Adult Peritoneal Dialysis Patients Standing Orders

1. **Target Weight**
   Target Weight Evaluations to be performed during peritoneal home dialysis training and four times yearly (Jan-Apr-July-Oct).
2. **Peritoneal Access**
   a. NEW PERITONEAL ACCESS CARE
      Begin 3 to 10 days post PD access placement or externalization. Sterile dressing should be left in place for 7 days unless soiled. Scheduling beyond 10 days delays exit site care treatment and increases exit site infection risk.
      i. PERITONEAL ACCESS Assessment
         1. Access flush and dressing change before dialysis, at the nurse's discretion. Outcome to be faxed to MD.
         2. Flush access with 1.5% dextrose or normal saline; leave up to 300 ml in peritoneal cavity as needed. (Refer to Peritoneal Access Flushes procedure.)
         3. If effluent is bloody, flush access with 1.5% dextrose, 1000 ml up to 3 times until clear. Notify MD if fluid does not clear after 3 flushes.
         4. Fill access with 6 ml heparin (1:1000 u/ml) following every flush procedure.
         5. Catheter Flush is done Weekly for 3 weeks and then Monthly.
   b. ESTABLISHED PD EXIT SITE CARE
      Nurse to evaluate exit site monthly and perform Daily Peritoneal Catheter Exit Site Care procedure if indicated.
   c. PERITONEAL ACCESS INFLOW PROBLEMS
      i. Irrigate access to check patency and function.
      ii. Consider changing transfer set.
   d. PERITONEAL ACCESS OUTFLOW PROBLEMS
      In the absence of signs and symptoms of peritonitis, i.e., abdominal pain, fever, cloudy outflow, absent bowel sounds:
      i. Irrigate access to check patency and function.
      ii. Consider changing the transfer set.
      iii. Administer Lactulose 15-30 ml orally as needed for constipation.
      iv. For slow drains or fibrin present, add heparin 500 u/L to overnight CAPD bag or to each APD bag – until drain problem resolves or fibrin no longer present. (Always use 1:1000 u/ml

heparin.)

v. As indicated, request an order from the attending physician's office for a KUB to evaluate for constipation and catheter position.

vi. Initiate the NKC protocol Using Tissue Plasminogen Activator (tPA) for Peritoneal Access Obstruction as indicated in established PD patients who have started PD treatments. (ICD10 = D68.9)

3. Peritoneal Dialysis Orders

a. Low Calcium dialysate (2.5 mEq/L) is used unless otherwise specified by the nephrologist.
b. Icodextrin use requires specific MD order.
c. PD is performed daily.
d. Adjust PD prescription to maintain DW and PD adequacy:
   Fill volume – 1.5 to 3L
   Exchanges – 3 to 7 per 24 hours
   % Dextrose – 1.5 to 4.25☐A long dwell (greater than 4 hours) should be strongly considered for patients with less than 500ccs of urine output.
e. All Patients will first be trained to CAPD prior to starting APD unless otherwise ordered.
f. CAPD may be used as backup for APD at the nurse's discretion.

4. Infection

Follow peritonitis & PD access exit site infection protocols.

5. Routine Diet (daily allowance)

a. 1500 - 2000 mg sodium and drink to thirst
b. 3-4 gm potassium.
c. 0.8 – 1.2 gm phosphorus.
d. 1.2 – 1.5 gm/kg protein.

6. <u>Laboratory Tests</u>

a. New Patient Lab Draws:

i. Chem panel (ICD10 = N18.6)
   Repeat Ca prn if result => 10.2
ii. CBC with platelets (ICD10 = N18.6)
iii. PTH Intact (ICD10 = N25.81)
iv. Ferritin, Iron, TIBC, % Saturation (ICD10 = E83.0)
v. Aluminum (ICD10 = N18.6)
   1. For those on aluminum-containing phosphate binders or sucralfate (ICD10 = N18.6 <u>initial</u> draw; N18.6 <u>subsequent</u> draws)
vi. Hemoglobin A1c (ICD10 = E11.9) values will be obtained on each new patient. If no diagnosis of diabetes, N18.6
vii. Initial adequacy of dialysis testing is done within the first 30 days following initiation of treatment (ICD10 = N18.6)

viii. Anti-HBc (ICD10 = N18.6) on admission if not previously obtained.
ix. Hepatitis C Antibody (ICD10 = N18.6) on admit to NKC if not previously obtained.
x. HBsAg (ICD10 = N18.6)
xi. Anti-HBsAb (ICD10 = N18.6)
xii. Initial PET (ICD10 = N18.6) is done within 12 weeks following completion of training.

b. Routine Draws

i. Chemistries: monthly (ICD10 = N18.6)
ii. CBC with platelets: monthly (ICD10 = N18.6)
iii. HBsAg: (ICD10 = N18.6)
    1. If the patient is HBsAg negative and hepatitis B surface antibody (Anti-HBsAB) negative (or anti-HBsAB is <10 mIU/mL): draw HBsAg monthly
    2. Draw HBsAg annually on all patients
iv. Anti HBsAB: (ICD10 = N18.6) Per vaccination protocol
v. Modified PET: as clinically indicated (ICD10 = N18.6)
vi. Anti-HBc: (ICD10 = N18.6) On admission (if not previously obtained)
vii. Hepatitis C Antibody: (ICD10 = N18.6) On admission (if not previously obtained) and semi-annually.
viii. Iron labs: quarterly (ICD10 = E83.10) Jan– Apr–July–Oct.
~~ix.~~ iPTH: Quarterly (Jan-Apr-July-Oct)
    1. Hyperparathyroidism (ICD10 = N25.81)
x. Aluminum: (ICD10 = N18.6) Quarterly for patients on aluminum-based phosphate binders or sucralfate (Jan– Apr– July–Oct.)
xi. Magnesium: quarterly for patients on magnesium-based binders N18.6
xii. Hemoglobin A1c: values will be obtained quarterly on patients who have a diagnosis of diabetes mellitus in EMR and annually (ICD10= E11.9).

c. Adequacy Testing

Routine adequacy testing is performed quarterly, following Dialysis prescription changes, and as clinically indicated. (ICD10 = N18.6). For adequacy calculation, ideal body weight instead of actual body weight may be considered for patients with BMI >35 at the discretion of the nephrologist

d. PRN Draws

i. Potassium (Hyperkalemia ICD10 = E87.5, or Hypokalemia ICD10 = E87.6).
    1. If K+ is <3.0 notify MD, notify RD, repeat K+ weekly until result is >3.0

2. For K+ 3.0 to 3.4 notify MD, notify RD, repeat K+ q 2 wks until >3.4
3. For K+ 3.5 to 3.9 notify MD
4. For K 5.5-5.9 notify MD, notify RD
5. For K+ ≥6.0, repeat K+, notify MD, notify RD

ii. Hypercalcemia: Repeat Ca prn if result => 10.2 (ICD10= Hypercalcemia) E83.

iii. Effluent cell count with gram stain, culture + sensitivity and fungal culture as needed (ICD10 = K65.9)

iv. Access site culture as needed (ICD10 = T85.71XA)

7. Laboratory Tests requests for patients who travel

Patients traveling to other facilities may have their labs drawn prior to travel at the discretion and request of the unit to be visited as long as correct ICD10 codes are provided.

8. Medications

a. ROUTINE (Individual prescriptions required Page 7)

i. **Colace** or equivalent 100 mg p.o. twice daily as indicated.

ii. **Lactulose 15ml (10gm/5ml) po prn constipation** (ICD10 = K59.00)

iii. **Gentamicin** 0.1% cream topically to PD access exit site daily.

iv. **Water soluble vitamin** one p.o. daily.

b. PRN

i. **Diphenhydramine; Epinephrine, Methylprednisolone are to be used only for Drug Reaction** (ICD10 = T50.995A) Notify MD and pharmacy of any drug reaction.

1. **Diphenhydramine (Benadryl)** 25 mg po or IV PRN drug reaction may repeat x 1. Do not give if hypotensive. Patients should be reminded not to drive after receiving IV diphenhydramine.
2. **Epinephrine** 0.3 mg IM
3. Methylprednisolone 125mg IV push over 5-10 minutes

ii. **Glucose Paste** (ICD10 = E16.2)

1. Obtain glucose meter result.
2. For symptomatic hypoglycemia glucose meter result 50-79, administer approximately ½ to 1 tube (12 – 24 gm) glucose paste PO if patient is alert, may repeat as needed.

iv. **Heparin**

1. Use if fibrin or bloody effluent present (ICD10 = D68.9)
2. Add heparin 500 u/L to overnight CAPD bag or to each APD bag until effluent is clear or fibrin is resolved.
3. Always use 1:1000 u/ml heparin.

v. **Nitroglycerin – Anginal Chest Pain** (ICD10 = I20.9)

1. Give Nitroglycerin 0.4 mg SL.

2. May repeat every 5 minutes x 2.
3. Notify MD by phone.
4. Do not give if systolic BP is <100 mmHg.

vi. Normal Saline – Hypotension

1. Normal Saline IV may be given in 200 ml boluses up to 1000 ml.
2. Notify MD.

vii. **Oxygen – Dyspnea, Chest Pain, Hypotension, Arrhythmia** (ICD10 = R09.02 Hypoxemia)

1. Oxygen may be administered per nasal cannula at 2 L/min or mask at 5 L/min.
2. Do not exceed 2 L/min in patient with COPD.
3. Notify MD.

viii. Seizures

Initiate Seizure Management protocol.

ix. tPA – Clotted PD Access

Administer per Using Tissue Plasminogen Activator (tPA) for Peritoneal Access Obstruction protocol.

x. **Acetaminophen (Tylenol) – Pain** (ICD10 = R52)
Give acetaminophen 325 mg 1 to 2 tablets po every 4 hours PRN during dialysis for mild pain or fever (R50.9).

c. OTHER:

i. **Hepatitis B Vaccine** (ICD10 = Z23) per protocol
ii. **Influenza vaccine** (ICD10 = Z23) per protocol
Influenza vaccine should be administered to all patients during the flu season (October - April) except those with egg allergy, those for whom the patient's physician has stated it is contraindicated, and those who refuse.
iii. **Pneumococcal vaccine** (ICD10 = Z23) per protocol
iv. **Covid Vaccine (ICD10 =Z23) per protocol**

9. Miscellaneous

a. Emergency Dialysis Orders

Provision of dialysis services in an emergency depends on the degree of social isolation of both patients and staff, availability of patient transportation for access to care, and the availability of caregivers to provide care.

b. During emergencies (earthquake, fire, flood, power outage, pandemic, etc.), the following procedure will be implemented:

i. In a declared emergency in which the NKC Emergency Operations Center (EOC) is convened, standing orders specific to the emergency at hand will be communicated to facilities, staff and medical staff.

ii. They are subject to change depending on changes in conditions.

iii. Nursing services may exercise discretion and clinical

judgment in their application. This may vary from facility to facility.

c. Baseline provision of care should include:
    i. Sodium Polystyrene Sulfonate (Kayexalate) (ICD10 = E87.5): provide patient with Sodium Polystyrene Sulfonate as needed from disaster supplies (30 gm).
    ii. Implementation of emergency diet plan.
d. Initiate TB screening per TB Testing Surveillance for Patients policy

Matthew Rivara, MD
Physician Name (Please Print)

Physician signature

February 3rd, 2025
Date

(See Initial Orders)

NORTHWEST Kidney Centers

Adult Peritoneal Dialysis Patients Standing Orders (Addendum)

Adult Peritoneal Dialysis Patients Standing Orders – Medications PRN, item 8.b.ii revision. Addendum replaces item 8.b.ii with following text:

Glucose Paste/Gel Administration for Hypoglycemia (ICD10 = E16.2). Initial dosing: If patient is alert and symptomatic with a blood glucose between 50 and 79 mg/dL, administer 1 tube/packet (15-24 grams) of glucose paste/gel PO. **Recheck blood glucose in 15 minutes** using the glucometer. Additional dose: If blood glucose result remains less than 80 mg/dL, administer a second dose of glucose paste/gel. Recheck blood glucose in 15 minutes after the second dose of glucose paste/gel. If blood glucose remains less than 80 mg/dL after the second dose and the patient is still symptomatic, call or page the Nephrologist for further instructions.

