

Increasing Primary Care Physician Follow-Up Appointments After Hospitalization

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## Table of Contents

Abstract .....	1
Introduction .....	3
Description of Problem/Need .....	3
Review of the Literature .....	4
Literature Synthesis .....	5
Evidence-Based Strategies .....	5
Theoretical/Conceptual Model.....	6
PICO Statement .....	6
Purpose/Goals/Aims .....	7
Methods/Procedures and Project Design .....	7
Results.....	10
Discussion .....	11
Conclusion .....	12
References.....	13
Appendix A.....	17
Appendix B .....	18
Appendix C .....	19
Appendix D.....	20
Appendix E .....	21

Appendix F.....	22
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### **Abstract**

Waimanalo Health Center (WHC) in Hawaii has a problem with their patients following up with their primary care providers (PCPs) after discharge from the hospital, leading to a large number of 30-day readmissions. The purpose of this evidence-based project (EBP) was to increase WHC patients' follow-up appointments with their PCP within 2 to 3 days of discharge from the hospital or no later than 7 days after discharge. An EBP was implemented from October 10, 2018 through January 10, 2019, at Adventist Health Castle medical center (AHC) on medical, telemetry, and surgical floors to increase WHC patients' scheduling and attending follow-up appointments with their PCPs within 7 days of discharge. The project consisted of having all discharging nurses prompt patients to call physically and schedule their follow-up appointments with their PCPs prior to being discharged from the hospital; patients received a redesigned larger appointment card with their appointment dates and times, along with information on the importance of following up with their PCPs. This verbal prompt and appointment card were added to AHC's existing discharge, which consisted of patient-centered discharge packets and follow-up phone calls. The number of appointments made by patients to schedule their follow-up appointments with their PCPs decreased from 70% to 59%, and the appointments made within 7 days had a slight decrease from 26.9% to 26%. Findings indicated 14 patients made follow-up appointments within 7 days of discharge with no readmissions and a readmission rate of 0%; 18 patients had follow-up appointments scheduled within 30 days of discharge with 2 readmissions during this period and a readmission rate of 11.1%; and 22 patients did not schedule follow-up appointments after discharge, with 7 being readmitted within 30 days, a readmission rate of 31.8%. In conclusion, adding the EBP and having patients schedule their follow-up appointments prior to being discharged from a hospital had no effect on increasing the number of patients who

scheduled follow-up appointments. However, evidence showed that fewer patients who scheduled a follow-up appointment within a month after discharge were readmitted to the hospital.

### **Introduction**

Readmissions within 30 days, following hospitalization for a variety of reasons, leads to an increase in health care costs and a decrease in patients' health outcomes (Labrada et al., 2017). Researchers have shown that continuity of care after discharge will improve a patient's health outcomes, reduce a patient's need to use emergency services, and lower hospital readmissions (Kohnke & Zielinski, 2017; Tammes et al., 2017). Coleman (2003) defined transitional care as a "group of interventions to coordinate continuity of care between different locations" (p. 549). Staff providing transitional care can facilitate a smooth transfer of care from the hospital to an outpatient setting (Hirschman, Shaid, McCauley, Pauly, & Naylor, 2015). Those in the U.S. healthcare system spend an estimated 41 billion dollars annually on readmissions, and Burton (2012) suggested that 12 billion of those dollars could have been saved with a better transition of care at the time of discharge.

### **Description of Problem/Need**

Waimanalo Health Center (WHC) is located in Waimanalo Hawaii, on the South East side of Oahu. They have an estimated 4,500 patient appointments a year; 62.2% are native Hawaiian. In 2016, 99.4% of patients registered below 200% of the poverty level (Health Resources and Services Administration, 2016). The only major hospital on the South East side of Oahu is Adventist Health Castle (AHC), and most of the Waimanalo population have sought medical attention at AHC.

