CEDARS-SINAI MEDICAL CENTER

PHARMACY AND THERAPEUTICS COMMITTEE APPROVALS, JUNE 2016

Agenda Item	P&T Committee Decision
Drugs for Formulary Consideration	**Filgrastim (Zarxio®)** – added to formulary; remove Granix® & Neupogen® from formulary; reverse previous automatic substitution Indications: patients with chronic neutropenia, receiving myelosuppresive chemotherapy or bone marrow transplant, or patients undergoing peripheral blood progenitor cell collection and therapy Usual dose: 5-10 mcg/kg/day subcutaneous/IV depending on indication Precautions: glomerulonephritis, capillary leak syndrome, splenic rupture, and tumor growth have been reported with filgrastim products Monitoring: CBC with differential **Macitentan (Opsumit®)** – add to formulary, restrict use to patients receiving macitentan prior to admission. Indications: treatment of pulmonary arterial hypertension to delay disease progression Usual dose: 10mg PO daily Precautions: may cause fetal harm, hepatotoxicity, pulmonary edema, decreased sperm counts Monitoring: liver enzyme tests, CBC REMS & BBW: Due to teratogenicity, all females of reproductive potential should have a negative pregnancy test prior to beginning therapy and testing should continue monthly during treatment and for one month after discontinuing therapy. 1. Pharmacists may order pregnancy test if unable to confirm the patient's pregnancy status 2. When the patient or prescriber enrollment status cannot be confirmed, macitentan may be dispensed until the next business day when the benefits of continuing therapy outweigh the risks **Proderm® (balsam peru/castor oil) Aerosol** — discontinued by manufacturer. Remove from formulary. – Reverse previous Granulex® (balsam peru/castor oil/trypsin) aerosol to Proderm® aerosol auto-sub – Venelex® (balsam peru/castor oil) ointment 30 grams – add to formulary **Sodium Fluorescein for Intraoperative Cystoscopy** Indigo carmine is commonly used intraoperatively to identify ureteral meatuses and verify ureteral efflux. This product has been on shortage since June 2014. Limited data suggest the use of preoperative phenazopyridine, intravenous methylene blue or intravenous fluorescein. Limitations with phenazopyridine include the inability to use this agent in unplanned procedures or in patients requiring gastric decompression. Although methylene blue can be used as an alternative, it is only intermittently available from the manufacturer. – Allow use of fluorescein during cystoscopy procedures in patients who are unable to use oral phenazopyridine or IV methylene blue during indigo carmine shortage – Add fluorescein vials to 7STONE pyxis during indigo carmine shortage **Calcitonin injection** - revised restrictions to hypercalcemic crisis (i.e. malignancy) - total calcium >14 mg/dL (corrected for hypoalbuminemia) – Calciuresis - saline 200-300ml/hour ± loop diuretic (depending on CV status) to maintain UOP of 100-150 ml/hr and concurrent zoledronic acid 4mg – If inadequate response to calciuresis/bisphosphonate or more immediate reduction in calcium is needed, calcitonin 4 IU/kg IM/SQ may be administered o If calcium decreases, repeat in 12 hours (maximum of 2 doses) o If calcium does not decrease, no further doses should be administered **Additional Items** – Adefovir (Hepsera®) – remove from formulary – Altretamine (Hexalen®) oral capsules – low usage. Remove from formulary – Ticlopidine 250mg tablets – discontinued by manufacturer. Remove from formulary – Bendeka® (Bendamustine solution) – interchangeable with Treanda® (Bendamustine powder) – Medication Ordered — Automatic Substitution Brinzolamide (Azopt) 1% — Dorzolamide (Trusopt®) 2%: 1 drop into affected eye TID
Antimicrobial Stewardship  RDT proposed language.pdf  Antimicrobial Prophylactic Regimen	**Rapid Diagnostic Tests (RDT) Proposed Reporting Language for CS-Link** Please refer to document for details. **Antibiotic Duration Recommendations for Common Adult Infections** A recommendation was added for treatment of HSV meningitis/encephalitis: 14 days (range 14-21 days) **Antimicrobial Prophylactic Regimens for Gynecologic Procedures** Guidelines were updated for antimicrobial prophylactic regimens for gynecologic procedures. Please refer to document for details.

