

Experiences of Pre-Heart Transplant CICU Patients Using Fitbit as an Ambulation Measuring Device

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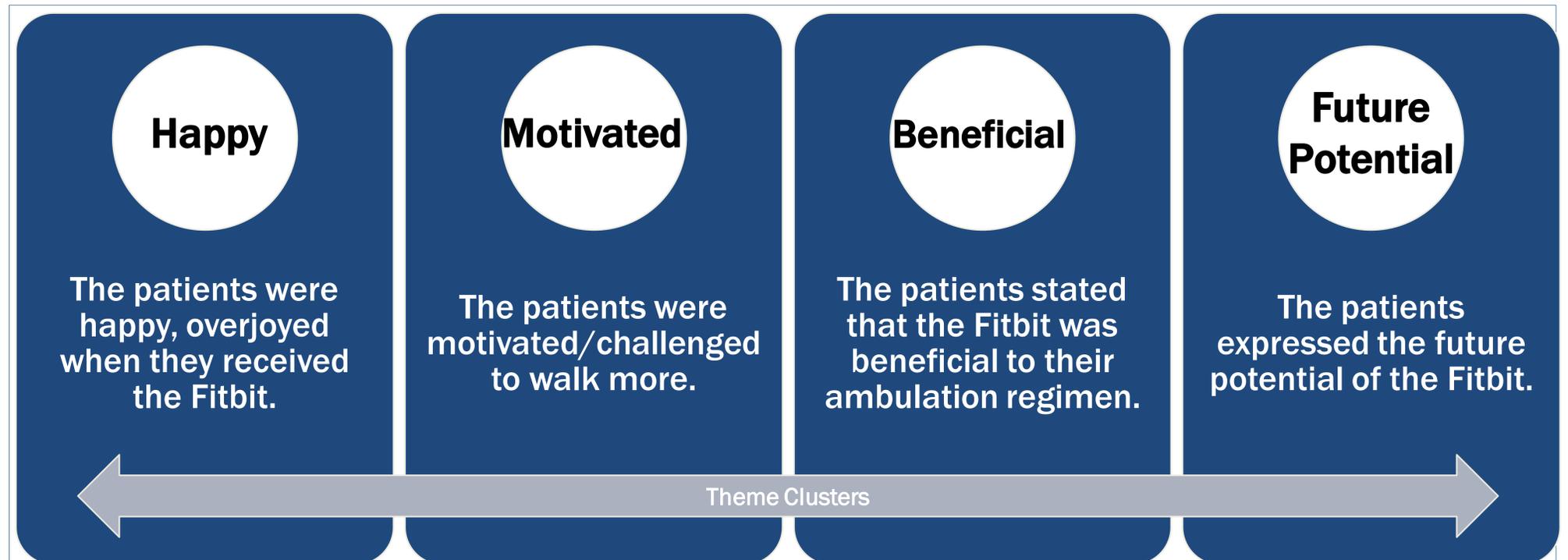
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Background/Introduction

- More than 500,000 people are diagnosed as having heart failure (HF) each year (Lloyd-Jones et al., 2010).
- While waiting for transplantation, HF patients are typically medically managed with Guideline Directed Medical Therapy (GDMT) and they are very prone to less than optimal mobility (Hashim 2015).
- Prolonged immobilization results in profound loss of muscle strength and endurance of every muscle in the body. Immobilized patients may lose up to 15% of their muscle strength each week and almost half of their normal strength in three to five weeks (Dittmer, & Teasell, 1993).
- Complete immobilization will significantly increase a patient's morbidity and mortality (H'Doubler et.al., 2000).
- Percutaneously placed axillary-subclavian intra-aortic balloon pump (IABP) support the patient's heart while waiting for heart transplantation enabling them to ambulate.
- Initially a physical therapy (PT) wheel was utilized to measure the number of steps that the patient took during ambulation. The PT wheel was not accurate and it had limitations.
- An innovative approach using Fitbit as an ambulation measuring device was implemented.

Result



Purpose/Objectives/Hypothesis

- To explore the experiences of pre-heart transplant patients using Fitbit as an ambulation measuring device.

Methods

- The team used the "Fitbit One" device as the activity tracker. It tracks steps, floors climbed, distance, calories burned and active minutes. It clips on the patient gown and has a 14 day battery life before recharging. Descriptive phenomenology was used in this study.
- The participation was voluntary and the patients had to be accepted on the heart transplant list with a United Network for Organ Sharing (UNOS) 1A designation.
- Participants were recruited from the Cardiac Intensive Care Unit (CICU) who were pre-heart transplant candidates with cardiac support devices (axillary-subclavian IABP and Swan-Ganz catheters with two inotropic drips) and had ambulation orders.
- The goal was to recruit five to ten participants. Before the patient was entered into the study, the patient's written consent was obtained.
- A semi-structured interview guide was used in the individual interviews.

Result/Implications

Study participants claimed to have had experienced benefits from using the Fitbit as an ambulation measuring device. Participants were motivated to walk more and stay active. As a result of increased activity the patients claimed to have slept better at night. Additionally, they experienced an increase in stamina and even felt that the Fitbit would aid them with their post-operative recovery.

Future Action

A quantitative study of the Fitbit program. will be next.

References

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