Matthew Rivara MD
Physician Name (Please Print)

Physician signature

October 6th, 2025
Date

Patient Name: _____ **NKC#** _____

1. Medication Prescription

e. ROUTINE

i. **Colace** or equivalent, 100 mg p.o. twice daily hold for diarrhea. #60 with 11 refills
ii. **Lactulose 15ml (10gm/5ml)** po daily prn constipation #473ml with 1 refill
iii. **Gentamicin** 0.1% cream topically to PD access exit site daily. #15g tube with 11 refills

☐ **f. PD Emergency Kit may be prescribed at physician request AS DIRECTED-**The PD department no longer recommends this for each patient, but it may be appropriate for patients who live remotely.

i. Ceftazidime 1 gram IP Daily per peritonitis emergency protocol #3 no refills
ii. Cephalexin 500mg PO BID per exit site infection protocol when inst#14 no refills.
iii. Vancomycin 1000mg IP Once per peritonitis emergency protocol #2 no refills
iv. Sterile Water 10ml vial for reconstitution per peritonitis emergency protocol #4 no refills
v. Heparin 1:1000 units 10 ml vial, administer 0.5ml per liter of PD Fluid prn fibrin no refills.
vi.

Physician Name (Please Print)	RN Name (Please Print)	
Physician signature	RN signature	Date
		February 3rd, 2025

NORTHWEST Kidney Centers

Home Dialysis Programs Standing Orders – Erythropoietin

Erythropoietin (EPO, epoetin alfa, epoetin alfa-epbx, Epogen™) (ICD10 - D63.1)

1. **Goal:** Hgb 10-12 g/dl **Target: Hgb 11 g/dl**

2. **Labs:**
   a. Monthly CBC.
   b. When holding EPO, check Hgb every 2 weeks (twice monthly) until Hgb is <11.5.
   c. If the patient remains on hold for > 4 weeks, return to monthly CBC draws only.
   d. When Hgb <10 g/dl or >11.5 g/dl, check every 2 weeks (twice monthly) and adjust until target range is achieved.

3. **Maximum dose:** EPO dosage is not to exceed 30,000 units/week, or **450 units/kg of dry weight (DW) whichever is lower.**

4. **Administration:**
   a. EPO will be administered subcutaneously (SC) according to the appropriate treatment tier.
   b. Do not exceed 1 cc in volume for any single SC administration.
   c. Weekly doses may be given on the same day.
   d. When a nephrologist makes a dose adjustment off protocol, this is considered a one-time order, unless the nephrologist specifically states that the patient is off protocol. Otherwise resume protocol following the dose change.

5. **Conversion of In-center SC EPO to Home Patient SC EPO:**
   a. Convert patients currently receiving in-center SC EPO to Home Patient SC EPO by determining total weekly in-center EPO dose.
   b. Round the in-center total weekly dose down to closest home treatment tier using the "Average Weekly Dose" on the "Step/Tiers Table" below.

6. **Conversion of Mircera to EPO:**
   a. Convert patients currently receiving Mircera to EPO using a conversion factor of 1 mcg:220 units Mircera:EPO.
   b. Round the dose to the nearest treatment tier.

7. Conversion of IV to SC EPO:

a. Existing patients on IV EPO, change to subcutaneous EPO using the formula: New weekly dose = (current per dialysis dose × frequency) × 0.8 (round to the nearest treatment tier.)

b. IV administration of EPO requires prior approval from the Chief Medical Officer (CMO). **If CMO approves IV administration for the patient, monitoring and dose adjustments will be the responsibility of the attending nephrologist.**

8. New patients and patients naïve to EPO:

a. Weight = Dry Weight.
b. Ensure iron repletion before starting EPO (≥ 25% saturation.)
c. Hgb ≥10.0→ Do not start EPO (label)
d. Hgb <10.0 start 100 units/kg/week (round to the nearest treatment tier.)
e. Patients already on EPO will be treated as existing patients.

9. Dosage Adjustments:

a. Do not make dose adjustments more frequently than every 4 weeks unless the Hgb > 11.5 or < 10 g/dl or patient is new to the Home Program.
b. If Hgb > 11.5 or < 10 g/dl, make dose adjustments twice monthly, corresponding with Hgb checks.
c. If Hgb drops > 2 g/dl, notify MD.
d. Make dose changes based on the "Dose Change" and "Step/Tiers" tables below.
e. Nurse has the discretion to counsel patient to take an existing dose until new dose arrives (if dose is to be increased).
f. When EPO on hold x 6 months, inactivate order and restart as a new patient.

Dose Change Table

If Current Hgb:	Hgb Change (g/dl)	EPO Dose Change
Hgb ≤ 10	↓ ≥ 1.5	↑ 2 steps
	↑ 0.9 - ↓ 1.4	↑ 1 step
	↑ 1.0 – ↑ 1.4	No Δ
	↑ ≥ 1.5	↓ 1 step
Hgb 10.1 – 10.5	↑0.4 - ↓ ≥ 1.5	↑ 1 step
	↑0.5 – ↑ 1.4	No Δ
	↑ ≥ 1.5	↓ 1 step
Hgb 10.6 – 10.9	↓ ≥ 1	↑ 1 step
	↑ 0.9 - ↓ 0.9	No Δ
	↑ ≥ 1	↓ 1 step

Patient Name_____**NKC#**_____

Dose Change Table (continued)		
If Current Hgb:	**Hgb Change (g/dl)**	**EPO Dose Change**
Hgb 11.0 – 11.5	↓ ≥ 1.5	↑ 1 step
	↓ 0.5 – ↓ 1.4	No Δ
	↑ 1.4 - ↓ 0.4	↓ 1 step
	↑ ≥ 1.5	↓ 2 steps
Hgb 11.6 – 11.9	↑ 0.4 - ↓ ≥ 0.4	↓ 1 step
	↑ 0.5 – ↑ 1.4	↓ 2 steps
	↑ ≥ 1.5	Hold ESA, resume dose when Hgb < 11.5 ↓ 2 steps
Hgb ≥ 12.0		Hold ESA, resume dose when Hgb < 11.5 ↓ 2 steps

Step/Tiers Table		
Step/Tier	Dose	Monthly total
1	2,000 U q 4 weeks	2,000 U
2	2,000 U q 2 weeks	4,000 U
3	2,000 U weekly	8,000 U
4	3,000 U weekly	12,000 U
5	4,000 U weekly	16,000 U
6	10,000 U q 2 weeks	20,000 U
7	6,000 U (3K + 3K) weekly	24,000 U
8	8,000 U (4K + 4K) weekly	32,000 U
9	10,000 U weekly	40,000 U
10	14,000 U (10K + 4K) weekly	56,000 U
11	20,000 U (10K + 10K) weekly	80,000 U
12	30,000 U (10K + 10K +10K) weekly	120,000 U

Matthew Rivara, MD
Physician Name (Please Print)

Physician signature

September 11, 2023
Date

(see Initial Order)

Patient Name_____**NKC#**_____

Recommendations for the **EMERGENCY DEPARTMENT** Management of Peritonitis

1. Notify the NKC Peritoneal RN on-call immediately upon patient arrival to emergency dept. **(206) 292-2285.**

2. **Patient will bring with them to the Emergency Department:**
   a. Dialysate drain bag for inspection and specimen collection.
   b. Fresh supplies and 2 new dialysate bags to which medications can be added.
   c. This page of recommendations **to give to Emergency Dept staff.**

3. **For ED Staff:**
   The Peritoneal Dialysis Catheter must only be accessed by an RN trained in Peritoneal Dialysis or the patient or caregiver trained in peritoneal dialysis.

   Obtain dialysate effluent from the drain bag.

4. **Laboratory tests:**
   a. Cell count with differential (ICD10 code K65.9)
   b. Gram stain with bacterial **and** fungal culture and sensitivity (ICD10 code K65.9)
   c. Ask laboratory to fax copy of results to NKC PD unit:
   (206) 292-2164 (fax)

5. **Initial antibiotics must dwell in the peritoneal cavity for a minimum of 6 hours and cover both Gram positive and Gram negative bacteria.** A combination of Vancomycin and Ceftazidime is recommended for empiric therapy of peritonitis (while waiting for culture/Gram stain results). If a cephalosporin allergy exists Tobramycin should be substituted for Ceftazidime. If a Vancomycin allergy exists, can use Cefazolin. If **a PD trained staff is not available, consider starting IV medications if high clinical suspicion for peritonitis.**

6. **Medications will be added to a single bag of dialysate and given intraperitoneally (IP) based on actual body weight. Add the entire dose to the dialysate bag using sterile technique. Have patient perform dialysis exchange using entire bag.**

   a. Vancomycin Dosing

Patient Name_____ **NKC#** _____

IMPORTANT: Vancomycin is dosed every 3-5 days (depending on vancomycin random levels) NOT DAILY.

Actual Weight (Kg)	Vancomycin Dose
<60	1000 mg in one bag
60-90	1500 mg in one bag
>90	2000 mg in one bag

b. Ceftazidime Dosing: Weight <50 Kg 1000 mg IP, ≥50 Kg 1500 mg IP daily in long dwell (6 hours).

c. Tobramycin Dosing {Cephalosporin allergy) IP daily in long dwell (6 hours).

Actual Weight (Kg)	Tobramycin Dose IP
<27	20 mg
28-33	25 mg
34-40	30 mg
41-46	35 mg
47-53	40 mg
54-60	45 mg
61-66	50 mg
67-73	55 mg
74-80	60 mg
81-86	65 mg
87-93	70 mg
94-100	75 mg
101-106	80 mg
107-113	85 mg
114-120	90 mg
121-126	95 mg
127-133	100 mg

7. Vancomycin or cefazolin in combination with either Ceftazidime or Tobramycin is compatible and may be administered into the same dialysate bag.
8. Add Heparin 500 units per liter IP to each dialysate bag unless contraindicated.
9. Notify the patient's attending nephrologist or covering on-call nephrologist.
10. **If patient is discharged from the emergency department, please notify the on call peritoneal dialysis nurse at (206) 292-2285.**

Patient Name_____ **NKC#**_____

11. For pain management, oral medications as needed. Avoid non-steroidal anti-inflammatories (NSAIDS). If narcotic is given, patient will need additional treatment for constipation.

12. Patients will be educated to make an Emergency Kit that they can take with them to the Emergency Department.

Patient Name _____ **NKC#** _____

Standing Orders for the Treatment of Peritoneal Access Exit Site Infection

1. **DEFINITION**
    a. Purulent drainage from peritoneal exit site indicates the presence of infection. Erythema, tenderness, or swelling may or may not represent infection. Clinical judgment is required.
    b. A tunnel infection may present as erythema, edema, or tenderness over the subcutaneous tract. All patients should be assessed for possible tunnel infection and peritonitis. If cuff is involved (pus squeezed out by compressing the cuff), it is considered a tunnel infection.
    c. If tunnel infection is suspected, obtain a Cell Count, gram stain and culture of PD effluent. (ICD10=K65.9)
2. **PATIENT INSTRUCTION**
    a. Notify NKC peritoneal staff of any purulent drainage, erythema or pain at the exit site, or any tenderness over the subcutaneous tract.
    b. Perform exit site care twice daily while drainage is present. Use Gentamicin cream 0.1% topically with each exit site care or Mupirocin cream 2% if Gentamicin allergic.
    c. The use of Betadine (povidone iodine) at the exit site is not recommended.
3. **LAB REQUISITION**
    a. Gram stain, culture and sensitivity only if purulent drainage. (ICD10= T85.71XA) *Culture of erythematous exit sites in the absence of drainage is not recommended.
4. **EMPIRIC ANTIBIOTIC TREATMENT-** (pending culture result)
    a. Notify MD and obtain prescription for:
        i. Cephalexin 500 mg, PO twice daily for two weeks (28 tablets) or
        ii. Trimethoprim/sulfamethoxazole 80/400 mg (SS) PO daily for two weeks (14 tablets).
        iii. Note: the prescription must come from the MD's office. The PD nurse cannot call in prescription for the MD.
    b. Modify therapy based on culture results.
    c. Standard treatment for exit site is 2 weeks, though if exit site has been reassessed and no longer has any signs or symptoms of infection, can consider decreasing treatment to a minimum of 7 days(Three weeks is recommended for infections caused by P.

aeruginosa.)

d. If infection doesn't resolve after 3 weeks of appropriate antibiotics, catheter removal should be considered.

