LCEMS POLICY BOARD
MEETING MINUTES
March 5, 2008

Members Present	Representing
Chief Rick Monto	Maumee Fire Dept.
Chief Daryl McNutt	Whitehouse Fire
Mayor Angela Kuhn	Whitehouse CEO
Chief Barry Cousino	Springfield Twp. Fire Chief
Chief Bill Wilkens	Oregon Fire
David Lindstrom, M.D.	LCEMS Medical Director
Dennis Cole	Emergency Services Director
Mike Beazley	County Administrator

Absent:

Mary Beth Crawford, M.D. (St. Luke's)	Hospital Council
Mayor Carty Finkbeiner	City of Toledo, CEO
Chief Mike Wolever	City of Toledo Fire Chief
Chief Kevin Bernhard	Lucas County Fire Chiefs' Association
I. Kohli	Springfield Twp., CEO
Mayor Tim Wagener	City of Maumee, CEO
Chief Fred Welsh	Sylvania Twp. Fire Chief
Mayor Marge Brown	City of Oregon, CEO
Pam Hanley	Sylvania Twp. CEO

Attendees:

Brent Parquette	LCEMS QA/QI
Lt. Ed Herrick	Toledo Fire EMS Bureau
Captain Bill Hull	Toledo Fire EMS Bureau
EMS Chief Martin Fuller	Whitehouse Fire
Jack Morasch	ProMedica
Assistant Chief Tom Eisel	Sylvania Twp. Fire
David Miramontes, M.D.	St. Vincent Medical Center
Jeff Lowenstein	MedCorp
Jeff Kish	Rumpf Ambulance

The LCEMS Policy Board meeting called to order at 8:38 a.m., Wednesday, March 5, 2008 in the Emergency Services Building.

1) **Minute Approval**

The minutes from the February 6, 2008 meeting were distributed for review. A motion was made to accept the minutes. Motion carried.

2) **Medical Committee Report**

No meeting to report. Next meeting is scheduled for Monday, April 7, 2008

3) **Paramedic Committee Report**

Chief McNutt reported this committee met February 11th. There was discussion regarding training issues on the EPCR. Brent talked about drop down menus and working with Zoll. The issue of the lack of attendance at these meetings which he brought to the Fire Chiefs meeting. Gary Orlow gave an update on the new rigs, which are now in service. Under the new business category the wish list was discussed. Under the open discussion category, the discussion of the departments having Phillips Life Paks and AEDs and how they could be interfaced with the County. The next meeting is scheduled for March 10th at 9:00 a.m.

Dennis asked to elaborate more on the Phillips discussion. Dennis reported they met with the Phillips representative to discuss acting as a central router. EMS can host the router but each device would require a cell phone/card for connectivity to the router. Dennis asked those present to think about where the county should go with this and bring back their suggestions to him.

4) CE

Brent reported the paramedics CE for February was on geriatrics and infectious diseases. The evaluations were good due to the boring nature of the topic. March's topic is Medical Emergencies with case reviews. Also with March's CE is the introduction of the ResQGARD to trial

Dr. Lindstrom reported the manufacturer of the ResQPOD developed the ResQGARD. This device is FDA approved. (Attached is draft information regarding the ResQGARD) Dr. Lindstrom reported the manufacturer is giving the County enough for two months to trial. The trial will be implemented in April. Dr. Lindstrom reported he will give some to Dr. Miramontes and Dr. Brookens also. Dr. Lindstrom reported because this is a new device, the paramedics will take it off at the hospital and collect it.

5) Private Ambulance Contract

Dennis Cole reported there have been meetings with the private ambulance companies regarding the contract. The biggest request is in Section 19 which states the ambulance provider agrees not to advertise to the general public as an alternative to 9-1-1. Dennis reported the ambulance companies would like it "softened" to where they have the ability to advertise with a phone number. A discussion ensued.

