

جامعة
الملك سعود
King Saud University



UNDERGRADUATE'S

**COLLEGE OF MEDICINE
ANESTHESIA DEPARTMENT (045)**

LOG BOOK

Student Name:-----

Computer Number:-----



King Saud University
College of Medicine
Department of Anesthesia

AFFIX PATIENT LABEL HERE

PREOPERATIVE VISIT

CASE # **1**

DATE: _____

Date: _____ Time: _____

Surgery Proposed: _____

Surgery Performed: _____

Preoperative Assessment: _____ NPO

Present History: _____

Past History: _____

Family History: _____

Drugs Therapy: _____

CLINICAL EXAMINATIONS:

GENERAL CONDITIONS:

CHEST EXAMINATION :

HEART EXAMINATION :

PULSE :

BP :

TEMP.:

AIRWAY ASSESSMENT : NEXT PAGE

ASA 1 2 3 4 5

ANESTHESIA PLANE:

King Saud University
College of Medicine
Department of Anesthesia

Pre Intubation Airway Assessment Record

Patient History:

- Has the patient had a previous difficult intubation? (i.e. Fiberoptic) yes no
Comment: _____
- Does the patient have an unstable c-spine or previous spinal fusion? yes no
Specifics: _____
- Does the patient have a history of OSA with CPAP use? yes no
Any treatment: _____
- Does the patient have a history of burns to the head or neck? yes no
Comment: _____
- Does patient have severe rheumatoid arthritis? yes no
Comment: _____
- Has the patient had previous airway surgery or a previous tracheostomy? yes no
Specifics: _____

Clinical Examination LEMON Assessment Method:

L – Look externally for characteristics known to cause difficult laryngoscopy (please circle all that apply)

- Face Small jaw Edema Loose Teeth
 Facial hair Prominent Teeth Disfiguring of the Jaw
 Difficult Bag/Mask Ventilation (2 person, use of airway, inability to maintain seal)
- Thorax / Abdomen Pregnancy Massive ascities Morbid obesity
 Bowel Obstruction

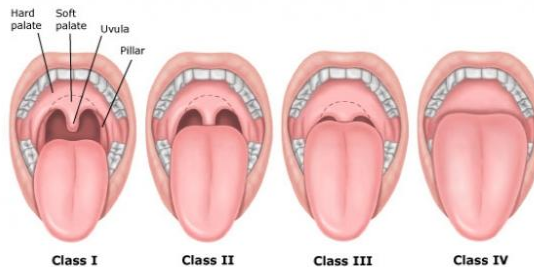
E – Evaluate the 3-3 Rule:

- Mouth opening – 3 finger breadths yes no
Thyro-Mental distance – 3 finger breadths yes no



M – Mallampati Score

Mallampati Class: _____



O – Obstruction (Is there any condition that can cause obstruction of the airway which would make laryngoscopy and ventilation difficult?)

- Tumors
 Stridor
 Congenital Defects (Down's, Goiter, Pierre-Robin Syndrome)
 Other obvious deformity _____

N – Neck mobility

- Can the patient move their jaw forward? yes no
Can the patient fully bend / extend the head and neck? yes no
Is the patient in a cspine collar? yes no



AFFIX PATIENT LABEL HERE

**King Saud University
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INTRA-OPERATIVE RECORD CASE # 1 DATE : _____

MONITORING

- EKG _____
- BP Cuff _____
- Pulse Oximeter _____
- Capnograph _____
- Gas/Vapor Analyzer _____
- Temperature, N, R, S _____
- P. Nerve Stimulator _____
- Stethoscope Esoph / Prec _____
- Urinary Catheter # _____
- NG Tube # _____
- TEE _____
- CVP _____
- PAC _____
- Arterial Line/s _____

MASK VENTILATION

- Easy
- Difficult

INTUBATION

- Easy
- Atraumatic
- Difficult
- Awake
- Fiberoptic
- ETT Size _____
- ETT Type _____
- ETT Position Check _____

Laryngoscopy View

INDUCTION TECHNIQUE

- Pre-Oxygenation
- Intravenous
- Cricoid Pressure
- Rapid Sequence
- Inhalation

VENTILATION

- Spontaneous
- Mechanical Ventilation
 - VC
 - PC
- R _____ /min IP _____ cm H2O
- Vt _____ ml I:E Ratio _____

- Mask/Prongs
- Venturi
- Coaxial
- Semi closed
- H M Exchanger
- Bacterial - Viral Filter

- One Lung
- Volume /Press Alarms
- O2 Concentration Alarm

TECHNICAL

-
- Face Protected
- Press Areas Padded

POSITION

- Supine
- Lateral
- Prone
- Lithotomy
- Kidney
- Sitting
- Trendelenburg

PERIPHERAL IV SITES

- _____ # _____
- _____ # _____
- _____ # _____
- Micropore Blood Filter
- Tourniquet Site _____
On _____ Off _____

REGIONAL BLOCKS

- SPINAL
- EPIDURAL
- COMBINED
- CAUDAL
- BRACHIAL PLX
- ANKLE
- LUMBO-SACRAL PLX
- PARAVERTEBRAL
- PERINERVE BLOCK
- OTHERS

- U/S GUIDED BLOCK P. Nerve Stimulator
- PATIENT POSITION _____
- SITE / INTERSPACE _____
- APPROACH _____
- NEEDLE TYPE _____ SIZE _____
- LOR: AIR SALINE
- DEPTH YO EPIDURAL SPACE _____
- CATHETER LENGTH AT SKIN _____
- SENSORY BLOCK LEVEL _____

Medications

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Maintenance

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- CSF NO YES
- BLOOD NO YES
- NUMBER OF ATTEMPTS _____
- DIFFICULT
- FAILED
- COMPLICATIONS
- TEST DOSE _____
- DRUGS _____
- INFUSION _____

King Saud University
College of Medicine
Department of Anesthesia

RECOVERY ROOM RECORD

CASE# 1

DATE: _____

Time of Arrival: _____ Date: _____ Theater No: _____

Surgeon: _____ Surgical Procedure: _____

Anesthesia: _____

Skin color :

Oxygenation :

SPO2

R R

Circulation :

