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Use of Common Technology (Fitbit) as an Aid to Increase Ambulation Among Preheart Transplant Patients

Frederick R. Macapagal, BSN, RN, CCRN

Coronary ICU, De Bakey Heart and Vascular Center, Houston Methodist Hospital, Houston, TX, USA

Holly M. Rodriguez, BSN, RN, CCRN-CMC, RN-BC

Cardiac Intensive Care Unit; DeBakey Heart and Vascular Center, Houston Methodist Hospital, Houston, TX, USA

Rizalina M. Bonuel, BSN, RN, CCRN, PhD

Harris Health System, Harris health System, Texas, TX, USA

Emma G. McClellan, MSN, RN, CCRN, NEA-BC

Cardiac Intensive Care Unit, Houston Methodist (Houston, Texas), Houston, TX, USA

Purpose:

Heart failure patients with intravenous inotropic drips and heart assist devices such as the ambulatory axillary intra-aortic balloon pump, awaiting a heart transplant in the CICU are weakened by their condition, have very limited mobility, decreased motivation and energy. As a result, decreases in stroke volume, respiratory capacity, and muscle strength and sleep disturbances can occur. Further deterioration in their condition negatively affect the pre and post heart transplant recovery. A unique program developed by staff nurses utilizing monetary prize from a philanthropic foundation enabled them to issue a Fitbit One (fitbit) to preheart transplant patients. The Fitbit One is an activity measuring device worn on a person's clothing. It measures, displays and stores data such as the number of steps taken, distance walked, calories burned and number of stair steps climbed. This data can then be accessed thru an app on a smart phone, tablet or computer.

Methods:

Descriptive phenomenology and purposive sampling was used in this study. Forty three (43) pre heart transplant patients who had intravenous inotropic drips and or heart assist devices were were issued a fitbit to determine if it will motivate them to walk more. They were instructed to wear the fitbit as soon as they get up out of the bed and when walking. Nurses were given inservices on the use of fitbit for the patients. The patients were asked to join the CICU pre heart transplant fitbit group where members can compare their achievements (number of steps taken/distance walked) with other pre heart transplant candidates. The first eight patients were then interviewed after 2 weeks of using the fitbit using a uniform interview questionnaire with six main questions and follow up questions about their experiences with the fitbit. Their responses were recorded, transcribed and tabulated using Colaizzi's method. A letter and email was then sent to each patient in order to validate the results.

Results:

Five of the 8 patients responded to the mail and or email validating the results of the data. Using Colaizzi's method, 144 significant statements were identified which yielded 48 formulated meanings, 14 themes and 4 cluster of themes from the patients' interview responses. The 4 cluster of themes identified were: 1. the fitbit is a motivator to walk more since they can track their progress and compare them to other

pre heart transplant patients thru the fitbit screen, fitbit app and the CICU pre heart transplant fitbit group. 2. They were happy to get a fitbit, 3. They believe it is beneficial for them to walk more, 4. They believe that the use of fitbit (or any other activity measuring device) can have potential benefits for future patients.

Conclusion:

Commonly used technology like fitbit can be used to motivate pre heart transplant patients to walk more. They believe that it is beneficial to them to be able to walk more before heart transplant. They claim that the use of fitbit can be beneficial to future heart failure patients.

Title:

Use of Common Technology (Fitbit) as an Aid to Increase Ambulation Among Preheart Transplant Patients

Keywords:

Fitbit activity tracker, Mobilization, patient feelings with an activity tracker, and Pre-heart transplant patients

Abstract Summary:

This activity focuses on the use of commonly available Fitbit activity measuring device to motivate pre heart transplant patients to walk. A qualitative research done on 8 patients who were issued a fitbit revealed after 2 weeks of use that the fitbit motivated them to walk more.

References:

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First Primary Presenting Author

Primary Presenting Author

Frederick R. Macapagal, BSN, RN, CCRN
Houston Methodist Hospital

Coronary ICU, De Bakey Heart and Vascular Center
Staff RN
Houston TX
USA

Author Summary: Mr. Macapagal has been a coronary critical care nurse for 20 years. He is the primary researcher on the subject with 3 other co-researchers. He has presented(oral/posters) on this subject matter in local, national, and international critical care/transplant nursing conferences. Published author on the ambulatory IABP research; and on nursing care and treatment of ambulatory IABP patients. He is the primary researcher on the use of fitbit by 1A pre heart transplant patients in their CICU.

Second Author

Holly M. Rodriguez, BSN, RN, CCRN-CMC, RN-BC
Houston Methodist Hospital
Cardiac Intensive Care Unit; DeBakey Heart and Vascular Center
Staff RN
Houston TX
USA

Author Summary: Miss Rodriguez had presented several topics on TED talk at the Houston Methodist Hospital: She has extensive experience with talking to people and educating the nursing staff in CICU about new products, new procedures, and does regular lectures with student nurses.

Third Author

Rizalina M. Bonuel, BSN, RN, CCRN, PhD, PhD, RN, CCRN, CNS, APRN-BC
Harris Health System
System Director, Nursing Practice
Houston TX
USA

Author Summary: Dr. Nena Bonuel has presented multiple oral and poster research projects at both national and international conferences. She has also authored and co-authored multiple publications in nursing journals. She is the PhD adviser/mentor/resource person for this project.

Fourth Author

Emma G. McClellan, MSN, RN, CCRN, NEA-BC
Houston Methodist (Houston, Texas)
Cardiac Intensive Care Unit
Nursing Director
Houston TX
USA

Author Summary: I have been working with this patient population since the initiation

of the therapy. I have been in multiple roles as the process has evolved. I have worked at the bedside as a staff nurse and I have been the resource and supporter from a leadership perspective. This program has grown and evolved over time.