

The Path to Safe, Advanced Patient Care; Acute Care Pediatric Cardiology Nurses Begin Caring for Patients with a Berlin Extracorporeal Cardiac Pump

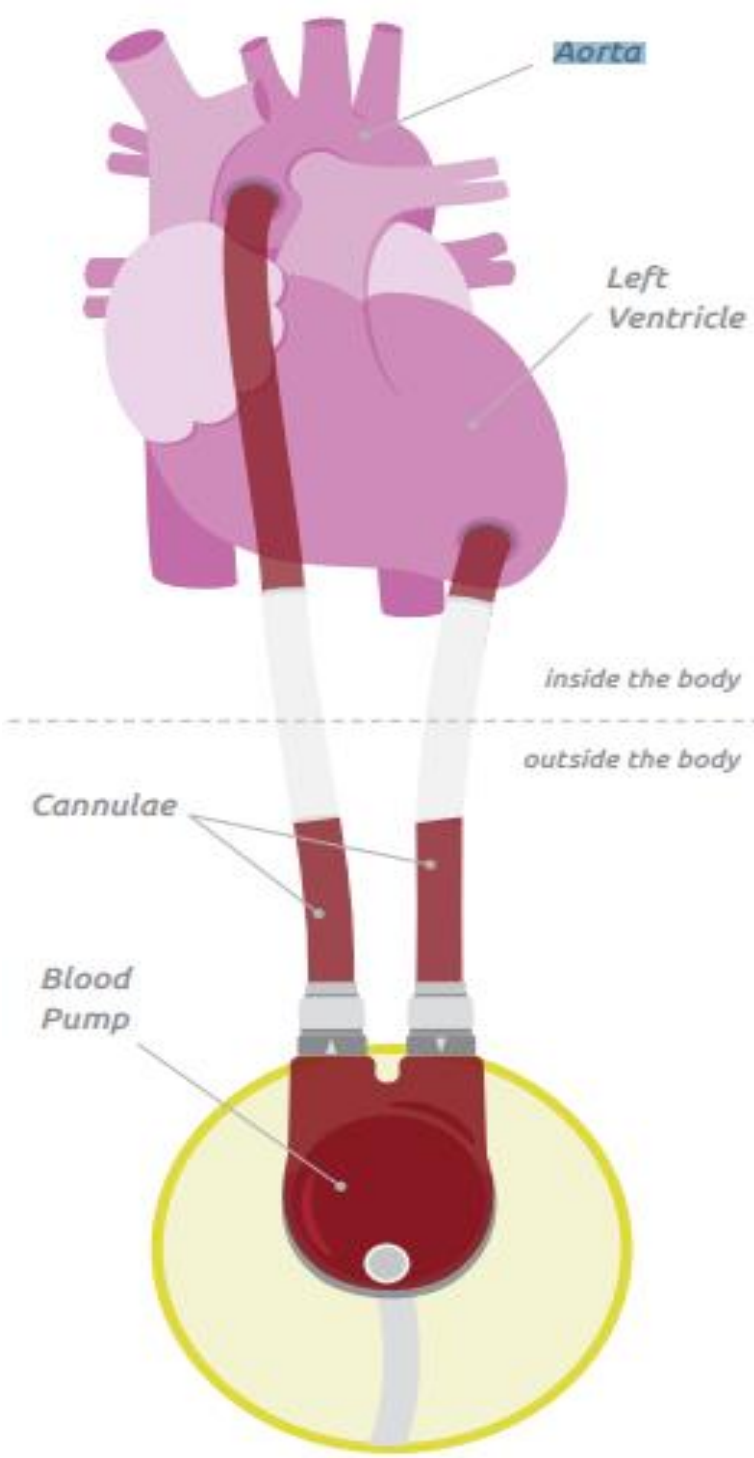
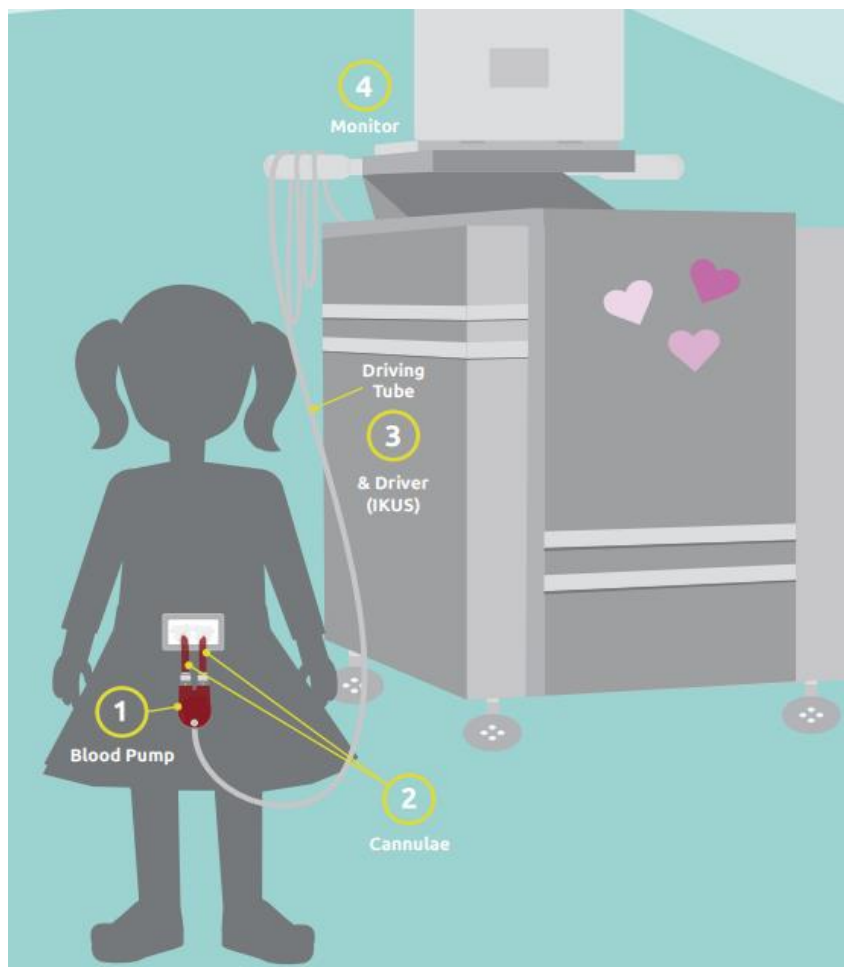
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Introduction

