

GRANT: EDUCATION REGARDING INFLUENZA PREVENTION FOR YOUTH WITH SWINE EXPOSURE AT AGRICULTURAL FAIRS

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DESCRIPTION OF PUBLIC/ANIMAL HEALTH PROBLEM IN FORT BEND COUNTY

The population in Fort Bend County has more than doubled in the last 15 years, with a growth percentage of 65% covering 27 cities. Fort Bend County is ranked as the sixth fastest growing county in Texas with a population of 685,345 people in the 2014 census. The once sparsely populated rural and agricultural area has now become one of the most ethnically diverse regions in Texas. This continued explosion in population has led to increased demands on the public health infrastructure and the need for increased prevention and surveillance activities in the county. It has now become imperative that the health and well-being of the residents of Fort Bend, particularly the most vulnerable community members, remain a priority.

Zoonotic diseases are a concern because of the abundance of farmlands and livestock in the county. There are 1,286 farms covering 339,295 acres according to the 2012 census of agriculture in Fort Bend County, with average farm size at 264 acres. Among the 254 counties that make up the state of Texas, the county ranks 29th in top livestock inventory animals for hogs and pigs at 693. The Fort Bend County Fair and Livestock show is the largest county fair in Texas and draws nearly 200,000 visitors. The fair boasts of a swine show, where swines from farms are exhibited and ranked according to size and breed. There are also several other livestock exhibits that cater specifically to children in the county. Needville Youth Fair is another annual event in the county designed specifically to promote the interest of youth in agriculture and livestock. The fair comprises of several livestock shows and exhibits that showcase swines, cattle and other livestock to children. These county fairs, vast farmlands and livestock exhibits suggest that there are multiple opportunities for interaction with farm animals. There is also a danger of the spread of zoonotic diseases, if adequate steps towards education and prevention are not taken. Some of the zoonotic diseases that are of concern to the county includes: swine influenza, *salmonella* and *E.coli*.

Interaction with swines at county fair and farms have been identified as the cause for human cases of influenza viruses from swine, also called Swine Influenza. The highest rate of influenza infection occurs among children, especially very young children with medical conditions and suppressed immune systems. The influenza-associated pediatric mortality case count in the state of Texas is 133 between 2008 and 2014. The highest number of deaths (37 cases) were observed among children between the ages of 10 – 14 years. Since 2008, Fort Bend County experienced 4 deaths due to influenza in children between the ages of 0 – 17 years old. This accounts for 3% of the total number of pediatric deaths observed in 254 counties in the state of Texas. There have also been 1128 influenza isolates since 2010. In 2009, there were 159 confirmed cases of swine flu (H1NI) in Fort Bend County. This outbreak is a reminder of the speed with which such a disease can be spread and emphasizes the importance of education and prevention. The numbers and statistics show that prevention efforts in Fort Bend County should start with the youth and extend into the rest of the community.

RESOURCES

Currently, Fort Bend County in conjunction with the CDC, routinely and periodically conducts educational seminars and programs in schools within the county. These seminars and programs provide information on recognizing symptoms in students and colleagues as well as strategies to preventing influenza at home and in school. Epidemiologists frequently make educational trips to elementary schools in the county. These visits provide Interactive education on the importance of proper hand washing and the dangers of improper hand washing techniques.

The educational seminars often begin with introductions and a muppet show. This acts as an ice breaker and allows the students to acquaint themselves with the different “characters” in the workshop that may contribute to disease or ill – health. Colorful and vibrant coloring books are shared to the students. Each of the students are encouraged to identify the different characters in the coloring pages. We explain the roles of each character in the coloring books as well as their contributions to health and wellness. Proper hand washing techniques are described using animations, theme songs and live demonstrations. Glow Germ is a fun and interactive tool that students use to see the presence of germs on their hands after washing. We believe this visualization exercise would help reinforce the message on proper hand washing techniques in the minds of the children. The children are also given take home coloring books, crayons and workbooks.

There is also a collaboration between the county and Nextdoor, a free and private social network for neighborhoods. This integration allows Fort Bend health personnel to work efficiently with community members on communicating health safety measures and disease prevention awareness. Fort Bend County health and human services is able to share prevention messages and alerts online with residents. The county has the ability to communicate wellness tips, important health alerts, disease outbreaks, public health emergency notifications and updates on any public health activity with residents. It is also used to provide information on public safety issues, community events and activities as well as local services that are offered in the health and human services department. This will be a very valuable tool in providing information about proper hand washing techniques, proper animal handling by children in petting zoos and agricultural county fairs as well as education on the roles that people and animals play in the spread, prevention and control of zoonotic diseases. The social network can also be used to provide influenza vaccination information to residents, dates and venues for health and wellness workshops and enable effective responses to zoonotic diseases and infections in the community.

