ICEMA

Inland Counties Emergency Medical Agency

SERVING INYO, MONO, AND SAN BERNARDINO COUNTIES

Spring 2008
Quarterly Newsletter

INSIDE THIS ISSUE:

Message from Medical Director Reza Vaezazizi, M.D.

Methicillin-resistant *Staphylococcus aureus* (MRSA) became the disease of fascination for the lay press this past fall. Alarming headlines appeared almost daily about the killer bacteria. This media frenzy began when reports of MRSA related deaths among high school athletes in 3 states surfaced. Shortly after, numerous other cases of non-fatal infections were reported in schools around the country, some leading to multiple school closures. Headlines like "Drug-Resistant Staph Deaths May Surpass AIDS Toll" (CNN) created a panic-like attitude regarding this infection among the general public and even some health care groups. While community spread of MRSA is a real concern, as health care professionals we need to arm ourselves with the facts and be able to reassure our patients that we have the tools to deal with this problem.

Although more persistent strains of MRSA began to appear about 10 years ago, we humans have coexisted with the S. aureus bacterium for a long time. Interestingly enough, both MRSA and methicillin-sensitive S.aureus (MSSA) are capable of causing serious invasive infections. The vast majority of MRSA cases still present as common skin and soft-tissue infections that do not progress to life threatening illness. These types of skin infections are still very treatable with surgical drainage and several commonly available antibiotics. What has changed in the last 5-10 years is the emergence of an increasing number of strains that are more resistant to traditional antibiotics as well as increasing virulence of these same strains making invasive infection more likely, some-

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Surge Tents

By: Georgi Collins, RN, BSN, PHN, EMS Nurse Specialist

Managing the flow of patients through a hospital is crucial to mitigating patient crowding, a problem that can lead to increased patient safety issues and quality of care concerns. ED overcrowding has been shown to be primarily a hospital system problem that is not readily solved by changing ED flow or dynamics. Licensing, Accrediting, and other Regulatory Agencies expect hospitals to engage in steps that should be outlined in their own policies and emergency plans to anticipate and manage times of high patient influx. These proactive steps are commonly called "Surge Plans" or "Managing Patient Flow Plans."

ICEMA has identified a major gap in the number of beds available for surge through a Hazard Vulnerabilities Assessment. Additionally, California Department of Public health has presented San Bernardino County (via the Hospital Preparedness Program (HPP) agreement) a target surge bed capacity of 2,200 beds. In collaboration with local HPP funds, hospitals have begun to address this

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times in otherwise healthy individuals. However, current CDC data tell us that the majority of cases continue to be health care related rather than community acquired, and most continue to occur in adults.

Unfortunately, media's representation of this MRSA does not tell the whole story. Using terms such as the "Superbug" is not really helping the general public better understand this infection. In fact, what is the real "Superbug"? This term has also been used in recent times to describe such organisms as Clostridium difficile, Streptococcus pneumoniae, and a variety of other bugs that were either challenging to treat or were associated with a bad outcome. From a patient's perspective, any organism causing a serious infection in that patient qualifies as a superbug. Maybe we should just stop using this term altogether. Remember the term "flesh-eating" bacteria? Although both MRSA and MSSA are capable of causing this form of infection, the original bug labeled as "flesh eating" was a Group A Streptococcus. The media failed to highlight that one of the most effective measures in prevention of MRSA is frequent hand washing, particularly by health care workers which, by the way, helps prevent influenza and other infectious diseases that kill far more people than MRSA.

As health care professionals, we need to be the voice of reason and reassurance for our patients as well as a source of good practical advice. I recommend that you take some time and check out CDC's MRSA website at www.cdc.gov/features/mrsainshools for useful and practical information that you can share with your patients. Also, Pam Martinez, RN, Nurse Educator from Ontario Fire Department, has submitted an article on MRSA that you will find in this issue of our newsletter. This should provide an excellent starting point for useful and practical information on this topic for our EMS community. Recognition of early signs of serious or systemic infection and prompt intervention are the keys in the battle against MRSA or any other infection with potential for serious outcome. As health care professionals we need to keep in mind that panic is never a useful tool.

