

Introduction to Anesthesia Booklet

Topics:

Medical Abbreviations

Machine Check

Common Lab Values

Table Top Setup

A

A&O Alert and oriented

AA Anesthesiologist assistant

AAA abdominal aortic aneurysm

AAAA American Academy of Anesthesiologist Assistants

AAF African-American female

AAM African-American male

AAPA American Association of Physician Assistants

Ab; ab Abortion; antibiotics

ABG Arterial blood gas

ABL Allowable blood loss

abn Abnormal

ACL Anterior cruciate ligament

ACLS advanced cardiac life support

ACS Acute coronary syndrome

ACT Activated clotting time

A.C.T.H., ACTH Adrenocorticotrophic hormone

ADD Attention deficit disorder

ADHD Attention deficit and hyperactivity disorder

adm. Admission, administer(ed)

AF Atrial fibrillation (or A fib)

A/G Albumin-globulin ratio (blood)

AI Aortic insufficiency

AICD Automated implantable cardioverter defibrillator

AIDS Acquired immuno-deficiency syndrome

AKA Above the knee amputation

AK Above knee

alb. Albumin

ALI Acute lung injury

alk. phos. Alkaline phosphatase

ALS Amyotrophic lateral sclerosis (Lou Gehrig's Disease)

AMA Against medical advice, American Medical Association

AMI Acute myocardial infarction

amt Amount

amp Ampule

ant Anterior

A&O x 3 Alert and oriented to person, place, and time

AODM Adult onset diabetes mellitus

A/P, AP Anterior-posterior, anteroposterior

aPTT Activated partial thromboplastin time

AR Aortic regurgitation

ARDS Adult respiratory distress syndrome

AROM artificial rupture of membranes

AS Aortic stenosis

ASA Aspirin, American Society of Anesthesiologist

ASC Ambulatory surgery center

ASCAD Arteriosclerotic coronary artery disease

ASCVD Arteriosclerotic cardiovascular disease

ASD Atrial septal defect

ASHD Arteriosclerotic heart disease

AST Aspartate aminotransferase (formerly SGOT)

ATN Acute tubular necrosis

AV Atrioventricular; assisted ventilation

A/V Arterio-venous

AVF Arteriovenous fistula

AVG Arteriovenous graft

AVM Arteriovenous malformation

AVR Aortic valve replacement

B

B bilateral

Ba barium

BCLS basic cardiac life support

BCP birth control pills

BE barium enema

BH Bair Hugger

b.i.d./B.I.D. twice a day

B.I.N. twice a night

BK below knee

BLBS= bilateral breath sounds and equal

BKA below the knee amputation

BM bowel movement

BMI body mass index

BMR basal metabolic rate

BMT bilateral myringotomy tubes

BP blood pressure

BPH benign prostatic hyperplasia

bpm beats per minute

BRBPR bright red blood per rectum

BS breath sounds; bowel sounds; blood sugar

BSA body surface area

BSO bilateral salpingo-oophorectomy

B/U back-up

BUN blood urea nitrogen

BW birth weight

bx biopsy

C

c with

C-1, C-2,etc first cervical vertebra, etc.

CA cancer, carcinoma

Ca calcium

CABG coronary artery bypass graft

CaCl calcium chloride

CAD coronary artery disease

CaGl calcium gluconate

CASHD coronary artery symptomatic heart disease

Cal. calorie

cap. capsule

CAPD continuous ambulatory peritoneal dialysis

CAT computerized axial tomography

CBC complete blood count

CBF cerebral blood flow

cc cubic centimeter

C_{CR} creatinine clearance

CCU coronary care unit or critical care unit

CEA carotid endarterectomy

CF cystic fibrosis

CFX circumflex coronary artery

CHD congenital heart disease

CHEM-6 Na⁺, K⁺, Cl⁻, CO₂, glucose, BUN

CHEM-7 Chem-6 + creatinine

CHEM-14 total bilirubin, total protein, albumin, calcium, phosphorus, alkaline phosphatase, lactic dehydrogenase, SGOT, creatinine, uric acid, cholesterol, MSI, GGT, SGPT

CHEM-23 CHEM-6 + CHEM-14 + CPK, direct bilirubin, triglycerides

CHF congestive heart failure

CHI closed head injury

Chol. cholesterol

CI cardiac index

CICU cardiac intensive care unit

CK creatine kinase

Cl chloride

cm. centimeter

CMRO₂ cerebral metabolic requirement of O₂

CMV cytomegalovirus

CNS central nervous system

c/o complained of

CO cardiac output

CO₂ carbon dioxide, bicarbonate

COPD chronic obstructive pulmonary disease
CP cerebral palsy; chest pain
CPAP continuous positive airway pressure
CPB cardiopulmonary bypass
CPK creatinine phosphokinase
CPR cardiopulmonary resuscitation
Cryo cryoprecipitate
CRNA certified registered nurse anesthetist
C & S culture and sensitivity
C/S Cesarean section delivery
CSF cerebrospinal fluid
CT; C/T computed tomography (see CAT)
CTA clear to auscultation
CTR carpal tunnel release
CTS carpal tunnel syndrome
Cu copper
CV controlled ventilation / cardiovascular
CVA cerebral vascular accident
CVICU cardiovascular intensive care unit
CVP central venous pressure
c/w consistent with
CXR chest X-ray

D

D5W dextrose 5% in water
D5 1/2NS dextrose 5% in 0.45% normal saline
D5LR dextrose 5% in Lactated Ringers
D10W dextrose 10% in water
D50 dextrose 50%
D&C dilation and curettage
D/C discontinue
DDD degenerative disc disease
D.D.S. doctor of dental science
DI diabetes insipidus
DIC disseminated idiopathic coagulopathy
DIFF. differential (blood count)
DJD degenerative joint disease
DKA diabetic ketoacidosis
dl deciliter
DL direct laryngoscopy
DLCO diffusion capacity of lung-carbon monoxide test
DLT double-lumen tube
DMD Doctor of Medical Dentistry
DNR do not resuscitate
D.O. Doctor of Osteopathic Medicine
DOA dead on arrival
DOB date of birth
DOE dyspnea on exertion