Other Updates	**<u>Value in Therapeutics - Guiding Principles</u>** – High cost drugs for chronic diseases should not be administered or initiated inpatient unless it is needed for immediate administration to treat the acute care condition and patient has coverage and will be able to continue therapy as an outpatient. – Patients should not be admitted for infusions that can be administered on an outpatient basis unless prior authorization and appeal process would result in delays that adversely affect patient outcomes. – Educational programs should ensure compliance with CSMC P&T policies and decisions – Coupons for free drugs, copays, and patient assistance programs are limited to: o Medications with demonstrated superiority or safety profile where existing therapies have been ineffective or have resulted in toxicity o Patient is able to continue therapy (insurance coverage, self-pay) **<u>Risk Evaluation and Mitigation Strategy (REMS) and Boxed Warnings (BBW) Updates</u>** Females of Reproductive Potential – defined as 12 – 55 year old unless specified in REMS or BBW **Mycophenolate REMS**– implementation date TBD Embryofetal toxicity resulting in 1st trimester pregnancy loss and congenital malformations is a known risk of mycophenolate therapy. – Inpatient setting: pharmacist to review medication guide with female patients during each admission – Outpatient pharmacy setting: pharmacist to review medication guide with each prescription – Outpatient Clinic setting- the clinic staff to ensure that: 1. Female patients have been educated on the risks associated with mycophenolate 2. Female patients and prescriber have signed the Mycophenolate REMS Patient-Prescriber Acknowledgment Form and ensure that it is in the medical record – check for it every time it is ordered 3. For females, pregnancy status has been verified: o Immediately before starting mycophenolate o 8 to 10 days after starting mycophenolate o At routine follow-up visits, defined as 30days from the last pregnancy test 4. Any mycophenolate-exposed pregnancies are reported in MIDAS 5. Pharmacist to review the medication guide with female patients and document in CS-Link **Abacavir-Containing Products BBW: Required HLA-B*5701 Allele Screening** Due to serious and sometime fatal hypersensitivity reactions associated with abacavir, the manufacture has updated its recommendations including: 1. Abacaviris contraindicated in patients with a prior hypersensitivity reaction and in HLA-B*5701-positive patients, who are at higher risk of hypersensitivity reactions. 2. All patients should be screened for the HLA-B*5701 allele prior to initiating therapy with abacavir or re-initiation of therapy with abacavir, unless patients have a previously documented HLA-B*5701 allele assessment. In order to comply with the BBW requirements, CS-Link order questions and instructions related to HLA-B*5701 allele assessment were approved: 1. Abacavir is contraindicated in patients with a prior hypersensitivity reaction to abacavir and in HLA-B*5701-positive patients. All patients should be screened for the HLA-B*5701 allele prior to initiating therapy with abacavir or reinitiation of therapy with abacavir, unless patients have a previously documented HLA-B*5701 allele assessment' 2. Document positive HLA-B*5701 allele screening in the CS-Link allergy section **Metformin-Containing Products BBW** The revised procedure was updated to reflect the changes in metformin BBW 1. CrCl will be monitored instead of SCr alone 2. Discontinue metformin in patients with CrCl < 30 ml/min 3. Avoid initiating metformin in patients with CrCl of 30-45 ml/min o Evaluate risk/benefits in patients currently on metformin whose CrCl is between 30-45 ml/min 4. Hold metformin in patients with CrCl between 30–60ml/min for 48hrs after IV contrast administration. o Re-evaluate CrCl 2 days after IV contrast administration; restart metformin if renal function is stable. **Ticagrelor (Brilinta®) BBW** CS-Link was updated to reflect the changes in the ticagrelor BBW: 1. Remove 'Surgery planned within 5 days' from contraindications 2. Add the following order instructions: When possible, interrupt therapy with ticagrelor for five days prior to surgery that has a major risk of bleeding **<u>Alteplase (tPA) for Stroke: Recommended Criteria Changes</u>** – Implementation date TBD The existing alteplase guidelines were revised based on the recent publication of 'Scientific Rationale for the Inclusion and Exclusion Criteria for IV Alteplase in Acute Ischemic Stroke' (Stroke 2016;47). **<u>Guidelines for Management of Central Nervous System Hemorrhage</u>** Updates to the Guidelines for the Management of Central Nervous System Hemorrhage are based on the 2015 AHA/ASA guidelines.

