NEWSLETTER
Iowa Emergency Medical Services Association

APRIL/JUNE 2002

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A VOICE FOR POSITIVE CHANGE IN IOWA EMS

weathering the changes

by IEMSA President, Jeff Messerole

A common theme through my presidency has been change. The association has weathered change and in my opinion for the better. We are going to experience changes in the next year and I'd like to address a couple of them. Chapter 140, the Critical Care Paramedic, and the Epi-pen are issues I seem to hear about frequently and deserve some explanation.

Chapter 140 addresses training funds, equipment funds, and system development grants. The Iowa EMS Association, Dr. Petersen, the staff at the Bureau of EMS, and the EMS Advisory Council have responded positively to a mandate from the state of Iowa to simplify processes within all departments. The Bureau of EMS had to develop language to combine the Bureau training funds issued to counties and services, equipment, and system development. Not an easy task. It began several months ago when meetings occurred between the Bureau and IEMSA to discuss how to best accomplish this to benefit EMS. It was suggested that all the money could be placed in a non-reverting fund that EMS could access for training, equipment and system development grants. The importance of this suggestion was that the money would be non-reverting.

That means what is not used by EMS, will stay with EMS and not go back to the Department of Public Health. Not that EMS has a problem spending available money for training, equipment, and system development, but in the past if there were any funds left over, they went to someone else. Accessing those funds will be different than in the past. County EMS Associations will have to write grants to receive the money. Some thought and preplanning will go into how the funds are going to be allocated. We believe the money will be awarded as 50% of the grant up front and the remaining funds delivered upon completion of the grant. Some parts of the grants will require a dollar match as in the past. I am excited about the establishment of a non-reverting fund for EMS. Our next step should be to look at ways to increase the amount of funds available in this non-reverting fund. Discussions are beginning and are promising. There is much money being made available to each state for the provision of emergency response to terrorism. EMS will play a role in providing the initial care and has an interest in seeing

—Continued on Page 2

Our next step should be to look at ways to increase the amount of funds available in this non-reverting fund.

What's Inside

weathering the changes—*continued*

by IEMSA President, Jeff Messerole

—Continued from Page 1

that if money is available for training and equipment then EMS should have access to their fair share. It is not certain how much money will be available or how Iowa will proceed with training and equipping its providers to respond to terrorism but your association, IEMSA, is at the table and will work with all involved to see EMS is properly trained and equipped to respond.

Next are the issues of the Critical Care Paramedic (CCP) and the concept of Critical Care Transport (CCT). Much discussion is occurring as a result of the Bureau notifying paramedic ambulances services to respond as to how they intend to staff critical care transports. If we look back at how this came about, I believe we can better understand the issue. A little over two years ago the EMS Advisory Council entertained the concept of a state developed curriculum to train paramedics who find themselves caring for patients on inter-hospital transfers that would require a knowledge of care not currently being taught in a paramedic class. A subcommittee of physicians and educators met over several months to identify those skills, considered critical care. More importantly they developed a curriculum to train paramedic specialist who faced transfers of with patients with chest tubes, arterial lines, ICP monitors, etc. The result of these meetings were a list of 13 skills considered critical care skills with a recommendation to the EMS Advisory Council to provide a certification endorsement for those paramedic specialists who completed a critical care paramedic program including these skills. EMS services where then notified and given a 180-day variance if needed to come on line with the rule changes that addressed the CCP. Services found their options limited. They can comply with the rules and train their paramedic specialist staff to the critical care paramedic level, or they could choose to sign an agreement with the referring hospital to provide an RN to assist in the care of this critically ill or injured patient. The goal of critical care transport is to have a team of caregivers from different disciplines trained to transport critically ill or injured patients from one hospital to another. The paramedic specialist who successfully completes the CCP course would serve as one team member along with perhaps a respiratory therapist, registered nurse, or physician. However, there are some concerns with CCT training. Services will train CCP's and let them single handedly transport these critically ill or injured patients from one hospital to another. There is the possibility that the fee charged for this CCT is significantly greater than the highest fee for an Advanced Life Support call, possibly making CCT's an attractive revenue source. The other issue with this is that the rule requires a transporting ambulance service who does not have a CCP and is requested by a hospital to transfer a critically ill or injured patient to a tertiary care center for a higher level of care to have an RN supplied by the hospital to attend that patient during that transport.. Any ol' RN will do according to the rule. IEMSA and others are working to develop guidelines for the type of training or orientation an RN should have prior to being thrown in the back of an ambulance, an environment that possibly could be very foreign to that RN who is expected to care for that critically ill or injured patient. While it is not the job of EMS to regulate nursing, we will send a strong message as to the guidelines we recommend for any ol' RN staffing an ambulance during a critical care transport. CCP and CCT will probably and should probably be a regional thing, much like the aeromedical services.

And finally is the addition of the Epi-Pen to the cadre of skills and equipment used to save lives. With 85% of EMS in Iowa being provided by volunteers and as many as 85% being basics and 1985 EMT-I's, it seemed appropriate to approach

weathering the changes
—continued

the need to have those services carry Epi-Pens on the ambulances and rescue trucks for patients experiencing an anaphylactic, severe, allergic reaction. A true minute by minute life threatening emergency that can not wait to get to a hospital or to tier with a paramedic service for treatment. The protocol has been revised and should be approved in July. EMSer's will need to refresh the training they received for assisting a patient with their Epi-Pen, have some type of pharmacy agreement with their medical director or pharmacist, some type of system to track expiration dates, as well as some type of CQI program addressing this high-risk low frequency skill. Another great step forward for EMS in Iowa!

I've touched on some of the items IEMSA has and remains active in these last several months. There is much more to discuss as it unfolds and much more news to catch up on in this edition of the newsletter. I hope this finds you all well and enjoying what you do best – saving lives. Take care and God bless.

Your friend in EMS,
Jeff Messerole, President
IEMSA

ems council of NE Iowa

by Connie Leicher, NE Representative

The EMS Council meets every other month at Area Ambulance building/Mercy in Cedar Rapids. Even though we don't have any funding, this group still meets to keep the counties updated. We have reports from IEMSA representatives, Craig Keough from the Bureau of EMS and the Majority of our counties are represented as well as the hospitals.

Black Hawk County has been very active with a project for the counties volunteer services. The committee applied for grant funding last April. They received $15,000 in grant dollars to create a recruitment and retention program. They contracted with Vision Development Services to create a video and a graphics display that would be used by each EMS crew at the local open houses, community events and schools. Videos were produced for each service as well. Color brochures will also be handed out as a way to get the word out about the need for EMS volunteers in their respective comminutes. The video and brochures will be dispersed to each service at the Black Hawk Co. meeting in May.

The NE Iowa board meets again on May 23rd at 10:00.

corndogs & cotton candy

by John Copper, North Central Representative—Booth Chair

The Iowa State Fair is coming up on us quickly. The IEMSA Booth will be located in the Hall of Flame & Law this year. We will be looking for EMS services and individuals to volunteer to help cover the booth throughout the fair. This opportunity is a great experience, as you will have the chance to meet and visit with the public about the important issues facing EMS today.

The fair runs August 8th through the 18th, 2002. The booth hours are 9am-9pm, but we staff the booth 9am-5pm. We like to schedule everyone in 2-3 hour shifts, so that no one has to work too long and can have the rest of their day to enjoy the activities of the fair, corndogs and cotton candy. Therefore, we'll need five to ten volunteers a day. Contact John Copper to sign up now—515-574-6687 or e-mail copper4@frontiernet.net.

ems day-on-the-hill a success

by Dave Cole, Legislative Committee

EMS Day on the Hill 2002, March 21, was a once again a great success!

We had over 70 legislators attend our welcome breakfast. They not only offered their support but also a very well deserved Thank You to Iowa's EMS providers.

Some legislators who attended offered suggestions surrounding pension and retirement for EMS providers, (as some of you might remember this was one of our original legislative goals back in 1989) we hope to meet this summer and develop proposals for next year. We also had good representation (over thirty) from Iowa's EMS providers. Not only your IEMSA Board but also we had over ten new providers from various areas that made their first trip to EMS on the Hill Day. (THANKS) Thanks to our continued lobbying efforts by Mr. Cal Hultman and all who attended we have once again made our voice heard.