Even We Have to Call For Help

It was late January, around 3:30 in the afternoon, when the call came through of an injured hiker. He had fallen off the trail in Ice House Canyon, near the top on the east side of Mt. Baldy, with a possible fractured femur and head injury. This would require a technical hoist rescue on the cold, snow-covered mountainside. The eastern rising sun often slightly melts the crust of the snow, but as the afternoon shadows loom, the steep mountain quickly becomes a sheer sheet of ice. San Bernardino Air Rescue 7 was dispatched.

It is a rule with the San Bernardino County Air Rescue Team that each person must be comfortable and capable with the rescue maneuver or the mission will be aborted. On this day, one member did not feel comfortable completing the icy rescue. The team was facing an ethical dilemma that could result in loss of life of both the hiker and the rescue personnel. Because of the short winter day, further delay could put all rescue efforts in jeopardy until first light the next day. Crew safety is the first priority, even though our training and commitment is to helping those in need of our skills. Air Rescue Members are trained to be safe, yet are obligated to act with beneficence, the duty to help others. The nature of the reported injuries left us with few options. We could abort the rescue and do a first light launch, hoping this hiker could survive the frigid night, or we could drop a team member off to hike down to the man with limited supplies for better chances of night survival, although it was questionable if any of us on the crew were prepared for a freezing night on the mountain either. In complete silence, we flew to a nearby road to land, each person thinking about the problem. Once landed, we stated our thoughts about the disagreement and ideas to rectify it. I spoke concerning my desire and commitment as an EMT to help this patient, and I believed we were equipped and capable. Our Crew Chief reminded us about crew and scene safety, and the promise to the entire team to uphold that; there would be no room for error on this mission. Several questions remained, and only a few precious minutes could be wasted if we were to perform a rescue that day. Even if we could get to the hiker, could we extract him? What decisions would we then face if a crewmember were injured in the process and now also stranded? What made one of us any more important than the hiker, in terms of a rescue effort I didn't feel we had the right to make that distinction. The objecting crew member made it clear that he objected for the entire team, and that dropping him

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off would only create more of an ethical dilemma, especially if a member became injured in the process. All agreed that leaving the hiker through the night would most likely be fatal to the injured man. A fatal outcome was not something that we could interpersonally justify, or live guilt free with, if he were not to make it, even though they were safe, and acting within protocol. We tried to narrow down our options and possible strategies, hoping that one would lead to a rescue. Our pilot called base at the hanger to speak with the other team members and further brainstorm on alternatives; perhaps they had a plan that hadn't been previously thought of. Another pilot at the hanger reminded our crew that because the temperatures were so low that day, the helicopter would be more apt to carry a heavier load, and thus another crew member, for "back-up," so to speak.

The Pilot and Crew Chief made contact with an experienced ice rescuer and fellow Crew Chief who was available. It was determined at that time that we could return to base for more supplies, the additional personnel, and return to the scene to perform the technical ice rescue before dark. This hiker was fortunate to have an experienced Pilot and Crew Chief available to help with this critical decision, because as it turned out, he was suffering from major head trauma and multiple fractures, and it is doubtful he could have survived through that night.

("Surge Tents"…….continued from front page)

gap. The County of San Bernardino has added thirty (30) small Mass Casualty Shelters (MCS) or "surge tents" to its disaster equipment inventory. All eighteen (18) acute care receiving hospitals in San Bernardino County have received at least one surge tent. It is expected that the hospitals will use these surge tents when they are experiencing patient loads greater than their ED capacity.