DPL diagnostic peritoneal lavage
DPT diphtheria-pertussis-tetanus
DT delirium tremens
DTRs deep tendon reflexes
DVT deep vein thrombosis
dx; Dx diagnosis
Dz disease

E

EBL estimated blood loss
EBT endobronchial tube
EBV estimated blood volume; Epstein-Barr virus
ECCE extracapsular cataract extraction
ECG electrocardiogram
ECMO extracorporeal membrane oxygenation/oxygenator
ECT electroconvulsive therapy
ED emergency department
EDC estimated date of confinement
EEG electroencephalogram
EF ejection fraction
EGA estimated gestational age
EGD esophagogastroduodenoscopy
EJ external jugular vein
EMG electromyogram
ENT ear, nose, throat
EOM extraocular muscles
ER emergency room
ESR erythrocyte sedimentation rate
ESRD end stage renal disease
ESRF end stage renal failure
EST electroshock therapy
ESWL external sound wave therapy
ETCO₂ end-tidal carbon dioxide
EtOH alcohol
ETT endotracheal tube
EUA examination under anesthesia
Ex lap exploratory laparotomy

F

FANA Florida Association of Nurse Anesthetists
F.B. foreign body
FBS fasting blood sugar
FeSO₄ ferrous sulfate (iron)
FEV₁ forced expiratory volume at 1 second
FFP fresh frozen plasma
FHx family history

FHR fetal heart rate
FHT fetal heart tone
FIO₂ fraction inspired oxygen
FRC functional residual capacity
FROM full range of motion
FSA Florida Society of Anesthesiologists
FSH follicle stimulating hormone
FTA fluorescent treponemal/titer antibody
FT₃I free triiodothyronine index
FT₄I free thyroxine index
FTLB full term living birth
FTNB full term normal birth
FTT failure to thrive
F/U follow up
FUO fever of unknown origin
Fx fracture

G

GBS gall bladder series
GC gonococcus
GCS Glasgow Coma Scale
g/dL grams per deciliter
GDM gestational diabetes mellitus
GE gastroesophageal
GERD gastroesophageal reflux disorder
GGT gamma glutamyl transpeptidase
GH growth hormone
GI gastrointestinal
G/P gravida/para
GPI general paresis
G₆PD glucose 6 phosphate dehydrogenase
grav. gravida (pregnancy)
GSW gunshot wound
gtt drops
GTT glucose tolerance test
GU genitourinary
GYN gynecology

H

h, H hour
HAV hepatitis A virus
HBV hepatitis B virus
HCG, hCG human chorionic gonadotropin
Hct hematocrit
HD hemodialysis
HDL high density lipoprotein
HELLP hemolysis, elevated liver enzymes, low platelets (a syndrome)
Hg mercury

Hgb hemoglobin

HGH human growth hormone

HIV human immunodeficiency virus

HME heat-moisture exchanger

H/O history of

H & P history and physical

HPI history of present illness

HPV human papillomavirus

HTN hypertension

Hx; hx history

I

IABP intra-arterial balloon pump

IBW ideal body weight

ICP intracranial pressure

ICU intensive care unit

I & D incision and drainage

IDDM insulin dependent diabetes mellitus

I/E inspiratory-to-expiratory time ratio

Ig A,D,E,G,M immunoglobulin- types A,D,E,G,M

IGP intragastric pressure

IHSS idiopathic hypertrophic subaortic stenosis

IHR inguinal hernia repair

IJ internal jugular vein

IM intramuscular

IMA internal mammary artery

IMV intermittent mandatory ventilation

INR internal normalization ratio

I & O intake and output

IOP intraocular pressure

ITP idiopathic thrombocytopenic purpura

IUD intrauterine device

IUFD intrauterine fetal death

IUP intrauterine pregnancy

IV intravenous

IVC inferior vena cava

IVDA intravenous drug abuse

IVF in vitro fertilization

IVH intraventricular hemorrhage

IVP intravenous pyelogram

J

JODM juvenile onset diabetes mellitus

JVD jugular vein distension

K

K potassium

Kcal, KCAL kilocalorie

KCl potassium chloride

kg kilogram

KUB kidney, ureter, bladder (used when taking an X-ray)

KVO keep vein open

L

L left; liter

L-1, L-2, etc. first lumbar vertebra, etc.

LAD left anterior descending (coronary artery)

lap. laparotomy

lat lateral

LAVH laparoscopic assisted vaginal hysterectomy

LBBB left bundle branch block

LBP low back pain

LBW low birth weight

L & D labor and delivery

LDH lactic dehydrogenase

LDL low density lipoprotein

LE lower extremity

LFT liver function test(s)

LHF left heart failure

LHRH luteinizing hormone releasing hormone

LIMA left internal mammary artery

LLD left lateral decubitus (position)

LLE left lower extremity

LLL left lower lobe

LLQ left lower quadrant

LM left main coronary artery

LMA laryngeal mask airway

LMP last menstrual period

LOC loss/level of consciousness

LP lumbar puncture

LPN licensed practical nurse

LR lactated Ringer's solution

LSO left salpingo oophorectomy

LTL laparoscopic tubal ligation

LUE left upper extremity

LUL left upper lobe

LUQ left upper quadrant

LV left ventricle

LVAD left ventricular assist device

LVE left ventricular enlargement
LVEDP left ventricular end diastolic pressure
LVH left ventricular hypertrophy
LWMA left wall motion abnormality

M

M1 mitral first sound
MAC minimum alveolar concentration; monitored anesthesia care
MAP mean arterial pressure
MBC maximal breathing capacity
MCA motorcycle accident
mcg microgram
MCL mid clavicular line
MD Medical Doctor
MDI metered dose inhaler
mEq milliequivalent
mEq/L milliequivalent per liter
mg milligram
mg/dL milligrams per deciliter
MgSO₄ magnesium sulfate
MH malignant hyperthermia
MID-CAB minimally invasive coronary artery bypass
MICU medical intensive care unit
min minute
ml milliliter
mm millimeter
mmHg millimeter of mercury
MOSF multi-organ system failure
MR mitral valve regurgitation
MRI magnetic resonance imaging
MRSA methicillin resistant staph aureus
MS multiple sclerosis; mitral stenosis
MSO₄ morphine sulfate
MSL mid sternal line
MVA motor vehicle accident
MVI multivitamins
MVP mitral valve prolapse
MVR mitral valve replacement

