

2018 Model Practices

Applicant Information

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Size

Select a size:

- Small (0-50,000) Medium (50,000-499,999) Large (500,000+)

Practice Categories

Model and Promising Practices are stored in an online searchable database. Applications may align with more than one practice category. Please select all the practice areas that apply.: *

- | | | | | |
|---|---|---|---|--|
| <input type="checkbox"/> Access to Care | <input type="checkbox"/> Advocacy and Policy Making | <input type="checkbox"/> Animal Control | <input type="checkbox"/> Coalitions and Partnerships | <input type="checkbox"/> Communications/Public Relations |
| <input type="checkbox"/> Community Involvement | <input type="checkbox"/> Cultural Competence | <input type="checkbox"/> Emergency Preparedness | <input type="checkbox"/> Environmental Health | <input type="checkbox"/> Food Safety |
| <input type="checkbox"/> Global Climate Change | <input type="checkbox"/> Health Equity | <input type="checkbox"/> HIV/STI | <input checked="" type="checkbox"/> Immunization | <input checked="" type="checkbox"/> Infectious Disease |
| <input type="checkbox"/> Informatics | <input type="checkbox"/> Information Technology | <input type="checkbox"/> Injury and Violence Prevention | <input type="checkbox"/> Marketing and Promotion | <input checked="" type="checkbox"/> Maternal-Child and Adolescent Health |
| <input type="checkbox"/> Organizational Practices | <input type="checkbox"/> Other Infrastructure and Systems | <input type="checkbox"/> Primary Care | <input checked="" type="checkbox"/> Quality Improvement | <input checked="" type="checkbox"/> Research and Evaluation |
| <input type="checkbox"/> Tobacco | <input type="checkbox"/> Vector Control | <input type="checkbox"/> Water Quality | <input type="checkbox"/> Workforce | <input type="checkbox"/> Conference Theme: Unleashing the Power of Local Public Health |

Other::

Title: Innovative Strategy to Increase identification of Infants born to Chronic Hepatitis B Mothers. Organization: Houston Health Department State: TX

Is this practice evidence based, if so please explain.:

The United States Preventive Services Task Force (USPSTF) recommends Hepatitis B Virus (HBV) screening for everyone at high risk of chronic infection, including people born in HBV endemic countries, and all pregnant women during the first trimester of pregnancy (USPSTF, 2015). In addition, the Advisory Committee on Immunization Practices (ACIP) recommends postexposure immunoprophylaxis, consisting of hepatitis B immunoglobulin and the first dose of hepatitis B vaccine within 12 hours of birth, followed by completion of the hepatitis B vaccine series and a post serologic testing (CDC, 1988) for all infants born to HBsAg positive women. Scientific evidence showed that without postexposure immunoprophylaxis, approximately 40% of infants born to HBV-infected mothers in the United States will develop chronic HBV infection, approximately one-fourth of whom will eventually die from chronic liver disease. These recommendations are based on strong evidence and receive rating of 4 out of 4, meaning they are based on “systematic reviews of published intervention evaluations or studies that have evidence of effectiveness, feasibility, reach, sustainability, and transferability” (Healthy People 2020, 2017). Finally, these recommendations were endorsed by American Academy of Pediatrics, American Academy of Family Physicians, and the American Congress of Obstetricians and Gynecologists. The CDC policy and practices survey and the medical abstraction tools were adapted and used to collect data.

Winnable Battles

To keep pace with emerging public health challenges and to address the leading causes of death and disability, CDC initiated an effort called Winnable Battles to achieve measurable impact quickly. Winnable Battles are public health priorities with large-scale impact on health and known effective strategies to address them. Does this practice address any CDC's seven Winnable Battles? If so, please choose from the following: *

- Food Safety HIV in the U.S. Nutrition, Physical Activity, and Obesity Tobacco Healthcare-associated Infections
- Motor Vehicle Injuries Teen Pregnancy None

Overview: Provide a brief summary of the practice in this section (750 Word Maximum)

Your summary must address all the questions below:

- Brief description of LHD- location, demographics of population served in your community
- Describe public health issue
- Goals and objectives of the proposed practice
- How was the practice implemented/activities
- Results/Outcomes (list process milestones and intended/actual outcomes and impacts.
 - Were all of the objectives met?
 - What specific factors led to the success of this practice?
- Public Health impact of practice
- Website for your program, or LHD.

