

## **LOWER COSTS ASSOCIATED WITH HOME DISCHARGE OF BRIDGE-TO-TRANSPLANT PATIENTS USING THE TLC-II PORTABLE DRIVER**

T Kraus, RN, MSN 1, K Nelson, MBA, RN 2, K Tong, MS 3, and S Chan, BA 3. 1 Inova Fairfax Hospital, Falls Church, Virginia; 2 LDS Hospital, Salt Lake City, Utah and 3 Quorum Consulting, Inc., San Francisco, California.

**Background:** Approximately 15 to 20 percent of the 2,400 heart transplant patients annually are first implanted with a ventricular assist device (VAD) while awaiting a donor heart. The TLC-II Portable Driver allows home support of bridge-to-transplant (BTT) patients implanted with the Thoratec VAD System.

**Objective:** Our objective was to compare the medical costs incurred during home discharge supported by a TLC-II Portable Driver versus continued hospital inpatient stay, which is the current standard of care for a bridge-to-transplant patient.

**Methods:** We conducted a literature review to estimate the different daily costs associated with continued hospital inpatient stay versus home discharge. The TLC-II Portable Driver acquisition cost and TLC-II Portable Driver rental cost were derived from the Thoratec price listing. A model was developed to project medical costs during the bridging period of a BTT procedure over a range of 0 to 150 days.

**Results:** From our literature review, we determined that the costs during the bridging period are made up of general floor, medication, laboratory tests, dressing supplies, and professional fees. We estimated the total inpatient cost to be \$1,672 per day and the total home discharge cost to be \$25 per day. FDA compliance requires the purchase of two TLC-II Portable Drivers costing a total of \$150,000. Rental of the TLC-II Portable Driver is estimated at \$12,500 per month. Projected over time, the cost of the hospital inpatient stay climbed much more rapidly than the cost of home discharge. The cost of continued hospital inpatient stay equaled the cost of home discharge after 91.1 (\$152,280) and 7.6 (\$12,690) days of bridging for the TLC-II Portable Driver purchase and rental scenario. For bridging days greater than 91.1 for a purchase scenario and 7.6 for a rental scenario, the cost of a hospital inpatient stay was higher.

**Conclusion:** Home discharge with the TLC-II Portable Driver may incur lower medical costs than continued inpatient hospitalization if the bridging period is over three months in a purchasing scenario or if the bridging period is over one week in a rental scenario, both of which are within the typical bridging time frame.