Inside surge tent, at Loma Linda University Medical Center

We experienced a substantial increase in diversion hours and patients waiting in EDs on ambulance gurneys which was due to an increase in patient volume beginning the first week in January, peaking in February, and slowly tapering down at the end of February. This impacted the emergency medical system at the ED and 9-1-1 ambulance provider level. LLUMC implemented use of its surge tent to temporarily triage patients which improved the patient flow in the ED and decreased the amount of patients that would normally occupy a ED bed. ICEMA supports this as an appropriate use of HPP purchased equipment and should be viewed as a model in the future to aid in the management of high patient influx instances. Riverside County experienced the same high influx of patients due to the flu season, and issued an Ambulance Diversion Moratorium. This moratorium on ambulance diversion was for all Riverside County hospitals except Desert Regional Medical Center, Eisenhower Medical Center and JF Kennedy Memorial Hospital.

Surge tent outside of Loma Linda University Medical Center.

LLUMC set up its surge tent on January 4, 2008. Its trigger point for implementation of the surge tent was fifty (50) patients in the ED lobby (total ED capacity of 49 beds, 31 adult and 18 pediatrics), with a documented decreased flow in the ED due to an increase of admitted and high acuity patients. Wait times in the ED were also taken into consideration. LLUMC performed triage and Rapid Medical Evaluations of non-urgent and urgent patients in the surge tents. The emergent patients stayed in the ED lobby for triage in the established area. The tent was staffed with two (2) Registered Nurses, two (2) Medical Doctors (one pediatric and one adult), and two (2) ED techs. The tent was equipped with a code cart, computer, telephone, lab and IV supplies (nurse server), generator and heaters. The patients were placed on chairs, since no gurneys were available. ED staff found it extremely useful. One night they were able to "treat and street" thirty-eight (38) patients from the tent. LLUMC is currently working on specific protocols, and in the future are considering adding a port-a-potty and privacy screens to the tents. ICEMA hopes, in the event of future overcrowding incidents due to a high influx of patients and extended ambulance bed delay, hospitals will implement their surge plans and consider using their surge tents. * *Department of Health Services and the Joint Commission on Accreditation of Healthcare Organizations. Contributions to article obtained from Jennifer Orr, Pre-Hospital Liaison Nurse, LLUMC.*

HRSA Update

By: Jerry Nevarez, MSN, RN, PHN, ICEMA Nurse Educator

The Hospital Preparedness Program (HPP) has experienced significant changes for Year 6. In 2007-08, the Hospital Preparedness Program has been restructured to focus on integration of public health and the medical community and achieving capabilities such as interoperable communication systems, real time bed capacity reporting, volunteer registries, and fatality and evacuation management. HPP also focuses on alternate care sites, mobile medical assets, pharmaceutical caches, National Incident Management System compliance, education and training, and exercises. For Year 6 (2007-08), California Department of Public Health split the funding into 2 streams, HPP Base ($729,367) and Pandemic Influenza ($204,057), for a total allocation of $933,424 to San Bernardino County. CDPH also identified the Pandemic Influenza (Pan Flu) funds as "One time funds" to be used to focus local efforts on pandemic influenza planning and exercising of those plans.

Golden Guardian 2006 Exercise at Hyundai Pavilion in Glen Helen

The Hospital Preparedness Program (HPP) Agreement application for Year 6 was submitted to the California Department of Public Health (CDPH) on January 22, 2008 by ICEMA. Jerry Nevarez, RN, MSN, PHN remains the HPP Coordinator for San Bernardino County. As of this writing, ICEMA is still waiting to receive the Letter of Acceptance from CDPH. This places additional stress on the County (and the program), as the funding year for HPP runs from September 1, 2007 – August 8, 2008 therefore we are six months into the funding cycle without an approved budget or work plan. As a result of the changes in the program, the HPP Coordinator has met with Public Health Preparedness and Response Program (PHPRP) staff to reinstate the large, multi-agency planning meetings initiated in 2007, in 2008. These meetings are necessary to engage the various community agencies (public and private) in the planning process. Since the focus this year is on Surge Capacity and Alternate Care Sites with an emphasis on Pan Flu planning, ICEMA and PH felt it necessary to engage as many partners as possible in developing these plans. All 18 of the acute care hospitals continue to participate in HPP for 2007-08. Patton State Hospital and Kindred Hospital have indicated that they will sign a participation MOU with ICEMA this year as well.

