Prevention bulletin

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Arizona Department of Health Services

The Challenge Of Tuberculosis Screening

By Karen Lewis, M.D.
State Tuberculosis Control Officer

Tuberculosis (TB) has changed in the United States in the last 50 years. In 1953 there were 84,304 cases of TB, and 19,707 deaths from TB. In 2005, there were only 14,093 cases of TB. In addition, deaths due to TB had fallen to fewer than 800 a year, AZ has seen a similiar trend. This is due to effective antibiotics and good public health interventions.

However, TB remains a problem throughout the world. It is estimated that 1/3 of the world's population is infected with TB. About 10% of those infected will develop active TB sometime in their lifetime. Since TB control continues to improve in the U.S., it is not surprising that now more than half of TB cases in this country are in people born in another country.

Screening tests for Latent TB Infection

Effective TB control requires timely diagnosis of active TB disease and proper treatment of those with latent tuberculosis infection (LTBI). Screening for of LTBI is done in two ways: tuberculin skin testing (TST) [1,2] or blood assays for *Mycobacterium* tuberculosis such as the QuantiFERON®-TB Gold (QFT-G) test [3].

The preferred TST for diagnosing LTBI is the intradermal method of placing 0.1 ml of 5 tuberculin units (TU) of PPD into the volar surface of the forearm, and recording how many millimeters of induration are present 48-72 hours later. *Multiple puncture tests (such as the tine test) or PPD strengths of 1 TU or 250 TU are not sufficiently accurate and* **should not be used.**

The purpose of tuberculin screening programs for TB is to indentify and treat LTBI in persons at high risk for TB, i.e., recently infected people, infected people at increased risk for progression to active TB disease, and people whose employment may put them at risk for TB infection (such as health care workers).

Screening of low risk persons is discouraged because it diverts resources from activities of higher priority. Also, a substantial proportion of tuberculin test positive persons from low risk populations may have false positive skin tests.

Cut-off Levels for TST

Three cut-off levels are used for defining a positive TST. For people with no risk factor for TB, a positive TST is when the induration is > 15 mm.

A skin test of > 5 mm is positive for people who: **1)** Are recent contacts of an infectious TB patient, **2)** Have fibrotic changes on chest Xray consistent with prior TB, or **3)** Are immunosuppressed because of disease (e.g. HIV) or drugs (e.g. organ transplants or systemic corticosteroids).

A TST of > 10 mm is positive in people who have clinical conditions that increase their risk for progressing to active TB disease. These clinical conditions include children < 4 years old, children exposed to high risk adults, silicosis, diabetes mellitus, chronic renal failure,

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The Challenge Of Tuberculosis Screening

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leukemia, lymphoma, carcinoma of the head or neck and lung, gastrectomy, jejunoileal bypass, or weight loss of > 10% ideal body weight.

The TST cut-off of > 10 mm also applies to people who have an increased probability of recent infection, such as recent immigrants from high prevalence countries, injection drug users, or residents and employees of high-risk congregate settings such as jails, prisons, nursing homes, hospitals, and homeless shelters.

Health Care Workers and TST

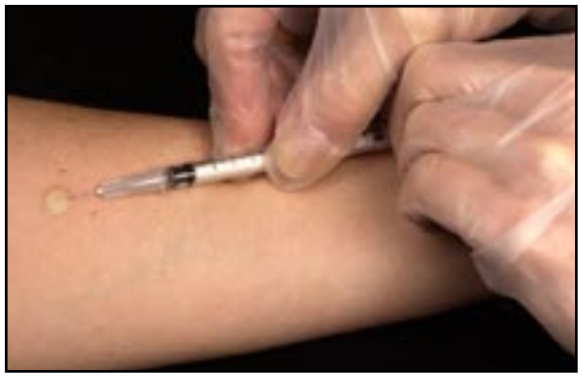
Routine TSTs are not recommended for people at low risk for LTBI. However, when health care workers are tested on entry to a work site where risk for exposure to TB is anticipated, the higher cut-off of > 15 mm is recommended for the initial TST interpretation.

Subsequently, health care workers with negative TST reactions who undergo repeated skin testing will then have a lower cut-off point. In these people, an increase in reaction size of > 10 mm within a period of 2 years should be considered a skin-test conversion indicating recent infection with *M. tuberculosis*.