Please see the legislative update article for a list of bills that have been addressed in this session.

IEMSA Members meet with Iowa State Legislators

IEMSA Award Winners Attend Stars of Life Program in Washington D.C.

by Mark Postma, Legislative Chair

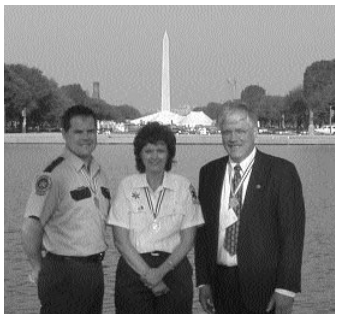
IEMSA 2001 Award Winners Gary Ireland and Karla Anderson attended the 2002 Stars of Life Program held in Washington, D.C. May 8th-10th, 2002. This event, sponsored by the American Ambulance Association, is a program that the IEMSA association has sponsored by sending two award winners each year for three years.

The program consists of "Stars" that represent their respective EMS agency/service throughout the United States. The "Stars" attend training sessions on how to meet with their Congressman who represent their respective districts. The "Stars" have a photo taken in front of the Capitol and are recognized at a special banquet held at the Marriott Metro Center.

Both "Stars" spouses attended the events this year. The trip allows for ample time to visit the many different historical venues and tour the monuments in the Washington D.C. area. As we approach the IEMSA conference this fall, consider nominating a member of your squad who has made an impact on EMS in the State of Iowa. Winners at this years conference will represent the State of Iowa at next year's "Stars of Life" event.

See the 2002 IEMSA Awards Nomination Form on Page 17.

IEMSA Award Winners in D.C. at Stars of Life Event



IEMSA Conference November 14-16
Features New 1/2 Day Pre-Conference Workshops!

by Evan Bensley, NW IEMSA Representative & Conference Co-Chair

The Iowa EMS Association Conference Committee has been hard at work on the 2002 conference. We are constantly working on new ways to improve or add to the conference and 2002 is no exception. Be sure to mark the dates on your calendar for November 14-16 at the Polk County Convention Center in downtown Des Moines.

Three Pre-Conference Workshops will be offered for the first time. The workshops will be held on the afternoon of Thursday, November 14th. We will offer these three tracts for specialty areas of EMS. The first tract will be for EMS Instructors. National Registry testing results across Iowa have been dropping. The idea of a seminar to aid EMS Instructors in teaching methods, classroom discipline, and working with a curriculum had been suggested as a way to improve the scores for first time testings. Speakers during this tract will include the EMS Bureau presenting the required EMS Instructor Update and Heather Davis from the EMS Program at the UCLA Medical Center in California.. Heather's two-hour presentation will aim at improving instructional methods for volunteer and rural EMS Instructors.

The second tract of the Pre-Conference Workshop will be for EMS Service Managers. The focus of this tract will be to help the smaller rural ambulance Service Directors understand the complex new Medicare billing requirements and legislative issues that directly affect their services. The presentation will be given by Mark Postma from MEDIC Ambulance Service and Dana Sechler from Eastern Iowa Community College.

The third tract will be offered for Paramedics who need to acquire 12-Lead EKG training to advance to the Paramedic Specialist level. Neal Weers from Mercy School of EMS in Des Moines will give the 12-Lead EKG presentation. Neal has presented at the IEMSA Conference before and has done a great job in presenting a 12-Lead class that has been both entertaining and educational.

The Pre-Conference Workshops will begin at noon on November 14th. Each of the programs will run until 4:00 pm. A total of 4.0 CEH's will be awarded for any of the workshops. Minimum numbers of participants will be required for each tract in order to cover expenses to provide these workshops. Participants may attend just a workshop, just the regular conference or both! The IEMSA Board meeting this year will again be held at 7 pm on Thursday evening with the "Meet the Board" reception with refreshments afterward.

The Hotel Savery has been contracted as the host hotel this year for the conference. We chose the Hotel Savery for a number of reasons. These included that they are closer to the Convention Center, they offer a historical room that is less expensive, and the Friday evening dance this year will be held in the downstairs of the Savery. Conference attendees had expressed concerns last year about the dance being held in the Convention Center and attendance at the dance was down. People indicated they would prefer that the dance be held at the hotel in which they are staying. Rooms are also still be available at the Marriott for those preferring to stay there.

The evening dinner previously held before the dance also had low attendance last year and has been eliminated this year. Participants who infrequently come to Des Moines had indicated a preference for visiting their favorite restaurant for dinner before the dance. In return for loss of the evening meal, this year lunch both Friday and Saturday of the conference will be provided. Previously attendees could use the restaurants in the

—Continued on Page 18

Mark Your Calendars for the **2003 Conference** - November16–18!

iemsa continuing education corner— asthma attack!

CE Directions

Iowa EMS Association members may read through the article, complete the post-test with an 80% success rate and receive 1 hour of continuing education for EMS at the basic and advanced levels through Southwestern Community College EMS Education in Creston, EMS Provider Number 14.

Please send the completed post test to: Cheryl Blazek

Southwestern Community College
1501 West Townline St.
Creston, IA 50801

Further information may be received by calling (641) 782-1332 or (800) 247-4023 ext. 332, Faxing (641) 782-1334 or E-mailing— blazek@swcc.cc.ia.us

Only IEMSA Members who receive 80% on the post test may receive the 1 hour of continuing education credit. The post test must be received by August 15, 2002.

Upon completion of the article and post-test, participants will be able to: review the pathophysiology, field impression and differential diagnoses of intracranial and extracranial medical causes of altered mental status;

Let's Begin

Case Presentation: On a cool, crisp autumn day, you are dispatched for a person having trouble breathing. On your arrival, you locate a 27-year-old female who appears to be in acute respiratory distress. The patient's name is Jane Moore, and she has a history of asthma. She states that this attack started about 25 minutes ago and she has used her inhaler twice without relief. She believes that her inhaler is now empty.

You note that she is speaking in short, but complete sentences. Her skin pink, warm and dry. Initial vital signs are BP 138/84, pulse 100, respirations 26, regular but slightly labored. As you auscultate the chest, you hear pronounced wheezes bilaterally – primarily on exhalation. Jane denies any other pain or discomfort. This attack is similar to others Jane has had in the past that have been relieved with her inhaler. She states, "I am allergic to several pollens, molds, and penicillin."

Pulse oximetry with patient on room air is at 92%. You apply humidified oxygen via non-rebreather mask at 15L/min. Within three minutes, the pulse oximeter reads 94%, although Jane's respirations are not any easier. An IV is established with normal saline, set at 100 gtts/hour. The cardiac monitor is applied and shows a sinus rhythm, rate of 98 with normal axis and narrow complexes on 12-lead. You prepare to administer Albuterol via a hand-held nebulizer. She is familiar with the use of the device. Five minutes later, shenods her head to acknowledging that the medication is helping her breath easier.

Transport time is 20 minute to the closest facility. Medical Control is contacted and advises repeating the Albuterol treatment continuously enroute to the hospital. The doctor also orders you to administer Methylprednisone (Solu-Medrol), 125 mg IV. After two nebulizer treatments, Jane is feeling much better. Her work of breathing has decreased and the oxygen saturation level is now 98%. Upon auscultation, some wheezing is still heard bilaterally. Jane has a mildly productive cough. As you turn her care over to the emergency department, she thanks you for your help.

Background: Asthma is a common inflammatory disease that involves periodic episodes of severe, but reversible bronchial obstruction. Frequent, repeated attacks may lead to irreversible damage to the lungs and the development of chronic asthma.

Asthma affects nearly 10 million Americans and is responsible for about 4,000 to 5,000 deaths per year. Asthma is more common in children and young adults, yet can occur anytime in life.

—Continued on Page 7

There are two basic types of asthma: extrinsic and intrinsic. Extrinsic asthma involves acute episodes, triggered by an allergic reaction to an inhaled irritant. Frequently, there is a family history of allergies, such as hay fever. The onset usually occurs before age 10. Childhood asthma often improves with age.

