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The Best Practice for Increasing Telephone Outreach

An Integrative Review

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ABSTRACT

Purpose of Study: Many hospitals established telephone follow-up (TFU) programs to improve care transitions and reduce hospital readmissions. However, there is a lack of knowledge on how to increase the outreach of TFU programs. This integrative review aims to answer the clinical practice question, "What is the best practice for increasing telephone follow-up reach rates post-hospital discharge?"

Primary Practice Setting: The primary setting evaluated in this review was hospital-based phone call programs that are conducting post-hospital discharge TFU.

Methodology: In this integrative review, we searched studies published between January 2003 and November 2017. We searched 5 electronic databases including PubMed, EMBASE, CINAHL, Web of Science, and Cochrane. The Johns Hopkins Nursing Evidence-Based Practice model was used to critically analyze and synthesize the selected articles.

Results: Nine articles were reviewed, and this study uncovered that pre-hospital face-to-face meeting might increase TFU reach rates. However, most studies calculated reach rates using only frequencies/percentages. This contributed to our low-quality rating on most of the reviewed studies.

Implications for Case Management Practice: This review identified that TFU, as a component of a care coordination program, may reduce hospital readmissions and control health care utilization. However, few studies ($n = 2$) used TFU reach rates as a major study outcome to determine the impact of face-to-face meetings on phone outreach. Therefore, the evidence is limited to inform case management practice to increase phone outreach post-hospital discharge. It is recommended to conduct further research and test different methods that may increase phone outreach.

Key words: *adult, care coordination, reach rate, readmission reduction, telephone follow-up*

When the Patient Protection and Affordable Care Act (ACA) was enacted in 2010, the U.S. government commissioned the Centers for Medicare & Medicaid Services (CMS) to develop novel care coordination programs to reduce overall health care utilization and improve the quality of care (Berkowitz et al., 2016). In 2015, the CMS proposed a rule to include telephone follow-up (TFU) as a component of discharge planning. Subsequently, many commercial and hospital-based call centers established TFU programs to improve transitions of care (Brittain et al., 2014; Mann, 2017).

Telephone follow-up, an essential component of care coordination programs, has demonstrated effectiveness in improving care transitions, prevented unnecessary hospital readmissions (Tuso et al., 2013), and enhanced the quality of patient care (Harrison, Auerbach, Quinn, Kynoch, & Mourad, 2014). It increases patient satisfaction and decreases emergency department (ED) visits as a component of a care coordination program (Jones et al., 2016; Reinius et al., 2013; Virgolesi et al., 2017). In recent years, there has been an increasing need for telephonic case managers and the call center industry is booming (Mann, 2017). A telephone-based case management intervention may reduce health care utilization for frequent ED visits and readmissions (Shepperd et al., 2013; Verhaegh et al., 2014). Patients who participate in a TFU post-hospital discharge may benefit from a novel care coordination program.

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However, there is very little knowledge on how many patients have been successfully reached post-hospitalization. The average reach rate of commercial call centers conducting TFU programs in the United States is estimated to be 40% (Rodak, 2012), and some local hospitals with TFU as a component of a care coordination program had a 53% (Brittain et al., 2014) completion rate. Therefore, commercial and hospital call centers are not reaching 44%–60% of patients post-hospital discharge. Unfortunately, TFU is effective in preventing readmissions and in streamlining care transitions only if patients are successfully reached post-hospital discharge.

Methods

Aim

The aim of this integrative review was to identify, critically analyze, and synthesize quantitative and qualitative evidence on how post-hospital discharge phone call programs may increase reach rates to improve and promote care transitions. The practice question asked was, "What is the best practice for increasing telephone follow-up reach rates post-hospital discharge?"

Study Design

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guided the literature search (Welch et al., 2015). The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model by Dang and Dearholt (2018) was used to critically analyze and synthesize this integrative review.

