Contributions To Safer Surgery
At Valley Medical Center
V.M.C. Is New To SCOAP...
But...
SCOAP
Has Already Had Its Effect!
Safe Surgery Initiatives

- The Joint Commission
- World Health Organization
- Institute for Healthcare Improvement
  - WSHA
  - Qualis
Safe Surgery Initiatives

SCOAP
The pushmi-pullyu (pronounced "push-me-pull-you") is an animal which has two heads at opposite ends of the body. When it tries to move, both heads try to go in opposite directions.

---- Hugh Lofting
Clarity (Multiple Initiatives)…
Consistency (Level A Evidence)…
Compliance (P4P etc.)…
DO NOT READ THIS SIGN
Safe Surgery

- JCAHO
- WHO
- SCOAP
- SCIP
- IHI
- WSHA
- Qualis
SAFE SURGERY SAVES LIVES
**SURGICAL SAFETY CHECKLIST (First Edition)**

**Before induction of anaesthesia**

<table>
<thead>
<tr>
<th>SIGN IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>• PATIENT HAS CONFIRMED</td>
</tr>
<tr>
<td>• IDENTITY</td>
</tr>
<tr>
<td>• SITE</td>
</tr>
<tr>
<td>• PROCEDURE</td>
</tr>
<tr>
<td>• CONSENT</td>
</tr>
<tr>
<td>• SITE MARKED/NOT APPLICABLE</td>
</tr>
<tr>
<td>• ANAESTHESIA SAFETY CHECK COMPLETED</td>
</tr>
<tr>
<td>• PULSE OXIMETER ON PATIENT AND FUNCTIONING</td>
</tr>
<tr>
<td>• DOES PATIENT HAVE A:</td>
</tr>
<tr>
<td>• KNOWN ALLERGY?</td>
</tr>
<tr>
<td>• NO</td>
</tr>
<tr>
<td>• YES</td>
</tr>
<tr>
<td>• DIFFICULT AIRWAY/AIDSPIRATION RISK?</td>
</tr>
<tr>
<td>• NO</td>
</tr>
<tr>
<td>• YES, AND EQUIPMENT/ASSISTANCE AVAILABLE</td>
</tr>
<tr>
<td>• RISK OF &gt;500ML BLOOD LOSS (7ML/KG IN CHILDREN)?</td>
</tr>
<tr>
<td>• NO</td>
</tr>
<tr>
<td>• YES, AND ADEQUATE INTRAVENOUS ACCESS AND FLUIDS PLANNED</td>
</tr>
</tbody>
</table>

**Before skin incision**

**TIME OUT**

| CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE |
| SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM |
| • PATIENT |
| • SITE |
| • PROCEDURE |
| ANTICIPATED CRITICAL EVENTS |
| • SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS? |
| • ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS? |
| • NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS? |
| • HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES? |
| • YES |
| • NOT APPLICABLE |
| • IS ESSENTIAL IMAGING DISPLAYED? |
| • YES |
| • NOT APPLICABLE |

**Before patient leaves operating room**

**SIGN OUT**

| NURSE VERBALLY CONFIRMS WITH THE TEAM: |
| • THE NAME OF THE PROCEDURE RECORDED |
| • THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE) |
| • HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME) |
| • WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED |
| • SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT |

**THIS CHECKLIST IS NOT INTENDED TO BE COMPREHENSIVE. ADDITIONS AND MODIFICATIONS TO FIT LOCAL PRACTICE ARE ENCOURAGED.**
SCIP Measures

Patients on BB PTA Received Beta Blockers

Prophylactic Antibiotic Start Within 1 Hour
Overall Prophylactic Antibiotic Start
Antibiotic Start Within 1 Hour – Hip
Antibiotic Start Within 1 Hour – Knee
Antibiotic Start Within 1 Hour – Colon
Antibiotic Start Within 1 Hour – Hysterectomy
Antibiotic Start Within 1 Hour – Major/General

Antibiotic Selection
Overall Prophylactic Antibiotic Selection
Antibiotic Selection – Hip
Antibiotic Selection – Knee
Antibiotic Selection – Colon
Antibiotic Selection – Hysterectomy
Antibiotic Selection – Major/General