The second type of asthma is intrinsic. In this disease, other types of stimuli initiate the acute attack. These stimuli include respiratory infection, exposure to cold air, exercise and exertion, drugs (aspirin), stress, and inhalation of irritants, such as cigarette smoke. Intrinsic asthma usually has an adult onset, after age 30 in up to 33%. Many patients have a combination of the two types.

Pathophysiology:

The bronchi and bronchioles are responsive to irritants, leading to contraction of the smooth muscles (bronchoconstriction), inflammation with edema (swelling), and increased secretion of thick mucous. These changes can block the airways, totally or partially, and interfere with the airflow and oxygen supply. In extrinsic asthma, the allergic reaction causes release of chemical mediators like histamine, which causes brochospasms, edema and increased mucous secretion. This reaction also stimulates the vagus nerve, causing a reflex bronchoconstriction. The second stage of this allergic reaction occurs a few hours later. During this stage, increased leukocytes (white blood cells), release additional chemical mediators that cause tissue damage. Left untreated, frequent and prolonged attacks can lead to chronic asthma later in life. The mechanisms behind intrinsic attacks are not fully understood.

Partial obstruction of the smaller airways results in air trapping with hyperinflation of the lungs. Air passes into the areas distal to the obstruction (alveoli), but is only partially exhaled. Since exhalation is a passive process, less force is available to move air out, and forced expiration often collapses the bronchia wall, creating a further barrier to exhalation. The residual volume (air left in the lungs after exhalation) increases and, as a result, it becomes harder to inhale fresh air or to cough effectively to remove the mucous.

To better understand this air trapping, try this experiment: Take several breaths and exhale only partially before inhaling again. After a few breaths, you will see how hard it is to inhale or to cough. This is what an attack feels like.

Total obstruction of the airway results when mucous plugs completely block the airflow in an already narrowed passage. This leads to atelectasis (collapse of the alveoli). The air left in the alveoli diffuses out and is not replaced. This could lead to collapse of the lung. Both a partial and total obstruction will lead to hypoxia. Oxygen levels are further depleted by the increased demand of the muscles of respiration and by the stress of the individual fighting for air. Hypoxemia causes vasoconstriction in the pulmonary blood vessels, slowing blood flow and increasing the workload on the right side of the heart.

With repeated acute asthma attacks, irreversible damage occurs in the lungs. The bronchial walls become thickened, and fibrous tissue (resulting from frequent infections that follow attacks) develops in atelectic areas. Because it is impossible to remove all the tiny mucous plugs in the airways, complications are common following asthma attacks.

Assessment Findings:

The assessment begins enroute by simply knowing what time it is. Because of our circadian rhythm (internal clock), naturally occurring anti-inflammatory hormones are at high levels in the morning and low at night. For this reason, asthma conditions often get worse at night.

On initial assessment you will usually find the patient sitting upright, leaning forward with his/her hands on knees. This is referred to a "tripod" position. He/she is frequently and obviously using accessory muscles to breath; retractions may also be noted. Using the accessory muscles of the abdomen for exhalation is less obvious. You may need to place your hand on the patient's abdomen as he/she breaths to feel for accessory muscle use. The patient may also have a productive cough of thick, tenacious mucous.

Respiratory distress is obvious. You will often hear audible wheezes, even without a

—Continued on Page 8

asthma attack!

—*Continued from Page 7*

stethoscope. However, you still need to listen carefully with the stethoscope in all lung fields, anterior and posterior. Not all that wheezes is asthma!! Asthma usually has diffuse wheezes heard bilaterally in all lung fields on expiration. Localized wheezing in just one area of the lungs, usually indicates foreign body obstruction or other localized pathology irritation. Rhonchi, sounds heard in large upper airways on inhalation, are frequently called "inspiratory wheezes". Beware of the person who goes from wheezes to no lung sounds. Absence of wheezing generally indicates ventilatory failure.

The heart rate increases. Tachycardia is a common response to hypoxia and the stress response of not being able to breath. Another possible finding in severe cases in pulsus paradoxus. This condition refers to an abnormal decrease in systolic blood pressure that drops more than 10-15 mmHg during inspiration compared to expiration. Pulsus paradoxus, an important hemodynamic feature of tamponade, is an abnormally large inspiratory fall in arterial pressure. When left ventricular filling and stroke volume are decreased, blood pools in the lung and right side of the heart during inspiration, increasing intracardial pressure. Therefore during inspiration, a greater negative intrathoracic pressure occurs, resulting in a dramatic fall in systolic BP and pulse volume. The arterial BP may normally fall to 4-5 mmHg during inspiration, but a decrease of 10mmHg or more is considered abnormal.

Acid-Base Changes: Initially, hyperventilation occurs, causing increased CO2 elimination. This leads to a decrease in hydrogen ions and an increase in pH, producing a state known as respiratory alkalosis. A capnometry unit will show decreased CO2 (less than 35 mmHg). In time however, the work of breathing will tire the patient, which results in decreased respiratory effort and weaker coughing. Severe respiratory distress is apparent.

Hypoventilation leads to hypoxemia. Indications of respiratory failure are diminished level of consciousness, and possibly cyanosis. Blood gas measurements show a PaO2 (not pulse oximeter) level of less than 50 mmHg or a PaCO2 of more than 50 mmHg. A capnometry unit will show end-tidal CO2 of more than 50 mmHg. If you don't have a blood gas or capnometer, and the attack is so severe that the patient cannot talk at all, the pO2 level is probably less than 50 mmHg.

History and Management: Knowing the history and medications the patient takes is very important to the management of the asthma attack. Fortunately, most patients who have asthma are aware of their condition, are good at self-management, and can indicate the severity of the attack. They also may know more about the drug you are giving them than you do. (It is not uncommon for asthma patients to set up their own breathing treatments faster than the EMS provider!)

Persons with asthma can prevent having an attack by avoiding irritants or drugs that precipitate attacks. Good ventilation in the home and workplace are recommended. When an attack occurs, controlled breathing techniques and a reduction in anxiety often lessens the severity and the extent of the attack (a feeling of panic often aggravates the condition). Regular swimming sessions are a great benefit, particularly to children, because it strengthens chest muscles and improves cardiovascular fitness.

Patients with a history of asthma usually are on a regimen of medications to control various stages of asthma and asthma attacks. Many asthmatics carry inhalers such as Albuterol USP (also recognized by the trade names of Preventil® or Ventolin®). Other acute inhalers include Terbutaline (BreathineTM), Metaproterenol (Alupent®), and Isoetharine (Bronkosol®). Albuterol is frequently given to small children as a syrup. Terbutaline, Albuterol, Metaproterenol and Isoetharine are all beta2 bronchodilators used for acute asthma attacks. For years, epinephrine and isoproterenol

were used for asthma. The new beta2 drugs are just as effective, but have minimal effect on the heart rate. Another inhaler: Atrovent® (Iptratroprium), has the combined effects of Ventolin and Atropine.

Some patients may be on steroid glucocorticoid inhaler such as Beclomethasone (Beclovent®), as a long-term anti-inflammatory. These drugs work to iminimize the second-stage allergic reaction in the airways. Beclomethasone has no use in the acute attack. Cromolyn Sodium (Intal®), is a prophylactic medication administered daily by inhalation. This drug inhibits the release of the chemical mediators from the epithelial cells, thus minimizing the allergic response of the tissues. Cromolyn is used by athletes as a preventative measure, and has been used in the acute asthma attack.

Out-of-Hospital Management:

BLS care should begin immediately. Oxygen should be humidified (if at all possible) and administered high flow via non-rebreather mask. The humidification is especially important in small children. The humidified oxygen helps loosen the mucous and makes it easier to cough secretions up. Remember, the mucous finishes off the obstruction! On the other hand, giving dry oxygen can actually dry the mucous membranes, causing plugs.

Try to calm and reassure the patient while coaching breathing efforts. Allow the patient to assume the most comfortable position for breathing. If the patient has an inhaler and knows how to use it, allow them to do so.

