



RECOMMENDATION FOR CONSIDERATION

Board Meeting Date: **December 14, 2011**

Subject: **Changes to Required Equipment List - Pulse-oximetry Devices**

VTR#: **1211-01**

Committee/Task Force: **EMS for Children Committee**

Recommended Goal

Recommended Policy Change

Other:

Recommendation:

The Department of Health should modify the list of *Required Ground and Air Ambulance Equipment and Supplies* to include pulse-oximetry units with the capability to assess both adult and pediatric patients. This modification should be effective by July 1, 2013 and apply to all ambulance types, including quick response services (QRS).

Rationale [Background]:

Pulse-oximetry monitoring is an established tool for the indirect monitoring of the oxygen saturation of a patient's blood. This technology has existed since the 1970s and became widely adopted in the later 1980s. The American Heart Association, among others, has long referenced a leading cause of pediatric cardiac arrest to be of a respiratory etiology, and use of this tool could assist EMS providers in more quickly identifying declining respiratory status. Presently, pulse-oximetry is the only tool for prehospital BLS providers, beyond their physical exam, to assess oxygenation status and response to oxygen therapies. At the ALS level, it is the only tool besides non-invasive ETCO₂ monitoring.

In the publication of Circulation associated with the release of the 2010 ECC guidelines for neonatal resuscitation, the American Heart Association cited, "It is recommended that oximetry be used when resuscitation can be anticipated, when positive pressure is administered for more than a few breaths, when cyanosis is persistent, or when supplementary oxygen is administered (Class I, LOE B) (Kattwinkel, et al. 2010)."

In Pennsylvania, the use of pulse-oximetry is required for ALS levels of licensure; however, specific reference to pediatric capability is not made. Pulse-oximetry is currently optional for use by BLS providers, but it is required for BLS agencies participating in the CPAP for BLS program.

In 2009, the American College of Surgeons Committee on Trauma, the American College of Emergency Physicians, the National Association of EMS Physicians, the American Academy of Pediatrics, and the EMSC Program released a consensus document on recommended equipment for ambulances. This document was subsequently adopted by the Federal EMSC program as the basis for assessing EMSC Performance Measure #73 related to pediatric equipment, and includes pulse-oximetry units for both pediatrics and adults.

The 2011 Statewide EMS Treatment Protocols for both ALS and BLS providers include several references to the assessment of pulse-oximetry. The protocols reference the assessment of pulse-oximetry on the patient refusal checklist, rehabilitation

guideline, and oxygen administration protocol. Additionally, for BLS, a pulse-oximetry protocol remains in effect, which provides guidance on titration of oxygen delivery to maintain an SPO₂ of ≥94%.

Medical Review [Concerns]:

This recommendation was sent, electronically, to the Medical Advisory Committee Chairperson for review. The EMSC representative to the MAC participated in the EMSC meeting during which this recommendation was developed and supported the recommendation contingent on the future release of supplemental education.

Specific to medical direction, the current requirement in Pennsylvania is for BLS agencies to have medical director oversight before utilizing pulse-oximetry monitoring. The new EMS Act, Act 37 of 2009, requires physician medical direction for EMS agencies of all levels, which would ensure all providers have medical oversight available for the use of pulse-oximetry.

Fiscal Concerns:

The fiscal impact was considered by the committee prior to the development of this recommendation. In 2010, the EMSC project surveyed a sampling of EMS agencies, which was determined by the Federal EMSC program to be representative across the Commonwealth. The results of this survey were analyzed in early 2011 and revealed that approximately 90% of Basic Life Support vehicles in the Commonwealth already carry pulse-oximetry units. Of ALS agencies, 100% reported having adult-capable units, and 92% report having pediatric capable units on all of their vehicles.

In addition to the results of the survey, the EMSC program distributed, through the regional councils, an additional 230 adult/pediatric pulse-oximetry units throughout the Commonwealth. While this distribution is still ongoing, some EMS Regional Councils have reported that distribution has included QRS units because all ALS and BLS ambulances within the region were already equipped.

For these reasons, it is anticipated that the statewide financial impact of this recommendation will be minimal, and may primarily impact the non-emergency transport services the most. PEHSC maintains several EMS equipment vendors as part of the group purchase program, which can offer agencies competitive pricing on pulse-oximetry units. Further, partnerships are maintained with community organizations such as the General Federation of Women's Clubs, which continue to assist in distributing pulse-oximetry units to EMS organizations in need of them. Presently, a device is available through the group purchase program to Pennsylvania EMS agencies for a cost of \$50.

Educational Concerns:

While pulse-oximetry is referenced in the standard curriculum for both the EMT and Paramedic, the EMSC Committee agreed that education on assessing and monitoring pulse-oximetry was important. The committee's physician representation and select committee members plan to develop, and submit to the Department for continuing education credit approval, a Learning Management System presentation on pulse-oximetry monitoring. The focus of this education will be to encourage general patient presentation as criteria for treatment while using pulse-oximetry as an adjunct to that assessment. This presentation should be completed in the first half of CY 2012.

Plan of Implementation:

Upon acceptance of this recommendation, the Department of Health should:

1. Issue an EMS Information Bulletin and RC Memo to EMS Agencies and Regional EMS Councils to provide notice of the pending change to the list of *Required Ground and Air Ambulance Equipment and Supplies* effective July 1, 2013.
2. Consider pulse-oximetry units (capable of both adult and pediatric monitoring) an EMSOF priority for FY 12-13.
3. Provide notice in the Pennsylvania Bulletin amending the list of *Required Ground and Air Ambulance Equipment and Supplies* to reflect the addition of pediatric- and adult-capable pulse-oximetry units.
4. Consider providing PEHSC group purchase information to EMS agencies as a resource to obtain a pulse-oximetry unit with a reduced financial impact to the agency.

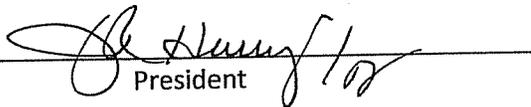
The PEHSC Committee/Task Force offers consultation to the Department in regard to the content of this Vote to Recommend (VTR) and its attached documents. The PEHSC Committee/Task Force specifically offers staff or member support to participate in Department deliberations regarding this recommendation in an effort to convey committee/task force discussions.

Board Meeting Comments/Concerns:

Discussion was held at the Board of Directors meeting relative to the applicability of this VTR to QRS agencies. Discussion included commentary that QRS personnel perform treatment under the guidance of the Statewide EMS Treatment Protocols, which include titrating oxygen delivery to pulse-oximetry. It is the Committee's intent that QRS unit be included in the scope of this recommendation.

A concern on the proposed implementation date of January 1, 2013 was expressed as falling in the middle of an EMSOF fiscal year. The EMSC Committee Chairperson agreed to modify the VTR for an implementation date of July 1, 2013.

Electronic comments were received by e-mail recommending that the recommendation be expanded to include co-oximetry for the monitoring of carbon monoxide in patients.

Signed:  Date 12/22/11
 President

For PEHSC Use Only – PA Department of Health Response

Accept:____ Table:____ Modify:____ Reject:____

Comments:

Date of Department Response: _____