VOICE

April—June 2011

www.IEMSA.net

IOWA EMERGENCY MEDICAL SERVICES ASSOCIATION

It's EMS Week...
THANK YOU FOR YOUR SERVICE!

A special THANKS to all of our Corporate Sponsors who continue to support IEMSA and it's members!

Iowa Health System		Iowa Donor Network
LifeQuest	Life Line Emergency Vehicles	Foster Coach Sales
PCC, Inc.	Progressive Medical Inc.	Med Force
Covenant Ambulance Service	ZOLL	Sartori Paramedics
Everest Emergency Vehicles	Dickinson County EMS Association	Mercy College of Health Sciences
University of Iowa AirCare	Mercy Oelwein Ambulance	EMS Billing Services
Tri-Tech		AAA Auto

VOICE

EMS Week—**SPECIAL EDITION**

Vol. 2011-02, April—June, 2011

Table of Contents

The Voice Newsletter is published quarterly by:

IOWA EMERGENCY MEDICAL SERVICES ASSOCIATION

8515 Douglas Avenue, Suite 27B ✱ Urbandale, IA 50322

Are you getting eNews?
If not, let us know
and we will gladly add you to our listserve.

THANK YOU!

Email: administration@iemsa.net

2011

IEMSA

Board Meetings

January 26, 2011
WDM Marriott 6:00—8:00 pm

February 17, 2011
Altoona Fire Dept 1:00—3:00 pm

March 17, 2011
WDM EMS Station 19 1:00—3:00 pm

April 21, 2011
WDM EMS Station 19 1:00—3:00 pm

May 9, 2011
Gateway Hotel, Ames IA 6:00—8:00 pm

June 16, 2011
WDM EMS Station 19 1:00—3:00 pm

July 2011
No Meeting

August 18, 2011
WDM EMS Station 19 1:00—3:00 pm

September 15, 2011
WDM EMS Station 19 1:00—3:00 pm

October 20, 2011
WDM EMS Station 19 1:00—3:00 pm

November 10, 2011
Annual Meeting 6:30—8:00 pm

December 15, 2011
WDM EMS Station 19 1:00—3:00 pm

2011

IEMSA

Board of Directors

President
Jerry Ewers

Vice President
Linda Frederiksen

Secretary
Thomas Summitt

Treasurer
Brandon Smith

Immediate Past President
John Hill

Northwest Region
Terry Stecker, John Jorgensen, John Hill

Southwest Region
Rod Robinson, Jan Beach-Sickels, Kevin Frech

North Central Region
Thomas Craighton, David Mallinger, Russ Piehl

South Central Region
James Sargent, Katy Hill, Angie Moore

Northeast Region
Curtis Hopper, Lee Ridge, Rick Morgan

Southeast Region
Thomas Summitt, Bob Libby, Linda Frederiksen

At-Large
Jerry Ewers, Brad Buck, Brandon Smith

Education
Cheryl Blazek, Kristi Brockway

Medical Director
Dr. Forslund

Lobbyist
Michael Triplett

SAVE THE DATE

EMS
LEADERSHIP ACADEMY 2011
September 23-25, 2011
West Des Moines, IA

CHECK OUR WEBSITE FOR MORE INFORMATION as it becomes available at www.IEMSA.net

EMS MEMORIAL CEREMONY

MAY 14, 2011
10:00 am Continental breakfast
10:30 am Ceremony

Thomas Craighton
Board Member
Welcome

Presentation of Colors
Honor Guard
Bagpiper
(MacKenzie Highlanders)

Kevin Cooney
Anchor NewsChannel 8

Ellen McCardle-Woods
Bureau of EMS

Honorees

Howard Brechtel
Steve Cook
Caroll DeGroote
Chuck Ford
Roger Heglund
Al Hunter
Terry Leicher
James D. McMeekin
Eric Stein
Sheryl Stoolman

Helicopter Fly Over

Father Hess
Closing Prayer

Visit the EMS Memorial at 8055 Mills Civic Parkway, West Des Moines, IA

CORPORATE PROFILE | Progressive Medical International

Progressive Medical International is a leading distributor of new and refurbished medical equipment and medical supplies from top vendors and manufacturers in the industry. Established in 1992 with the primary focus on refurbishing medical equipment, PMI grew beyond just focusing on refurbished medical equipment and started offering medical supplies as well, including a private brand of medical supply items introduced in 2006 under the name of Medstorm.

2009 was a big year; PMI introduced the HALO Chest Seal to the EMS and Military medical markets. HALO Chest Seal is specifically designed to provide total occlusion for penetrating chest wounds. PMI is very proud, as are our customers, of the HALO and its capabilities. In 2010 HALO won a couple of products of the year awards including JEMS “Hot Product 2010” award and EMS World “2010 Top Innovative Product” award. In August 2010 PMI expanded the HALO brand and introduced the HALO XL, this is a bigger version of HALO Chest Seal that is used for larger abdominal and chest wounds. We are hoping to grow our HALO brand even more in 2011.

Progressive Medical International

Equipment • Supplies • Biomed Repair

PMI’s vision is "To provide our customers with the best products, prices, service and most importantly... product advice, which enables them to provide the highest level of patient care." We simplify our customer decisions by providing a complete line of new and refurbished medical equipment, as well as a comprehensive line of emergency care supplies, custom medical kits, great customer service and a 24/7 online ordering system.