Prophylactic Antibiotics End Within 24 Hours
Antibiotics End Within 24 Hours – Overall
Antibiotics End Within 24 Hours – Hip
Antibiotics End Within 24 Hours – Knee
Antibiotics End Within 24 Hours – Colon
Antibiotics End Within 24 Hours – Hysterectomy
Antibiotics End Within 24 Hours – Major/General

Patients with Appropriate Hair Removal

Colon Patients Immediate Postop Normothermia

VTE Prophylaxis
Recommended VTE Prophylaxis Ordered
VTE Prophylaxis Given WI 24 Hours of Surgery
Consider using the Colorectal Surgery Order Set. If completed send to VMC Pre-Surgery.

Consider Oral Prep Day Before Surgery? Neomycin/Erythromycin? If "Yes" send Prep Documentation to VMC.

Consider In Addition To Routine Pre-op Labs - Albumin / Pre-Albumin / Creatinine
- If labs are obtained within 30 days of admission send results to VMC

Document Current/Recent Medications especially Meds taken for...
- Hypertension - Diabetes - Asthma - Sleep Apnea - CAD - VTE - HIV/AIDS
- Plus Any Of The Following...
- Imuno-suppressants
- Statins
- Beta Blockers
- ACEI
- ARB
- Anti-coags (Within 1 Wk of Surgery)

Document Indication For Surgery (SCOAP Examples Below)
- Colon Cancer
- Diverticulitis
- Stricture
- Volvulus
- AV Malformation
- Rectal Prolapse
- GI Bleed
- Obstruction
- Colostomy
- Ulcerative Colitis
- Radiation Colitis
- Ischemic Colon
- Polyps
- Perforation
- Rectal Cancer
- Chon's Disease

Consider intraoperative Glucose Control (If Patient Is Not Diabetic - NA)
- Patient Is Diabetic
  - Consider obtaining (and documenting) Blood Glucose on the day of surgery
  - Consider obtaining (and documenting) Intra-operative Blood Glucose
  - Consider beginning Insulin Infusion for intraoperative Glucose ≥ 125
  - Consider ordering Post-op Blood Sugars and/or Insulin

Intraoperative Patient Warming Process (Standard Practice)
- Peri-Op Nursing will initiate Patient Warming Process in Pre-op Holding
- Anesthesia to monitor and record intraoperative temperature on Anesthesia Record
- PACU/CCU to obtain and record First Temperature On Arrival To Unit

Consider Venous Thrombo-Embolism Prophylaxis (VTE)
- Consider Low Dose Unfractionated Heparin 5,000 Units Sub-Q Pre-Op
- Consider Lovenox 40 mg. Sub-Q Daily (30 mg. if CrCl < 30 ml/min)
- Consider Fondaparinux 2.5 mg. Sub-Q Daily X ___ Days. ***First Dose At 6º Post-op
- Consider continuing VTE Prophylaxis after discharge

Consider Beta Blocker Status And Plan
- If Patient Is NOT On Beta Blockers Pre-Op Beta Blocker Orders Are Optional
- Consider Peri-Op Beta Blocker Orders if patient is on a Beta Blocker Pre-Op

Consider Antibiotic Prophylaxis
- No Antibiotic May Be Needed. If True document reason in record
- Consider Ancef IV in OR Before first incision AND Flagyl IV within 60 Mins. of first incision
  - Repeat Dose For Cases ≥ 2.5 Hours
- If β-Lactam Allergy (Penicillins, Cephalosporins, Monobactams, Carbapenems): Consider Vancomycin IV within 90 Mins. AND Flagyl IV Within 60 Mins. of first incision
- Consider Discontinuing Antibiotics in less than 24 Hours Post-Op
  - Document reason for any Antibiotic Course Ordered ≥ 24º Post-Op

Consider Advanced Pain Control Methods (If indicated)
- Consider Post-Op PCA Per Pharmacy Or Post-Op Epidural Per Anesthesia
  - If indicated, these should be ordered/started within 24º of Surgery End-Time

Consider order for Entereg (Alvimopan)