6) Open Discussion

Dr. Lindstrom distributed a handout regarding hypothermia and costs (attached). Dr. Lindstrom reported the four major STEMI hospitals are just about ready to accept theses patients. Dr. Lindstrom reported he would like to implement this in May.
A motion to move forward was made by Chief Monto and seconded by Chief Cousino. Motion carried.

Chief Monto inquired if there was a process to more forward with getting GP S on the vehicles.

Dennis Cole reported Bio Key has produced a simple GPS/AVL mapping program. He is working at getting a quote from Motorola for GPS/AVL modems. We will be looking at a trial on the life squads.

Chief Wilkens asked into the process/criteria of moving life squads around when it's busy. Chief Wilkens cited an instance where LS8 was moved into the City of Toledo for three hours. Dennis Cole reported when the system is busy, vehicles are moved according to projected probability of the next call. When life squads are not available, the private ambulances are called in.

A lengthy discussion ensued.

7) Adjournment and Next Meeting

With no further business, the meeting was adjourned at 9:35 a.m. The next meeting is schedule for April 2, 2008 at 8:30 a.m.

ResQGARD
Impedance Threshold Device (ITD)

1. **Introduction:**
   A. The **ResQGARD** is an impedance threshold device (ITD) that provides therapeutic resistance to inspiration in spontaneously breathing patients. During inspiration, a negative pressure (created from expansion of the thorax) draws air into the lungs. When inspiratory impedance is added to the ventilation circuit, it enhances the negative pressure (vacuum) in the chest, which pulls more blood back to the heart, resulting in increased preload and thus, enhanced cardiac output on the subsequent cardiac contraction.

   B. The **ResQGARD** provides therapeutic benefit as soon as it is placed into the circuit and may be helpful in establishing intravenous access.

2. **Indications:**
   A. Patients ≥ 25 lbs who are experiencing symptoms of low blood circulation or hypotension (< 100 mmHg [adults]; < 90 mmHg [children]), which can be secondary to a variety of causes such as:
      i. Hypovolemia
         a) Internal hemorrhage
         b) External hemorrhage
         c) Dehydration
      ii. Hypotension
         a) Dialysis
         b) Sepsis
         c) Orthostatic intolerance
         d) Medication reaction

3. **Contraindications: (Absolute)**
   A. Patients < 25 lbs
   B. Patients with flail chest
   C. Patients with ongoing, known uncontrolled blood loss
   D. Shortness of breath, respiratory insufficiency
   E. Chest pain
   F. Congestive heart failure
   G. Dilated cardiomyopathy
   H. Pulmonary hypertension
   I. Aortic stenosis

4. **Contraindications: (Relative)**
   A. Blood loss of unknown rate
      i. In the situation where life-threatening bleeding is not under control, the **ResQGARD** may accelerate bleeding. For this reason it's important to have bleeding under control before applying the **ResQGARD**. In cases where the rate of blood loss is unclear, the recommendation is to use the **ResQGARD** as you would a fluid challenge in the field (i.e., if a fluid challenge is indicated, then the ResQGARD would be too). If it is believed that the administration of fluids would worsen bleeding and "permissive hypotension" is desired (i.e., maintaining systolic BP at 90), then the ResQGARD should not be used. Since the use of an ITD may be fluid-sparing and can be discontinued immediately, a trial application of the **ResQGARD** may be considered.

5. **Precautions**
   A. The safety and effectiveness in persons suffering from arterial stenosis or asthma has not been established.
   B. Prolonged use for more than 30 minutes has not been clinically evaluated.
   C. If respiratory distress develops during use of the **ResQGARD**, immediately discontinue use.
   D. With a patient complaint of nausea and/or vomiting, the **ResQGARD** should only be used with the mouthpiece or facemask w/o strap to allow for easy removal.