Progressive Medical takes part in the community as much as possible and to show our support to universities and Red Cross, we donate supplies and equipment to many different organizations as often as we have items available.

www.ProgressiveMed.com

A Message from the President

"Presidents Perspective"

Jerry Ewers, Fire Chief
IEMSA President
Board of Directors

As for me, it's really nice to say goodbye to the snow and say hello to Spring. I hope everyone is looking forward to the season change as much as I am which is why I love Iowa so much. The changes of season are similar to changes in life and the workplace; some good and some not so good. Although I am a proponent of change, I truly look forward to changes in technology, protocols, services offered, leadership, and responsibilities. By examining our past successes and failures we are able to help shape our future. While we all know that EMS is still in its infancy, change has occurred over the years since I've been in EMS and there's no shortage of individuals who have proven to be heroes in regards to their passion and commitment for providing EMS and making a difference in their community.

National Emergency Medical Services Week, commonly referred to as EMS week, is May 15-22, 2011. This is a week long celebration and recognition of the people that provide emergency medical services to communities. Remember, EMS week has two purposes – appreciation of EMS providers and improving public awareness of EMS. Again, EMS week is an opportunity for us to honor the men and women who respond to calls for help everyday. The Board of Directors of IEMSA would like to personally say thank you to the entire EMS Community in Iowa for your dedication, contributions, achievements, and commitment you show protecting our communities across this great state. This year's theme for EMS week is "Everyday Heroes." We can look back to the early 1970's and give thanks to President Gerald Ford for proclaiming "Emergency Medical Services Week," but I believe you are all heroes making a difference everyday. So, thank you for all you do and keep up the good work!

As we talk about EMS week, how will you increase and improve the public's image of what you do and why they need to support you? What type of activities will you participate in? Will you have an open house? Will you advertise in the local media? Will you utilize social media to spread the word about EMS Week? Will you speak, or present, to civic groups, associations, schools, boards or commissions in your community? Will you recognize a peer or a citizen who made a difference? When EMS week is over and you sit back and relax, please send me a quick e-mail, or letter, with photos describing the events that you sponsored in your community. IEMSA will compile these events and activities that were provided across Iowa and we'll publish them on the website and spotlight them in the next Voice publication so everyone can see what was done and maybe get an idea or two for implementation next year.

The National Moment of Silence will take place June 25, 2011. This is an opportunity for EMS providers and agencies around the nation to join with those in attendance at the National EMS Memorial Service in honoring and remembering those members who have made the ultimate sacrifice and given their lives in the line of duty.

While speaking about EMS Week and the National Moment of Silence, please join us for IEMSA's EMS Memorial Service that is being held May 14, 2011 at 10:00 am in West Des Moines. Currently we have 10 names being added to the memorial. This is our opportunity to host a ceremony in their honor with those honorees' families, friends and co-workers present. I hope to see you there.

As stated in my first article, I personally welcome your input and guidance during my time as President. Please tell us what we are doing well and what we can improve upon. Again, this is YOUR organization.

I hope to see all of you at the upcoming EMS memorial and Billing and Management conference.

Please check out IEMSA's website for upcoming programs, conferences, and events for 2011.

Stay safe and thanks for all you do!

Gerald P Ewers

Naturally Sweeter: Kids with Diabetes Mellitus

Case Study

Nikki is a normally precocious 4 year old who was diagnosed with Type 1 diabetes last month. She was found unconscious by her mother who called 911. Upon arrival, you find Nikki lying on her bedroom floor, unconscious. You conduct a primary assessment establishing she has a patent airway and adequate breathing. Your partner obtains a set of vital signs as you gather pertinent medical history from Nikki's mother, who informs you she gave Nikki her insulin approximately 40 minutes ago and found her unconscious when she came tell her breakfast was ready. Your partner reports vital signs: heart rate of 58 beats/min, respiratory rate of 18 breaths/min and a blood pressure of 96/62 mmHg.

1. What is the most likely cause of Nikki altered mental status?
2. What should be your next step in this incident?

Introduction

Diabetes Mellitus, commonly referred to as "sugar diabetes" develops when the body fails to adequately produce and/or utilize insulin resulting in the inadequate metabolism of glucose and ultimately a shift in the metabolism of carbohydrates, fats and proteins. The end result is high levels of glucose in the blood and insufficient glucose in the cells for energy production. Diabetes Mellitus is one of the most common chronic diseases seen in children and adolescents and is associated with serious health risks that can lead to premature death and disability. According to the CDC, about 151,000 people below the age of 20 have diabetes. (2)

Pathophysiology

Sugar or *glucose* is required by the cells of the body to produce energy. When the production of *insulin*, a hormone responsible for "unlocking" the cells to allow the glucose to enter, is deficient or absent, glucose is unable to enter the cells and the body turns to another avenue of energy production; the breakdown of fats and proteins. The by-product of fat metabolism is ketones. Diabetes Mellitus is divided into two classifications: insulin dependent diabetes referred to as Type 1 or IDDM and non-insulin-dependent or NIDDM/Type 2.

Type 1 Diabetes Mellitus

Type 1 diabetes is traditionally diagnosed during childhood and has been historically referred to as juvenile-onset diabetes. It accounts for 5 to 10 percent of all diagnosed cases of diabetes and is the leading cause of diabetes in children. In children under 10 years of age, Type 1 diabetes accounts for almost all diagnoses of diabetes. Type 1 diabetes is considered to be an autoimmune disease. For this reason, it is believed some children may be genetically predisposed and the onset of symptoms can often be linked with a precipitating event, such as a response to a viral infection.

In Type 1 diabetes, the body's immune system destroys insulin-producing beta cells in the pancreas. The body is not able to adequately regulate blood glucose levels and glucose builds up in the blood, not entering the cells where it is needed for the production of energy. The body then breaks down fat and protein, producing ketones, recognized by a "fruity" smell to the breath.

