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Universal Childhood Influenza Vaccination

by Amy Rae Bashforth, MPA, Immunization Program

Influenza, or flu, is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness and, in some cases, can lead to death. The flu virus tends to spread from November to April, with most cases occurring between December and March. Influenza viruses can cause disease among persons in any age group, but rates of infection are highest among children (1). Rates of serious illness and death are highest among persons 65 years and older, children aged less than 2 years and persons of any age who have medical conditions that place them at increased risk for complications from influenza. Annual averages of approximately 36,000 deaths and 226,000 hospitalizations have been associated with influenza.

Annual influenza vaccination is the most effective method for preventing influenza virus infection and its complications. Influenza vaccine can be administered to persons aged 6 months and older to reduce the likelihood of becoming ill with influenza and transmitting it to others.

Children generally have the highest chance of becoming ill from influenza and often spread the virus throughout their communities. During severe influenza seasons, as many as 30 percent of school-age children get influenza. Even though vaccinations help reduce flu-related school absences by 47 to 56 percent, many children are not vaccinated. As a result, children are absent about 38 million school days each year due to influenza. Approximately 20,000 children under the age of 5 are hospitalized due to the flu each year. Infants and toddlers are hospitalized as a result of influenza at rates similar to elderly people and at higher rates than people of all other ages. On average, nearly 100 children die in the United States from influenza and its complications every year (2).

Beginning with the 2008–09 influenza season, all children aged 6 months through18 years should be vaccinated annually against influenza. The ACIP states that the expansion of vaccination to include all children aged 5 through 18 years should begin in 2008 if feasible, but no later than the 2009-10 influenza season.

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Universal Childhood Influenza Vaccination—continued

The ACIP recommendation to expand routine influenza vaccination to include all children and adolescents aged five through 18 years is based on accumulated evidence that influenza vaccine is effective and safe for school-age children, increased evidence that influenza has substantial adverse impacts among school-aged children and their contacts (e.g., school absenteeism, improper antibiotic use, medical care visits and parental work loss) and an expectation that a simplified age-based influenza vaccine recommendation for all school-age children and adolescents will improve vaccine coverage levels among the approximately 50 percent of school-aged children who already had a risk-based or contact-based indication for annual influenza vaccination (1).

A number of studies support the recommendation to expand childhood influenza vaccination. Epidemiologic studies of community outbreaks of influenza demonstrate that school-age children typically have the highest influenza illness attack rates. This suggests that routine, universal vaccination of children might reduce transmission to their household contacts and possibly others in the community. If adequate vaccination coverage among children can be achieved, evidence for additional benefits, such as the indirect effect of reducing influenza among persons who have close contact with children and reducing overall transmission within communities, may occur. In nonrandomized, community-based controlled trials, reductions in influenza-like illness (ILI)-related symptoms and medical visits among household contacts have been demonstrated in communities where vaccination programs among school-aged children were established, compared with communities without such vaccination programs. Rates of school absences associated with ILI also were significantly reduced in some studies (1).

Reducing influenza among children who are at high risk for complications should continue to be a primary focus of influenza-prevention efforts. Children who are at high risk for influenza complications include all children aged 6 through 59 months, children with certain medical conditions, children who are contacts of children aged less than 5 years or over 49 years of age and children who are contacts of persons at high risk for influenza complications because of medical conditions. Influenza vaccines are not licensed for use for children less than 6 months of age. Because these infants are at higher risk for influenza complications compared with other child age groups, vaccinating household contacts and other caregivers to reduce the risk for influenza in these infants remains a high priority (1).

All children aged 6 months through 8 years must receive two doses of influenza vaccine the first season they are vaccinated. The second dose should be administered a minimum of four weeks after the first dose. Children aged 6 months through 8 years who were vaccinated for the first time during the 2007–08 influenza season, but received only one dose during that season, should receive two doses of the 2008–09 influenza vaccine. All other children aged 6 months through 8 years who previously received one or more doses of influenza vaccine at any time should receive only one dose of influenza vaccine for the season. If possible, both doses should be administered before onset of influenza season. However, vaccination, including the second dose, is recommended even after influenza virus begins to circulate (1).