6. **ResQGARD Packaging:**
   A. Each **ResQGARD** kit will contain:
      1. **ResQGARD** with pre-connected EtC02 filter line set (adaptor connection between ITD and filter line)
      2. Vented facemask
      3. Mouthpiece
      4. Nose clip
      5. ResQStrap
      6. Product evaluation form
      7. 02 supply tubing

NOTE: The LCEMS Medical Director mandates the in-line attachment of the EtC02 filter-line. Kits supplied to LCEMS Life Squads will already have filter lines attached to the **ResQGARD** through the use of an adaptor.

7. Procedure for Field Application:

A. Using the **ResQGARD** on a facemask:

1. Identify need for **ResQGARD** application (Indication for use)
2. Reassure patient; positioning as necessary
3. Vital Signs (Evaluate P, RR, BP)
4. Apply Monitor – LifePak 12
   i. Acquire automated BP prior to **ResQGARD** use.
      If automated BP analysis is not available, acquire manual or palpated BP (monitor BP before, during and after **ResQGARD** use).
   ii. Attach pulse oximeter probe for continuous Sp02 monitoring before, during, and after **ResQGARD** use.
5. Connect the **ResQGARD** w/EtC02 filter-line to vented facemask provided; make sure pieces fit together snugly.
6. Explain to the patient that the device will make it slightly more difficult to take a breath but that the resistance is what may make them feel better.
7. Gently (but firmly) hold the **ResQGARD** over the nose and mouth (or have the patient hold), establishing and maintaining a tight face seal with the facemask. The head strap (e.g. ResQStrap) may be used if the patient does not want to hold the **ResQGARD** in place except in case of nausea and/or vomiting.
8. Attach EtC02 filter-line to LP 12 for continuous capnometric/capnographic analysis
9. Have patient breathe in slowly (over 2 – 3 secs) and deeply; exhale normally. Breathe at rate of 10 – 16/minute.
10. If supplemental oxygen is used, attach the tubing to the oxygen port on the **ResQGARD** and deliver one (1) to fifteen (15) lpm. Do not exceed 15 lpm.
11. If patient is unable to tolerate mask application (i.e., confinement, anxiety, "smothering" effect), consider attaching the **ResQGARD** to the mouthpiece provided.

B. Using the **ResQGARD** with a mouthpiece:

1. Identify need for **ResQGARD** application (Indication for use)
2. Reassure patient; positioning as necessary
3. Vital Signs (Evaluate P, RR, BP)
4. Apply Monitor – LifePak 12
   i. Acquire automated BP prior to **ResQGARD** use.
      If automated BP analysis is not available, acquire manual or palpated BP (monitor BP before, during and after **ResQGARD** use).
   ii. Attach pulse oximeter probe for continuous Sp02 monitoring before, during and after **RESQGARD** use.
5. Connect the **ResQGARD** w/EtC02 filter-line to the mouthpiece provided; be sure pieces fit together snugly.

6. Explain to the patient that the device will make it slightly more difficult to take a breath but that the resistance is what may make them feel better.
7. Place the mouthpiece into the patient's mouth and establish and maintain a tight seal with the lips.
8. Attach EtC02 filter-line to LP 12 for continuous capnometric/capnographic analysis
9. Have the patient breathe in slowly (over 2 – 3 secs) and deeply through the mouth only; exhale normally. Breathe at a rate of 10 – 16/minute.
10. A nose clip may be helpful if the patient has trouble inspiring only through their mouth.
11. If supplemental oxygen is used, attach the tubing to the oxygen port on the **ResQGARD** and deliver one (1) to fifteen (15) lpm. Do not exceed 15 lpm.

8. Patient Assessment Notes:

A. In a patient without intravenous (IV) access, applying the **ResQGARD** may make it easier to establish an IV because of the improvement in blood pressure. The **ResQGARD** should be used in conjunction with other indicated treatments for hypotension (e.g. fluids, vasopressors, patient positioning). Once the patient is feeling better and the blood pressure has stabilized and risen to an acceptable level (e.g. >110mmHg in adults), it is recommended that you continue **ResQGARD** treatment for approximately 10 minutes before discontinuing it. Frequently reassess the patient and vital signs for returning symptoms of hypotension. If the patient begins to decompensate, the **ResQGARD** should be re-applied.