QuantiFERON®-TB Gold (QFT-G)

QFT-G is a new aid in diagnosing both LTBI and active TB disease. QFT-G is an enzyme-linked immunosorbent assay (ELISA) test that detects the release of interferon-gamma in fresh heparinized whole blood. The blood is incubated with synthetic peptides that simulate two proteins found in *M. tuberculosis* and pathogenic *M. bovis* but which are absent in BCG vaccine. These proteins are early secretory antigenic target-6 (ESAT-6) and culture filtrate protein-10 (CFP-10).

Results QFT-G testing are reported as positive, negative, or indeterminate. Positive means the *M. tuberculosis* infection is likely. Negative means that *M. tuberculosis* infection is unlikely but cannot be excluded, especially when illness is consistent with TB disease or the person has an increased likelihood of progression to TB disease. Indeterminate means that the results cannot be interpreted, due to the controls either showing a low mitogen response or a high background interferon level.



The CDC states that QFT-G can be used in all circumstances in which the TST is currently used (including contact investigations, evaluation of recent immigrants who have had BCG vaccination, and TB screening of health-care workers for *M. tuberculosis*). Advantages of QFT-G over the TST include a single patient visit, decreased staff time, and the results not being affected by reader bias or previous BCG vaccine.

A disadvantage of QFT-G is that blood samples must be processed **within 12 hours after collection** while white blood cells are still viable. In addition, its sensitivity in immunocompromised patients, diabetes, chronic renal failure, or in children younger than 17 years old has not yet been determined.

Before QFT-G testing is done, arrangements should be made with a qualified laboratory (and courier service, if needed) to ensure prompt and proper processing of the blood. At least one laboratory in Arizona is currently offering QFT-G, and others are discussing implementation in the future.

Exclude Active TB before Treating for LTBI

A diagnosis of LTBI requires first excluding TB disease by medical evaluation. Patients who have a positive TST or positive QFT-G should be checked for signs and symptoms suggestive of TB disease and should receive a chest Xray.

The clinical screening and chest Xray should always be done **before** starting any TB medicines. If evidence of active TB infection is found on the chest Xray, the patient has active pulmonary TB, **not** LTBI. Sputum cultures should be obtained, and **four** effective TB medicines should be started pending culture results.

Remember: Using only one TB drug in the face of active TB disease can lead to the development of drug resistance within just a few weeks.

If active TB disease is excluded by clinical and radiologic exam, patients with LTBI should be started on preventive therapy. Isoniazid (INH) is given for 9 months. An alternate regimen for LTBI is Rifampin given for 4 months.

Previously there had been a recommendation of rifampin plus pyrazinamide as an alternate treatment for LTBI. This is no longer recommended because of the risk of serious hepatotoxicity with using these two drugs for preventive therapy.[4]

References

(1) MMWR Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. June 9, 2000; Vol 49 (No. RR-6) www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm

(2) MMWR Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005. December 30, 2005; Vol 54 (No. RR-17) www.cdc.gov/mmwr/preview/mmwrhtml/rr4906a1.htm

(3) MMWR Guidelines for Using the QuantiFERON®-TB Gold Test for Detecing Mycobacterium tuberculosis Infection, United States. December 16, 1005; Vol 54 (No. RR-15)

(4) MMWR Update: Adverse Event Data and Revised American Thoracic Society/CDC Recommendations Against the Use of Rifampin and Pyrazinamide for Treatment of Latent Tuberculosis Infection-United States, 2003. August 8, 2003. Vol. 52(31); 735-739 www.cdc.gov/mmwr/preview/mmwrhtml/mm5231a4.htm

HEPATITIS AWARENESS MONTH

May 2006 - Screening, Education And Vaccination

By Judy Norton, Millie Blackstone, RN, MPH, & Ayesha Bashir MD, MPH

May is Hepatitis Awareness Month: The main viral hepatitides in the United States continue to be A, B and C. In 2005, there were 195 cases of hepatitis A reported in Arizona compared to 0 cases of hepatitis C and 389 cases of hepatitis B; however, there were 8,034 cases of non-acute hepatitis C and 1,027 cases of non-acute hepatitis B reported in 2005 (provisional numbers). Even though the number of new hepatitis C infections has been decreasing considerably nationwide due to better blood screening tests, hepatitis C continues to represent the most common chronic bloodborne infection in the United States.