B P

H.R

C.V.P

Urine Output :

Medications :

I V Fluids : ml/L

Oxygen :

Others :



King Saud University
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AFFIX PATIENT LABEL HERE

PREOPERATIVE VISIT

CASE # 2

Date: _____ Time: _____

Surgery Proposed: _____

Surgery Performed: _____

Preoperative Assessment: _____ NPO

Present History: _____

Past History: _____

Family History: _____

Drugs Therapy: _____

CLINICAL EXAMINATIONS:

GENERAL CONDITIONS:

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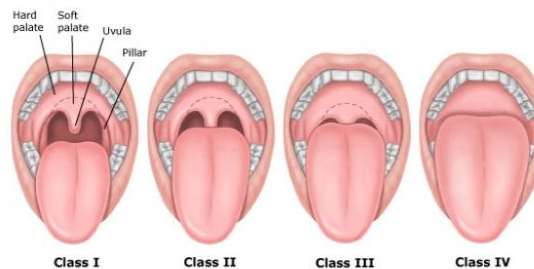
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AFFIX PATIENT LABEL HERE

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MONITORING

- EKG _____
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- Pulse Oximeter _____
- Capnograph _____
- Gas/Vapor Analyzer _____
- Temperature, N, R, S _____
- P. Nerve Stimulator _____
- Stethoscope Esoph / Prec _____
- Urinary Catheter # _____
- NG Tube # _____
- TEE _____
- CVP _____
- PAC _____
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- PERINERVE BLOCK
- OTHERS

- U/S GUIDED BLOCK
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- PATIENT POSITION _____
- SITE / INTERSPACE _____
- APPROACH _____
- NEEDLE TYPE _____ SIZE _____
- LOR: AIR SALINE
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Medications

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Maintenance

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RECOVERY ROOM RECORD

CASE# 2

DATE: _____

Time of Arrival: _____ Date: _____ Theater No: _____

Surgeon: _____ Surgical Procedure: _____

Anesthesia: _____

Skin color :

Oxygenation :
SPO2
R R

Circulation :
B P
H.R
C.V.P

Urine Output :

Medications :

I V Fluids : ml/L

Others :

INSERTING AN ORAL AIRWAY

1 SELECT THE PROPER SIZE

- Measure the OPA from the victim's earlobe to the corner of the mouth.



2 OPEN THE VICTIM'S MOUTH

- Use the cross-finger technique to open the victim's mouth.



3 INSERT THE OPA

For an adult:

- Grasp the victim's lower jaw and tongue and lift upward.
- Insert the OPA with the curved end along the roof of the mouth.
- As the tip approaches the back of the mouth, rotate it one-half turn (180 degrees).
- Slide the OPA into the back of the throat.



For a child or an infant:

- Use a tongue blade or a tongue depressor and insert with the tip of the device pointing toward the back of the tongue and throat in the position it will rest in after insertion.

OR

- Insert the OPA sideways and then rotate it 90 degrees.

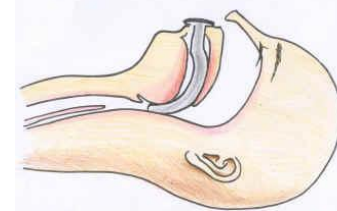


4 ENSURE CORRECT PLACEMENT

- The flange should rest on the victim's lips.



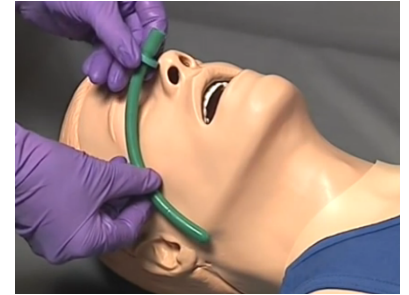
Note: If the victim vomits, remove and suction the airway, ensuring all debris is removed from the airway.
Thoroughly clean the device and reinsert the OPA only if the victim is still unconscious and does not have a gag reflex



NASAL AIRWAY

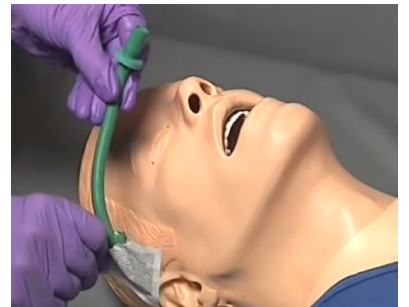
1 Select The Proper Size

- Measure the NPA from the victim's earlobe to the tip of the nostril. Ensure that the diameter of the NPA is not larger than the nostril.



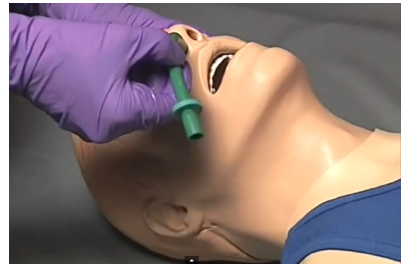
2 Lubricate The NPA

Use a water-soluble lubricant prior to insertion. With the bevel toward the septum, advance the NPA gently



3 Insert The NPA

- If resistance is felt, do not force.
- If you are experiencing problems, try the other nostril.



4 Ensure Correct Placement

The Airway Should Rest The Victim's Nostril.



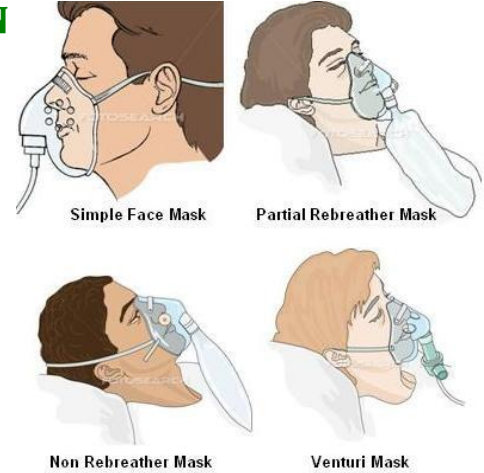
SUPPLEMENTAL OXYGEN





Low Flow Systems

- nasal cannula
- facial mask
- facial mask with oxygen reservoir

High Flow Systems

- Venturi mask



Method	FiO ₂ (Approximate)	Flowrate (L/min)
Non rebreather Mask	60-80%	10-15
Venti Mask 	24% 26% 28% 31% 35% 40% 50% 	3 3 6 6 9 12 15 
Simple Face Mask	35-55%	5-10lpm
Nasal Cannula 	24% 28% 32% 36% 40% 44%	1 2 3 4 5 6

