



## Cost-effective Management of *Clostridium difficile*-Associated Disease with Oral Vancomycin

Bruce Weiner, M.S., F.A.S.H.P.  
Vice President – Pharmacy  
VHA Performance Services  
Tampa, FL

### About VHA

*Committed to the success of not-for-profit, community-based health care providers*

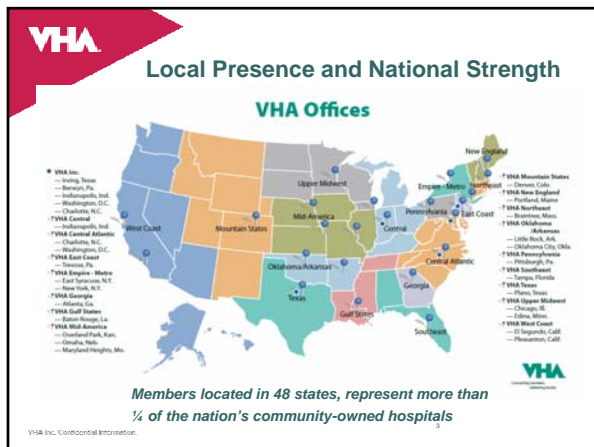
Founded in 1977 by 30 not-for-profit, community-owned hospitals, dedicated to providing health care to people regardless of their ability to pay for services

A health care alliance of more than 2,400 not-for-profit organizations

Today, we continue to:

- serve as a resource that connects members through networks on national, regional, and local levels
- enable health care providers to reduce costs and improve the quality of care delivered.

© 2009 VHA Inc. All rights reserved.



### *Clostridium difficile* Associated Disease Etiology, Signs & Symptoms

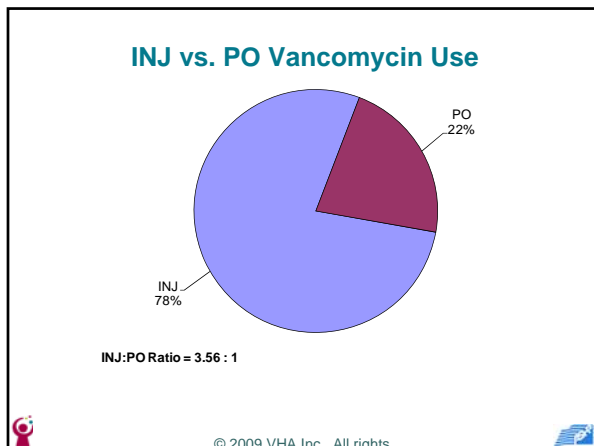
- ***Clostridium difficile***: anaerobic, spore-forming, gram negative bacillus
- **Signs & Symptoms**: diarrhea, abdominal cramping, leukocytosis, low-grade fever
- Most frequently occurs in the health care setting, including hospitals and long term care facilities.

### Treatment of *Clostridium difficile* Associated Disease (CDAD)

- Cessation of inciting antibiotics
- Antibiotics active against *Clostridium difficile*
  - Oral metronidazole
  - Oral vancomycin
- Electrolyte & fluid replacement

### *Clostridium difficile* Associated Disease Cost-effective treatment

- **Metronidazole** 500 mg PO three times a day or 250 mg PO four times a day X 10 – 14 days
- **Vancomycin** 125 mg PO four times a day X 10 – 14 days



### Management of *Clostridium difficile* Associated Disease – Annual Utilization

MEDICATION	COST/DOSE	DAILY DOSE	COST/DAY	ANNUAL COST	ANNUAL DAYS
VANCOIN HCL 250 MG PULVULE	\$ 29.46	250 MG PO QID	\$ 117.82	\$53,608.53	455
VANCOIN HCL 125 MG PULVULE	\$ 15.74	125 MG PO QID	\$ 62.97	\$5,982.17	95
METRONIDAZOLE 500 MG TABLET	\$ 0.11	500 MG PO TID	\$ 0.32	\$375.73	1167
METRONIDAZOLE 500 MG TABLET	\$ 0.17	500 MG PO TID	\$ 0.51	\$17.04	33
METRONIDAZOLE 250 MG TABLET	\$ 0.05	250 MG PO QID	\$ 0.18	\$13.50	75
VANCOMYCIN 1 GM VIAL	\$ 1.34	250 MG PO QID	\$ 5.35	\$2,434.25	455
VANCOMYCIN 500 MG VIAL	\$ 0.70	125 MG PO QID	\$ 2.78	\$264.10	95
			ANNUAL SAVINGS =	\$56,892.35	

*Use of the injectable vancomycin, administered orally, in place of the expensive Vancocin Pulvule, will result in an annual savings of ~ \$57,000.*

© 2009 VHA Inc. All rights reserved.

- ### Vancomycin Hydrochloride 50 mg/ml Oral Solution
- Vancomycin HCl 10 g inj.            1 vial
  - Saccharin Sodium                    0.4 g
  - Stevia                                      0.4 g
  - Glycerin                                 80 ml
  - Raspberry concentrate            0.2 ml
  - Distilled water                        qs    200 ml
- Stability = 14 days  
○ Keep refrigerated
- © 2009 VHA Inc. All rights reserved.

- ### *Clostridium difficile* Associated Disease Conclusions
- Metronidazole is the least expensive medication available for the treatment of CDAD.
  - When vancomycin is used for the treatment of CDAD, the injectable form provides a cost effective alternative to the more expensive capsule formulation
- © 2009 VHA Inc. All rights reserved.

### *Clostridium difficile* Associated Disease References

- Halsey J. Current and future treatment modalities for *Clostridium difficile*-associated disease. Am J Health-Syst Pharm. 2008; 65:705-15.
- McMaster-Baxter NL and Musher DM. *Clostridium difficile*: Recent epidemiologic findings and advances in therapy. Pharmacotherapy 2007;27(7):1029-1039
- Surowiec D, Kuyumjian AG, Wynd MA, et al. Past, present, and future therapies for *Clostridium difficile*-associated disease. Ann Pharmacother 2006; 40:2155-63.
- McElhiney LF. Compounding for manufacturer backorders and discontinuations: "Oh No! Not Again!". Internat J Pharmaceutical Compounding; 2009;13(1):20-25.

© 2009 VHA Inc. All rights reserved.