

BULLETIN

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IN THIS ISSUE

MAKING A DIFFERENCE IN SUDDEN CARDIAC ARREST SURVIVAL RATES..... 1

TOXIC CHEMICAL DETECTED IN LOCAL WELL WATER3

NATIONAL PUBLIC HEALTH WEEK IS HERE!3

CONSIDER ZIKA RISKS BEFORE TRAVEL.....4

MCAH USES COLLECTIVE IMPACT PROCESS5

REPORTED CASES OF COMMUNICABLE DISEASES.....5

LOCAL RESEARCH BECOMES REALITY FOR CALIFORNIA WIC FAMILIES!6

HEALTH OFFICER NOTES

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Robert Agthe, flickr

MAKING A DIFFERENCE IN SUDDEN CARDIAC ARREST SURVIVAL RATES

One evening last October, a local woman's worst nightmare played out in front of her when her husband suddenly collapsed to the floor, unresponsive and not breathing. His heart had stopped beating—he was clinically dead—but because of the actions taken by his wife, the emergency medical service (EMS) responders and the hospital, this couple are once again enjoying their life together.

In the midst of exotic viruses that spark the public's attention, there are the familiar, yet tragic, health effects from cardiovascular disease. Sudden cardiac arrest claims a life every 90 seconds in the United States, taking more lives each year than breast cancer, prostate cancer, lung cancer, AIDS, auto accidents, and firearms combined. Of the nearly 400,000 cardiac arrests that occur each year in the United States, 90 percent happen outside of a hospital, of which only 8 percent survive.

The good news is that national statistics show that the survival rate for out-of-hospital cardiac arrests can dramatically improve to 30-50 percent when bystander CPR is immediately performed and followed with effective advanced life support by responding EMS. Armed with these facts, the County's [EMS Agency](#), a Division of the Public Health Department, worked with our local EMS partners to develop the High Performance CPR program with the goal of

CONTINUED ON PAGE 2



Public Health
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improving cardiac arrest survival rates in our county.

The EMS Agency and our partners have made remarkable progress with this new program that emphasizes uninterrupted, quality CPR. The patient described earlier is part of an encouraging trend occurring in some communities, including our own, in which more people are surviving sudden cardiac arrest. Initial data indicate the High Performance CPR program has already made a significant impact. Based on EMS data comparing the same five month period in the previous two years, the number of cardiac arrest patients having a return of spontaneous circulation (ROSC) has increased 50 percent.

While this is a dramatic improvement worth celebrating, these initial findings are based on data limited to ROSC while in EMS care and do not include hospital outcome data. As we continue to collect more data to definitively evaluate the program's performance, we are confident the current efforts will continue to produce similar results, as have other High Performance CPR programs implemented in other communities throughout the United States.

Several individuals and organizations, both local and national, deserve some credit for this positive trend, and in this patient's case, the credit starts with his wife. Her life-saving actions began when she received a brief training at work to learn the easy [Hands-Only CPR](#) technique, or CPR without interruptions for breaths. As she had learned, she first called 9-1-1 and then immediately began pressing hard and fast in the center of her husband's chest until EMS arrived and took over.

Each minute without CPR decreases a cardiac arrest victim's chance of survival by 7-10%.

The EMS response to her 9-1-1 call included a mix of EMTs and paramedics from fire and ambulance agencies who quickly initiated a sort of pit crew response with each responder assigned a specific role. This innovative and coordinated response enables our responders to maintain continuous and optimal chest

compressions with minimal interruptions while administering necessary medication, ventilation and defibrillation. In addition to high-functioning EMS CPR teams, our local responders have also started using new technology to measure and monitor compression rate, depth and ventilation characteristics to ensure high-quality CPR

Cardiac Arrest v. Heart Attack

Cardiac arrest occurs when the heart stops beating, abruptly and without warning. If this happens, blood stops flowing to the brain and other vital organs.