B. If the **ResQGARD** has been applied in the field, and transport is indicated, the **ResQGARD** should be removed from the patient upon transfer to the ED staff. The **ResQGARD** should not be left in the hands of untrained healthcare providers.

C. In the setting of orthostatic intolerance, **ResQGARD** use may result in improved blood pressure and patient presentation without the use of conjunctive therapies (i.e., fluid, vasopressors, patient positioning). Once the patient is feeling better and the blood pressure has stabilized and risen to an acceptable level, **ResQGARD** treatment should continue for approximately 10 minutes before discontinuation. Reassess the patient's vital signs frequently (minimum of 3 measurements) after **ResQGARD** use, including orthostatic measurements of pulse and blood pressure. The orthostatic intolerant patient who after adequate assessment, maintains a stabilized blood pressure and pulse after **ResQGARD** discontinuation, may not require transport by Life Squad. All details of patient assessment/treatment before, during and after **ResQGARD** use must be included in the ePCR documentation.

9. Data Collection

A. The **ResQGARD** has been added as an "intervention" into the Zoll Data System ePCR software. There will be required data entry fields associated with its application and use in the field

B. Download of all patient ECG data to Zoll Data System ePCR software is mandated.

10. Special Notes:

A. Upon completion of a run where a **ResQGARD** was used, notify LCEMS Dispatch. A log book of **ResQGARD** incidents will be kept for review and data collection.

B. Some patients who are claustrophobic will tolerate **ResQGARD** use on a mouthpiece better than on a facemask.

C. The **ResQGARD** is single-patient use only.

D. Continuous End-Tidal C02 monitoring is mandated by LCEMS with field application of the **ResQGARD.**

E. Serial blood pressures every 5 minutes, pulse oximetry, and continued patient assessment are necessary for evaluating **ResQGARD** effectiveness.

APPROVED BY:

_____ _____

Signature of Medical Director Approval Date

RESQGARD PRODUCT EVALUATION FORM

Facility: _____ Date: _____

Patient Age: _____ Gender: ☐ Male ☐ Female

What condition caused the hypotension that you treated? _____

_____

What accessories were used with the ResQGARD (check all that apply):

☐ Facemask ☐ Mouthpiece ☐ Head strap ☐ Nose clip

Was supplemental O_2 given with the ResQGARD? ☐ Yes; _____ l/min ☐ No

What other therapies were given to treat the patient's hypotension (check all that apply):

Intravenous fluids:	☐ Before ResQGARD	☐ During ResQGARD	☐ After ResQGARD
Vasopressors:	☐ Before ResQGARD	☐ During ResQGARD	☐ After ResQGARD
Patient positioning:	☐ Before ResQGARD	☐ During ResQGARD	☐ After ResQGARD
Other: _____	☐ Before ResQGARD	☐ During ResQGARD	☐ After ResQGARD

	Time	Blood Pressure	Heart Rate	Respiratory Rate	SaO_2
Before ResQGARD					
During ResQGARD					
After ResQGARD					

What was the total length of time that the ResQGARD was used? _____ minutes

How well did the patient tolerate breathing through the ResQGARD (see back)?
_____ Device Tolerance Index

How comfortable did the patient find the ResQGARD (see back)? _____ Device Comfort Index

Were you able to raise the patient's blood pressure to a satisfactory level? ☐ Yes ☐ No

Did the patient feel better after using the ResQGARD? ☐ Yes ☐ No

How easy/difficult was it to position the ResQGARD on the patient? _____

How much is a product that can provide this type of therapy worth (i.e. suggested market price): _____

_____

Please comment on any additional concerns or provide product improvement suggestions: _____