Search Strategies

A literature search was conducted across five electronic databases including PubMed, EMBASE, CINAHL, Web of Science, and Cochrane with the assistance of a librarian from the Johns Hopkins University Welch Medical Library. The studies included for this review were published between January 2003 and November 2017. Medical Subject Headings (MeSH) terms included the following: "telephonic case management," "call centers for patient follow-up," "telephone follow-up calls," "post-discharge phone calls," "increasing engagement to post-discharge care plan," "telephone follow-up reach rates," "hospital readmission reduction programs," "care coordination programs," "models of care coordination," "reduction of hospital readmissions," "transitions of care," and "models of transitional care."

Inclusion Criteria

The following studies were included in the review:

1. Studies using a care coordination program with TFU as a component of transitions of care;
2. Studies of adult populations older than 18 years; and
3. Publications in English.

Exclusion Criteria

Studies that tested TFU as an independent intervention were not included in this review because TFU as a single intervention has not been shown to improve health care outcomes, reduce readmissions, decrease overall health care utilization, or improve the standard of patient care (Jones et al., 2016; Shepperd et al., 2013). Studies that did not utilize a care coordination program and review articles were also excluded.

Screening Process of Study Eligibility

Titles were searched through electronic databases (n = 1,425), and additional articles were identified by manual search through websites and reference list sections (n = 14) for a total of 1,439 articles (see Figure 1). There were 483 duplicate titles that were discarded. A total of 956 titles were screened, and 940 were excluded for not meeting inclusion criteria. Sixteen full-text articles were assessed for eligibility; however, after reading the articles thoroughly, three were clinical practice guidelines (CPGs) and four had unclear methodology/interventions, thus were ultimately excluded. Therefore, nine research articles were included in the final review: eight quantitative research studies and one qualitative study. Table 1 presents characteristics of the final retrieved studies. All nine studies were conducted and published in the United States. Most studies (n = 8) were conducted in inpatient settings using a multidisciplinary team (registered nurses [RNs], social workers, pharmacists, and physicians). One study was conducted in an ED setting using research physician assistants.

Results

Table 1 also presents the following for the nine published articles reviewed: author of the study, year of publication, research design, population/patients, average age, TFU reach rates, statistical techniques to calculate reach rates, and strengths and weaknesses of the studies.

