

# Heart transplantation for adult CHD: Overview and special considerations

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In the current issue of *Cardiovascular Innovations and Applications* , Dipankar Gupta, Jana Reid, Diego Moguillansky, Renata Shih, Mark S. Bleiweis, Frederick J. Fricker and Biagio A. Pietra from the Congenital Heart Center, Department of Pediatrics, UF Health Shands Children's Hospital, University of Florida, Gainesville, FL, USA consider how with improvements in surgical and medical management, the number of patients with congenital heart disease (CHD) reaching adulthood has increased over the last decade.

Success in the management of [congenital heart disease](#) (CHD) in the young is leading to an increasing number of heart transplants in adults with CHD. CHD has an incidence of 0.8-1%, translating to approximately 40,000 newborns per year. With improving surgical and interventional techniques and medical management, approximately 90% of children with CHD survive to adulthood. On the basis of a recent study, there are approximately 2.4 million people in the United States with CHD. On the basis of this study, the estimated number of adults with CHD in the United States is approximately 1.4 million. The population of adults with CHD in 2010 demonstrated a 63% increase when compared with the estimates from 2000, making it the fastest growing population in congenital cardiology. In addition, approximately 300,000 patients of the 1.4 million adults with CHD have evidence of severe CHDs. Adult CHD (ACHD) is associated with multiple morbidities secondary to the original anatomic substrate, multiple palliative procedures, and associated complications. Unfortunately, despite improved surgical and [medical management](#), approximately

10-20% patients with CHD progress to end-stage heart failure as adults, and it is the most common cause of late death in patients with ACHD.

The cohort of ACHD patients is increasing significantly. There is a high likelihood for the need for heart transplantation as these patients develop chronic [heart](#) failure and other chronic sequelae of palliated CHD. It is important to recognize advanced [heart failure](#) and other associated complications early in this cohort of complex patients for early referral to an ACHD specialist. Because of the presence of multiple factors that can affect the long-term outcomes, there needs to be a careful selection process for transplantation to optimize the utilization of donor organs. Our experience with transplantation in ACHD [patients](#) demonstrates excellent short-term outcomes; however, the timing of transplantation is a huge challenge, mostly related to other end-organ dysfunction. Further studies are needed to continue to improve the outcomes after transplantation.

**More information:** Dipankar Gupta et al, Heart Transplantation for Adult Congenital Heart Disease: Overview and Special Considerations, *Cardiovascular Innovations and Applications* (2018). [DOI: 10.15212/CVIA.2017.0043](#)

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