2020 Report: Device Support in Pediatric Heart Failure

This baseline report represents data collected from 34 ACTION pediatric heart centers from Jan. 1 through Dec. 31, 2020.¹ This report will be updated annually.

We’re Taking ACTION.

Nearly every pediatric hospital in the U.S. that performs pediatric VADs is a member of ACTION. Together, we comprise the largest nationwide effort to improve outcomes for pediatric heart failure and VAD patients.

In 2020...

We served 127 new patients...

- Cardiomyopathy (81)
- Congenital Heart Disease (CHD, 46)
- Single Ventricle (27)
- Other CHD (19)

We’re Making an Impact.

We’re improving safety and efficacy of VADs in children with end-stage heart failure.

145 New Devices Implanted³

- Berlin Heart EXCOR® 65
- PediMag™, CentriMag™, Rotaflow 43
- HVAD™ System 17
- HeartMate 3™ LVAD 16
- Impella 3
- Other 1

87% of patients had positive outcomes

ACTION’s safe and effective use of VADs accelerated the FDA’s approval process to expand labeling of Abbott’s HeartMate 3™ LVAD to treat children with heart failure.

¹ 34 centers with IRB/DUA approval, >50 centers participating in the network and in progress with regulatory/legal documents
² Indicates the percent of children’s hospitals who serve patients with advanced heart failure within North America that are official members of ACTION
³ Unique device implants across ACTION centers
We’re Looking Forward.

We aim for better outcomes in all patients with heart failure by both improving patient/provider education and initiating collaborative quality improvement (QI) and research initiatives.

**7**
ACTION Publications

**23**
QI/Research Initiatives

**490,235**
Social Influence Reach*

We’re Working to Improve the Outcome.

All outcomes are heavily impacted by patient age, demographics, physiology, and case complexity as well as device safety profiles and treatment pathways.

Median length of stay for discharge-eligible\(^5\) devices

64.5% of discharge-eligible\(^5\) patients discharged

11% of all patients had a stroke.

24% of all patients had a bleeding event.

26% of all patients had an infection event.

### Adverse Event Rate by Age

<table>
<thead>
<tr>
<th>Patient Age (years)</th>
<th>Stroke (%)</th>
<th>Major Bleeding (%)</th>
<th>Major Infection (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2 (63 patients)</td>
<td>11</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>2-5 (21 patients)</td>
<td>19</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>6-11 (20 patients)</td>
<td>10</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>12-17 (19 patients)</td>
<td>5</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>&gt;18 (4 patients)</td>
<td>25</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

To join the ACTION, visit actionlearningnetwork.org.

\(^*\) The total # of impressions across ACTION’s social platforms in 2020.

\(^5\) Patients on intracorporeal continuous flow devices for longer than 30 days of support.

\(^6\) ACTION clinicians interact and engage on our internal platform to collaborate and share best practices.
ACTION Publications

1. ABCs of Stroke Prevention: Improving Stroke Outcomes in Children Supported With a Ventricular Assist Device in a Quality Improvement Network

2. Discharge and Readmissions After Ventricular Assist Device Placement in the US Pediatric Hospitals: A Collaboration in ACTION

3. Heart failure in children: Priorities and approach of the ACTION collaborative


5. The Creation of a Pediatric Health Care Learning Network: THE ACTION QUALITY IMPROVEMENT COLLABORATIVE

6. Early experience with the HeartMate 3 continuous-flow ventricular assist device in pediatric patients and patients with congenital heart disease: A multicenter registry analysis

7. Collaboration and new data in ACTION: a learning health care system to improve pediatric heart failure and ventricular assist device outcomes