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REGIONALIZATION IN LOW- AND MIDDLE- INCOME COUNTRIES: PRINCIPLES AND PROMISE

To the Editor:

We read with interest the correspondence from Drs Vervoort,¹ Backer,^{2,3} and Karamlou⁴ regarding regionalization of congenital heart surgery (CHS) in low- and middle-income countries (LMICs). This is a discussion that we at Children's HeartLink have had over the second half of our 52-year history working in different LMICs, the majority of which have underinvested in pediatric cardiac surgical services.

Dr Vervoort's comment about the various types of financing highlights an important aspect of the health systems within which congenital heart programs exist. In India, for example, most pediatric cardiac programs are in the private sector, whereas in Brazil, many programs are in the public sector, but clinicians split their time between private and public hospitals. In Vietnam and China, pediatric cardiac services are in the public sector, but hospitals have varying degrees of public and private financing.

We would like to reinforce the message that regionalization of CHS be proactively designed in LMICs that are just now beginning to develop and grow these services. Recommendations for regionalization should emanate from the in-country pediatric cardiac medical community, as well the "funders" of CHS services, whether private payors or the government. Such mandates should be grounded in quality outcomes data and analytics. Two examples with which we are familiar highlight the equal importance of the design of their financing.

In India, still less than one-quarter of children in need of CHS receive it. When Aarogyasri, the Andhra Pradesh state-based insurance program for low-income people, was introduced in 2007,⁵ for a while the city of Hyderabad had several CHS programs competing with one another for patients and qualified staff, while other parts of the country had no CHS centers whatsoever. Reimbursements were based on volume and not linked to quality outcomes. A subsequent reexamination of this policy brought improvements, and today other states are trying to incorporate assessment of quality in reimbursements, especially for more complex cases. In contrast, after collecting and analyzing volume and outcomes data across all centers in the state, the health secretariat of São Paulo state in Brazil proactively decided to close programs in the public sector because of subpar performance.

Opportunities for intervention will depend on countries' health systems, whether private, public, or mixed. We strongly support regionalization, volume and outcome tracking and transparency, and establishment of program quality metrics as attributes of any system of CHS care. Participation in the International Quality Improvement Collaborative for Congenital Heart Disease in LMICs offers a helpful platform for tracking quality goals.⁵ As LMIC governments address the CHS gaps with limited public budgets, it may be tempting to focus solely on volume because of the significant unmet need. We want to underscore the importance of a long-term stepwise plan that incorporates not only regionalization, but also high-quality outcomes across the spectrum of CHS complexity. Children with heart disease deserve the best possible care, regardless of where they were born. Properly structured plans for regionalization offer them the best hope of making that a reality.

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