Bag-Mask Ventilation

Performance Steps
Perform head tilt-chin lift
Perform suctioning within 10 seconds
Assembles bag and chooses appropriate size mask
Choose appropriate size OPA (Oropharyngeal Airway) or NPA (Nasopharyngeal Airway) and Inserts device
Hold and seal mask with 1 hand
Ventilate at proper rate (1 breath every 5 to 6 seconds)
Produce noticeable chest rise
Deliver each ventilation over 1 second
Release bag completely between ventilations
Hold and seals mask correctly with 2 hands
Apply cricoid pressure



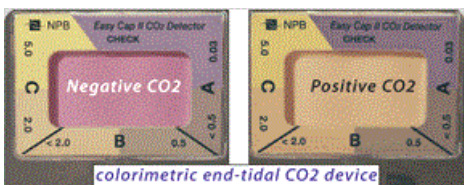
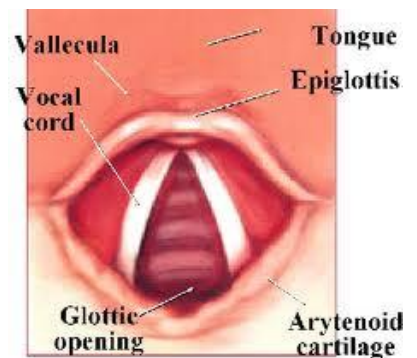
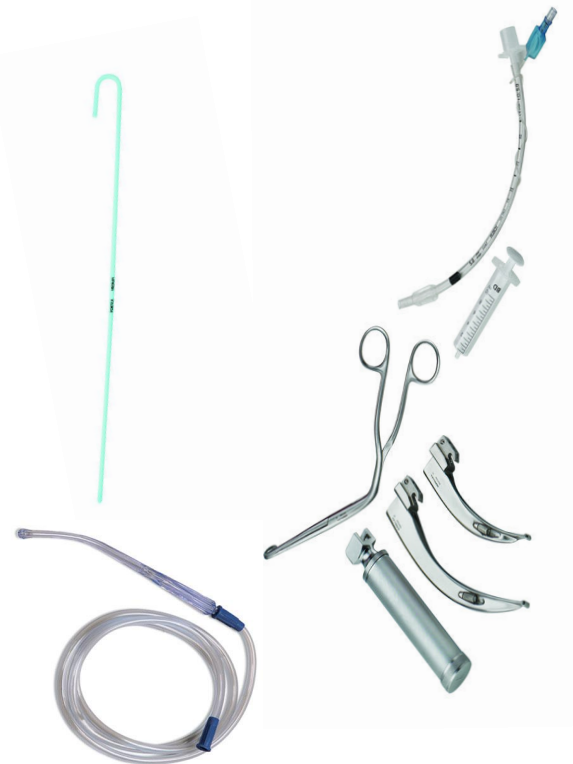
Bag-mask ventilation



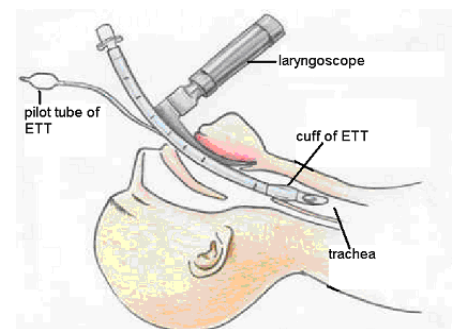
2-person Bag-mask ventilation

Adult Intubation

Performance Steps
Assume ventilation is in progress.
Assemble and checks all necessary equipments
Choose appropriate size ET tube
Choose appropriate type (straight or curved) and size laryngoscope blade
Check light ,Tests ET tube cuff integrity
Insert the stylet and lubricates the ET tube
Place head in neutral or sniffing position
Clear airway if needed
Insert laryngoscope blade
Hold laryngoscope in left hand.
Insert laryngoscope in right side of mouth, moving tongue to the left.
Visualize epiglottis, then vocal cords.
Insert ET tube to proper length for gender
Inflate ET tube cuff to achieve proper seal; remove syringe
Insert bite block
Produce noticeable chest rise; auscultates breath sounds
Confirm correct positioning of ET tube by colorimetric ETCO ₂ Capnograph
Secure ET tube in place (commercial device or tape)
Perform correct ventilation rate for respiratory arrest (1 breath every 5 to 6 seconds)
Perform correct ventilation rate for cardiac arrest (1 breath every 6 to 8 seconds)
Deliver each ventilation over 1 second
Demonstrate complete release of bag between ventilations

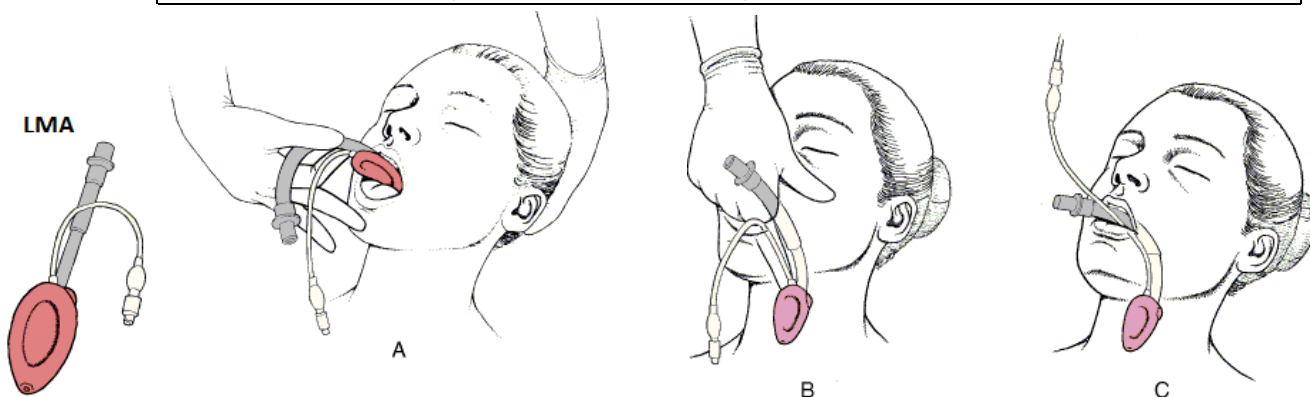


colorimetric end-tidal CO2 device



Laryngeal Mask Airway (LMA)