We are improving care for our Berlin Heart (BH) patients by transferring them from the Intensive Care Unit (ICU) to a Moderate Care (MC) unit while they await a transplant. An education plan for moderate care staff is essential to ensure safe care and support patient development during the typical six-month wait.

Background

- Prior to January 2023, all patients with a BH device stayed in the ICU until a heart transplant was available.
- ICU environment can cause stress for patients and families.
- MC offers an environment that promotes patient growth and development.
- Transitioning to the MC unit:
 - Reduces healthcare costs
 - Increases ICU bed availability
- Concerns among healthcare professionals regarding care of BH patients in MC unit include:
 - Potential life-threatening complications
 - Acquiring new skills
 - Absence of an Intensivist in MC at all times

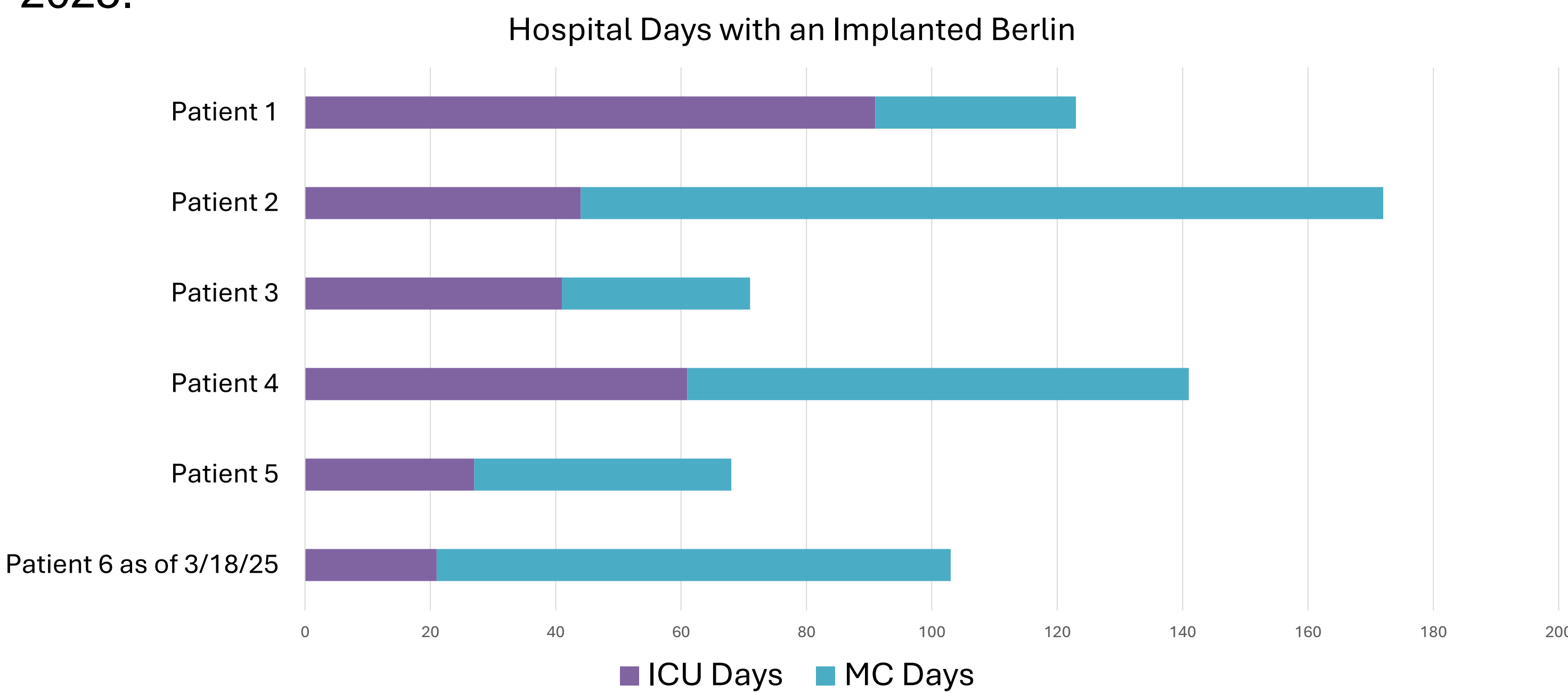


Barriers

- Ensuring staff maintain competencies when dealing with a low-volume patient population.
- Absence of established national standards for the care of BH patients.
- Staff concerns regarding the potential risks associated with managing BH patients outside of a critical care setting.