Hepatitis A and Hepatitis B vaccines have been partially responsible for the success in their control; unfortunately, there is no vaccine available for hepatitis C. Additionally, the long term consequences of hepatitis C (e.g., chronic liver disease) may not become apparent for 20 or more years; thus, many of those infected are not aware of their infection status and do not take the necessary measures to avoid spreading the virus to others and to minimize the risk of developing serious liver disease.

High-risk behaviors include:

- **Shared needles use to injects drugs or for tattoos/piercing;**
- **Health care workers exposed to blood;**
- **Organ transplant recipients before 1992;**
- **Recipients of clotting factors before 1987;**
- **Long-tem kidney dialysis patients;**
- **Sexual activity to some extent;**
- **Child born to a hepatitis C positive mother.**

OF SPECIAL NOTE

Recent immigrants from high risk counties such as Asia may be at increased risk of hepatitis B and should be screened and vaccinated.

NEW PERINATAL HEPATITIS B RECOMMENDATIONS:

The Advisory Committee on Immunization Practices (ACIP) recommends implementation specific strategies to improve identification and eliminate transmission of hepatitis B virus (HBV) to infants born to HBsAg positive mothers and mothers with unknown HBsAg status at the time of delivery. These strategies regarding HBV include:

- Implementation of delivery hospital policies and procedures;
- Case-management programs, Laws and regulations to ensure administration of appropriate post-exposure immunoprophylaxis to these infants beginning at birth; and,
- Administration of a birth dose of hepatitis B vaccine to medically stable infants who weigh ≥ 2000 grams and who are born to HBsAg-negative mothers.

The ACIP also recommends improving vaccine coverage of children and adolescents who were not previously vaccinated. This includes:

- Implementing immunization record reviews for all children aged 11-12 years of age and children/adolescents under 19 years of age who were born in countries with an intermediate or high endemic rate of HBV,
- Adopt hepatitis B vaccine requirement for school entry, and
- Vaccinate all un-vaccinated adolescents in settings that provide health care services to persons in this age group.

Health education materials, information about disease reporting, and resources are available at ADHS. For more information about hepatitis A and hepatitis B contact The Office of Infectious Disease Services at 602.364.3676. For information regarding perinatal hepatitis B, contact the Immunization Program Office at 602.364.3638. For more information about hepatitis C contact the Hepatitis C Program at 602.364.3658. You can also check our web site at www.azdhs.gov.

By Judy Norton, Program Manager for Hepatitis C; Millie Blackstone, RN, MPH, Perinatal Hepatitis B Coordinator; and Ayesha Bashir MD, MPH, Infectious Disease Epidemiology

VIRUS	HEPATITIS A	HEPATITIS B	HEPATITIS C
Transmission Type	Fecal/oral	Blood and body fluid	Blood and body fluid
Chronic Form?	No	Yes	Yes
Risk factors for epatocellular carcinoma, cirrhosis, liver failure	No	Yes	Yes
Vaccination?	Yes; 2 doses – 6 mo.apart	Yes; series of three	No
Treatment?	No	Yes, but not curative	Yes, but not curative
Passive Immunization?	Yes, within 2 weeks of exposure	Yes, In in conjunction with vaccine	No; management with supportive care, screening those with high risk behaviors, and offering both hepatitis A and B vaccine and education.

What's New in Newborn Screening?

By Jan Kerrigan and Elaine Carr

Newborn screening has long been recognized as an essential, life-saving, and effective public health service. Through newborn screening in Arizona last year, more than 80 babies were identified to have serious genetic disorders and were helped to access the services they needed. This valuable service is about to become even more so.

Providers will be able to offer parents of newborns an extra measure of protection as the Arizona Department of Health Services (ADHS) Newborn Screening Program begins expansion of the newborn screening panel, increasing from 8 to 28 disorders (see Table 1). In addition to expanding the number of disorders identified by bloodspot testing, the ADHS will begin providing follow up services for newborns and infants who do not pass the hearing screen done at birth. New legislation requires all providers who perform newborn hearing screens (and subsequent hearing tests) to submit the test results to the ADHS, and the ADHS to encourage families of children with possible hearing loss to access appropriate evaluations, services, and early intervention.