N

N; N₂ nitrogen
Na sodium
N/A not applicable; not available
NAD no apparent distress
NaP sodium pentothal

NG nasogastric
NH₃ ammonia
NI not indicated
NICU neonatal intensive care unit
NIDDM non-insulin dependent diabetes mellitus
NKA no known allergies
NKDA no known drug allergies
NMR nuclear magnetic resonance
N₂O nitrous oxide
NP nurse practitioner
NPH neutral protamine Hagedorn (insulin)
NPO nothing by mouth (nil per os)
NS normal saline
NSAID non-steroidal anti-inflammatory drug
NSR normal sinus rhythm
NSU Nova Southeastern University
NTG nitroglycerine
NTT nasal tracheal tube
N/V nausea and vomiting
N/V/D nausea, vomiting, diarrhea

Q

O₂ oxygen
OB obstetrics
OB/GYN obstetrician/gynecologist
OD overdose
OETT oral endotracheal tube
OP CAB off-pump coronary artery bypass
OPS out patient surgery
OR operating room
ORIF open reduction internal fixation
OSA obstructive sleep apnea
O.T. occupational therapy
OTC over the counter

P

p after
P₂ pulmonic second sound
P & A percussion and auscultation
PaCO₂ partial pressure of CO₂ in arterial blood
PA pulmonary artery
PAC premature atrial contraction; pulmonary artery catheter
PA-C physician assistant-certified
PACU post anesthesia care unit

PALS pediatric advanced life support
PaO₂ partial pressure of O₂ in arterial blood
PAOP pulmonary artery occluded pressure
Pap Papanicolaou smear (Pap smear)
para parity
PAT paroxysmal atrial tachycardia; pre admission testing
PCA patient controlled analgesia
PCN penicillin
PCWP pulmonary capillary wedge pressure
PD peritoneal dialysis
PDA patent ductus arteriosus
PE pulmonary embolism
PEA pulseless electrical activity
PEEP positive end expiratory pressure
PEG percutaneous endoscopic gastrostomy
per by
PERRLA pupils, equal, round, reactive to light and accommodation
P_{ET}CO₂ partial pressure of CO₂ in end-tidal gas
PFO patent foramen ovale
PFT pulmonary function test
pH hydrogen ion concentration
PI present/previous illness
PICC percutaneously inserted central catheter
PICU pediatric intensive care unit
PID pelvic inflammatory disease
PIH pregnancy induced hypertension
PIP peak inspiratory pressure
PLT/plt. platelets
PMHx past medical history
PMS premenstrual syndrome
PND paroxysmal nocturnal dyspnea, post nasal drip
PNV prenatal vitamins
PO by mouth
PO₄ phosphate
POD postoperative day
PONV post-op nausea and vomiting
post-op after operative
p.p. postprandial
PP post partum
PPP pressure points padded
PPD purified protein derivative (TB test)
PPL pleuropneumonia like
PR per rectum
PRBC packed red blood cells
preop before surgery
p.r.n./prn whenever necessary
PROM premature rupture of membranes
PSHx past surgical history
PSP phenolsulfonphthalein test
PSV pressure support ventilation
PSVT paroxysmal supraventricular tachycardia

PT prothrombin time (a.k.a. protime); physical therapy
PTA prior to admission
PTCA percutaneous transluminal coronary angioplasty
PTH parathyroid hormone
PTT partial thromboplastin time
PUD peptic ulcer disease
PVC premature ventricular contraction
PVD peripheral vascular disease
PVR pulmonary vascular resistance

Q

q every
qd every day
qh every hour
q2h every 2 hours
q4h every 4 hours
qHS every night
qid four times a day
qn every night
qod every other day
QRS ventricular wave ECG
q.s. sufficient quantity
QV as much
qwk every week

R

R right
RA rheumatoid arthritis; right atrium
rad unit of measurement of the absorbed dose of ionizing radiation
RAD reactive airway disease
RAH right atrial hypertrophy
RAI radioactive iodine
RAP retrograde autologous prime
RBBB right bundle branch block
RBC red blood cell
RCA right coronary artery
RDS respiratory distress syndrome
RF rheumatic fever
Rh Rhesus factor
RHD rheumatic heart disease
RHF right heart failure
RLE right lower extremity
RLL right lower lobe
RLQ right lower quadrant
RML right middle lobe

RN registered nurse
R/O rule out
ROA occiput right anterior
ROM range of motion
ROP occiput right posterior
ROS review of systems
ROT occiput right transverse
RQ respiratory quotient
RR respiratory rate
RRE round,regular,equal
RRR regular rate and rhythm
RSO right salpingo oophorectomy
RSD reflex sympathetic dystrophy
RSV respiratory syncytial virus
RT respiratory therapy
R/T related to
RTC return to clinic
RT₃U resin triiodothyronine uptake
RUE right upper extremity
RUL right upper lobe
RUQ right upper quadrant
RVAD right ventricular assist device
RVH right ventricular hypertrophy
RWMA right wall motion abnormality
Rx therapy; prescription

S

s without
SA sinoatrial
SAH subarachnoid hemorrhage
SaO₂ oxygen saturation of hemoglobin in arterial blood
SBE subacute bacterial endocarditis
SCD sequential compression device
SD septal defect
SDH subdural hematoma
SGC Swan-Ganz catheter
SGOT serum glutamic oxaloacetic transaminase (AST)
SGPT serum glutamic pyruvic transaminase (ALT)
SHx social history
SIADH syndrome of inappropriate antidiuretic hormone
SICU surgical intensive care unit
SIDS sudden infant death syndrome
SIMV synchronized intermittent mandatory ventilation
SIRS systemic inflammatory response syndrome
SL sublingual
SLE systemic lupus erythematosus
SNP sodium nitroprusside
SOB shortness of breath

S/P status post
SpO₂ saturation of hemoglobin in arterial blood from pulse oximetry
SQ subcutaneous
SR spontaneous respiration
SROM spontaneous rupture of membranes
s/s signs and symptoms
SSS sick sinus syndrome
STAT supersedes tasks of all types (i.e. immediately)
STD sexually transmitted disease
SV stroke volume; supraventricular; spontaneous ventilation
SVC superior vena cava
SvO₂ oxygen saturation of hemoglobin in mixed-venous blood
supp. suppository
SVR systemic vascular resistance
SVT supraventricular tachycardia
sx symptoms; surgery

