



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

(35)

**Impact of Telemedicine on Pediatric Heart Transplant Patients during the COVID-19 Pandemic**

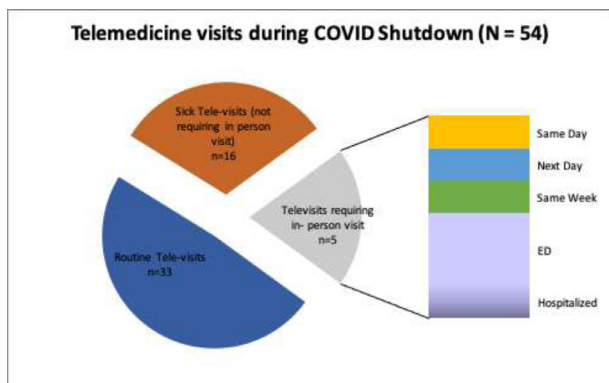
*K. Beddows, N. Bansal, L. Abraham, D.T. Hsu and J.M. Lamour. Children's Hospital at Montefiore, Bronx, NY.*

**Purpose:** During the COVID surge and shutdown (SD) of NYC from 3/20-5/20, we transitioned to telemedicine (TM) to provide routine and urgent care to our pediatric heart transplant (HT) patients (pts). The effectiveness of TM in this population has not been described.

**Methods:** A retrospective cohort study was conducted at the Children's Hospital at Montefiore, Bronx, NY. Electronic health records of all HT pts who received care from 1/3/20-8/31/20 were queried. Data collected included frequency of TM, in person, and emergency room (ER) visits, hospitalizations, immunosuppression (IS) levels requiring adjustment, and out-of-window pt follow-up (f/u). The proportion of IS levels out of range was compared among 4 groups by chi-square analysis.

**Results:** During SD there were 54 TM visits: 61% routine and 39% sick. Five (24%) sick TM visits justified an in person f/u: 3 clinic visits, 2 ER visits, 1 required hospitalization (Figure). During the post-SD period 1 when in person visits resumed, 9 pt visits were out of window for routine f/u, median of 6 weeks delayed. IS levels were not therapeutic in 29% of pts pre-SD compared to 46% during post-SD period 1 ( $p=0.06$ ). There was a difference between post-SD period 1 and 2 ( $p=0.04$ ). By SD period 2, IS had returned to pre-SD levels ( $p=0.6$ ) (Table).

**Conclusion:** TM can be utilized to stay connected to pts and reduce the need for in person visits when routine in person care is disrupted. The higher percentage of pts with IS levels out of range seen during the immediate post COVID SD period reinforces the importance of routine IS level surveillance. Home IS level monitoring should be considered as a component of TM in this population.



Patient visits during COVID pandemic				
N (%)	Pre -COVID shutdown	During COVID shutdown	Post COVID shutdown period 1	Post COVID shutdown period 2
Dates	1/3/20-3/12/20	3/13/20-5/12/20	5/13/20-6/20/20	6/21/20-8/31/20
Routine in person visits	62	4	50	43
Telemedicine Routine	0	33	0	0
Telemedicine Sick	0	21	1	9
Unplanned telemedicine resulting in in person visit	0	5/21 (23%)	0	0
IS out of range	18 (29%)		23 (46%)	11 (25%)

(36)

**Remote Monitoring of Heart Transplant Recipients during the COVID-19 Pandemic**

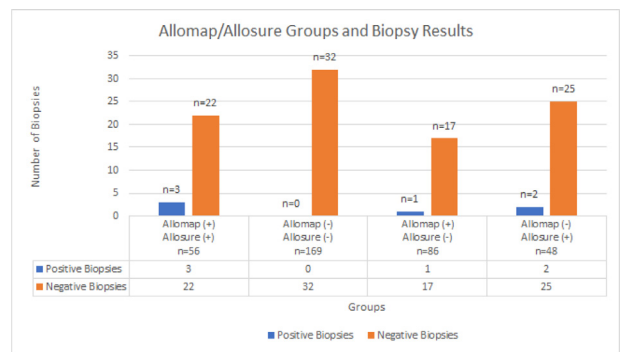
*S. Slomovich, Z. Roth, K. Clerkin, A. Kleet, O. Walraven, A. Kim, P. Colombo, J. Raikhelkar, J. Griffin, M. Farr, M. Yuzefpolskaya, J. Fried, F. Latif, S. Restaino, V. Topkara, N. Uriel and G. Sayer. Columbia University Irving Medical Center, New York, NY.*

**Purpose:** The COVID-19 pandemic created significant challenges in monitoring heart transplant (HT) recipients for rejection due to efforts to minimize contact with the hospital setting. The aim of this study was to evaluate the safety and efficacy of transitioning HT patients to home phlebotomy and a monitoring protocol based on gene expression profiling (GEP) and donor derived cell free DNA (ddcfDNA).

**Methods:** A single-center cohort study that prospectively enrolled consecutive HT patients who were transitioned to a remote monitoring protocol employing home phlebotomy and non-invasive surveillance for rejection. Patients were enrolled starting at 2 months post-HT. Positive GEP values were defined as  $\geq 32$  (up to 6 months post-HT) and  $\geq 34$  (> 6 months post-HT). A positive ddcfDNA score was defined as  $>0.12\%$ . A positive biopsy was defined as grade  $\geq 1B/1R$ .

**Results:** 246 HT patients were enrolled and followed for a minimum of 3 months. Mean age was  $56 \pm 14$ , 71.5% were male, and median time from transplant was 2.7 years. The average distance of patients from the hospital was 25.6 miles. 359 blood tests were drawn for detection of GEP and ddcfDNA and 102 biopsies performed (Figure). Among 32 patients who had negative results on both tests and had a biopsy, 0 had a positive biopsy. Of 25 patients who had positive results on both tests and had a biopsy, 3 (12%) had a positive biopsy. The biopsy positivity rate in patients who were GEP+/ddcfDNA- was 6% and in patients who were GEP-/ddcfDNA+ was 8%. None of the positive biopsies were associated with hemodynamic compromise. 15 (6%) of patients were admitted due to allograft rejection during the study period. There were no deaths.

**Conclusion:** Using a remote monitoring protocol with home phlebotomy and noninvasive rejection surveillance was feasible and safe in HT recipients. In this cohort, the combination of negative GEP and ddcfDNA scores was accurate at predicting a lack of allograft rejection.



(37)

**Quality of Life Outcomes for Patients on Palliative Cardiac Continuous Intravenous Inotropic Support**

*M. Maini,<sup>1</sup> A. Rao,<sup>2</sup> A. Wood,<sup>3</sup> and H. Groninger.<sup>2</sup> <sup>1</sup>Georgetown University School of Medicine, Washington, DC; <sup>2</sup>Section of Palliative Care, Department of Medicine, MedStar Washington Hospital Center, Washington, DC; and the <sup>3</sup>Section of Palliative Care, Department of Medicine, Georgetown University Hospital, Washington, DC.*

**Purpose:** As more patients live with advanced heart failure, use of continuous intravenous inotropic support (CIIS) as palliative therapy has increased