This year, the Ohio Department of Health (ODH) Immunization Program will provide a total of 560,000 doses of influenza vaccine to both public and private providers. This is an increase from 424,280 doses shipped last season. For the 2008–2009 influenza season, 320,000 doses of influenza vaccine have been purchased with federal Vaccines for Children (VFC) funding for Ohio VFC-eligible children and have been shipped to private and public VFC providers in Ohio; this is a significant increase from 125,580 doses in 2007–2008. Additionally, ODH used other federal funding sources to purchase 50,000 doses of influenza vaccine for children vaccinated at local health district clinics. State funding was used to

purchase 190,000 doses of influenza vaccine for adults who are vaccinated at local health districts and Federally Qualified Health Centers. This purchase will assist in meeting the needs of high-risk Ohioans who have limited ability to pay for this vaccine through other means (e.g., no health insurance, not covered by Medicare).

National Influenza Vaccination Week

The CDC has announced the week of Dec. 8–14, 2008, as National Influenza Vaccination Week. This week will highlight the importance of continuing influenza vaccination throughout influenza season (i.e., December and beyond) (3). ODH and CDC recommend that people take this opportunity to be vaccinated, and hope influenza vaccine providers will use this time to enhance influenza vaccine availability by scheduling additional clinics, extending clinic hours and enabling a larger role for mass vaccination at places such as retail locations. Free materials commemorating National Influenza Vaccination Week and promoting the importance of flu vaccination are available on the CDC Web site at http://www.cdc.gov/flu/professionals/flugallery/. Additionally, limited supplies of brochures regarding influenza and pneumococcal vaccination are available from the ODH Immunization Program. Ohioans wishing to be vaccinated should contact their physician's office, local health district or use the American Lung Associations Flu Clinic Locator at http://www.lungusa.org.

For additional information regarding influenza and influenza vaccine, please contact the ODH Immunization Program at (614) 466-4643.

References and Resources

1. Centers for Disease Control and Prevention. Prevention & Control of Influenza - Recommendations of the Advisory Committee on Immunization Practices (ACIP) 2008. *MMWR*; 2008; July 17; Early Release: 1-60.
2. Families Fighting Flu Web site: http://www.familiesfightingflu.org/.
3. CDC National Influenza Vaccination Week Web site: http://www.cdc.gov/flu/nivw/index.htm.
4. CDC Seasonal influenza Web site: http://www.cdc.gov/flu/.
5. ODH Web site: http://www.odh.ohio.gov/odhPrograms/idc/immunize/influen.aspx.

The Short End of the Stick: The Problem of Sexually Transmitted Diseases

by James D. Greenshields, Infertility Prevention Project Coordinator, HIV/STD Prevention Program

The title of this article sums up the common endpoint for many women in relation to sexually transmitted diseases (STDs). The following treatise will consider two of the most common STDs that infect sexually active women of child bearing age, chlamydia and gonorrhea, and why these women are at the greatest risk for serious complications caused by these infections.

The Problem: Women in Ohio and across the United States are faced with an ever-increasing problem with the spread of chlamydia. Today a popular media concept used is to personalize one's risk. Personalizing one's own risk is a concept used in discussing STDs, as well as other health-related issues that may affect the health and lifestyle of a patient; for example, human papillomavirus (venereal warts), cervical cancer, breast cancer, prostate cancer or even erectile dysfunction. The idea and intent of personalizing one's risk is to increase awareness of the reality that anyone could be a person infected with a disease. However, the prevalence of these medical conditions is much greater than the general population realizes.

So, too, are the complications for personal health. The most prevalent route of transmission of an STD is a person engages in sexual relations with an infected person. Of course, no one wants to believe the person they are going to have sex with could possibly be infected. The rationalization is that this only happens to other people. Despite attempts by some to play down the risks, studies have shown that one in 20 sexually active women of child bearing years will be infected with chlamydia. For adolescent women, 19 years of age or younger who are sexually active, the ratio jumps to one in 10 for chlamydia infection.

Why Worry? The complications from an infection with chlamydia or gonorrhea may be life threatening in the extreme or at least very painful and may cause a stay in the hospital.