Performance Steps
Prepare and assemble all necessary equipment
Choose appropriate size LMA
Test integrity of cuff by inflating it
Deflate cuff on a flat surface and lubricate LMA on posterior surface only for use
Open the mouth using the “crossed fingers” technique or by performing a tongue-Jaw lift; do not hyperextend neck.
Clear the airway if needed
Insert tube into mouth and place it so that the curvature is the same as that of the Pharynx, directing it posteriorly until resistance is felt.
Inflate the cuff with the appropriate amount of air corresponding to the size of the tube , remove syringe
Insert bite block
Produce noticeable chest rise; auscultate breath sounds
Confirm correct positioning of LMA by colorimetric ETCO" capnograph
Secure LMA in place
Perform correct ventilation rate for respiratory arrest (1 breath every 5 to 6 seconds)
Perform correct ventilation rate for cardiac arrest (1 breath every 6 to 8 seconds)
Deliver each ventilation over 1 second
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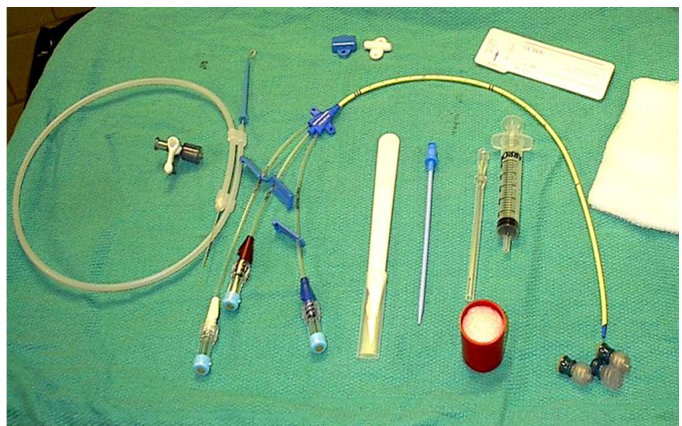
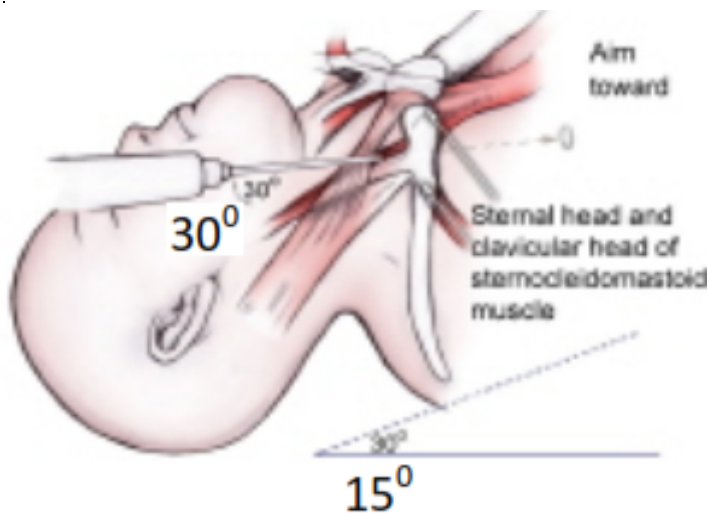


Peripheral Veins

Performance Steps
Apply tourniquet proximally.
Locate vein and cleanse the overlying skin with alcohol or povidone-iodine.
Anesthetize the skin if a large bore cannula is to be inserted in an awake patient.
Hold vein in place by applying pressure on vein distal to the point of entry.
Puncture the skin with bevel of needle upward about ½ to 1 centimeter from the vein and enter the vein either from the side or from above.
Note blood return and advance the catheter either over or through the needle, depending on which type of catheter-needle device is employed.
Remove the tourniquet.
Withdraw and remove the needle and attach the intravenous tubing.
Cover the puncture site with povidone-iodine ointment and a sterile dressing and tape in place, excluding the point of connection of the intravenous tubing.

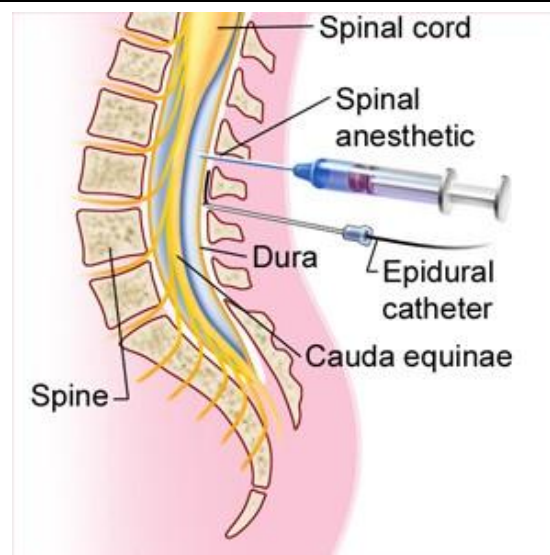
Internal Jugular, Middle Or Central Route

Performance Steps
Patient in supine, at least 15 ⁰ head down position, head turned away.
Cleanse skin, use lidocaine if patient awake.
Introduce needle attached to syringe in the centre of triangle formed by two lower heads of sternomastoid muscle and clavicle.
Direct needle caudally, parallel to sagittal plane, at 30 ⁰ posterior angle
If vein not entered, withdraw needle and redirect it 5 to 10 degrees laterally.
Advance needle while withdrawing plunger of syringe.
When blood appears and vein entered, remove syringe and insert catheter to predetermined depth.
Remove needle and connect catheter to IV tubing
Cover puncture site, and affix catheter in place



Regional Anaesthesia (Spinal Anaesthesia)

