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REPLY: GLOBALIZATION EFFORTS FOR CONGENITAL CARDIAC SURGERY: A BLANK SLATE TO GET IT RIGHT

Reply to the Editor:

The correspondence from Zheleva and Overman¹ in response to articles that discuss regionalization paradigms in low- and middle-income countries (LMIC)²⁻⁵ was refreshing. No one argues that children with congenital cardiac disease deserve the best care irrespective of geography, but whether this is achievable remains a question. If the best care is deployable, systems should be proactively designed based on lessons (maybe better termed missteps) learned from high-income countries—in other words, the blank slate afforded by nascent initiatives in LMICs can be exploited to get it right the first time. This concept was a central message of the reply constructed by Zheleva and Overman,¹ and among the ideas investigated in our recent article on pragmatic regionalization in the United States.⁶ In this thought experiment, we imagined a blank slate in which congenital heart surgery (CHS) centers would be distributed geographically based on population density and would be located to maintain a minimum volume threshold of ≥ 300 annual cases as a surrogate for quality. Using this methodology, we demonstrated that 57 hospitals could serve the contiguous United States, with median annual case volumes of 451, and a reduction in travel distance from the present state. Such a distribution of CHS centers would likely also translate into reduced mortality based on prior work from our group.⁷ Unfortunately, due to the current landscape of CHS in the United States, which borders on the antithesis of pragmatism, this construct will remain a theoretical notion.

I agree with Zheleva and Overman¹ that quality should partner closely with regionalization given the imperfect correlation between center volumes and quality. The problem lies in understanding how to measure quality. Currently, assessment of center performance is a major aspect of the current congenital heart disease care environment. The concept of quality has been difficult to define, but is potentially captured by the multidomain concept of value-based care. Value-based care, defined as adverse outcomes divided by cost, has become a standard to which CHS centers and surgeons are increasingly measured. A potential value metric in

which mortality, complications, and length of hospital stay are considered separately and as a composite, is likely to be the most useful in satisfying consumers and stakeholders. Various mechanisms have been leveraged to improve value-based care among CHS centers, including public reporting of postoperative outcomes, publicly available ranking or rating systems, including the Society of Thoracic Surgeons Congenital Heart Surgery Database and United States News and World Report. Moreover, third-party payors, accreditation bodies, and parental/patient advocacy groups have encouraged participation in national quality registries that subtend the spectrum of diagnoses and procedures. Participation has also been utilized as a criterion to award third-party contracts. Medicaid reimbursement, for example, has been tied to participation, and others (eg, Optum and the Adult Congenital Heart Association) have also designated centers of excellence. In California, participation in 3-year neurodevelopmental follow-up for neonatal intensive care unit outbornes (neonates or infants who are discharged directly from the neonatal intensive care unit) with congenital cardiac disease, is mandated by California Children's Services (ie, California's state Medicaid equivalent). The program referenced by Zheleva and Overman, the International Quality Improvement Collaborative for Congenital Heart Surgery Disease in LMICs⁸ appears to be an excellent method to integrate value-based care into a potential regionalization paradigm. Finances and political agendas may complicate the realization of best care for every child with congenital heart disease regardless of where he or she lives, but this should remain the motivating objective.

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