

## Health Services Agency

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## Santa Cruz County Responds to Influenza Vaccine Shortage



severe illness are those over 65 and under 2 years, and persons with serious chronic diseases. Influenza is also the cause of significant loss of productive work hours and disrupts important community services when it reaches epidemic levels.

In October the nation received word that approximately half of the Influenza Vaccine that was expected would not be available. Contamination problems stopped the final production and shipment of the vaccine made by Chiron, a major manufacturer. This event has created an enormous public health challenge. Influenza is a serious disease that kills over 30,000 Americans annually. It is a major cause of serious illness in the winter months, contributing to overcrowding of Emergency Departments and shortage of hospital beds. Persons most at risk for death and



A comprehensive response to this enormous challenge was imperative. The County Health Services quickly mobilized staff and approached this crisis as a public health emergency. It was clear that vaccine rationing would be required. On October 6<sup>th</sup> a Public Health Alert was sent to all health care providers in the County, listing the more limited definition by the federal Centers for

Disease Control and Prevention of who should be vaccinated, and advising that they must not vaccinate any others. This restriction was strengthened by a Public Health Order issued on October 8<sup>th</sup> by the California State Health Officer, Dr. Richard Jackson. On October 19<sup>th</sup>, the County Board of Supervisors declared a local state of emergency caused by the vaccine shortage.

Much work lies ahead. County staff is working to inventory all vaccine in the county. Medical providers are continually reminded to vaccinate only those in the high risk groups, and the public is asked to forgo getting their vaccination if they are not in one of these groups. It is likely that some redistribution of existing vaccine will take place in order to assure that as many people in the highest risk categories as possible are protected. Rumors about inappropriate vaccination are continually investigated and action will be taken if authenticated. The State has set up a hot line for reporting incidents of vaccination price

gouging. This information and many other facts about Influenza can be found on the County's web site at [www.santacruzhealth.org](http://www.santacruzhealth.org)

All of us must work together toward a common goal of saving lives and preventing severe illness. Every dose of vaccine that is inappropriately given will mean one less to someone whose life may be threatened by Influenza. Eventually, it is likely that no more vaccine will be available. Then the basic prevention measures, such as hand hygiene, will be our primary tools to prevent infection. The County will issue frequent Health Alerts and updates as this situation unfolds. Because of the unique circumstances, approaches and strategies may change rapidly to meet the emerging challenges.



## The California Encephalitis Project: A Diagnostic Aide for Providers

The California State Department of Health Services has a project that provides rapid state-of-the-art diagnostic testing for human encephalitis at the Viral and Rickettsial Disease Laboratory (VRDL). This project seeks to elucidate the causes, risk exposures, symptomatology, and clinical features of encephalitis at NO CHARGE for patients who meet the project's case definition. A wide variety of viral cultures and PCR tests are performed on specimens submitted to the California Encephalitis Project (including mycoplasma, measles, varicella, herpes, and flaviviruses).



To be eligible for this free diagnostic testing, patients must meet the following criteria:

- \* Hospitalized with encephalopathy (altered level of consciousness >24 hours, lethargy, change in personality) **or** ataxia **AND** have 1 or more of the following: fever over 38 degrees C, seizures, focal neurologic findings, CSF pleocytosis, abnormal EEG or neuroimaging study
- \* 6 months of age or over
- \* Immunocompetent

If you have a patient who meets the above criteria and would like to have the testing offered by the California Encephalitis Project, you will need to complete a short case history form and send the following to the VRDL -please label with the patient name, specimen type and date of collection:

- \* Case history form
- \* CSF (at least 2 cc)
- \* Serum drawn during the acute phase (7 days or less after onset; at least 3 cc)
- \* NP or throat swab in viral transport media
- \* Specimen submittal form

Rectal swabs (in viral transport media) and urine are also recommended samples but not required.

