



October 6th + 7th, 2021 | Virtual Conference

17TH ANNUAL CHILD HEALTH RESEARCH DAYS

# Nutrition for a Changing World

The Science of Nourishing the Next Generation

## CHRD 2021: Abstract & Poster Submission Form

### Submitter Name

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### Research Category:

- Basic Science
- Clinical
- Community Health / Policy

### What was your role in the project?

- Design
- Perform Experiments
- Analyze Data
- Write Abstract

### Presenter Status:

- Undergraduate Students
- Masters Student
- PhD Student
- Post-Doctoral Fellows
- Residents
- Non-Trainee

**Title**

A systematic review of neurodevelopmental outcomes of preschool children who underwent the Hybrid procedure for Congenital Heart disease

**Background**

Children with Hypoplastic left heart syndrome (HLHS) are at higher risk of neurodevelopmental delay. While the Norwood is the traditional first step in HLHS palliation, the hybrid procedure (HP) is a less-invasive surgical option often offered to neonates with higher presurgical risks. Survival for HP has been reported to be 67%.

**Objective**

This systematic review aims to determine the neurodevelopmental outcomes of preschool children with HLHS who underwent HP.

**Methods**

We used 4 databases to identify relevant articles: Embase, CINAHL MEDline and Child and Adolescent development. 36 articles underwent initial screening, 19 articles underwent full-text review and 6 papers that our inclusion criteria.

**Results**

The 6 articles included in this study examined outcomes at four time points (6-months, 1-year, 2-years, and 4-years). One study reported six-month Bayley III scores (90.5 cognitive, 78.9 motor, 88.5 Language). Two studies reported 1-year outcomes (Bayley II 88 MDI, 65 PDI and Bayley III 95.21 cognitive, 82.1 motor, 93.6 language). Weighted average of Bayley III from 2 studies at 2-years of age was found to be 100.7 cognitive, 96.9 motor, 98.5 language (n=45). 4-year WIPSI was reported to be 88.

**Conclusion**

While low survival has been reported, this review demonstrates neurodevelopmental outcomes of preschool children who survive the HP are similar to children who undergo the Norwood procedure. Few studies reported developmental data after the HP, which limits the generalizability of these results. Centers should collectively report outcomes of children who underwent HP to allow for larger sample size and better understanding of long-term outcomes

## Authors

- For each author, please click "[+] Add Item" and provide the author's information

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