"The Golden Guardian 2008 exercise will provide an opportunity to test systems in place for the response to and support of a scenario of this magnitude. "

Additionally, all of the HPP participating hospitals have indicated that they intend to participate in the Golden Guardian 2008 Exercise. The San Bernardino Operational Area (OA) will be participating in this exercise in conjunction with the California Office of Homeland Security Exercise and Evaluation Program (HSEEP), and the Governor's Office of Emergency Services, Southern Region. The scenario for this exercise is a catastrophic 7.8 magnitude earthquake along the Southern San Andreas Fault. While the exercise is being conducted throughout the state, the focus is on the Southern Region of California. This includes Los Angeles, Orange, Riverside, San Bernardino, San Diego, Mono and Inyo counties, respectively. The areas selected for evaluation by the OA's Homeland Security Grants and Exercise Committee (GECO) during the exercise are:

<u>Emergency Operations Center Management</u>

- Communications
- Emergency Public Information and Warning
- Mass Care (Sheltering, Feeding, and Related Services)
- Medical Surge
- Emergency Public Safety and Security Response
- Economic and Community Recovery
- Restoration of Lifelines

The Golden Guardian 2008 exercise will provide an opportunity to test systems in place for the response to and support of a scenario of this magnitude. The exercise will include two (2) days of response activities (November 13 and 14) and two (2) days of recovery activities (November 17 and 18). This exercise will provide local jurisdictions, special districts, private sector, hospitals, and others a unique opportunity to participate in coordinated, County-wide exercise activities to evaluate and enhance San Bernardino County response and recovery capabilities in response to one of the most likely hazards facing the county. Dr. Lucy

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In Memory of Vance Tomaselli

San Bernardino County Fire Department News Release

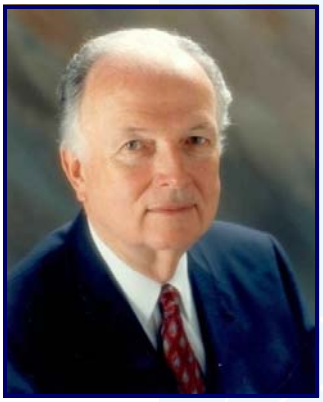
On Saturday, February 16th, while en route to a structure fire at Camp Edwards near Angelus Oaks, Captain Tomaselli suffered a stroke. He was airlifted to Loma Linda University Medical Center, where he underwent emergency surgery.

Captain Tomaselli, age 60, was a 28-year veteran with the fire service. He was a Paid-Call Fire Captain assigned to Station 15 in Angelus Oaks and is survived by his son Jim Tomaselli and daughter Caryn Todd. "Vance has always been dedicated to serving his community and the travelers who encountered him on their way through the mountain communities. Vance dedicated his life to serving others. He will be sorely missed by all that had the pleasure of knowing him," stated Fire Chief Pat Dennen.

ICEMA would like to extend our sincerest condolences to the Tomaselli family and to San Bernardino County Fire Department for the loss of a family member and hero.

In Memory of Dr. Zirkle

By: Edna Maye Loveless



Dr. Thomas Zirkle, MD, FACS, passed away on January 11, 2008, unexpectedly after successfully undergoing heart bypass surgery. Born in Loma Linda in 1936, Dr. Zirkle followed his father's path in pursuit of a distinguished medical career. He served as Senior Vice President of Loma Linda University Medical Center, Assistant Dean of the School of Medicine, Special Assistant to the President at the University, and President of the School of Medicine¹s Alumni Association. Spearheading an emergency medical service program for Loma Linda fire fighters, Dr. Zirkle developed and taught the courses, ultimately becoming deputy chief of the department, active in all aspects of fire fighting.