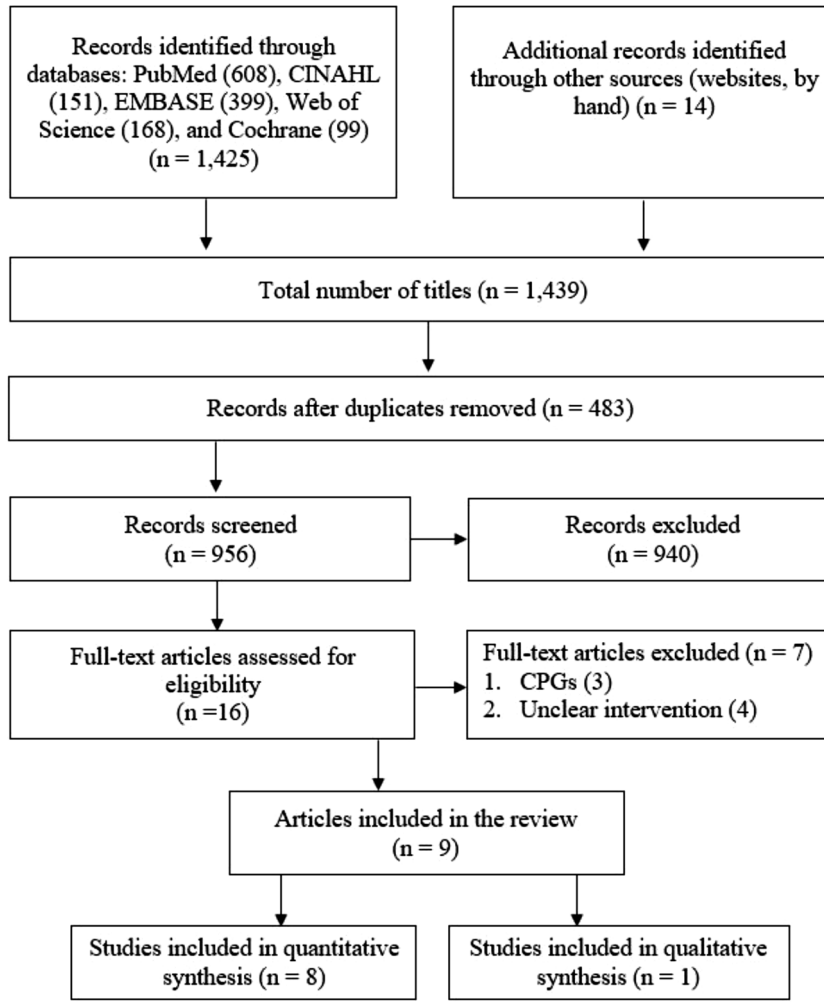

FIGURE 1
Search strategies. PRISMA strategy based on Welch et al. (2015). CPG = clinical practice guideline.

Care Transitions Intervention

Coleman et al. (2004) used a quasi-experimental design to test the Care Transitions Intervention (CTI) model with 158 medicine patients in a large hospital in Denver, CO. The CTI model has four pillars:

1. Medication self-management;
2. Use of a dynamic Personal Health Record (PHR);
3. Primary care and specialist follow-up; and
4. Knowledge of red flags.

The CTI was a multidisciplinary care coordination program using TFU as one component of transitional care. An RN transition coach conducted a pre-hospital discharge face-to-face meeting to explain the TFU. Transition coaches in the CTI model were RNs with the goal of conducting TFU or home visits post-hospital discharge. Face-to-face meetings were utilized to inform the patient of the upcoming TFU, to secure accurate post-hospital discharge contact information, and to set expectations of transitional care follow-up post-hospital discharge.

During the face-to-face meetings, patients completed a PHR form to guide their post-hospital discharge. The PHR form contained the following information: (a) how the patient could be reached post-hospital discharge; (b) the name of the health care proxy; (c) the best time and date for a TFU; and (d) information needed at the time of TFU. This study reached 99% of the subjects in the intervention group and reduced (p = .04) 30 days post-hospital discharge (Coleman et al., 2004).

After the aforementioned seminal study of the CTI model, Coleman, Parry, Chalmers, and Min (2006) replicated the study in a randomized controlled trial (RCT) with 379 medicine patients. This study was also conducted in a large medical center and demonstrated that 86% of the intervention patients were reached by the TFU. This study also used face-to-face meetings pre-hospital discharge with the intervention group and tracked hospital readmissions at 30 days (p = .048) and at 90 days (p = .04). The reductions in readmissions post-hospital discharge were statistically significant (Coleman et al., 2006).