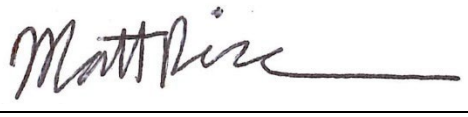
5. **SPECIFIC TREATMENT** (when culture results known)
   a. **Gram-positive Organism**
      i. Obtain MD prescription for oral antibiotics:
         1. Cephalexin 500 mg PO twice daily 14 days or longer until exit site infection has resolved, or:
         2. Trimethoprim/sulfamethoxazole 80/400 mg (SS) PO daily for 14 days or longer until exit site infection has resolved.
         3. If full resolution of infection is confirmed by clinical evaluation at 1 week, contact MD to consider shortening treatment duration to 7-10 days.
   b. Adjust therapy based on culture results and sensitivities.
   c. Twice daily exit site care.
   d. Evaluate the exit site weekly until the infection has resolved.
   e. For community acquired MRSA alternatives to trimethoprim/sulfamethoxazole include doxycycline 100 mg PO twice daily or clindamycin 300 mg PO three times daily. IP vancomycin can also be considered.
   f. In slowly resolving infections with S. aureus consider adding rifampin 600 mg PO daily. Please note that rifampin will reduce the levels of medications such as warfarin and anticonvulsants. The patient should be advised to contact the nephrologist for instructions if they are on any of these medications.

6. **Gram-negative Organism (non-pseudomonas)**
   a. Obtain MD prescription for levofloxacin 500 mg PO on day 1 followed by 250 mg PO **every other day** x 14 days (7 doses total) or longer until exit site infection has resolved.
   b. If full resolution of infection is confirmed by clinical evaluation at 1 week, contact MD to consider shortening treatment duration to 7-10 days.
   c. Adjust therapy based on culture results and sensitivities.
   d. Twice daily exit site care.
   e. Evaluate the exit site weekly until the infection has resolved.
   f. Remind the patient not to take phosphate binders, antacids or milk with levofloxacin as this will decrease the absorption of the antibiotic. Administration of levofloxacin should be separated from these drugs by at least 2 hours with levofloxacin being administered first.

7. **Pseudomonas**
    a. Obtain MD prescription for levofloxacin 500 mg PO on day 1 followed by 250 mg PO every other day x 21 days (10 doses total) or longer.
    b. Adjust therapy based on culture results and sensitivities.
    c. Continue twice daily exit site care.
    d. Evaluate the exit site weekly until the infection has resolved.
    e. Remind the patient not to take phosphate binders, antacids or milk with levofloxacin as this will decrease the absorption of the antibiotic. Administration of levofloxacin should be separated from these drugs by at least 2 hours with levofloxacin being administered first.
    f. If resolution of the infection is slow or if there is recurrent Pseudomonas exit-site infection add ceftazidime 1 gram IP daily or an aminoglycoside in long dwell (minimum 6 hours).
    g. Catheter removal should be considered earlier for exit-site infections caused by Pseudomonas aeruginosa not responding to therapy.
8. **RECURRENT EXIT SITE INFECTION** (recurrent infection within 30 days of completion of treatment)
    a. Follow initial protocol.
    b. Confirm that the patient is using Gentamicin cream 0.1% topically per protocol. (If Gentamicin allergic use Mupirocin cream.)
    c. Assess for tunnel infection and peritonitis.
    d. Consider prompt catheter removal for refractory cases.
9. **SPECIAL CONSIDERATIONS:**
    a. The patient with an exit site infection that progresses to peritonitis, or who presents with an exit site infection in conjunction with peritonitis with the same organism will usually require catheter removal except in the case of coagulase negative staphylococcus which is usually responsive to antibiotic therapy.
    b. If prolonged therapy (e.g. longer than 3 weeks) with appropriate antibiotics fails to resolve the infection, access replacement as a single procedure under antibiotic coverage can be considered and low volume, supine PD can be continued until the new access is ready for full volume treatment.
    c. Fungal prophylaxis recommended: Oral Nystatin 500,000 units 4 times daily while patients are on antibiotics for greater than 7 days. Alternative to nystatin is fluconazole 200mg PO first day then 100mg daily. Fungal prophylaxis should continue for one week after antibiotic therapy.
    d.

e. Note: the prescription must come from the MD's office. The PD nurse cannot call in prescription for the MD.

Matthew Rivara, MD
Physician Name (Please Print)



February 3rd, 2025
Physician signature Date
(see Initial Orders)

Addendum A
Common Antibiotics – Oral Dosing in PD for Exit-Site and Tunnel Infections

Amoxicillin	250–500 mg PO twice daily
Cephalexin	500 mg PO twice to three times daily
Ciprofloxacin	250 BID or 500mg PO Daily
Clarithromycin	500 mg PO loading dose, then 250 mg PO daily
Dicloxacillin	500 mg PO four times daily
Erythromycin	500 mg PO four times daily
Fluconazole	200 mg PO loading, then 100 mg PO daily
Isoniazid	200–300 mg PO daily
Levofloxacin	500 mg PO first dose, then 250 mg PO every other day
Metronidazole	500 mg PO three times daily
Nystatin	500,000 units 4 times daily
Trimethoprim/sulfamethoxazole	80/400 mg PO daily

References:
Peritoneal Dialysis International, 1-19"ISPD Catheter-Related Infection Recommendations: 2023 Update."

NORTHWEST Kidney Centers

Methoxy polyethylene glycol-epoetin beta (Mircera®) Protocol

Methoxy polyethylene glycol-epoetin beta (Mircera®) ICD 10 code D63.1
Anemia in chronic kidney disease

Purpose: To provide optimal management of ESRD related anemia in dialysis patients

Hemoglobin Target Goal: 10.0-11.0 g/dL

Methoxy polyethylene glycol-epoetin beta Dosing:

Doses are based on estimated dry weight and rounded to the following steps:

Step	Dose
1	30 mcg every ***four*** weeks
2	50 mcg every ***four*** weeks
3	30 mcg every two weeks
4	50 mcg every two weeks
5	60 mcg every two weeks (30 mcg + 30 mcg)
6	75 mcg every two weeks
7	100 mcg every two weeks
8	150 mcg every two weeks
9	200 mcg every two weeks

Table 1

1. Methoxy polyethylene glycol-epoetin (Mircera®) will be increased and decreased in 1-step or 2-step increments, based on scale above.
2. Mircera® will be administered IV to in-center hemodialysis patients, and SQ to home dialysis patients.
3. Mircera® ceiling is 200 mcg every two weeks (or 3.0 mcg/kg every 2 weeks, whichever is lower). Orders above 200mcg every two weeks require facility medical director or CMO approval.
4. For in-center hemodialysis patients, if pre-dialysis systolic blood pressure is >190 mm Hg, do not administer Mircera®. Notify nephrologist and administer Mircera® dose at next hemodialysis session if systolic blood pressure is <190 mm Hg at that time.

Initiating Mircera® for new patients or ESA naïve patients

For new patients or established patients who have not received an ESA within the last 3 months, initiate as follows:

1. Iron repletion per iron standing orders
2. AND
   a. If Hgb < 10 g/dL, then start Mircera® at 0.6 mcg/kg every 2 weeks, and round down to closest step per Table 1 but no less than 30 mcg every 2 weeks (Step 3).

Patient Name_____ **NKC#** _____

b. If Hgb 10.0-10.4 g/dL, then start Mircera® at 30 mcg every 2 weeks (Step 3).
c. If Hgb >= 10.5 g/dL, then do not start Mircera® until Hgb falls to <10.5 g/dL

Mircera® Dosing Adjustment

1. Titrate Mircera® per the following table for patients who have a Mircera® order and had not been changed in the last 4 weeks:

Mircera® Dosing Adjustment	
Hgb decreased by greater than or equal to 0.5 g/dL since last dose change	
Current Hgb (g/dL)	**Step Dose Change**
Less than 10	2 step dose increase
10.0-10.9	1 step dose increase
11-11.9	No Change
Hgb increased/decreased by less than 0.5 g/dL since last dose change	
Current Hgb (g/dL)	**Step Dose Change**
Less than 9.5	2 step dose increase
9.5-9.9	1 step dose increase
10.0-10.4	If Hgb decreased, do 1 step dose increase. If Hgb increased or stayed the same do NOT change
10.5-11.4	No change
11.5-11.9	1 step dose decrease; if patient is on Step 1, do not HOLD
Hgb increased greater than or equal to 0.5 g/dL since last dose change	
Current Hgb (g/dL)	**Step Dose Change**
Less than 10	1 step dose increase
10-10.4	No Change
10.5-11.9	1 step decrease; if patient is on Step 1, do not HOLD
Current Hgb (g/dL)	**Dose Change**
Greater than or equal to 12 g/dL	Hold Mircera; check Hgb within 2 weeks for patients who are on equal to or more than 50 mcg every 2 weeks
If Hgb is increased or decreased at least 1.0 g/dl since the last Hgb level; recheck Hgb within next 2 dialysis treatments for in-center HD and at next redraw for home patients. Follow the algorithm based on the results of the recheck, e.g., if the value remains the same as the first draw, then follow the algorithm for no change.	

Table 2

2. Do not change Mircera® dose more frequently than every 4 weeks EXCEPT:
   a. If Hgb falls from above 10 g/dL to less than 10 g/dL, increase dose after 2 weeks.
   b. If Hgb is already less than 10 g/dL and drops greater than 0.5 g/dL, increase dose after 2 weeks.
   c. If Hgb >= 12 g/dL, hold Mircera® and check Hgb every week for in- center patients, and at next redraw for home dialysis patients. Resume Mircera® with 1-step decrease as soon as Hgb is < 11.8 g/dL and last dose was administered 2 weeks ago or more. If Hgb remains >= 12 g/dL for more than 2 months, return to regular Hgb testing policy.
3. Post hospitalization: check Hgb at the first clinic visit after hospitalization and pre-hospitalization dose will be administered if patient is due for

Patient Name_____**NKC#** _____

Mircera. When Hgb is back, then titrate Mircera as needed per Table 2.

Conversion from darbepoetin or erythropoietin to Mircera®

1. When a patient with a darbepoetin (Aranesp) or erythropoietin order switches to Mircera®, discontinue darbepoetin (Aranesp) or erythropoietin order.
2. Convert darbepoetin or erythropoietin to appropriate dose of Mircera®, per conversion dose chart below. Convert to Mircera® when the next ESA dose is due.
3. If ESA is on HOLD from another protocol, wait until Hgb is less than 11.8g/dl, then convert ESA as follows: See Table 3 or 4 to convert previous ESA dosing to Mircera® Step, then see Table 1 and decrease 1 Step.

Erythropoietin to Methoxy Polyethylene Glycol Epoetin-beta Conversion Dose Chart		
Epogen Dose (U) per week - total	Mircera® Dose	
	Dose (mcg)	Frequency
< 2000	30	Every 4 weeks
2000 - < 3000	50	Every 4 weeks
3000 - < 5000	30	Every 2 weeks
5000 - < 8000	50	Every 2 weeks
8000 - < 11,000	60	Every 2 weeks
11,000 - < 18,000	75	Every 2 weeks
18,000 - < 27,000	100	Every 2 weeks
27,000 - < 42,000	150	Every 2 weeks
>= 42,000	200	Every 2 weeks

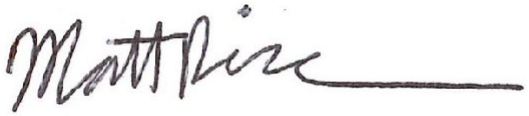
Table 3

Darbepoetin (Aranesp) to Methoxy Polyethylene Glycol Epoetin-beta Conversion Dose Chart		
Darbepoetin Dose (mcg) per week - total	Mircera® Dose	
	Dose (mcg)	Frequency
< 10	50	Every 4 weeks
10 - <20	30	Every 2 weeks
20 - <30	50	Every 2 weeks
30 - < 40	60	Every 2 weeks
40 - < 50	75	Every 2 weeks
50 - < 60	100	Every 2 weeks
60 - < 100	150	Every 2 weeks
>= 100	200	Every 2 weeks

Table 4

Labs: Draw CBC per routine lab orders.

