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Honorable Dennis Brown  
4162 State Capitol

Respiratory Care Practitioners - #26060

Dear Mr. Brown:

## QUESTION

Is the practice of extracorporeal membrane oxygenation (ECMO) within the scope of practice of a respiratory care practitioner?

## OPINION

The practice of extracorporeal membrane oxygenation is within the scope of practice of a respiratory care practitioner.

## ANALYSIS

The California Children Services Branch of the State Department of Health Services defines neonatal extracorporeal membrane oxygenation (hereafter, ECMO) as "the use of a cardiopulmonary bypass circuit for temporary life support for term or near-term infants with potentially reversible cardiac or respiratory failure" (Section 3.35.1 of Chapter 3 of Bulletin 88-13, issued 9/1/88). We are informed that while ECMO is typically a procedure used for infants with that medical condition, it may also be used for adults (Respiratory Care Examination Committee, "ECMO" Issue Discussion, Nov. 7, 1989).

The Neonatal Quality Assurance Committee at the Huntington Memorial Hospital in Pasadena, California has developed standards of care for an ECMO specialist and you have asked us to assume that those standards represent the duties and responsibilities of an ECMO specialist. Those standards generally state that an ECMO specialist has the duty and responsibility of assessing a patient's signs, symptoms, and response in the cardiopulmonary and neurological systems, documenting observations, and reporting those observations to other members of the health care team, interpreting data relevant to the patient's care and execution of the physician's orders, assisting the nurse with specified procedures, monitoring the ECMO circuit, evaluating blood gases and making adjustments appropriate to maintain therapeutic ranges of blood gases and oxygen, and adjusting, maintaining, or administering medications as ordered by the physician (see "ECMO" Issue Discussion, supra).

Respiratory care practitioners are licensed and regulated pursuant to the Respiratory Care Practice Act contained in Chapter 8.3 (commencing with Section 3700) of Division 2 of the Business and Professions Code.<sup>1</sup> Section 3702 defines the practice of respiratory care as follows:

"3702. Respiratory care as a practice means a health care profession employed under the supervision of a medical director in the therapy, management, rehabilitation, diagnostic evaluation, and care of patients with deficiencies and abnormalities which affect the pulmonary system and associated aspects of cardiopulmonary and other systems functions, and includes all of the following:

"(a) Direct and indirect pulmonary care services that are safe, aseptic, preventative, and restorative to the patient.

"(b) Direct and indirect respiratory care services, including but not limited to, the administration of pharmacological and diagnostic and therapeutic agents related to respiratory care procedures necessary to implement a treatment, disease prevention, pulmonary rehabilitative or diagnostic regimen prescribed by a physician and surgeon.

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<sup>1</sup> Section references hereafter are to the Business and Professions Code, unless otherwise noted.

"(c) Observation and monitoring of signs and symptoms, general behavior, general physical response to respiratory care treatment and diagnostic testing and (1) determination of whether such signs, symptoms, reactions, behavior or general response exhibit abnormal characteristics; (2) implementation based on observed abnormalities of appropriate reporting or referral or respiratory care protocols, or changes in treatment regimen, pursuant to a prescription by a physician and surgeon or the initiation of emergency procedures.

"(d) The diagnostic and therapeutic use of any of the following, in accordance with the prescription of a physician and surgeon: administration of medical gases, exclusive of general anesthesia; aerosols; humidification; environmental control systems and baromedical therapy; pharmacologic agents related to respiratory care procedures; mechanical or physiological ventilatory support; bronchopulmonary hygiene; cardiopulmonary resuscitation; maintenance of the natural airways; insertion without cutting tissues and maintenance of artificial airways; diagnostic and testing techniques required for implementation of respiratory care protocols; collection of specimens of blood; collection of specimens from the respiratory tract; analysis of blood gases and respiratory secretions.

"(e) The transcription and implementation of the written and verbal orders of a physician and surgeon pertaining to the practice of respiratory care.

"'Respiratory care protocols' as used in this section means policies and protocols developed by a licensed health facility through collaboration, when appropriate, with administrators, physicians and surgeons, registered nurses, physical therapists, respiratory care practitioners, and other licensed health care practitioners."

Thus, the practice of respiratory care authorized by Section 3702 includes those functions that are enumerated in the duties and responsibilities of an ECMO specialist set forth above, including, among other things, rendering of respiratory care services associated with cardiopulmonary system functions (subd. (b), Sec. 3702), observing and monitoring a patient's signs and symptoms and response to respiratory care treatment and diagnostic testing, reporting those observations and implementing the

appropriate respiratory care protocols or changes in treatment (subd. (c), Sec. 3702), and administering medical gases, evaluating blood gases, and administering therapeutic agents in accordance with the order of a physician and surgeon (subd. (d), Sec. 3702).

Also Section 3701, a part of the Respiratory Care Practice Act, contains a statement of legislative intent relative to that act and provides in pertinent part as follows:

"3701. \* \* \*

"The Legislature also recognizes the practice of respiratory care to be a dynamic and changing art and science, the practice of which is continually evolving to include newer ideas and more sophisticated techniques in patient care.

"It is the intent of the Legislature in this chapter to provide clear legal authority for functions and procedures which have common acceptance and usage. It is the intent also to recognize the existence of overlapping functions between physicians and surgeons, registered nurses, physical therapists, respiratory care practitioners, and other licensed health care personnel, and to permit additional sharing of functions within organized health care systems.

\* \* \*"

Thus the Legislature by enacting the act clearly intended to provide authority for those functions that were being performed by respiratory care practitioners and to provide additional sharing of functions with other health care practitioners.

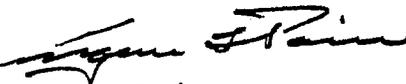
We are informed that respiratory care practitioners have been performing ECMO over the past 15 years (letter from Robert H. Bartlett, M.D., University of Michigan Medical Center, dated May 2, 1989). The Respiratory Care Practice Act was enacted in 1982 (see Sec. 3., Ch. 1344, Stats. 1982, operative July 1, 1983). Thus, it seems reasonable to assume that the Legislature was aware of this activity and intended to provide authority for that function by respiratory care practitioners.

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Therefore, it is our opinion that the practice of extracorporeal membrane oxygenation (ECMO) is within the scope of practice of a respiratory care practitioner.

Very truly yours,

Bion M. Gregory  
Legislative Counsel

By   
Eugene L. Paine  
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