Signs and Symptoms of Type 1 Diabetes

Development of Type 1 diabetes begins years before recognizable symptoms develop. By the time symptoms become apparent most of the beta-cell population has been destroyed. Once this occurs, symptoms develop over a relatively short period of time. Early symptoms include those commonly associated with hyperglycemia; increased thirst and urination, constant hunger with weight loss and blurred vision. Some children may experience extreme fatigue.

Eventually, as insulin deficiency increases, ketoacids, the by-product of fat metabolism, build up in the blood and are excreted through urine and breath. Dehydration worsens and this build up of ketoacids causes the patient to experience a feeling of shortness of breath and abdominal pain, and vomiting. Diabetic ketoacidosis (DKA), a condition of elevated blood glucose and dehydration can develop into a life-threatening diabetic coma if diabetes is not diagnosed

and treated with insulin at this point. Vomiting in children is often attributed to gastroenteritis, however, in new onset diabetes, vomiting is accompanied with frequent urination as opposed to decreased urination from dehydration in a GI complaint.
Children who develop Type 1 diabetes are at increased risk of autoimmune diseases such as celiac disease and chronic and degenerative conditions such as retinopathy, nephropathy, neuropathy, high cholesterol, hypertension and heart disease as they age.

Type 2 Diabetes Mellitus

Type 2 diabetes was commonly associated only with adults and was in fact referred to as "adult onset diabetes." It accounts for about 90%-95% of all cases of diabetes and has been reported among the children and adolescents of the U. S. with increasing frequency over the last 2 decades. (3)
Currently, nearly half of all new cases of diabetes mellitus in children have elements most consistent with Type 2 diabetes. (4)
Type 2 diabetes is a condition where the body continues to produce insulin, but the cells are "resistant", thus Type 2 diabetes is often referred to as "insulin resistant" diabetes. It has also long been referred to as "Pre-diabetes."
Type 2 diabetes occurs when one or all of the following occurs:

- The pancreas secretes insulin sluggishly resulting in a change in carbohydrate metabolism
- The body tissues require an excessive amount of insulin

Secreted insulin is destroyed or made inactivate in some way
Children diagnosed with Type 2 diabetes are commonly older than 10 years of age and/or are experiencing puberty, overweight and may have a family member with Type 2 diabetes. Other risk factors may include a genetic predisposition and there is a higher incidence of Type 2 diabetes in children of Native American, African American, Hispanic/Latino American and some Asian and Pacific Islander American descents. The increased risk and occurrence of Type 2 diabetes has been directly attributed to what is being called an *obesity epidemic* and has become a serious public health problem. Diet and exercise are two of the most important lifestyle changes that can be made for children who are predisposed or already have Type 2 diabetes.

Objectives:

- Define Diabetes Mellitus
- Review the pathophysiology of Diabetes Mellitus
- Define the types of diabetes mellitus found in children and adolescents.
- Explain the risk factors and management priorities for each type of diabetes
- Discuss the assessment and management of children and adolescents experiencing hypoglycemia

Signs and Symptoms of Type 2 Diabetes

Type 2 diabetes can have the same symptoms seen in Type 1 diabetes; however it develops more gradually in children than Type 1 diabetes. Children or teens may feel very tired, thirsty, nauseous, and experience increased urination. Additional symptoms may include blurred vision, weight loss, frequent infections and wounds or sores that are slow to heal. Some adolescents and children may present with no symptoms at the time of diagnosis and girls may present with a vaginal yeast infection from frequent urination. Severe dehydration with extremely high blood glucose levels and coma may also occur as with Type 1 diabetes.
Physical signs associated with Type 2 diabetes include *acanthosis nigricans*; dark, thick, velvety skin around the neck or in the armpits. Hypertension and *dyslipidemia* (high cholesterol and triglycerides) are also associated with insulin resistance and girls can develop *polycystic ovary syndrome* with absent or infrequent periods, excessive hair and acne.
Children with Type 2 diabetes have a high risk of long-term complications and conditions associated with diabetes, including hypertension, heart disease, and high cholesterol. Appropriate and accurate diagnosis and management of Type 2 diabetes can prevent the onset of complications associated with diabetes. Management priorities for children with Type 2 diabetes are healthy eating, portion control, and exercise. Some children may require oral medication to lower their blood glucose.

"Other" Diabetes

Type 1 or Type 2 diabetes are the most commonly occurring forms of diabetes attributed with children and adults. However, some teenagers have elements of both types. This type of diabetes is called "hybrid" or "mixed" diabetes. Individuals with "hybrid" diabetes commonly have both insulin resistance associated with obesity and Type 2 diabetes and antibodies against pancreatic islet cells associated with autoimmunity and Type 1 diabetes. Signs and symptoms of "hybrid" diabetes are the same as those for Type 1 and Type 2 diabetes. Management will depend largely on which type of diabetes is present at the time of diagnosis. Treatments will likely include insulin injections (Type 1) and oral medications to improve insulin resistance (Type 2), management of healthy eating and physical activity.
Maturity-Onset Diabetes of the Young (MODY) is a rare form of diabetes found in children that is caused by a single gene defect resulting in faulty insulin secretion. MODY can be defined by its

early onset, usually occurring before the age of 25, absence of ketosis and autosomal dominant inheritance. In other words, a child whose parent has MODY has a 50 percent chance of inheriting the same type of diabetes. MODY often goes undetected and accounts for 2 to 5 percent of all cases of diabetes. Treatments vary and may include management of diet, exercise, oral anti-diabetes medications to enhance insulin secretion or insulin therapy.

Diabetes can also occur in children secondary to other diseases. Secondary diabetes is sometimes seen in children with cystic fibrosis or those using glucocorticoid (anti-inflammatory/steroid hormone) drugs. One to five percent of all diagnosed cases of diabetes may be attributed to these causes.

