Background
Candida is the third most common cause of late onset sepsis in VLBM infants with mortality rates of 10-15%. Candida bloodstream infection (BSI) increases hospital days and cost. When results of RCT and retrospective cohort studies are combined (studying 2,956 VLBW infants), there was a statistically significant decrease in death in VLBW infants receiving fluconazole prophylaxis.

Safety and Efficacy of Fluconazole
Fluconazole impairs adherence of Candida to endothelial and epithelial surfaces, decreases biofilm formation in central venous catheters (CVCs), enhances killing of Candida sp through direct eradication and improved host defense response. Known side effects are reversible elevations in liver enzymes and bilirubin. No RCT or retrospective study shows significant or long term adverse effects from prophylaxis.

Incidence of Candida BSI
Children’s Hospital Oakland, Alta Bates, and John Muir have a Candida BSI rate of less than 1% in infants less than 1,000g (as of June 2010).

Treatment
Consider treatment with fluconazole prophylaxis for infants less than 1000 grams if an infant has 3 of the following risk factors:
- Candida colonization
- Use of broad spectrum antimicrobials (especially cephalosporins) for 10 or more days
- Central venous catheter placement
- Use of histamine blockers
- Use of steroids (no literature to support this although routinely listed as a risk factor)
- Recent abdominal surgery

Dosing
Fluconazole 3mg/kg/dose IV administered twice weekly for 6 weeks or until the CVC is removed. If infant has a positive blood culture for Candida, switch to amphotericin.

Monitoring
Check liver function tests weekly.

References