

Overcoming Challenges in Outpatient Drug Therapy

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Conflicts of Interest

Research support	Nil
Employee	Nil
Consultant	Nil
Stakeholder	Nil
Speaker bureau	Nil
Scientific advisory board	Nil

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Ambulatory Leukemia-BMT Clinic



- 40-bed/chair clinic
- >14,000 visits last year
 - 113 AML & ALL patients for consolidation therapy
 - 64 auto-SCT for MM
 - 73 patients for allo-SCT supportive care until day +100
- Increase in patient referrals at a rate ~8%/yr

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Overview of Pharmacy Practice

- Facilitators of rational drug therapy
- Providers of pharmaceutical care
 - Monitor treatment plans
 - Educate patients and providers
 - Promote cost-effective therapy
- Identify patients at high risk for poor medication-related outcomes
 - All transplant patients
 - All patients receiving IV antimicrobials



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Outpatient Drug Therapy Challenges



- Delivery of outpatient IV antibiotics
- Obtaining drug benefit approval from Pharmacare
- Communication of medication information to outpatients

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Once Daily Vancomycin?

PHYSICIAN'S ORDERS

Leukemia/BMT Outpatient Parenteral Antibiotic Program

DATE: _____ TIME: _____

ONCE DAILY DOSING PARENTERAL ANTI-BIOTIC REGIMEN

1. Draw blood cultures and urine for CBC.
2. Check X-ray (if clinically applicable).
3. Patient fit for (check only): Hemodynamic: _____ Weighted: _____
4. Patient Wt: _____ kg 19 _____ cm Ideal Wt: _____ kg
5. Creatinine Wt: _____ kg Serum Creatinine: _____ μmol/L

Calculations of Body Wt:
Male: $(51.85 + 0.7296 \times \text{cm} - 152.4) \div 4.545 = 130.0 \text{ kg}$
Female: $(45.36 + 0.7152 \times \text{cm} - 152.4) \div 4.545 = 112.0 \text{ kg}$
Adjusted body wt: $\text{Ideal wt} + 0.25(\text{Actual wt} - \text{Ideal wt})$

CHOOSE ONE PARENTERAL ANTI-BIOTIC:
Change based on ideal body wt (IBW), except in obese patients (greater 120% of IBW) from one adjusted body wt.
1. Tobramycin 240 mg with creatinine clearance (CrCl) less than 30 mL/min
2. Vancomycin 240 mg with creatinine clearance (CrCl) less than 30 mL/min
3. Linezolid 600 mg with creatinine clearance (CrCl) less than 30 mL/min

6. Patient check appropriate antibiotic:

TOBRAMYCIN _____ mg IV (6 mg/kg) IV Q_____H according to the dosing interval table.

TOBRAMYCIN VANCOMYCIN DOSING INTERVAL TABLE	CrCl (mL/min)	Dosing Interval (H)
Greater than or equal to 60	24	24
21 to 59	48	48
Less than or equal to 20	Individualize	

Estimated CrCl: $\frac{140 - \text{age}}{7} = 0.011 \times \text{SCr} (\mu\text{mol/L})$
(x0.85 for females)

CEFTRIAXONE 2 g IV Q24H x 3 doses, then 1 g IV Q24H.

VANCOMYCIN _____ mg (20 mg/kg total body weight) IV Q_____H over 90 minutes according to the dosing interval table. Patient to be reassessed in 72 hours for vancomycin discontinuation (if clinically improved/stable with no documented or suspected gram positive infection).

CEFTRIAXONE 2 g IV Q24H x 3 doses, then 1 g IV Q24H.

VANCOMYCIN _____ mg (20 mg/kg total body weight) IV Q_____H over 90 minutes according to the dosing interval table. Patient to be reassessed in 72 hours for vancomycin discontinuation (if clinically improved/stable with no documented or suspected gram positive infection).

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Physician Signature: _____ Printed Name/PC: _____
Date/Time: _____

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Battling with PharmaCare

- Antifungal prophylaxis for transplant patients on steroids for GVHD
 - Fluconazole
 - Not a full benefit drug unless prescribed by BMT staff physician or PharmaCare Special Authority submitted
 - Voriconazole
 - Not a benefit drug unless PharmaCare Special Authority submitted for treatment of IA initiated in hospital
 - Posaconazole
 - Not a benefit drug, coverage considered for IA if intolerant or fail other therapies or for mucormycosis

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Are we effective communicators?

- 48 y/o male post-DCBT for ALL complicated by acute GVHD (gut) on prednisone
 - Steroid-induced DM on insulin NPH 17 units QAM

Pre-Supper Sugar <10 (<8)
↑ NPH dose by 2 units
every 2-3 days to target
Pre-Supper Sugar <10

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More Challenges Ahead...



"I don't think that's what the pharmacist meant when he said 'Take for two days and skip a day.'"

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