T

T temperature; thoracic
T₃iodothyronine
T₄thyroxine
T & A tonsillectomy and adenoidectomy
TAH total abdominal hysterectomy
TB tuberculosis
TBSA total body surface area
TEE transesophageal echocardiography
TEF transesophageal fistula
TENS transcutaneous electrical nerve stimulation
THA total hip arthroplasty
THR total hip replacement
TIA transient ischemic attack
TIBC total iron binding capacity
tid three times a day
tin three times a night
TKA total knee arthroplasty
TKR total knee replacement
TMJ temporomandibular joint
TOF train of four; Tetralogy of Fallot
TPN total parenteral nutrition
TR tricuspid (valve) regurgitation
TSH thyroid stimulating hormone
TUNA transurethral needle ablation
TURB transurethral resection of the bladder
TURP transurethral resection of prostate
TVH total vaginal hysterectomy
Tx treatment
T & C type and crossmatch

U

U unit

UA urinalysis

UCG urinary chorionic gonadotropins

UE upper extremity

UGI upper gastrointestinal

UO urine output

URI upper respiratory infection

U/S ultrasound

UTI urinary tract infection

UUN urine, urea, nitrogen

V

V_T tidal volume

VAE venous air embolism

VATS video assisted thoroscopic surgery

VC vital capacity

VCU voiding cystourethrogram

VD venereal disease

V_D volume of distribution

V_D/V_T dead space-to-tidal volume ratio

VDRL venereal disease research lab(lab report)

VHD valvular heart disease

VLBW very low birth weight

VLDL very low density lipoprotein

VMA vanillylmandelic acid

V-P ventricular-peritoneal

V/Q ventilation-perfusion ratio

VS vital signs

VSD ventricular septal defect

VSS vital signs stable

V-Tach ventricular tachycardia

W

WBC white blood cells

wk week

WNL within normal limits

WMA wall motion abnormality

WPW Wolff-Parkinson-White (syndrome)

wt. weight

w/u work up

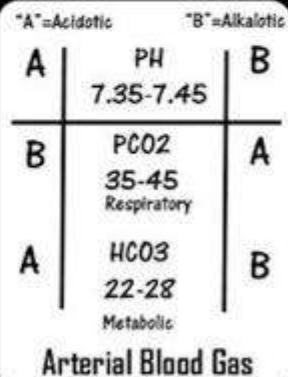
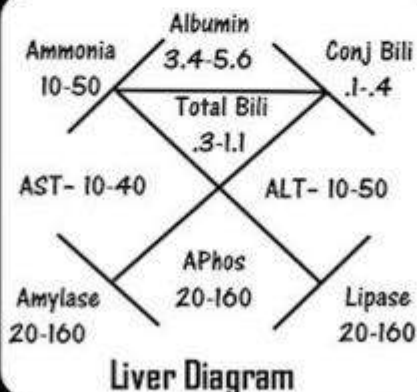
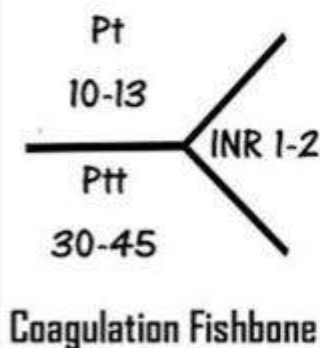
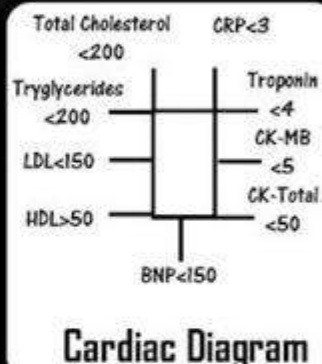
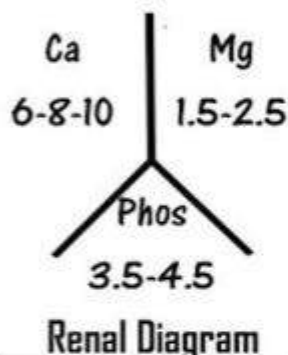
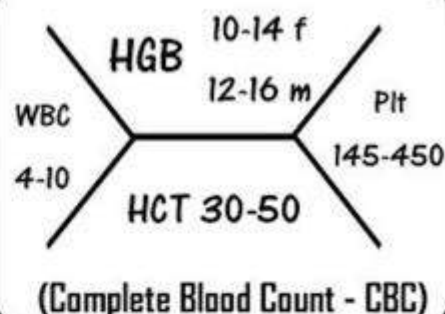
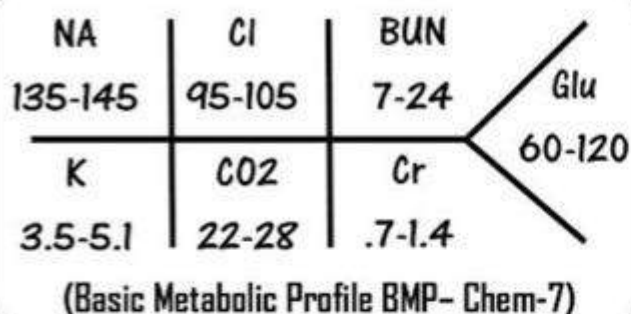
X, Y, & Z

x times
XR X-ray
yo year(s) old
Zn zinc

SYMBOLS

| approximately
@ at
⇒ change
¥ check
π decrease, deficiency, depressed, diminished, inferior (position), θ degree
/ divided by; per
= equals
V increase, elevated, enlarged, rising, superior (position), upper - negative
number or pounds
• none, nothing
1θ primary
2θ secondary
3θ tertiary
c with
s without
p after
. decimal [Never use trailing zero (1.0mg) or leading decimal (.1mg)]

NORMAL LAB VALUES



MEDICAL JARGON

A-line (n.)

Refers to the words “arterial line” which is a catheter inserted into an artery usually to monitor pressure and waveforms.

Ex. *“He has an **a-line** in his right radial artery.”*

Amnio (n.)