Management of Diabetes in Children and Adolescents

Diabetic management of children and adolescents with Type 1 and Type 2 diabetes varies little from management of adults with diabetes. However, due to body changes and metabolism demands as children grow, as well as increased activities such as sports, monitoring and adjustment of treatment strategies are ongoing.

There is no single method to manage diabetes in all children. Treatments are individualized based on the child's type of diabetes, activity levels, age and growth and development.

The management of hyperglycemia or hypoglycemia associated with either type of diabetes is dependent on the result of blood glucose checks and ongoing monitoring. EMS practitioners should know baseline blood glucose levels appropriate for children at various ages and work with families at the time of an emergency to establish what the appropriate blood glucose level is for that child. Table 1 shows the optimal blood glucose level in plasma by age group:

(SEE TABLE ONE)

Hypoglycemia

Children undergoing treatment for diabetes may develop hypoglycemia, a condition in which the blood glucose levels drop too low. Hypoglycemia occurs when the child has taken too much insulin, missed a meal or snack or has participated in strenuous exercise. Hypoglycemia may also occur for no apparent reason, but may be related to a need to change their current insulin dose as they grow and develop. In children under the age of 6 or 7 years of age, hypoglycemia may result due to a form of "hypoglycemic unawareness". In other words, they lack the cognitive ability to recognize and react to the symptoms of hypoglycemia, thereby placing children of this age group at a higher risk for hypoglycemia.

Signs and Symptoms of Hypoglycemia

Signs and symptoms of hypoglycemia include a change in mental status, including irritability and confusion. Additional signs and symptoms include sweating, shaking, hunger, weakness, tachycardia, shallow tachypnea, dizziness and vomiting. When blood glucose levels fall very low; loss of consciousness usually occurs and the child may experience seizures.

Assessment

First assess the child's level of consciousness. If the child is unresponsive, immediately manage the airway and breathing. Obtain a SAMPLE history from the parent or caregiver and determine when the child last ate and when the last does of insulin was administered. Additional questions should be asked to determine any change in the child's daily activities:

1. Was the insulin dose changed recently?
2. Had the child been sick with a fever, vomiting or infection?
3. Has the child been eating properly?
4. Was the child participating in rigorous activity after taking their insulin or without eating?

Management

The treatment goal when addressing a child or any individual experiencing hypoglycemia is to return their blood glucose level to within normal range. Children that are awake and oriented may be given glucose orally using glucose paste or having the child drink a high concentration sugar solution or suck on a piece of candy. However, if the child has an altered mental status, nothing should be given by mouth. In those cases, an IV should be initiated and glucose administered intravenously. SEE NEXT PAGE INSERT) for specific prehospital management of diabetic emergencies in children.

/Safety Note/

Hypertonic solutions D25W and D50W are very hyperosmolar. Rapid infusion may cause extravasation resulting in swelling and tenderness at the injection site and has been known to cause tissue necrosis. Administration of D25W or D50W should be conducted through a patent IV site and slow infusion method.

Table 1

Plasma Blood Glucose Range (mg/dl)

Values by Age (Years)	Before Meals	Bedtime/ Overnight
Toddlers/Preschool (6 & under)	100-180	110-200
School Age (6-12)	90-180	100-180
Adolescents/Young Adults (13 – 19)	90-130	90-150

Prehospital Management of Diabetes Mellitus

BLS Interventions

Conduct a primary assessment: (ABCs) airway, breathing and circulation and mental status—check blood glucose level per local protocol

- Administer oxygen as needed
  - Assist ventilations if required
- Altered mental status present:
  - Diabetic ketoacidosis or hyperglycemia:
    - Child is awake, alert and able to drink: give non-sweetened fluids by mouth
  - Hypoglycemia:
    - Child is conscious give sugar substance such as fruit juice, candy, or oral glucose per local protocols

ALS Interventions

Conduct a primary assessment (ABCs) airway, breathing, circulation and mental status:

- Check blood glucose level
- Establish an IV and infuse normal saline at 20cc/kg
- Diabetic ketoacidosis or hyperglycemia:
  - Place child on cardiac monitor and observe for arrhythmias
  - Administer one 20cc/kg bolus (only one bolus should be given unless cardiovascularly unstable or directed by medical control to give more)
- Hypoglycemia:
  - Serum glucose is <60:
    - IV dextrose 2-4 cc/kg (0.5 to 1 g/kg) D25
    - Infant less than 30 days old: 2-4 cc/kg (0.2-0.4 g/kg) of D10
    - Unconscious child without IV access administer glucagon:
      - (<10 kg) 0.1 mg/kg IM
      - (>10 kg) 1.0 mg IM

Always follow local protocols and check drug doses.
Contact medical control as needed or required when administering medications to children.

Transportation

Children who have experienced a diabetic medical emergency should always be transported immediately to the appropriate facility, even if the child responds to interventions. An ongoing assessment should be conducted, including a reassessment of the ABCs and mental status. Blood glucose levels should be re-evaluated as allowed by local protocols. ALS intercept should be arranged if not already on scene. Children who have been diagnosed with any type of diabetes will need further evaluation for alterations in the ongoing management of their diabetes.

Conclusion

Diabetes Mellitus is a common chronic disease that is being seen with increasing frequency in children. Type 1 diabetes mellitus, commonly called "juvenile diabetes" was once the most common form of diabetes seen in children, however Type 2, historically referred to as "adult onset" diabetes is increasing significantly in children and adolescents. EMS practitioners may be called to manage a diabetic child experiencing a hypoglycemic emergency when alterations in insulin demands occur through normal childhood growth and development, increased physical activity or other disease processes. The signs and symptoms of diabetes can be mistakenly attributed to gastrointestinal complaints in children; therefore the knowledgeable EMS practitioner may be the first healthcare provider to recognize the differentiating symptoms that lead to an early diagnosis and appropriate management of diabetes in children.