Performance Steps
Taking Consent from the patient
Assessment (indications and contraindications)
Insert iv fluids
Mask, cap, gown and gloves
Prepare the back with antiseptic
Place a sterile Drape Over The Area
Identify the anatomical landmarks
Inject local anaesthetic into the skin and deeper tissue
Insert the large introducer needle into the selected spinal interspace
Direct the spinal needle through the introducer and into the subarachnoid space
Free flow of CSF confirms proper placement
Aspirate for CSF if clear inject the proper anaesthetic
Remove the needle, introducer and drape sheet
Have the patient lie down





King Saud University
College of Medicine
Department of Anesthesia

Prepared by:
Pain Management Unit

Dept. of Anesthesia
KKUH. KSU

Pain

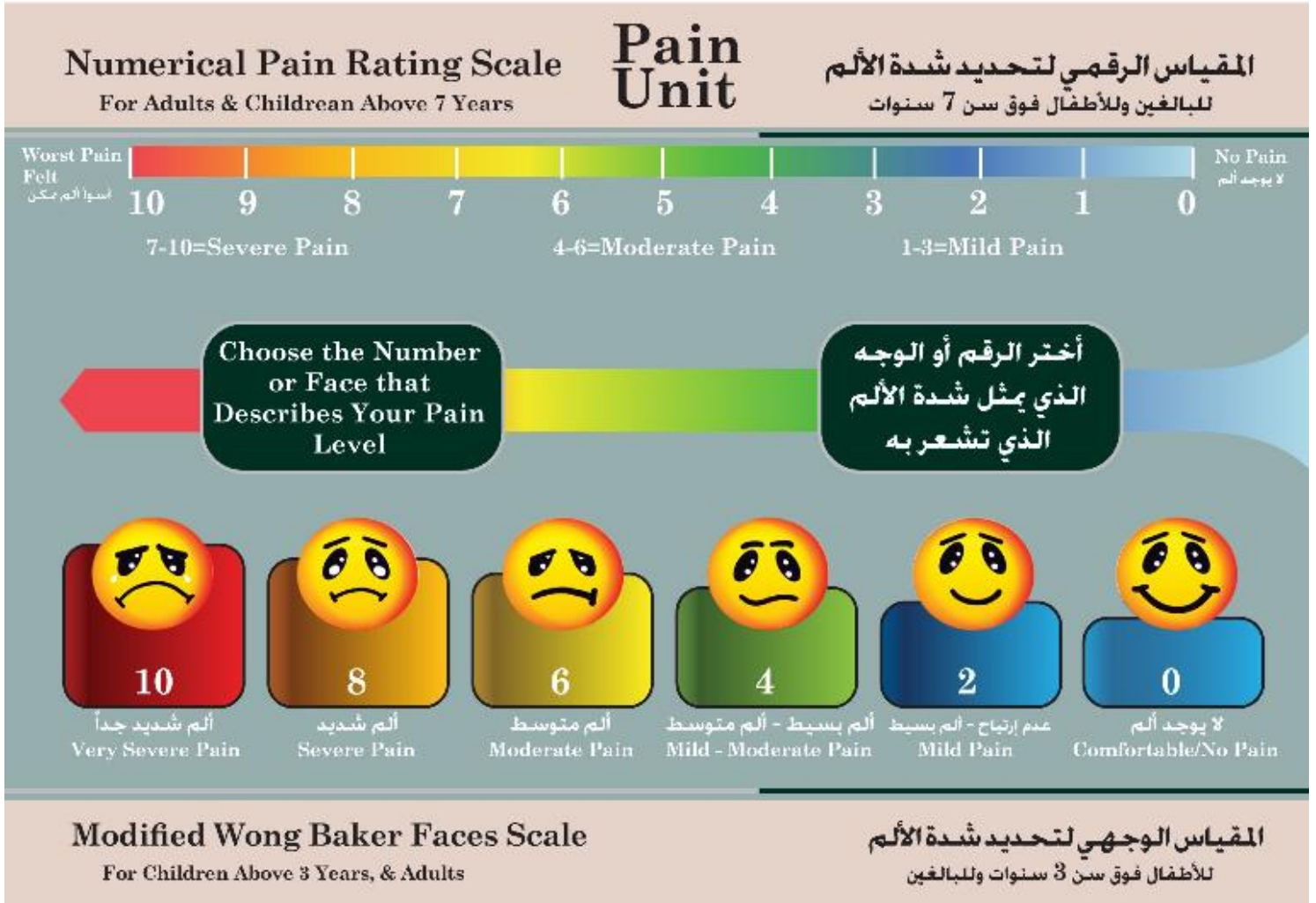
Pocket Guide

Pain is the 5th Vital Sign



- . Assess & document pain in all patients.
- . Use the standardized pain assessment scale, which is appropriate for age and cognition.
- . Manage pain & evaluate response to analgesia periodically.
- . Avoid placebo & IM. Pethidine.

Standardized Pain Assessment Scales



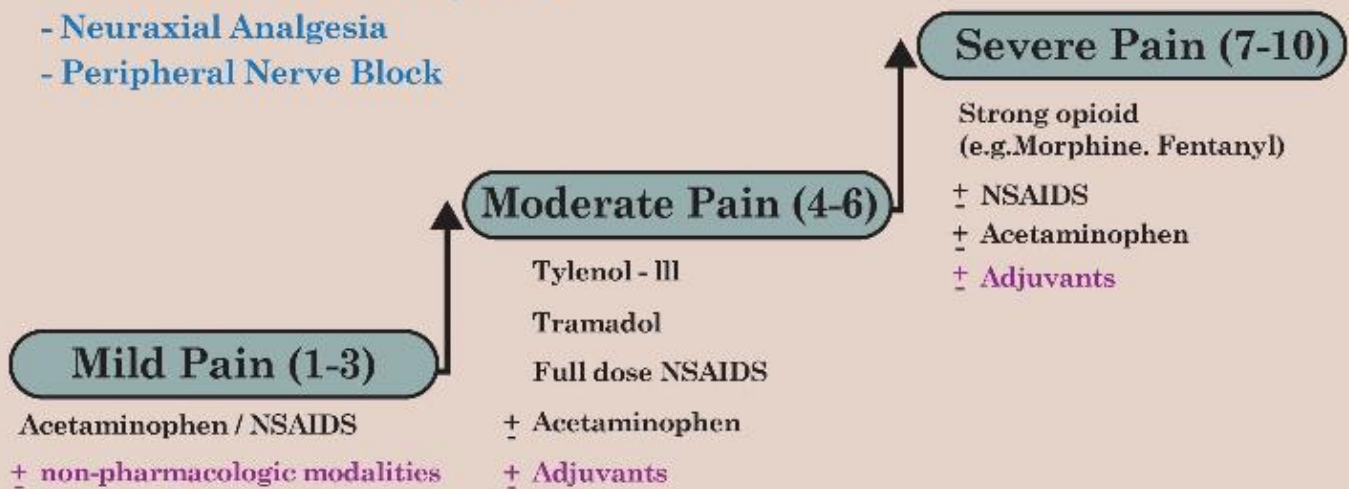
FLACC Scale for Pain Assessment in Children 2 months–7 years