This is a shortening of the word “amniocentesis” where the obstetrician samples the amniotic fluid through the abdominal wall with a biopsy needle.

Ex. *“her **amnio** was negative.”*

Bili (n.)

A shortening of the word “bilirubin” which is a yellow bile pigment resulting from the breakdown of hemoglobin.

Ex. *“This patient’s total **bili** is up.”*

Blue 100 (n.) (variants; Code Blue, Dr. Blue)

Ex. *“**Blue 100**, emergency room, **Blue 100**, emergency room, **Blue 100**, emergency room”*

A general hospital announcement to all medical staff that there is a life threatening medical emergency and usually involves cardiac resuscitation. The hospital operator repeats the phrase three times and the location of the emergency. Every hospital has its own term for this situation.

bleeder (n.)

Usually refers to an arteriole that has been severed and is pumping blood into the surgical site.

Ex. *“Nurse, can you hand me a stitch, I have a small **bleeder** here.”*

blower (n.)

Refers to a ventilator.

Ex. *“After we intubate the patient, let’s put him on the **blower**.”*

Can also refer to a carbon dioxide blowing instrument used in cardiac surgery.

Ex. *“Turn the **blower** on so I can get rid of some of this blood.”*

bovie (n.)

Refers to any electrocautery device used in the operating room to cauterize wounds to staunch bleeding or oozing from capillaries or arterioles. The Bovie machines were the first widely available commercial electrocautery devices.

Ex. *“Nurse, can you hand me the **bovie**, I have some bleeding here.”*

break (v.)

The process of relieving an acute symptom that is continuous.

Ex. *"The patient has a laryngospasm , so I'm applying some positive pressure to **break** the spasm."* **bug**

juice (n.)

Refers to antibiotic solution.

Ex. "I need some **bug juice** to rinse out this wound."

cabbage (n.)

Ex. *"This patient had a **cabbage** done 4 years ago."*

A play on phonetic structure of "CABG" which is the abbreviation for coronary artery bypass graft.

cat scan (n.)

Refers to the radiologic technique known as **C**omputerized **A**xial **T**omography. Ex. *"The patient has to go for a **CAT scan** first before they come down to the operating room."*

clamp (n., v.)

Refers to a surgical instrument shaped like scissors, however used to compress a blood vessel or other anatomic structure. Common example of such an instrument is a "hemostat"

Ex. (n.) *"Nurse give me a **clamp**, I have a bleeder."* (v.) *"I'm going to **clamp** the aorta."* **close**

(v.)

The act of closing the wound with suture or staples.

Ex. *"We're almost done. We'll **close** in about 10 min."*

code (n.,v.)

Ex. (n.) *"There is a **code** in progress down the hall. (v.) If this patient's blood pressure goes down he may **code**."* (adj.)

Refers to a medical emergency in which a designated team responds. Usually involves a cardiac resuscitation for cardiac arrest or irregular rhythm.

Code Blue (n.)

See "Blue 100"

crit (n.)

Refers to percentage of red blood cells per 100cc of whole blood sampled from the patient. The term is a shortening of the term hematocrit.

Ex. *"The patient has lost 500cc of blood. Let's get a **crit**."*

Echo (n.)

A shortened term for the word "echocardiogram" which is an ultrasonic evaluation of heart function.

Ex. *"The patient's **echo** showed damage to the left ventricle."*

epi (n.)

The term is a shortening of the term epinephrine.

Ex. *The patient's pressure is down. Give them 100 micrograms of **epi**."*

foley (n.)

A shortened phrase for **Foley** catheter. A tube that is inserted through the urethra to drain the bladder.

Ex. *"The patient had a **foley** placed last night."*

fluoro (n. or v.)

A shortened form of **fluoroscope or fluoroscopy**. A form of continuous x-ray for diagnostic and procedural assistance.

Ex. *"they are bringing in a **fluoro (n.)** to see where the fracture is. They will **fluoro (v.)** the leg in two places."*

gas (n.)

Refers to an arterial blood **gas** test.

Ex. *"The patient's lungs sound bad. Let's get a **gas** and see what the oxygen level is in his blood."*

glue (n.,v.)

Refers to an adhesive, methylmethacrylate that is used primarily by orthopedic surgeons to fix artificial joints to the supporting bones. This bone(s) is usually the femur and/or tibia. Placement of this substance sometimes has vasoactive effects on the circulation.

Ex. (n.) *"We are putting the **glue** into the femoral shaft now."*

Ex. (v.) *"We are going to **glue** the artificial hip to the femur now."*

K (n.)

Refers to the serum electrolyte potassium whose chemical symbol is K.

Ex. *"The EKG waveform looks odd. Let's draw some blood and see what the **K** is."*

lido (n.)

A shortening of the drug name **lidocaine**.

Ex. *"The patient has premature ventricular contractions. Give 100 mg. of **lido**."*

lines (n.)

Refers to tubing used in intravenous administration and monitoring sets or cables used with physiologic monitors.

Ex. *"Watch how you transfer the patient onto the bed. You may get her **lines** tangled."*

lytes (n.)

A shortening of the term electroly**tes** referring to compounds found in the blood serum.

Ex. *"This patient has renal disease. Make sure we get **lytes** on him before we induce anesthesia."* **mayo**

(n.)

Refers to an equipment stand used by scrub nurses to hold instruments that can be positioned over the patient.

Ex. *"I'm raising the OR table. Watch your **mayo**!"*

mics (n.)

The word is pronounced "mikes." This is a shortening of the word **micrograms**.

Ex. *"Give the patient 100 **mics** of neosynephrine."*

neo (n.)

Is a shortened form of **neosynephrine**.

Ex. *"Give the patient a 100 mics of **neo**."*

neuro (n.)

A shortening of the term **neurosurgery** and refers to that surgical specialty.

Ex. *"The **neuro** docs haven't evaluated the spine yet."*

orthopods (n.)

Refers to orthopedic surgeons.

Ex. *"The **orthopods** want this patient positioned on his left side up."*

on/off the pump

Refers to a patient being placed or taken off of an extracorporeal bypass machine that is used to bypass the heart and lungs during cardiac surgery.

Ex. *"We'll be going **on the pump** in just a couple of minutes."*

penrose (n.)