Case Study Revisited:

You perform a blood glucose check and obtain a reading of 30 mm/dl. You established in IV and administer D25, slowly to avoid extravasations. As the dextrose infuses Nikki wakes up and states she is hungry. You prepare Nikki for transport to the pediatric hospital that is familiar with her medical history. Your past experience with newly diagnosed Type 1 diabetes tells you the 40 minutes following insulin administration without breakfast had caused Nikki's blood glucose level to drop below normal, therefore you continue to closely monitor for any change in her level of consciousness or fall in blood glucose level enroute to the hospital.

References:

1. American Academy of Pediatrics: Pediatric Education for Prehospital Professionals: PEPP (2006) Jones and Bartlett, Sudsbury, MA
2. American Diabetes Association http://www.diabetes.org
3. CDC: Diabetes Projects http://www.cdc.gov/diabetes/projects/cda2.htm
4. Center for Disease Control and Prevention: "Diabetes Data & Trends: 2005 Fact Sheet." www.cdc.gov/diabetes/statistics/index.htm
5. "Reversal of Type 2 Diabetes Mellitus and Improvements in Cardiovascular Risk Factors After Surgical Weight Loss in Adolescents" PEDIATRICS: Volume 123, Number 1, January 2009 www.pediatrics.org
6. T. A Adirim, MD, MPH., E. Smith, RN, NREMT-P: Special Children Outreach & Pediatric Education: SCOPE (2006) Jones & Bartlett Sudsbury, MA
6. Wertz, E., Emergency Care for Children (2002) Thomson-Delmar, Clifton Park, NY

By:

Jules K. Scadden,

NREMT-P, PS

Author: Fundamentals of Basic Emergency Care, 3 ed.

Test Questions

1. Diabetes Mellitus is commonly referred to as?
a. Insulin diabetes
b. Gestational diabetes
c. Sugar diabetes
d. Metabolic diabetes

2. The end result of inadequate glucose metabolism is?
a. Low levels of glucose in the blood and high levels of glucose in the cells
b. High levels of glucose in the blood and no glucose in the cells
c. High levels of glucose in the blood and high levels of glucose in the cells
d. High levels of glucose in the blood and insufficient glucose in the cells

3. Which of the following is an accurate statement?
a. Energy is needed by the cells in the production of insulin.
b. Insulin is a hormone responsible for "unlocking" the cells to allow the glucose to enter.
c. The by-product of carbohydrate metabolism is ketones
d. None of the above statements are accurate

4. Type 1 diabetes is traditionally diagnosed in childhood and has been referred to as_____diabetes.
a. Juvenile
b. Childhood
c. Pediatric
d. Youth

5. The body's immune system destroys insulin-producing beta cells in the pancreas in what type of diabetes?
a. Type 2
b. Hybrid
c. Type 1
d. MODY

6. The group of symptoms commonly associated with Type 1 diabetes are:
a. Increased thirst and urination, constant hunger with weight loss and "fruity" breath
b. Increased energy, high blood glucose, weight gain
c. Weight loss, low blood glucose, decreased thirst
d. Dehydration, decreased urination, fatigue, high blood glucose

7. Children who develop Type 1 diabetes are at an increased risk of developing chronic conditions such as retinopathy, nephropathy, neuropathy, _____, and heart disease.
a. Hypotension
b. Hypertension
c. Low cholesterol
d. COPD

8. Type 2 diabetes is commonly referred to as_____diabetes.
a. Juvenile
b. Insulin resistant
c. Adult onset
d. b & c

9. Physical signs associated with Type 2 diabetes include:
a. Acanthosis nigricans
b. Obesity
c. Excessive hair and acne
d. All of the above are physical signs associated with Type 2 diabetes

10. EMS is called to the park for a child acting stuperous. Upon arrival you led to a park bench where an 8 y/o male is being attended by a young woman. The woman tells you her brother had been playing kickball when he suddenly became dizzy, shaky and staggered to the bench. The boy is now lying in a stupor. You ask the boy's sister about her brother's health history and she informs you that he was diagnosed with Type 1 diabetes and began taking insulin 4 months ago. What is your next course of action?
a. Check vital signs
b. Check the boy's blood glucose level
c. Administer oral glucose
d. Begin the primary assessment

IEMSA
CONTINUING EDUCATION
Answer Form

(Please print legibly)

Name

Address

City State Zip

Phone

Email

IEMSA Member Number EMS Level

Check which box is the correct answer				
1	A ☐	B ☐	C ☐	D ☐
2	A ☐	B ☐	C ☐	D ☐
3	A ☐	B ☐	C ☐	D ☐
4	A ☐	B ☐	C ☐	D ☐
5	A ☐	B ☐	C ☐	D ☐
6	A ☐	B ☐	C ☐	D ☐
7	A ☐	B ☐	C ☐	D ☐
8	A ☐	B ☐	C ☐	D ☐
9	A ☐	B ☐	C ☐	D ☐
10	A ☐	B ☐	C ☐	D ☐

IEMSA members completing this informal continuing education activity should complete all questions 1 through 10, and achieve at least an 80% score in order to receive the 1 hour (1CEH) of optional continuing education. ***Deadline: July 1, 2011***

Mail completed form via mail, email or fax to:

IEMSA
8515 Douglas Ave., Suite 27B
Urbandale, IA 50322

administration@iemsa.net Fax: 515.225.9080

ABDOMINAL PAIN PROTOCOL

Overview

Abdominal pain is one of the most common emergency complaints. In the pre-hospital setting you may not identify the cause of the pain, but your goal is to provide relief for the patient's symptoms and treat life-threatening issues that may arise due to their illness or injury.