TABLE 1
Characteristics of Retrieved Articles and Study Findings

Author	Research Design	Population/ Patients	Average Age (Years)	TFU Reach Rates (%)	Statistics to Calculate TFU Reach Rates	Strengths	Weaknesses
Coleman et al., 2004	Quasi-experimental (n = 158)	Medicine	75	99	Descriptive (in %)	Broad spectrum of medical-surgical diagnoses. Readmission rates were determined at 30, 90, and 180 days post-hospital discharge.	Conducted only in one large hospital. Patients' ethnicities were not reported. Inferential statistics were not used in calculating TFU reach rates.
Coleman et al., 2006	RCT (n = 379)	Medicine	76	86	Descriptive (in %)	Randomization was used. Collected more demographic variables than the previous study. Readmission rates were determined at 30 and 90 days post-hospital discharge.	Participants were mainly Caucasians. Focused on medical diagnoses. Inferential statistics were not used in calculating TFU reach rates because it was not the main outcome of the study.
Jack et al., 2009	RCT (n = 370)	Medical-surgical	49.9	62	Descriptive (in %)	Randomization of subjects. Large sample. Robust statistical techniques were used (Poisson's test and proportion tests) to determine rates of readmission. Diverse groups of participants that consisted of Caucasians, African Americans, and Hispanic patients. Participants were younger than those in previous studies.	The trial was conducted at a single medical center. The study did not utilize inferential statistics in calculating TFU reach rates.
Kind et al., 2012	Quasi-experimental (n = 708)	Medical-surgical	75	90	Descriptive (in %)	Large sample size. Robust statistical techniques were used (Pearson's χ^2 and multivariate logistic regression) to calculate health care utilization.	The sample consisted of male, Caucasians, retired military staff. The VA system provides incentives to the retired staff to comply with health care programs, which might have affected the results of this study. This study did not utilize inferential statistics in calculating TFU reach rates.
Kind et al., 2016	Quasi-experimental (n = 1,247)	Medicine	77	65	Descriptive (in %)	The study was employed in a diverse population, with a large sample size. A robust statistical technique was used in determining readmissions (Pearson's χ^2).	The sample was not diverse; most participants were Caucasians (93%). The study did not utilize inferential statistics in calculating TFU reach rates because it was not the main outcome of the study.
Menchine et al., 2013	RCT (n = 346)	Emergency	45	72.8	Inferential Statistically nonsignificant	The study used a prospective RCT. Large sample size. Used a robust statistical technique: Multivariate regression to test the effect of face-to-face to TFU reach rates. Diverse participants. Participants were younger than those in previous studies.	The trial was conducted at a single medical center. It was unknown if the participants were independent of one another and that none were repeat subjects. The study did not mention any information regarding hospital readmissions/subsequent ED visits.

(continues)

TABLE 1
Characteristics of Retrieved Articles and Study Findings (*Continued*)

Author	Research Design	Population/ Patients	Average Age (Years)	TFU Reach Rates (%)	Statistics to Calculate TFU Reach Rates	Strengths	Weaknesses
Parry et al., 2006	Qualitative (n = 32)	Medicine	78	100	Descriptive (in %)	Several factors for engagement were determined, including the patient's willingness to engage in self-care management. The perception of a caring relationship with a transition coach was analyzed.	Conducted on one hospital. The study did not utilize inferential statistics in calculating TFU reach rates.
Parry et al., 2009	RCT (n = 42)	Medicine	80.5	93.8	Descriptive (in %)	The study was an RCT and measured readmissions at 30, 90, and 180 days after discharge.	The sample size was small, and the subjects were not diverse, composed mainly of Caucasians. The study did not utilize inferential statistics in calculating TFU reach rates because it was not the main outcome of the study.
Vergara et al., 2017	Quasi-experimental (n = 211)	Medicine	51	87	Inferential Statistically significant ($p < .001$)	Utilized χ^2 in determining TFU reach rates. Participants were diverse. Participants were younger than those in previous studies.	The correlations between TFU reach rates, subsequent ED visits, hospital readmissions, sociodemographic variables, and surgical variables were not investigated. It is unknown if using pre-hospital discharge face-to-face meetings on an adult surgical unit would also produce a statistically significant increase in TFU reach rates.

Note. ED = emergency department; RCT = randomized controlled trial; TFU = telephone follow-up; VA = Department of Veterans Affairs.

Using a CTI model, Parry, Kramer, and Coleman (2006) conducted a qualitative study in a large hospital to explore a patient-centered coaching intervention to improve transitions of care for chronically ill adults. The final sample consisted of 32 medicine patients. The following themes were identified: (a) continuity throughout the care transition, (b) self-management, (c) knowledge and skills, (d) and coaching relationships. The researchers reported that they were able to provide transitional care post-hospital discharge that resulted in 100% TFU reach rates (Parry et al., 2006). However, it was not reported on how many patients were readmitted because of the qualitative design of the research study.

Parry, Min, Chugh, Chalmers, and Coleman (2009) tested the CTI model in an RCT with adult patients. Similar to the previous studies (Coleman et al., 2004, 2006; Parry et al., 2006) of the CTI model, a transitional coach met with 42 medicine patients pre-hospital discharge to establish rapport and obtain information regarding the post-hospital discharge care plan. Transition coaches reached 93.8% of discharged patients. This study was also conducted in Denver and demonstrated statistically significant reduced readmission rates after 30 days (p = .15), 90 days (p = .01), and 180 days (p = .08) (Parry et al., 2009). According to Parry et al. (2009), the key factors driving the success of the intervention were as follows: (a) continuity of the relationship with the transition coach across settings; (b) a feeling someone cared about them; (c) the attainment of self-confidence in how to manage one's condition; and (d) the trust that was established.

