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PREFACE

The United States has the highest rates of sexually transmitted diseases (STDs) in the developed world. The majority of these infections are silent or cause symptoms so indolent that the victim does not seek health care. Despite the absence of overt symptoms, however, disease progression occurs. Chronic sequelae of STDs are associated with significant morbidity, mortality, and health care costs.

For the most part, the impact of these infections on reproductive health and quality of life is under-appreciated. In some cases, the link between STDs and chronic disease is not understood (e.g., only recently has human papillomavirus infection been recognized as the cause of cervical cancer). Ironically, sometimes the link is known but, for cultural or social reasons, it may not be acknowledged (for example, a woman with pelvic inflammatory disease [PID] may not be told that sexually transmitted gonorrhea and chlamydial infection are the most common causes of primary PID). Women and their infants bear the burden of STDs disproportionately. In part this reflects biological, gender-based differences, such as the anatomic vulnerability of the female genital tract. This burden also reflects social and cultural differences, such as a lower economic status of women. However, as parents, men and women both are particularly vulnerable in one aspect of reproductive health: the ability to conceive and bear healthy children. Adverse outcomes of pregnancy are costly; the emotional and financial burden can be enormous for the family and for the health care system.

Some STDs are familiar causes of adverse pregnancy outcomes as reflected by neonatal health: congenital syphilis, neonatal herpes, recurrent laryngeal papillomatosis, ophthalmia neonatorum, and congenital HIV infection are examples. However, one of the most neglected research areas is the role of STDs in first- and second-trimester miscarriage, stillbirth, low birth weight, premature rupture of membranes, and premature birth. Primarily because we have not conducted extensive research in this area, we don't know what we don't know. In other words, we haven't found what we haven't sought. For example, *Chlamydia trachomatis* was first isolated from the genital tract of humans in 1964, yet the role of chlamydial infection in ectopic pregnancy has only emerged in the present decade. There are

many unanswered questions about chlamydial infection and pregnancy—for instance, how might undiagnosed, untreated chlamydial endometritis affect conception? The emerging link between STDs and adverse pregnancy outcomes offers exciting possibilities for prevention of these sequelae through primary and secondary prevention of STDs both before and during pregnancy.

The STD Program Staff of the National Institute of Allergy and Infectious Disease (NIAID) and the Centers for Disease Control and Prevention (CDC) National Center for HIV, STD and TB Prevention have worked together on an initiative for STDs and adverse pregnancy outcomes. The ongoing collaboration began in 1994 with a workshop that brought together a group of experts to review the existing knowledge on STDs and pregnancy and to provide insight about a research agenda. The collaboration has also produced this monograph, the purpose of which is to focus attention on this problem and to encourage scientists with diverse backgrounds to work together on multidisciplinary research on STDs and adverse outcomes of pregnancy.

The chapters of this book summarize the existing knowledge about STDs and adverse outcomes of pregnancy, identify gaps in knowledge, and highlight potential areas of new research. Experts have written chapters on disease etiology, including epidemiology, microbiology, and clinical aspects; veterinary diseases and laboratory animal models for research; the biology of host susceptibility to infection; and methodology for perinatal research.

We owe thanks to many people who have helped with this effort. We wish to thank the investigators/authors; they are pioneers in this field and deeply committed to this problem. Special thanks go to the STD Program Staff at the CDC for help in organizing the workshop, and to the STD Program Staff at the NIAID for compiling this volume. The staff at ASM Press have been extraordinarily helpful and patient, and their efforts are truly appreciated.

Finally, to those who care enough to read this volume, we thank you in advance for your interest, support, and work. We recognize that your efforts to fund and carry out the research, to write the papers, to change policy, and to legislate change will move us closer to our collective goal: having and raising healthy children. It is the most important thing that we do.

The Editors

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