It has been determined that chlamydia and/or gonorrhea are the two major causes of pelvic inflammatory disease (PID) in the United States. PID is an infection involving the pelvic cavity, endometrial lining (of the uterus) and/or an infection of the fallopian tubes (salpingitis). PID causes extreme pelvic pain, infertility, ectopic pregnancy and may cause death from complications. The problem faced by women and their sexual partners is they may not show any symptoms of infection. Between 50 and 70 percent of infected persons do not show any recognizable symptoms. When women show symptoms, they are already in the mid-stages of pelvic inflammatory infection. Women who develop PID are at an increased risk (33 percent) of infertility on the first episode. The risk of infertility increases to 66 percent with a second episode. A third episode of PID increases the risk of infertility to 99 percent. Alarmingly, multiple episodes of PID are common in the sexually active population and principally in adolescent females.

Note: When males become infected, the symptoms usually include a slightly painful urination and occasional discharge. The symptoms, when they do occur, are brought on by an infection of the penile urethra. In very rare cases, the male may progress to an infection of the tubules that store sperm in the scrotal sac (epididymitis). Infertility may be caused by infection of the tubules that store sperm, the epididymis, but is extremely rare.

The Numbers: In the United States, it is estimated that approximately 3 million new cases of chlamydia are diagnosed each year. In Ohio, the reported cases of chlamydia are as follows:

Year	Cases	Female	Male	Unspecified Gender
2004	38,911	30,085	8,190	636
2005	42,079	32,343	8,871	865
2006	41,679	31,810	9,317	552
2007	45,939	34,838	10,705	396

The Short End of the Stick: The Problem of Sexually Transmitted Diseases—continued

As illustrated in the previous table, with the exception of 2006, the State of Ohio continues to show an increase in the number of cases reported.

The ratio of female-to-male cases is 3.5 to 1 for chlamydia. Without additional knowledge, one might conclude this infection is predominately a female problem. However, the problem is that males are not tested as frequently as females. So infection goes undiagnosed, allowing additional women to be infected. Clearly, each female infection is the result of sexual contact with an infected person. The disease is transmitted 99.9 percent of the time through sexual intercourse, while 0.1 percent of infections are transmitted from mother to a neonate.

When looking at gonorrhea, 45 percent of cases are in males and 55 percent are in females. This is a closer ratio because private providers test for gonorrhea more frequently than they test for chlamydia in the male population. In 2007, there were 19,975 cases of gonorrhea reported, compared to 45,939 of chlamydia, so the perception that gonorrhea is more common than chlamydia is untrue.

The Possible Solution - The Three "T"s: There is no simple solution to the increasing numbers of reported chlamydia infections. One problem is human nature itself; specifically, sexual intercourse that spreads these infections. As long as women and men engage in sexual relations the problem of STDs will persist. Sexual relations will continue, but with them comes responsibility.

Sexual responsibility; the phrase is very easy to write but it is much more difficult to put into practice. Every person must understand that along with all the great feelings that go with a sexual act there is also a responsibility to both themselves and their sexual partner. For STDs, there are unique responsibilities.

In the case of most STDs, this first responsibility is to have routine **T**esting for any exposure to an STD. Routine testing is once per year for all sexually active women 26 years or younger, per the Centers for Disease Control and Prevention (CDC) recommendations. Testing is important for both men and women because some people do not present symptoms. In many cases, the infected person does not realize they have an STD.

The second responsibility is to receive adequate **T**reatment for any STD when the test is positive. This may seem self-evident, but many individuals who do not have symptoms refuse to believe the test results. Many positive persons do not return for treatment. The reasons include cost, stigma and disbelief. It is easier to challenge the credibility of the test results than to challenge the patient's relationship of trust with their partner.

The third responsibility is the most difficult for the positive patient, but will have the greatest result in decreasing the number of infections. **T**alk to their sexual partner(s) about going to a clinic for testing and treatment. This talk may be difficult. Proper counseling will provide the positive client the tools necessary to address this issue with their sexual partner(s).

It is the medical provider's role to follow-up with a positive chlamydia or gonorrhea patient. There are two parts to this role. The first is assuring the positive patient has received adequate treatment, per CDC recommendations. The second part is assuring the patient understands his or her responsibility for informing sexual partner(s) of the possibility of being infected and how to seek appropriate testing and treatment.