750 Word Maximum

The Houston Health Department (HHD), serves approximately 2,303,482 residents as estimated in 2016 (US Census). Situated in southeast Texas, Houston is the fourth largest city in the United States. Houston's population is composed of: 26% White, 23% Black, 44% Hispanic, 6% Asian, and 1% other races. Houston has about 30.3% foreign-born residents. Even though HHD's jurisdiction mainly covers the City of Houston, some programs such as immunization are responsible for providing services to 4,664,389 residents of Harris County, the most populous county of Texas, and the third most populous in the United States. Established in 1840, HHD currently has approximately 1,220 full time employees, and 120 temporary employees with an annual budget of \$173.7M. The HHD became the first health department in Texas to be accredited in 2014 by Public Health Accreditation Board (PHAB), and is the second in a large U.S. city to earn a national accreditation. Public Health issue: Underreporting of Hepatitis B positive pregnant women is a big challenge for all Perinatal Hepatitis B Prevention Programs (PHBPP) funded by the Centers of Disease Control and Prevention (CDC). Each year, between 25,000 to 26,000 infants are estimated to be born to HBsAg positive mothers, but only half are identified by PHBPP for case management services. Project Description: The Houston PHBPP is funded by the CDC to provide case management services to HBsAg-positive women and their infants residing in the city of Houston. The PHBPP's goal is to identify at least 90% of infants born to HBsAg-positive mothers each year, yet the Houston program has only been able to identify 12.5% of the estimated lower limit of 301 births in 2013. With review of the program processes, and increased internal collaboration, the program identified 51 infants in 2014, and 76 infants in 2015 prior to this project implementation. In 2015, Houston PHBPP decided to conduct an evaluation project with an overarching goal to increase identification of HBsAg positive mothers and their infants. The project's objectives were (1) to examine hospital policies and practices in preventing perinatal HV transmission, (2) to quantify the underreporting rates of HBsAg-positive women and their infants by the Labor & Delivery (L&D) hospitals in Harris county, TX, and (3) to identify at least 25 additional cases.

Methodology: Prior to starting the assessment, Infection Control Practitioners (ICPs) from each of the 24 L& D hospitals located in Harris county, TX were contacted to identify responsible manager or director for the receipt of the survey and coordination of record review. In September 2016, an introductory email was sent to all identified managers with specific instructions on the assessment, detailing the objectives and assessment timelines; followed up with a survey monkey link. Upon completion of the policies and practices survey, a scheduling link was sent to the managers, with detailed instructions on the mother-baby pair records abstraction and review. From February 2016 through July 2016, Houston PHBPP staff conducted a retrospective mother-baby pair medical chart review of all HBsAg-positive women and a random sample of 50 HBsAg-negative women who delivered in 2014 and 2015. The infant's record was only reviewed if a live birth occurred. The identified births to HBsAg-positive women were then cross referenced to the list of infants case-managed by the prior to the assessments. From August 2016 through February 2017, the Houston PHBPP Coordinator met with each L&D to discuss findings and areas of improvements. Results: The average underreporting rate of Hepatitis B infections among L&D hospitals in Houston/Harris County was 40%. Four in 10 births to HBsAg-positive mothers were not reported in 2014 and 2015. Prior to the assessment, 51 and 76 infants were identified and case-managed in 2014, 2015 respectively. Infants identified during the assessment have led to additional identification of 71 infants in 2014, 82 infants in 2015. With our project's objective to identify 25% additional cases: 12.75 cases in 2014 and 19 cases in 2015, this resulted in 568% increase in 2014, and 431% increase in 2015.

