

# Public Health Views... and News

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The Branch-Hillsdale-St.  
Joseph Community Health  
Agency**

### **HPV VACCINE – RATIONALE FOR UNIVERSAL ADOLESCENT IMMUNIZATION WITH GARDASIL®**

Cancer of the cervix is caused by Human Papilloma Virus (HPV) infection transmitted by sexual contact. The most common pathogenic HPV type is type 16 (51% of cancers are associated with this one type). Type 18 is associated with 13% of cancers. These “highly pathogenic” types tend to cause prolonged infections of the cervix which can lead to abnormal pap smears with cervical intraepithelial neoplasia (CIN) and eventually cancer in some women.

HPV types 6 and 11 cause genital warts (condylomata accumulata) and laryngeal papillomas. These papillomas in infants can be caused by HPV transmission during childbirth. In addition, some anorectal cancers are also related to HPV infection. In

men, cancer of the penis can occur as a result of HPV. Testing for the highly pathogenic HPV types is now commonly performed at the time of PAP testing, allowing risk stratification.

Fortunately, the body can clear HPV infections spontaneously within a year or two in the majority of cases. When the infection is prolonged due to virulence factors (viral proteins E6 and E7) or host factors (cigarette smoking, diminished immunity, and others), dysplasia may persist and progress. This may lead to invasive cancer. Significant dysplasia (CIN2 or CIN3) requires a colposcopic biopsy to rule out malignant transformation. Removal of the lesion (by LEEP or conization) or destruction of the abnormal tissue (by cryosurgery or other means) is then needed to prevent development of cancer.

A quadravalent HPV vaccine against types 6, 11, 16 and 18 - (Gardasil® - Merck, Inc.) is currently available. A bivalent vaccine is soon likely to be released against types 16 and 18 only – (developed by GlaxoSmithKline, Inc.). Both

seem to be efficacious in reducing CIN (93 - 95% efficacy), but long term studies have not been done. Gardasil® has been effective in preventing genital warts (99% efficacy). At present, no data is available in males or in women over age 27 years.

The Advisory Committee on Immunization Practices (ACIP) now recommends routine vaccination of all girls at age 11 or 12 years. For those not previously vaccinated, HPV immunization is recommended for females of age 13 to 26 years. The vaccine is not currently licensed for any males or for females of age 27 years or older.

Rationale for this recommendation is the high prevalence of HPV infection in the population. It is estimated that 80% of sexually active persons will have been infected by at least one type of HPV by age 50 years. Within two years after initiating sexual activity, 54% of young people will acquire an HPV infection. According to recent studies, 60% of adolescent females in the US report a history of initiating sexual activity by the time they are in the 12<sup>th</sup> grade. Non-penetrative sex has been shown to transmit HPV as well. Even if a female is abstinent until marriage, her partner may not have been, and he may likely transmit HPV to her.

The recommendation for universal HPV vaccination has been challenged by those who suggest that it might promote promiscuous sexual activity, unsafe sex, or decrease the perceived need of routine cervical cancer screening. Clearly those females who will have but one monogamous sexual relationship for life or

choose to remain virginal would not benefit from an HPV vaccine. On the other hand, the vaccine is safe and efficacious and is unlikely to cause harm aside from pain related to the shots.

Over 9,000 cases of cervical cancer are diagnosed per year in the US. Many more thousands of abnormal Pap smears lead to untold anxiety and expensive diagnostic procedures. The diagnosis of CIN (2 or 3) leads to invasive procedures needed to eradicate HPV infected precancerous lesions. These procedures are costly and can be painful. Routine vaccination of adolescent females has been shown to be cost-effective in adding quality adjusted years of life. The government has made this relatively expensive vaccine available to low income adolescents through the Vaccines for Children (VFC) program.