- \* convalescent phase serum should also be sent (drawn 14-21 days after onset)

For more information and to download forms, log onto [www.ceip.us/html/encephalitis.htm](http://www.ceip.us/html/encephalitis.htm). For additional questions or information, contact Somayaeh Honarmand at the California Encephalitis Project at (510) 307-8599. And remember, all cases of encephalitis are reportable to the patient's local health department.

## The Syphilis Score:

After many years of decline, early syphilis has again appeared on local radar. The year 2003 saw a dramatic increase in the number of infectious cases in Santa Cruz County.

Infectious syphilis includes cases of primary, secondary, and early latent syphilis. Local rates started to increase in 2002. During 2003, there were 12 cases of infectious syphilis; one of these had concomitant neurosyphilis. Thus far, in 2004, there have been 10 cases. A similar phenomenon is occurring in major cities throughout the United States.

In the Disease Control Unit of your local Health Department, *all* possible reports of syphilis are examined with diligent scrutiny. Many of these turn out to be either latent disease or biologic false positives. Neither of these situations pose a threat to the public health community. However, the initial steps to deem such a situation as a low risk are the same as for a case of primary syphilis. Initial lab results may not give the obvious answer. We do local and state record searches and follow up with labs and/or medical providers to screen this segment of our caseload. Both a false positive and a case of very early primary syphilis may appear with the same initial RPR titer. Confirmatory tests (FTA, TP-PA, or Darkfield) and past histories of medical treatment are needed.

Even then, we operate under the assumption that it is always possible that an old latent case has become re-infected and is in the early stages. A negative confirmatory lab on a positive initial test *usually* indicates a false positive. Many physiological conditions may be responsible for this, including intravenous drug use, pregnancy, and autoimmune diseases.

Latent syphilis includes those syphilis infections that are greater than one year's duration. In many situations, the patient is clueless about prior exposure. Occasionally, a patient will have a clear memory of the disease and treatment. This is especially important if we have no local or statewide record of the individual. If we are unable to establish correct prior treatment for syphilis, we recommend a series of 3 injections of penicillin, one week apart. We must track the dates, doses, and providers of treatment. In all phases of syphilis, the correct penicillin is paramount. During the last year, there were cases in other jurisdictions where a patient was incorrectly treated with the wrong type of penicillin. To ensure efficacious results, the patient must receive long acting bicillin, i.e., benzathine penicillin G, in a dose of 2.4 million Units IM. Here at the Public Health Clinic, the clinic nurses always administer the dose in 2 separate

injections, one in each buttock. While this initially seems more invasive, the divided doses ensure greater absorption and less irritation from the highly viscous medication to the involved muscle mass.

If a patient has a clear history of penicillin allergy, doxycycline may be substituted. Obviously, the patient requires careful teaching, to assure that they adhere to the entire regimen of twice-daily antibiotics for the entire period. Often, we recommend the administration of only half the regimen, with a follow-up visit scheduled to evaluate clinical progress, without disruption of treatment. Penicillin is the *only* acceptable treatment for syphilis in pregnancy.

Future issues of this newsletter will further discuss salient aspects of early syphilis, syphilis in pregnancy and management of syphilis in the HIV-co-infected patient. If you have any questions, please do not hesitate to call us at the Disease Control Unit. I will arrange on-site visits, materials, or assist in any way possible. In addition to me, one other Public Health Nurse constitutes the Syphilis Response Team, or SRT! You or your patients may also end up speaking with Paula Haller, PHN II, another dedicated member of the Communicable Disease crew. If you have had patients with syphilis, you probably



have already heard from us, or seen faxes and follow-up letters. We strive to provide the patients of Santa Cruz County with the very best in syphilis case management. We are open to assisting in any way possible. We look forward to continued collaboration. Also, please feel free to give the following number to any of your patients: 454-4348. This is a confidential syphilis and STD line, set up in the STD Controller's office. It is a special number for those who may have questions about syphilis but are not comfortable asking in any formal venue. Your patients may wish to give this number to their partners.