Paramedics should take an active, aggressive role in the management with an acute asthma attack. Your approach should be one of understanding the problem and treating it accordingly. Look carefully at the medicines the patient is on for clues as to what works for him/her. Asthma is a lower airway obstruction (bronchoconstriction), so Traditional upper airway procedures, such as intubation, do not relieve the problem

IV access should be established with an isotonic, crystalloid solution, such as normal saline or lactated ringers. Since the drugs that could be given may later have some effect on the cardiovascular system, it is a good idea to establish an IV prior to any medication administration (if possible). Consult with your local protocol or medical control for what is accepted in your area. IV rates should be adjusted to about 100 cc/hour. A person who has endured an asthma attack for several minutes can begin to dehydrate, especially children. The average adult, breathing normally will exhale 400 ml of water in a day. In acute asthma with increased respiratory rate, "a day's worth of breathing" may occur in just a few minutes.

Since the problem is bronchoconstriction, your first medication should be a bronchodilator. Perhaps the most widely used and safest drug today is Albuterol (Ventolin, Proventil). The common adult dose is 2.5 mg (0.5mg of a 0.5% solution mixed with 2.5 cc of normal saline) in an updraft, small volume, hand-held nebulizer. Prefilled, pre-measured dosage containers are available (0.083 % in 3 ml) where no mixing is required. Twist the top and empty the contents into the nebulizer. The drug is nebulized with oxygen running at about 6 L/min (it may take more L/min to nebulize the drug). Caution should be taken when running a nebulizer in line with a humidifier. The oxygen tubing may pop off dur to increased back pressure caused by the nebulizer. It may be better to use a separate oxygen line, not connected to a humidifier for the nebulizer, and continue to administer humidified oxygen via nasal cannula at a lower L/min. flow. This gives the patient extra oxygen between puffs with the inhaler. Albuterol may be repeated if the first does is ineffective or if more is needed t maintain the effect. Some services advocate continuous treatment for the duration of transport. Check your local service protocol.

Although Albuterol and other beta2 drugs are designed to have minimal cardiac effect, it has been reported to increase heart rate or cause ectopy. Therefore, the patient should be attached to a cardiac monitor. Some patients may not respond immediately to a beta2 drug. Bronchoconstriction may be caused by parasympathetic (cholinergic) or vagal stimuli. In this instance, Atropine (1mg) may be

—Continued on Page 10

asthma attack!

—Continued from Page 9

added to the inhaler with the second dose of Albuterol OR the use of Atrovent is advocated. Atropine (a drug used primarily to increase heart rate) also blocks the cholinergic response the causes bronchoconstiction. It comes packaged 1 mg in a 1 ml vial for this purpose. Draw this amount out, add it to the 3 ml of Albuterol and let the patient inhale it through the nebulizer. Reflex bradycardias are usually not seen because of the local absorption and use of the drug, and there is not a parasympathetic crisis of the heart (bradycardia).

If the patient is not moving air well enough or is unconscious and cannot hold the nebulizer, try Terburaline (Brethine®), 0.25mg via subcutaneous injection. Terbutaline is another beta2 drug that works very well in an asthma attack. Again, as with any beta drug, monitor the heart rate and rhythm carefully as these can cause tachycardias.

In cases that are unresponsive to the above drugs, the old standby: Epinephrine may be used in subcutaneous injection. The adult dose is 0.3 to 0.5 mg of the 1:1000 solution and the pediatric dose is 0.01 mg/kg (of 1:1000). Use epinephrine with extreme caution, especially in patients with known cardiovascular disease or those over age 55. Today's beta2 drugs are as effective as epinephrine and should be used first to minimize possible cardiovascular effects.

Status Asthmaticus: Status asthmaticus is a prolonged or repeated asthma attack that cannot be broken with bronchodilators or epinephrine. It can occur as a sudden onset or can be more insidious. It is frequently precipitated by a viral respiratory infection. These patients need rapid transport to the hospital and aggressive ventilatory support. Some texts have suggested an administration of Aminophylline to assist in bronchodilation. Aminophylline (5-7 mg/kg) is a xanthine bronchodilator that must be mixed with 50 to 100 ml of D5W and administered as a drip over 20-30 minutes. Paramedics should consider intubation as a last resort in these cases since the problem of bronchoconstriction still remains after the procedure. Intubation however, does make it easier to provide aggressive ventilatory support.

Experience has shown that if the patient has been intubated during a previous asthma attack, the paramedic should be ready to intubate during the current attack. Allow the drugs a chance to work prior to intubating. Every effort should be made to avoid intubating a child until absolutely necessary. Children are harder to wean off the ventilator because of the restrictive and obstructive pathology.

If the beta2 drugs relieve the bronchoconstriction, the paramedic may receive orders to administer a steroid, anti-inflammatory agent such as Methylprednisoline (Solu-Medrol). The common dose is 125 mg IV. Although the drug generally takes about 3 hours to start working, it helps prevent recurrence of the attack.

Summary:

Asthma is a common disease that is reversible with prompt recognition and aggressive management. Left untreated, asthma can and does kill. About 4,000 to 5,000 people die annually from the preventable, reversible condition. The key to prevention is patient education and chronic management of the condition. The key to management is the emergency provider's knowledge of the pathophysiology and drug options.

Selected References:

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Sanders, M, Mosby's Paramedic Textbook, Mosby, 1996
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Cason, D., Paramedic Field Care, Mosby, ACEP, 1997
Cohen, S, Pediatric Emergencies, Lippencott, 1982

This article written by Robert Cook, REMT-P, EMS Paramedic Supervisor for the Hamilton Hospital in Webster City, Iowa

—See Post-Test on Page 11

post-test–asthma attack!

Name

Address City State ZIP

Certification # Level IEMSA Member #/Expire Date

Please read the article and choose the one, best answer by circling. Complete this test, including the above info and send your completed post-test to:

Cheryl Blazek, EMS Coordinator
Southwestern Community College
1501 West Townline St.
Creston, IA 50801

You must be a member of the Iowa EMS Association and achieve an 80% on this post-test. First Responders, EMT-Basics and EMT-Intermediates complete questions 1-10. Iowa Paramedics and Paramedic Specialists complete questions 1-15.

1. Asthma accounts for about _____ deaths per year.

A. 10 million
B. 1,000
C. 4,000-5,000
D. 6,000-7,000

2. The two basic types of asthma are:

A. Intrinsic and extrinsic
B. Allergy and toxic
C. Alpha and beta
D. Stable and unstable

3. Asthma is more common in children and young adults.

A. True
B. False

4. A prolonged or repeated asthma attack that is not responsive to bronchodilators is:

A. Status epilepticus
B. Status bronchoconstriction
C. Status asthmaticus
D. COPD

5. Allergic reactions cause a release of a chemical mediator known as:

A. Histamine
B. Atropine
C. Albuterol
D. Prothrombin

6. Which of the following conditions is not a presentation of an asthma attack?

A. Bronchodilation
B. Mucous production
C. Edema
D. Cough

7. BLS management of an acute asthma attack includes:

A. High-flow oxygen, humidified
B. Position of comfort
C. Encouraging cough
D. All of the above

8. Wheezing always means bronchoconstriction from asthma:

A. True
B. False

9. A patient suffering from an asthma attack loses his/her radial pulse upon inhalation. This condition is called:

A. Pulse deficit
B. Pulsus paradoxus
C. Pulse defect
D. Pulse pressure

10. Which of the following medications prescribed to a patient would indicate a possible history of asthma or bronchoconstriction?

A. Nitroglycerine
B. Insulin
C. Digitalis
D. Atrovent

First Responders, EMT-Basics and EMT-Intermediates (Iowa) stop here.

Iowa Paramedics and Paramedic Specialists continue.

11. Which of the following drugs is not a beta2 agent?

A. Albuterol
B. Methylprednisolone
C. Terbutaline
D. Metaproterenol

12. Beta2 drugs are used primarily to facilitate:

A. Vasodilation
B. Bronchoconstriction
C. Bronchodilation
D. Diuresis

13. IV fluids frequently are needed in an acute asthma attack because:

A. The patient may become dehydrated.
B. The patient will have a lowered BP.
C. The patient may be overhydrated.
D. The patient may develop tachycardia.