Refers to a surgical item that is placed in wounds to drain them postoperatively. It is a tubelike device that is very pliable and usually made of latex. It is also used as a tourniquet when starting intravenous lines.

Ex. *"Is there a **penrose** on the cart? I need to start an i.v."*

plege solution (n.) pronounced "pleeg"

A solution used in cardiac bypass procedures, which is infused into the coronary arteries to disrupt the electrical activity of the heart and induce cardiac arrest. Administered by the perfusionist operating the bypass apparatus.

Ex. *"I have infused 200cc of **plege solution** and myocardial temperature is 32.1°."* **relax**

(v., adv.)

Term that usually refers to paralyzing a patient temporarily by using drugs during an operation.

Ex.(v.) *"The surgeon is probably going to want us to **relax** the patient for this appendectomy."* Ex
(adv.) *"Use the twitch monitor to see if the patient is **relaxed**."*

road trip (n.)

Used to define anesthetic procedures done outside the operating room.

Ex. *"We're going on a **road trip** to cardiac cath lab for an AICD evaluation."*

roc (n.)

Shortening of the drug **rocuronium**.

Ex. *"I just gave the patient 10 mg. of **roc** because the patient moved."*

rod (n., v.)

Used to describe any number of orthopedic devices that primarily are inserted into the shaft of the damaged bone.

Ex. (n.) *"We will use a **rod** to repair that fractured femur."*

Ex. (v.) *"We'll be **rodding** this femur fracture."*

sat (n.)

Shortening of the term **saturation** used in blood gas analysis. Saturation refers to the percent of hemoglobin that has oxygen bound to the molecule.

Ex. *"The patient's **sat** is only 91%. Let's increase the oxygen going to the patient."* **scope**

(n.,v.)

This term has several meanings. It is a shortening of the drug name **scopolamine**. It also refers to any instrument that is used to visualize internal anatomy, such as a laryng**oscope**. It is also used as a verb in defining an action that uses an instrument to visualize internal anatomy.

Ex. (n.) *"Give the patient .2 mg. of **scope**."*

Ex. (n.) *"Hand me the **scope** so I can intubate this patient."*

Ex. (v.) *"I'm going to **scope** this patient first and see if we can intubate."*

squirt (v., n.)

Used by surgeons and other physicians that use vascular catheters. Typically a dye solution that is

Ex. (v.) *"I'm going to **squirt** the aorta now."*

Ex. (n.) *"The patient had a **squirt** that showed a cerebral aneurysm."*

squirter (n.)

A word used to indicate a laceration of a large arterial blood vessel that sends a pulsating stream of blood into the surgical field.

Ex. (n.) *"Nurse, hand me a clamp. I have a **squirter** here."*

stat (v.)

An expression that means to do something immediately. Usually follows a request or order.

Ex. (v.) *"Give the patient 100 mg. of succinylcholine. STAT!"*

stitch (n.,v.)

Used to denote a surgical suture or the act of suturing.

Ex. (n.) *"Don't tie the **stitch** too tight or it will break."*

Ex. (v.) *"Let's get this wound **stitched**."*

Sux (n.)

A shortened form of a drug named **succinylcholine**.

Ex. (n.) *"Give the patient 100mg. of **Sux**."*

Swan (n.,v.)

A shortened form of the name of a monitoring cardiac catheter called a **Swan**-Ganz catheter. Also used as a verb to describe the insertion of the **Swan**-Ganz catheter.

Ex. (n.) *"The patient came from the intensive care unit and has a **Swan** in place."* Ex. (v.) *"The surgeons are going to **Swan** the patient before they bring him to the OR."*

wedge (n.,v.)

A term used for the reading acquired from Swan-Ganz catheter after it is properly positioned in the pulmonary artery. It is a term used to describe the positioning of the Swan-Ganz catheter to obtain a reading.

Ex. (n.) “The patient’s **wedge** was 15.”

Ex. (v.) “The waveform indicates that we have a **wedged** catheter.”

Dangerous Abbreviations

Dangerous Abbreviations Or Dose Designations – Not Recommended

Abbreviation /Dose Expression	Intended Meaning	Misinterpretation	Correction
Apothecary symbols AU	dram minim	Misunderstood or misread (symbol for dram misread for “3” and minim misread as “mL”).	Use the metric system.
D/C	aurio uterque (each ear)	Mistaken for OU (oculouterque—each eye).	Don’t use this abbreviation.
Drug names ARA°A AZT	discharge discontinue	Premature discontinuation of medications when D/C (intended to mean “discharge”) has been misinterpreted as “discontinued” when followed by a list of drugs.	Use “discharge” and “discontinue.”
CPZ			Use the complete spelling for drug names.
DPT	vidarabine	cytarabineARA°C	
	zidovudine (RETROVIR)	azathioprine	
HCl HCT	COMPAZINE (prochlorperazine)	chlorpromazine	
HCTZ MgSO4	DEMEROL PHENERGAN THORAZINE	diphtheria-pertussis-tetanus (vaccine)	
MSO4	hydrochloric acid	potassium chloride (The “H” is misinterpreted as “K.”)	
MTX TAC	hydrocortisone	hydrochlorothiazide	

	hydrochlorothiazide	hydrocortisone (seen as HCT250 mg)	
	magnesium sulfate	morphine sulfate	
	morphine sulfate	magnesium sulfate	
		mitoxantrone	
	triamcinolone	tetracaine, ADRENALIN, cocaine	

ZnSO4 Stemmed names “Nitro” drip “Norflox” mg o.d. or OD TIW or tiw per os q.d. or QD qn qhs q6PM, etc. q.o.d. or QOD sub q SC	zinc sulfate	morphine sulfate	
	infusion	sodium nitroprusside infusion	
	norfloxacin	NORFLEX	
	microgram	Mistaken for “mg” when handwritten.	Use “mcg.”
	once daily	Misinterpreted as “right eye” (OD—oculus dexter) and administration of oral medications in the eye.	Use “daily.”
	three times a week.	Mistaken as “three times a day.”	Don’t use this abbreviation.
	orally	The “os” can be mistaken for “left eye.”	Use “PO,” “by mouth,” or “orally.”
	every day	Mistaken as q.i.d., especially if the period after the “q” or the tail of the “q” is misunderstood as an “i.”	Use “daily” or “every day.”
	nightly or at bedtime	Misinterpreted as “qh” (every hour).	Use “nightly.”
	nightly at bedtime	Misread as every hour.	Use “nightly.”
	every evening at 6 PM	Misread as every six hours.	Use 6 PM “nightly.”
	every other day	Misinterpreted as “q.d.” (daily) or “q.i.d. (four times daily) if the “o” is poorly written.	Use “every other day.”