**Sharon Crowley, RN, MN, FCNS**  
**STD Controller**  
**831-454-4482**

## That Enigmatic, Pesty Gonococcus!

Modern medicine gives little credit to the cleverness and tenacity of the little gonococcus organism. Since ancient times, it has quietly wreaked its havoc, outwitting antimicrobials and morphine into an ever more challenging foe. Enter neisseria gonorrhoea! You are not alone in your battle with this enemy to Public Health. Here in the Disease Control Unit of the Health Department, gonorrhea case management is attacked by a team of dedicated Public Health Nurses. The number of cases does not tell the whole story. The resilience and pervasiveness of gonorrhea has presented unique challenges for medical providers as well.

The neisseria gonorrhoeae organism has long been known for its ability to develop resistance to antimicrobial therapy. After tremendous success with the discovery of penicillin, rates of gonorrhea declined after World War II. Then, the organism developed strains resistant first to penicillin, then tetracyclines. Current levels of fluoroquinolone resistance exceed the CDC's level of safety for recommended treatment with the class of drugs still commonly used, i.e., the fluoroquinolones. Initial fluoroquinolone resistance was noted in Japan, Hawaii, and other areas of the Pacific Rim. Several projects continue to monitor the level of resistant strains, via the

Gonococcal Isolate Surveillance Project (GISP). These sentinel clinics are scattered throughout the country, with several in California, where levels of fluoroquinolone resistance are markedly high. In California, the rate of fluoroquinolone resistance is now up to **19%**! Starting in 2002, Santa Cruz County recommended that this class of drugs no longer be used as first-line treatment. The State STD Control Branch came out with similar guidelines in 2003 and the CDC in 2004.

We continue to receive cases of gonorrhea where initial treatment has been with a fluoroquinolone. Cipro and Levaquin are very popular. While excellent antimicrobials, these drugs are not recommended as first-line treatment of gonorrhea, even in uncomplicated cases. During our case management, PHNs evaluate initial treatment, and when necessary, re-administer treatment in the field (directly-observed therapy), with a cephalosporin. We have been doing this for 5 years now. Until 2003, we were able to substitute a well-studied oral cephalosporin, cefixime (Suprax). Unfortunately, the manufacturer discontinued production of this drug last year. We were left scrambling to find an acceptable oral substitute for successful implementation of our field-based efforts. We chose cefpodoxime (Vantin), 400mg, as single-dose oral

therapy. We have been using Vantin in our field-based efforts for several months. In addition, we have monitored the frequency of side effects. We are very pleased with the results. Overall, it seems to be very well tolerated, with few side effects, mostly mild gastrointestinal symptoms.

We still recommend co-treatment with a first line agent for Chlamydia. Single dose Azithromycin, in a 1 gram dose, affords the best compliance. Most of our field treatment is the result of lack of abstinence by sexual partners or resumption of sexual relations with an untreated partner. Please encourage your patients to notify and refer their partners for treatment. We adhere to the State and CDC message of abstinence after treatment for any STD for **7 days after treatment of all sexual partners**. Nurses in the Disease Control Unit are able to assist you in partner evaluation and treatment. Please do not hesitate to ask for our help. In our experience, patients respond better when their medical provider has told them to expect to be contacted by a Public Health Nurse. Because of their confidence in their medical provider, they are more responsive to Public Health intervention.

### **Two final issues:**

Please also consider using a cephalosporin for your cases of PID, even in cases of PID of unknown

etiology. We have had cases in Santa Cruz County, where neisseria gonorrhoeae was isolated from the upper reproductive tract during laparoscopy, while specimens from the cervix were negative.