	Anticoagulation Updates **Kcentra® (4-Factor Prothrombin Complex Human) Dosing Without Available INR** Kcentra® 1000 units may be administered in patients who are receiving warfarin and experiencing a life-threatening hemorrhage without an INR being available; once the INR is resulted the remaining dose will be administered as indicated. **Enoxaparin Prophylaxis for Ischemic Stroke Patients, Trauma Patients** Based on the Chest 2012 and Neurocritical Care Society guidelines, enoxaparin 40mg SQ daily will be added to the Neu IP TIA Ischemic Stroke Admission (1509) order set and heparin 5000 units SQ BID will be removed. Based on an internal study pending publication in JAMA Surgery, VTE prophylaxis for trauma patients will be initiated at 40mg SQ BID and this dose will be added to the Trauma to Floor (1252) and SICU Trauma Admission (1254) order sets. Exclusions to this dose include patients with: age >65 years, weight <50kg, or CrCl <50ml/min. **Enoxaparin/heparin protocol baseline aPTT** In patients on heparin being monitored by heparin levels, the baseline aPTT prior to starting heparin can be used as the baseline for initiating LMWH; therefore no new baseline aPTT is required for patients transitioning from heparin to LMWH. **Progressive Care Unit Optimization – Medication List Update** - Implementation date TBD With input from Nursing, Pharmacy, Clinical Transformation, EIS, Patient Placement and the Emergency Department, the updated PCU patient placement guideline recommendations were approved: 1. Ongoing nursing interventions and assessments Q2 hours; if more frequent nursing interventions and assessments are needed, not to exceed 8 occurrences (i.e. blood sugar, neuro checks, vital signs) 2. Moderate to high risk for dysrhythmia 3. Moderate to high risk for respiratory decompensation 4. Invasive hemodynamic devices 5. Medications requiring PCU status IV guidelines were also updated to reflect above changes **Pediatric Pharmacy & Therapeutics Committee** **PICU & CCICU Sedation Weaning Guidelines for Withdrawal Prevention** In order to standardize care, a Sedation Weaning Guideline was developed with a multidisciplinary group comprising of physicians, nurses, and pharmacists. Titration Guidelines Ped 05 16.pdf **Medications being Titrated in PICU/NICU Recommendations** Please refer to the document for changes. **NICU TPN – increase baseline protein in the vanilla TPN** After an extensive literature review by the TPN committee and approval from Neonatology faculty, it was approved to increase the protein content in the Vanilla TPN at Cedars-Sinai NICU: – Premasol 8.75 grams in 250mL → 2.8 gram/kg/day of Premasol at 80/ml/kg/day (for late preterm infants and VLBWs) and 3.5gram/kg/day of Premasol at 100ml/kg/day (for ELBWs). **Residual Tubing Volume in Pediatrics** – In pediatric patients receiving IVPB medications without a continuous IV fluid, RN may order 25mL saline flush for primary tubing under "scope of practice" For HD patient, RN to order 25mL D5W – Build a CS-Link ERX 0.9% NaCl IV line flush 25mL. Line flush. To be used as a flush for IVPB medications when there is no continuous IV running. Run at the same rate as IVPB that is being flushed. If compatible, use D5W for dialysis patients - do not use NS Chemotherapy Formulary list 05 16.p **Oncology Pharmacy & Therapeutics Committee** **Chemotherapy Infusion Formulary -** please refer to the document for details **Outpatient Antiemetics Prophylaxis Guidelines for Chemotherapy Induced Nausea & Vomiting** The following changes were approved: – Cisplatin was moved up to high emetic risk and new agents were added to the table: o Low emetic risk: belinostat, blinatumomab o Minimal emetic risk: nivolumab, obinutuzumab, siltuximab, ramucirumab, pembrolizumab
Updated Policies, Procedures & Guidelines	The following policies, guidelines, and order sets were updated; please refer to the Policy & Procedure Manager (PPM) and Pharmacy Intranet for the most updated documents: **Policies & Procedures** – Patient's Own Medication (MM.03.01.05) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=39177&mode=view – Bedside and Self-Administered medications (MM.06.01.03) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=38366&mode=view – Patient Refusal To Surrender Medications Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=39546&mode=view – Patient Care Orders Regulations