Coordinated-Transitional Care Program

Kind et al. (2012) conducted a quasi-experimental study at a Veterans Affairs (VA) hospital in Madison, WI, utilizing the Coordinated-Transitional Care (C-TraC) program. Similar to the studies described earlier that used the CTI model, Kind et al. (2012) employed face-to-face meetings pre-hospital discharge to inform patients of the care plan and provided the C-TraC handout to the patients. The majority of the 708 study participants were men. The C-TraC patient handout was similar to the PHR form employed in the Coleman et al. (2004, 2006) and Parry et al. (2006, 2009) studies. Kind et al. (2012) successfully reached 90% of the patients post-hospital discharge and reported that patients who received the C-TraC protocol had one-third fewer hospital readmissions than the comparison group (p = .013). Sociodemographic characteristics, comorbidity, and functional status were also adjusted using multivariate logistic regression analysis. It was also found that the intervention group was less likely to be readmitted to the

hospital than the control group (odds ratio = 0.55; 95% confidence interval [CI] [0.333, 0.90]; $p = .018$).

Kind et al. (2016) replicated their 2012 study and utilized the same intervention of conducting face-to-face meetings pre-hospital discharge to reach patients. They conducted pre-hospital discharge face-to-face meetings with 1,247 geriatric patients at a large medical center in Madison, WI, and demonstrated TFU reach rates of 65%. The intervention group had statistically significant ($p < .001$) lower 30-day readmission rates (10.8%) than the comparison group (16.6%) that did not receive the C-TraC program.

Vergara, Sheridan, Sullivan, and Budhathoki (2017) conducted a pilot study using a powered quasi-experimental design and employed face-to-face meetings with patients ($n = 88$) pre-hospital discharge on a medicine unit at a large medical center in Baltimore, MD. The control group ($n = 123$) did not receive any intervention. A less than 10-min face-to-face meeting intervention consisted of the following:

1. Informing the patient of the purpose of the TFU;
2. Providing a handout for the patient to complete;
3. Obtaining the best phone numbers to reach the patient;
4. Identifying the preferred time and date of TFU;
5. Identifying any health care representative, if one was designated; and
6. Instructing the patient to prepare the items needed for the TFU (Vergara et al., 2017).

The intervention was derived from the CTI model and the C-TraC program and used Transitions Theory (Meleis, 2017) as the study's framework. The patients who received face-to-face meetings had an 87% TFU reach rate, whereas the comparison group that did not have face-to-face meetings had a 67% TFU reach rates. The increase in reach rates in the intervention group demonstrated statistical significance ($p < .001$). This was the first study to specifically test an intervention to increase TFU reach rates for medicine patients (Vergara et al., 2017).

Both the CTI model and the C-TraC programs used the same RNs to conduct pre-hospital discharge face-to-face and post-hospital discharge TFU (Coleman et al., 2004, 2006; Kind et al., 2012, 2016; Parry et al., 2009, 2006; Vergara et al., 2017). Overall, the TFU reach rates using the CTI model and the C-TraC program were between 65% and 100%. This is considerably higher than the average 40% national TFU reach rates (Rodak, 2012) and the average TFU reach rates of a large mid-Atlantic hospital (53%) (Brittain et al., 2014) that would arbitrarily call patients post-hospital discharge.

Project Reengineered Discharge (RED) Program

Jack et al. (2009) conducted a study using the Project Reengineered Discharge (RED) program to reduce preventable readmissions for medical-surgical patients. Project RED was an RCT at a large hospital in Boston, MA. Similar to the CTI model, Project RED is a novel care coordination program using TFU as a component of care transitions. Project RED also employed pre-hospital discharge face-to-face meetings with patients to explain the steps of transitional care.

