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Richard A. Jonas, Jeffrey P. Jacobs, Marshall L. Jacobs and Constantine Mavroudis

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REPORTING OF MORTALITY ASSOCIATED WITH PEDIATRIC AND CONGENITAL CARDIAC SURGERY

To the Editor:

We congratulate Furck and colleagues¹ for their excellent analysis of outcomes after the Norwood operation in patients with hypoplastic left heart syndrome, as described in their recent publication. However, we are concerned that the authors have reported the rate of mortality using a nonstandard strategy for this type of reporting. Furck and colleagues reported a 30-day mortality of 2.5% for the last 3 years. They stated that “Death after this period and until the subsequent palliative surgery, regardless of whether in or out of the hospital, was defined as interstage mortality.” They reported interstage mortality of 15%. This manner of reporting of outcomes is not consistent with standardized reporting strategies. It can be potentially misleading and can create unrealistic expectations among referring physicians, caregivers, and families.

Collaborative international efforts have resulted in the establishment of standardized methodologies for the reporting of mortality and morbidity associated with pediatric and congenital cardiac surgery.^{2,3} Operative mortality is defined as any death, regardless of cause, occurring (1) within 30 days after surgical intervention in or out of the hospital and (2) after 30 days during the same hospitalization subsequent to the operation. Thus operative mortality includes all deaths

that occur during the initial hospitalization. Logically, interstage mortality encompasses all deaths that occur after the period of time included in operative mortality but before the stage 2 operation. Thus all mortality during the initial hospitalization should be classified as operative mortality and not interstage mortality.

The most recent analysis of the Society of Thoracic Surgeons Congenital Heart Surgery Database documents discharge mortality of 18.7% (447/2395 patients) after the Norwood (stage I) operation.⁴ By reporting only 30-day mortality and classifying deaths that occur after 30 days but during the initial hospitalization as interstage mortality, the authors have used a methodology not consistent with standardized methodologies of outcome reporting. If an author wishes to explore other means of presentation, one would assume that it would be done with a degree of emphasis that was not apparent in this article. We believe that the use of standard reporting strategies for mortality is crucial when reporting the outcomes after pediatric and congenital cardiac surgery.

Richard A. Jonas, MD^a

Jeffrey P. Jacobs, MD^b

Marshall L. Jacobs, MD^c

Constantine Mavroudis, MD^c

*^aDepartment of Cardiac Surgery
Children’s National Heart Institute
Children’s National Medical Center
Washington, DC*

*^bChair, STS Congenital Heart Surgery
Database Task Force
Surgical Director of Heart
Transplantation and ECMO
The Congenital Heart Institute of
Florida (CHIF)*

*Department of Surgery
University of South Florida College of
Medicine
All Children’s Hospital
Children’s Hospital of Tampa
Cardiac Surgical Associates of
Florida (CSAoF)*

*St Petersburg and Tampa, Fla
^cCenter for Pediatric and Congenital*

*Heart Diseases
Department of Pediatric and
Congenital Heart Surgery
Cleveland Clinic Foundation
Cleveland, Ohio*

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Reply to the Editor:

We thank Jonas and his colleagues for their interest in our study and for drawing our attention to the definition of operative mortality.¹

During the review process of the manuscript, we offered to recalculate our data on mortality of the Norwood operation according to the definition of The Society of Thoracic Surgeons Congenital Database Task-force and the Joint EACTS–STS Congenital Database Committee,² but as we gave data on both 30-day mortality and interstage mortality, we were allowed to leave the data as presented.

However, we agree with Jonas and colleagues that the way of reporting operative mortality should be consistent to simplify comparison between groups. We, therefore, recalculated

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