ICEMA EMS Update

By: Denice Wicker-Stiles, Assistant Administrator

ICEMA continues to implement the EMS Management Information Surveillance System (MISS). Currently AMR Redlands, AMR Rancho, AMR Victorville, Morongo Basin Ambulance, Desert Ambulance, Symons in Bishop, Running Springs, Morongo Valley Fire Department, Needles Ambulance and Baker Ambulance are using and/or testing the system.

Trauma Triage, Burn Protocols and the Standard Drug and Equipment list are out for 45 day comment. These protocols can be found on the ICEMA Website.

* Reference #2001 BLS & ALS Standard Drug and Equipment List
* Reference #8005 Trauma Tri age Criteria and Destination Policy
* Reference #8007 Adult Trauma
* Reference #8009 Pediatric Trauma
* Reference # 9001 Burn Criteria and Destination Policy
* Reference #9003 Adult Burns
* Reference #9005 Pediatric Burns

The San Bernardino County Trauma System Advisory Committee (TSAC) and the joint Riverside/San Bernardino County Trauma Advisory Committee (TAC) continue to meet regularly.

ICEMA is continuing to work on 5150 transport issues. The ICEMA Executive Director is co-chairing, along with Dr. Lalal, Medical Director of San Bernardino County Behavior Health, a 5150 task force to discuss transports. Included on the task force are representitives from law, fire, transport providers and hospitals.

ICEMA continues to participate in the California Diversion Project.

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Jones, Chief Scientist for the Multi Hazards Initiative in Southern California (part of the United States Geological Survey) presented the science behind the scenario. This conference was used "To identify, inform and engage potential Golden Guardian Exercise activity participants from among the San Bernardino County Invitees".

We will have an update in the next newsletter regarding Golden Guardian 2008 and the activities of the HPP Program. Until next time, keep your powder dry and plenty of food and water on hand. As the famous TV philosopher Frasier Crane once said, "If less is more, just imagine how much more, more would be."

What is Staphylococcus Aureus and MRSA?

By: Pamela Martinez, RN, BS, MICN, Nurse Administrator Ontario Fire Department

Staphylococcus aureus, often called "staph," is a type of bacteria commonly found on skin surfaces. Approximately 30% of the public harbor staph in their nasal passages, yet are asymptomatic. Methicillin-resistant Staphylococcus aureus (MRSA) is a variant form of Staphylcoccus aureus. In the past, MRSA was found only in healthcare facilities with patients that were susceptible to infection. More recently MRSA has emerged in the general community, and can cause infections in otherwise healthy people.

Types of MRSA

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a type of bacteria that is resistant to certain antibiotics. These antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin, amoxicillin and Keflex. Staph infections, including MRSA, occur most frequently among people in hospitals and healthcare facilities (such as nursing homes and dialysis centers) who have weakened immune systems. This is referred to as HA-MRSA (Hospital Acquired MRSA). Community Acquired-MRSA (CA-MRSA) infections are generally defined as "MRSA infections in people with no history of the following risk factors within one year prior to the date of the positive MRSA culture":

- Diagnosis of MRSA was made in the outpatient setting or by a culture positive for MRSA within 48 hours after admission to the hospital;
- No medical history of MRSA infection or colonization;
- No medical history in the past year of:
    - A. Hospitalization;
    - B. Admission to a nursing home, skilled nursing facility, or hospice;
    - C. Dialysis;
    - D. Surgery;
    - E. No permanent indwelling catheters or medical devices that pass through the skin into the body.

MRSA Risk Factors

Pre-hospital care providers are at risk for acquiring "staph" because it is transmitted through direct contact with skin or other surfaces (such as gurney railings, unclean medical equipment, linens, etc.) which can harbor the bacteria. Infections with "staph" are usually caused by the entrance of bacteria through a break in the skin. The organisms most often cause skin infections, but can also infect the lungs, bones, and bloodstream. Most of the time, infections can be easily resolved with appropriate antibiotic therapy, although the resistant nature of MRSA makes it more difficult to treat than non-resistant strains. Within communities, "staph" infections are commonly seen in clusters, especially among people who live or work in close proximity to one another (like sports teams, people living in extended care facilities, prisoners, and the homeless).

