

# **Emergency Medical Identification (EMI) Guidelines For Health Care Providers in the Pediatric Hemophilia/Bleeding Disorder Population**

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Nurses are encouraged to teach families of children with bleeding disorders about the use of emergency medical identification (EMI), but there have been no guidelines concerning what type of EMI should be used and where they should be worn. In addition, there is a consensus among these nurses that despite teaching, EMIs are often not used. For these reasons we embarked on a study to identify current pediatric hemophilia nursing practice in educating families about EMI and nurse's perceptions of patient/family adherence in using EMI.

Based on the results of this study, we developed Emergency Medical Identification (EMI) Guidelines to be used by healthcare providers working with the pediatric hemophilia/bleeding disorder population. This draft is meant to serve as a general guideline to be adapted to meet the needs of each child. The Nursing Working Group of NHF and MASAC 2010 will review the guidelines. We are presently conducting Phase II of the study to directly assess parent/caregiver's experience in hopes of gaining more knowledge about EMIs and further refining the guidelines.

## **1. Why is it important to use an emergency medical identification?**

It is generally accepted that the use of EMI is beneficial in a variety of medical conditions. Benefits may include the potential for:

- Prompt identification of medical condition
- Prompt correct medical intervention
- Decrease medical errors
- Decreased overall morbidity and mortality
- Decreased overall medical cost

## **2. What form of EMI should be used and where should it be placed at each age?**

**(See Emergency Medical Identification Options below)**

- For all age groups, EMI should be worn on the body instead of externally such as in a wallet, on a car seat, or caregiver's purse. A separate emergency medical identification card can accompany the child, but this should not replace EMI on the child.
- The EMI should be identified with a medical symbol (i.e. Caduceus) and look like an EMI so it will not be mistaken for a piece of jewelry.
- Once fit securely, the EMI should be assessed frequently to insure that the fit is snug, but not tight.

There are many brands of EMI. NHF does not endorse any specific brand, however, being affiliated with a 24 hr on-call nonprofit program is encouraged.

### **Infants (<1 year):**

- A simple design is best i.e. one that has no/few removable parts and no beading.
- Presently there is no ideal form of EMI for infants due to sizing and safety. Most sport straps are too large for infants and most EMIs have emblems or clasps that are <1 3/4 inches making them choking hazards.
- Often a metal emblem with a chain bracelet or metal emblem on a sport strap is placed on the *ankle*.
- *All EMI items placed on a child <3 years old which have emblems or clasps <1 3/4 inches should carry the warning: " Not intended for children < 3 years old due to potential choking hazard."*

### **Toddler/Preschooler (1-5 years):**

- Metal emblem with chain bracelet or various sport strap bracelets can be used and placed on the *ankle or wrist*.
- *All EMI items placed on a child < 3 years old which have emblems or clasps < 1 3/4 inches should carry the warning: " Not intended for children < 3 years old due to potential choking hazard."*

### **School age/Adolescent (6-13 years):**

- More options are available including metal emblem with chain bracelet or sport strap bracelet. Pendant necklace, dog tag necklace and beaded bracelets can be used for older children > 8 years old.
- In this age group, many adolescents prefer EMIs that are stylish. For this reason, it is particularly important that EMI still be identifiable so it will not be mistaken for a piece of jewelry.

### **3. Why is it important that EMI be on the child's body?**

- EMI and child may be separated in event of an accident.
- Parents are not always with the child or able to speak for the child if they themselves are injured.
- There are no universal guidelines for emergency first responders (medically trained personnel at scene of accident) delineating where to search for EMIs. They may not look outside the body for identification. In some states there is a law prohibiting the search for EMI in wallets etc. for security reasons.
- Treatment is usually already started in Emergency Room before an *external* EMI is located outside the body i.e. wallet, glove compartment, purse, cell phone.

### **4. What type/brand of EMI should be recommended?**

There are several brands of EMIs available. There two issues when choosing an EMI: the product and the service.

- **Product:** There are no regulations for EMI products so you should choose one that is safe and recognizable as an EMI with a medical symbol i.e. Caduceus. There are several products with similar names i.e. "MedicAlert", Medical Alert etc. The non-profit foundation started in 1958 is MedicAlert®.
- **Service:** Some EMI companies like Sticky J® and TagmyKid® just provide the EMI jewelry. They are for-profit companies. Others, like MedicAlert® provide the jewelry and have a 24 hour on-call program. They are a non-profit company. An on-call program is usually more expensive, because of the medical service. Many of the on-call programs specialize in alarm devices for seniors who may fall and need assistance. Others like MedicAlert® have special program for children: Kidsmart®.

NHF does not endorse any specific brand of EMI, however, being affiliated with a 24 hr on-call nonprofit program is encouraged. Information should be updated yearly and a yearly fee is charged.

**5. What is the best way to measure an EMI?** We have found increased adherence/compliance when the staff assists the family with measuring the child for the EMI. Nurses can measure the child's wrist or ankle snugly, but not tightly then add a half-inch. It should be measured on the skin and not over a sock. A tape measure may be included on the application form.

### **6. When should a child get their first EMI?**

As soon as the diagnosis is confirmed, EMI should be discussed and the application form completed and mailed. This is typically in the first one to two original hematology visits. There is approximately a 1- 2-week window until the EMI arrives after being ordered. EMI should be discussed with each visit, not just yearly or biannually at the comprehensive hemophilia clinic visit.