The vaccine does not prevent all sexually transmitted diseases or all potentially harmful HPV virus types. It is not recommended to be given during pregnancy (Class B), but thus far no harm has been demonstrated to a developing fetus. The bivalent vaccine (if released) should be effective in reducing CIN, but not in decreasing warts. Women receiving HPV vaccination should continue periodic cervical cancer screening as recommended by their physician.

In summary, HPV vaccine appears to be safe and effective in reducing CIN. The long term efficacy is not absolutely known, but studies as long as 4 ½ years are encouraging. A clear recommendation has been made by ACIP to immunize all girls between age 11 and 12. Girls as young as 9 years of age may receive the vaccination series at the discretion of their physicians.

Catch-up vaccinations may be given to women until their 27<sup>th</sup> birthday. Prior infection with HPV is not a contradiction to receiving the vaccination.

### **State to Kick Off “Protect your Family Month” in April**

Disasters can happen at any time. The potential of severe weather, e-coli outbreaks, pandemic influenza, or a hazardous materials accident are just a few of the would-be disasters that have raised concerns among many area residents. While the Branch-Hillsdale-St. Joseph Community Health Agency is working to protect the community in the event of an emergency, health officials are urging everyone to take responsibility for the safety of their family and be prepared for all emergencies.

**Be prepared** - have a plan and supplies, remain calm, stay informed, and be ready to activate your disaster plans.

Here are some things that families can do to prepare for a potential disaster:

- Be proactive, not reactive. Create a family emergency plan and talk about it ahead of time – taking action before an emergency occurs helps people deal with disasters of all sorts more effectively.
- If you are like millions of animal owners nationwide, your pet is an important member of your household. Your family emergency plan must include your pets. Being prepared can save their lives.

- If a storm, power outage, or other disaster strikes your community, you might not have access to food, water, and electricity for several days. You may need to survive on your own after a disaster. This means having your own food, water, and other supplies in sufficient quantity to last for at least three days.
- Keep a battery operated radio nearby and tune your radio to your favorite local station for information.

So join with us in helping inform the public of the importance of being prepared for emergencies and disasters both at work and at home. Additional information about preparedness can be found at:

<http://www.bt.cdc.gov/>  
[www.pandemicflu.gov](http://www.pandemicflu.gov)  
[www.ready.gov](http://www.ready.gov)

### **The Chronic Care Model**

The Chronic Care Model identifies the essential elements of a health care system that encourage high quality chronic disease care. Chronic Care evidence-based change concepts foster productive interactions between informed patients who take an active part in their care and promotes that care providers have appropriate resources and expertise to help manage chronic conditions. The Chronic Care Model can be applied to a variety of chronic conditions, health care settings and target populations. The bottom line, once implementation of the Chronic Care Model is active; it results in healthier patients, more satisfied

providers and exponential health care cost savings. The following six elements make up this model.

#### **Community Resources and Policies**

The challenge: Many practices simply cannot provide all of the services and supports that patients and families need for optimal chronic illness care.

The solution: Community resources can supplement and support efforts to improve the care of patients with chronic conditions. This can be accomplished through mobilizing community resources to meet the needs of patients, encouraging patients to participate in effective community programs and by forming partnerships with community organizations to support and develop interventions that fill gaps in needed services.

#### **Organization of the Health Care System**

The challenge: System change must begin at the top.

The solution: A supportive health care organization must be guided by strong leadership. Senior leadership plays an instrumental role in providing motivation, securing resources and by removing barriers to implementation. Leadership must create a culture, organization and mechanisms that promote safe and high-quality care.

#### **Decision Support**

The challenge: The health care practice team must have the information needed to make appropriate clinical decisions in a timely fashion.

The solution: Guidelines and clinical standards become effective provider-behavior

change agents when they are woven into the fabric of patient care through effective professional education, reminders, and ongoing feedback and reinforcement. Necessary components needed to accomplish this task include promotion of clinical care that is consistent with scientific evidence and patient preferences, embedded evidence-based guidelines into daily clinical practice and integration of specialist expertise with primary care.