In some cases, the talk can not take place due to possible or perceived physical abuse by the partner that may occur. In these circumstances, there is an anonymous referral option available. Special counseling for these clients is necessary, because re-exposure and re-infection is likely if no follow up occurs.

Positive public health outcomes will occur if the Three "T"s take place for all STD patients:

Test **T**reat & **T**alk

The Short End of the Stick: The Problem of Sexually Transmitted Diseases—continued

Where do we go from here? Several ongoing initiatives in Ohio provide testing and treatment for STDs as well as a social marketing campaign to spread the message of sexual responsibility and safe sex. The Ohio Department of Health (ODH), through the Infertility Prevention Project, provides free testing for chlamydia and gonorrhea for the highest-risk populations. ODH supplies medications at no cost to multiple sites throughout the state for the treatment of STDs. ODH, in collaboration with the CDC, is implementing a social marketing campaign across the state in an effort to raise general awareness of the chlamydia / gonorrhea concern.

If you would like additional information about STDs, please contact any of the resources listed below.

- The Ohio Department of Health
  HIV / STD Prevention Program
  35 E. Chestnut Street
  Columbus, OH 43215
  614-466-2446

- The Ohio Department of Health
  Infertility Prevention Project
  161 South High Street
  Akron, OH 44308
  330-643-1300

- The local city or county public health district in your area.

- The local family planning agency in your area.

- The Centers for Disease Control and Prevention at http://www.cdc.gov .

Quarterly Summary of Select Reportable Infectious Diseases

Third Quarter, 2008*

June 29, 2008 – September 27, 2008

Reportable Condition	Quarter	Year
Amebiasis	13	20
Campylobacteriosis	495	983
Coccidioidomycosis	2	9
Creutzfeldt-Jakob Disease (CJD)	1	5
Cryptosporidiosis	434	547
Cytomegalovirus (CMV), Congenital	2	8
Ehrlichia chaffeensis	5	6
Encephalitis, Post Infection	0	3
Encephalitis, Primary Viral	3	8
Enterohemorrhagic *Escherichia coli* O157:H7	67	107
Enterohemorrhagic *Escherichia coli*, Not O157:H7	1	4
Enterohemorrhagic *Escherichia coli*, Unknown Serotype	20	44
Giardiasis	273	655
Haemophilus influenzae, Invasive	28	108
Hemolytic Uremic Syndrome (HUS)	1	4
Hepatitis A	11	33
Hepatitis B, Acute	25	87
Hepatitis B, Chronic	338	1,149
Hepatitis C, Acute	7	16
Hepatitis C, Past or Present	1,340	5,443
Hepatitis E	1	3
Influenza-Associated Pediatric Mortality	0	1
Kawasaki Disease	5	24
Legionellosis	119	219
Leprosy (Hansen Disease)	0	1
Listeriosis	8	19
Lyme Disease	9	14
Meningitis, Aseptic	284	544
Meningitis, Other Bacterial	10	41
Meningococcal Disease	3	32
Mumps	2	22
Pertussis	93	546
Rheumatic Fever	0	3
Rocky Mountain Spotted Fever (RMSF)	13	20
Salmonellosis	397	990
Shigellosis	731	1,162
Staphylococcus aureus, Intermediate Resistance to Vancomycin (VISA)	2	3
Streptococcal Disease, Group A, Invasive	39	224
Streptococcal Disease, Group B, in Newborn	12	42
Streptococcal Toxic Shock Syndrome (STSS)	1	11
Streptococcus pneumoniae, Invasive, Drug Resistant/Intermediate (all ages)	35	304
Streptococcus pneumoniae, Invasive, Drug Susceptible/Unknown (all ages)	93	606
Toxic Shock Syndrome (TSS)	1	2
Typhoid Fever	3	7
Varicella	227	1,718
Vibrio parahaemolyticus Infection	2	2
Vibriosis (Not Cholera)	3	4
Yersiniosis	14	35
Total	**5,173**	**15,838**

* 2008 data include confirmed, probable and suspected cases reported to the CDC. This report includes both quarter-specific and year-through-quarter cumulative frequencies for each disease. Quarter is determined by the MMWR week the case was sent to the CDC. This report includes only Class A reportable diseases. Data were reported to the Ohio Department of Health via the Ohio Disease Reporting System. Some reportable conditions may be under investigation. Therefore, all data in this report are provisional, but current as of Oct. 2, 2008.