The Binder Project is an initiative by the county that informs medical providers and practitioners on events and activities the health department currently provides in the community. The county provides a compilation of all the health resources in the county

in a binder that is distributed to Family Practice Physicians, Pediatricians and Physicians for Internal Medicine. The binder contains such information as:

- Health Services: Health screenings, Immunizations, Sexually transmitted diseases and tuberculosis control, and fee schedule
- Epidemiology: Texas notifiable conditions, disclosures for public health activities, methods for reporting public health related activities such as child abuse or neglect
- Investigation Forms: Forms used to report viral hepatitis, infectious disease, pertussis, mumps and varicella

This initiative allows better flow of information between the county, health providers and the community at large on health and wellness. It is also a great publicity tool for the services the clinical services department offers. This is especially important because we realized that residents in the county are largely unaware of the different services and programs that the county provides. The provision of such important information strengthens the public health system and ensures that preventative measures are in place. The Binder project can be utilized in providing information on zoonotic diseases, as well as its prevention and control. It can also be used to offer tips and techniques on proper hand washing and animal handling especially during the weeks of the county fair.

Fort Bend County is a provider in the Texas Vaccines for Children (TVFC) program. The county has under its employment, nurses that are solely responsible for providing immunizations and education on vaccines and vaccine-preventable diseases. This program is intended to ensure the immunization of children, adolescents and adults. It also has special emphasis on accelerating interventions to improve the immunization coverage of children three years of age or younger (birth to 35 months of age). Since one of the main goals of the program is to expand immunization capacity in the county through non-traditional systematic approaches, education and provision of influenza vaccinations can also be included in the activities of the program. Education on the disease processes of zoonotic diseases, the relationship between people and animals in the spread of infections and tips and techniques on interacting with animals can also be provided during its outreach activities. Outreach programs that occur during the annual Fort Bend County fair can be leveraged to include information on preventing the spread of zoonotic infections and diseases between visitors and animal exhibits.

The 4-H club in Fort Bend County, a youth development program of the Texas A&M AgriLife Extension Service, focuses on the needs, concerns and interests of youth in the county. Members of the 4-H club participate in "Ag'tivity Barn", an agricultural and nature exhibit at the Fort Bend county fair. Some of the livestock that are exhibited at the "Ag'tivity Barn" include: goat, steer, lamb, rabbit and swine shows as well as an egg hatching exhibit and duck ponds. Young Club members participate in the junior livestock shows and livestock auctions. The "Ag'tivity Barn" also boasts of several private tours

and special presentations that are given to all school districts within Fort Bend County during the week of the Fort Bend County Fair. During the tours, auctions and exhibits, school children and members of the public are given the opportunity to physically interact with the livestock and animals by touching and petting. The private tours and presentations present viable openings for the clinical health department to include interactive and educational messages on safe practices while handling livestock and farm animals. They also present opportunities for the department to include messages about zoonotic disease processes, prevention of such diseases and proper hand washing techniques. Since such presentations would require collaboration between Fort Bend's Agricultural extension and the Health and Human services department, relationships would also be simultaneously formed between both departments.

METHODS

Objective One

Interactive workshops and sessions aimed at educating children in the district on zoonotic disease processes, proper hand washing techniques and safe practices around farm animals. The purpose of these workshops is to reduce incidences of infection between children and animals, especially during weeks leading to the Fort Bend County and Needville fairs. Presentations will also be made to elementary and middle school students during the school year. These workshops and sessions would also require collaboration between Fort Bend County, Fort Bend 4-H and Department of state for health services (DSHS) zoonosis control. This collaboration would foster the development of a relationship building between the departments, leading to effective responses to public and animal health issues.

Impact:

300 school students/children

Plan:

- Children throughout the school district in Fort Bend attend private tours and special presentations in the "Ag'tivity Barn", during the week of the Fort Bend County Fair and Rodeo.
- A workshop on 'Farm animals, disease and safety' will be presented to the children during such presentations.
- Fort Bend's Clinical services department, in conjunction with Fort Bend 4-H and Texas DSHS zoonosis control will develop content for the workshop including an interactive lesson, muppet show, writing and coloring materials and educational games for the children.

- The sessions will begin with an interactive lesson. Content of the lesson will include: zoonotic disease processes, how to properly wash your hands and health and safety around farm animals.
- The lesson will end with a coloring activity or workbook and a muppet show, to reinforce the information presented.
- The children will be asked to test their abilities to wash their hands properly using Glow Germ. Glow germ will be used to see the presence of bacteria on their hands after washing, under a special light.
- Workbooks, coloring books and crayons will be distributed to the children after the presentations and workshops.