Project RED differed from the CTI model and the C-TraC program because it used a discharge advocate to conduct the face-to-face meetings (with 370 patients) and the advocates included social workers and allied health workers. In addition, in the Project RED program, a pharmacist who never met the patients pre-hospital discharge conducted the TFU. Nonetheless, in Jack et al.'s (2009), TFU reach rates were 62% and Project RED also decreased readmissions (0.314 vs. 0.451 visit per person per month; incidence rate ratio, 0.695; 95% CI [0.515, 0.937]; $p = .009$). The recurring themes in Project RED were identified as follows: awareness of the post-hospital discharge care plan, supporting patients and caregivers to take an active role after hospital discharge, and preparing the patient for hospital discharge. However, Project RED did not address the following recurring themes found in the aforementioned studies using the CTI model and the C-TraC program:

- Increasing engagement;
- Establishing rapport prior to hospital discharge with the staff who will contact the patient post-hospital discharge; and
- Establishing the feeling of connection prior to hospital discharge and TFU.

Despite its endorsement by the Agency for Health Research Quality as a CPG, the generalizability of the findings of Project RED was not well established compared with the CTI model or the C-TraC program, which were tested in several studies and in quality improvement projects (Gardner et al., 2014; Li, Guo, Suga-Nakagawa, Takahashi, & Renaud, 2015; Vaughan et al., 2014).

Face-to-Face Meetings and TFU Conducted by Nonlicensed Staff

Menchine et al. (2013) conducted a prospective RCT of 346 ED patients in a large hospital in Los Angeles, CA, to determine whether verifying phone numbers, obtaining best contact times, and informing patients that they would be contacted would increase TFU reach rates 48–72 hr post-hospital discharge. Student's t test, Fisher's exact test of significance, and multivariate regression statistical analyses were employed

in determining the impact of face-to-face meetings with TFU reach rates. The intervention group had a 72.8% TFU reach rate and the control group had a 68.2% TFU reach rate, both not statistically significant. However, this may have been the result of the study's use of research assistants to conduct face-to-face meetings versus licensed professional RNs that may have been a limiting factor in the results.

Common Study Findings

The literature described establishing rapport as an effective measure to reach patients post-hospital discharge, as it facilitated patients interacting with the health care personnel with whom they would talk on the phone post-hospital discharge (Coleman et al., 2006; Kind et al., 2012, 2016; Menchine et al., 2013; Parry et al., 2009; Vergara et al., 2017). Increasing engagement provided opportunities for patients to ask questions about health promotion and disease prevention. Moreover, the findings of this literature review demonstrated the following:

- The significance of obtaining accurate phone numbers and convenient times to conduct the TFU before hospital discharge (Coleman et al., 2006; Jack et al., 2009; Kind et al., 2012, 2016; Vergara et al., 2017);
- The effectiveness of having an RN conduct the face-to-face meeting;
- The value of keeping the patient informed of post-hospital discharge care plans that provide increased awareness about self-care management at home (Coleman et al., 2004, 2006; Jack et al., 2009; Kind et al., 2012, 2016; Parry et al., 2009; Vergara et al., 2017).

Data Synthesis and Discussion

Table 1 summarizes the characteristics of retrieved articles and findings of the review. The average age of participants in the reviewed studies was 75–80.5 years (Coleman et al., 2004, 2006; Kind et al., 2012, 2016; Parry et al., 2006, 2009) except for three studies (Jack et al., 2009; Menchine et al., 2013; Vergara et al., 2017), where the average age of participants was 45–51 years (see Table 1). The literature demonstrated useful strategies to contact patients post-hospital discharge and to increase TFU reach rates (Coleman et al., 2004, 2006; Jack et al., 2009; Kind et al., 2012, 2016; Menchine et al., 2013; Parry et al., 2006, 2009; Vergara et al., 2017). The TFU reach rates reported in the literature ranged from 62% to 100% and were significantly higher than the national TFU reach rate (40%) (Rodak, 2012). The concepts of establishing rapport, obtaining accurate information, increasing engagement, and improving awareness of the discharge plan as explained by the nurse or nurse case manager were elucidated in the CTI model (Coleman et al., 2004, 2006; Parry et al., 2006, 2009), in the C-TraC studies (Kind et al., 2012, 2016), and in one pilot study (Vergara et al., 2017).