The bloodspot screen expansion begins in late April 2006 with the initial addition of three disorders. Other disorders will be added periodically over the next year (see Table 2). By July 2007, results will be reported for all 28 disorders, including cystic fibrosis. The twenty-eight disorders recommended by the Arizona Newborn Screening Advisory Committee and selected for the expansion are the same as those recommended by the American Academy of Pediatrics, March of Dimes, American College of Medical Genetics, and the Health Resources and Services Administration. Arizonans benefit because treatable, disabling or life-threatening, genetic disorders can be identified in babies who otherwise may seem perfectly healthy at birth. Early treatment can prevent or minimize the irreversible symptoms of damage that, in the past, often occurred before diagnosis could be made.

Expansion of the newborn screen is primarily possible because of the availability of Tandem Mass Spectrometry (MS/MS), a laboratory methodology that improves and consolidates metabolic screening processes. This method incorporates an acylcarnitine profile, enabling the addition of fatty acid oxidation disorders (e.g., medium-chain acyl-CoA dehydrogenase [MCAD] deficiency) and organic acid disorders to the newborn screening panel. The Arizona State Laboratory has three MS/MS instruments able to distinguish and measure scores of analytes indicating possible presence of disease. The Arizona State Laboratory is completing validation testing for many of the disorders that will be screened, and testing will continue for the next year. Some disorders are identified with other methodology but the MS/MS offers a huge breakthrough in newborn screening. MS/MS uniquely lends itself to the rapid testing and high volume necessary for Arizona's growing birth rate.

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TABLE I. THE EXPANDED NEWBORN SCREENING PANEL OF DISORDERS

Amino Acid Metabolism Disorders
Phenylketonuria* (PKU)
Maple syrup urine disease*
Homocystinuria*
Citrullinemia
Tyrosinemia type I
Argininosuccinic acidemia

Fatty Acid Oxidation Disorders
Medium chain acyl-CoA dehydrogenase deficiency (MCADD)
Very long-chain acyl-CoA dehydrogenase deficiency
Long-chain L-3-OH acyl-CoA dehydrogenase deficiency
Trifunctional protein deficiency
Carnitine uptake defect

Organic Acid Disorders
Isovaleric acidemia
Glutaric acidemia type I
3-OH 3-CH3 glutaric aciduria
Multiple carboxylase deficiency
Methylmalonic acidemia
Methylmalonic acidemia (mutase deficiency)
3-Methylcrotonyl-CoA carboxylase deficiency
Propionic acidemia
Beta-ketothiolase deficiency

Hemoglobin Disorders
Hb S/Beta-thalassemia
Hb S/C disease
Sickle cell anemia*

Other Disorders
Congenital hypothyroidism*
Congenital adrenal hyperplasia*
Biotinidase deficiency*
Galactosemia*
Hearing Loss
Cystic Fibrosis

*Current disorders tested by ADHS

What's New in Newborn Screening?

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A critical piece of Arizona's comprehensive newborn screening program is still the collection of a satisfactory specimen, with complete and accurate information on the specimen card. Screening continues to be performed from small samples of blood placed on a filter paper collection kit between 24 and 72 hours of age or before the baby leaves the hospital. A second newborn screen is collected at five to ten days of age, or at the time of the first doctor visit. Because there is no perfect point in time for optimum identification of all of the disorders in the expanded panel, it is more important than ever to ensure babies have two newborn screens.

Should test results indicate a suspicion of one of the newly screened disorders during the expansion period, the provider ordering the newborn screen will be notified by a genetic specialist contracted by the ADHS. The specialist will offer help to providers for initial patient management and referral, if necessary.

Fact sheets for providers on each of the disorders of newborn screening are being developed nationally and will be tailored with Arizona-specific information. Additional educational materials are being developed for families. Please check our website http://www.azdhs.gov/phs/owch/newbrnscrn.htm periodically as we add this and other important information, or contact the Newborn Screening Program 602.364.1409 or 1.800.548.8381. A partnership plan with the Arizona Chapter of the American Academy of Pediatrics and Arizona Chapter of the March of Dimes is also being developed to promote and offer education about newborn screening.

For more information about the changes in newborn screening or education opportunities, please call the ADHS Newborn Screening Program at 602.364.1409 or 1.800.548.8381 or visit our website at http://www.azdhs.gov/phs/owch/newbrnscrn.htm.

