Editorial

Prevention of Rubella: Missed Opportunities

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The goal of rubella vaccination programs is to protect future progeny from intrauterine and congenital rubella (abortion, stillbirth, and congenital rubella syndrome [CRS]). Experience in the United States and northern Europe shows that substantial progress can be made in preventing the ravages of rubella acquired during pregnancy.[1,2] Nevertheless, administrative gaps and some unforeseen demographic and biological factors have become causes for concern in preventing rubella during pregnancy

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Ewert et al have been instrumental in closely examining an outbreak of rubella and CRS occurring in 1991 in southern California.[3] In a classic epidemiologic analysis, they used this natural experiment to probe for weaknesses in our approaches to rubella prevention. They demonstrated that more than half (57%) of these cases could have been prevented if opportunities for rubella testing and vaccination had not been missed previously. Fully 38% of infected mothers giving birth to congenitally infected newborns were never married; an additional 10% had common-law marriages. None of these women received premarital testing. Of married women, approximately half were married in Latin America, where testing/vaccination is voluntary. In the absence of effective herd immunity, mandatory school rubella vaccination programs ("no shots, no school") did not protect the 34% of mothers who had not attended school in California. Immigration from countries where rubella vaccination is not widely practiced and the reduced circulation of wild rubella in North America also increase susceptibility among women of childbearing age.

This investigation also revealed eight women who had been determined to be rubella seronegative previously, but who were not vaccinated following prior pregnancies. None of the infected women who had received abortion services had rubella testing or vaccination. A prior analysis of a mid-1980s CRS outbreak in New York demonstrated similar findings.[4]

Carrying forward their southern California investigation, the authors conducted a questionnaire-based study to examine testing and vaccination practices on obstetrical and abortion providers in southern California.[5] All hospitals routinely tested for rubella during postnatal care. However, an astonishing 22 (39%) of 56 responding hospitals had no postpartum rubella vaccination policies. Services on which policies were in place tended to be those with full-time staffs and/or residency programs. This all-too-common failure serves as an alarm to reinvigorate and reinitiate vaccine protocols wherever babies are delivered, whether in traditional or nontraditional settings. Care providers need to ensure that testing and vaccination services are provided for rubella as well as hepatitis B virus. Provision of these services should become standard measures for the adequacy of pregnancy care.

Of responding services that provided abortion, only 2% provided rubella screening and vaccination. Despite much expert advice, including the recom-

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93-ED-129. McGregor JA. Prevention of rubella: missed opportunities. Infect Control Hosp Epidemiol *1993;14:511-512.*

mendations of the Advisory Committee on Immunization Practices (ACIP),[2] rubella prevention services are made available only rarely to women receiving abortion. Clearly, abortion providers should make these services available.

Other healthcare settings also are not being used for rubella prevention. These include sexually transmitted disease clinics, other adolescent, gynecologic, and medical care settings, and child daycare providers ("no shots, no care").[3,6]

Biologic issues with rubella vaccination continue to demand attention. What proportion of CRS occurs after prior successful maternal vaccination?[7-9] How often does reinfection occur, and how frequently is it associated with embryonic or fetal disease? What are the determinants of prolonged effective immunity? An increasing number of women now conceive and bear children over age 35; does effective immunity persist from childhood into middle age? How frequent are arthritis or other presumed sequelae of persistent rubella vaccine infection?[8,9] Do risks of such sequelae need to be explained completely, prior to vaccination? New technologies including PCR and advanced serologic methods such as antibody avidity may help us continue to unravel these persistent questions.[10]

These and other rubella conundrums will yield to future research. The immediate challenge is to address rationally and effectively the absence of medical and nursing policies regarding rubella, as spotlighted by Ewert et al. Routine administration of rubella vaccines can virtually eliminate congenital rubella in large populations. Rubella vaccine policies and practices must be re-energized and implemented effectively so that this tool can reduce occurrences of rubella in childbearing women to a practicable minimum.

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