- Professional Review and Clarification of Medication Orders - Chain of Command (MM.05.01.01.b) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=38911&mode=view
- Drug Product Problem Reporting (MM.07.01.03.a) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=38281&mode=view
- Review of Medication Orders (MM.05.01.01) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=38555&mode=view
- Discharge Prescriptions (MM.07.01.01.d) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=31842&mode=view
- Discharge Planning Protocol and Multidisciplinary Process Policy: Clinical Manual/General Clinical http://cshsppmweb/dotNet/documents/?docid=34356&mode=view
- Order Management Procedure http://cshsppmweb/dotNet/documents/?docid=34329&mode=view
- Duration of Medication Orders (MM.04.01.01.e) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=39348&mode=view
- Medication Ordering and Order Types (MM.04.01.01.f) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=39349&mode=view
- Barcode: Medications Dispensed by Pharmacy (MM.05.01.11.c) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=38998&mode=view
- Disaster Medication and Cart and Chemical/Biological Antidotes Cart (MM.02.01.01.d) Procedure: Medication Management http://cshsppmweb/dotNet/documents/?docid=38683&mode=view
- Drug Supply Chain Security Act: Transfer of Medications Between CSMC and Outside Pharmacies http://cshsppmweb/dotNet/documents/?docid=38522&mode=view
- Messenger Service, Apollo Couriers - Procedure: Pharmacy http://cshsppmweb/dotNet/documents/?docid=38640&mode=view
- Labor Utilization Procedure: Pharmacy http://cshsppmweb/dotNet/documents/?docid=39097&mode=view
- Flammable Liquids Procedure: Pharmacy http://cshsppmweb/dotNet/documents/?docid=38285&mode=view
- Staff Development and Education Plan Procedure: Pharmacy http://cshsppmweb/dotNet/documents/?docid=38556&mode=view
- Antidotes for Emergency Use (MM.03.01.03.d) Procedure: Medication Management – Archived
- Outpatient Pharmacies: San Vicente Pharmacy - Security Procedure: Pharmacy – Archived
- Pharmacist on Call Procedure: Pharmacy http://cshsppmweb/dotNet/documents/?docid=39347&mode=view
- Use of Intravenous Echocardiography Contrast Agent(Definity®/Optison®): Protocol http://cshsppmweb/dotNet/documents/?docid=40275&mode=view
- Definity® Ultrasound Contrast Agent Policy: Clinical Manual/General Clinical and Competency Checklist http://cshsppmweb/dotNet/documents/?docid=37648&mode=view
- Optison® Ultrasound Contrast Agent Administration Policy: Clinical Manual/General Clinical and Competency Checklist http://cshsppmweb/dotNet/documents/?docid=37646&mode=view
- Intravenous Therapy (IV): Initiation and Management of Peripheral Intravenous Lines Policy: Clinical Manual/General Clinical http://cshsppmweb/dotNet/documents/?docid=40266&mode=view
- Oncology Pharmacy and Therapeutics Committee (MM.02.01.01a) Procedure: Medication Management
- Post Pediatric Kidney Transplant Treatment of Acute Rejection Guideline Procedure: Comprehensive Transplant Center http://cshsppmweb/dotNet/documents/?docid=13838&mode=view

IV Guidelines http://web.csmc.edu/clinical/clinical-departments/pharmacy/iv-guidelines.aspx

- Amiodarone (Cordarone®)
- Atropine
- Chlorothiazide (Diuril®)
- Diazepam (Valium®)
- Digoxin Immune Fab (Ovine) (Digibind®)
- Diltiazem
- Dobutamine (Dobutrex®)
- Dopamine Hydrochloride (Intropin®)
- Enalaprilat (Vasotec I.V. ®)
- Esmolol (Brevibloc®)
- Hydralazine (Apresoline®)
- Labetalol (Normodyne®, Trandate®)
- Metoprolol
- Milrinone (Primacor®)
- Nesiritide (Natrecor®)
- Nitroglycerin
- Phenobarbital Sodium (Luminal®)
- Procainamide HCL (Pronestyl®)
- Tirofiban (Aggrastat®)