Success Factors: Multiple phone calls, email reminders, flexibility of the HHD project team in scheduling the site visit, and follow up meeting to share findings and educate staff contributed to the success of this evaluation project. Public Health Impact: Effective reduction in perinatal HBV infection not only starts with screening, but also lies in timely and accurate reporting of the infected mothers to local health departments PHBPP for initiation of case management services, education, and treatment. Increased compliance among delivery hospitals, laboratories, and prenatal care providers is critical to reducing HBV related complication in pregnancy thus improve maternal and neonatal outcomes; and reducing morbidity/mortality among children born to HBsAg positive women. Website: <http://www.houstontx.gov/health/immunizations/index.html>

Responsiveness and Innovation

A Model Practice must be responsive to a particular local public health problem or concern. An innovative practice must be (1) **new to the field of public health (and not just new to your health department)** OR (2) **a creative use of an existing tool or practice**, including but not limited to use of an Advanced Practice Centers (APC) development tool, The Guide to Community Preventive Services, Healthy People 2020 (HP 2020), Mobilizing for Action through Planning and Partnerships (MAPP), Protocol for Assessing Community Excellence in Environmental Health (PACE EH). Examples of an inventive use of an existing tool or practice are: tailoring to meet the needs of a specific population, adapting from a different discipline, or improving the content.

- Statement of the problem/public health issue
- What target population is affected by problem (please include relevant demographics)
 - What is the target population size?
 - What percentage did you reach?
- What has been done in the past to address the problem?
- Why is the current/proposed practice better?
- Is current practice innovative? How so/explain?

- Is it new to the field of public health

OR

- Is it a creative use of existing tool or practice:

What tool or practice did you use in an original way to create your practice? (e.g., APC development tool, The Guide to Community Preventive Services, HP 2020, MAPP, PACE EH, a tool from NACCHO's Toolbox etc.)

- Is the current practice evidence-based? If yes, provide references (Examples of evidence-based guidelines include the Guide to Community Preventive Services, MMWR Recommendations and Reports, National Guideline Clearinghouses, and the USPSTF Recommendations.)

2000 Word Maximum

Please state the Responsiveness and Innovation of your practice: *

Target Populations: The target populations included 24 L&D hospitals located in Houston/Harris county, TX. Percentage reach: 100% of L&D hospitals were reached and assessed. What has been done in the past to address the problem? Even though annual evaluation of the L&D hospitals was conducted, the objective was to assess the policies and practices in preventing perinatal HBV transmission, and assess the hepatitis B birth dose coverage. The record review of all HBsAg-positive women who delivered in the L&D hospitals was new. Why is the current/proposed practice better? This practice is better because it helps not only to identify additional infants born to HBsAg-positive women, but it also ensures these infants receive appropriate case management services. Case management services of these high-risk infants have been shown to increase timely completion of hepatitis B vaccines series and serologic testing. In addition, the dissemination of the findings to each hospital resulted in change of reporting process, thus increase compliance. As evidence by, 144 infants have been identified and case-managed so far in 2016 without record review or visit to the hospitals. Is current practice innovative? How? Explain: This practice is innovative because it is new to the Perinatal Hepatitis B prevention program. The review of all HBsAg-positive women and their infants was the innovative part. During the assessment, a reporting form previously developed by the Texas Department of State Health Service was used to collect information on the HBsAg-positive mothers and their infants. This practice has been creative in adapting the CDC survey and medical record abstraction tools to identify causes of the gap in compliance of reporting HBsAg positive women to local health departments. It adds further knowledge to the issue of underreporting of infants born to HBsAg-positive women. Also, the USPSTF and the ACIP recommendations, in addition to Texas laws of screening all pregnant women for HBsAg, and reporting of HBsAg positive women were reiterated to the hospitals. More importantly, identification of these HBsAg positive women have generated appropriate referral to a specialist for further evaluation and will result in improved maternal health outcomes; the reduced transmission risk, increased compliance of ACIP recommendations of these high-risk infants will result in improved infant health outcomes. Is the current practice evidence-based? The United States Preventive Services Task Force recommends Hepatitis B Virus (HBV) screening for everyone at high risk of chronic infection, including people born in HBV endemic countries, and all pregnant women during the first trimester of pregnancy (USPSTF, 2015). In addition, the Advisory Committee on Immunization Practices (ACIP) recommends postexposure immunoprophylaxis, consisting of hepatitis B immunoglobulin and first dose of hepatitis B vaccine within 12 hours of birth, followed by completion of hepatitis B vaccine series and a post serologic testing (CDC, 1988) for all infants born to HBsAg positive women. Scientific evidence showed that without postexposure immunoprophylaxis, approximately 40% of infants born to HBV-infected mothers in the United States will develop chronic HBV infection, approximately one-fourth of whom will eventually die from chronic liver disease. These recommendations are based on strong evidence and receive rating of 4 out of 4, meaning they are based on "systematic reviews of published intervention evaluations or studies that have evidence of effectiveness, feasibility, reach, sustainability, and transferability" (Healthy People 2020, 2017). Finally, these recommendations were endorsed by American Academy of Pediatrics, American Academy of Family Physicians, and the American Congress of Obstetricians and Gynecologists. The CDC policy and practices survey and the medical abstraction form tools were adapted and used to collect data.