Heart attack occurs when blood supply to part of the heart muscle is blocked, but a heart attack can cause cardiac arrest.

performance during a cardiac arrest.

One of the responding paramedics told us, "I was not only proud of how all of the responders worked so diligently using High Performance CPR, but also how this woman was able to save her husband with early CPR." Another responding paramedic later commented, "Two months ago, this man would have died because we would

have paused compressions for breaths, defibrillation, and movement of the patient, and our compressions may not have been deep or fast enough."

Since September 2015, the EMS Agency trained more than 750 local EMS responders as high-functioning EMS CPR teams. In addition, EMS responders, many of whom volunteered their time, trained more than 2,500 local citizens in [Hands-Only CPR](#) employing innovative and entertaining methods to expand their reach into the community. Training events, which sometimes deployed flash mobs, used music and a fun energy to engage the public with events taking place at public spaces, such as shopping centers and farmers' markets.

It takes only five minutes to learn [Hands-Only CPR](#) and we were able to easily incorporate this training into the Health Agency's New Employee Orientation Course. If you would like to learn more about our High Performance CPR program, please contact the EMS Agency at SLOems@gmail.com or call 805-788-2511.

The success of our High Performance CPR program is possible because of the commitment and dedication of our citizens, our EMS community and financial investments made by partner organizations, including French Hospital Medical Center, San Luis Ambulance Service, and the Emergency Medical Services Foundation.

Thank you for your attention,



TOXIC CHEMICAL DETECTED IN LOCAL WELL WATER

Trichloroethylene (TCE) was detected in groundwater in late December and January in an area near the San Luis Obispo County Airport. Our staff at Environmental Health Services executed a sampling plan in December to determine the potential threat to Public Health. In total, our sampling of 55 private drinking water wells in the area detected TCE in 26 wells, of which 11 had TCE levels higher than the federal drinking water standard. The [Central Coast Regional Water Quality Control Board](#) (Water Board) is the regional regulatory agency responsible for conducting the investigation to determine the source of the TCE contamination. Information about the TCE contamination is available at www.SLOpublichealth.org under [News Releases](#) (12/24/15).

Private wells are not regulated and owners are responsible for maintaining their wells and ensuring their water quality. An [Annual Maintenance Checklist for the Private Well Owner](#) is available by calling our Environmental Health Services Division at 805-781-5544 and online at www.SLOpublichealth.org under Programs and Services: [Environmental Health](#).

NATIONAL PUBLIC HEALTH WEEK IS HERE!

Americans are living 20 years longer than their grandparents' generation. However, even with these gains, the U.S. lags behind other high income nations in critical health measures - ranking 34th in life expectancy and performing poorly on everything from infant mortality to obesity and chronic disease. During this year's [National Public Health Week \(April 4-10\)](#), see what you can do to change those odds and help San Luis Obispo County contribute to creating the healthiest generation by 2030.



Focus on Education

Education is associated with longer life expectancy, as well as improved health, quality of life and health-promoting behaviors. Third grade reading levels are a strong predictor of future academic success, individual earning potential, global competitiveness, and general productivity.

WHAT CAN YOU DO? Start education early by accessing Public Health's Nurse-Family Partnership (pregnancy-age 2), enrolling in Head Start (ages 2-4), or participating in a high-quality after-school program.



Invest in Healthy Food

Healthy eating reduces the risk of developing chronic diseases such as heart disease, cancer, and diabetes. Reducing calorie-rich, nutrient-poor foods in your diet can reduce obesity and significantly improve quality of life, while promoting optimal development for children.

WHAT CAN YOU DO? Find a farmers' market in your neighborhood and, when possible, center your meals around fresh, local ingredients. If affording food is difficult, visit your local food bank or see if you qualify for Public Health's WIC Program.



Prioritize Physical Activity

People who are physically active for 7 hours a week have a 40 percent lower risk of dying early than those who are active for less than 30 minutes/week. The CDC recommends 1 hour or more of physical activity every day and vigorous-intensity physical activity at least 3 times a week.