Categories	0	1	2
FACE	NO particular expression or smile	Occasional grimace or Frown, withdrawn, disinterested	Frequent to constant quivering chin, clenched jaw
LEGS	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
ACTIVITY	Lying quietly, normal position, moves easily	Squirming, shifting back & forth, tense	Arched, rigid, or jerking
CRY	No cry (awake or sleep)	Moans or whimpers, occasional complaints	Cries steadily, screams or sobs, frequent complaints
CONSOLABILITY	Content, relaxed	Reassured by occasional touching, hugging, or being talked to, distractible	Difficulty to console or comfort

Analgesic Ladder

Acute pain management modalities provided by the APS:

- Patient Controlled Analgesia IV
- Neuraxial Analgesia
- Peripheral Nerve Block



Based on the WHO Analgesic Ladder

PAIN MANAGEMENT: NSAIDS

Drug/Class	Preparations	Doses	Comments
1) Acetaminophen (Paracetamol)	<ul style="list-style-type: none"> • Tablet: 500 mg • Elixir: 120mg/5mL • Drops: 100 mg/mL • Injection: vial 1 g/100mL • Suppository: 100 mg, 125 mg, 200 mg, 250mg, 350 mg, 500 mg 	<ul style="list-style-type: none"> • Adult: 1g, q 4-6 hr • Pediatric: 10 -15 mg/kg/dose q 4-6 hr 	<ul style="list-style-type: none"> • IV Acetaminophen used postoperatively reduces opioid consumption. • Caution: may cause severe hepatic toxicity in acute overdose; monitor LFTs with chronic use & with alcohol use. Use with caution in patients with known G6PD deficiency.
2) NSAIDs: <ul style="list-style-type: none"> • Ibuprofen (Brufen) • Diclofenac (Voltaren) • Indomethacin (Indocin) • Ketoprofen (Orudis) 	<ul style="list-style-type: none"> • Tablet: 200mg,400mg • Syrup: 100 mg/5mL • Tablet: 25 mg, 50 mg • Tablet (Retard): 100 mg • Suppository: 50 mg • Topical gel: 1% • Eye drops: 0.1% • Capsule: 25 mg • Injection: vial 50 mg/2mL • Suppository: 100 mg • Injection: vial 100 mg/2 mL 	<ul style="list-style-type: none"> • Adult: 400-600 mg, q8 hr • Pediatric: 5-10 mg/kg, q8 hr • Adult: 25-50mg, q 8 hr • Adult: 25-50mg, PO, q8hr • Supp.: 100mg, OD • Adult: 50-75-100mg IM, q8hr, PRN 	<ul style="list-style-type: none"> • Used alone for mild-to-moderate pain, & as adjunct to opioids in severe pain. • Avoid in patients with Asthma. • Avoid concurrent use of Aspirin with other NSAIDs (increases the risk of bleeding). • Before initiating treatment: weigh the potential benefits & risks, consider other treatment options; & use the lowest effective dose for the shortest possible duration. • If the pediatric dose is not specified in the table, then the analgesic is not applicable!
Selective COX2 Inhibitors: <ul style="list-style-type: none"> • Celecoxib (Celebrex) • Meloxicam (Mobic) 	<ul style="list-style-type: none"> • Capsule: 200 mg • Tablet: 7.5 mg, 15 mg 	<ul style="list-style-type: none"> • 200-400 mg, once daily • 7.5 -15 mg, q 12 hr 	<ul style="list-style-type: none"> • Selective COX-2 inhibitors have less GI side effect but similar renal toxicity. • Used for moderate pain, & as adjunct to opioids in severe pain. • Celecoxib has equal efficacy & similar renal toxicity to other NSAIDs, less GI ulcer/bleed. Should be used with caution in patients with hypertension and cardiac diseases.