### **7. What should be written on the EMI application form for an on-call program?**

Each EMI application form is unique and can be somewhat complex. Be sure to list clearly name of child, diagnosis, medications and treatment recommendations, and any medication allergies. Include the name and phone number of parent or caregiver and the 24 hr number for the hematology service. Parents sometimes must sign the form. We find better adherence when the staff assists the family with measuring, completing the form and mailing it.

**8. What should be written on the EMI?** A Caduceus or Rod of Asclepius (snake and staff as the universal medical symbol) should be on the emblem. Assess how many spaces you have available for engraving and plan accordingly. Keep written information simple and understandable to most people. For example: Bleeding Disorder: Hemophilia VIII <1%. If it is an on-call program you need not include the hematology service phone number on the emblem because the on-call program will provide it. If the child has jewelry alone and is not part of an on-call program, you should include the hematology service number and treatment on the emblem. Due to size constraints it may be difficult to include all pertinent information. Often the child's name is not included for security reasons. Some companies offer to print information on the inside of the emblem for security reasons.

**9. How can cost be minimized?** One option is to ask your regional hemophilia chapter or another program to fund EMIs. It is possible to set up an account at the EMI Company and charge it directly to the specific fund number. Some chapters will not only provide the initial fee, but the ongoing yearly fee as well.

**10. How can adherence/compliance be improved?**

Educating both parents/care givers and children is key. Discuss, "Why it is important to wear an EMI" (see #1) and "Anecdotes of poor outcomes from not wearing EMI" (see below). Positive reinforcement for wearing EMI and teaching role play to help the older child decide who and how to disclose that they have hemophilia/a bleeding disorder may prove beneficial. Discussion about the use of EMI should occur with each contact not just annually or biannually at comprehensive care visits.

**Anecdotes of good outcomes from wearing EMI:**

- "Had a mild [mild factor VIII deficiency] that wore his bracelet [EMI], car accident with lacerated liver, was airlifted to hospital for treatment ASAP. Use this example to encourage non-wearers"
- "One of my college aged patients was in a MVA [motor vehicle accident] during spring break and found unconscious in his car. His MedicAlert identified his hemophilia and he was carrying factor. This saved his life."

**Anecdotes of poor outcomes from *not* wearing EMI:**

- "Gun shot wound, taken to OR at another hospital, parents not around."
- "Head injury factor IX patient, given factor VIII: patient died"

**11. What is the future of EMIs?**

There will always be a need for a simple EMI on a person's body despite technical advances. This is because:

- The first person at the scene of an accident may be a layperson without ways to extract detailed medical information.
- Medical scanning devices (to read bar codes, fingerprints) are presently expensive and many first responders etc. do not have access to them especially in rural areas and developing countries.

**Potential EMIs and their limitations:**

**Flash drive with emergency medical identification:** Many hospitals will not accept flash drives due to the potential risk of computer viruses; it is not attached to the child so it can become separated from the child in the event of an emergency; the basic information is not readily accessible at the scene of accident.

**Sub dermal chip:** Risk involved with implantation; information changes may be difficult to update; basic information is not readily accessible.

**Tattoos:** Tattoos are not intended for children <18 years; Risk involved with bleeding disorder and Physician permission required; In order to be legible, a tattoo would need to be very large; Lettering bleeds/fades with time so it may not be legible in the future.

**Simple Infant EMI:** A new EMI for infants should be developed. This EMI could be a simple waterproof, disposable hospital- type plastic band with an adhesive closure. Basic medical information would be printed on it and a bar code for extra medical information. This would be a safe option due to the lack of small parts. It would be easy to size. This would be ideal for developing countries and in cases of disasters. Limitations include limited durability.

### Emergency Medical Identification (EMI) Options

Infant (<1 year old)	Toddler and Preschooler (1-5 years old)	School age and Adolescents (6-13 years old)
MedicAlert® Petite/Child metal emblem with chain bracelet placed on ankle. Starts at size 4 1/2 inches*	MedicAlert® petite/child metal emblem with chain bracelet or metal emblem with sport strap placed on ankle/ wrist. *	MedicAlert® small metal emblem with chain bracelet or sport strap on wrist. Pendant Necklace, dog tag or beaded bracelet for children >8 yrs old.
StickyJ® metal emblem on sport strap placed on ankle. Size 4-6 inches*	StickyJ® metal emblem with sport strap placed on ankle/wrist. *	StickyJ® metal emblem with chain bracelet or sport strap placed on wrist. Pendant necklace or beaded bracelet for children >8 years old.
	Tagmykid® no metal emblem, cloth and velcro band placed on ankle/wrist. Starts at 5 inches*	Tagmykid® no metal emblem cloth velcro band placed on wrist.

- Presently there is no ideal EMI for infants
- \*All EMIs placed on a child <3 years old which have emblems or clasps <1 3/4 inches should carry the warning: "Not intended for children < 3 years old due to choking hazard."
- For all age groups, EMI should be worn on the body instead of externally such as in a wallet, on a car seat, or caregiver's purse. A separate emergency medical identification card can accompany the child, but this should not replace EMI on the child.
- The EMI should be identified with a medical symbol (i.e. Caduceus) and look like an EMI so it will not be mistaken for a piece of jewelry.
- Once fit securely, the EMI should be assessed frequently to insure that the fit is snug but not tight.
- NHF does not endorse any specific brand of EMI, however being affiliated with a 24 hr on-call nonprofit program is encouraged.
- These are general guideline to be adapted to meet the needs of each unique child.

MedicAlert® is MedicAlert.com (includes on-call program)  
 StickyJ® is StickyJewelry.com (on-call program not included)  
 Tagmykid® is Tagmykid.com (On-call program not included)

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