14. What is the action of Atropine in an acute asthma attack?

A. Increases heart rate
B. Prevents bronchodilation
C. Decreases heart rate
D. Blocks cholinergic bronchoconstriction

15. Which of the following drugs is generally not effective in the acute asthma attack?

A. Ventolin
B. Alupent
C. Cromolyn Sodium
D. Atrovent

board of directors meeting minutes— *march 21, 2002*

West Des Moines EMS, 3421 Ashworth Rd., West Des Moines, Iowa

Present: Jeff Messerole, Cindy Hewitt, Jeff Dumermuth, Evan Bensley, Kay Lucas, John Copper, Brett Bredman, Dana Sechler, Jerry Johnson, Mark Postma, Rosemary Adam. Board members absent with proxy: Connie Leicher, Steve Noland, Melissa Sally-Mueller Board members absent without proxy: Cliff Greedy, Bruce Thomas, Lori Reeves

Call To Order – 10:04am—The meeting was called to order by President Messerole and the presence of a quorum established, and guests welcomed.

Determination of Quorum/Proxies--Proxies from Steve Noland and Connie Leicher were presented by Jeff Dumermuth. Clarification that only one proxy per board member is allowed and Jeff identified that both had been received by email.

Treasurer's Report

Presented by President Jeff Messerole. Mr. Postma noted that the total of liabilities and equities should equal $91,544.20 not $0.00. Mr. Johnson also indicated that the board has continued to ask for a comparison of costs vs. budget on our monthly treasurer's report.

Motion: Postma Second: Johnson to approve the treasurer's report. All = aye.

Bureau of EMS Report

Presented by Dr. Petersen. A summary of his report was provided in the form of a hand out and is included as an attachment to these minutes.

Legislative Committee

Dave Cole acknowledged and thanked everyone that had participated on EMS Day on the Hill. A total of 66 legislators registered as having attended the meeting.

Rick Jones indicated that the Association needs to be sure that the event is held earlier next year. If we had big issues to cover with legislators, late March is way too late to have any effect since most legislation has already funneled down at that point. Rick also reported that the Do Not Resuscitation Bill had been through both sides and passed unanimously and was on the way to the governor's desk for his signature. The Organ Donor bill also passed with similar success and is waiting to be signed.

Mark Postma reported that a subcommittee of the data points committee had been formed to look at air transport data points and that they were working through those issues with the state and providers.

Mark Postma also reported that he, Jerry Johnson and Jeff Dumermuth had recently attended a seminar presented by the American Ambulance Association in Dallas, TX regarding the new Medicare Fee Schedule and it's implementation. The fee schedule goes into effect 4-1-02. It was agreed that IEMSA will sponsor a presentation about the fee schedule on April 17th at Iowa Methodist Medical Center. Mark Postma will coordinate the presentation with help from Mr. Johnson and Mr. Dumermuth.

Bylaws Committee

Jerry Johnson reported that the first meeting will be held in April. – No Report

Newsletter/PI&E/Web Page Committee

Dana Sechler reported that our merchandise had been added to the web page. Currently visitors can print off and fax or mail an order form. We will continue to pursue the ability to provide for ordering and payment via the web in the future.

Rosemary Adam noted that several mistakes were in the last newsletter and that we will do a better job of editing prior to the next publication. Articles for the next newsletter are due April 19th and regional reports are needed. Creston Community College has agreed to sponsor the CE article.

Jeff Dumermuth indicated that PI&E had met and come up with several ideas. He indicated that it will be difficult to implement many of them until we have a part-time staff person available in the office.

Booth Committee

John indicated that we had had good success at our recent booths

with >$1500.00 generated. The next two booth opportunities are April 6th at NC EMS in Mason City and May 4-5 at EMS Update in Ames.

State Fire Service and Emergency Response Council

Cindy Hewitt reported that Representative Hoosier who led the HF2492 that created that council for the transition from IA State University to the Dept of Public Safety had attended their meeting and is disappointed that the council didn't let the legislative members and the Gov. know their recommendations as outlined in the plan. She believes since we are chosen/appointed groups we have a voice and our areas wouldn't be getting the cuts if we spoke up !!!! Many members of the council don't understand the FSTB and the Fire Marshall's office can't do the work of the council, due to political conflict. Rep. Hoosier mentioned EMS , not just fire.

Cindy asked if there were any opinions on whether Randy Novak & FSTB is doing the public safety role, that we believe he should. His annual eval is coming up, and the council is to give input.

Service Directors/Providers

No report

Nominating/Elections

No report – Jerry Johnson reminded the board that we need to look at the dates for the at-large election and be proactive with meeting the time restrictions this year.

Annual Conference

No report – It was noted that we need to get the information out on the web site about our pre-conference as soon as possible.

911 Telecommunications

A written report from Dennis Bachman was reported that indicated they were looking to increase wireless surcharge from $.50 to $1.00. Phase 1 of wireless 911 is complete and that 911 should find the closest cell tower.

Advisory Council

No report

State Medical Examiner Advisory Council

No report

New Business:

The question was raised whether the association would support Dr. Petersen's plan on disaster preparedness implementation over a three year plan. Motion: Johnson Second: Lucas to support Dr. Petersen's plan. 10=yes 1=no (Hewitt). Motion carried.

With no further business presented, the meeting was adjourned.

Next meeting – April 18, 2002.

calendar of events

by John Copper, Booth Chair

June 13–16—State, Summer Fire School, Ames, Sandy Deacon, 888-469-2374

June 21– Board of Directors Meeting - WDM Fire Station, 10:00 am.

July 18– Board of Directors Meeting - WDM Fire Station, 10:00 am.

August 8-18, 2002—Iowa State Fair --We're looking for volunteers to work for the IEMSA booth at the Iowa State Fair. Consider sending a couple people from your service for a day. Contact John Copper to sign up for a day—515-574-6687 or email - frontiernet.net. Your help would be greatly appreciated.

August 22– Board of Directors Meeting - WDM Fire Station, 10:00 am.

The Hotel Savery is our 2002 conference headquarter hotel and the location of the Annual Friday Night Dance.

2002 IEMSA Annual Conference Make Your Reservations!

Savery Hotel—515/244-2151 or 800/798-2151
$60 Single, $72 Double/Standard King

Marriott Hotel—515/245-5500 or 800/228-9290
or reserve rooms online at our website www.iemsa.net
$76 Single/Double

state fire & ems council

by Cindy Hewitt, RN, EMT-PS, IEMSA Vice President

I am Cindy Hewitt, and I represent IEMSA on the State Fire & EMS Council. This position is appointed, by the office of Governor Vilsak, with my term expiring in 2004. It was developed to help transition the Fire Service Training Bureau (FSTB) from the Iowa State University Extension Service to the State of Iowa. The council works with the State Fire Marshall's office and the Bureau Chief (and staff) of the FSTB, and reports the progress to the Gov. Vilsak. The council represents many different organizations and discusses the future visions on how to move the fire service forward.

The most controversial item, so far has been the recommended minimum training for firefighters. I appreciate all of the input many of you Fire/EMS services sent me. Meetings always involve discussions on money and sources of funding or lack of it. We usually conduct monthly meetings. We met 3/9 at the Altoona Fire Station and 4/9 at the Urbandale Fire Station. It is nice to move the meeting location to different departments to see the great fire stations and equipment. Our next meeting will be June 11, at the FSTB at 10am. The Council is also planning a one -day retreat in July. Please feel free to attend these regular council meetings or call the FSTB for more information.

Lots of issues have come forward to this Council and to the IEMSA board.

Remember:
GET INVOLVED !
BE INTERESTED !
BE A VOICE !

Make an effort to understand what is going on within your own industry. Learn how your own entity is working with the other essential emergency services. What do Fire & EMS have in common in your area? What about law enforcement and dispatchers and the 911 system? Does the current system work? Tell others. Your professional/volunteer organizations, the FSTB or IDPH Bureau of EMS, your county EMS Association, all need to know. Usually, no one claims to want to be political pawn. The fact is we are as EMS, affected everyday by 'tons' of people/organizations who represent the public. Elected officials are making decisions for YOU and YOUR EMS unit. And it usually involves money. It involves setting limits and minimum standards. In EMS, we all hope the patient's best interest is in mind. BE A VOICE !