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MRSA Prevention

Prevention of "staph" infections is relatively simple and is based on good hygiene practices. Here are some suggestions:

- Keep your hands clean by washing thoroughly with soap and water and using an alcohol-based hand sanitizer throughout the day.
- Wear personal protective equipment during patient care, and wash your hands immediately upon removal of gloves.
- Keep cuts and scrapes clean and covered with a bandage until healed. Draining wounds with evidence of infection should be promptly evaluated by your physician.
- Never touch other people's wounds or bandages without protective gloves.
- Avoid sharing personal items, such as towels, razors, bar soap or other toiletries.
- Clean off all recreational equipment, such as weight benches, treadmills, and bicycles before use, and place a towel or shirt between your bare skin and exercise equipment.
- Use liquid soap or your own personal bar soap when using community showers.
- Wash your linens (towels, sheets, blankets or uniforms) separately in detergent with water at or above 160F for at least 25 minutes, or utilize an oxygenated laundry detergent (such as Oxi Clean) that is suitable for cleaning at lower temperatures.

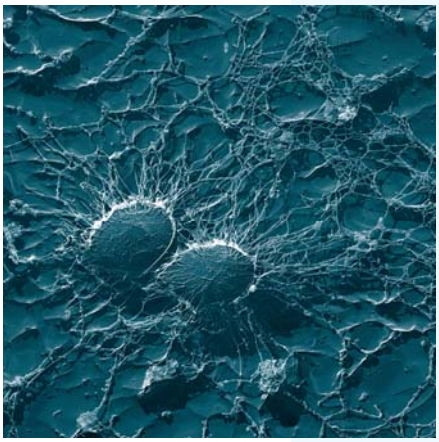

Photo courtesy of Erbe, Pooley: USDA, ARS, EMU

MRSA infections usually present as skin infections, such as abscesses, boils, and other pus-filled lesions. They are frequently reported as "spider bites;" however, until diagnosed, it is more appropriate to describe them as skin infections of an unknown origin. These infections typically are treated quickly and effectively, although they may be recurrent. MRSA infection recurrences have generally been attributed to over-use of antibiotics, misdiagnosis, and re-colonization.

It is very important that healthcare providers do not stereotype people who have recurrent MRSA infections. The literature shows there is no clear medical evidence at this time linking MRSA infections to any other communicable disease. Prevention of "staph" infections, including MRSA, focuses on good hand care techniques. Using universal precautions on all patients with skin infections and open wounds will provide sufficient protection. MRSA is not required to be reported to public health agencies. However, if you think you have been exposed or have a skin infection that looks suspicious, notify your supervisor and seek medical evaluation.

Cell Phone Laws Go Into Effect July 1, 2008

California Governor Arnold Schwarzenegger recently signed a legislation that prohibits the use of handheld mobile phones while driving. The new law will take effect on July 1st of this year. According to the California Department of Motor Vehicles website, minors (under the age of 18) are **prohibited** from using a wireless telephone, *including a hands-free device*. All other drivers 18 and over are prohibited from driving while using a wireless phone **unless** a hands-free device is used. The first offense will cost $20 plus administrative fees, and the second or subsequent offense will cost $50 along with administrative fees. There are exceptions to the rule, so for further information log onto: www.dmv.ca.gov/cellularphonelaws/index.htm

Tidbit corner

EMSA needs California Medical Volunteers

Managed by the California Emergency Medical Services Authority, in partnership with the California Department of Public Health. ***YOU*** can be a part of California's response to large-scale disasters by volunteering on-line with California Medical Volunteers. For more information log onto: https://medicalvolunteer.ca.gov

ICEMA Training & CE Opportunities

April 28, 2008
ARC (Train-the-Trainer) 9:00 a.m.—Noon at ICEMA
Skills & Orientation Instructor Course 1:00 p.m.—4:00 p.m. at ICEMA

Application and sign-up is required.
Log onto www.icema.net for further information.

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