LHD and Community Collaboration

The LHD should have a role in the practice's development and/or implementation. Additionally, the practice should demonstrate broad-based involvement and participation of community partners (e.g., government, local residents, business, healthcare, and academia). If the practice is internal to the LHD, it should demonstrate cooperation and participation within the agency (i.e., other LHD staff) and other outside entities, if relevant. An effective implementation strategy includes outlined, actionable steps that are taken to complete the goals and objectives and put the practice into action within the community.

- Goal(s) and objectives of practice
- What did you do to achieve the goals and objectives?
 - Steps taken to implement the program
- Any criteria for who was selected to receive the practice (if applicable)?
- What was the timeframe for the practice
- Were other stakeholders involved? What was their role in the planning and implementation process?
 - What does the LHD do to foster collaboration with community stakeholders? Describe the relationship(s) and how it furthers the practice goal(s)
- Any start up or in-kind costs and funding services associated with this practice? Please provide actual data, if possible. Otherwise, provide an estimate of start-up costs/ budget breakdown.

5000 words maximum

Goal & objective of the practice: the overarching goal was to increase identification of HBsAg positive mothers and their infants thus increasing program efficiency and quality. The project's objectives were (1) to examine hospital policies and practices in preventing perinatal HV transmission, (2) to quantify the underreporting rates of HBsAg-positive women and their infants by the Labor & Delivery (L&D) hospitals in Harris county, TX, and (3) to identify at least 25 additional cases. Implementation: Prior to starting the assessment, Infection Control Practitioners (ICPs) of each of the 24 L& D hospitals were identified, and a contact information sheet was either email or faxed to them. The information requested included the name, phone number, email, and fax number of the medical records, L& D, nursery, pharmacy, laboratory, infection control manager/director. The ICPs were also asked to specify the appropriate person to receive and complete the survey and to coordinate on-site record review. In September 2016, an introductory email was sent to all managers with specific instructions on the assessment, detailing the objectives and assessment timelines; followed by a survey monkey link. The policies and practices survey adapted from CDC assessed the L& D practices on maternal HBsAg screening, documentation, postexposure immunoprophylaxis treatment and documentation to the infant, hepatitis B birth dose to all infants born to HBsAg negative mothers and documentation. Upon completion of the policies and practices survey, a scheduling link was sent with detailed instructions on the maternal-infant paired records abstraction and review. Each hospital was asked to pull all HBsAg positive mother-baby records, in addition to 10 mother-baby pair records per month of HBsAg-negative women who delivered in their facilities from January 2014 through December 2015. From February 2016 through July 2016, the program staff conducted a retrospective mother-baby pair medical chart review of all HBsAg-positive women submitted by the hospitals, and a random sample of 50 mother-baby pair records were selected for review out of 120 records submitted for each year. The infant's record was only reviewed if it was a live birth. The identified births to HBsAg positive women were then cross referenced with the list of infants case-managed prior to the assessments. From August 2016 through February 2017, the HHD PHBPP Coordinator met with each L&D to discuss findings and areas of improvements. The program has developed monthly follow up method with the L&D hospitals to ensure timely reporting of HBsAg positive mothers and their infants. Selection Criteria: All L&D located within Houston/Harris County, TX. All women who have live births within these facilities records were eligible for review for HBsAg screening. Their infants' records were also eligible for review for Hepatitis B birth dose receipt. Only live births records were reviewed. All HBsAg positive women and their infant's records were reviewed. Collaboration: Houston Perinatal Hepatitis B Prevention Program collaborated with Epidemiology informatics team to adapt CDC policies and practices survey electronically. The community health services' Staff Analyst, assisted to develop a Microsoft Access database to collect, store data, and analyze the data. Without the collaboration of infection control practitioner, L&D managers, and medical records, this assessment would not have been feasible. Three hospitals were assessed remotely by granting access to their electronic medical record (EMR) to Houston PHBPP evaluation team. Twenty-one were assessed on site. The program also collaborated with quality assurance team of some hospitals to increase compliance. Start up or in-kind costs: The Houston PHBPP is funded by the CDC. Program evaluation is part of the CDC's objectives for the PHBPP. No additional cost was incurred. However, it is worth mentioning that this evaluation project was time consuming and resource intensive. Six nurses and 3 public health investigators were used to complete this project.