We are all volunteer's in one way or another. I may work for a paid service, but I am a volunteer like many of you. We all work extra hours with our volunteer Fire & EMS services. We make many trips to your local meetings or across the state or some even go across the nation. We wear a different hat depending on where we are.

I am a proud volunteer with Agency Fire & Rescue, where they allow me to function as a first responder. It is very rewarding, and lots of hard work. And we are making progress for all volunteers. Keep up the good work ! Be a voice, a proud voice !

IEMSA Annual Member Meeting

Thursday afternoon and evening is special this year!

This years Annual Member/ Board meeting will be held on Thursday evening **November 14, 2002 at 7:00pm** at the Polk County Convention Complex.

Plan to come early, attend an afternoon **pre-conference workshop from Noon-4pm**, register for the conference, and spend some time in our newly expanded exhibit hall, featuring new products and services for EMS.

This year we've added exhibit hall hours to feature an **"Exhibitors Opening Reception"** from 4:30pm–6:30pm, Thursday night. Don't miss it!

Critical Care Paramedic Program in Iowa

Timothy D. Peterson, MD, Chief / Medical Director

As a result of nearly three years of planning by the Iowa Department of Public Health Bureau of EMS and EMS Advisory Council, the recognition of a scope of practice and endorsement for the "Critical Care Paramedic" (CCP) has become a reality as of March 13, 2002 when the related administrative rules went into effect. This process was initiated as a result of a needs-assessment survey of Iowa hospitals in May 1999 to identify if there were adequate resources in Iowa's EMS system for transfers of critically ill or injured patients between hospitals. A total of 83 hospitals responded (71%). Key findings from open ended questions indicated that the most common problems were inadequate number of paramedics (24%), helicopter not available due to weather (23%), inadequate number of RNs (23%), RN qualifications (6%), and paramedic qualifications (6%). Solutions proposed by survey respondents include more paramedics (24%), more RNs (16%), increased training for paramedics (14%), and improved EMS system design (14%).

Based on these results, the EMS Advisory Council established a statewide ad hoc workgroup of multi-specialty physicians in 1999 to determine what skills would be needed and appropriate over and beyond the certified paramedic specialist. Based upon these recommendations, the Bureau of EMS worked with the EMS Advisory Council to address changes in the administrative rules to allow for additional skills, and also worked with the Iowa EMS training programs to define a core curriculum.

Additional skills provided by the CCP include the following:

- BiPAP
- CPAP
- Chest Tube Placement – assist mode only
- Chest Tube Monitoring and Management
- Digital Intubation
- Retrograde Intubation
- Ventilators - Enhanced Assessment and Management
- Internal Cardiac Pacing Monitoring
- Arterial Line Monitoring
- ICP Monitoring

The entire scope of practice document for all levels of EMS providers in Iowa can be found on the bureau of EMS web site. www.idph.state.ia.us/ems

It is important to note that the national standard curriculum and Iowa certification of the paramedic has previously never included these critical care skills. If any of the above listed skills is determined necessary by the attending physician, it has always been and still remains the responsibility of the physician to match the patient's needs to a qualified provider. Failure to do so may place the hospital and/or physician at risk of an EMTALA violation if a lesser level of care is provided during the transfer. The new CCP level of training and associated Critical Care Transport (CCT) endorsement of the ambulance service program now provides hospitals with a safe and appropriate alternative versus always needing to send a nurse or physician with the patient being transferred to another facility. The Iowa EMS Advisory Council was very forward thinking in creating this expanded scope of practice and the related endorsements for the CCP. This will increase the quality of care available and enhance the EMS system's capability to meet the needs of the future.

Whether or not any individual EMS ambulance service program should advance to the CCP level is a decision to be made locally by service program directors, medical directors, and hospital administrators based upon an assessment of needs and resources available. Service programs that would frequently be asked to provide this level of care should strongly consider advancing to the CCT level.

—Continued on Page 16

Critical Care Paramedic Program in Iowa—*continued*

—*Continued from Page 15*

However, when the need for this level of care is infrequent, it might make more sense to rely on the hospital to always provide the appropriate hospital staff to accompany the patient as so determined by the sending physician. The bureau will work with each and any entity to support their decision, but cannot support placing an EMS provider with a patient requiring skills outside their scope or practice.

The process to advance to the CCT level involves completing a two-page addendum to the original service program authorization application. This is to assure that the service program has the trained personnel, equipment, and protocols available to provide this level of care if so desired. Service programs meeting the requirements will receive a "Critical Care Endorsement" from the Iowa Department of Public Health that recognizes their capability to provide this higher level of care. The option for a hospital to commit qualified staff (typically an ICU/CCU or ED RN) and equipment when needed by signing the service program application addendum will fulfill the requirements for authorization, even if the service program does not have any individual critical care paramedics as members or the extra equipment. This provides flexibility for the EMS system to grow over time to match the needs of patients to resources as determined appropriate by local entities.

Providing the necessary education for the CCP endorsement will remain a challenge until a sufficient number of training slots are available in Iowa. Currently, the University of Iowa Emergency Medical Services Learning Resource Center is teaching the curriculum, and some other training programs are planning to offer this training. Because of the flexibility being allowed for hospitals to commit qualified nursing staff, the CCT program can be instituted as soon as local decision makers determine to commit to provide support.

Reimbursement issues are also of concern. It is of note that the definition of "Critical Care Transport" in the Iowa Code Administrative Rules 641-132.1(147A) for EMS is "specialty care patient transportation when medically necessary, for critically ill or injured patient needing critical care paramedic (CCP) skills, between medical care facilities, and provided by an authorized ambulance service that is approved by the department to provide critical care transport and staffed by one or more critical care paramedics or other health care professionals in an appropriate specialty area." This definition is congruent with current reimbursement criteria for critical care transport which makes specific reference to "specialty care transportation" as a criteria for higher reimbursement in the out-of-hospital setting.

Iowa is among the first states in the nation to bring the concept of "Critical Care Transport" to reality. This is a result of collaborative and progressive efforts among many stakeholders committed to excellence in Iowa's health-care system.

Further questions can be forwarded to Dr. Peterson at 515-725-0319 or tpeterso@health.state.ia.us

treasurers report

January 31, 2002

Checking	$ 37,574.94
Savings	$ 30,000.00
Petty Cash	$ 5.47
Investment	$ 23,476.60
Total Balance	$ 91,057.01

Feburary 28, 2002

Checking	$ 38,381.34
Savings	$ 30,000.00
Petty Cash	$ 5.47
Investment	$ 23,476.60
Total Balance	$ 91,863.41

March 31, 2002

Checking	$ 35,581.48
Savings	$ 30,000.00
Petty Cash	$ 5.47
Investment	$ 23,476.60
Total Balance	$ 89,063.55

April 30, 2002

Checking	$ 35,947.67
Savings	$ 30,000.00
Petty Cash	$ 5.47
Investment	$ 23,476.60
Total Balance	$ 89,429.74

Call for IEMSA Award Nominations

The IEMSA Annual Emergency Medical Services recognition will be held at the 2002 conference—Friday, November 15, 2002 at the Polk County Convention Center. This time is dedicated to the recognition of EMS leaders in the State of Iowa. The nominations criteria are listed below. Write a letter of recognition and return it to IEMSA with your completed nomination form postmarked by September 12, 2002.

Criteria for Nomination

You may nominate yourself.

Individual:
Must be currently certified by the State of Iowa, have strong and consistent clinical skills at his/her certification level; and have made an outstanding contribution to the EMS system either within or outside of his/her squad or service. Award recipients in this category will be the Iowa EMS Association candidates for the Star of Life program held in Washington, DC, expenses paid by IEMSA. Award recipients and Star of Life winners MUST be (or become) an active Iowa EMS Association member.

Service:
Must be currently certified by the State of Iowa, have made outstanding contribution(s) in the last year to PI&E; maintain positive and outstanding relationship with the community (ies) it serves; and take visible and meaningful steps to assure the professionalism of its personnel and the quality of patient care.

Friend of EMS:
Any individual who has made outstanding contribution(s) which enhance the quality of EMS at the local, regional or state level.