Matthew Rivara, MD
Physician Name (Please Print)



Physician signature

February 3rd, 2025
Date

Patient Name_____ **NKC#** _____

Standing Orders for the Treatment of Outpatient Peritonitis

1. **Definition of Peritonitis: At least two of the following:**
   a. Clinical signs of peritonitis (Cloudy effluent and/or abdominal pain)
   b. WBC > 100 cells/mm3 with >50% polymorphonuclear (PMN) cells with minimum 2-hour dwell.
   c. Positive dialysis effluent culture

Start empiric antibiotics if any one of these are present and peritonitis is suspected

2. **Nurse will instruct patient to:**
   a. Save the cloudy bag (refrigerated or on ice if delayed).
   b. Record temperature, blood pressure, pulse, note any other symptoms.
   c. Notify NKC Peritoneal staff for further instructions.
   d. Patient will be directed to come into unit or go to ER. If patient does not have PD fluid for testing, minimum of 1L, if tolerated, PD fluid should be instilled and dwelled for a minimum of two hours before sample is taken.

3. **Lab Sampling and Requisitions**
   a. Cell Count and Differential (ICD10 = K65.9)
      i. Send 3 ml lavender topped tube filled with effluent.
   b. Bacterial Culture and Sensitivity with Gram Stain (ICD10 = K65.9)
      i. Send 10 ml of cloudy effluent into each bottle of a set of two Bactec Culture Bottles (1 aerobic & 1 anaerobic).
      ii. Send 10 ml sterile, yellow-topped tube filled with effluent.
   c. Fungal Culture (ICD10 = K65.9)

   Send 10 ml sterile, yellow-topped tube filled with effluent.

4. **Antibiotic Therapy**
   a. Antibiotics should have a minimum dwell time of six hours.
   b. CAPD patients will add the antibiotics to the overnight exchange.
   c. APD patients will add the antibiotics to the day exchange. If a day exchange is not usually done, one will be added for the duration of the antibiotic therapy.

5. **Initial Treatment – Empiric Antibiotics**
   a. Antibiotics will be initiated in clinic unless this will lead to a significant

delay in care and patient has an Emergency Kit at home.
   i. If Emergency Kit present, can initiate antibiotics at home with recommended clinic evaluation the same day.

b. Notify MD by fax and phone call to office.
c. Check for antibiotic allergies.
d. Look for evidence of exit site or tunnel infection.
e. Drug dose may depend on the presence of residual kidney function (RKF).
   i. If urine output > 100 ml/day = RKF is present.
   ii. If urine output is $\leq$ 100 ml/day = no RKF.
f. Antibiotics are administered by the intraperitoneal (IP) route as a single daily dose in the long dwell for APD patients or can be dosed in each exchange for patients on CAPD. Vancomycin is an exception, which is administered every 3-7 days.
g. Empiric antibiotics will be given until culture results become available.
   i. **Give combination of Vancomycin and Ceftazidime (Use Tobramycin for cephalosporin allergy)**
      1. Vancomycin is given IP q 3-7 days (based on vancomycin random levels).
         a. Standard dose: 15-30 mg/kg (See Dosing Chart).
         b. Vancomycin random level before second and all subsequent doses (target greater than 15 mcg/ml and less than 20 mcg/ml).
         c. Adjust dose and subsequent dosing interval per specific MD order based on vancomycin random level.

      AND

      2. Ceftazidime 1000 mg IP for weight <50 kg and 1500 mg IP for weight $\geq$50 kg.
      3. **For Cephalosporin Allergy Use**
         a. Tobramycin 0.75 mg/kg/day IP with **RKF present.**
         b. Tobramycin 0.6 mg/kg/day IP with **no RKF.** (See Dosing Chart)
            i. Prolonged aminoglycoside use should be avoided if an alternative agent is available. When used, levels should be closely monitored to avoid nephrotoxicity and ototoxicity in patients with residual kidney function.
      4. For vancomycin allergy use Cefazolin.
h. Refer to Appendix A to adjust antibiotics based on culture and sensitivities. Cefazolin should not be used unless sensitivities known.
i. Refer to Appendix B tables for antibiotics.
j. Consider adding Heparin 500 u/L IP to each bag of dialysate per protocol. (Always use heparin 1:1000 u/ml.)
k. Fungal prophylaxis recommendation: Oral Nystatin 500,000 units 4 times daily while patients are on antibiotics for greater than 7 days.

Recommended to continue 7 days after antibiotic therapy

l. Notify physician if patient develops diarrhea during antibiotic therapy due to risk of Clostridium Difficile colitis.

1. Treatment Follow-Up

a. A repeat cell count should be completed 48-72 hours after starting antibiotics to ensure response to therapy.
b. Cell count with differential 2 weeks post completion of antibiotics other than vancomycin.
c. If patient is on vancomycin, cell count with differential 19 days post completion of vancomycin.

2. Retraining and Prevention of Future Infections

a. All patients who develop peritonitis must be evaluated in clinic for technique problems and scheduled for retraining and a home visit as needed per nursing evaluation.
b. Review of aseptic technique and infection-related education topics is mandatory for all patients who develop peritonitis.
c. Staff should ensure that Gentamicin 0.1% cream is being used to prevent exit site infections in all patients. If patient has a gentamycin allergy Mupirocin cream may be used.
d. Patients with suspected relapsing* or recurrent** peritonitis should be evaluated as per peritonitis standing orders.

- *Infection with same organism within 30 days of completion of therapy
- **Infection with different organism within 30 days of completion of therapy

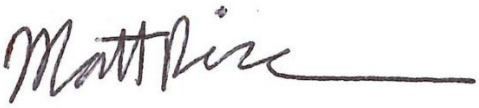
3. Technique Break (ICD10 = Z41.8)

a. To prevent a peritonitis following a wet break in sterile technique, Cephalexin 500mg PO BID x 3 days is recommended. Alternative treatment is a single dose of Vancomycin 1 gm IP. Each patient must come to PD clinic following a technique break to review aseptic technique and infection-related education topics and transfer set change. Retraining and home visit as needed per nursing evaluation.

4. References

a. ISPD Guidelines/Recommendations: 2022 Update.

Matthew Rivara, MD
Physician Name (Please Print)



Physician signature

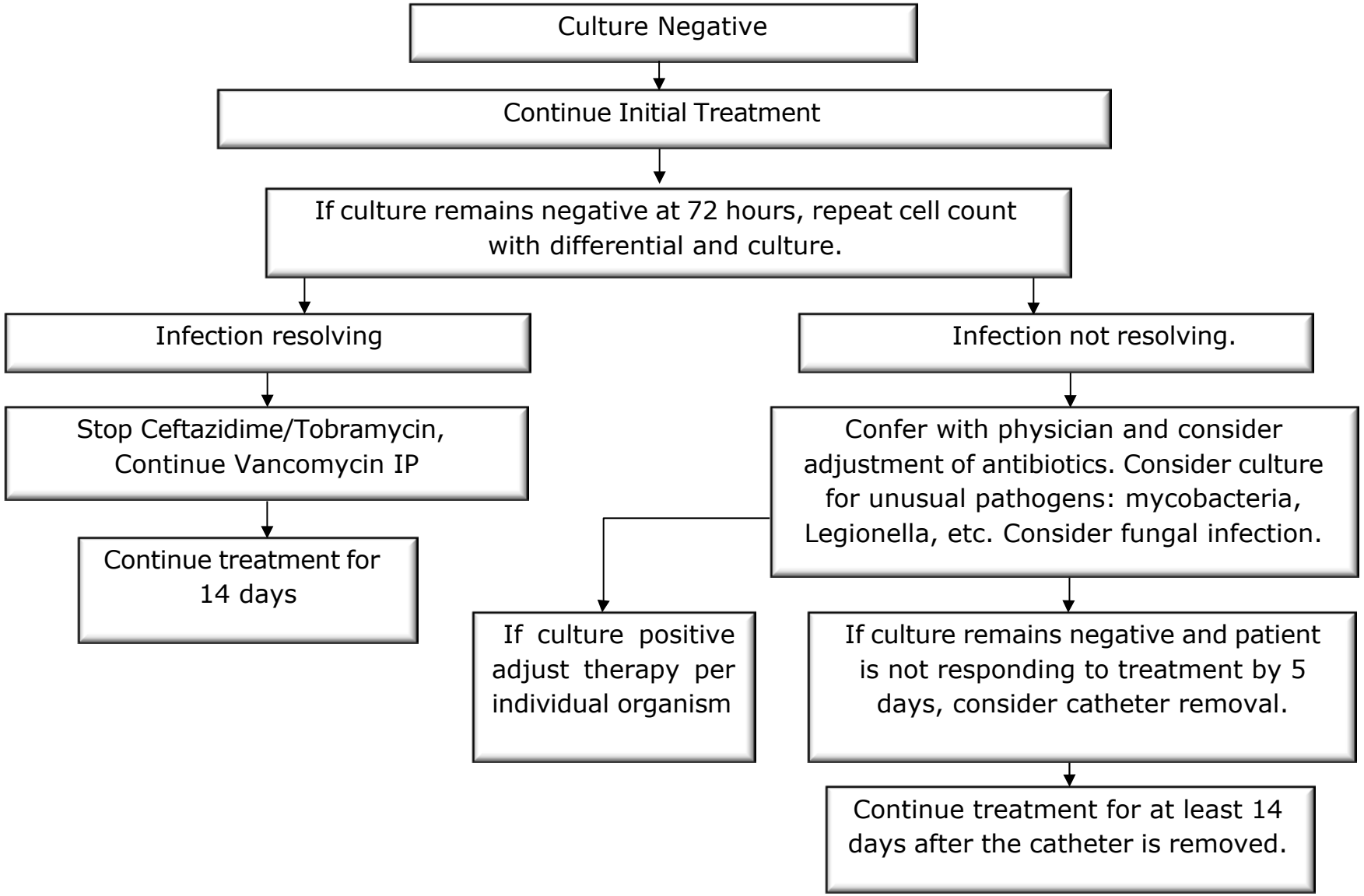
February 3rd, 2025
Date

(see Initial Orders)

Patient Name_____ **NKC#**_____

APPENDIX A: ANTIBIOTIC ADJUSTMENT ALGORITHMS

1.



