Impact of Telemedicine on Mortality, Length of Stay, and Cost among Patients in Progressive Care Units: Experience from a Large Healthcare System

Donna Lee Armaignac
*Baptist Health South Florida*, DonnaAr@baptisthealth.net

Anshul Saxena
*Baptist Health South Florida*, AnshulS@baptisthealth.net

Muni Rubens
*Miami Cancer Institute*, MuniR@baptisthealth.net

Carlos Valle
*Baptist Health South Florida*, CarlosValle@baptisthealth.net

Lisa-Mae Williams
*Baptist Health South Florida*, lisamaesw@baptisthealth.net

*See next page for additional authors*

Follow this and additional works at: [https://scholarlycommons.baptisthealth.net/se-all-publications](https://scholarlycommons.baptisthealth.net/se-all-publications)

**Citation**

Armaignac, Donna Lee; Saxena, Anshul; Rubens, Muni; Valle, Carlos; Williams, Lisa-Mae; Veledar, Emir; and Gidel, Louis, "Impact of Telemedicine on Mortality, Length of Stay, and Cost among Patients in Progressive Care Units: Experience from a Large Healthcare System" (2019). *All Publications*. 3287. [https://scholarlycommons.baptisthealth.net/se-all-publications/3287](https://scholarlycommons.baptisthealth.net/se-all-publications/3287)

This Conference Poster – Open Access is brought to you for free and open access by Scholarly Commons @ Baptist Health South Florida. It has been accepted for inclusion in All Publications by an authorized administrator of Scholarly Commons @ Baptist Health South Florida. For more information, please contact Carrief@baptisthealth.net.
Authors
Donna Lee Armaignac, Anshul Saxena, Muni Rubens, Carlos Valle, Lisa-Mae Williams, Emir Veledar, and Louis Gidel

This conference poster – open access is available at Scholarly Commons @ Baptist Health South Florida:
https://scholarlycommons.baptisthealth.net/se-all-publications/3287
Impact of Telemedicine on Mortality, Length of Stay, and Cost among Patients in Progressive Care Units: Experience from a Large Healthcare System

Donna Lee Armaignac, Anshul Saxena, Muni Rubens, Carlos Valle, Lisa-Mae Williams, Emir Veledar, Louis Gidel
Baptist Health South Florida

Background

- Telemedicine has transformed care delivery in intensive care units (ICUs)
- However, due to increasing patient load affecting functionality of intensive care units (ICUs), there is an increasing need for step-down units, such as progressive care units (PCUs)
- While there are many studies about the effects of telemedicine in ICU, currently there are no studies on the effects of telemedicine in PCU settings

Purpose

- To determine whether telemedicine intervention (TPCU) can affect hospital mortality, length of stay (LOS), and direct costs for progressive care unit (PCU) patients, compared to PCU patients without telemedicine intervention (NTPCU)

Method

- Retrospective study of adult patients admitted to the PCU at BHSF between 2011-2016. See Table 1.
- Statistical Analyses: General linear mixed models on overall and propensity score matched samples, survival analyses

Results

- Our study showed that TPCU intervention significantly decreased mortality in PCU and hospital and PCU LOS, despite the fact patients in TPCU were older and had higher disease severity and risk of mortality
- Increased post-PCU hospital LOS and total mean direct costs inclusive of telemedicine costs coincided with improved survival rates
- Telemedicine intervention decreased overall mortality and LOS within PCUs without substantial cost incurrences

Conclusions

- Our study showed that TPCU intervention significantly decreased mortality in PCU and hospital and PCU LOS, despite the fact patients in TPCU were older and had higher disease severity and risk of mortality
- Increased post-PCU hospital LOS and total mean direct costs inclusive of telemedicine costs coincided with improved survival rates
- Telemedicine intervention decreased overall mortality and LOS within PCUs without substantial cost incurrences

Reference