WHC's and AHC's 440 medical records of WHC patients who used AHC medical services for either emergency or scheduled surgeries during the months of January 2017 through April 2017 were reviewed. The data showed that of the 440 patients, 67 patients were admitted to AHCs for a variety of reasons. Of those 67 patients, 18 patients had follow-up appointments with

their primary care provider (PCP) within 7 days of discharge, 17 appointments were kept, 29 patients had follow-up appointments within 30 days, and 20 patients had no follow-up appointments scheduled. Of the 18 patients with a follow-up appointment within 7 days, only one patient was readmitted to the hospital within 30 days with a readmission rate of 5.9%. Of the 29 patients with appointments scheduled within 30 days, six patients were readmitted to the hospital within 30 days with a readmission rate of 20.7%. Of the 20 patients who did not have a follow-up appointment, three patients were readmitted within 30 days with a readmission rate of 15%. Of the 67 admitted patients 70% made follow-up appointments, and 26.9% of appointments were made within 7 days of discharge. Patients who identified their PCPs as members of WHC accounted for nine readmissions of the 99 total hospital readmissions with 9% of the total readmissions at AHC during the first quarter of 2017.

### **Review of the Literature**

A literature search was performed over 2 months from October to November 2017 using the database PubMed. Search strategies used the keywords *patient discharge*, *readmissions*, *follow-up appointments*, and *compliance*. Filters included: publications within the last seven years, and the search was limited to meta-analysis, literature reviews, clinical trials, randomized control trials, systematic reviews, and observational studies. Exclusion criteria were studies that consisted of elective surgeries or that focused on homeless populations. The grading tool used was Melnyk and Fineout-Overholt's (2011) level of evidence (Appendix A), with 16 studies synthesized. Melnyk and Fineout-Overholt's level of evidence graded articles and designated a number to each article depending on its level of strength. Level (number) I was the strongest evidence of systematic reviews or meta-analysis of all relevant randomized control trials, while

Level VII was the weakest with opinions of authorities (Melnik & Fineout-Overholt, 2011). For this project, Level V was the weakest of the studies used; most studies used were Level II.

### **Literature Synthesis**

Hospital readmissions within 30 days are costly for hospital leaders and patients' health (Labrada et al., 2017). Transitional care interventions can be a contributing factor in the continuity of care from the hospital setting into outpatient care (Kohnke & Zielinski, 2017; Tammes et al., 2017). Following up with a primary care provider within 2 to 3 days—7 days at the most—of discharge from a hospital will reduce readmission and improve the health of patients (Hernandez et al., 2010; Jackson, Shahsahebi, Wedlake, & DuBard 2015; Lee, Yang, Hernandez, Steimle, & Go 2016; Song & Walter 2017).

### **Evidence-Based Strategies**

Kaplan-Lewis (2013) found that ensuring patients would comply with their follow-up appointments was challenging. When people make a public commitment, they are more likely to follow through with said commitment (Cialdini, 1998). Some studies have shown that a follow-up text message or phone call appointment reminder improved patient compliance with follow-up appointments (Arora et al., 2015; Biese et al., 2014; Burns, Galbraith, Ross-Degnan, & Balaban, 2014), while others have shown no significance. In such a cluster-randomized control study involving 328 patients, Soong et al. (2014) found no significant improvement in compliance with reminder phone calls, although the researcher only used the one transitional care intervention (i.e., one reminder phone call). Therefore, reminder messages might improve patient readmission rates but should not be relied on solely. A systematic review that compared multiple transitional care interventions showed that a single intervention is not enough to reduce 30-day readmissions, and interventions should come in “bundles” (Hansen, Young, Hinami,



Leung, & Williams, 2011). To have the most successful continuity of care, staff need to begin transitional care interventions at the hospital (De Regge et al., 2017; Goyal et al., 2016; Hesselink et al., 2014).

The limitations of the search included that no studies were found for interventions covering the discharge patient populations. Most researchers focused on patients with certain medical conditions, thereby making duplication and implementation difficult for these interventions to a population with a wide range of diagnoses and socioeconomic status. Additionally, no researchers reported health literacy or the economic level of the patient population observed.