The findings of this literature review demonstrated the significance of obtaining accurate phone numbers and convenient times to conduct the TFU before hospital discharge; the effectiveness of having an RN conduct the face-to-face meeting; and the value of keeping the patient informed of post-hospital discharge care plans that provide increased awareness about self-care management at home.

However, it was found that face-to-face meetings with discharge advocates who were not the health care staff who conducted the TFU (Jack et al., 2009) resulted in the lowest reach rate (62%) among the reviewed studies. Also, in the study by Menchine et al. (2013), the TFU reach rate was 72.8%, which when compared with the comparison group, was not statistically significant, although it did show clinical significance. This study utilized research assistants in conducting the face-to-face meeting and TFU instead of RNs (in the ED setting). Using RNs in conducting face-to-face meetings and TFU needs further investigation to determine their impact or association with reach rates, subsequent ED visits, and hospital readmission rates. Although Vergara et al. (2017) conducted a pilot study to test face-to-face meeting (by utilizing an RN) as an intervention to improve post-hospital TFU reach rates, the setting was limited to one specialty and one medical center (see Table 1).

Although the TFU reach rates in the reviewed studies were all higher than the national TFU reach rates for call centers in the United States, most of these TFU reach rates were calculated using only frequencies and percentages. Tracking TFU reach rates was just a secondary outcome, and more in-depth quantitative analyses were not conducted. This contributed to our rating most of the reviewed studies with low quality or "C" in this review (see Table 2) because conclusions cannot be drawn without utilizing quantitative analysis.

Recommendations

The research studies in this review focused only on adult medical-surgical patients. The emphasis of

TABLE 2
Summation of Evidence Quality and Synthesis of Findings

Category (Level Type)	Total Number of Sources	Overall Quality Rating	Synthesis of Findings	Specific Quality Rating
Level I Experimental	4	0 with A 1 with B 3 with C	Face-to-face meeting with RNs and TFU being conducted by the nurse: Coleman et al., 2006 Parry et al., 2009 Face-to-face meeting prior to discharge with RAs: Menchine et al., 2013 Face-to-face meeting with a social worker and TFU being conducted by a pharmacist: Jack et al., 2009	 C C B C
Level II Quasi-experimental	4	0 with A 1 with B 3 with C	Face-to-face meetings with RNs and TFU being conducted by the nurse: Coleman et al., 2004 Kind et al., 2012 Kind et al., 2016 Vergara et al., 2017	 C C C B
Level III Nonexperimental or qualitative	1	0 with A 0 with B 1 with C	Face-to-face meetings with RNs and TFU being conducted by the nurse: Parry et al., 2006	C

Note. Analyses of evidence quality and synthesis were based on the Johns Hopkins Nursing Evidence-Based Practice model (Dang & Dearholt, 2017). RN = registered nurse; RA = research assistant; TFU = telephone follow-up.

past research studies on medical diagnoses was not surprising because the implementation of care coordination programs targeting adult medicine patients was commissioned by the CMS. Researchers have recently conducted studies to prevent readmissions of postoperative total knee arthroplasty patients (Sedrakyan, Kamel, Mao, Ting, & Paul, 2016); however, it is still unknown how these patients are reached post-hospital discharge or whether TFU is included in the care coordination program. Because the literature review revealed no actual studies specifically testing an intervention to increase TFU reach rates with surgical patients or other clinical specialties, this would be an important area of study to pursue in the future.

Multisite studies are needed to determine whether telephonic case management, based on a call center environment, decreases health care costs, improves the quality of care of patients, and informs nursing practice. There is a gap in nursing knowledge regarding how telephonic nurse case managers can increase TFU reach rates and then measure the impact of reach rates on reducing subsequent ED visits and hospital readmission rates. Therefore, more research, especially RCTs, is needed urgently to determine and test effective nursing interventions designed to increase TFU reach rates and track whether successfully reaching patients post-hospital discharge reduces subsequent ED visits and readmission rates.

