

What is the Role of Combination Therapy in Severe CAP and in VAP?  
Richard G. Wunderink MD  
Chicago, IL

Rationales for Combination Antibiotic Therapy

- Avoid inappropriate therapy
- Synergy
- Avoiding development of resistance on therapy
- Avoid toxicity
- Affect pathogenicity of microorganism
- Host factors

Empirical Combination Therapy

- For CAP, coverage of atypical pathogens is associated with improved outcomes
  - Consistently found in large administrative databases
  - Variable effect from year to year suggests coverage of atypicals most likely explanation
- For VAP, combination therapy is critical to avoid inappropriate initial therapy
  - Very broad spectrum of activity needed for suspected MDR pathogens
  - No value if low risk of MDR pathogens
  - Value once etiology known less clear

Combination Therapy for Specific Pathogens

- Bacteremic Pneumococcal Pneumonia
  - Consistent finding in most severely ill
  - Occult resistance possible
  - Most likely effect on host
- Community-acquired MRSA
  - Virulence factors critical in pathogenesis
- *Pseudomonas aeruginosa*
  - Most controversial
  - Combination no better than monotherapy
  - Monotherapy is inadequate