PAIN MANAGEMENT: OPIOIDS & WEAK OPIOID COMBINATIONS

Drug/Class	Preparations	Doses	Comments
Acetaminophen + Codiene (Tylenol III)	<ul style="list-style-type: none"> Tablet: Acetaminophen 500 mg – Cocaine 30mg 	<ul style="list-style-type: none"> Adult: 1-2 tab, q 4-6hr Children: (20 kg & above) 1 tab, 4-6 hr 	<ul style="list-style-type: none"> Do not exceed the maximum recommended daily dose of acetaminophen (4 grams/day). Higher than recommended doses over long periods of time may cause drug dependence.
Acetaminophen + Dextropropoxyphene (Distalgesic)	<ul style="list-style-type: none"> Tablet: Acetaminophen 325 mg – Dextropropoxyphene 32.5mg 	<ul style="list-style-type: none"> Adult: 1-2 tab, q 4-6hr Children: (20 kg & above) 1 tab, q 4-6 hr 	<ul style="list-style-type: none"> Constipation should be managed appropriately. May be used in moderate pain alone or in combination with NSAIDs. Low doses of strong opioids often more effective & better tolerated.
Tramadol (Tramal)	<ul style="list-style-type: none"> Capsule: 50 mg Tablet SR: 100 mg Injection: vial 100 mg/2mL 	<ul style="list-style-type: none"> 50-100 mg, q 8hr 100 mg, q12hr 50-100 mg, q8 IV/IM 	<ul style="list-style-type: none"> A Centrally-acting analgesic with mutual mechanism of action (weak opioid & serotonin reuptake inhibitor). May cause nausea/vomiting & dizziness.
Strong Opioids:			
<ul style="list-style-type: none"> Morphine 	<ul style="list-style-type: none"> Tablet: 10 mg Tablet SR: 30mg,60mg Syrup: 10 mg/5 mL Injection: 1 mg, 10 mg 	<ul style="list-style-type: none"> Tab.: 10 mg, q 4-6 hr Tab, SR:15 mg, q12 hr 	<ul style="list-style-type: none"> Pain physician/APS should be consulted for severe pain, to select the most appropriate opioid & pain management protocol. Adjust doses in renal impairment. Tolerance develops to all side effects within days, except for constipation. Oxycodone: use with caution; potential fatal interaction with alcohol or medications containing alcohol. Methadone: is difficult to titrate due to its half-life variability. It may take a long time to reach a stable level in the body. Methadone dose should not be increased more frequently than every 7 days. Do not use as PRN or combine with other long-acting opioids.
<ul style="list-style-type: none"> Hydromorphone 	<ul style="list-style-type: none"> Injection: 10 mg/mL 	<ul style="list-style-type: none"> 2 mg, q 4-6 hr 	
<ul style="list-style-type: none"> Oxycodone 	<ul style="list-style-type: none"> Capsule: 5 mg 	<ul style="list-style-type: none"> 5 mg, q 6-8 hr 	
<ul style="list-style-type: none"> Meperidine (Pethidine) 	<ul style="list-style-type: none"> Injection: 50mg/mL 	<ul style="list-style-type: none"> 1-1.5 mg/kg, IM q 4-6 hr, PRN 	
<ul style="list-style-type: none"> Fentanyl 	<ul style="list-style-type: none"> Injection: 100 mcg/2mL & 500 mcg/10mL Dermal patch: 25 mcg, 50 mcg, 75 mcg 	<ul style="list-style-type: none"> 2-5 mcg/kg, IV PRN Dermal patch/ 72 hr 	
<ul style="list-style-type: none"> Methadone 	<ul style="list-style-type: none"> Tablet: 5 mg, 10 mg 	<ul style="list-style-type: none"> 5 mg, q 8-12 hr 	

MANAGEMENT OF OPIOID SIDE EFFECTS

SIDE EFFECT	TREATMENT	ADULT DOSE	PEDIATRIC DOSE
Nausea/Vomiting	<ul style="list-style-type: none"> • Metoclopramide (plasil) • Diphenhydramine (Benadryl) • Granisetron 	<ul style="list-style-type: none"> • 10 mg PO/IV, q6 hr PRN • 0.25-0.5 mg/kg PO/IV • 1 mg IV daily, PRN (in severe form) 	<ul style="list-style-type: none"> • 0.25 mg/kg,PO/IV, q 6 hr, PRN • Consider Benadryl 0.25-0.5 mg/kg PO/IV • Not used in children under 18 yrs • In chemotherapy: 2 yrs and above: 10-40 mcg/kg/dose/ 30 min
Pruritus	<ul style="list-style-type: none"> • Diphenhydramine • Propofol • Naloxone 	<ul style="list-style-type: none"> • 25-50 mg PO/IV, q 6hr, PRN • 20-50 mg IV stat 	<ul style="list-style-type: none"> • 0.25 - 0.5 mg/kg IV, q 6h,PRN • 12.5 - 25 mg,PO, q 8h,PRN
Sedation/Respiratory depression	<ul style="list-style-type: none"> • Naloxone 	<ul style="list-style-type: none"> • 1-5 mcg/kg bolus, (can be repeated) 	<ul style="list-style-type: none"> • 5-10 mcg/kg bolus, (can be repeated)
Constipation	<ul style="list-style-type: none"> • Glycerin suppository • Docusate Sodium • Lactulose syrup (Dulcolax) 	<ul style="list-style-type: none"> • 1-2 suppository BD PRN • 100-200 mg, PO, BD • 15-30 mL, PO, q 8h 	<ul style="list-style-type: none"> • 900/1500 mg suppository, OD, PRN • 20-60 mg/day in 2-4 divided doses • 5-10 mL, PO, OD

PATIENT CONTROLLED ANALGESIA (PCA-IV)-(APS)

DRUG	MORPHINE	FENTANYL	HYDROMORPHONE
Concentration	1 mg/mL	10 mcg/mL	0.2 mg /mL
Bolus	0.05 mg/kg	0.5 mcg/kg	0.4-0.5 mg
PCA dose	0.02 mg/kg	0.2 mcg/kg	0.1-0.3 mg
Basal Rate	0-2 mg/hr	0-10 mcg/hr	0-0.2 mg/hr
Lock out/delay (minutes)	5-10	5-10	5-10
Loading Dose	2 - 2.5 mg	10-20 mcg	0.2 - 0.4 mg

Consider decreasing the dose by 20% in elderly patients, severely ill patients, & in patients with sleep apnea.

EPIDURAL ANALGESIA (EA), APS

DRUG	PREPARATIONS	COMMENTS
Bupivacaine	- 0.0625 % - 0.1 %	<ul style="list-style-type: none"> • May cause motor blockade • May cause hypotension • Patients may need to be catheterized as they will not feel bladder fullness
Bupivacaine +Fentanyl	0.0625 % or 0.1% 2 mcg/mL	<ul style="list-style-type: none"> • May cause respiratory depression.
Ropivacaine	0.2%	<ul style="list-style-type: none"> • Similar to Bupivacaine, but more sensory selectivity & less cardiac & neurotoxicity

- Assessment for sensory block: use 'ice in glove technique'.
- Assessment for motor block: use Bromage scale.