Patient Assessment: History

Pain is the defining element from the history. When evaluating the pain it is important to note the onset, provocation, quality, radiation, severity, and time of the pain. Does the pain change with position? Is there a point of maximum tenderness? Associated symptoms other than pain are common. Ask the patient about nausea and vomiting. If the patient is vomiting, is there any bright red blood or coffee ground material. When was the last bowel movement and was there diarrhea or constipation? If the patient is a female of childbearing age, when was their last period or could they be pregnant? Has there been any recent surgery or trauma? When obtaining their general history pay special attention to history of cardiac problems, as well other past problems that might be related to their current pain. Asking about alcohol use is also important.

Patient Assessment: Exam

Assess the general appearance of the patient. You should be able to get an idea of pain severity just by looking at them. Have them rate their pain on a 1 – 10 scale with 1 being the least amount of pain and 10 being the worst pain they have ever felt. Are they sweaty, pacing, lying still not moving. Obtain vitals signs. Increased heart rate and low blood pressure are to be looked for. Visually look at he abdomen. Is it distended? Is there bruising? Listen for bowel sounds and note the character. Gently palpate the abdomen with your fingertips.

Patient treatment

Follow your general patient care protocol and your scope of practice.
Treatment priorities in abdominal pain are pain control, nausea control and treatment of hypotension. Address pain with a pain medication such as morphine. The patient may need repeated doses of pain medication. Nausea is common in gastrointestinal problems. It can be controlled with a variety of anti-emetic medications such as ondansteron (Zofran). Loss of fluids from vomiting or diarrhea, hemorrhage or sepsis can lead to hypotension. A bolus of NS is indicated for hypotension. Document responses to the treatments you have given.

Abdominal Pain: CQI

If you are doing CQI you should always check that the correct protocol was chosen and followed, the scope of practice was followed, and if there were any medication errors. For abdominal pain special attention should be given to abnormal vitals signs and what was done in response to them. Was there treatment for any associated symptoms? Check for documentation of the response to interventions.

By:
Dr. Forslund
IEMSA Medical Advisor

Hello! Spring has sprung (or so they say) and NAEMT has been ramping up for a busy spring and summer on behalf of our membership. Through March and April, NAEMT has been working hard in education, advocacy and membership development.

NAEMT's educational committee added another high quality program. The NAEMT **EMS Safety Course** was officially rolled out to rave reviews at the EMS Today (JEMS) Conference in Baltimore, MD. The course aims to promote a culture of EMS safety and to help reduce the number and intensity of injuries incurred by EMS practitioners in carrying out their work. The student will learn: identification of the key elements of safe ambulance operation, techniques for moving and securing patients safely, recognition of where an EMS practitioner may be at risk of violence and how to either avoid or address those situations; appreciation of the importance of maintaining good personal health as well as the impact of EMS service on the individuals' personal health and how to address safety elements in a variety of operational situations. More information on the NAEMT EMS Safety Course can be found on our website at www.naemt.org.

March and April has seen a widely publicized debate rage over who the lead agency for EMS should be at the Federal level. Some organizations feel the best place for EMS is within the Department of Homeland Security, where the Fire Service resides, others believe EMS belongs in the Department of Health and Human Services. There have been "white papers" written stating that the White House has the authority to declare a lead agency for EMS. The White House has asked the Federal Interagency Committee on Emergency Medical Services (FICEMS) to make a recommendation on that lead agency by May 15, 2011.

FICEMS in turn requested national organizations involved in EMS to provide input by responding to the following questions: What should be the appropriate role of the Federal government in the entire EMS continuum of care? What should not be the role of the federal government in the entire EMS continuum of care? To see NAEMTs response to FICEMS, please go to www.naemt.org.

The 2nd annual EMS on the Hill Day will take place on May 3-5 in Washington D.C. Last year we saw 120 EMS Practitioners on Capitol Hill with 160 congressional visits conducted and representatives from 40 states and Puerto Rico. To date there are 151 EMS practitioners registered to participate in a full day of lobbying on behalf of EMS addressing Medicare Ambulance relief 2011, Extended Federal Death Benefits to Non-governmental Medics (PSOB) and Allocation of the D-Block Broadband Spectrum to Public Safety.

The event will begin the evening of May 3 with a pre-Hill visit briefing and meeting with other participants. On May 4, EMS practitioners will attend scheduled appointments with their Senate and House leaders and their staff, followed by a post-Hill visit reception. IEMSA and Iowa will be represented by Thomas Craighton, his wife Dawn and myself. Thomas was the recipient of one of four scholarships awarded by NAEMT to help offset the cost of travel and lodgings for one participant in each NAEMT region. Congratulations Thomas!

Also this month, NAEMT launched a new website to help our members and others in our profession prepare for EMS Week in 2011. The site, at *www.emsweekideas.org*, is designed to help EMS practitioners explore new ways to celebrate, participate in, grow, and support our profession. EMS Week presents an opportunity for EMS services and practitioners to focus positive attention on EMS and the opportunities that exist within our profession through sharing the best of EMS with our communities.

NAEMT in collaboration with EMS World also launched a new website to more widely communicate EMS job opportunities nationwide. EMS Job Center *www.emsjobcenter.com*, contains over 14,000 EMS related positions throughout the nation and a link to the site is located on the www.naemt.org homepage and on our EMS Careers page.

Finally, the National EMS Memorial Bike Ride "Muddy Angels" will conduct a week long cycling event to bring attention to line of duty death of EMS practitioners and safety issues faced by EMS practitioners every day. The NEMSMBR began in Boston, MA in 2002 in honor of a fallen Boston EMS medic and has grown over the years to become a national event including 1-3 day rides in Louisiana, South Carolina and Colorado, where the ride ends at the National EMS Memorial in Colorado Springs, CO. NAEMT has been a long time supporter and sponsor of the yearly bike ride which takes place during EMS Week May 14-21.