RAPID DIAGNOSTIC TESTS (RDTS) REPORTING LANGUAGE FOR CS-LINK

<table>
<tr><th>Verigene Nanosphere Result</th><th>Recommendations for Comments if Resistance Markers NOT Detected</th><th>Recommendations for Comments if Resistance Markers Detected</th></tr>
<tr><td>S. aureus</td><td>Staphylococcus aureus. NO resistance to methicillin (mecA) detected. This result predicts sensitivity to oxacillin (>99% accuracy). Preferred therapy is an IV anti-staphylococcal beta-lactam antibiotic.
Full susceptibility to follow.</td><td>Methicillin (oxacillin)-resistant Staphylococcus aureus (MRSA). mecA resistance marker detected. Vancomycin is the drug of choice. Full susceptibility to follow. Use Contact precautions.</td></tr>
<tr><td>E. faecalis</td><td>Enterococcus faecalis. No vanA/B resistance marker detected. This result predicts sensitivity to vancomycin (>99% accuracy).
Full susceptibility to follow.</td><td>Vancomycin-resistant Enterococcus faecalis (VRE). vanA/B resistance marker detected. Linezolid is the empiric drug of choice; ampicillin is preferred if susceptibility is confirmed. Full susceptibility to follow. Use Contact precautions.</td></tr>
<tr><td>E. faecium</td><td>Enterococcus faecium. No vanA/B resistance marker detected. This result predicts sensitivity to vancomycin (>99% accuracy).
Full susceptibility to follow.</td><td>Vancomycin-resistant Enterococcus faecium (VRE). vanA/B resistance marker detected. Linezolid is the empiric drug of choice; ampicillin is preferred if susceptibility is confirmed. Full susceptibility to follow. Use Contact precautions.</td></tr>
<tr><td>Acinetobacter</td><td>Acinetobacter species. No ESBL or carbapenem resistance markers detected. Full susceptibility to follow.</td><td>Acinetobacter species.
<table>
<tr><th>Resistance Gene</th><th>Recommendations for CSMC Reporting Comments</th></tr>
<tr><td>CTX-M</td><td>CTX-M Class A Extended Spectrum β-lactamase resistance marker (ESBL) detected. A carbapenem (EXCEPT Ertapenem) the drug of choice. Full susceptibility to follow. Use Contact precautions.</td></tr>
<tr><td>KPC</td><td>KPC marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>NDM</td><td>New Delhi metallo-β-lactamase (NDM) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>VIM</td><td>Verona integrin-encoded metallo-β-lactamase (VIM) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>IMP</td><td>Imipenem-resistant metallo-β-lactamase (IMP) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>OXA</td><td>Oxacillinase Class D β-lactamase (OXA) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
</table></td></tr>
</table>

RAPID DIAGNOSTIC TESTS (RDTS) REPORTING LANGUAGE FOR CS-LINK

Verigene Nanosphere Result	Recommendations for Comments if Resistance Markers NOT Detected	Recommendations for Comments if Resistance Markers Detected
Citrobacter	*Citrobacter* species. No ESBL or carbapenem resistance markers detected. Full susceptibility to follow. This organism may contain an inducible beta-lactamase. Monitor for potential emergence of resistance if using a third-generation cephalosporin.	*Citrobacter* species. (See resistance marker chart below)
Enterobacter	*Enterobacter* species. No ESBL or carbapenem resistance markers detected. Full susceptibility to follow. This organism may contain an inducible beta-lactamase. Monitor for potential emergence of resistance if using a third-generation cephalosporin.	*Enterobacter* species. (See resistance marker chart below)
E. coli	*Escherichia coli*. No ESBL or carbapenem resistance markers detected. This result predicts susceptibility to third-generation cephalosporins (>98% accuracy). Full susceptibility to follow.	*Escherichia coli*. (See resistance marker chart below)
K. oxytoca	*Klebsiella oxytoca*. No ESBL or carbapenem resistance markers detected. This result predicts susceptibility to third-generation cephalosporins (>98% accuracy). Full susceptibility to follow.	*Klebsiella oxytoca*. (See resistance marker chart below)
K. pneumoniae	*Klebsiella pneumoniae*. No ESBL or carbapenem resistance markers detected. This result predicts susceptibility to third-generation cephalosporins (>98% accuracy). Full susceptibility to follow.	*Klebsiella pneumoniae*. (See resistance marker chart below)
Proteus	*Proteus* species. No ESBL or carbapenem resistance markers detected. This result predicts susceptibility to third-generation cephalosporins (>98% accuracy). Full susceptibility to follow.	*Proteus* species. (See resistance marker chart below)