Finally, initial review seems to indicate that the use of **pcr** as a DNA technology for the diagnosis of gonorrhea, is no longer recommended. There have been sufficient instances of false positives to warrant this recommendation. This is especially true in low prevalence populations. While we do not see much local gonorrhea testing via NAATS using pcr, it is incorporated as technology in the thin-prep Pap smear. We have seen results obtained via thin-prep. Please be aware that the potential exists for a false positive gonorrhea, especially if this is the only mechanism used for STD testing. The thin-prep Pap should not supplant conventional STD tests, which are ideally done via one of the nucleic acid amplification tests, or NAATS. Almost all of the nucleic acid amplification tests utilized in our county incorporate the TMA, LCR, or SDA technology, which are excellent for the diagnosis of gonorrhea.

For questions or a written copy of guidelines: please call Sharon Crowley, STD Controller, @ 454-4482, or email @ [Sharon.crowley@health.co.santa-cruz.ca.us](mailto:Sharon.crowley@health.co.santa-cruz.ca.us).

## Appreciation for the Opportunity to Serve



As the date of my retirement draws near, I am continually reminded of the great honor that I have had to work in Public Health for so long. Santa Cruz County is a very special place, where people work together to address serious problems. No matter what the challenge before us, there is always the opportunity to come together and make the best effort possible to find solutions. The challenges have been daunting! The HIV/AIDS epidemic and other emerging infections, too many without medical care insurance, fears of bioterrorism, concerns for high risk populations and the growing concern that too few young people are interested in medical careers challenge our

goal to create a healthy community. But good people are working on each of these problems and concerns. Creative solutions are not an impossible dream in Santa Cruz County. They are within reach, as long as we continue to find the vision and courage to set the course.

Our community is blessed with an outstanding Public Health staff who repeatedly demonstrates the highest level of professionalism. These remarkable people go above and beyond the call of duty whenever they are needed. They work diligently with our many community partners trying to improve and protect health. We can all be proud of their work and their commitment to build a healthy community for all.

This is a time for me to offer my deepest appreciation for all those who have helped and supported me in my tenure as Chief of Public Health. I will always be grateful for the special opportunity that I have had. It is hard to leave a job that you love, but I know that Public Health is in very good hands. The people who do this important work will continue to give their very best to the people of this community, no matter what challenges lie ahead. I hope that all of you will continue to support and help them in their efforts, as you have done for me throughout my years of public service.

Thank you,  
Betsy McCarty

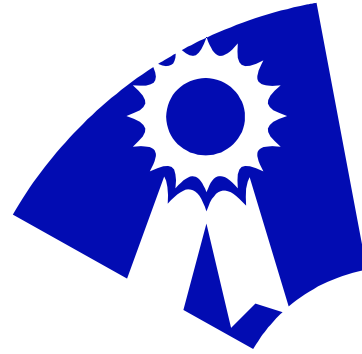
## ALPHA Binder Wins National Prize



In Fall 2002, the ALPHA (All Hazards Public Health Authority) team set out to make the task of reporting communicable disease a more "user friendly" process. To that end, we committed to revising the *Essential Reporting Guidelines 1998* booklet (the red book) into a binder that presented providers with key information at a glance. We also included specific information on Tuberculosis, SARS, tick-borne illnesses and other diseases that make up the bulk of inquiries from the

health care community. There are the necessary forms for reporting communicable disease, animal bites and pesticide exposures. We even have a section on bioterrorism, including the recognition of diseases many providers have never seen, such as smallpox and anthrax. We chose a binder format so that, as new infectious diseases appear, we could mail inserts instead of having to revise an entire booklet every few years. As a result, many of you had the latest information on West Nile Virus mailed to your offices for inclusion in the binder. We started distribution in December of 2003 and received many positive comments from you on the look and usefulness of the revised guidelines.

We entered the binder in a national competition and, to our great delight, we received the 2004 Bronze Award for Excellence in Public Health



Communication for an in-house Information Campaign by the National Public Health Information Coalition (NPHIC). This group is dedicated to improving America's health through public health communications and we are honored to have been recognized by them.