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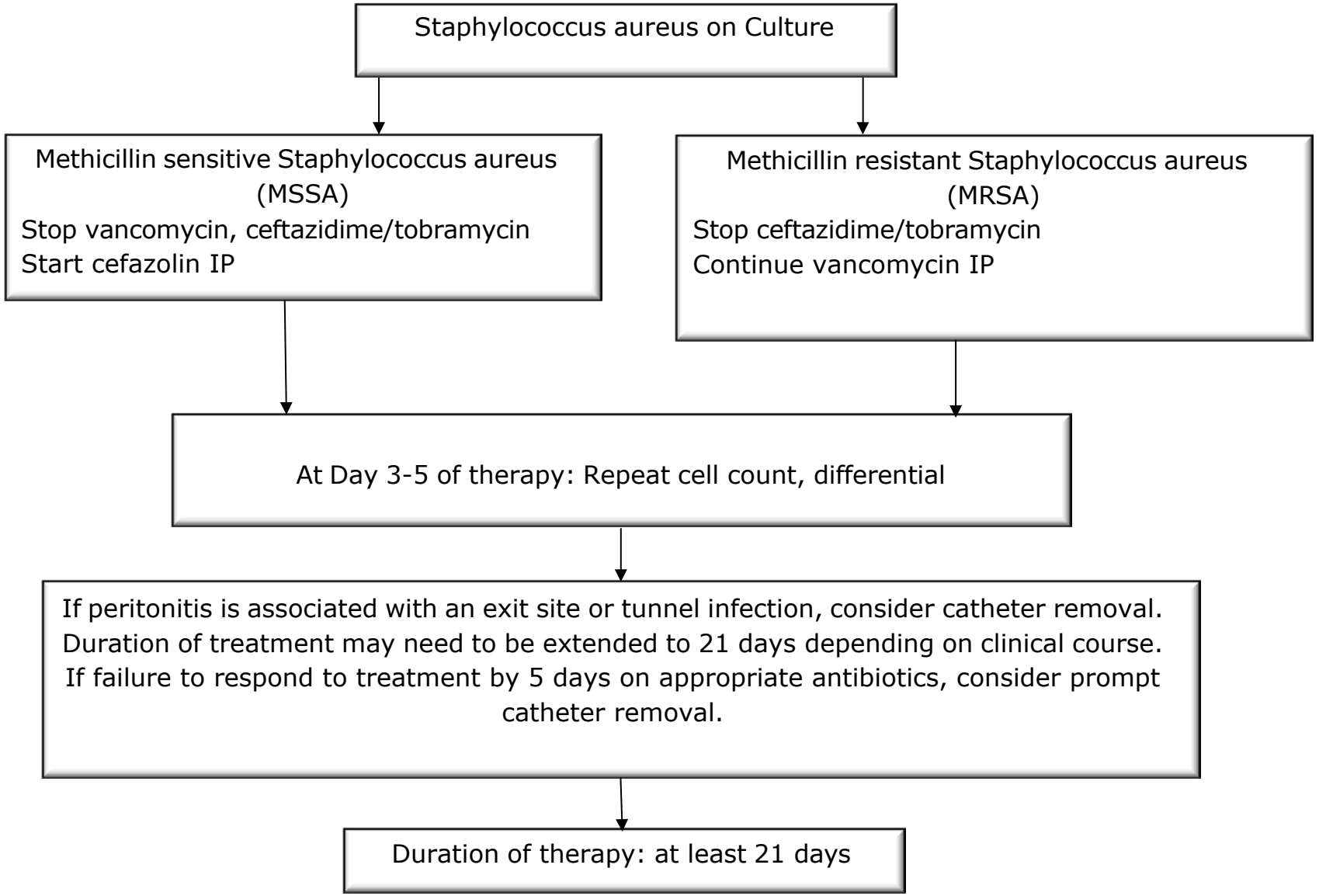
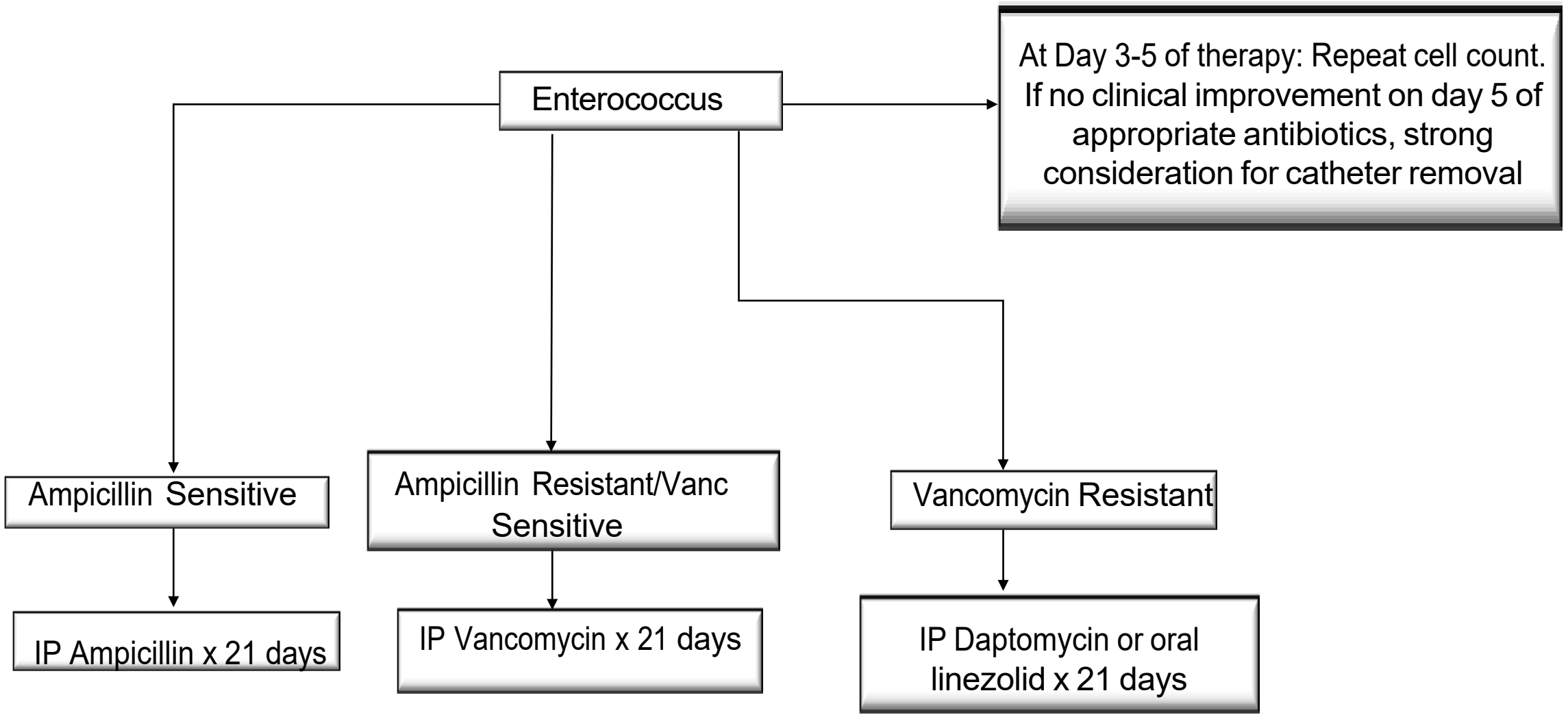

Staphylococcus aureus on Culture
Methicillin sensitive Staphylococcus aureus (MSSA)
Stop vancomycin, ceftazidime/tobramycin
Start cefazolin IP
Methicillin resistant Staphylococcus aureus (MRSA)
Stop ceftazidime/tobramycin
Continue vancomycin IP
At Day 3-5 of therapy: Repeat cell count, differential
If peritonitis is associated with an exit site or tunnel infection, consider catheter removal.
Duration of treatment may need to be extended to 21 days depending on clinical course.
If failure to respond to treatment by 5 days on appropriate antibiotics, consider prompt catheter removal.
Duration of therapy: at least 21 days

3.



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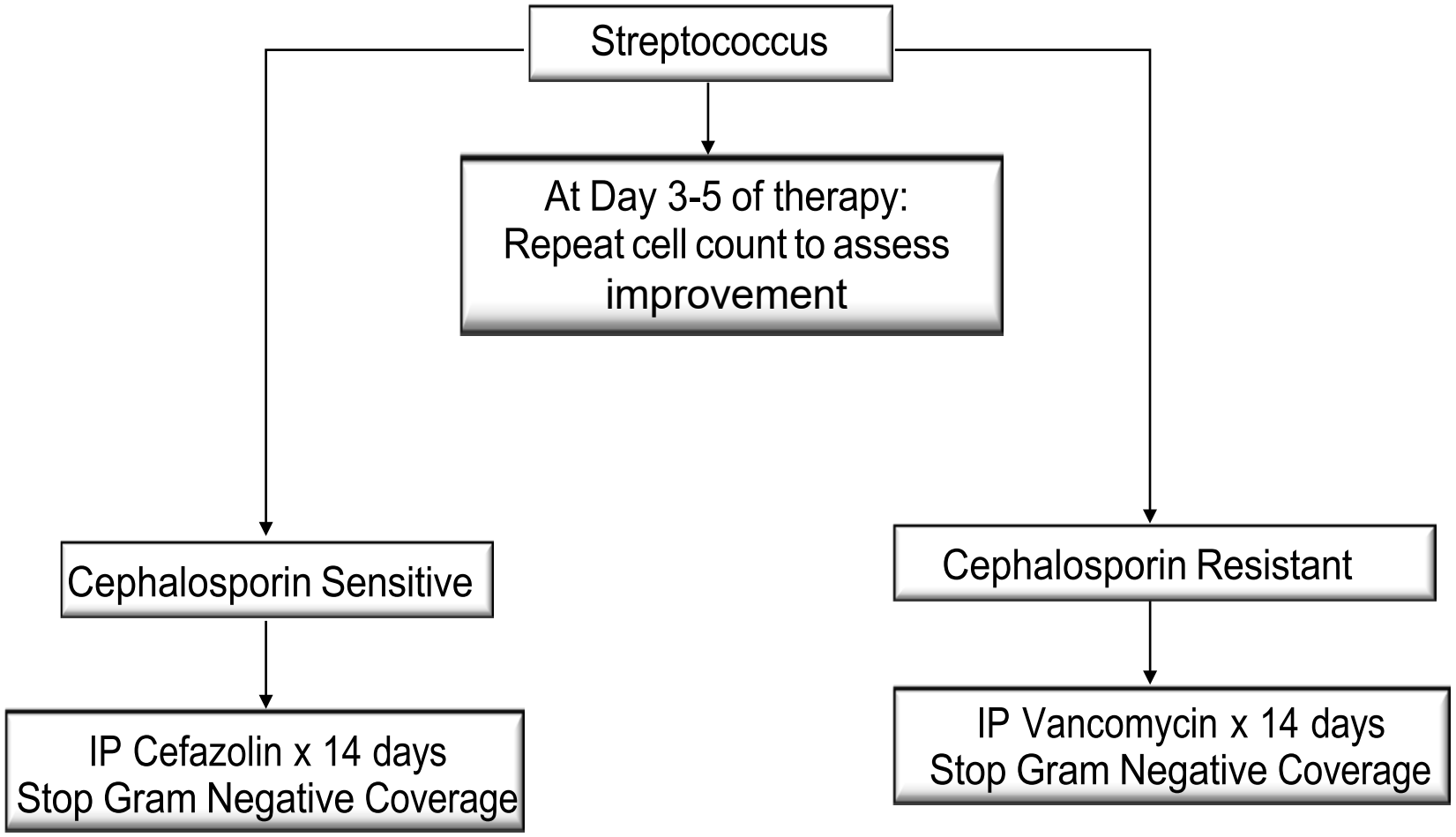