RAPID DIAGNOSTIC TESTS (RDTS) REPORTING LANGUAGE FOR CS-LINK

<table>
<tr><th>Verigene Nanosphere Result</th><th>Recommendations for Comments if Resistance Markers NOT Detected</th><th>Recommendations for Comments if Resistance Markers Detected</th></tr>
<tr><td>P. aeruginosa</td><td>Pseudomonas aeruginosa. No ESBL or carbapenem resistance markers detected. Full susceptibility to follow.</td><td>Pseudomonas aeruginosa.
<table>
<tr><th>Resistance Gene</th><th>Recommendations for CSMC Reporting Comments</th></tr>
<tr><td>CTX-M</td><td>CTX-M Class A Extended Spectrum β-lactamase resistance marker (ESBL) detected. A carbapenem (EXCEPT ertapenem) is the drug of choice. Full susceptibility to follow. Use Contact Precautions.</td></tr>
<tr><td>KPC</td><td>KPC marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>NDM</td><td>New Delhi metallo-β-lactamase (NDM) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>VIM</td><td>Verona integrin-encoded metallo-β-lactamase (VIM) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>IMP</td><td>Imipenem-resistant metallo-β-lactamase (IMP) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
<tr><td>OXA</td><td>Oxacillinase Class D β-lactamase (OXA) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.</td></tr>
</table></td></tr>
</table>

Resistance Gene	Recommendations for CSMC Reporting Comments for Resistance Genes
CTX-M	CTX-M Class A Extended Spectrum β-lactamase resistance marker (ESBL) detected. A carbapenem is the drug of choice. Full susceptibility to follow. Use Contact precautions.
KPC	KPC marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.
NDM	New Delhi metallo-β-lactamase (NDM) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.
VIM	Verona integrin-encoded metallo-β-lactamase (VIM) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.
IMP	Imipenem-resistant metallo-β-lactamase (IMP) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.
OXA	Oxacillinase Class D β-lactamase (OXA) marker for carbapenem resistance detected. Full susceptibility to follow. Use Contact Plus precautions.

Antimicrobial Prophylactic Regimens for Gynecologic Procedure (*absence of documented or suspected infection*)

Procedure	Antibiotic and Dose (single dose unless listed otherwise)
Hysterectomy (abdominal or vaginal) Urogynecology procedures, including those involving mesh	Cefazolin2 gm IVP (if weight ≥120 kg, use 3 g)& Cefoxitin (if bowel involved) 2 gm IVP& β-lactam allergy: Gentamicin 1.5mg/kg* IVPB **+** Clindamycin 900mg&IVPB
Laparoscopy (Diagnostic, Operative, Tubal sterilization)	None
Laparotomy	None
Hysteroscopy (Diagnostic, Operative, Endometrial ablation, Essure)	None
Chromotubation	Doxycycline 100mg orally 1 hour before procedure if history of pelvic infection (continue twice daily for 5 days if fallopian tubes are dilated) (*if no history of pelvic infection, no antibiotics needed*)
IUD insertion	None
Endometrial biopsy	None
Induced abortion/dilation and evacuation	Doxycycline 100mg orally 1 hour before procedure and 200 mg orally after procedure

* Gentamicin dosing recommendations by patient weight (infuse dose over 30 min)

□ <40 kg (90 lbs) = 60 mg
□ 41 – 50 kg (91 – 110 lbs) = 80 mg
□ 51 – 60 kg (111 – 130 lbs) = 90 mg
□ 61 – 70 kg (131 – 150 lbs) = 110 mg
□ 71 – 80 kg (151 – 176 lbs) = 120 mg
□ 81 – 90 kg (177 – 198 lbs) = 140 mg
□ 91 – 100 kg (199 – 220 lbs) = 150 mg
□ > 100 kg (> 220 lbs) – contact pharmacy; use adjusted body weight

[AdjBW = IBW + 0.4(TBW-IBW)]

& For patients weighing ≤ 40 kg, contact Pharmacist

Key principles:

- Antibiotic infusion should be completed prior to first incision
- Re-dosing is indicated when the surgery is delayed or exceeds two half-lives of the drug or there is excessive blood loss (i.e., >1500mL).