### **Theoretical/Conceptual Model**

The researcher used the Iowa model to study evidence-based practices (EBP) to improve post-discharge follow-up appointments. The Iowa model is a multi-step process used to highlight problems in the health care system using EBP to implement a change. The first step involves identifying a problem and determining the priority level; if high, the next step involves assembling a team. The team should consist of anyone of importance to the problem and its solution. Once the team is created, a review and critique of the literature are required. At this point, there are six parts to piloting an EBP: (a) select the desired outcome, (b) collect baseline data, (c) develop an EBP, (d) implement that EBP, (e) evaluate the success or failure of the EBP, and (f) modify practices as needed (Titler, 2001). An outline of the Iowa Model is provided in Appendix B.

### **PICO Statement**

Will changing the current AHC discharge protocol by having discharged patients schedule their own follow-up appointments with their PCPs at WHC, prior to discharge rather

than having the hospital staff schedule their appointments or prompting the patients to schedule their appointment after discharge, lead to a 10% increase in the WHC follow-up appointments made? Will those appointments be made within seven days of discharge, and will such an increase in appointments contribute to a reduction in the 30-day readmission rate by 5% at AHC by those patients who have their PCPs at WHC and who were directly involved in the EBP?

### **Purpose/Goals/Aims**

The purpose of this EBP was to increase the number of follow-up appointments scheduled within 2 to 3 days of hospitalization (but no later than seven days) by WHC patients who were prompted by AHC staff to call their PCPs prior to being discharged from AHC. This project would ensure that discharged patients received better continuity of care and potentially reduce 30-day readmissions at AHC. The goal was to have 80% of WHC patients hospitalized at AHC to have a follow-up appointment scheduled, and 40% of those scheduled appointments to be within seven days of discharge. A secondary goal was to determine if such appointments reduced AHC overall 30-day readmissions by 5%. None of these goals were met.

### **Methods/Procedures and Project Design**

AHC's standard discharge practices consisted of patient-centered discharge packets and reminder/follow-up phone calls. Previous research has shown that the most successful interventions came in bundles of three or more new strategies (Hansen et al., 2011). This EBP changed one element in AHC's discharge process: WHC patients were asked to schedule their own follow-up appointments with their PCPs prior to discharge, excluding patients identified as high-risk for readmission by the physician, as their appointments were scheduled and monitored by the care management team. The discharge process consisted of the secretary or case manager scheduling a follow-up appointment with the PCPs, or if an appointment was not made, a fax

was sent to the PCPs to notify them that their patient needed a follow-up appointment. The EBP process included an additional step once the physician input discharge orders by the secretary and filled out an appointment reminder card with patients' PCPs—or any other specialist they needed to see. The card included the providers' names and phone numbers. The nurse would then take the card to the patient, inform him/her of the importance of a follow-up appointment, and then ask the patient to make the call himself or herself to the PCP/specialist to schedule his or her posthospitalization follow-up appointments. The patient would use either a personal phone or the phone provided in his or her hospital room. Once an appointment was made, the nurse took the card and gave it back to the secretary who input the information into the computer to populate the appointment on the patient-centered discharge packet.

This EBP was conducted during the months of October 2018 through January 2019. The project's timeline was created on a Gantt chart (see Appendix C). Post-EBP data were collected at WHC through an EMR review during the month of August 2019 on those patients who had a PCP at WHC and who had been admitted to AHC. All other patients were excluded from this EBP. Pre- and post-EBP percentages were compared to see if there was an increase in the number of appointments scheduled, show within how many days of discharge those appointments were scheduled, and determine if these patients were readmitted within 30 days of discharge. Pre-EBP data were taken on patients during the first quarter of 2017 while post-EBP data were collected on patients during the fourth quarter of the year, which played a role in the results of the EBP.