***If you would like a free copy of the ALPHA binder, please call Laurie Lang at 454-4275.***

## Need CMEs or CEUs?

One of the goals for the All Hazards Public Health Authority (ALPHA) unit of the Public Health Department is to provide physicians, nurse practitioners, physician assistants and nurses with training opportunities that address a variety of healthcare issues. Many of you have attended our Communicable Disease Lecture Series in the past and your evaluations have been most complimentary and positive. With our next lecture in the series, we are partnering with Watsonville Community Hospital to offer a one hour lecture/discussion on Community Acquired Methicillin-Resistant Staphylococcus Aureus (CAMRSA), presented by Jon Rosenberg, MD, California Department of Health Services, Infection Control and Healthcare Epidemiology Unit. The presentation will take place on Dec. 9<sup>th</sup> from 12:45 p.m. to 1:45 p.m. in the hospital conference room and is free to all healthcare providers. Both CMEs and CEUs will be available and refreshments will be served. If you would like to attend, please call Laurie Lang at 454-4275 to reserve your space.

*For future training opportunities, we would like to send flyers via email. If you would like to be placed on our distribution list, please call Laurie Lang at the number above.*

## West Nile Virus: How are we doing?



By now you may have heard an awful lot about West Nile virus (WNV) – possibly much more than you ever wanted to. You may well be thinking that, once again, the media have overplayed the current issue *du jour*. You might even think public health agencies have overreacted to it. Have they? As we near the end of California's first real season of West Nile, it seems worthwhile to review, in order to look ahead.

West Nile virus is an arbovirus, a flavivirus similar to those that cause St. Louis encephalitis and Japanese encephalitis, as well as yellow fever and dengue fever. Birds are the main host species, and West Nile is highly infectious and deadly to birds, especially to corvid species (crows and ravens) and raptors. Mosquitoes are the vectors that transmit the virus among birds and, much less frequently, to mammals, which are only incidental hosts. Horses are quite susceptible, and nearly half of cases reported in horses in California have ended in death. Other mammals such as dogs and cats have been known to be affected.

There is no specific treatment for West Nile illness. There is no human vaccine, although there is an effective vaccine for horses. For people, the only way to avoid the disease is to avoid mosquito bites.

West Nile virus was first identified in 1937 in the West Nile District of Uganda. Until the mid-1990s, West Nile occurred only in the eastern hemisphere, mainly in areas around the Middle East. For the most part, it was a relatively innocuous pathogen that usually caused a mild illness, West Nile fever (WNF). Outbreaks were infrequent.

Since the mid-1990s, the frequency and clinical severity of WNV outbreaks appear to have grown. Increasingly, the virus causes serious neuroinvasive disease (NID) – meningitis, encephalitis, or West Nile poliomyelitis (acute flaccid paralysis) – and death. It's not clear whether this is due to a change in the virus, changes in human populations, or ecological changes.



In 1999, West Nile turned up in New York City. Since then, it has swept across the continent in a wave. This year the wave began to crash in California. California reported far more cases than any other state this year – 790 cases as of October 29, with 23 deaths

West Nile is most dangerous to the elderly. Few children get sick from West Nile. The median age for those who get seriously ill is 58 years old and the median age for those dying from it is 76 years old. That may explain the low impact of the virus in the Old World. If most people were exposed early in life, when resistance is high, maybe West Nile became essentially a mild childhood disease like measles and chickenpox, whereas in the New World the virus encountered an entirely unexposed population including more vulnerable age groups.

California reported roughly balanced numbers of cases of WNF and NID. The reported proportions of WNF and NID vary greatly from state to state – some report mostly WNF, some mostly NID. The difference is probably an artifact due to variable reporting. The best



data may be national data from asymptomatic, viremic blood donors. (Nationally, almost 10% of infections were first identified through screening of blood donations.) Blood donor data indicate that about 85% of infected people develop no symptoms at all, about 15% develop WNF, and about 1.5% develop NID. About one in ten NID cases are fatal.



The geographic epidemiology of West Nile in the U.S. has been interesting. When the pathogen first reaches an area, it causes a high rate of illness for one or two years, but then the rate of infection in that area drops off steeply. No one knows why.

