



**The Society  
of Thoracic  
Surgeons**



April 4, 2019

*Submitted via email*

Mady Hue  
Technical Advisor  
ICD-10 Coordination and Maintenance Committee  
Department of Health & Human Services  
Centers for Medicare & Medicaid Services  
7500 Security Boulevard, Mail Stop 00-00-00  
Baltimore, Maryland 21244-1850

**RE: Comments on the ICD-10 Coordination and Maintenance Committee held in the CMS Auditorium on March 5-6, 2019 for the topic of Extracorporeal Membrane Oxygenation (ECMO) for ECMO for Cardiopulmonary Support.**

Dear Ms. Hue,

The Society of Thoracic Surgeons (STS) and The Extracorporeal Life Support Organization (ELSO) would like to thank the ICD-10 Coordination and Maintenance Committee (the Committee) for reviewing the code change proposal for Extracorporeal membrane oxygenation (ECMO) at the March 5, 2019 meeting. We are writing to provide further comment on the coding options for ECMO presented at that meeting.

Founded in 1964, STS is a not-for-profit organization representing more than 7,500 surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lungs, and esophagus, as well as other surgical procedures within the chest.

ELSO is an international non-profit consortium of health care institutions who are dedicated to the development and evaluation of novel therapies for support of failing organ systems. Crucial is the promotion of a broad multidisciplinary collaboration. The primary mission of the Organization is to maintain a registry of, at least, use of extracorporeal membrane oxygenation in active ELSO centers.

We brought our code change proposal forward because of shortcomings we felt still existed after the 2018 ICD-10 PCS ECMO code changes and confusion that existed between peripheral and percutaneous ECMO. Peripheral and percutaneous are not synonymous terms. The Agenda for the March 2019 meeting included 3 coding options, and the Centers for Medicare & Medicaid Services (CMS) supported coding option 3 at the meeting. The updated Agenda posted after the meeting included 2 additional options based on questions from the meeting. CMS supported Option 3 during the meeting and indicated continued support of this option in the Updated Agenda materials.

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The specialty societies agreed with CMS at the meeting that Option 3 was the preferred coding option for the ECMO codes since those PCS codes provide additional granularity to capture more of the current ECMO techniques. Option 3 provides coding to differentiate intraprocedural ECMO used for short-term procedural support and life-saving ECMO instituted in critically ill patients. Option 3 also allows for the capture of the different cannulation techniques, which is important for data collection purposes.

From the discussions at the meeting, STS and ELSO recognize that there are concerns with the some of the proposed language, specifically the terms “intraprocedural,” “open,” and “percutaneous.” Therefore, we understand why CMS would include two additional options (options 4 and 5) for consideration that propose duration values for ECMO coding (intraprocedural, less than 24 hours, 24-96 hours, 5-8 days, and greater than 8 days). While option 4 kept the current qualifiers of central, peripheral veno-arterial (VA), and peripheral veno-venous (VV), option 5 expanded the qualifiers to differentiate between open peripheral and percutaneous peripheral VA and VV cannulation.

As we stipulated in our March 5<sup>th</sup> presentation, capturing ECMO duration values for patients put on ECMO for intraprocedural support could potentially be useful and would capture data on ECMO provided during the procedure or, in some cases, up to 24 hours after the procedure. However, the specialties **do not** support creating duration values for lifesaving ECMO used in situations such as cardiogenic shock, profound respiratory failure (e.g. H1N1 influenza), cardiac arrest, etc. ECMO used as a lifesaving measure represents the vast majority of ECMO patients and scenarios. The severity of illness of these patients is significant and the survival rate for the patients in which ECMO is used as a lifesaving technique is between 28% and 57%. The duration of ECMO in this patient population is highly variable and not reliably associated with the severity of the patient’s illness. For example, some very sick patients require ECMO for long duration as their organs recover. In contrast, there can be some equally sick patients for whom the duration of ECMO is unusually short because they are not able to recover and therefore die. Both groups of patients put on ECMO as a life-saving treatment are extremely resource intensive. Simply put, except possibly for the category of intraprocedural ECMO, there is no correlation between duration of ECMO and the patient’s severity of illness. Patients on lifesaving ECMO are critically ill and, until their organs recover, have an exceedingly high risk of death.

Additionally, we do not support creating duration values for the lifesaving ECMO category because of the unnecessary administrative burden this would put on providers and hospitals, and the unfortunate possibility of patients being kept on ECMO into the next duration interval. There should be no incentive to keep patients on ECMO longer than necessary.

The specialty societies support the coding proposal outlined in Option 3 in the updated Agenda materials as this provides the coding options to identify the two clinical circumstances in which ECMO may be utilized, intraprocedural and lifesaving, and also includes additional granularity for the cannulation techniques that are used for ECMO (i.e. central, peripheral percutaneous, and peripheral open cut-down). As previously indicated, this granularity is important for data collection and it also provides the opportunity for CMS to determine if there are resource utilization differences related to the various types of ECMO (e.g. central vs. peripheral, intraprocedural vs. lifesaving, percutaneous vs. open cut-down, etc.).

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The creation of the new codes for peripheral VA and VV ECMO effective October 1, 2018, created granularity, but also failed to recognize all of the cannulation techniques utilized for life-saving ECMO. Specifically, percutaneous and peripheral were used somewhat interchangeably, which should not be the case. Rather, there are two ways of establishing peripheral ECMO and these are percutaneous and open cut-down. There are differences between the two. This increased granularity will help with the study of resource utilization. Additionally, the 2019 code changes resulted in the erroneous assumption that peripheral cannulation is used when patients are less sick. In fact, often the patients who are placed on life-saving, peripheral veno-arterial ECMO are the sickest patients of all.

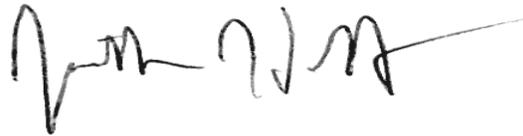
Although the specialty societies feel that the coding changes are important to collect data regarding all aspects of ECMO, we recognize that there are concerns with some of the proposed language and ICD-10-PCS conventions. We cannot support ECMO coding as changed in the last year as it is inaccurate and insufficient to capture the breadth of ECMO procedures. The specialty societies are willing to work with CMS and other stakeholders to further explore the coding options and address the concerns expressed at the meeting in order to ensure the codes are clearly defined to ensure accurate coding.

Thank you for the opportunity to provide these additional comments. Please contact Courtney Yohe, STS Director of Government Relations at [cyohe@sts.org](mailto:cyohe@sts.org) or 202-787-1230 should you need additional information or clarification.

Sincerely,



Robert S.D. Higgins, MD  
President  
The Society of Thoracic Surgeons



Jonathan Haft, MD  
The Extracorporeal Life Support Organization