Source: Ohio Department of Health Infectious Disease Surveillance

Quarterly Summary of Sexually Transmitted Diseases, Ohio

Third Quarter, 2008*

January 1, 2008 - September 30, 2008

SEXUALLY TRANSMITTED DISEASES	QUARTER	YEAR
CHLAMYDIA	9,114	31,628
GONORRHEA	2,998	11,035
SYPHILIS	185	540
TOTAL	**12,297**	**43,203**

* 2008 data include only confirmed cases, except for gonorrhea, which includes confirmed and suspected cases reported to the CDC. This report includes both quarter-specific and year-through-quarter cumulative frequencies for each disease. Quarter is determined by date of diagnosis. Some reportable conditions may be under investigation. Therefore, all data in this report are provisional, but current as of Oct. 9, 2008.

Source: Ohio Department of Health STD Disease Surveillance

Quarterly Summary of Tuberculosis Cases, Ohio

Third Quarter, 2008*

January 1, 2008 - September 30, 2008

	QUARTER	YEAR
TUBERCULOSIS (TB)	55	164

* 2008 data include confirmed cases reported to the CDC. This report includes both quarter-specific and year-through-quarter cumulative frequencies for tuberculosis. Quarter is determined by count date, which is the date the ODH TB Surveillance Program determines the tuberculosis suspect meets the CDC Surveillance Case Definition for TB. All data in this report are provisional, but current as of Oct. 9, 2008.

Source: Ohio Department of Health TB Surveillance

Ohio's 2008 Childhood immunization schedule

	Birth	2m	4m	6m	12m	18m	4 Years
HepB	●	●		●			
Rotavirus		●	●	●			
DTaP		●	●	●	●		●
Hib		●	●	●	●		
PCV		●	●	●	●		
Polio		●	●	●			●
MMR					●		●
Varicella					●		●
HepA					●	●	
Influenza	Every year beginning at 6 months of age						

American Academy of Pediatrics
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Ohio Chapter

The Ohio Department of Health (ODH) and the Ohio Chapter of the American Academy of Pediatrics (Ohio AAP) have partnered to promote the use of the Ohio Timely Immunization Schedule (OTIS), which will be easier for parents to use, but more importantly will improve on-time childhood immunization rates in Ohio.

National studies show only one in five children under the age of 2 receive all vaccines on time and 37 percent of children under the age of 2 are more than six months behind. Giving children all vaccines at the earliest opportunity has been shown to improve immunization rates. Use of combination vaccines to minimize the number of injections also has been shown to improve rates for all immunizations.

The ODH and the Ohio AAP are encouraging providers to use this simplified schedule for their patients. Whether an office has measured and documented excellent immunization rates among its patients, or is looking to improve its rates, this timely schedule is designed to help any practice increase its immunization rates. Similar efforts have been successful in several other states, resulting in improved rates among all vaccines at all ages for patients less than 2 years of age.

For questions about OTIS, please contact:

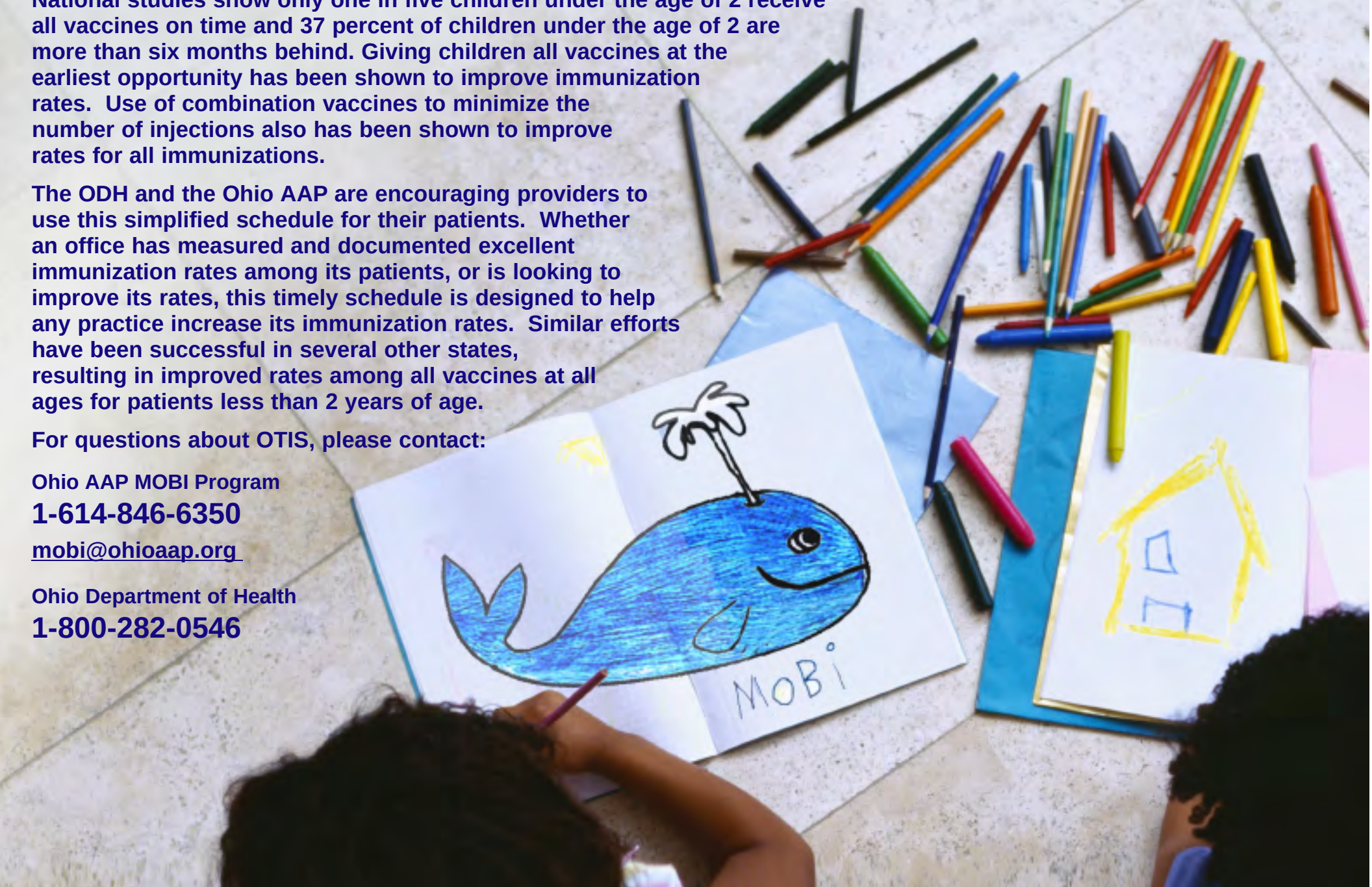
Ohio AAP MOBI Program

1-614-846-6350

mobi@ohioaap.org

Ohio Department of Health

1-800-282-0546



ID Quarterly Fall 2007 Announcements

The Centers for Disease Control and Prevention (CDC) has announced the week of Dec. 8 – 14, 2008 as National Influenza Vaccination Week. This event is designed to highlight the importance of continuing influenza vaccination through December and beyond.

Oct. 15, 2008 was National Latino AIDS Awareness Day. For more information, go to http://www.nlaad.org.

World AIDS Awareness Day will occur on Dec. 1, 2008. More information on this event can be accessed at http://www.worldaidscampaign.org.

Ohio's 13th World AIDS Awareness Day Conference will take place Dec. 3, 2008 at Ramada Plaza Hotel and Conference Center at 4900 Sinclair Center in Columbus. Registrations are now being accepted on OhioTRAIN at https://oh.train.org. Any questions may be directed to Dee Zumbro at the Ohio Department of Health at 614-752-4315 or via e-mail at Dee.zumbro@odh.ohio.gov.

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