Participants in the project consisted of all AHC medical-surgical, telemetry, and surgical floor nursing and secretarial staff. The goal was to train 80% of nursing and secretarial staff on each of the designated floors. The goal was exceeded by training 100% of the nursing and

secretarial staff. Percentages of staff trained were tracked by a sign-in sheet located at each monthly staff meeting and a computerized educational tool (health stream) developed for this project, which was provided to all staff.

Health streams at AHC are online training tools sent out to staff to educate them on policy changes or update them on new EBP. The health stream developed for this EBP consisted of the training on the new discharge practices. Training included a 5 to 10 mins PowerPoint presentation that described the need, details, and documentation of the EBP components (patient scheduling PCP visit). Progress on EBP implementation was monitored by attending one to two daily shift huddles on each floor weekly; the staff was asked for feedback on the project, and questions from the nurses and secretaries were answered. The main question asked was what to do if the PCP could not be contacted. If the PCP could not be contacted, the hospital staff would email the PCP the discharge summary and would follow up with the patient using a phone call to see if he or she had made an appointment.

Possible barriers to the success of this EBP were initially identified: (a) lack of nurse participation, (b) patients speaking a language other than English, and (c) patients not being discharged to their homes. The author developed strategies to overcome these barriers. With any change in hospital procedures, there can be resistance from those affected by the change.

In the project, the change affected both the floor nurses and unit secretaries. In-person education and Q&A at daily shift meetings rotating between the floor and a computerized education tool were used to keep the nursing and secretarial staff engaged in the EBP. Another barrier identified was the language barrier between the patient and the nurse. AHC has procedures in place to overcome this barrier called *my accessible real-time trusted interpreter*. This process allowed the nurse to access a licensed medical translator through a mobile device

located on each floor to translate information to the patient. If the patient could not make the appointment due to the acuity of their illness, a family member or caregiver was asked to schedule the appointment. Those patients transferred to a skilled nursing facility or rehabilitation center were excluded from this EBP. Patients identified as high-risk for readmission by the physician due to their multiple comorbidities and history of noncompliance, as well as behavioral health patients, have continued to have their appointments scheduled and monitored by the care management team. They were not included in this project.

### **Results**

One-hundred percent of the nurses and secretarial staff were educated on the project, thereby exceeding the goal of 80%. A total of 54 WHC patients were admitted to AHC during the EBP. The total percentage of patients who scheduled a follow-up appointment was 59%. The percentage of appointments scheduled within 7 days of discharge was 26%. Of those patients admitted, 14 patients made follow-up appointments within 7 days of discharge, and there were no readmissions with a readmission rate of 0. There were 18 patients who had follow-up appointments scheduled within 30 days of discharge, and there were two 30-day readmissions with a readmission rate of 11.1%. There were 22 patients who did not schedule follow-up appointments after discharge; 7 were readmitted within 30 days with a readmission rate of 31.8% (Appendix D). Of 125 readmissions during the EBP period, 15 patients who identified that their PCP was from WHC were readmitted within 30 days, accounting for 12% of readmission at AHC during the project.

Post EBP percentage of follow up appointments schedule was 59% with 26% of those appointments scheduled within 7 days of discharge, which was less than the initial 70% of appointments scheduled with 38.3% scheduled withing 7 days, pre EBP. The number of 30-day

readmissions for patients who scheduled an appointment within 7 days of discharge decreased from 1 to 0 with a readmission rate decrease from 5.9% to 0. The number of 30-day readmissions for patients who scheduled an appointment within 30 days of discharge went from 6 to 2 with a decrease in readmission rate from 20.7% to 11.1%. The number of 30-day readmissions for patients who did not schedule follow-up appointments went from 3 to 7 with a readmission rate that increased from 15% to 31.8% (Appendix E).