For helpful additional electronic references, see Table 3.

Jan Kerrigan, RN, is the Newborn Screening Program Manager, Arizona Department of Health Services, Office of Women's and Children's Health, and can be reached at 602.364.1410

TABLE II. NEWBORN SCREENING EXPANSION SCHEDULE

By May 2006

- Results will be reported for the currently screened disorders plus Citrullinemia, Tyrosinemia, and Argininosuccinic acidemia
- Pilot testing for Fatty Acid Oxidation and Organic Acid disorders will begin
- The ADHS will provide follow-up services to encourage families of infants who have not passed the newborn hearing screen, to access appropriate screening, evaluation or intervention
- The newborn screening fee will increase from $20 per screen to $30 for the first screen, and $40 for the second screen

By September 2006

- Results will be reported for 27 disorders
- Pilot testing for cystic fibrosis will begin

By July 2007

- Results will be reported for 28 disorders, including Cystic Fibrosis

TABLE III. ELECTRONIC REFERENCES

March of Dimes
An excellent description of the 28 disorders and hearing loss is provided. http://www.marchofdimes.com/professionals/14332_1200.asp

National Newborn Screening and Genetics Resource Center
Offers national and state newborn screening information, and links to all relevant sites.
http://genes-r-us.uthscsa.edu/

Mountain States Genetics Foundation Newborn Screening Practitioner's Manual
This web site also has additional links to parent resources.
http://www.mostgene.org/

Save Babies Through Screening Foundation
Resource Library and information for families http://www.savebabies.org/

Sickle Cell Disease Association of America
Provider and lay information, links, and library
http://sicklecelldisease.org/

Arizona Department of Health Services
Information about the Arizona Newborn Screening Program, information for families, providers, submitters, and links to relevant sites.
http://www.azdhs.gov/phs/owch/newbrnscrn.htm.

Epi's Corner

The State

And Now, For The Disease Forecast …

David Engelthaler,
State Epidemiologist

As we know, changes in climate can have significant impact human health in a variety of ways, from infectious disease to environmental exposures. In Arizona, we see a close tie between climate, the environment and human diseases. This year, we will possibly see increases in several infectious diseases in Arizona because of climate dynamics over the past few years. Here are some of them:

Coccidioidomycosis or "Valley Fever"

Coccidioidomycosis (Cocci) is a fungal disease that is highly endemic in Arizona, with Maricopa County being the hotspot for the world. The fungus grows in desert soils and spores are release into the air following soil disruption.

Recent studies have shown associations between coccidioidomycosis and climate changes. Some of these studies suggest that previous rainfall (even up to four years out) can affect disease burden today. It is believed that cocci risk increases after a certain period of rainfall, followed by a certain period of drought, as this helps to increase cocci fungal spore production in soils in Arizona's deserts. The recent rain/drought cycle appears not to be an exception, as we have been experiencing the largest recorded increase of cocci cases on record in Arizona (Jan-Mar 2006, n = 1732; 5-yr mean = 648). We also know that reported cases are only a fraction of actual cases in the community. Recent studies in Arizona suggest that upwards of 30% of patients with community-acquired pneumonia (CAP) in cocci-endemic areas are serologically positive for cocci, and that very few ambulatory CAP cases are actually ever tested for cocci.

The Forecast: At this point the dramatic increase in cocci cases has not tapered off and may continue well into 2006.

Action: Test for cocci on all ambulatory patients with CAP!

Hantavirus Pulmonary Syndrome (HPS)

HPS is primarily caused by Sin Nombre Virus, a hantavirus shed by wild deer mice throughout much of the North America, with most cases occurring in the American Southwest. It is not surprising that climate would affect this disease, and again the heavy rainfall followed by significant drought dynamic has been hypothesized to be associated with increased human cases. This holds true for this past year as well. In fact, in the past 18 months, Arizona has had more cases of HPS than in any previous time period since the original outbreak in 1993-94. Unlike cocci, HPS is a rare disease (48 cases total found in Arizona since 1992). However, it still remains highly fatal, killing about one-third of its victims. The one encouraging sign we have seen is that the earlier cases are recognized, the better their chances of survival.

The Forecast: While cases continue to be rare, we will possibly see more cases in Arizona due to the tremendous rainfall and increases in rodent populations early last year.