PAIN AMANGEMENT: ADJUVANT ANALGESICS

Drug	Preparations	Doses	Comments
1) Antidepressants: • Amitriptyline (Elavil, Tryptizol) • Imipramine (Tofranil)	• Tablet: 10mg, 20mg, 50mg Capsule SR: 25mg • Tablet: 10 mg, 25 mg	• 10-25 mg at night 50-150 mg at night • 110-25 mg at night 50-150 mg at night	<ul style="list-style-type: none"> • Should be administered at night to reduce daytime sedation & support good sleep. • Associated with significant tolerability issues • Used as analgesics for chronic/neuropathic pain, & as prophylaxis against migraine headaches.
2) Anticonvulsants: • Na Valproate (Depakene) • Gabapentin (Neurontin) • Pregabalin (Lyrica)	• Tablet: 200 mg Tablet SR: 500 mg Syrup & Drops • Capsule: 300mg, 400mg • 75-150 mg BD	• 20 mg/kg IV, over 5 minutes • 300-400mg, OD, 1st week, 300-400mg BD, 2nd week, 300-400mg, TDS, 3d week	<ul style="list-style-type: none"> • Anti-convulsants are used in acute/chronic neuropathic & migraine pain. • Check LFT before & after starting Valproate. • Gabapentin can be used in PHN • Pregabalin is approved for fibromyalgia & painful diabetic neuropathy. • Adjust doses in renal impairment.
3) Corticosteroids: • Dexamethasone (Decadron) • Prednisone	• Tablet: 0.5 /1.5 /2 /4 mg Elixir: 0.5 mg/5 ml, Injection: 8 mg/2mL • Tablet: 10 /20 / 50 mg	• Low –dose regimen: 1-2 mg once-twice/day • High –dose regimen: 100 mg 4 times/day	<ul style="list-style-type: none"> • Corticosteroids can be used in short-term to relief acute pain associated with inflammation. • Shown to reduce spontaneous discharge in injured nerves. • Can be used for bone pain. • If used more than 1week, avoid rapid withdrawal (risk of adrenocortical insufficiency).
4) Muscle relaxants: • Baclofen (Lioresal)	• Tablet: 10 mg, 25 mg	• 10-25 mg, q 8 hr	<ul style="list-style-type: none"> • Relieve muscle spasm in acute/ cancer pain. • Can be used in neurogenic pain & in rectal tenesmus.
5) Bisphosphonates: • Alendronate (Fosamax)	• Tablet: 70 mg	• 70 mg, once/ week	<ul style="list-style-type: none"> • Used for metastatic bone pain. May cause esophagitis, should be taken in the morning with a glass of plain water at least one-half hour before food, beverages, or other medications.

Acute Pain Service (APS)

APS Resident: pager # 2113 (weekdays 07:30 - 16:30 hours)

APS Nurse: pager # 2789 (weekdays 07:30 - 16:30 hours)
(thursdays 09:00 - 13:00 hours)

**Anesthesia Resident
on for Maternity:** pager # 3540 (daily 16:30 - 07:30 hours,
& weekends 24 hours, or in the
absence of APS Anesthesiologist)

King Saud University
King Khalid University Hospital
Department of Anesthesia



POST-OPERATIVE ANESTHESIA FORM (draft 3)
First Post-operative Day Visit

I)	Service: <input type="checkbox"/> Ward:..... <input type="checkbox"/> ICU <input type="checkbox"/> HDU Date:/...../..... Time:		
II)	Patient Data: Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female Age: Yrs/months Allergies: <input type="checkbox"/> No <input type="checkbox"/> Yes ASA Status: Type of Surgery:		
III)	<input type="checkbox"/> General Anesthesia <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ≥ 140/90 <input type="checkbox"/> ≤100/70 <input type="checkbox"/> ≥ 20/min. <input type="checkbox"/> ≤ 10/min. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	Symptoms/ Complications * Nausea/ trt. **Vomiting/ trt. Dizziness Sleepiness Sore Throat Awareness during Anesthesia Back pain Headache/PDPH ***ABP RR O ₂ Sat. ≤92% / <input type="checkbox"/> on O ₂ Urinary retention/ <input type="checkbox"/> catheter Other complications	<input type="checkbox"/> Regional Anesthesia <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ≥ 140/90 <input type="checkbox"/> ≤100/70 <input type="checkbox"/> ≥ 20/min. <input type="checkbox"/> ≤ 10/min. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
IV)	Pain Assessment: <input type="checkbox"/> Documented by Ward nurse <input type="checkbox"/> Numeric scale <input type="checkbox"/> Faces scale <input type="checkbox"/> Dynamic/10 <input type="checkbox"/> Static/10 <input type="checkbox"/> By night/sleep interruption/10 Pain Management: <input type="checkbox"/> PCA-IV <input type="checkbox"/> EA <input type="checkbox"/> PNB:..... <input type="checkbox"/> None <input type="checkbox"/> Oral Analgesics: <input type="checkbox"/> IV/IM analgesics:		
V)	Patient Satisfaction: Pre-operative Anesthesia Education Provided: <input type="checkbox"/> Yes <input type="checkbox"/> No Pre-operative Pain Control Methods Explained: <input type="checkbox"/> Yes <input type="checkbox"/> No Informed Consent (High risk consent) Obtained: <input type="checkbox"/> NA <input type="checkbox"/> Yes <input type="checkbox"/> No Satisfaction with Anesthesia: i- Procedure & outcomes: <input type="checkbox"/> Yes <input type="checkbox"/> No ii- Pain control <input type="checkbox"/> Yes <input type="checkbox"/> No		
VI)	Name: Badge #:		

*Nausea:(0)none, (1)mild/mod,(2)severe **Vomiting:(1) 1-2 times , (2)≥ 3 times ***ABP: readings in-between are normal

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King Khalid University Hospital
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POST-OPERATIVE ANESTHESIA FORM (draft 3)
First Post-operative Day Visit

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VI)	Name: Badge #:		

*Nausea:(0)none, (1)mild/mod.,(2)severe **Vomiting:(1) 1-2 times , (2)≥ 3 times ***ABP: readings in-between are normal

Instructions for log book

Regarding to objectives of 045 course (Anaesthesia) all students whom scheduled for operating theater should attend (OR) receiving area must be contacts with floor manager to disrepute the cases and start

- 1.Preoperative assessment for selected cases in receiving area
- 2.Go with the patients to the (O R) to attend induction, maintenance and extubation
- 3.Log book should be filled under supervision of consultant or Senior registrar and signed by one of them

Student feedbacks

