed, even if a magnet is used.**

Process:

1 – Determine if EMI is likely to occur
EMI – Electrocautery (Monopolar), Radiofrequency Ablation, MRI, Lithotripsy(?)
2 – Determine if preoperative programming is needed
Pacemaker in surgical field (Ipsilateral Head/Neck/Clavicle/Shoulder Surgery)
3 – Determine if the generation will be difficult to reach (Prone, Thoracic Surgery)
3 – Suspend anti-tachyarrhythmia functions, if present, place pacemaker in asynchronous mode
4 – Advise surgeon to consider using bipolar cautery
5 – Assure availability of temporary pacing (Code cart can do temporary pacing)
6 – Evaluate possible effects of anesthetic techniques on CIED

Action:

Bipolar or Harmonic Scalpel – not consensus that if these are used then the pacemaker is ok.
Plenty case reports that it is ok. One case report that bipolar interfered.
Grounding pad should be placed so the current does not travel through the pacemaker.
Do not directly contact the pacemaker or leads with the cautery, bipolar, focused lithotripsy or RF.
Position defibrillation pads so current does not flow through the pacemaker

Table 1. Generic Pacemaker Code (NBG*): NASPE/BPEG

Pacing	Sensing	Response Programmability	Multisite Pacing
O=None	O=None	O=None	O=None
A=Atrium	A=Atrium	A=Atrium	R=Rate Modulation	A=Atrium
V = Ventricle	V = Ventricle	V = Ventricle	V = Ventricle
D = Dual (A+V)	D = Dual (A+V)	D = Dual (A+V)	D = Dual (A+V)

When scheduling a patient at an ASC that will need interrogation please call the company representative to schedule them to be present for the interrogation. Please indicate the times they will be needed.