Document Post-op Events And Re-operation Events in record (SCOAP Examples Below)
- Colostomy
- Abscess
- Drain Placement
- Gastrostomy
- Gastrostomy Revision
- Re-exploration
- Port Revision
- Anastomosis Repair
- Narcotic Drip
- Evisceration
- Intubation
- Re-intubation
- Narcotic Drip
- Tracheostomy
- Drain Insertion
- DVT
- Infection
- Anastomosis Leak
- Fistula
- Dehiscence
- PEMI/CVA
- Washout

Document Ostomy/Anastomosis Performed In Record (SCOAP Examples Below)
- OSTOMY: Colostomy
- ileostomy
- Protective Stoma
- ANASTOMOSIS: Colo-colon
- Colo-anal
- Ileo-colon
- ileo-anal

Document Anastomosis Testing Method In Record (SCOAP Examples Below)
- Scope
- Methyloene Blue
- Saline
- Inspection/Palpation

Send Minimum Of 12 Lymph Nodes To Pathology If Colon Cancer
Perfectability!
- Richard McMullin, MD
Beta Blockade
Antibiotic Tissue Levels
VTE Prophylaxis
Euglycemia
Normothermia
Etc.
Gawande
Bratzler
Berwick
Sugarman
Flum
Etc.
MUFI’s
(Mandatory Un-Funded Initiatives)
Disease Specific Certification

Heart Failure
Pneumonia
Myocardial Infarction
COAP
Stroke
Joints
Leapfrog
Qualis
SCOAP
... Etc...Etc...Etc
Sample of Collateral Effects
**ORTHOPEDIC: HIP AND KNEE ARTHROPLASTY**

### ANTIBIOTIC PROPHYLAXIS

- **No Prophylactic Antibiotic Needed**
- **Cefazolin 1 gm IV** x 1 dose in OR within 60 min of incision (complete infusion before tourniquet inflation) **OR**
- **Cefazolin 2 gm IV** (weight >80 kg) x 1 dose in OR within 60 min of incision (complete infusion before tourniquet inflation)
- Repeat **Cefazolin** (same dose as ordered above) x 1 dose for cases longer than 2½ hours

**Beta-Lactam Allergy (Penicillins, Cephalosporins, Monobactams, Carbapenems):**
- **Clindamycin 600mg IV** **OR**
- **Clindamycin 900mg IV** (weight >80 kg) x 1 dose within 60 min of incision
- **Vancomycin 1 gm IV** **OR**
- **Vancomycin 1.5 gm IV** (weight >80 kg) x 1 dose over 90 min 2 hours before incision

**Known history of MRSA:**
- **Vancomycin 1 gm IV** **OR**
- **Vancomycin 1.5 gm IV** (weight >80 kg) x 1 dose over 90 min 2 hours before incision

### POST-OP

- **Cefazolin 1 gm IV** every 6 hours X 3 doses post op (pharmacy DO NOT change schedule)
- Other: ___________ IV every ____ hours. (Reason For >24º: ___________)

### VTE

- **Warfarin (Coumadin®)** per Pharmacy
- **Fondaparinux (Arixtra®)** 2.5 mg subcutaneously daily starting in AM (contraindicated in CrCl<30 ml/min)
- **Enoxaparin (Lovenox®)** 30 mg subcutaneously every 12 hours, first dose starting in AM/PM

**COLORECTAL, GYNECOLOGICAL (e.g. HYSTERECTOMY/SECTION), AND GENERAL SURGERY (e.g. HEPATOBILIARY/ GASTRODUODENAL)**

### ANTIBIOTIC PROPHYLAXIS

- **No Prophylactic Antibiotic Is Needed**
- **Colorectal Prep** (only in elective colorectal surgeries):
  - **Neomycin Sulfate 1 gm PO** + **Erythromycin Base 1 gm PO** give at 1300, 1400, and 2300 the day before surgery
  - **Neomycin Sulfate 2 gm PO** + **Metronidazole 2 gm PO** give at 1500 and 2300 the day before surgery

**Parenteral Antibiotic:**
- **Cefazolin 1 gm IV** - **PLUS** - **Metronidazole 500 mg IV** X 1 dose within 60 min of incision **OR**
- **Cefazolin 2 gm IV** (weight >80 kg) - **PLUS** - **Metronidazole 500 mg IV** X 1 dose within 60 min of incision.
- Repeat **Cefazolin** (same dose as ordered above) x 1 dose for cases longer than 2½ hours