_____

_____ _____

Caregiver Signature Telephone number/email

Return this form to: _____

Version: December 21, 2007 DRAFT Document Control #

RESQGARD PRODUCT EVALUATION FORM

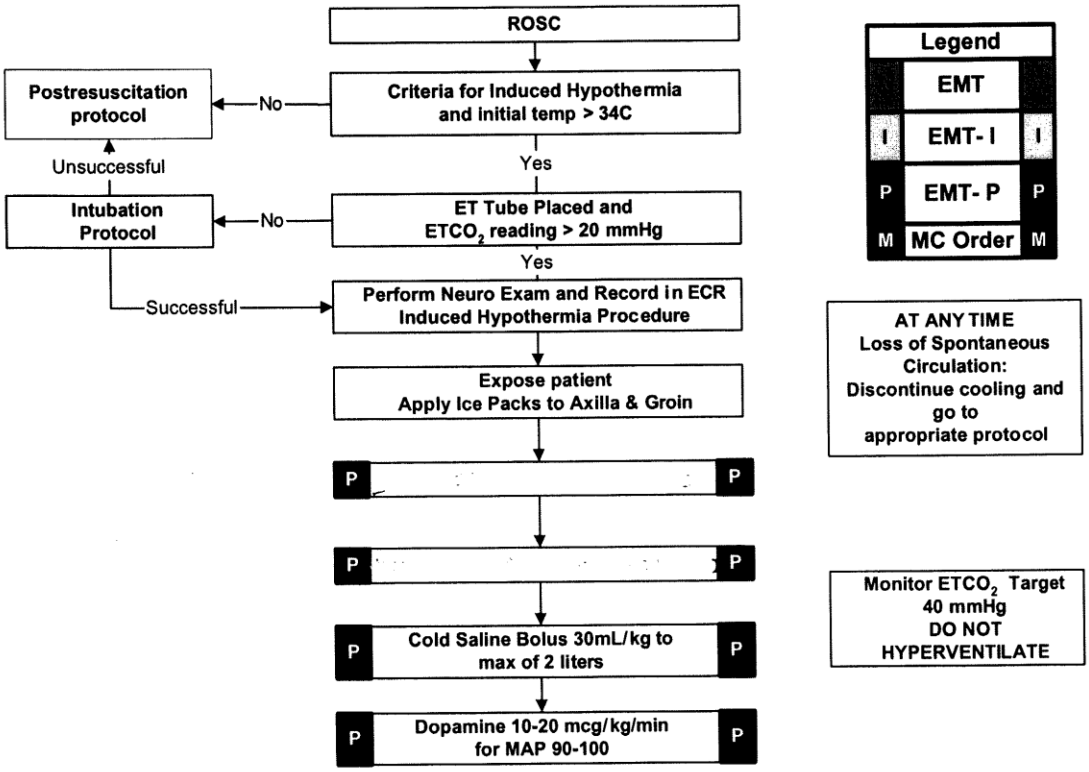
DEVICE TOLERANCE & COMFORT INDEXES

Patients: Please rate the device's comfort and your ability to tolerate breathing through the device on a scale of 0 – 4:

DEVICE TOLERANCE INDEX		DEVICE COMFORT INDEX
Not at all difficult to breathe through	0	Comfortable
Mildly difficult to breathe through	1	Mildly uncomfortable
Somewhat difficult to breathe through	2	Somewhat uncomfortable
Very difficult to breathe through	3	Very uncomfortable
Unable to tolerate; device removed	4	Extremely uncomfortable

Induced Hypothermia

History:	Signs/Symptoms:	Differential:
• Non-Traumatic Cardiac arrest	• Return of pulse	• **Continue to address specific differentials associated with the original dysrhythmia**



Legend

	EMT	
I	EMT- I	I
P	EMT- P	P
M	MC Order	M

AT ANY TIME
Loss of Spontaneous Circulation:
Discontinue cooling and go to appropriate protocol