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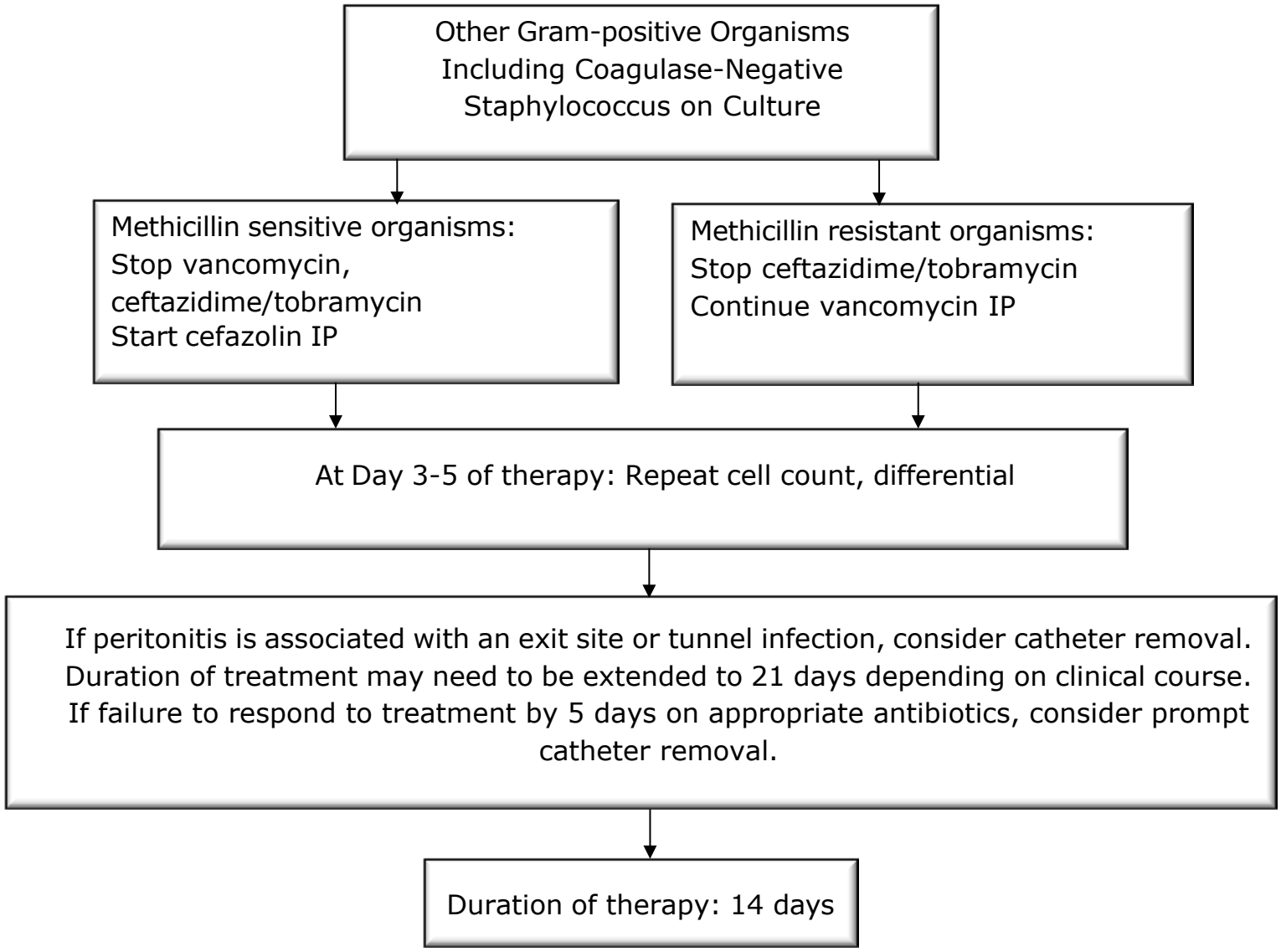
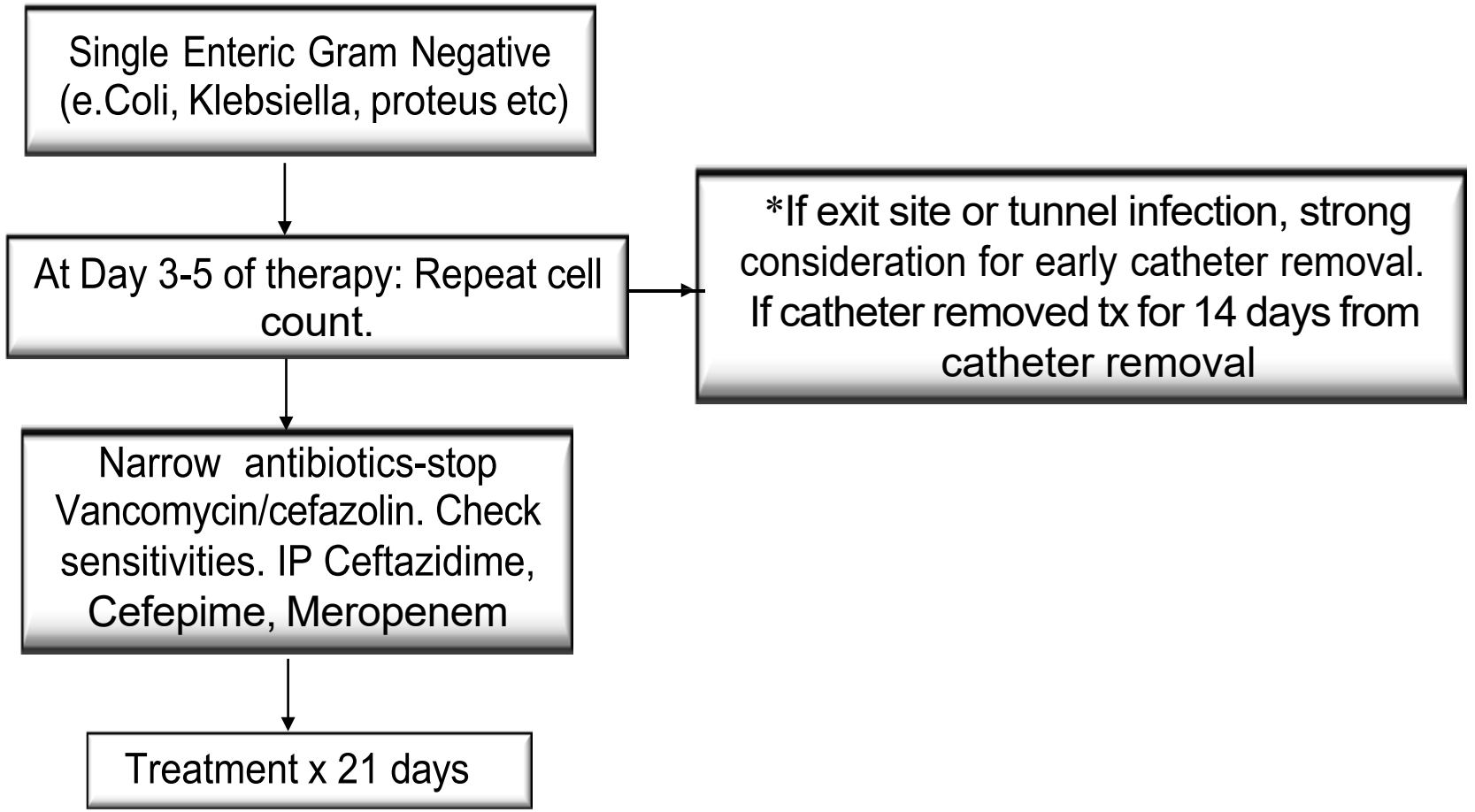
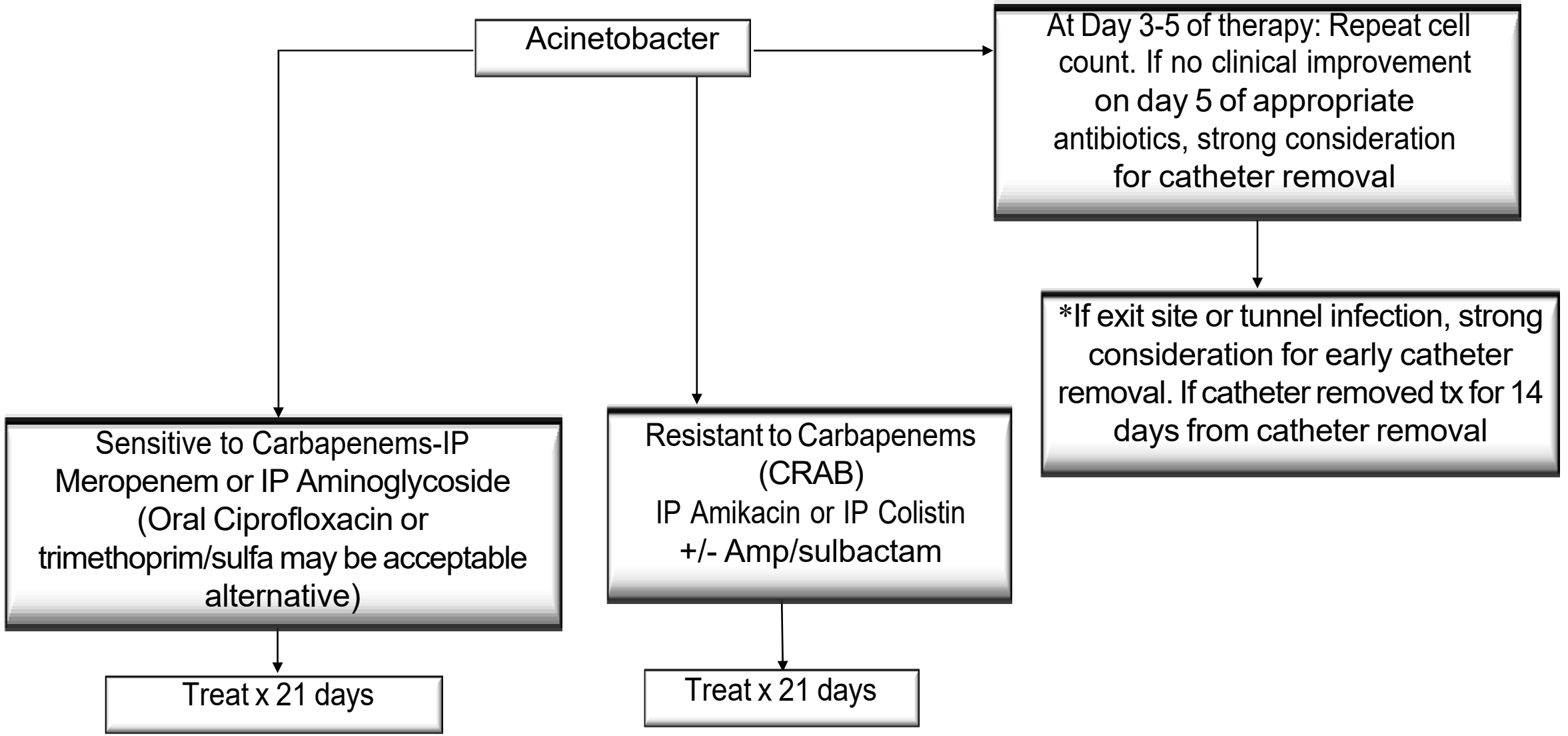


Patient Name _____ **NKC#**

6.