U or u IU cc x3d BT ss		s The “q” has been mistaken for “every” (e.g., one heparin dose ordered “sub q 2 hours before surgery” misunderstood as every 2 hours before surgery).	Use “subcut.” or write “subcutaneous.”
		s Mistaken for SL (sublingual).	Use “subcut.” or write “subcutaneous.”
	unit	Read as a zero (0) or a four (4), causing a 10fold overdose or greater (4U seen as “40” or 4u seen as 44”).	“Unit” has no acceptable abbreviation. Use “unit.”
	international unit	Misread as IV (intravenous).	Use “units.”
	cubic centimeters	Misread as “U” (units).	Use “mL.”
		s Mistaken for “three doses.”	Use “for three days.”
	bedtime	Mistaken as “BID” (twice daily).	Use “hs.”
		Mistaken for “55.”	Spell out “sliding

> and < / (slash m Name letters and dose numbers run together (e.g., Inderal40 mg) Zero after decimal point (1.0) No zero before	(insulin) or ½ (apothecary)		scale.” Use “one half” or use “½.”
	greater than and less than	Mistakenly used opposite of intended.	Use “greater than” or “less than.”
	doses or indicates “per”	Misunderstood as the number 1 (“25 unit/10 units” read as “110” units.	Do not use a slash mark to separate doses. Use “per.”
	Inderal 40 mg	Misread as Inderal 140 mg.	Always use space between drug name, dose and unit of measure.
	1 mg	Misread as 10 mg if the decimal point is not seen	zeros for doses expressed in whole numbers.

decimal dose (.5 mg)	0.5 mg	Misread as 5 mg.	Always use zero before a decimal when the dose is less than a whole unit.
----------------------	--------	------------------	---

Anesthesia Apparatus Checkout Recommendations, 1993

This checkout, or a reasonable equivalent, should be conducted before administration of anesthesia. These recommendations are only valid for an anesthesia system that conforms to current and relevant standards and includes an ascending bellows ventilator and at least the following monitors: capnograph, pulse oximeter, oxygen analyzer, respiratory volume monitor (spirometer) and breathing system pressure monitor with high and low pressure alarms. This is a guideline which users are encouraged to modify to accommodate differences in equipment design and variations in local clinical practice. Such local modifications should have appropriate peer review. Users should refer to the operator's manual for the manufacturer's specific procedures and precautions, especially the manufacturer's low pressure leak test (step #5).

Emergency Ventilation Equipment

* 1. Verify Backup Ventilation Equipment is Available & Functioning

High Pressure System

* 2. Check Oxygen Cylinder Supply

- Open O_2 cylinder and verify at least half full (about 1000 psi).
- Close cylinder.

* 3. Check Central Pipeline Supplies

- Check that hoses are connected and pipeline gauges read about 50 psi.

Low Pressure System

* 4. Check Initial Status of Low Pressure System

- Close flow control valves and turn vaporizers off.
- Check fill level and tighten vaporizers' filler caps.

* 5. Perform Leak Check of Machine Low Pressure System

- Verify that the machine master switch and flow control valves are OFF.
- Attach "Suction Bulb" to common Fresh gas outlet.
- Squeeze bulb repeatedly until fully collapsed.
- Verify bulb stays fully collapsed for at least 10 seconds.
- Open one vaporizer at a time and repeat 'c' and 'd' as above.
- Remove suction bulb, and reconnect fresh gas hose.

* 6. Turn On Machine Master Switch

and all other necessary electrical equipment.

* 7. Test Flowmeters

- Adjust flow of all gases through their full range, checking for smooth operation of floats and undamaged flowtubes.
- Attempt to create a hypoxic O_2/N_2O mixture and verify correct changes in flow and/or alarm.

Scavenging System

* 8. Adjust and Check Scavenging System

- Ensure proper connections between the scavenging system and both APL (pop-off) valve and ventilator relief valve.
- Adjust waste gas vacuum (if possible).
- Fully open APL valve and occlude Y-piece.
- With minimum O_2 flow, allow scavenger reservoir bag to collapse completely and verify that absorber pressure gauge reads about zero.
- With the O_2 flush activated allow the scavenger reservoir bag to distend fully, and then verify that absorber pressure gauge reads < 10 cm H $_2$ O.

Breathing System

* 9. Calibrate O_2 Monitor

- Ensure monitor reads 21% in room air.
- Verify low O_2 alarm is enabled and functioning.
- Reinstall sensor in circuit and flush breathing system with O_2 .
- Verify that monitor now reads greater than 90%.

10. Check Initial Status of Breathing System

- Set selector switch to "Bag" mode.
- Check that breathing circuit is complete, undamaged and unobstructed.
- Verify that CO_2 absorbent is adequate.
- Install breathing circuit accessory equipment (e.g. humidifier, PEEP valve) to be used during the case.

11. Perform Leak Check of the Breathing System

- Set all gas flows to zero (or minimum).
- Close APL (pop-off) valve and occlude Y-piece.
- Pressurize breathing system to about 30 cm H $_2$ O with O_2 flush.
- Ensure that pressure remains fixed for at least 10 seconds.
- Open APL (Pop-off) valve and ensure that pressure decreases.

Manual and Automatic Ventilation Systems

12. Test Ventilation Systems and Unidirectional Valves

- Place a second breathing bag on Y-piece.
- Set appropriate ventilator parameters for next patient.
- Switch to automatic ventilation (Ventilator) mode.
- Fill bellows and breathing bag with O_2 flush and then turn ventilator ON.
- Set O_2 flow to minimum, other gas flows to zero.
- Verify that during inspiration bellows delivers appropriate tidal volume and that during expiration bellows fills completely.
- Set fresh gas flow to about 5 L/min.
- Verify that the ventilator bellows and simulated lungs fill and empty appropriately without sustained pressure at end expiration.
- Check for proper action of unidirectional valves.
- Exercise breathing circuit accessories to ensure proper function.
- Turn ventilator OFF and switch to manual ventilation (Bag/APL) mode.
- Ventilate manually and assure inflation and deflation of artificial lungs and appropriate feel of system resistance and compliance.
- Remove second breathing bag from Y-piece.