### **Discussion**

Postintervention results for the evidence EBP were gathered and interpreted; the data indicated that the project was unsuccessful. Adding the emphasis of having patients schedule their follow-up appointments prior to being discharged from a hospital and making a new and larger follow-up appointment card had no effect on increasing the number of patients scheduling follow-up appointments or reducing readmissions. However, evidence showed that fewer patients who scheduled follow-up appointments within a month after discharge were readmitted to the hospital. Multiple factors could have led to these results.

One thing that could have affected the results of the project was the time in which the EBP was implemented. The initial data were collected on patients admitted during the first quarter of the year, while the postintervention data were collected on patients admitted during the fourth quarter of the year. The fourth quarter is during the high flu season and during multiple major holidays where people typically cheat on diets and fluid restrictions.

Another thing that could have affected the results was nurse participation in implementing the EBP. Even though the author exceeded the goal of 80% of staff educated on the project, a change could be hard for staff to include the new information/steps in the new

discharge process. There were checks and balances in place to monitor if the intervention was being implemented, but it was difficult to track if every nurse did the discharge as recommended.

Another issue that this EBP faced was the unavailability of the clinic appointment desk on weekends and holidays (i.e., WHC was closed); therefore, patients discharged over the weekend and on holidays had to make a call to schedule their appointments 1 to 3 days later from home. All discharges that occurred on the weekends and holidays eliminated the key part of the intervention: patient scheduling their follow-up appointments prior to discharge from the hospital.

There was positive feedback from both patients and staff with the new discharge appointment card. The card size allowed for better visibility of future doctor appointments, times, and locations for the patient. The educational information on the backside of the card was informative for the patient while allowing the discharge nurse to have a reference guide to teach the patient.

### **Conclusion**

In conclusion, the EBP—where clinical staff asked patients to schedule their follow-up appointments with their PCPs prior to discharge from the hospital—did not show an increase in follow-up appointments made or a reduction in 30-day readmissions. However, evidence has shown that fewer patients who scheduled follow-up appointments within a month after discharge were readmitted to the hospital within 30 days. This author recommended that the new discharge appointment card (Appendix F) be continued, along with AHC's original discharge procedure.