WHAT CAN YOU DO? Find a hiking trail you love, a biking route to work, or a low-cost fitness class nearby. Better yet, commit to going with a friend for added motivation!



Countries and Territories in the Americas with Active Zika Virus Transmission



CONSIDER ZIKA RISKS BEFORE TRAVEL

As spring break approaches, residents should be aware of Zika risks before leaving the country.

The Public Health Department continues to closely monitor the rapidly evolving Zika virus situation and recommends residents be aware of risks associated with travel to areas with Zika virus transmission and what precautions they should take.

Zika virus is transmitted to humans primarily through the bite of an infected *Aedes* species mosquito. The *Aedes* mosquito has not been detected in San Luis Obispo, Santa Barbara or Monterey Counties, although it is present in 12 other California counties, including Kern County.

Currently, there are no reported cases of local mosquito-borne Zika virus cases in US states, but there are numerous travel-associated cases. Local mosquito-borne Zika virus cases have been reported in the Commonwealth of Puerto Rico, the US Virgin Islands, and American Samoa. Outbreaks are occurring in many countries, including Mexico, and the public should refer to the CDC's current list of travel advisories at <http://wwwnc.cdc.gov/travel/notices/> before traveling outside the United States.

Pregnant women or women who are trying to become pregnant should consult with their health care provider before traveling to areas with Zika virus transmission.

The best way to prevent diseases spread by mosquitoes is to protect yourself and your family from mosquito bites and to eliminate sources of standing water.

Information about how to prevent mosquito bites is available

on the CDC's Zika page at www.cdc.gov/zika/prevention/index.html.

The CDC has reported they are currently investigating additional reports of possible sexual transmission of the virus, including several events involving possible transmission to pregnant women. These reports suggest sexual transmission may be a more likely means of transmission for Zika virus than previously considered. At this time, there is no evidence that women can transmit Zika virus to their sex partners. Only people whose male sex partners have traveled to or live in an area with Zika transmission need to be concerned about getting Zika from sex. Based on what we know today, traveling to or living in areas without Zika transmission does not pose a risk of getting infected with Zika.

If you are concerned for any reason, you can use a condom the right way every time you have sex. Condoms also prevent HIV and other STDs. If you are concerned your partner may be infected, not having sex is the best way to be sure that you do not get sexually transmitted Zika virus.

At this time, testing of exposed, asymptomatic men for the purpose of assessing risk for sexual transmission is not recommended. As health officials learn more, these tests may become more helpful to determine the risk of sexual transmission of Zika.

More information is available at www.SLOpublichealth.org.

MCAH RECEIVES TRAINING IN COLLECTIVE IMPACT PROCESS

The Public Health Department’s Maternal, Child & Adolescent Health Program (MCAH) was one of ten programs chosen nationally by CityMatCH to receive training and technical assistance in collective impact through CityMatCH’s new Federal Bureau of Maternal and Child Health Learning Collaborative Grant. SLO was the only California health department selected. Other state participants include Colorado, Wisconsin, Rhode Island and Tennessee. CityMatCH will support an identified MCAH effort for 3 years using FSG Consulting in San Francisco and the Tamarack Institute as training/technical assistance sources.

CityMatCH, a think tank, is also a national membership

organization of city and county health departments’ MCAH programs representing urban communities in the United States. The mission of CityMatCH is to strengthen public health leaders and organizations to promote equity and improve the health of urban women, families, and communities.

SLO MCAH, through a collective impact process, will focus on Fetal Alcohol Spectrum Disorders (FASD). The FASD Prevention Project will increase the community’s understanding that FASD is an urgent public health priority; increase community knowledge of FASD and its impact on the developing child; and, prevent alcohol use during pregnancy.

For more information please contact, Sandra Miscovich, MCAH Program Manager at 805-781-5592.