Antibiotic	Infusion Time	Re-dose if case delayed > 60 min from end of infusion		Intra-op re-dosing%:	
		Patient wt < 80 kg	*Patient wt ≥ 80 kg*	Frequency	Dose
Cefazolin (Ancef®)	IV push (3-5 min)	1 gm	repeat pre-op dose	4 hours	1 gm
Cefoxitin (Mefoxin®)	IV push (3-5 min)	1 gm	repeat pre-op dose	2 hours	1 gm
Clindamycin	30 min	600 mg	repeat pre-op dose	6 hours	600 mg
Metronidazole	60 min	250 mg	repeat pre-op dose	NA	NA
Gentamicin^	30 min	Repeat pre-op dose only when delay > 120 min		6 hours	consult pharmacist

References:

1. Adapted from Antibiotic selection for surgical prophylaxis in adult patients (Cedars-Sinai Medical Center, 2016).
2. Adapted from American College of Obstetricians and Gynecologists Committee on Practice Bulletins-Gynecology. ACOG Practice Bulletin. Clinical Management Guidelines for Obstetricians and Gynecologists. Antibiotic Prophylaxis for Gynecologic Procedures. *Obstet Gynecol.* 2009; 113: 1180-9.
3. http://www.idsociety.org/IDSA_Practice_Guidelines/ ASHP/IDSA/SIS/SHEA Joint Clinical Practice Guidelines for Antimicrobial Prophylaxis in Surgery
4. Su HY, Ding DC, Chen DC et al. Prospective randomized comparison of single-dose versus 1-day cefazolin for prophylaxis in gynecologic surgery. Acta Obstet Gynecol Scand 2005;84:384-9.

CEDARS-SINAI MEDICAL CENTER

Recommendations for Medications being Titrated in PICU/NICU

Revised 2016.04

"Clinical judgment supercedes all recommendations and/or any titrations made that may be clinically appropriate"

- If maximum infusion rate achieved call physician for further orders.

Drug Class and Drugs	Dosing & Titration Guidelines
Cardiac	
Dobutamine	Increase/decrease rate by minimum of 2.5 mcg/kg/min at intervals no longer than Q 30 minutes to goal. (Max infusion rate: PICU/NICU: 30 mcg/kg/min)
Dopamine	Increase/decrease rate by minimum of 2.5 mcg/kg/min at intervals no longer than Q 30 minutes to goal. (Max infusion rate: PICU/NICU: 30 mcg/kg/min)
Epinephrine	Increase/decrease rate by minimum of 0.05 mcg/kg/min at intervals no longer than Q 5 minute to goal. (Max infusion rate: PICU/NICU: ~~1.5~~ 2 mcg/kg/min)
Esmolol	Peds: 0-7 days old: Increase/decrease rate by minimum of 25 mcg/kg/min at intervals no longer than Q 15 minutes to goal. Max infusion rate: 800 mcg/kg/min 8-30 days old: Increase/decrease rate by minimum of 50 mcg/kg/min at intervals no longer than Q 15 minutes to goal. Max infusion rate: 800 mcg/kg/min 31 days to 1 year old: Increase/decrease rate by minimum of 50 mcg/kg/min at intervals no longer than Q 15 min to goal. Max infusion rate: 800 mcg/kg/min >1 year to 12 years old: Increase/decrease rate by minimum of 50 mcg/kg/min at intervals no longer than Q 15 min to goal. Max infusion rate: 800 mcg/kg/min >12 years old: Loading dose of 500 mcg/kg over 1min followed by infusion of 50 mcg/kg/min. May rebolus after 4mins with 500 mcg/kg over 1 min followed by increasing infusion to 100 mcg/kg/min. Can repeat this until effect or maximum dose of 300 mcg/kg/min.
Labetalol	Increase/decrease rate by minimum of 0.25 mg/kg/hr at intervals no longer than Q 15 minutes to goal. (Max infusion rate: PICU: 3 mg/kg/hr)
Milrinone	Increase/decrease rate by minimum of 0.25 mcg/kg/min at intervals no longer than Q 6 hours to goal. (Max infusion rate: PICU/NICU: 0.75 mcg/kg/min)
Nicardipine	Increase/decrease rate by minimum of 0.5 mcg/kg/min at intervals no longer than Q 15 minutes to goal. (Max infusion rate: PICU: 5 mcg/kg/min)
Nitroglycerin	**When used to increase venous capacitance**: Increase/decrease rate by minimum of 2 mcg/kg/min at intervals no longer than Q 15 minutes to goal. **All other indications**: Increase/decrease rate by minimum of 0.5 mcg/kg/min at intervals no longer than Q 15 minutes to goal. (Max infusion rate: ~~PICU: 20 mcg/kg/min NICU: 10 mcg/kg/min~~ PICU/NICU: 10 mcg/kg/min)
Nitroprusside	Increase/decrease rate by minimum of 0.5 mcg/kg/min at intervals no longer than Q 15 minutes to goal. (Max infusion rate: PICU/NICU: 10 mcg/kg/min)
Norepinephrine	Increase/decrease rate by minimum of 0.05 mcg/kg/min at intervals no longer than Q 15 minute to goal. (Max infusion rate: PICU/NICU: ~~1.5~~ 2 mcg/kg/min)
Phenylephrine	Increase/decrease rate by minimum of 0.05 mcg/kg/min at intervals no longer than Q 15 minute to goal. (Max infusion rate: ~~PICU: 0.5 mcg/kg/min~~ PICU/NICU: 5 mcg/kg/min)
Other Medications	
PGE1 (Alprostadil)	Increase/decrease rate by minimum of 0.01 mcg/kg/min at intervals no longer than Q 3 hr to goal. (Max infusion rate: PICU/NICU: 0.4 mcg/kg/min)
Dexmedetomidine	Increase/decrease at intervals no longer than Q 30 minutes. Dose/rate increase/decrease to be specified by physician. (Max infusion rate 1 mcg/kg/HOUR)
Fentanyl	Increase at intervals no longer than Q 30 minutes. Dose/rate increase to be specified by physician. (Max infusion rate: PICU: 250 mcg/hr NICU: 10 mcg/kg/hr)
Midazolam	Increase at intervals no longer than Q 30 minutes. Dose/rate increase to be specified by physician. (Max infusion rate: PICU: 10 mg/hr NICU: 0.36 mg/kg/hr)

