The rate of serious infections in women who had medical abortions decreased by 93% after a protocol change from vaginal to buccal misoprostol combined with routine antibiotics, based on data from more than 200,000 women.

From 2001 through March 2006, Planned Parenthood health centers in the United States managed medical abortions with a combination of oral mifepristone followed by 800 mcg of buccal misoprostol 24-48 hours later, said Mary Fjerstad of Chapel Hill, N.C., a nurse practitioner with Planned Parenthood.

But at the end of March 2006, in response to several deaths from bacterial infections after medical abortions, the organization switched its protocol from vaginal to buccal misoprostol (200 mg mifepristone followed by 800 mg buccal misoprostol 24-48 hours later), in addition to either routine antibiotics or screening and treatment for chlamydia. In 2007, Planned Parenthood required all its centers to provide antibiotics for all patients undergoing medical abortions (N. Engl. J. Med. 2009;361:145-51). In this study, Ms. Fjerstad and her colleagues reviewed data from 227,823 patients undergoing medical abortions.

The data were divided into four time periods based around changes in protocol. In period 1 (Jan. 1, 2005, through March 31, 2006), the health care centers used vaginal misoprostol and standard antiseptic measures for fetuses through 63 days' gestation.

In period 2 (April 1, 2006, through June 30, 2007), they used buccal misoprostol for fetuses through 56 days' gestation (or, rarely, oral misoprostol through 49 days' gestation); some centers administered doxycycline to all patients, while others screened for sexually transmitted infections and treated them.

In period 3 (July 1, 2007, through Dec. 31, 2007), the health care centers used vaginal misoprostol and standard antiseptic measures for fetuses through 63 days' gestation.

In period 4 (Jan. 1, 2008, through June 30, 2008), the centers used buccal misoprostol and routine doxycycline for fetuses through 63 days' gestation. The doxycycline regimen, when used, was 100 mg orally twice a day for 7 days. A total of 92 serious infections were reported in the study population. Of these, most occurred in period 1 (67) and period 2 (20). Two serious infections occurred in period 3, and three occurred in period 4. The relative decrease in infections was statistically significant between periods 1 and 4. In addition, the rate of serious infection decreased significantly between periods 1 and 2 and between periods 2 and 3. The change in serious infection rate was not significant between periods 3 and 4.

"Because there was no significant increase in the rate of serious infection from period 3 to period 4, it is unlikely that a decline in the maximum gestation age from 63 days in period 1 to 56 days in period 2 explains the decline over time in the rates of serious infection observed in both groups," the researchers noted.

The patients also were evaluated in two groups based on whether they received antibiotics only if they tested positive for a sexually transmitted infection (group 1) or received antibiotics as part of the treatment protocol (group 2). The decline in serious infection rates was significantly greater in group 2, compared with group 1 between periods 1 and 2 (93% vs. 61%), the researchers noted.

The results were limited by the retrospective nature of the study and the lack of long-term follow-up data, they said. One of Ms. Fjerstad's coauthors, Dr. Vanessa Cullins, was also employed by Planned Parenthood at the time of the study. No other conflicts were reported.

Medical Abortion Infections Lowered by 93%