Monitors

13. Check, Calibrate and/or Set Alarm Limits of all Monitors

Capnometer Pulse Oximeter
Oxygen Analyzer Respiratory Volume Monitor (Spirometer)
Pressure Monitor with High and Low Airway Alarms

Final Position

14. Check Final Status of Machine

- | | |
|-----------------------------|-----------------------------------|
| a. Vaporizers off | d. All flowmeters to zero |
| b. APL valve open | e. Patient suction level adequate |
| c. Selector switch to "Bag" | f. Breathing system ready to use |

* If an anesthesia provider uses the same machine in successive cases, these steps need not be repeated or may be abbreviated after the initial checkout.

OPERATING ROOM & TABLETOP SETUP PROTOCOL

Nova Southeastern University AA Program

Anesthesia care providers must follow an OR setup protocol which is consistent for all clinical cases. Consistent setups minimize the potential for errors in practice. Every hospital follows a protocol which is unique to that institution. However, there are standards for setup which this program requires its students to uphold. The following protocol is consistent with the accepted standard of care for the majority of the hospitals that you will be rotating with. This protocol WILL be followed by ALL students at ALL rotations and may only be altered if the deviation is discussed with the anesthesia team members prior to actual room setup.

I. Tabletop - The following items should be present on the anesthesia machine tabletop for ALL cases (general anesthesia or MAC) unless specified otherwise.

A. Airway Equipment

1. an appropriately sized and functional **laryngoscope** blade and handle
2. one (1) appropriately sized **endotracheal (ETT) tube** with cuff checked for patency
 - a. a **stylet** inserted into the ETT
 - b. two (2) **ETTs** (one size below and one size above the chosen size) in the top drawer of the anesthesia machine (formula for pediatric ETT sizes $\Rightarrow [age(y) + 16]/4$)
3. a **tongue depressor**
4. two (2) appropriately sized **oral airways**
5. The use of a **precordial stethoscope** is an accepted standard of care and it should be used at all times for **intraoperative monitoring and transport to PACU** unless specifically directed otherwise by a member of the team.

B. Pharmaceuticals

1. Emergency Drugs
 - a. syringe labeled ***atropine***, with drug drawn up
 - i. **1cc** syringe for a patient **under 1 year** of age
 - ii. **3 cc** syringe for a patient **over 1 year** of age
 - b. syringe labeled ***succinylcholine***, with drug drawn up
 - i. **1cc** syringe for a patient **under 1 year** of age
 - ii. **3 cc** syringe for a patient **over 1 year** of age but **under 12 years** of age
 - iii. **10 cc** syringe for a patient **over 12 years** of age
 - c. one type of ***vasopressor*** drawn up (i.e. Phenylephrine, ephedrine)
 - d. one 5cc syringe of **2% lidocaine**
2. Induction Agents
 - a. one (1) syringe of **1% propofol** on table top
 - i. **one (20) cc** syringe for patients **over age 5 years**
 - ii. **five (5) cc** syringe for patients **under age 5 years**
3. Maintenance Agents
 - a. a vial of a ***non-depolarizing muscle relaxant*** (i.e. rocuronium, vecuronium, cis-atracurium, etc.) with labeled syringe on tabletop but not drawn up unless confirmed by staff
 - b. a labeled syringe for ***midazolam***
 - c. a labeled syringe for a ***narcotic*** (fentanyl, sufentanil, etc.)

II. The Anesthesia Machine - The following items on the machine should be checked prior to the first case of the day and prior to each subsequent case when appropriate.

- A. The availability and integrity of patient **suction** must be verified.
- B. Check **O₂ cylinder** supply.
- C. Check **O₂ pipeline** supply.
- D. Check **vaporizer** fill level.
- E. Calibrate **O₂ monitor** sensor to room air.
- F. Check **flowmeters**.
- G. Install and check the integrity of an appropriately sized **breathing circuit**.
- H. Place an appropriately sized **mask** on the circuit.
- I. Verify that the **CO₂ absorber** (Baralime) is adequate.
- J. Verify the integrity of the **APL (pop-off) valve** and the **scavenging system**.
- K. Test the integrity of the **ventilator**.
- L. Test the integrity of **monitors** (capnograph, pulse oximeter, ECG, temperature probe, etc.) and position probes and leads for quick placement on the patient.
 - 1. The use of a **precordial stethoscope** is an accepted standard of care and it should be used at all times for **intraoperative monitoring and transport to PACU** unless specifically directed otherwise by a member of the team.

III. Intravenous Therapy - The following items should be set up in the OR prior to the start of each case.

A. Intravenous Fluid

- 1. **Lactated Ringers** for most healthy patients
- 2. **0.9% saline** (normal saline) or **5% dextrose in water (D5W)** for renal failure patients
- 3. fluid choice for neonates as per attending anesthesiologist's request

B. Tubing Setup

- 1. **60 drop/cc** (minidrip) setup for patients **under ten** (10) years of age
- 2. **10 drop/cc** (maxidrip) setup for patients **over ten** (10) years of age
- 3. **stopcock** in-line if a moderate chance of blood transfusion exists
- 4. **anesthesia extension set** if using stopcock or if IV site is not easily accessible
- 5. the fluid should be completely **flushed** through the tubing

C. Supply Bin

1. A bin containing the following items should be stocked and in the room prior to the start of each case:

- a. at least two (2) of each appropriately sized **IV catheter**
- b. **1% lidocaine** in a one (1) or a three (3) cc syringe and a 26 g or smaller needle for local infiltration
- c. **4" x 4" gauze** sponges for clean up
- d. **tape**
- e. **alcohol** wipes
- f. **18 g needles** for skin hole
- g. **tourniquet**

The above list is considered standard and it should be followed exactly unless a change has been discussed with the anesthesia team members. Unauthorized deviation from this protocol will be considered unacceptable and will be managed accordingly.