Evaluation

Evaluation assesses the value of the practice and the potential worth it has to other LHDs and the populations they serve. It is also an effective means to assess the credibility of the practice. Evaluation helps public health practice maintain standards and improve practice. Two types of evaluation are **process** and **outcome**. Process evaluation assesses the effectiveness of the steps taken to achieve the desired practice outcomes. Outcome evaluation summarizes the results of the practice efforts. Results may be long-term, such as an improvement in health status, or short-term, such as an improvement in knowledge/awareness, a policy change, an increase in numbers reached, etc. Results may be quantitative (empirical data such as percentages or numerical counts) and/or qualitative (e.g., focus group results, in-depth interviews, or anecdotal evidence).

- What did you find out? To what extent were your objectives achieved? Please re-state your objectives.
- Did you evaluate your practice?
 - List any primary data sources, who collected the data, and how (if applicable)
 - List any secondary data sources used (if applicable)
 - List performance measures used. Include process and outcome measures as appropriate.
 - Describe how results were analyzed
 - Were any modifications made to the practice as a result of the data findings?

2000 Words Maximum

What did you find out? Hundred percent of L&D hospital surveyed have policies and procedures in place, and a copy was reviewed during site visit. The analysis of the HBsAg positive data collected, revealed that of 184 infants born to HBsAg-positive women in 2014, and of 194 infants in 2015, 71 (38.80%) and 82 (42.23%) infants were not respectively reported to the HHD program. The average underreporting rate of Hepatitis B infections among L&D hospitals in Houston/Harris County was 40%. Four out of 10 births to HBsAg-positive mothers were not reported in 2014 and 2015. Prior to the assessment, 51 and 76 infants were identified and case-managed in 2014, 2015 respectively. Infants identified during the assessment have led to additional identification of 71 infants in 2014, 82 infants in 2015. With our project's objective to identify 25% additional cases: 12.75 cases in 2014 and 19 cases in 2015, this resulted in 568% increase in 2014, and 431% increase in 2015. We also found out that some L&D hospitals, where the attending nurse who assisted with delivering the baby is responsible for reporting the HBsAg-positive mother, have low numbers of unreported mothers compared to other L&D where the reporting responsibility falls on the Infection Control Practitioners (ICP). This gap is attributed to shift differential, since many of these ICPs may not work after hours or on the weekend, or have no substitute when on vacation. The high turn-over rates also affected the reporting compliance of the hospitals. Many L&D hospitals that were reporting positive HBsAg electronically, assumed that the mother was reported to the PHBPP. This was addressed before the assessment, by collaborating with HHD Epidemiology Bureau to ensure the PHBPP has access to the surveillance system; and by creating electronic case management platform in the surveillance system for the PHBPP. Because of the increased numbers of chronic hepatitis B cases reported weekly to the Epidemiology Bureau, many of these cases were not investigated. This challenge was also solved by ensuring that all child-bearing age female HBsAg-positive cases are investigated by PHBPP, not Epidemiology Bureau. Practice objectives: The project's objectives were (1) to examine hospital policies and practices in preventing perinatal HV transmission, (2) to quantify the underreporting rates of HBsAg-positive women and their infants by the Labor & Delivery (L&D) hospitals in Harris county, TX, and (3) to identify at least 25% additional cases. Did you evaluate your practice? Prior to the assessment, 51 and 76 infants were identified and case-managed in 2014, 2015 respectively. Infants identified during the assessment have led to additional identification of 71 infants in 2014, 82 infants in 2015. With our project's objective to identify 25% additional cases: 12.75 cases in 2014 and 19 cases in 2015, this resulted in 568% increase in 2014, and 431% increase in 2015. Process Evaluation: The program continues to monitor the progress every year. In 2016, the program has identified 144 infants born to HBsAg-positive women. The PHBPP Coordinator communicates with the ICPs on monthly basis to ensure receipt of HBsAg positive cases. Each L&D assessed had been reporting. Whether all the HBsAg mothers who delivered in their facilities have been reported accurately is unknown. This will be measured in the program's upcoming evaluation scheduled in 2018. Primary Data Sources: Data was collected by the HHD PHBPP staff. Survey monkey was used to capture the policies and practices in the L&D hospitals. Microsoft Access database created by a HHD Staff Analyst was used to collect, compile, and analyze the data. The number of infants identified was compared with the CDC estimates. The recent estimates show that HHD should identify between 255 and 422 infants born to HBsAg positive women in 2015. Since only half of the infants estimated by the CDC are identified by other PHBPP across the U.S., we can conclude that Houston PHBPP met the national average in 2015, by identifying 158 infants. Even though internal collaboration and review of the program processes have slightly increased the number of infants identified to 76 in 2015 prior to the evaluation project, compared to 37 in 2013 and 51 in 2014; an additional 82 infants born in 2015 to hepatitis B positive women, identified during the project has been significant in meeting the national average of infants identified for the year 2015.

