Reviewer’s report

Title: The epidemiology of bacterial vaginosis in relation to sexual behaviour

Version: 1 Date: 17 February 2010

Reviewer: Caroline Mitchell

Reviewer’s report:

This review paper addresses a critical question in the ongoing debate about the etiology of bacterial vaginosis: is the condition sexually transmitted? The authors review evidence for sexual transmission in general, for male to female transmission, for female to male transmission, for female to female transmission and for non-penetrative sexual transmission. Overall it is a well referenced article, and has chosen the appropriate areas of research to review.

Discretionary revisions:

1. The biggest deficiency in this paper is the focus on G. vaginalis, a bacterium for which there is the most data, but which is found both in women with BV and women without BV. The authors do not address this until the conclusion, and even then, only in passing. Even if data is lacking, the debate about the centrality of G. vaginalis to the pathogenesis of BV should be addressed in the introduction to acknowledge that while genital colonization with G. vaginalis may be a marker for BV, it is not uniquely responsible for pathogenesis and as such, the patterns of sexual transmission for G. vaginalis may not be the same as those for BV.

2. Final paragraph of page 7, the authors assert that in evaluation of efficacy of treatment of male partners to reduce the risk of BV, assessment of clearance of G. vaginalis would be necessary – this is true but not complete. Assessment of several BV associated bacteria would be ideal, since no single pathogen (not even G. vaginalis) has been identified as both necessary and sufficient to cause the syndrome.

Minor essential revisions:

1. In the first line of the discussion section of the abstract, G. vaginalis carriage and BV are described as “common” among adolescents. This is too strong a characterization.

2. In the first paragraph of the introduction the term “diminished colonization resistance” is used, which is awkward and unclear. The sentence could be rewritten as “In recent years BV has emerged as a global issue of concern due to its association with increased risk of acquisition of other STI’s such as HSV, HIV and Trichomonas.”

3. In the 9th line of the introduction, ascending infection with BV-related pathogens is described as “implicating” complications, which is both incorrect English and scientifically still not totally proven. Again, a statement such as “Vaginal colonization with BV-associated bacteria has been associated with
ascending infections such as...” would be more appropriate.

4. In the second line of the second paragraph of the introduction, antibiotic treatment is described as “cumbersome” – which seems inappropriate given that the standard antibiotic treatment regimen is only a week long. Ineffective might be a better characterization.

5. The second paragraph of the section “Bacterial vaginosis and sexual behavior” is redundant and unnecessary and should be deleted.

6. In the first paragraph of the section “Observations on the transmissibility of BV” the phrase “volunteering women” is awkward English and would be better stated as “women” or “female volunteers.”

7. In the second paragraph of the section “Observations on the transmissibility of BV” the G. vaginalis biofilm is described as the “ultimate microbiologic correlate of BV” which is scientific hyperbole and not supported by data – this should be deleted.

8. Final paragraph on page 6, 3rd line, has the word “then” which should be “than”

9. Final paragraph of the section “Observations...in sexually inexperienced women” states that a study found a twofold higher prevalence of G. vaginalis in women who reported no sexual activity, which appears to be a mistake, since those women had a prevalence of 17% and the comparator group 34%.

10. End of the top paragraph of page 15 says that the presence of L. gasseri was found to “concur and increased BV risk.” This should be either “confer” or “was associated with”

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.