There is also a need for further studies to determine the ideal health care provider to make post-hospital discharge TFU to prevent duplication of efforts and multiple calls to the patient. To illustrate, in some health systems, inpatient nurses, pharmacists, and home health agencies conduct a TFU within 48 hr post-hospital discharge (Phatak et al., 2016; Vergara et al., 2017). There are also community-based case managers or transition guide nurses who conduct a TFU (Antonoff et al., 2016; Hoyer et al., 2017). Primary care physician offices are being incentivized by the government for conducting TFU post-hospital discharge (Bindman, Blum, & Kronick, 2013) and private insurers have case managers conducting TFU after hospital discharge. This is significant duplication of effort that should be evaluated because multiple calls may cause frustration among patients and caregivers and may be one cause of suboptimal reach rates.

Implications for Case Management Practice

This integrative review identified that TFU, as a component of a care coordination program, is an effective intervention that can reduce hospital readmissions and control health care utilization. However, our review did not find a universally accepted (hospital- or ambulatory-based) best practice in increasing TFU reach rates. Only two research studies (Menchine et al., 2013; Vergara et al., 2017) used TFU reach rates as a major study outcome and employed inferential statistics to determine the impact of face-to-face meetings on TFU reach rates. Therefore, the evidence is limited and not enough to inform case management policies to increase TFU reach rates. Although the studies by Menchine et al. (2013) and Vergara et al. (2017) were rated of good quality or "B" (see Table 2), further investigations are needed to determine the

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generalizability of face-to-face meetings on different specialties and across the health care continuum.

Since the enactment of the ACA (2010), a plethora of call centers have been established in the United States primarily to conduct telephonic case management. Interestingly, there are no recommended policies and standards for commercial or hospital-based post-hospital discharge phone call programs to follow. Hospital phone call programs are simply calling by chance without informing the patients. There are no federal or state regulations or accrediting agencies responsible for monitoring the operations and safety of these call center programs and many operate across state lines. Health policy makers should explore possible systems and guidelines to monitor the activities and outcomes of post-hospital discharge phone call programs in the United States. The legal implications and professional licensing issues for RNs conducting telephonic case management that cross state borders should be explored.

Telephone follow-up can truly streamline care transitions, and it is significant for health policy makers to establish a gold standard on the acceptable reach rate or completion rate for health care organizations. As Harrison et al. (2014) stated:

> The effectiveness of posthospital discharge phone call programs may be more related to whether patients can answer a phone call than to the care delivered by the phone call. Programs would benefit from improving their ability to perform phone outreach while simultaneously improving the care delivered during the calls (p. 1519).

Limitations

This review sought to identify interventions related to increasing TFU reach rates in an inpatient hospital setting, thus was limited to studies using care coordination programs with TFU as an essential component. Because most care coordination models/programs were established because of the enactment of the ACA, the research has been limited to the United States; other relevant international studies may have been missed. In addition, this review focused only on adult populations and the findings would be limited if applied to pediatric patients.

Conclusion

This review supports using face-to-face meetings prehospital discharge may effectively increase TFU reach rates post-hospital discharge and may inform nursing case management practice. In addition, this review found that most existing studies used a percentage calculation to determine TFU reach rates. Only two studies used robust quantitative analyses to demonstrate how face-to-face meetings directly contributed to increased TFU reach rates (Menchine et al., 2013; Vergara et al., 2017). To answer the clinical practice question, "What is the best practice for increasing telephone follow-up reach rates post-hospital discharge?" it is difficult to rely on the current evidence to change clinical practice to increase the reach rates of post-hospital discharge phone call programs. There is a need for further research to identify the most effective methods to reach patients post-hospital discharge. There is also an opportunity for health policy makers to establish guidelines for safety and quality monitoring of phone call programs that crosses state lines.

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