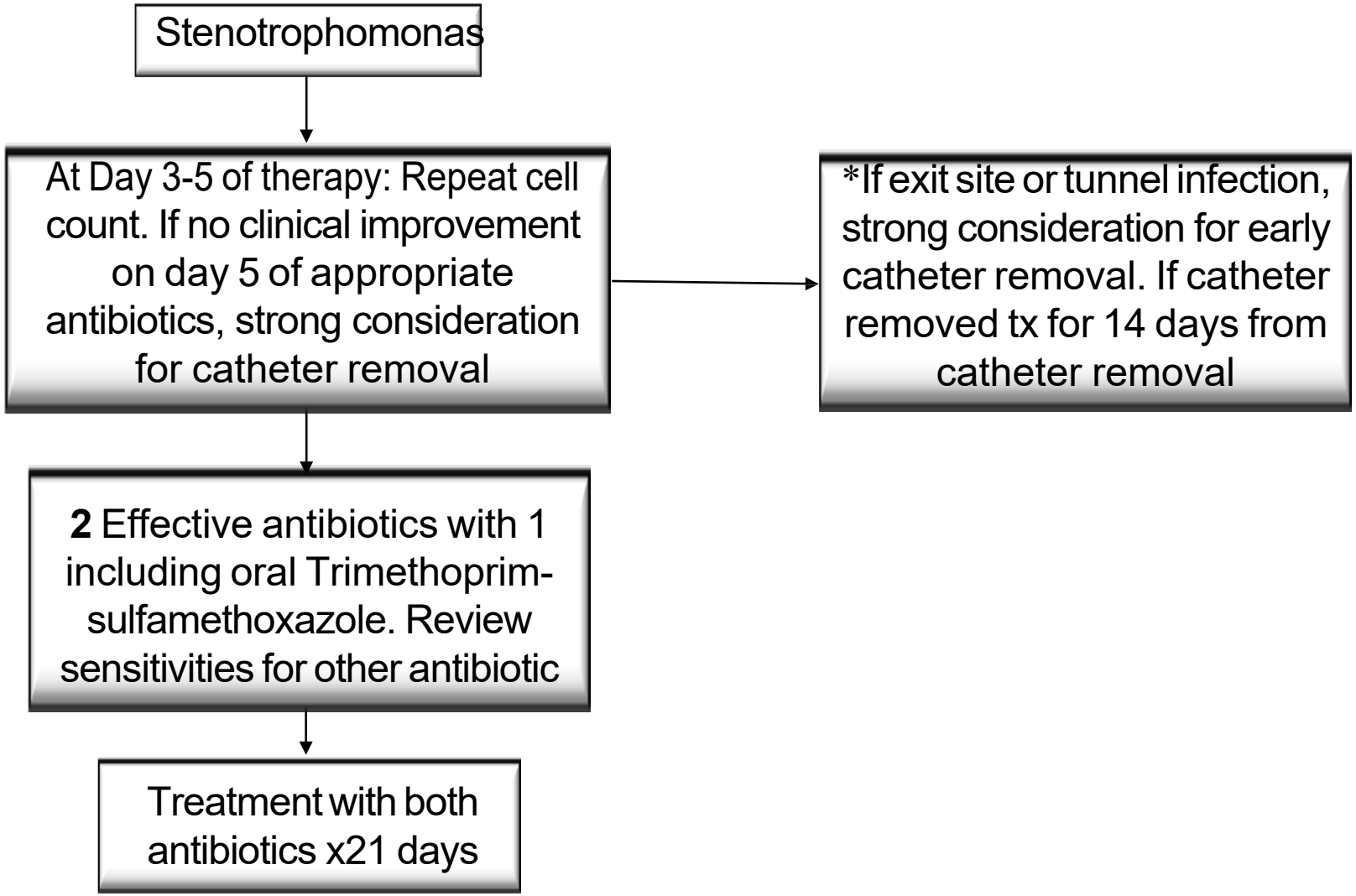

Single Enteric Gram Negative (e.Coli, Klebsiella, proteus etc)
At Day 3-5 of therapy: Repeat cell count.
*If exit site or tunnel infection, strong consideration for early catheter removal. If catheter removed tx for 14 days from catheter removal
Narrow antibiotics-stop Vancomycin/cefazolin. Check sensitivities. IP Ceftazidime, Cefepime, Meropenem
Treatment x 21 days

7.

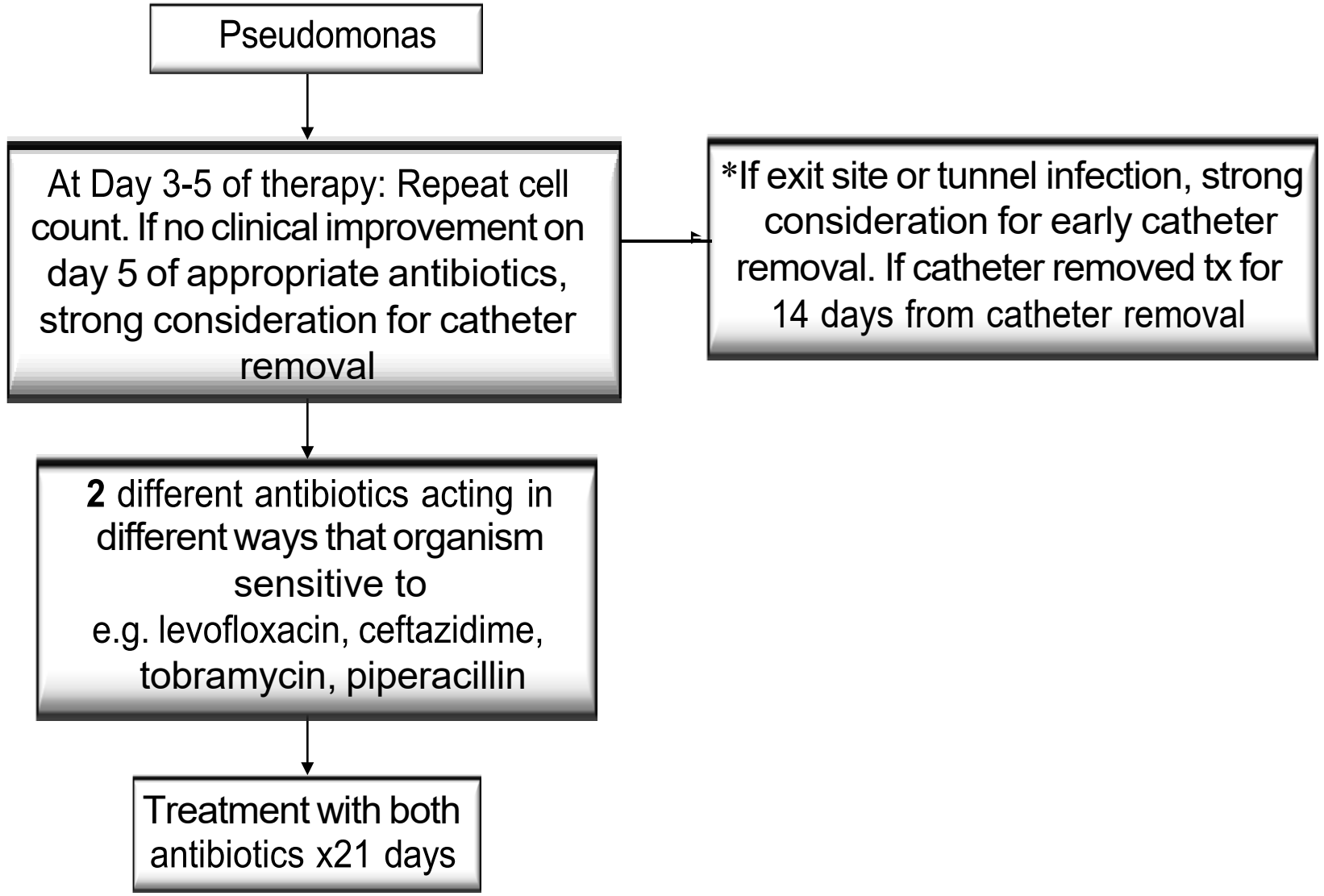


Patient Name _____ **NKC#** _____

8.

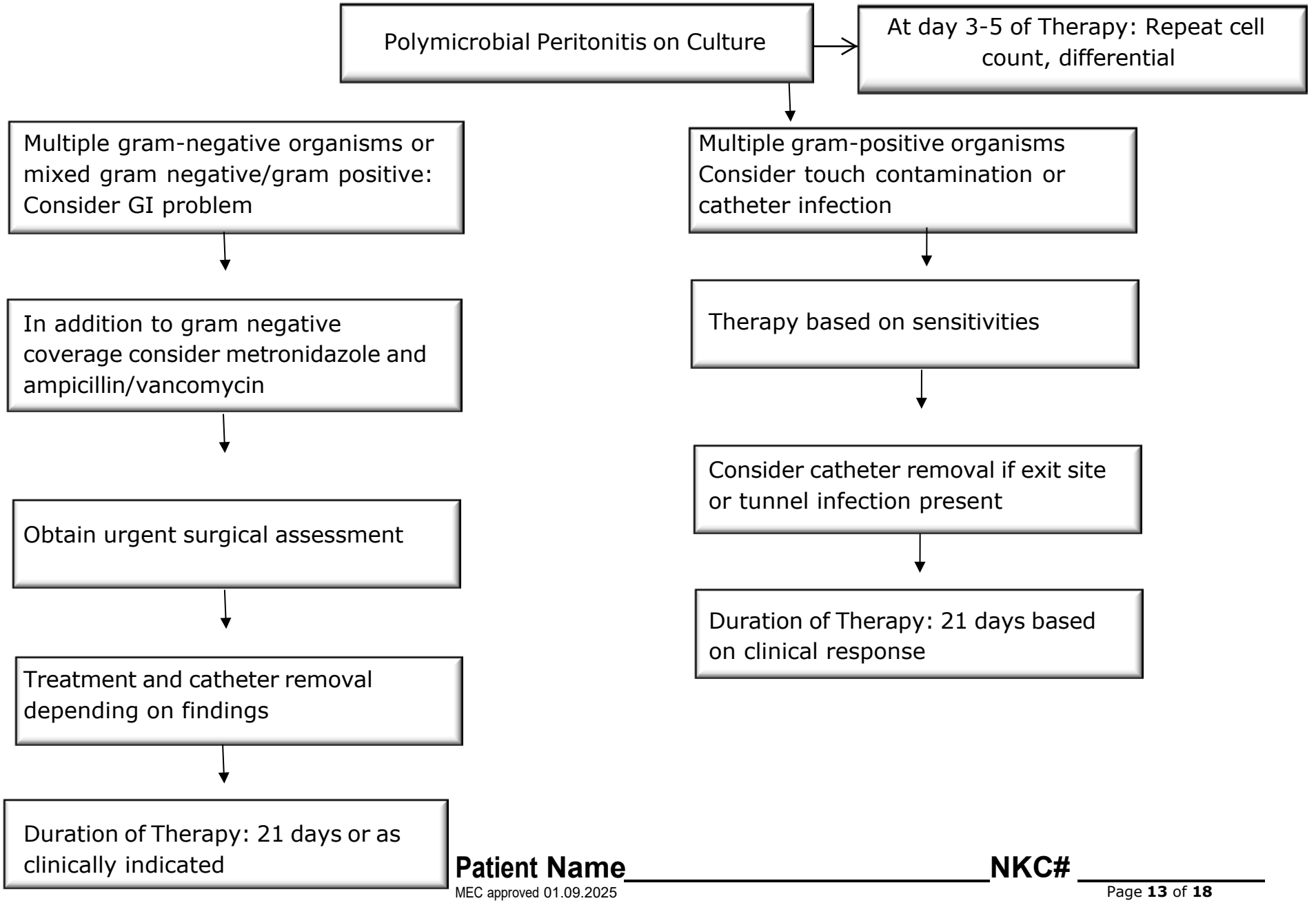

Stenotrophomonas
At Day 3-5 of therapy: Repeat cell count. If no clinical improvement on day 5 of appropriate antibiotics, strong consideration for catheter removal
*If exit site or tunnel infection, strong consideration for early catheter removal. If catheter removed tx for 14 days from catheter removal
2 Effective antibiotics with 1 including oral Trimethoprim-sulfamethoxazole. Review sensitivities for other antibiotic
Treatment with both antibiotics x21 days

9.