**Beta-Lactam Allergy (Penicillins, Cephalosporins, Monobactams, Carbapenems):**
- **Levofloxacin 750 mg IV** X 1 dose over 60 min 2 hours before incision **-PLUS** - **Metronidazole 500 mg IV** X 1 dose within 60 min of incision

### POST-OP

- Give ___________ IV every ____ hours. (Reason For >24º: ___________)

### VTE

- Complete DVT Prevention in Adult Surgical Patients Order Set

**OTHER GENERAL (e.g. HERNIA REPAIR/BREAST), CARDIAC, VASCULAR, NEUROSURGERY**

### ANTIBIOTIC PROPHYLAXIS

- **No Prophylactic Antibiotic Is Needed**
- **Cefazolin 1 gm IV** x 1 dose in OR within 60 min of incision **OR**
- **Cefazolin 2 gm IV** (weight >80 kg) x 1 dose in OR within 60 min of incision
- Repeat **Cefazolin** (same dose as ordered above) x 1 dose for cases longer than 2½ hours

**Beta-Lactam Allergy (Penicillins, Cephalosporins, Monobactams, Carbapenems):**
- **Clindamycin 600mg IV** **OR**
- **Clindamycin 900mg IV** (weight >80 kg) x 1 dose within 60 min of incision

**Known history of MRSA:**
- **Vancomycin 1 gm IV** **OR**
- **Vancomycin 1.5 gm IV** (weight >80 kg) x 1 dose over 90 min 2 hours before incision

### POST-OP

- Give ___________ IV every ____ hours. (Reason For >24º: ___________)

### VTE

- Complete DVT Prevention in Adult Surgical Patients Order Set

**BETA BLOCKERS - ALL SURGERIES**

- **PATIENT IS ON PRE-OP BETA BLOCKERS** - Administer Peri-operative BETA BLOCKERS

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**Provider's Signature**

**Date**

**Time**

*857400*

Form: 85-7400  Rev.4  03/10/09  P&T 08/16/06
## SCIP/SCOAP Colon Order Set

### PREP
- **SCIP**
  - Neomycin/Erythromycin Oral Prep Day Before Surgery. Send Prep Documentation to VMC.
  - Other:

- **SCOAP**
  - Routine Pre-Op Labs
  - Add To Routine Pre-op Labs: □ Albumin □ Pre-Albumin □ Creatinine
  - If obtained within 30 days of admission send results to VMC

### LABS
- **SCOAP**
  - Abdominal X-ray (Specify):
  - Abdominal CT Scan
  - Abdominal MRI
  - Abdominal Ultrasound

### IMAGING
- **SCIC**
  - Patient Is Diabetic
    - First A.M. Blood Glucose on the day of surgery
    - Anesthesia To Obtain And Record Intra-operative Blood Glucose On Record
    - Insulin Infusion for Intra-operative Glucose ≥ 125

### NORMOTHERMIA
- **SCOAP**
  - Nursing - Initiate Patient Warming Process in Pre-op Holding
  - Anesthesia - Monitor and Record Intraoperative Temperatures on Anesthesia Record
  - Nursing - Obtain and Record First Temperature On Arrival To PACU/CCU

### VTE PROPHYLAXIS
- **SCIC**
  - No Prophylaxis Needed. Reason:
    - Low Dose Unfractionated Heparin 5,000 Units Sub-Q Pre-Op
    - Lovenox 40 mg. Sub-Q Daily (30 mg. if CrCl < 30 ml/min) ***First Dose At 6º Post-Op
    - Fondaparinux 2.5 mg. Sub-Q Daily X ___ Days. ***First Dose At 6º Post-Op
    - SCD’s

### BETA BLOCKERS
- **SCIC**
  - Patient Is Taking Beta Blockers Pre-Op
  - Give:

### ANTIBIOTIC PROPHYLAXIS
- **SCIC**
  - No Antibiotic Needed. Reason:
    - Ancef 2 Gm. IV AND Flagyl 500 mg. IV. Give Both Within 60 Mins. of First Incision
    - β-Lactam Allergy: Vancomycin 1 Gm. IV within 90 Mins. Of First Incision AND Flagyl 500 mg. IV Within 60 Mins. Of First Incision
    - Repeat X 1 Dose For Cases ≥ 2.5 Hours
    - Discontinue Antibiotic(s) Within 24 Hours of Surgery End-Time