#### **Clinical Information Systems**

The challenge: The health care practice must have timely access to critical clinical information about individual patients or a given population of chronically ill patients to make it possible to deliver high quality chronic illness care.

The solution: A registry or database of key information on all patients with chronic conditions is the glue that holds an effective chronic care system together. This may be achieved by organizing patient and population data to facilitate efficient and effective care, providing timely reminders for providers and patients, identifying relevant subpopulations (intermediate or high-risk subpopulations, for example) for proactive care and monitoring performance of the practice team and the care system as a whole.

#### **Delivery System Design**

The challenge: Relying on 15-minute acute care visits initiated by patients with chronic care conditions doesn't lend itself to effective chronic disease management.

The solution: Planned visits and active follow-up are necessary to effectively prevent complications

resulting from chronic conditions. Planned visits may be a combination of individual and group sessions and need to include self-management and preventative interventions as well as acute care. Supports needed for accomplishing better delivery system design include: the assurance that there is delivery of effective and efficient clinical care and self-management support, clear definition of roles and distribution of tasks among care team members, usage of planned interactions to support evidence-based care, and assurance that patients understand their crucial role in self-care. The delivery system design must take into consideration that health care is delivered in a culturally appropriate and relevant manner.

### **Self-Management Support**

The challenge: Patients need to “own” their health conditions and have the skills and confidence to make the decisions and changes that lead to better health outcomes.

The solution: Individual and group interventions that promote patient empowerment and acquisition of self-management skills are needed to promote positive outcomes with regard to diabetes and other chronic conditions. Patients must be empowered and prepared to manage their health and health care. Care providers must emphasize the patient’s central role in managing their health, and must organize internal and community resources to provide ongoing self management support to their patients.

A strong business case exists to support implementation of the Chronic Care Model. Internal quality improvement has shown evidence of improved system

outcomes if the effort is comprehensive and not narrowly focused. Health care cost savings have been demonstrated at low per patient implementation costs. Satisfied and healthy patients are less likely to leave their current care practice for another practice. Capitated systems realize reductions in hospitalizations and necessary specialty care. Lower-cost interventions (for example, telephone contacts) and lower-cost personnel (for example, social workers) for some chronic care services may be utilized.

#### Resources:

Southern Michigan Diabetes Outreach Network (SODON)  
<http://www.diabetesinmichigan.org/HomeSODON.htm>

Improving Chronic Illness Care  
<http://www.improvingchroniccare.org/change/index.html>

### **Meth Labs On-line**

The Michigan Department of Community Health maintains a list of methamphetamine laboratories discovered in the state of Michigan.

The list provides the location, reporting agency, and remediation status of each laboratory discovered after July 7, 2006.

Authority for the maintenance of the list is provided by Public Act 255 of 2006 (MCL 333.26372). Only those locations linked to a property address are shown. Laboratories discovered in vehicles that are not used as dwellings, spent equipment dump sites, and equipment-only discoveries are not listed. Michigan Public Act 260 (MCL 33312103) and 258 (MCL 125.485a) of 2006 authorized the Michigan Department of

Community Health (MDCH) to develop guidance for the assessment and cleanup of indoor environments that have been used as clandestine drug laboratories (CDLs).

### **Next Edition**

Our next edition will cover the issues of trans fats, obesity and diabetes in the tri-county area. Below is some food for thought until then.



- On average, one pound of potato Chips cost two hundred times more than a pound of potatoes.
- On average, each American Consumes 117 pounds of potatoes, 116 pounds of beef, 100 pounds of fresh vegetables, 80 pounds of fresh fruit, and 286 eggs per year
- Refined Sugar is the only food known that provides calories but no nutrition. About 100 pounds of sugar are eaten per person each year in America, and only 36 percent of it is taken directly. The rest is in commercially sweetened and prepared foods like ketchup, baby food, canned fruits, and cereals. Children are estimated to consume 3 to 4 pounds of refined Sugar a week

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