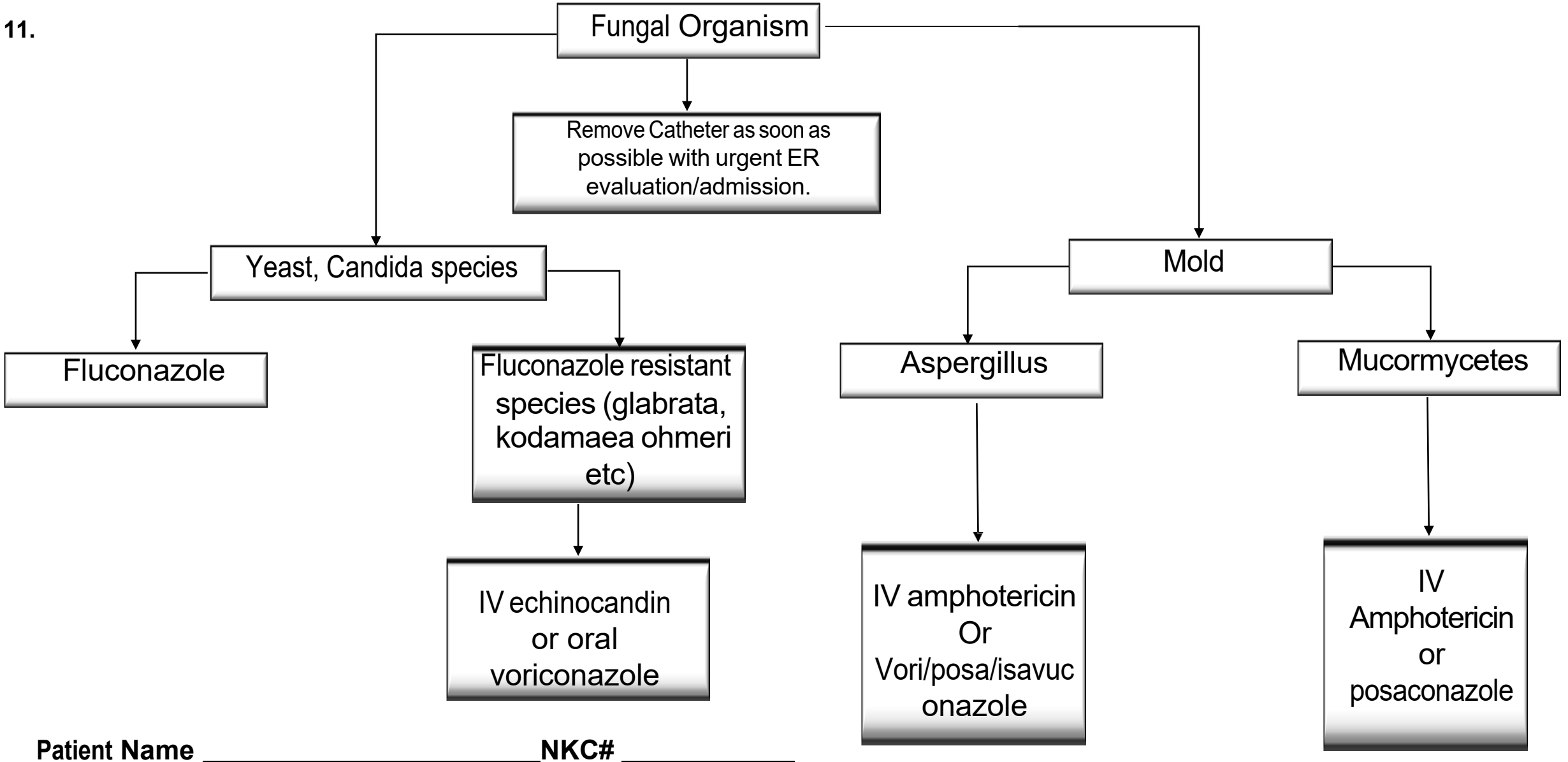


Patient Name _____ **NKC#** _____

10.


Polymicrobial Peritonitis on Culture
At day 3-5 of Therapy: Repeat cell count, differential
Multiple gram-negative organisms or mixed gram negative/gram positive: Consider GI problem
In addition to gram negative coverage consider metronidazole and ampicillin/vancomycin
Obtain urgent surgical assessment
Treatment and catheter removal depending on findings
Duration of Therapy: 21 days or as clinically indicated
Multiple gram-positive organisms Consider touch contamination or catheter infection
Therapy based on sensitivities
Consider catheter removal if exit site or tunnel infection present
Duration of Therapy: 21 days based on clinical response

11.



Patient Name _____ **NKC#** _____

APPENDIX B: DOSING ALGORITHM FOR COMMONLY USED IP ANTIBIOTICS

1. Vancomycin Dosing (same for RKF present or No RKF)

IMPORTANT: Vancomycin is dosed every 3-5 days depending on vancomycin random levels NOT DAILY. Add the entire dose in one bag of the dialysate.

Actual Weight (Kg)	Vancomycin Dose IP
<60	**1000 mg**
60-90	**1500 mg**
>90	**2000 mg**

- Vancomycin dose and interval will be affected by presence or absence of residual renal function. Shorter dosing intervals should be anticipated with residual renal function while longer dosing intervals should be anticipated in the absence of residual kidney function, guided by trough levels.
- Consult with physician for individual dosing parameters based on trough levels (target greater than 15 mcg/ml and less than 20 mcg/ml).

2. Ceftazidime Dosing: 1000 mg IP if < 50 kgs , 1500 mg IP if ≥ 50 kgs

3. Cefazolin dosing

Cefazolin dose IP	Actual Weight Urine output ≤100 ml/day Based on 15 mg/kg	Actual Weight Urine output >100 ml/day. Based on 18.75 mg/kg
1000 mg	**≤66**	**≤53**
1500 mg	**67-100**	**54-80**
2000 mg	**101-133**	**81-106**
2500 mg	**>133**	**>106**

4. Tobramycin Dosing

Actual Weight (Kg)	**<100 ml/day urine output: Tobramycin Dose IP Based on 0.6 mg/kg**
<34	**20 mg**
34-41	**25 mg**
42-50	**30 mg**
51-58	**35 mg**
59-66	**40 mg**
67-75	**45 mg**
76-83	**50 mg**
84-91	**55 mg**
92-100	**60 mg**
101-108	**65 mg**
109-116	**70 mg**
117-125	**75 mg**
126-133	**80 mg**

Actual Weight (Kg)	**≥100 ml/day urine output: Tobramycin Dose IP Based on 0.75 mg/kg**
<27	20 mg
28-33	25 mg
34-40	30 mg
41-46	35 mg
47-53	40 mg
54-60	45 mg
61-66	50 mg
67-73	55 mg
74-80	60 mg
81-86	65 mg
87-93	70 mg
94-100	75 mg
101-106	80 mg
107-113	85 mg
114-120	90 mg
121-126	95 mg
127-133	100 mg

- Tobramycin dose will be affected by presence or absence of residual renal function.
- Consult with physician for individual dosing parameters based on trough levels (target less than 1mcg/L).

APPENDIX C: Guidance for Procedure Prophylaxis

Northwest Kidney Centers Procedure Prophylaxis for Peritoneal Dialysis Patients Reference. Physicians will need to order to patient's preferred pharmacy,

To reduce risk of peritonitis for the following procedures we recommend:

Colonoscopy-

- Dry abdomen
- Antibiotic Prophylaxis
    - Cefazolin 2 grams (3grams if >120kg) IV + Metronidazole 500mg IV x 1 prior to procedure

    OR
    - Levofloxacin 750mg PO x 1
- Patient should resume regular PD after the procedure if they do not have ongoing effects from sedation and can perform PD safely. If not, it is okay to resume the following day.

Hysteroscopy:

- Dry abdomen
- Antibiotic Prophylaxis: consider adding *Fluconazole 200mg x1 g to the below regimen.*
    - Cefazolin 2 grams (3grams if >120kg) IV + Metronidazole 500mg IV x 1 prior to procedure

    OR
    - Levofloxacin 750mg PO x 1
- Patient should resume regular PD after the procedure if they do not have ongoing effects from sedation and can perform PD appropriately. If not, it is okay to resume the following day.

Recommendation for Dental Procedures:

- Dry abdomen
- Amoxicillin 2 grams x 1

Other procedures: It is recommended that the patient be dry for additional procedures such as endoscopy, ERCP, cystoscopy.

- Peritonitis risk for these procedures is lower and dependent on biopsies/additional procedures and the above antibiotics can be considered.

Wu HH, Li IJ, Weng CH, Lee CC, Chen YC, Chang MY, Fang JT, Hung CC, Yang CW, Tian YC. *Prophylactic antibiotics for endoscopy-associated peritonitis in peritoneal dialysis patients*. PLoS One. 2013;8(8):e71532. Epub 2013 Aug 1.

Yip T, Tse KC, Lam MF, Cheng SW, Lui SL, Tang S, Ng M, Chan TM, Lai KN, Lo WK. *Risks and outcomes of peritonitis after flexible colonoscopy in CAPD patients*. Perit Dial Int. 2007;27(5):560.

NORTHWEST Kidney Centers

Urgent Start Standing Orders - PD

1. Urgent starts are In-Center Intermittent Peritoneal Dialysis treatments meant for patients who have required urgent initiation of dialysis in the hospital setting. These patients are ready for hospital discharge but are still within 2 weeks of catheter placement requiring supine dialysis.

2. Initiate PD Urgent Start-All treatments to take place at the dialysis facility. Patients should have their catheter used in the hospital post-placement for a minimum of one treatment. Exceptions will require Medical Director Approval
    a. First treatment: 750 ml x 4-6 exchanges over 6-8 hours with no last fill; dextrose 1.5% (4 exchanges over 6 hours, 5 exchanges over 7 hours and 6 exchanges over 8 hours)
    b. Subsequent treatments: 1000 ml x 4-6 exchanges over 6-8 hours with no last fill

3. Duration of Urgent Start Protocol will be for a total of 2 weeks or until training spot available unless otherwise specified by MD.

4. Laboratory Testing
    a. New patient lab draws will be performed on the first day of urgent start.
    b. Routine draws during urgent start.
        i. NKC profile weekly

5. Patient will be evaluated each treatment for signs or symptoms of effluent leak.
    a. Exit site/Incision site.
    b. Subcutaneous
    c. Scrotal/labial

6. Patient will remain supine **at all times** while PD fluid is in the abdomen. Patient must be fully drained to be in any other position. Patient will be in a dialysis chair supine if bed is not available.

7. All other Adult Peritoneal Dialysis Standing Orders are in effect during Urgent Start except as indicated above.

8. Physicians will be contacted within the first 48 hours of initiation of Urgent start with patient update via fax and phone call to ensure fax received.

Matthew Rivara, MD
Physician Name (Please Print)

RN Name (Please Print)

Physician signature
(see Initial Orders)

RN signature

February 3rd, 2025
Date

Patient Name_____ **NKC#**_____

MEC reviewed 01.09.2025

Peritoneal Dialysis Programs Standing Orders – Iron

Iron Sucrose (Venofer) (ICD10 = D63.1)

1. **Goal:** Iron saturation 25 - 35%; Ferritin <800 ng/ml.
2. **Labs:** (ICD10 = E83.10)
   a. Draw iron studies (iron saturation and ferritin) monthly until TSAT
      - ≥ 25% then quarterly in January, April, July and October.
   b. Wait a minimum of 7 days after the last dose of iron prior to re-drawing iron labs.
3. **Administration:** Dilute in a minimum of 50 ml NS for IV infusion over 20 – 30 minutes.
4. **Dosing:**
   a. **First Dose:** Observe the patient in the dialysis unit for 30 minutes following the initial dose of IV iron to watch for possible drug reactions.
   b. Patients transferring from in-center will be converted to Iron Sucrose (Venofer) per home dialysis programs iron protocol.
   c. Based on patient's most recent iron studies give Iron Sucrose (Venofer) per tables below:

If	And	And		
	Ferritin	**Iron Saturation**	**Timing**	**Iron Sucrose (Venofer) Dose**
New to PD Program	≤ 800	< 25%	1st week (Training)	Give 200 mg
			2nd week	Give 200 mg
		25 - 35%	1st week (training)	Give 200 mg
		> 35%		Hold Iron Sucrose (Venofer)
	> 800	< 25%		Check with nephrologist
		≥ 25%		Hold Iron Sucrose (Venofer)

Patient Name_____ **NKC#**_____

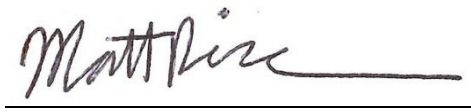
If	And	And		
Maintenance PD Program	**Ferritin**	**Iron Saturation**	**Timing**	**Iron Sucrose (Venofer) Dose**
	≤ 800	< 25%		Give 200 mg q 2 weeks x 2 doses and recheck iron studies at next monthly visit.
		25 - 35%		Give 200 mg
		> 35%		Hold Iron Sucrose (Venofer)
	> 800	< 25%		Check with nephrologist
		≥ 25%		Hold Iron Sucrose (Venofer)

5. Hemoglobin >12:
If hemoglobin ≥12, iron saturation ≤25%, contact MD for direction.

6. Infection/Antibiotics: HOLD IV iron if patient is on antibiotics.

Matthew Rivara, MD _____

Physician Name (Please Print) RN Name (Please Print)



Physician signature
(see Initial orders)

RN signature

February 3rd, 2025
Date

Patient Name_____ **NKC#**_____