### PAIN CONTROL
- **SCOAP**
  - Post-Op PCA Per Pharmacy (Start Within 24º Of Surgery End-Time)
  - Post-Op Epidural Per Anesthesia (Start Within 24º Of Surgery End-Time)
  - Other:

### ENTEREG
- **SCOAP**
  - Alvimopan 12 mg PO Pre-Op
# Preoperative Beta Blocker Orders

## Preoperative Assessment

### Selection Criteria
- For patients undergoing an **intermediate or high risk surgery**:
  - Major vascular procedure (e.g., AAA, carotid endarterectomy, femoral bypass)
  - Major intrathoracic or abdominal surgery (e.g., pneumonectomy, colectomy)
  - Major orthopedic procedure anticipated to be greater than 2 hours (e.g., total joint, major spine, hip repair)

**AND**

- The patient has **known coronary artery disease** (history of angina, previous MI, previous coronary angioplasty or stent, or CABG), or peripheral vascular disease (including carotid artery disease).

**AND**

- The patient was not taking beta blockers as an outpatient (if so, continue the dosing peri-operatively) or has omitted his/her usual dose of beta blocker for more than 24 hrs.

## Exclusion Criteria
- The patient has **none** of the following contraindications to beta blockers:
  - Evidence of acute CHF
  - Acute bronchospasm
  - Second or third degree heart block

## Preoperative Beta Blocker Administration

- Ensure the following are in use prior to administration of Beta Blocker:
  - Physician examination to assess exclusion criteria
  - ECG monitor
  - Non-invasive BP monitoring

- **Administer metoprolol** 5 mg IV if vital sign criteria are met:
  - HR > 60 per minute
  - Hold if systolic BP < 100 mm Hg

- If, after 5 minutes vital signs criteria (HR and BP) are still met, repeat **metoprolol** 5 mg IV. Document preoperative vital signs and beta blocker administration on the Inpatient Preprocedure Checklist (Form # 870331-6)

## Postoperative Beta Blocker Administration

- Continue preoperative dosing with vital sign parameters or add:
  - Metoprolol______________________

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**Physician Signature**  
**Date**  
**Time**

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*Valley Medical Center*

**Preoperative Beta Blockade Orders**  
**8574300**

**Form# 85-7430-0**  
**8/31/2004**  
P&T 9/25/2004
**Yesterday's standard practice = Intra-op hypothermia**

Anesthesia causes hypothermia
- Anesthesia causes vasodilatation and a free flow of warm blood from the core to the cooler legs (periphery). This causes a rapid drop in core temperature—"redistribution hypothermia."

![Diagram of temperature changes during anesthesia]

**Intra-op forced-air warming cannot prevent redistribution hypothermia**
- A review of 10 published studies reveals the average pre-induction temperature loss is 0.61°C and the average post-induction redistribution temperature loss is 1.11°C.
- Forced-air warming typically begins immediately following induction, but it does nothing to prevent the initial combined 1.72°C drop in temperature. Most patients quickly

**Forced-air warms only 0.1°C per hour**
- The average of 10 published studies shows Bar-Hugger® (forced-air warming) intraoperatively warms patients at only 0.1°C per hour.
- In a 2.5 hour surgery patients are frequently hypothermic from incision to the last stitch.
- Intraoperative warming with forced-air does not reliably prevent hypothermia.

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**Tomorrow’s standard practice = Flatline™ normothermia**

Pre-warming prevents hypothermia
- A continuous of warming throughout the perioperative process is necessary to prevent unintended hypothermia. Pre-warming the legs prior to induction is the only way to prevent the “redistribution hypothermia” resulting from anesthesia.

![Diagram of temperature changes during anesthesia]

**Hot Dog® warming is designed to warm patients at every stage of the surgical process in a low-cost, highly effective manner.**
- The patient never becomes hypothermic and avoids the risks associated with hypothermia: increased wound infections, increased bleeding and increased morbidity cardiac events.