Action: Suspect HPS for any patient with fever, tachypnea and tachycardia along with a history of significant mouse exposure, especially in rural and urban fringe areas. Following the flu-like prodrome (3-5 days), patients start to exhibit the classical HPS picture: atypical lymphocytes, a significant bandemia, and thrombocytopenia in the setting of pulmonary edema. If HPS is suspected, please immediately contact local or state health officials.

Plague

Plague is another disease highly associated with climate and the environment due to its flea-rodent/vector-host lifecycle. Humans are typically infected after exposure to infected fleas or rodents, typically in the high country above 4500 ft in the Southwest. Again, plague is a very rare disease, but it can be highly fatal if not treated in time. Fatal cases sometimes go undiagnosed until after death, as treating physicians don't automatically consider plague in the differential diagnosis. The current model suggests that when precipitation in the preceding year's late winter and early summer is above average, followed by mild temperatures in the current year's spring there is increase risk for human cases.

The Forecast: We had the necessary winter precipitation and rodent population increases last year, as well as above average August precipitation. If milder temperatures maintain throughout April, we may see an increase in human cases this year in the Southwest.

Action: Patients with fever and a painful, swollen, regional lymph node (bubo), accompanied with a history of exposure to rodents or rabbits, or their fleas, in areas above 4500ft. elevation, should automatically lead to suspicion of plague (or tularemia, which may have multiple lymph node swelling). As with HPS, suspect plague cases should be immediately reported to local or state health officials.

These diseases represent some of the most prevalent and rare infectious diseases in Arizona, but they are all tied to the environment. Seasonal weather changes may have expected yearly effects on disease risk (e.g., increase rain during the summer monsoons increases mosquito production and West Nile Fever risk). But climate changes tend to be associated with peaks and valleys between years. There have been numerous studies associating climate changes and disease incident fluctuations, but such

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studies are not able to fully account for the complexities of disease dynamics and, therefore, should be interpreted with caution. The recent climatic events in Arizona, however, maybe the stars aligning for a few disease peaks this year.

Resources:
Park, et al. 2005. An epidemic of coccidioidomycosis in Arizona associated with climatic changes, 1998-2001. JID. 191:1981-7.
Kolivras, et al, 2003. Modeling valley fever incidence on the basis of climate conditions. Int J Biometeorol. 47:87-101.
Enscore, et al. 2002 Modeling relationships between climate and the frequency of human plague cases in the southwestern United States, 1960-1997. Am J trop Med Hyg. 66:186-96.
Engelthaler, et al. 1999 Climatic and environmental patterns associated with hantavirus pulmonary syndrome, Four Corners region, United States, EID. 5:87-94.
Galgiani. 2006. Personal communication.

Arizona Department of Health Services

NoteWorthy

CDC's Advisory Committee Recommends Expanded Influenza Vaccinations for Children

On February 23, 2006 the Advisory Committee on Immunization Practices (ACIP) to the Centers for Disease Control and Prevention (CDC) recommended an expansion of routine influenza vaccination for children. With the expansion, the recommended influenza vaccination age will be from 6 months to up to 5 years old. The previous recommendation was for children 6 months to 23 months old. The new recommendation expands that recommendation to also cover children from 2 years to up to 5 years old.

The committee also recommended expanding routine vaccination for household contacts (anyone who spends a significant amount of time in the home) and out-of-home caregivers of children 24-59 months old. The previous recommendation had been for household contacts and caregivers for children 6 months to 23 months old.

Otherwise healthy children are at increased risk for requiring influenza-related medical care and rates of medial outpatient visits for influenza-related illnesses are high in all childhood ages. Children 24 months to 59 months old with influenza are nearly as likely to require visits to healthcare providers and emergency rooms as children 6 months to 23 months old. Approximately 5.3 million children and 11.4 million healthy household contacts or caregivers for these children will also be covered by the new recommendation Vaccination of all children who have certain chronic medical conditions such as asthma, diabetes, kidney disease or weakened immune systems continues to be strongly recommended by ACIP. Children younger than nine years who will be receiving the influenza vaccine for the first time should receive two doses.