Hall of Fame:
Any individual who has made outstanding contributions to EMS during longevity in the field (10+ years). This individual may be someone to recognize posthumously. This will be an ongoing plaque displayed in the Association Office.

Instructor:
Any individual who instructs and/or coordinates on a full-time or part-time basis; has dedication to EMS through instruction, number of years in EMS and/or number of years instructing EMS.

See Page 21-22 to Learn About the 2001 IEMSA Award Winners.

Award Nomination Form

Individual: ❍ Volunteer ❍ Career

Service: ❍ Volunteer ❍ Career

Instructor: ❍ Full-Time ❍ Part-Time

❍ **Friend of EMS:**

❍ **Hall of Fame:**

Nominee's Name

Address

City/State/Zip *Phone*

Certification Level & Number

Nominator's Name

Address

City/State/Zip

Day Telephone

Evening Telephone

Mail to:
IEMSA Awards
1200 35th St, Suite 206-11
West Des Moines, IA 50266

Deadline: September 12, 2002

Pediatric Pre-Hospital Care (PPC) Course

National Rollout Debuts at IMMC

by Jerry Johnston, IEMSA Past-President

In cooperation with the National Association of EMT's (NAEMT), Iowa Methodist Medical Center and Blank Children's Hospital served as the Midwestern site for the national rollout of NAEMT's newest course offering… PPC March 23 and 24, 2002. NAEMT's PPC Executive Council acting as National Faculty conducted the two-day Provider/Instructor program. Participants from across the state of Iowa took part. Several may be selected to act as Affiliate Faculty. "We are very grateful to IMMC, particularly Joni Thornton and Melissa Sally-Mueller, IEMSA EMSC Representative, for their assistance in helping us bring this course to Iowa", remarked PPC Chair Jerry Johnston. "Their effort and support really made this possible".

Introduced at NAEMT's National Conference, 'Outlook 2000', PPC is an in-depth study of the prehospital care of injured and ill children. With minimal lecture and lots of hands-on practice, PPC emphasizes a problem-focused assessment approach. The course concentrates not only on didactic knowledge and acquisition of psychomotor skills, but on the integration this knowledge base and skills set so that the provider is able to function effectively and efficiently during pediatric emergencies.

The course is appropriate for most providers, ranging from basic EMT's to Paramedics as well as RN's and PA's. Interested? Call NAEMT headquarters at 1-800-34-NAEMT or Jerry Johnston, Chair, at 319-385-3141.

Critical Care Paramedic Program Seminar

"Implications for Hospitals and EMS Systems"—June 19th

Seminar Location:
Iowa Methodist Medical Center
Education & Research
Conference Center—
1200 Pleasant Street, DSM, Iowa

Registration Fee:
- **FREE to IEMSA Members**
- $25 for Non-members (includes a 1-Year IEMSA membership)

To Register: Given the tight deadline, you must register by e-mailing your name(s), service name, and email address to: **sallymmm@ihs.org**.
Non-Members: Pay at the Door

Agenda:
- Overview of the administrative rules—*EMS Bureau*
- One System's Approach.—*Jerry Johnston, Henry County EMS*
- Case studies/EMTALA Implications—*Rosemary Adam*

2002 IEMSA Conference

—continued

skywalk system for lunch on Friday. This was time consuming to get through the large lines at the restaurants causing many people to arrive late back to the Convention Center after eating. Additionally attendees were not allowed to bring outside food or drink into the Convention Center once they returned with their meal. These problems added to the frustration of the hectic noon hour. A pizza and pasta buffet will now be added for the noon time lunch on Friday.

The annual Awards Ceremony will be moved to the start of the last session on Friday afternoon. We encourage everyone to mail in his or her nominations for the various awards. We need to recognize those who work hard for the local communities and rarely receive the recognition they deserve.

Several speakers have been confirmed to present on Friday and Saturday. Many of the speakers have never spoke in Iowa. It has been our goal this year to bring some fresh ideas and presenters to Iowa EMS providers.

We look forward to having another successful conference. We'll continue to work hard to make the IEMSA Conference your, "can't miss" conference each year.

board of directors

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515-725-0326

you make the call: or can you?

by Rosemary Adam, At-Large Representative

Case Study #1: Your ambulance company gets a call from the local, Community Trauma Center and has asked that you transfer a trauma patient onto the Level I, Resource Hospital, approximately 200 miles away. They report that the patient is "stable" and needs to have some facial fractures evaluated by a Specialist. Your crew today is comprised of the EMT-Basic and a National Standard Paramedic (Paramedic Specialist in Iowa).

Upon your arrival, you find this 22-year-old male with a patent airway, speaking in short sentences. He is alert and oriented. His respiratory rate is 20/minute, slightly splinted and shallow due to diagnosed rib fractures with a hemopneumothorax. He has a chest tube on the right side that has drained approximately 100cc of bright, red blood into the pleural drainage system over the past 2 hours. BP 100/70, pulse 100, resp. 20, GCS 15, pulse oximetry 95% on 2L/nasal cannula. He has 2, 18 gauge I.V.s in place and has received 500 ml of normal saline. He has a Foley catheter in place with has drained 300 cc over the past 2 hours. Head and Abdominal CT both negative. The patient has a zygomatic and orbit fracture on the right with a moderate eye injury.

Can you make this call?

Did your EMT-Basic or National Standard Curriculum for Paramedic include any objectives on caring for the pleural drainage system and the chest tube?

If you make this call-Are either you or your EMT-B partner violating your scope of practice rules?

You advise the ER nurse in charge that you don't know much about taking care of a chest tube. She gives you a 10-minute inservice on care of the chest tube and the device and hands you the paperwork for the transfer. The Supervising Physician within Medical Control says its OK to go on this transfer?

NOW -Can you make this call?

I know, I know…you've been transporting patients with chest tubes "for years" in your service and no one has said anything before this. Actually – the rules have always said that the EMS provider must stay within their curriculum for scope of practice. The 1985 and the 1999 National Standard Curriculum have never included objectives on care and maintenance of the thoracostomy tube or drainage system. Further, your Medical Director cannot ignore the Iowa Law to add skills outside your scope of practice.

Delineation of the new scope of practice skills at the Critical Care Paramedic level, as defined by a physician Ad Hoc Group off the EMS Advisory Committee, were established in 2000 with rules enacted March 13, 2002. This brought the issue to the forefront of air and ground services across Iowa. The new Medicare reimbursement rules, discussed since 2000 and recently enacted, have also brought the entire issue of critical care transport to the forefront across the U.S.. Iowa is one of very few states that have their

continued on page 22

2001 IEMSA Award Winners

Career Service of the Year Award—Sioux Valley Memorial Hospital Ambulance Service. We received seven letters of nomination for this service from area hospital, fire,services, first response programs and their EMS association. The Sioux Valley Hospital's Ambulance Service consists of five full-time, one part-time, and 16 on-call personnel. They respond to about 700 calls per year. They provide Paramedic tier with seven fire departments in Cherokee County, along with services in neighboring counties.

Maintaining a hospital-based service in this day and age, especially in a rural setting, is quite a challenge. The Hospital CEO adds that, "this challenge proves its worth of endurance every time we are able to witness the role of the department in the continuum of care we proudly provide to our patients."

This ambulance service participates in nearly every chamber, city, county, school and special event that takes place in their service area. The ambulance and its crew are warmly welcomed everywhere they go and both children and adults alike, approach them as if they were a part of their own family.

Not only does this ambulance service serve the public but also truly cares about each individual.

Volunteer service of the year Award—Denver Ambulance Service. They received five nominations from area hospitals and EMS Providers. Denver is located in Northeast Iowa, 10 miles north of Waterloo. this ambulance service covers 160 square miles in Bremer County, serving a total population of 5,900 citizens. They provide ALS response to over 200 EMS calls per year. Denver EMS was established in 1976 and upgraded to EMT-D in 1989, Conditional EMT-I in 1991 and Conditional EMT-P in 1994. The service consist of five Paramedics, four Intermediates, eleven EMT-Bs, two nurses and one dedicated driver.

