BACKGROUND

Genitourinary tract infections are responsible for a sizable portion of potentially preventable preterm births and other complications in pregnancy. Adverse outcomes related to these infections include: preterm births, preterm premature rupture of the membranes, amniotic fluid infection, postpartum intrauterine infections (endometritis), pyelonephritis, sepsis and maternal death. In addition to preterm birth and amniotic fluid infections, infants are at risk for congenital infection, conjunctivitis, pneumonia, neonatal sepsis, mental retardation, cerebral palsy, and fetal and infant death. Research suggests that infection and inflammation are directly related to at least 40% of preterm birth.[1,2] Before 30 weeks gestation, there is evidence that between 60 and 80% of births are related to bacterial infection.[3,4]

Gaps in Care

- Women are not screened at the recommended intervals during pregnancy
- Screening tests employed lack optimal sensitivity and specificity for the condition
- Treatment is delayed
- Recommendations for partner treatment and tests of cure are not followed

Easily identifiable reproductive tract infections (RTIs) including **gonorrhea**, **chlamydia**, **bacterial vaginosis**, **urinary tract infections**, and asymptomatic **bacteriuria** (UTI/ASB) are major preventable causes of potential poor birth outcomes and their sequelae. Literature and guidelines from both the American College of Obstetrics and Gynecology and the Centers for Disease Control and Prevention support the rationale for improving pregnancy outcomes by screening and treating infection during pregnancy. Results from research trials suggest that **one preterm birth can be prevented for every 21 women** who receive treatment for asymptomatic bacteriuria, every **10 women** who receive treatment for chlamydia or bacterial vaginosis, and for every **3 women** treated for gonorrhea.[5,6,7,8] Yet, gaps exist between recommendations and actual practice. These gaps result when women at risk are not screened at recommended intervals during pregnancy, when the screening tests employed lack optimal sensitivity and specificity for the condition, when treatment for positive results is delayed, and when recommendations for partner treatment and tests of cure are not followed.

The impact of potentially preventable infection related adverse pregnancy outcomes are shown in Table 2.

Table 2 Estimated impact of various infections on adverse pregnancy outcomes[a] through their effect on preterm birth.[9] (Assuming 4,000,000 births per year)

Maternal infection/ organism	Approx. maternal prevalence	Mothers infected (no.)	Estimated increase in PTB [a]	Estimated excess PTB[b] (no.)	Adverse outcomes linked to PTB[c]	
					Perinatal death (no.)	Neurologic sequelae (no.)
Bacterial vaginosis	20.0%	800,000	2X	80,000	4000	4000
Chlamydia	5.0%	200,000	2X	20,000	1000	1000
Gonorrhea	1.0%	40,000	3X	8,000	400	400
Syphilis	0.12%	4,800	2X	480	24	24
Trichomonas	2.0%	80,000	1.3X	2,400	120	120

[a] Based on best available data in untreated women
[b] Assuming a baseline preterm rate of 10%
[c] Assuming 5% deaths and 5% neurologic sequelae