I am honored to serve as the route coordinator/Ride commander as 120 cyclists and support personnel begin the ride in Boston, MA and end on May 20, 2011 in Washington DC. If you'd like to keep track of the ride; JEMS, EMS World and EMS1.com will all be publishing daily blogs as the ride moves through MA, RI, Long Island, NY, NYC (Time Square), through PA and the Battlefield of Gettysburg and through the state of MD and DC to end in Alexandra, VA.

The event will end with a memorial service and EMS week celebration on May 21, 2011. This year, as well as last year, Sheryl Stoolman from Carroll, IA will be remembered and honored at each ceremony held throughout the ride as well as her induction in May to the National EMS Memorial. Please go to the Muddy Angel website for more information about the ride, www.muddyangels.org

I wish you all a healthy, safe and wonderful spring and summer! If you have any questions, comments or concerns or would like to be more actively involved in the NAEMT organization please contact me at jkscadden@gmail.com.

Best Regards!

Jules Scadden, PS
NAEMT-
Director-at-large

Visit our website at
www.NAEMT.org ✱

On The Hill

Township Mandate - Two versions of it both failed this year. SF 450 would have created a three county pilot project, while HF 9 would have created a list of "essential" services that cities and counties could not cut prior to cuts to "non-essential" services. The revised version of HF 9, HF 671, does not contain the enumerated "essential" services (of which EMS was one), and goes to straight property tax relief.

E911 Funding (Narrowbanding) - SF 448 does not appear to have the votes to pass the Senate. It increases the wireless surcharge from $0.65 to $1 per month, and the money would go to the State for development of the E911 system for compliance with the FCC narrowbanding rules.

Eliminating CPR in High School - HF 109 would have eliminated the requirement that school districts provide CPR certification courses to high school students. IEMSA opposed this bill, which died in the first funnel.

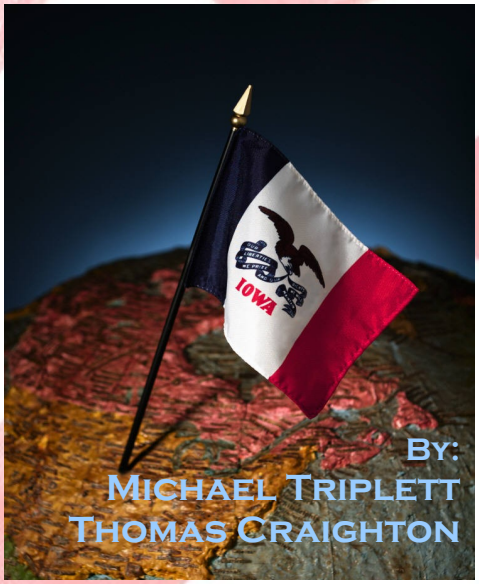
IowaCare Funding - Very little was done with the IowaCare program this year, with an eye toward 2014 and the full implementation of the federal Affordable Care Act.

Tax Credits for Volunteer EMS - The House Ways and Means Committee can debate HF 119 at any time. The bill phases in a $100 personal income tax credit for volunteer EMS and firefighters over four years.

Michael Triplett
Triplett Enterprises Ltd.
michael.triplett@mac.com
515-707-3464 (mobile)
515-282-3186 (fax)

This has been a very active year in the legislature. You have all had a part in the process as Mike and I have used your input to move through discussions with legislators.
Because of this being a year with a large focus on Budget quite a few of the items have not gotten through the process to be new law, BUT we have started many people thinking of EMS and how we are funded and how we do business. There are still a couple items on the table as you will see from mike's notes that follow. This has been a starting point and we will continue to work as an Organization to move EMS and our funding and work forward in the legislature.
As a side note I will also be going to Washington D. C. for the National EMS Day on the Hill sponsored by NAEMT May 4th. Whether you are a member of NAEMT or not go to their website and review information there. If you are not a member I would encourage you to join the National Organization as well as maintain your IEMSA membership. This helps EMS both in Iowa and at the National Level.

Thomas A. Craighton BS, AAS,CRT, RCP, PS, CCP, FF-II
EMS Manager
Respiratory Care Manager
Franklin General Hospital



Don't know what to get that special EMT for their Birthday, Anniversary, Christmas or Just Because...

Why not a
1 year Membership to **IEMSA**?
Log on to our website and click on **Membership** and you can purchase a membership in their name. See the many benefits you will receive with your 1 yr. membership gift.