Influenza vaccine manufacturers have indicated that they plan to produce between 100 million and 120 million doses of influenza vaccine for the 2006-07 influenza season. The 2006-07 influenza vaccine will include two new strains, an A/Wisconsin/67/2005 (H3N2)-like virus and a B/Malaysia/2506/2004-like virus; the A/New Caledonia/20/99(H1N1)-like virus strain from the 2005-2006 season will remain in the upcoming vaccine.*

**Note: Exerpt from the CDC Office of Communication – Media Relations dated February 23, 2006*

Don't forget to order your influenza vaccine early as one concern is whether vaccine supply will be adequate when additional children are going to be vaccinated!

Arizona Celebrating Success During National Infant Immunization Week (NIIW)

National Infant Immunization Week (NIIW) is April 22-29th. Arizona has been invited to showcase the border activities within the state. The Director of the National Immunization Program, Dr. Anne Schuchat, will be traveling to Yuma, Tucson, and Phoenix during the week as a featured speaker at events.

The Arizona Immunization Conference will be held for one day on April 27th this year. Please mark your calendars for this event!

The New Health Care and EMS Checklists Are On the HHS Website

Home Health Care Services Checklist
http://www.pandemicflu.gov/plan/healthcare.html

Medical Offices and Clinics Checklist
http://www.pandemicflu.gov/plan/medical.html

Emergency Medical Service and Medical Transport Checklist
http://www.pandemicflu.gov/plan/emgncymedical.html

What Would Be The Impact Of An Influenza Pandemic Be In Arizona?

by Will Humble

An especially severe influenza pandemic could lead to high levels of illness, death, social disruption, and economic loss in Arizona. Everyday life would be disrupted because so many people in so many places become seriously ill at the same time. Impacts can range from school and business closings to the interruption of basic services such as public transportation and food delivery.

A substantial percentage of Arizona's population will require some form of medical care. Health care facilities would likely be overwhelmed, creating a shortage of hospital staff, beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may need to be created to cope with demand.

The need for vaccine is likely to outstrip supply and the supply of antiviral drugs is also likely to be inadequate early in a pandemic. Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

The State of Arizona has created an Influenza Pandemic Response Plan to promote an effective response throughout an influenza pandemic. While a pandemic response is primarily a public health response, many agencies, organizations, and private institutions will need to work in a coordinated and collaborative manner to ensure an effective overall response in Arizona. The report and a series of useful influenza pandemic preparedness checklists are posted at www.azdhs.gov/pandemicflu.

The Arizona Influenza Pandemic Response Plan consists of an introductory summary and a series of detailed Supplements. The heart of the Arizona Influenza Pandemic Response Plan is the Response Activity Supplements. These Supplements are subject-area specific and provide very detailed planning and response activities.

PANDEMIC DEATH TOLLS SINCE 1900

1918-1919	
U.S	**500,000+**
Worldwide	**40,000,000+**
1957-1958	
U.S.	**70,000+**
Worldwide	**1-2,000,000**
1968-1969	
U.S.	**34,000+**
Worldwide	**700,000+**

The Response Activity Supplements are subject to change and will be updated with changes in planning assumptions, response capacities, or information on potential pandemic strains and subsequent disease.

The ADHS will be continually soliciting input on this plan through a series of Regional Pandemic Influenza Coordinating committee meetings that will be held throughout 2006. You can contact your local health department to get involved in your county's response plan.

Patients Worried About Avian Flu and Pandemic Flu?

As the Avian influenza A virus H5N1 in poultry and wild birds has been spreading recently to a long list of countries in Asia, Europe, Africa, and the Near East, and further human cases are reported, concern among the public is growing. Your patients may ask you questions about both pandemic flu and avian flu. Educating your patients on the difference between seasonal flu, pandemic flu, and Avian flu may help reassure them. The following websites and hotlines may useful for such education:

For more information on avian and pandemic flu:

1) U.S. Department of Health and Humans Services webpage on pandemic flu: www.pandemicflu.gov

2) Arizona Department of Health Services website with frequently asked questions about pandemic flu: www.azdhs.gov/phs/oids/epi/pandemic_flu.htm

2) The Centers for Disease Control and Prevention (CDC) webpage on avian flu:

www.cdc.gov/flu/avian/index.htm

3) The World Health Organization (WHO) on avian flu: www.who.int/csr/disease/avian_influenza/en