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## Appendix A

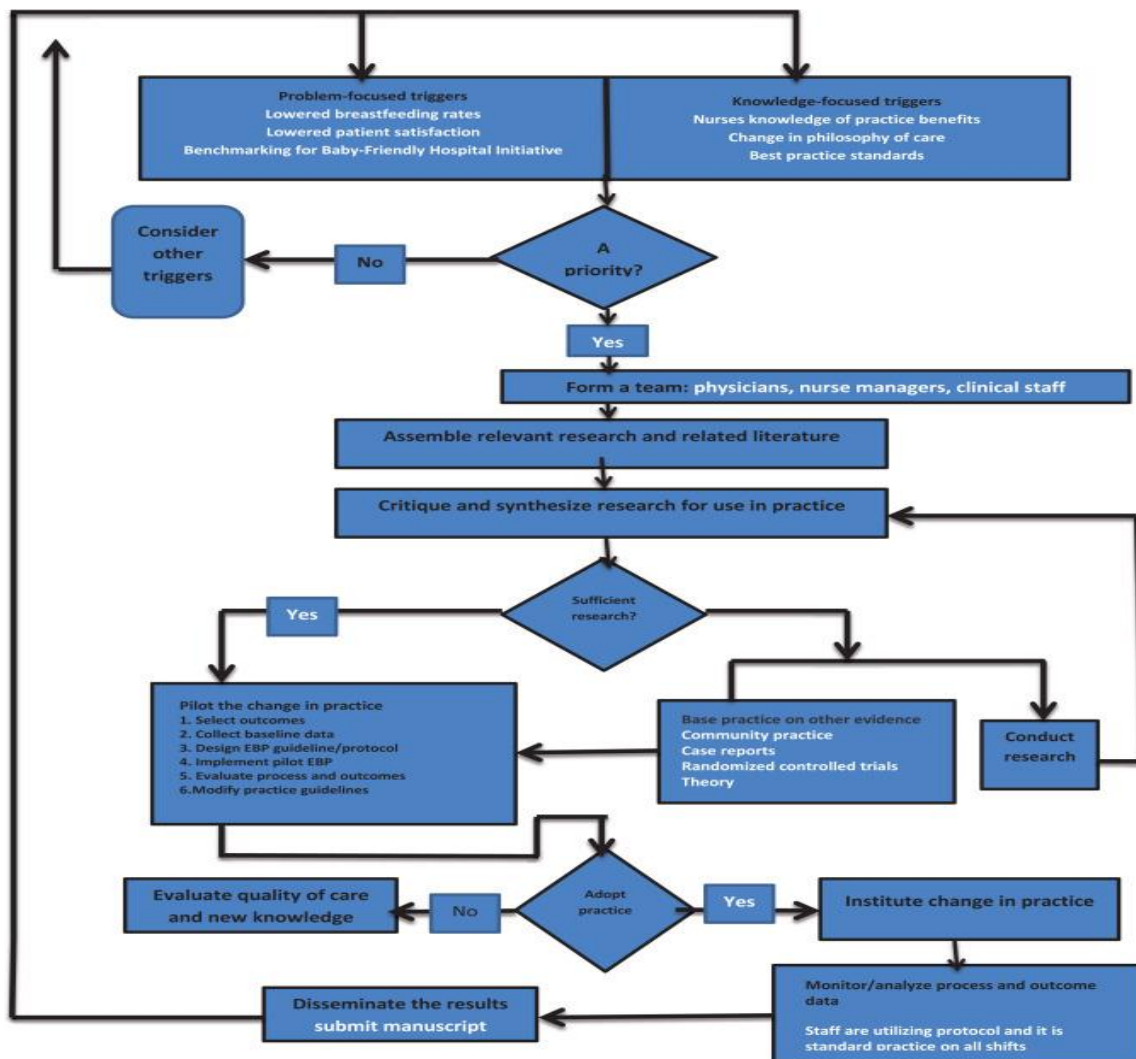
### Literature Review

Melnik and Fineout-Overholt's (2011) level of evidence grades articles and designates a number depending on their level of strength. Level (number) I is the strongest evidence made up of systematic reviews or meta-analysis of all relevant randomized control trials while Level VII is the weakest consisting of opinions of authorities (Melnik & Fineout-Overholt, 2011). For this project, Level V was the weakest of the studies used with the majority of the studies used being level II.

Levels of evidence	Author and year
I	Hansen, L, Young, R, Hinami, K, Leung, A, Williams, M. (2011).  Jackson, C., Shahsahebi, M., Wedlake, T., & DuBard, C. A. (2015).  Song, J., & Walter, M. (2017).
II	Arora, S., Burner, E., Terp, S., Lam, C., , Nercisian, A., Bhatt, V., Menchine, M. (2014).  Biese, K., LaMantia, M., Shofer, F., McCall, B., Roberts, E., Sterns, S., Principe, S., Kizer, J., Cairns, C. (2014).  Burns, M, Galbraith A, Ross-Degnan, D, Balaban, R.,(2014).  Labrada et al. (December 12, 2017).  Soong, C., Kurabi, B., Wells, D., Caines, L., Morgan, M. W., Ramsden, R., & Bell, C. M. (2014).
III	Hernandez, A, Greiner, M, Fonarow, G, Hammill, B, Heidenreich, P, Yancy, C, Peterson, E, Curtis, L. (2010).  Kaplan-Lewis, E. (July 26, 2013).
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V	De Regge, M., De Pourcq, K., Meijboom, B., Trybou, J., Mortier, E., & Eeckloo, K. (2017).  Hesselink, G., Zegers, M., Vernooij-Dassen, M., Barach, P., Kalkman, C., Flink, M. (2014).  Kohnke, H., & Zielinski, A. (2017).