CEDARS-SINAI
MEDICAL CENTER
Department of Pharmacy Services

Chemotherapy Infusion Formulary

ADO-TRASTUZUMAB	IDARUBICIN
ALDESLEUKIN	IFOSFAMIDE
ALEMTUZUMAB	IFOSFAMIDE/MESNA
ANTITHYMOCYTE	INTERFERON
ARSENIC	IPILIMUMAB
ASPARAGINASE	IRINOTECAN
AZACITIDINE	IXABEPILONE
BELIMUMAB	MELPHALAN
BENDAMUSTINE	METHOTREXATE
BEVACIZUMAB	METHOTREXATE-BICARBONATE
BLEOMYCIN	MITOMYCIN
BRENTUXIMAB	MITOXANTRONE
BUSULFAN	NELARABINE
CABAZITAXEL	OFATUMUMAB
CARBOPLATIN	OXALIPLATIN
CARFILZOMIB	PACLITAXEL
CARMUSTINE	PANITUMUMAB
CEP-37250/KHK2804	PEGASPARGASE
CETUXIMAB	PEMBROLIZUMAB
CISPLATIN	PEMETREXED
CLADRIBINE	PENTOSTATIN
CLOFARABINE	PERTUZUMAB
CYCLOPHOSPHAMIDE	RAMUCIRUMAB
CYTARABINE	RITUXIMAB
DACARBAZINE	ROMIDEPSIN
DACTINOMYCIN	SARGRAMOSTIM
DAUNORUBICIN	SIPULEUCEL-T
DCEP	STREPTOZOCIN
DECITABINE	TEMSIROLIMUS
DENILEUKIN	TENIPOSIDE
DOCETAXEL	THIOTEPA
DOXORUBICIN	TOCILIZUMAB
DOXORUBICIN-DACARBAZINE	TOPOTECAN
EPIRUBICIN	TRASTUZUMAB
ETOPOSIDE	VINBLASTINE
FLOXURIDINE	VINCRISTINE
FLUDARABINE	VINCRISTINE-DOXORUBICIN
FLUOROURACIL	VINORELBINE
GALLIUM	ZIV-AFLIBERCEPT
GEMCITABINE	
GEMTUZUMAB	