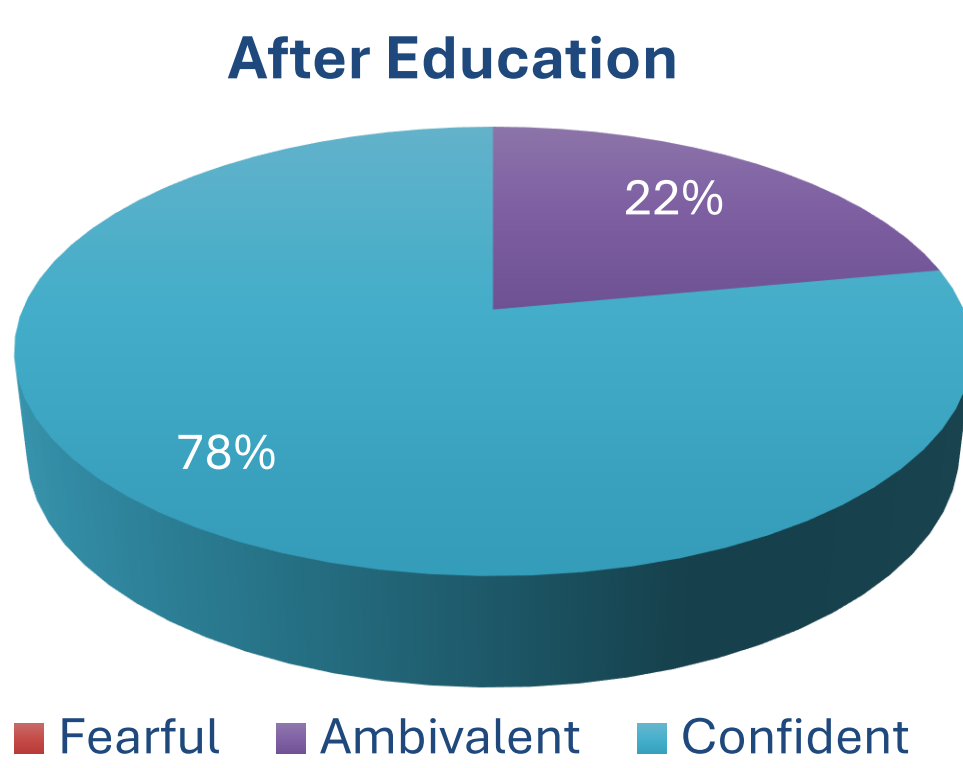
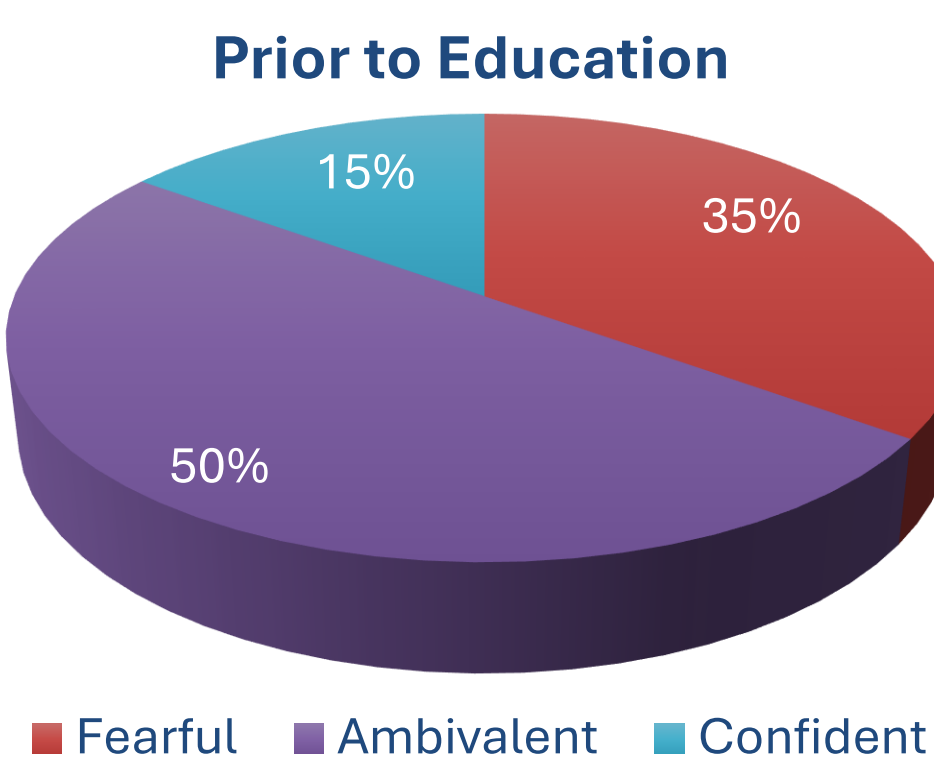
Outcomes

- Since January 2023, six BH patients have been transferred to the MC department, resulting in a **total reduction of 393 ICU days**, as of March 18, 2025.



| Patient | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------|----------|-----------|----------|-----------|----------|-----------|
| Estimated Savings | \$74,048 | \$296,192 | \$69,420 | \$185,120 | \$94,874 | \$189,748 |

- Estimated total savings for patients was \$909,402; freeing up ICU beds potentiated hospital earnings of \$1,598,892.
- All transferred patients remained free from infection.
- Parents of BH patients reported increased comfort with the transfer after the MC department tour.
- Result from the Qualtrics survey conducted before and after Berlin education indicated a significant increase in confidence.



Goals

- Establish and implement a comprehensive educational process to prepare staff to care for BH patients: safe circulation, maintain sterility, and prevent thrombus formation.
- Coordinate a transfer process that considers the needs of BH patients, their families, and multi-disciplinary healthcare team.
- Free up ICU beds by facilitating patient transfers to MC.

Multidisciplinary Approach

- Conducted benchmark analysis with leading pediatric cardiac centers to formulate best practices.
- Implemented interactive learning modules
- Hands-on practice with equipment
- The healthcare team convened regularly to assess readiness and identify concerns and educational needs to prepare for caring of BH patients.
- Developed a comprehensive resource binder and education board
- MC nurses shadowed in the ICU at bedside of BH patient.
- Arranged pre-transfer tours for parents to visit MC and meet the healthcare team.
- Day of transfer, a MC nurse started their shift in the ICU with the BH patient and ICU nurse, ensuring a smooth transition to MC.
- Hands on support by VAD Coordinator, with initial 24-hour phone availability



References