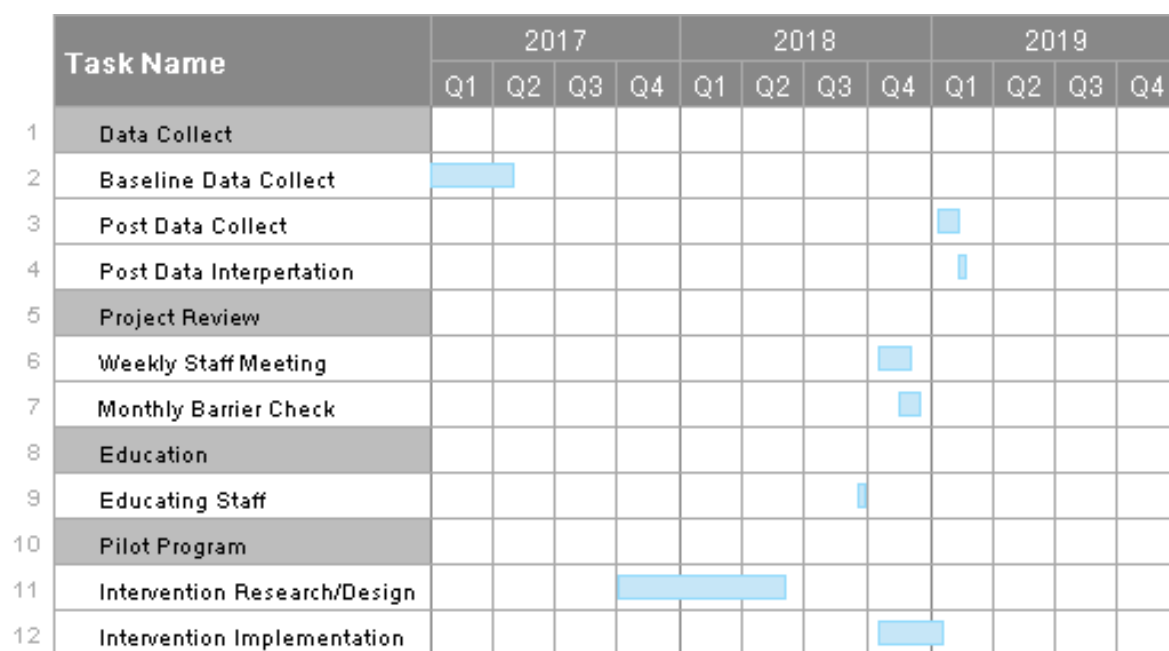
## Appendix B

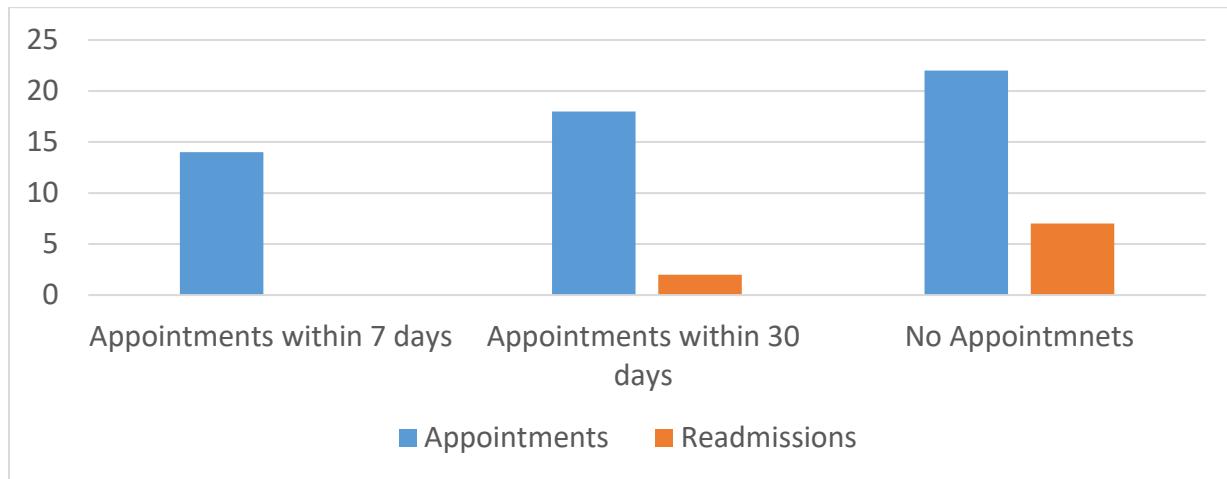
## Iowa model outline

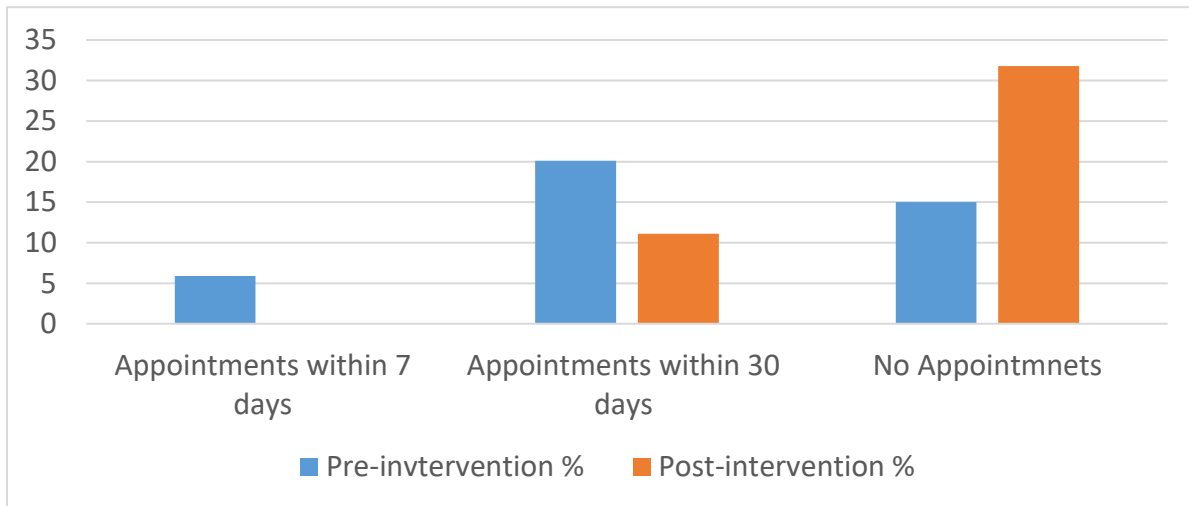


The Iowa Model of Evidence-Based Practice to Promote Quality Care (Titler, 2001)

### Gantt Chart: Project Timeline



**Appendix D****Post-EBP Appointments and Readmission**

**Appendix E****Pre/Post-EBP Readmission Percentages**



## Appendix F

## New Appointment Card

**Living God's love by inspiring health, wholeness, and hope.**

Adventist health

LOGO

Primary care Provider: \_\_\_\_\_.

Contact number: \_\_\_\_\_.

Date: \_\_\_\_\_ . Time: \_\_\_\_\_.

Specialist: \_\_\_\_\_.

Contact number: \_\_\_\_\_.

Date: \_\_\_\_\_ . Time: \_\_\_\_\_.

In case of an emergency proceed to the nearest emergency room or call 911

Front

Back

Reasons why the follow-up appointment in 2-3 days of discharge is important

1. Reduces risk for readmission
2. 9 out of 10 patients are not readmitted to the hospital in 30 days
3. Better overall health outcome
4. Discuss your condition
5. Review current/future health goals
6. Make sure that you know the warning signs of your condition
7. Review any new medications and why you are taking them
8. Discuss any changes to previous medication regimen
9. Identify any new tools or transitional care that you might need
10. Identify any additional specialist that you might need and help schedule appointments or establish care with them.