Misinterpretation of Negative Pulse Oximetry Screening as Absence of Critical Congenital Heart Disease

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We read the case report by Harden et al. [2] entitled False-Negative Pulse Oximetry Screening for Critical Congenital Heart Disease: The Case for Parent Education with great interest. This case underscores the importance of interpreting screening test results with caution.

Since the endorsement of pulse oximetry screening (POS) for critical congenital heart disease (CCHD) by the American Academy of Pediatrics (AAP) [3], many hospitals across the country, including ours, have proactively implemented the screen. We applaud the AAP for the initiative and wish to highlight through this letter some of the practical concerns arising after implementation of these recommendations.

The AAP did not provide any standardized documentation guidelines for incorporating the screening results in the discharge summary to date. Nonstandard statements such as “CCHD screen-negative” in the nursery discharge summaries may give rise to a false sense of reassurance to the unfamiliar medical practitioner and the parents that the child has no possibility of critical congenital heart disease. The pulse oximetry screen holds a very high specificity for ruling out certain CCHDs, as demonstrated in the Swedish [1] and German [4] studies. Clearly, other conditions are associated with significant morbidity and mortality that need ongoing surveillance. Considering all these, we are concerned that there is room for overlooking serious congenital heart conditions if clinicians and parents are not adequately educated concerning the limitations of the screening protocol.

We enthusiastically support the AAP’s endorsement of pulse oximetry screening for early detection of CCHD but urge the Academy to mandate that nurseries document the cardiac conditions specifically ruled out by virtue of a negative screen on every discharge summary. We urge the Academy also to consider expanding the algorithm to include comprehensive guidelines for ongoing surveillance for congenital heart disease (CHD) during well-child visits of screen-negative children.

The AAP’s recommendation calling for its members to work in concert with the local and regional chapters and respective policy makers in the development of the educational materials and training [3] is probably the best way to ensure that no child with CHD is missed.

Conflict of interest The authors declare that they have no conflict of interest.

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