It's not that most of the people in the area have been exposed and developed immunity, because after a severe season, only a small proportion of the population show evidence of having been infected. Blood testing in various areas after their first year has shown antibody positivity rates ranging from 1%-17%. The true infection rate may even be much lower, though. In Los Angeles, Orange, San Bernardino, and Riverside Counties (the four California counties hardest hit this year), the reported infections numbered only 290, 65, 191, and 110, compared to county populations of 10,047,000, 3,000,000, 1,869,000, and 1,759,000, respectively. Even if only 1% of infections were reported as cases, that would suggest a population infection rate below 0.4%.

It isn't that most of the bird hosts have either died or developed immunity, either. Studies have indicated that the percentage of mosquitoes carrying West Nile does not drop substantially after the first year or two, so there must still be plenty of hosts. As yet, no one has explained the dramatic reduction in impact after the first year or two.



Since California is now completing its first significant West Nile season, what is the prospect for next year? Can we expect a drop-off in cases? Yes, and no. The heavily hit counties in Southern California are likely to see fewer cases. California is a big state, and most of the state has been fortunate enough to avoid substantial human impact so far. We know, from testing of dead birds, trapped mosquito pools, sentinel chickens and equine cases, that WNV is now present in every county in the state. And that's pretty much the position that the Southern California counties were in at the end of the 2003 season. So there's every reason to expect that, for most of the state, the 2005 season will be the big one.

How big? The number of U.S. deaths from WNV in recent years has been small – more than the deaths from salmonella poisoning, whooping cough, or syphilis, and about a third of the number killed by tuberculosis or by accidental shootings. The number of serious cases is also modest, and those cases can involve long-term and maybe permanent paralysis or debility. So, it's a disease well worth the attention. HSA has pursued a measured response to West Nile, focusing our attention on public education about mosquito control and avoidance. We will continue to conduct investigation and surveillance activities and keep health care providers informed of WNV activity within our county. If you would like to be placed on our Public Health Alert email distribution list, please call the ALPHA unit at 454-4275.



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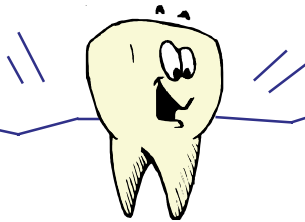
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We support  
Water Fluoridation  
for healthy teeth



Nosotros Apoyamos la  
Florización del agua  
para tener dientes saludables

AFFIX LABEL

Reportable Cases of Communicable Disease  
Santa Cruz County 2000 - 2004

<u>Disease/Condition/Agent</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
AIDS	5	17	18	11	21
CAMPYLOBACTER	43	68	49	60	91
CHLAMYDIA	449	585	525	572	544
E COLI 0157:H7	4	5	0	5	2
GIARDIASIS	18	11	15	31	35
GONORRHEA	59	65	33	47	41
HIB INVASIVE DISEASE	1	1	1	0	0
HEPATITIS A	4	11	16	10	18
HEPATITIS B, ACUTE	4	4	2	8	6
HEPATITIS B, CHRONIC	15	38	48	35	30
HEPATITIS C, ALL	261	269	277	264	241
HIV	2	9			
LYME DISEASE	3	8	3	10	4
MEASLES	1	0	0	1	4
MENINGITIS, VIRAL	34	44	39	25	20
OUTBREAKS	2				
MENINGOCOCCAL DISEASE	1	2	5	4	6
PERTUSSIS	26	54	46	34	10
PID	25	24	41	45	48
RABIES, ANIMAL	2	1	0	4	5
RUBELLA	0	0	0	0	0
SALMONELLOSIS	34	32	53	43	35
SHIGELLOSIS	17	34	26	13	15
SYPHILIS, INFECTIOUS	9	12	3	0	0
TUBERCULOSIS, ACTIVE	7	9	6	7	4
TYPHOID FEVER	0	1	0	0	0

\*primary, secondary & early latent