Monitor $ETCO_2$ Target 40 mmHg
DO NOT HYPERVENTILATE

Pearls:

- **Criteria for Induced Hypothermia:**
- ROSC after cardiac arrest not related to trauma or hemorrhage.
- Age greater than 16
- Female without obviously gravid uterus
- Initial temperature > 34C
- Patient is intubated and remains comatose (no purposeful response to pain)
- If patient meets other criteria for induced hypothermia and is not intubated, then intubate according to protocol before inducing cooling. If unable to intubate DO **NOT** initiate induced hypothermia.
- When exposing patient for purpose of cooling undergarments may remain in place. Be mindful of your environment and take steps to preserve the patients modesty.
- Do not delay transport for the purpose of cooling.
- Reassess airway frequently and with every patient move.
- Patients develop metabolic alkalosis with cooling. Do not hyperventilate.
- If there is loss of ROSC after cooling is initiated or any other complication as the result of this protocol please complete hypothermia unusual event reporting form and contact a Medical Director on completion of the call.

ACR SmartButton

Product Specifications

The ACR SmartButton is a miniature-sized temperature logger that is extremely low-cost and easy to use. Because of its small size and low-cost, you can purchase tens or hundreds of them for multiple-site temperature monitoring. To get you started, purchase the SmartButton Starter Pack. It includes one SmartButton, an Interface cable, the SmartButton Reader software, and a mini manual. So simple and easy to use, anyone can start data logging today!

APPLICATIONS

Food processing verification, pharmaceutical storage, laboratories, transportation of temperature-sensitive goods, equipment run time, HVAC system testing and balancing, etc.

GENERAL SPECIFICATIONS

Size:	17.35mm diameter x 5.89mm height (0.68" x 0.23")
Weight:	4 grams (0.14 ounces)
Case Material:	Stainless Steel
Battery:	3.0 volt Lithium – Approximate 10 year battery life using 20 min sample rate at 15°C (*See product lifetime table for more information)
Resolution:	8-bit (1 part in 256)
Mounting	User selectable (magnetic backing, plastic plate mount, angled blue hard plastic or self-adhesive backing material)
Clock Accuracy	± 2 minutes per month from 0° to 45°C (32° to 113°F)
Sampling Methods:	Continuous (First-in, First-out) or Stop When Full (Fill-then-stop)
Operating Limits:	-40°C to 85°C (-40°F to 185°F)
PC Requirements:	Pentium® 75 (Pentium® II or faster recommended) running Windows® 9X/NT/2000/XP with at least 16MB RAM (64MB RAM strongly recommended), color monitor, 16bit or higher color graphics card, printer, pointing device and one free serial port
Software Requirements:	SmartButton Reader
Communication:	RS232 Serial/ACR SmartButton Interface

TEMPERATURE SENSOR SPECIFICATIONS

Type:	Silicon
Range:	-40°C to 85°C (-40°F to 185°F)
Accuracy:	±1.0°C from -30°C to 45°C (± 1.8°F from -22°F to 113°F) ±1.5°C from 45.5°C to 85°C (± 2.7°F from 114°F to 185°F)

ORDERING INFORMATION

Item	**Cat#:**
SmartButton (Single)	01-0180
SmartButton Starter Pack	01-0181

WARRANTY: 1 YEAR

POLICY COMMITTEE LCEMS HYPOTHERMIA EQUIPMENT DRAFT PROPOSAL
March 5, 2008

	$ / Unit	Cost $ /10 Life Squad Units
Patient Thermometers InfraRed		
"Braun Thermo Scan"	$167.45	$1,674.50
Covers (400)		$27.00
Temperature Monitors - Cooler		
"ACR Thermocron" $120 + 10($55) + $42	$55	$712.00
Coolers for 4 bags Saline		
Koala	$32.00	$320.00
TOTAL $:	$254.45	**$2,733.50**