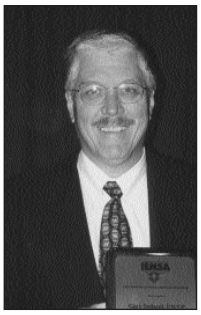
One nomination writes, "This dedicated group of EMS providers consistently demonstrates a commitment to provide high quality emergency care to the members of their community. When their patients arrive to our emergency department, we know they have received the best that EMS can offer." Another writes, "In a time when rural ambulance services are struggling to maintain personnel and provide basic care, the Denver Ambulance Service continues to provide the highest level of care. The quality and level of service is only matched by the dedication and support of all its members."

Friend of EMS—Gerry Sloniker of Graettinger. Clark Christensen says, "For the past 20 years, Gerry has served as the EMS & Fire programmer for Iowa Lakes Community College and "has literally touched thousands of EMS and Fire provider's lives by providing quality initial and continuing education… Gerry has always brought much more to the job than the typical Coordinator at a Community College. When anyone has questions about EMS education in Northwest Iowa, they are advised to as Gerry. If you needed help organizing an event, fundraiser, conference, community awareness activity—you could always count on Gerry. He has been a volunteer in the Graettinger EMS squad for many years. He has also donated his time to many state wide committees over the years. Gerry retired at the end of 2001 and will be sorely missed by all providers in northern Iowa as well as the Iowa Training Program group."

—Continued on Page 22

2001 IEMSA Award Winners—*continued from page 21*

Career Individual EMS provider of the Year—Gary Ireland of Iowa Falls. Gary has been a paramedic



for about 25 years, starting his career for Story County Hospital's Paramedic Service in Nevada in the 1970's. Gary is more widely known as the just-recently-retired Chief of the Iowa Bureau of EMS. During Gary's reign as Bureau Chief he implemented Iowa's EMS-C program, established minimum standards for EMS care, secured an Injury Prevention Coordinator and program, established the PAD/AED program, developed and implemented a statewide Trauma System, defined the scope of practice for EMS providers initiated the EMS system development grant program and lead the way as supervisor for many assertive EMS providers and coordinators.

Volunteer Individual EMS Provider of the Year—Karla Anderson of Emmetsburg.

One of eight nominees from across Iowa, Karla was nominated by the crew chief of Palo Alto County Ambulance Service, Giacomo (Jack) Parisi. He writes, "All volunteers make many sacrifices, but in the case of Karla Anderson, she is well beyond the call of duty, She is the cornerstone of our ambulance service. Karla is married with three children and is very busy with her family. She raises horses and other animals, coaches a variety of children's sport teams, and works full-time in an insurance office. She also volunteers for many Church functions and teaches Sunday School. In addition to all that, she is very involved in her ambulance service as an EMT-B with ten years of experience. Karla responded on 200 ambulance calls last year, which represents one-third of all ambulance calls for the county. She also logged more ambulance calls than anyone else in the county even more than our full-time staff. Karla has quietly and selflessly provided a priceless service to the people of Palo Alto County. She has never complained about being overworked or under-appreciated."

Nominate *an outstanding individual Volunteer and/or Career, or an outstanding Instructor, maybe a Friend of EMS that has been especially special to EMS, or an entire service (they can be a volunteer service or career service), that you think deserves special award for all they've done, awarded at the Annual IEMSA conference and trade show, November 15, 2002.*

Just complete the nomination form on page 17. Hurry! The Deadline is September 12, 2002.

you make the call: or can you?

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continued from page 20

rules on critical care paramedic and transport ready to go for this important new reimbursement level.

Case Study #2: Dispatch sets off your pager to notify you of a transfer from the XYZ Hospital to ABC hospital, some 100 miles away. When you call the hospital to get details, you find that this is a "cardiac patient" who may need a transplant. He has a "couple of I.V.s and needs to be monitored," according to the charge nurse.

Upon your arrival, you find this very ill-appearing patient in an ICU bed, intubated, on a ventilator, sedated, with 2 peripheral lines and one internal jugular line with 2 vasoactive drugs being pumped, along with antibiotics, and Heparin. It has been difficult to oxygenate this patient due to his cardiovascular status. The attending physician has ordered a transfer today so that the Resource Hospital can install a Ventricular Assist Device and evaluate for possible heart transplant.

Who should go on this transfer? What special equipment/medications/protocols need to be available to you during the transfer?

What are the COBRA/EMTALA rules about this transfer?

Well—— for a start, you need a good ventilator, end-tidal CO2 monitor (capnography), three I.V. pumps, and the ability to manage this patient with your existing protocols and EMS scope of practice. WE ARE NOT JUST TALKING SKILLS – WE'RE TALKING KNOWLEDGE BASE.

continued on page 23

you make the call: or can you?—continued

continued from page 22

Can you make this call?

As you evaluate this situation, you decide this patient should be flown to ABC hospital. Guess what? Bad weather front has moved in – no one is flying today. You call your supervisor and ask for advice. She advises that either a nurse from the ICU go along OR another REMT-P. You mention that we should probably include a nurse in this transport team and the ICU staff relates that there are no nurses available. "We are short staffed as it is." The Supervisor suggests one of the nurses from the ER who have gone on transfers before. While you wait for the ER nurse to get to the hospital, you evaluate this patient.

He has an 8.0 ET tube in, secured at 23 cm at his lip. There are some breath sounds bilaterally with fine and loud moisture in the lung fields. His pulse oximetry shows 95%. The ventilator is set at a tidal volume of 900, rate of 16 with 100% oxygen and 10 of PEEP. The Respiratory Therapist at the bedside tells you that he has been very difficult to oxygenate. Arterial blood gases have been showing a mixed respiratory and metabolic acidosis with mild hypoxemia, even with high-flow oxygen and PEEP. The patient developed a pneumothorax in the night from barotraumas and a medium-sized chest tube is in place on the left side, connected to low-flow suction and the pleural drainage system is bubbling gently. His skin is cool to touch. Arterial BP 92/60, Cuff BP 86/50. Pulse 110, in a sinus rhythm. The Foley bag has a little urine in it. The nurse reports, "his kidneys are shut down due to the shock." The patient has a Midazolam drip up to keep him sedated in order to tolerate the ventilator. The arterial line has a pressurized bag of Heparin up. Dopamine is up at 18 ug/kg/minute and Nitroglycerine is up at 20 ug/min. He is receiving an aerobic and anaerobic antibiotic through one of the peripheral lines at routine intervals.

Your "on call" ER transport nurse has arrived at the bedside of this patient and says, "oh my". She has never worked in the ICU setting and is not familiar with a couple of the management items you have discovered.

Can you make this call?

Has this nurse been oriented to this work environment? (She may be quite knowledgeable and skilled in the ER.) Does she know about assessment modifications in the back of a moving ambulance? Has she been oriented to the protocols, radio communications, medical control, team concepts of the transport business? Has your Medical Director credentialed her to do this trip? Does she realize all aspects of securing and safety in this transport conveyance?

Rewind the Time on The Above Case Studies: Let's take another look at the situations above. Let's say that we planned ahead and realized that there were going to be times like these. The local hospital, Medical Director, and the EMS folks got together and evaluated for the safe and effective transport of critical care patients.

They looked at the Scope of Practice documents that guide EMS personnel, nurses, Respiratory Therapists and any other health care providers who might make up a transport team in their area. (EMS Scope of Practice may be accessed through: www.idph.state.ia.us/EMS.)

This planning group then looked at a couple years worth of data from this hospital and all other EMS response area hospitals for the potential number of patients that might have to be transported via a local ground unit that qualified as a "special" critical care patient.

The group then took a look at whether there was a need for a Critical Care Transport Team: Transport team members with specialized education and experience in the critical care arena with orientation to ground transport, EMS rules and regulations, and credentialed by the Medical Director.

This includes a transport service agreement with the local hospital to borrow specialized equipment or the ability to acquire ventilators, transport pumps, and special monitoring equipment for the critical patient with special needs. This concept, includes a commitment to solid education, continuing education, and quality assurance activities and total patient care.

And – if the local pre-planning committee finds that there are not enough of these types of transfers to develop this type of commitment – what's the back up plan? Is there a Critical Care Transport Team available to you (when the helicopter is unavailable)?

Planning is the key!
You make the call – But, do it ahead of time.

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