Local Acts

PERINATAL HEPATITIS B PREVENTION: ADAPTING PUBLIC HEALTH SERVICES TO MEET THE CHANGING NEEDS OF A DIVERSE COMMUNITY

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The Hennepin County Perinatal Hepatitis B Prevention Program (Perinatal Hep B Program) in Minnesota provides case management for pregnant women who have been identified as being surface antigen positive for hepatitis B (HBsAg positive). Most of the women served are refugees and immigrants. Case management is challenged by many obstacles to health-care access as well as difficulty locating resources to meet basic needs.

To address these issues and better serve the families' needs, the Perinatal Hep B Program has adapted services and expanded outreach efforts. The goal of these changes is to address basic needs first, so the more complicated medical needs can become the focus. Once families' basic needs are met, parents are more apt to follow up with visits to the clinic for themselves and their infants. This article focuses on Hennepin County Public Health's initiatives and successes working in our community to improve perinatal hepatitis B outcomes.

BACKGROUND

Hepatitis B is a liver disease caused by a virus and, if left untreated, can progress to cirrhosis of the liver and liver cancer. Perinatal transmission of the hepatitis B virus (HBV), from mother to infant at birth, is the most common mode of transmission worldwide. HBV is 50 to 100 times more infectious than human immunodeficiency virus (HIV),[1] and according to the Centers for Disease Control and Prevention (CDC), high endemic areas of the world include sub-Saharan Africa, Southeast Asia, and Eastern Europe.[2]

In 1991, CDC implemented and funded a program focusing on preventing perinatal transmission of hepatitis B in all 50 states through a grant process with state health departments. In Minnesota, the Minnesota Department of Health (MDH) forwards funding to local public health departments to provide direct services to the community. Hennepin County supplements this funding to meet program needs. Program guidelines include case management services, contact investigation of all household members, and monitoring immunizations and titers for infants who have been exposed.

The Hennepin County program builds upon the basic guidelines established by CDC and MDH. The Perinatal Hep B Program provides guidance, education, and support to women who are pregnant and HBsAg positive. Since 2003, the number of pregnant HBsAg positive women has increased from 120 to 150 women per year. There has been increased identification of women co-infected with HIV and hepatitis B, as well as increased morbidity and mortality. Since 2007, specialists have noted changes in the disease presentation that have created changes in disease management and the need for greater collaboration within the medical community. The Perinatal Hep B Program has evolved since 2003 to meet the continuing changes in the disease and in our community.

INITIATIVE SUMMARY

The Perinatal Hep B Program has changed dramatically in recent years to meet the needs of a growing refugee population. The families' evolving needs require that our program adapt to address their ever-changing circumstances. Most of the refugees have come from areas of the world in which hepatitis B is endemic in the population. While the number of Hmong families has stabilized, the number of families from sub-Saharan Africa has grown significantly. Recently, families from Myanmar (formerly Burma), Tibet, China, and Russia have also relocated to the St. Paul/Minneapolis metropolitan area. Eighty-four different languages are spoken within Hennepin County, requiring interpreters who have been medically trained. Challenges still remain due to different dialects. The Hennepin County Office of Multicultural Services assists and supports families in navigating social services and the medical community.

The Perinatal Hepatitis B Public Health Nurse (Perinatal Hep B Public Health Nurse) meets with families at their clinics, which has proven to be very effective. Many cultural myths and stigmas about the disease need to be acknowledged in care plans. In an effort to provide education about hepatitis B and dispel some of the myths regarding the disease, staff has met with

elders in the Lao, Somali, and Ethiopian communities, knowing that many people within these communities seek the counsel of their elders.

The Perinatal Hep B program addresses the needs of children who are at risk for developing hepatitis B due to exposure at birth. From 2002 to 2007, the number of infants born to HBsAg positive women has increased. The program served about 600 children in 2007, up from nearly 500 children in 2002. The women served are 14 to 50 years of age.

Minnesota clinics are required to report pregnant HBsAg positive women to MDH to prevent the transference of hepatitis B during pregnancy and delivery, and to facilitate prenatal monitoring and appropriate care. Hennepin County receives referrals from MDH, Hennepin County Public Health Clinic, local epidemiologists, and area medical clinics when a woman is identified as being pregnant and HBsAg positive. The Perinatal Hep B Public Health Nurse conducts contact investigation concerning the hepatitis B status of all household members, including partners, older children who may also be foreign-born, and extended family members. This number ranges from 500 to 1,000 people per year. Family members with unknown hepatitis B status are referred for serology and/or immunizations.

For the Perinatal Hep B Public Health Nurse, medical case management involves education and coordination of care for women prenatally as well as postpartum. For the public health nurse, this includes coordinating care with obstetric clinics, pediatrics, family practices, and liver specialists. Referrals for women who are co-infected are also made to HIV specialists to meet their specific needs. Infants are followed from birth through serology testing at 1 year of age. For an infant who has been exposed to hepatitis B, the hepatitis B vaccine is a treatment rather than prevention. These infants receive hepatitis B immune globulin and the first hepatitis B vaccine at birth. Follow-up hepatitis B vaccines are recommended at two months, four months, and six months of age, with some variation based on the type of combination vaccine that is given. Completion of a series of four hepatitis B immunizations and serology is the targeted outcome. The Perinatal Hep B Public Health Nurse sends letters to parents and clinics reminding them of the need for upcoming immunizations.

Titers are conducted for these infants to ensure immunity to hepatitis B. Titers are recommended between nine and 15 months of age, with most titers being drawn at 1 year of age to coincide with other laboratory tests. Some families believe that taking blood from an infant will cause the child to become ill. Education of families and coordinating care with the families and the clinics are key elements to overcoming barriers and maintaining healthy families. This information and support is provided to the families by the Perinatal Hep B staff.

