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## Editorial

# A society is judged by the way it handles its weakest and most defenceless: Status of pediatric cardiac services in India

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February serves as a poignant reminder of the importance of Congenital Heart Disease (CHD) awareness, with International CHD Week observed from the 7th to the 14th. In the context of India, a nation poised as the world's second most populous and among the fastest-growing economies, the annual birth of approximately 2.5 million neonates underscores the sheer scale of potential health challenges. Alarming, a substantial proportion of these newborns enter the world burdened with congenital birth defects, with CHD standing out as the most prevalent, affecting an estimated 28–30% of cases.<sup>1</sup> Within the Indian context, the birth prevalence of CHD is staggering, estimated at 10 per 1000 live births, translating to roughly 2.5 lakh cases annually<sup>2–4</sup>. This epidemiological landscape reflects a stark departure from the patterns observed in the Western world, underlining the unique challenges and complexities inherent in managing CHD within this region.

Despite the strides made in medical research, the etiology of CHD remains largely enigmatic, with genetic factors accounting for only a fraction—approximately 10–15%—of cases. The intricate interplay of environmental factors further complicates the picture, with maternal infections such as rubella, maternal diabetes, smoking, and alcohol consumption implicated as potential risk factors. Additionally, exposure to teratogenic drugs during pregnancy, maternal obesity, advanced parental age,

consanguinity, and assisted reproductive technologies contribute to the multifaceted etiological landscape of CHD. Notably, a familial history of CHD significantly amplifies the likelihood of an affected child, underscoring the complex interplay of genetic and environmental factors.

The past few decades have witnessed a notable surge in CHD diagnoses, owing largely to advancements in diagnostic modalities since the 1990s. It is estimated that severe forms of CHD, necessitating intervention within the early days of life, afflict approximately 1.5 per 1000 live births<sup>5</sup>. However, unlike the scenario in developed nations where prevalence rates among adults mirror those among children, India grapples with significantly lower survival rates to adulthood among CHD patients. Alarming, only a fraction of affected individuals undergo timely intervention, painting a grim picture of regional disparities in access to appropriate treatment across the country. This glaring treatment gap underscores the urgent need for concerted efforts to bolster healthcare infrastructure and promote equitable access to specialized care, particularly in underserved regions.

Efforts aimed at preventing CHD constitute a multifaceted endeavor, encompassing educational, preventive, and interventional strategies. Initiatives geared towards educating and empowering women, counseling prospective parents on risk factor mitigation, advocating for vaccination and folic acid fortification, and promoting lifestyle modifications such as smoking

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cessation and alcohol abstinence form the cornerstone of CHD prevention. Furthermore, genetic counseling for at-risk families and prenatal screening through fetal echocardiography represent pivotal strategies for early detection and intervention, thereby mitigating the burden of CHD-related morbidity and mortality.

### Conflict of Interest

None.

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