Timetable:

September 23 – October 2, 2016

Evaluation:

- Counting the number of students that attend each workshop and maintaining a record.
- Counting the number of workbooks and coloring books distributed in each workshop or presentation.
- Frequent review of the presentation content by the Fort Bend Clinical services, Fort Bend 4-H and Texas DSHS zoonosis departments.
- Surveillance on the number of Influenza incidences among children in the county.

Objective Two

The use of brochures, pamphlets and large graphical signs during the Fort Bend County fair and Rodeo as well as the Needville County Fair will help in generating publicity on the need to properly wash hands and engage in safety practices when interacting with farm animals. Exhibitors of livestock and farm animals during auctions and other events during the county fair will also benefit from the content on the publicity materials. They will also be encouraged to remind visitors to wash their hands properly or use hand sanitizers. The availability of an influenza nurse and vaccinations will give attendees of the fairs the opportunity to receive vaccinations or ask pertinent questions. The purpose of this strategy is to increase the number of influenza vaccinations and encourage health and safety habits around farm animals or livestock. Brochures and flyers will also be shared at the fort bend circus and health fairs throughout the county.

Impact:

1,000 fair attendees

Plan:

- Hiring a full time project/influenza nurse
- The influenza nurse will have a booth/table in the county fairs. The nurse will be able to give influenza information and vaccinations as well as pamphlets and brochures on importance of hand washing. There will also be information on safe practices around farm animals and livestock.
- Information on health services in the Health and Human services departments will also be available to fair attendees.
- Epidemiologists will also share informational brochures, pamphlets and flyers to fair attendees. Hand sanitizers will also be distributed.
- Livestock exhibitors will encourage fair attendees to wash hands properly after interaction with farm animals.
- Each booth/animal exhibit will have free hand sanitizers
- The influenza nurse will also share flyers, brochures and provide influenza vaccine information at the Fort Bend circus and health fairs.

Timetable:

September 23 – October 2, 2016

Evaluation:

- Counting the number of hand sanitizers distributed
- Counting the number of vaccinations given
- Counting the number of flyers and brochures distributed
- Surveillance on the number of Influenza incidences in the county.

Objective Three

Outreach activities performed under the Vaccine for Children program will be leveraged to include information about zoonosis disease processes and influenza vaccinations. This will allow information on the transmission and prevention of zoonotic infections and diseases to be disseminated to the community frequently throughout the year. It will also allow community members the opportunity to ask questions and receive answers.

Impact:

300 adults

Plan:

- The influenza nurse will prepare interactive presentations on zoonotic disease processes, transmission and prevention that will be reviewed by the DSHS zoonosis department.

- Presentations on zoonotic disease processes, transmission and prevention will be given during the vaccine for children outreach activities.
- The nurse will also answer any questions, offer information on influenza vaccinations and how they can be received.
- Brochures and pamphlets on proper hand washing techniques and safe practices around farm animals will be distributed.
- The influenza nurse will also provide information on the services the County's health and human services department offers.

Timetable:

Three times during the year (spring, summer and fall)

Evaluation:

- Counting the number of attendees for each vaccine outreach event
- Counting the number of Influenza vaccinations given at each event and the number of people who sign up to receive a vaccination at Fort Bend County clinical services department
- Counting the number of brochures and pamphlets distributed
- Surveillance on the number of Influenza incidences in the county

Objective Four:

The Binder project will also be used to share information about zoonotic disease processes and safety around farm animals. Through this project, medical practitioners receive a binder that contains information about the county as well as health services that the county offers. These practitioners and their patients will be informed of the transmission of diseases between people and animals, influenza vaccination schedule and proper hand washing techniques.

Each Fort Bend County neighborhood has its own private Nextdoor neighborhood website that will be used by the county to disperse health and wellness information. The private and free social network, Nextdoor, will be used to share information about zoonotic disease processes and safety around farm animals.

Impact:

300 adults

Plan:

- Each month, the influenza nurse will visit 5 medical practitioners to distribute the binders
- The nurse will also update Nextdoor with interactive information concerning zoonosis, particularly swine flu and influenza, every week.

- Information about the availability of influenza vaccines and their availability will also be provided.

Timetable:

Annually, five medical practitioners (pediatricians, family practice physicians and internal medicine physicians) each month for 7 months.

Evaluation:

- Counting and keeping a record of the number of binders distributed
- Counting the number of medical practitioners visited in a month
- Counting the number of health alerts, notifications and health tips posted on Nextdoor every month.

BUDGET

Budget is attached.