Within some cultures, families believe that if a child is given too many immunizations, it will thin the child's blood and make the child ill. Thus, some parents only allow two immunizations to be given during a visit. Providers must therefore choose which immunizations to give at a well-child visit. Parents are encouraged to return in six weeks for additional immunizations, but there is poor follow-through for the follow-up visit. As a result, many children fall behind on all of their immunizations. To address this need, the Perinatal Hep B Program partners with Baby Tracks, a Hennepin County immunization tracking program that supports parents of 0- to 2-year-old children in completing their children's immunizations.[3]

Perinatal Hep B staff members take a syndemic[4] approach when working with families. By breaking down barriers to health care, staff members help vulnerable families get their children into clinics for immunizations and well-child examinations, and monitor general health as well as risks for hepatitis B, thereby decreasing morbidity and mortality associated with hepatitis B. Taking into account Maslow's hierarchy of needs,[5] once the families' basic needs are met, they can follow through on other tasks, such as clinic visits for themselves and their children. We assist families with finding a medical home appropriate to their medical needs and life circumstances. Families are initially referred to community agencies that can assist them with applying for Medicaid, cash and food assistance, and the Women, Infants and Children (WIC) program, as well as with clothing, diapers, housing, interpreters, and transportation.

Our staff connects with mothers by phone and through literature that is sent to their homes. During the phone call, household members are screened for hepatitis B status, referred for vaccination or serology testing, and assessed for the family's broader needs. Historically, personal visits with families by public health nurses have taken place in the family's home. However, because of myths and stigma surrounding hepatitis B, having the Perinatal Hep B Public Health Nurse arrive at the home may start rumors and place the woman at risk of being ostracized from her community. In response to this, our Perinatal Hep B staff arranges client visits at the clinic, which is a safe, neutral environment. At the clinic visit, the Perinatal Hep B Public Health Nurse is able to meet with the provider, social worker, or mental health worker as well as the

family. Coordination of care is achieved at that time. Women receive consistent information from both their provider and Perinatal Hep B staff, which facilitates greater understanding of the disease. In addition, the parents are given gift cards (provided by MDH) as an incentive to bring their children to the clinic for vaccinations. The parents learn that the health-care providers and clinic staff are the primary sources of support for their families.

In Hennepin County, case management has evolved into greater collaboration between local public health and community partners, which eases the stress for families. This collaboration results in direct referrals to appropriate resources. We have established and cultivated new partnerships with community clinics, Baby Tracks, WIC, Child and Teen Check-Ups, Way to Grow, MDH, economic assistance (e.g., Temporary Assistance for Needy Families/Medicaid), liver specialists, epidemiology, Office of Multicultural Services, Refugee Health Task Force, ImmuLink (regional immunization registry), Sub-Saharan African Youth and Family Services in Minnesota, Northwest Hennepin Family Services Collaborative, Minnesota African Women's Association, Minneapolis Urban League, public health nursing, and social services. The result is more streamlined services, greater access to medical and social services, better knowledge about cultural traditions, increased education about hepatitis B, reduced duplication of services, and decreased morbidity and mortality. This, in turn, supports and empowers families and provides for necessary life-sustaining care.

Since 2007, liver specialists have noted changes in the disease presentation that have led to changes in disease management and the need for greater collaboration within the medical community. It is now recommended that pregnant women be referred to liver specialists during pregnancy due to new treatment modalities. We also collaborate with the HIV section of MDH, as more co-infected women are identified.

OUTCOME AND EVALUATION

The program's success can be measured in vaccine and serology completion rates for infants rising from 92% in 2002 to an all-time high of 100% in 2007. The rates of mothers referred to liver specialists for follow-up during pregnancy increased from 20% in 2002 to 75% in 2007. The number of at-risk women and their children/families who have a medical home has also increased. Follow-through of sexual partners and other household members referred for primary care rose from 20% in 2002 to 50% in 2007. Collaboration with community partners and clinics has improved. Enhanced working relationships with epidemiology at local public health departments and MDH have been established to address the shift in disease presentation. Enrollment of at-risk newborns into the Baby Tracks program has risen. Furthermore, clinics and community partners have strengthened their relationships and continue to expand to accommodate evolving needs.

LESSONS LEARNED AND NEXT STEPS

The Perinatal Hep B Program staff encourages women to manage their ongoing medical needs. The Perinatal Hep B Public Health Nurse helps women schedule initial appointments with their providers. At the women's request, our Perinatal Hep B program staff meets with women at their liver specialist appointments as well as prenatal appointments. It is crucial to refer women to a liver specialist while they are still covered under the Medicaid program for pregnant women. The response from providers has been very favorable. We are also working with community partners to assist with extending Medicaid coverage for those who are eligible.

Families are experiencing greater difficulty meeting their basic needs and are more likely to follow up with clinic visits for themselves and their infants once those needs are met. Increased collaboration with social service agencies helps this effort, and allows the Perinatal Hep B staff to focus on providing medical education and addressing health-care needs. Women have voiced their appreciation of services that not only support them but their whole family as well.

CONCLUSION

It is expected that the number of pregnant HBsAg positive women will continue to increase, as will the complexity of their needs. Ongoing education is necessary as more refugees arrive from different countries. Daughters of refugees, who arrived in the U.S. as children, are reaching childbearing age, thereby adding to the number of pregnant HBsAg positive women. Outreach efforts with various community groups will continue as the need for education evolves and grows. Greater collaboration with HIV organizations will continue as more co-infected women are identified. Throughout these changing circumstances, the Perinatal Hep B Program will continue to evolve and adapt to meet these families' health-care needs, while seeking additional outside resources to assist with their other basic needs.

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