www.IEMSA.net

Sydney Fire & Rescue

AFFILIATE HIGHLIGHT

is a small all volunteer organizations that was established in 1924. Our annual calls to service is about 300 calls between both 911 and transfer out of the local critical access hospitals to included George C. Grape Community Hospital, Shenandoah Medical Center and on an occasion St. Mary's hospital in Nebraska City , Nebraska. We currently have about 45 active members on the department. In the 1970's the fire department assume the pre-hospital care from the local funeral home. Sidney Fire and Rescue started out as at the EMT level and has advanced through the EMT-D, EMT-Basic. In 2001 the department became the second ALS Iowa Paramedic Level service in Fremont County. In 2009 Sidney then advanced to the Paramedic Specialist level. We currently have 13 EMT-Basics, four EMT-Intermediates, four Iowa Paramedic's, two Paramedic Specialist both with Critical care endorsements, 3 Nurse with RN exceptions. Sidney Fire and Rescue covers about 180 square miles. Sidney mission is to provide protection of property, life and limb through strong fire preventions as well as prevention through community outreach by providing CPR training to our community. We exist because strong volunteerism and drive to support our community in their worse time. A major event for Sidney has been the Sidney Iowa Championship Rodeo held in late July and early August for the last 88 years. This rodeo has created several significant calls over the years that have taxed the resources of the department. But each time the department has been able to handle each event due significant training and preparation for the rodeo. Sidney Fire and Rescue became an member in 2011. Our membership feels that to further EMS as a whole we have to be part of IEMSA who drives change and improvements to our chosen profession. Sidney on a whole would not be a thriving department if it wasn't the leadership of past, present, and future members of the department. They would like to say thank you to the past leadership and membership who has made the department what it is today. They look forward to continuing the tradition of the department for many years to come. Since 2001 Sidney has made significant advances in protocols changes to include RSI. In the last year Sidney Fire and Rescue has made significant purchases in buying Zoll E series monitor Defibrillator which has given the capability to transmit their 12 leads to the local ER's. With this purchase also came the Auto-pulse from Zoll. Sidney Fire & Rescue looks forward to continuing its high standards in the patient care area for years to come.

Kevin Frech
IEMSA Board Member 2011

Iowa Western Community College

Iowa Western Community College EMS Education has stepped into a new realm of learning! In Southwest Iowa, we are fortunate enough to be able to offer our students a hands-on learning experience second to none. With the opening of our new Simulation Center, our students have the opportunity to be dispatched out to a home, care for the patient in the back of an ambulance and deliver them to the ER, all without leaving the classroom. Along with other Allied Health Fields, we are enjoying the world of simulation and learning all the benefits it provides for our students.

From the time the pager goes off, until our "patient" is turned over to the care of the ER staff, our students are recorded (visually, audibly, and electronically through the simulated manikin) in their treatment, transport and delivery. Within the walls of our one bedroom apartment, in the squad in the classroom, and in the ER there are pan and zoom cameras and microphones to record what is said, done and seen. When our students finish with the scenario, they simply go to a debriefing room and watch what they just did. The learning takes place when the student and classmates evaluate the performance…. first hand, up close and personal, and in real time.

We offer EMS courses at all levels, Emergency Medical Responder through Paramedic, but we offer the same simulation experience to all of our students. We believe in creating a classroom experience that is as close to on the job training as possible. Our goal is to make the transition from student to EMS provider quick and easy. Our EMT courses are offered for credit and non-credit, while our Paramedic Program fits nicely into an Associate Degree package to allow our graduates the best success as a career medic.

Within the learning center, we also have access to a bariatric manikin…. When water is added to his suit, he can go from 125 pounds to 460 pounds (because you know, those larger folks get sick too). We have access to a birthing suite, where "Noel" delivers her baby hydraulically, - no more pushing that infant through manually! We work together with Medical technicians to demonstrate how a code situation would work in the clinical setting and we work with nursing students to develop a cooperative working environment within the ER and ICU areas.

Medicine has come a long way, and IWCC has been blessed to be able to provide an opportunity for the students in our programs to work on that cutting edge. If you are ever in the Council Bluffs area, stop in, we would love to show you around!

Featured Training Program

Honoring Our Own

If someone you know has passed away and played an active role in EMS, please consider honoring their memory in this year's presentation of Honoring Our Own.

Over the years, volunteer and career providers have given countless hours of dedicated service to many Iowans. Whether an EMT, PARAMEDIC, FIRST RESPONDER, FIREFIGHTER, EMS or FIRE INSTRUCTOR, DISPATCHER, or someone who was a dedicated Friend of EMS and assisted any EMS or FIRE Organization we would like to honor their memory by featuring them in this video memory presentation.

If you would like more information, have an honoree, or would like your service featured in this year's production, please contact TOM SUMMITT@tcsummitt@machlink.com or call the IEMSA office at

EMS Everyday Heroes

The dates for National EMS Week 2011 are May 15 thru May 21 with May 18 set aside as Emergency Medical Services for Children (EMSC) Day!!

Become a Fan on the National EMS Week Facebook page at: http://www.facebook.com/National.EMS.Week

Thank you for your service!

Are You Ready for the Hunt?

Summer is just around the corner, the flowers are blooming and the weather turning warmer. For many, referred to as Geocachers spring marks the beginning of new adventures. Geocachers, people who actively participate in the high-tech treasure hunt called Geocaching (pronounced geo-cashing), are seeking treasures all year round. Spring however, opens the door to many caches that have spent the winter hidden under the snow.

During EMS Week 2011 IEMSA will be joining the hunt. Adventure seekers equipped with GPS devices try to locate hidden containers, called geocaches or caches, outdoors and then share your experiences online.

Geocaching is enjoyed by people from all age groups from all areas of the world. There are millions of geocaches in over 100 countries around the world. Iowa is home to more than 10,000 caches!

A typical cache is a small waterproof container containing a logbook where the geocacher enters the date they found the cache and then they sign the logbook. In some instances larger containers can also contain items for trading, usually toys or trinkets of little value. Another type of cache is a travel cache. Similar to a traditional geocache, this variation is found at a listed set of coordinates. The finder uses the log book, trades trinkets, and then hides the trackable cache in a different location. The trackable cache then moves from place to place, picking up stories along the way.

This year, as a kick off to EMS Week, IEMSA will be releasing location information for the IEMSA geocache via Enews and the IEMSA website on May 16, 2011. This geocache will focus on the importance of early recognition of cardiac arrest..

For more information regarding Geocaching or to start your adventure visit www.geocaching.com.

IOWA EMERGENCY MEDICAL SERVICES ASSOCIATION
8515 Douglas Avenue, Suite 27B
Urbandale, IA 50322