REPORTED CASES OF SELECTED COMMUNICABLE DISEASES

DISEASE	YEAR 2014					YEAR 2015														
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Total Cases	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Year to Date										
AIDS/HIV	1	2	2	3	2	0	0	4	5	9	1	4	1	2	1	5	0	5	3	16
Campylobacteriosis	12	24	15	24	75	12	15	30	17	74										
Chlamydial Infections	258	245	226	305	1034	291	230	259	292	1072										
Coccidioidomycosis	12	10	9	8	39	14	9	11	17	51										
Cryptosporidiosis	4	2	2	1	9	0	1	3	1	5										
E. Coli	2	1	7	5	15	5	3	4	0	12										
Giardiasis	2	1	5	2	10	4	2	5	4	15										
Gonorrhea	29	40	39	45	153	28	31	33	73	165										
Hepatitis A	0	0	0	0	0	0	0	0	0	0										
Hepatitis B (Chronic)	12	7	7	11	37	3	2	10	4	19										
Hepatitis C (Community)	105	97	54	72	328	50	64	84	45	243										
Hepatitis C (Correctional)	58	58	57	52	225	42	36	39	31	148										
Lyme Disease	1	0	1	0	2	1	1	1	1	4										
Measles (Rubeola)	0	0	0	0	0	0	0	0	0	0										
Meningitis (Bacterial)	1	1	2	3	7	1	2	1	0	4										
Meningitis (Viral)	0	7	7	4	18	4	4	5	9	22										
MRSA	0	0	2	0	2	0	0	0	0	0										
Pertussis	3	12	25	3	43	4	7	5	5	21										
Rubella	0	0	0	0	0	0	0	0	0	0										
Salmonellosis	9	11	9	11	40	11	13	13	8	45										
Shigellosis	0	0	2	5	7	1	1	1	6	9										
Syphilis (Primary/Secondary)	1	0	0	4	5	1	1	4	3	9										
Tuberculosis	1	1	0	1	3	0	0	0	2	2										

For more information, please visit the SLO County Epidemiology Data and Publications website. Case counts reflect those reported diseases that meet case definitions as established by the California Department of Public Health. Reported cases that do not meet the case definitions are not included in case counts. All cases are for San Luis Obispo County residents only. Persons who do not list San Luis Obispo County as their primary residence and are reported as having a communicable disease are reported in their primary county of residence. Case counts may change over time, as cases currently under investigation are resolved they are added to the totals.



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LOCAL RESEARCH BECOMES REALITY FOR CALIFORNIA WIC FAMILIES!

In an effort to encourage the California WIC program to offer yogurt as an option for families, the National Dairy Council funded a study between March and September 2009 to examine the impact of providing yogurt to women enrolled in WIC. The study was conducted by researchers from UC Berkley and UC Davis. The results were published in the Journal of Nutrition Education and Behavior in 2010.

Two small California WIC sites were selected to participate in the yogurt study, the Paso Robles WIC site and the Colusa WIC site in northern California. All of the Paso Robles WIC staff (Celena Crawford, Wendy Fertschneider, Deanna Smaw and Leti Ramirez) helped in the study.

Public Health Aide Margo Medina was borrowed from her

usual duties in Family Planning to administer the data collection. The WIC participants who agreed to be in the study were assigned either to an intervention group (received yogurt coupons and educational yogurt brochure) or the control group (did not receive yogurt coupons or brochure). Both groups of subjects completed a baseline and a follow-up 3-day dairy food record.

The study concluded that “because of the positive nutrient contributions of yogurt that appear to add, rather than just replace nutrients in the diet, yogurt would be a viable addition to the WIC food package”.

This April, six years after the study, the entire California WIC population will now be able to buy yogurt with their WIC checks!



Left to Right: Celena Crawford, Leti Ramirez, Margo Medina, Wendy Fertschneider and Deanna Smaw