4) Arizona Department of Agriculture (ADA) website: www.azda.gov/Main/Avian%20Influenza.htm

5) U.S. Department of Agriculture (USDA) website: www.usda.gov/birdflu

6) World Organization of Animal Health (referred to as OIE): www.oie.int/eng/AVIAN_INFLUENZA/home.htm

For more information on avian and pandemic flu via phone:

Arizona Public Health Hotline, with bilingual recorded information: 1.800.314.9243 or in metro Phoenix 602.364.4500

Arizona Department of Agriculture Livestock and Poultry Hotline Number with recorded information on avian flu and other animal diseases: 1.888.742.5334

USDA recorded information on food safety on the USDA Meat and Poultry Hotline: 1.888-MPHotline (1.888.674.6854), TTY: 1.800.256.7072

Prevention bulletin

Arizona Department of Health Services
Public Information Office
150 North 18th Avenue
Phoenix, AZ 85007

Janet Napolitano, Governor
Susan Gerard, Director ADHS
Niki O'Keeffe, Assistant Dir., Public Health Services

Contributors:
Ayesha Bashir MD, MPH,
Millie Blackstone, RN, MPH,
Elaine Carr,
Lani Clark,
David Engelthaler,
Will Humble M.P.H.,
Jan Kerrigan,
Karen Lewis, M.D.,
Sharon McKenna,
Judy Norton,
The Office of Infectious Disease Services,
The Arizona Immunization Program Office,
The Office of HIV/AIDS Services

Managing Editor:
Mary Ehlert, M.S., ABC
e-mail: ehlertm@azdhs.gov

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Kids Learning Sun Safety in School

Arizona children are learning how to protect themselves from the sun, thanks to a new law aimed at combating rising skin cancer rates.

In a state where sunshine is plentiful and the risk of skin cancer is considerably greater than in other parts of the country, sun safety education is especially important.

One in five Arizonans are likely to develop skin cancer and since 80 percent of a person's lifetime exposure to the sun occurs before the age of 18, childhood intervention is crucial to preventing the disease.

The law, passed in August 2005, requires sun safety education in all public and charter elementary and middle schools. Free materials and items are given to educators and free school assemblies are also available. More than half a million students are learning simple ways to reduce their sun exposure and protect their skin in order to develop habits to last a lifetime.

Here are ways to "Limit the Sun but Not the Fun!"

Cover Up!

Wear long sleeves and pants to protect your skin when playing or working outdoors. Darker colors and fabric with a tight weave provide the most protection.

Use Sunscreen Every Day!

Even on cloudy days, the sun's rays can damage your skin. Wear sunscreen with a Sun Protection Factor (SPF) of 15 or higher. Apply 15 minutes before going outside and reapply every 2 ½ hours or sooner if perspiring or engaging in water activities.

Wear a Hat and Lip Balm!

A hat with a wide brim offers good protection for your scalp, ears, face and the back of your neck. The bigger the brim, the better the protection. Protect lips with SPF 15 balm.

Wear Sunglasses!

Sunglasses reduce sun exposure that can damage your eyes and lead to cataracts. Check the label and choose sunglasses that block at least 90% of UV-A and UV-B rays.

Limit Time in the Midday Sun!

Limit your outdoor activities when the sun's ultraviolet rays are the strongest and most damaging (10 a.m. to 4 p.m.).

Seek Cover!

Find something fun that doesn't involve the direct sun. Look for shade under a tree, a ramada or find an indoor activity inside a gym, library or classroom during peak UV.

Check the daily UV Index!

Did you know you can check the intensity of the sun's rays every day? The ultraviolet or UV index is a way of measuring the sun's radiation level. The scale is from 1 to 10. The higher the UV, the more careful you should be. A day with a UV rating of 10 requires more protection than a day with a rating of 1. Click on the SunWise website below to find your school's daily UV.

Avoid Sun Lamps and Tanning Booths!

These artificial sources of UV light can cause as much damage as the sun's UV rays. Remember, there is no such thing as a safe tan. To get a tan, skin damage has to occur!

Visit the Arizona Department of Health Services website for FREE sun safety activities and more at: www.azdhs.gov/phs/sunwise. Contact Sharon McKenna at 602.364.3143, 800.367.6412 or e-mail: mckenns@azdhs.gov to learn about SunWise.

Arizona Department of Health Services