Sustainability

Sustainability is determined by the availability of adequate resources. In addition, the practice should be designed so that the stakeholders are invested in its maintenance and to ensure it is sustained after initial development (*NACCHO acknowledges that fiscal challenges may limit the feasibility of a practice's continuation.*)

- Lessons learned in relation to practice
- Lessons learned in relation to partner collaboration (if applicable)
- Did you do a cost/benefit analysis? If so, describe.
- Is there sufficient stakeholder commitment to sustain the practice?
 - Describe sustainability plans

1500 Words Maximum

Please enter the sustainability of your practice (2000 Words Maximum): *

Lessons Learned: All Perinatal Hepatitis B Prevention Programs (PHBPP) must consider collecting HBsAg positive women information during their hospital audit. Even though, no additional cost was incurred during this project, the number of staff, the amount of time required to conduct the record review should be taken into consideration. Therefore for small jurisdiction, this project may be implemented and completed every year, however medium to large jurisdictions may consider conducting their record review every other year. It is also important to cross-reference the list of cases identified during the audit with the list of case-managed to assess the reporting discrepancies and provide proper education to hospital staff. Continuous collaboration and communication with the hospitals is crucial to keep the L&D hospitals compliant due to the high staff turn-over rates in the hospitals. Effective reporting process when not established between the PHBPP and the hospitals may increase the underreporting rates again. Monthly check-in with L&D hospitals increases reporting compliance and early identification of the infants for case management services. PHBPP should be conducting a follow up meeting with each hospital to discuss findings, shown to increase collaboration and compliance. Lessons Learned in relation to partner collaboration: Because hospitals have multiple audits throughout the year, it is important to plan and schedule this assessment ahead. Hospitals greatly valued feedback provided by the Houston PHBPP. They were very interested in learning best practice to close the gap. For example, some hospitals asked what others are doing to have low numbers of unreported HBsAg positive women and their infants. Did you do a cost/benefit analysis: No Is there sufficient stakeholder commitment to sustain the practice? Yes. Prior to incorporating this innovative part of the assessment, the Houston PHBPP has been consistent in conducting the program evaluation every year. This is a recommended CDC's objective for all funded programs, suggested to be complete least every 5 years. But for low performing programs, it is imperative to consider completing this evaluation project at least every two years. This assessment does not generate any additional cost, and just need to be integrated in the existing program evaluation.

Additional Information

How did you hear about the Model Practices Program?: *

- | | | | | |
|--|--|---|--|---|
| <input type="checkbox"/> I am a previous Model Practices applicant | <input type="checkbox"/> At a conference | <input checked="" type="checkbox"/> Colleague in my LHD | <input type="checkbox"/> Colleague from another public health agency | <input type="checkbox"/> E-Mail from NACCHO |
| <input type="checkbox"/> Model Practices Brochure | <input type="checkbox"/> NACCHO Connect | <input type="checkbox"/> NACCHO Exchange | <input type="checkbox"/> NACCHO Exhibit Booth | <input type="checkbox"/> NACCHO Website |
| <input type="checkbox"/> Public Health Dispatch | | | | |