

Table 1: Characteristics of Included Studies

Author	Purpose	Setting Sample	Intervention (I)/ Comparison (C)	Results and Findings	Comments
Design					
Adams, et al., 2014 ⁶	To evaluate the effectiveness of the re-engineered discharge process on 30-day all cause readmission rates and improved patient family involvement in discharge process	n = 336 medical surgical patients hospitalized on a 30-bed Medical Surgical Unit in a Rural Community Hospital in Southwestern Pennsylvania comprised the intervention group.	I: Standardized admission and discharge instructions, post discharge appointment with provider, discharge medication reconciliation and a follow-up phone call. C: Usual discharge planning included follow-up appointment scheduled prior to discharge and patient education without family present.	28 (8%) patients were readmitted within 30 days of discharge. 5 (17.8) of the 28 readmitted patients had the same diagnosis for both admissions. The hospital readmission rate went from 44% at baseline to 8% over the 120 days of project data collection. This resulted in a 32% reduction in readmission rates. 99% reported receiving written information regarding their medication regimen, 94% reported they had received information about their specific disease/condition, and 95% received information regarding when to seek medical attention.	Of the patients readmitted 50% had a post discharge follow-up appointment scheduled with their physician, 43% went for their scheduled follow-up appointment with their provider, 43% received their transition record prior to discharge, and 64% of the primary care providers received a copy of the patient transition record. Potential for response bias as 24% of patient/family questionnaires were returned.
Prospective Cohort					
Altfeld, et al., 2012 ¹⁸	To identify needs encountered	720 general medical patients ≥ 65 years old	I: Enhanced Discharge Planning Program (EDPP)	There was no significant difference between the EDPP and usual care group in	The majority of patients had problems that emerged only after

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Design RCT	by older adult patients after hospital discharge and assess the impact of a telephone TOC intervention on stress, healthcare utilization, readmission, and mortality.	and hospitalized at Rush University Medical Center. Inclusion: Discharged home with > 7 medications and one of the following: 1) Lives alone 2) No support system 3) High fall risk 4) Previous admission within the last 12 months 5) Lack of emotional support 6) Psychosocial need identified	(n = 360) Telephone follow-up at 30 and 60 days post discharge, psycho-social assessment, patient & care-giver stress assessment, and physician follow-up C: Usual care group (n = 360) received conventional discharge care with no post discharge contact between staff and patients/ caregivers	patient stress, caregiver stress, general health rating and 30 day readmission and mortality. EDPP group patients were significantly more likely to have made and kept follow-up appointments 29.2% of the EDPP group initiated contact for additional assistance.	discharge. Problems in receiving home health services were experienced by half of those for whom home health was ordered at discharge.
Amin, et al., 2014 ¹¹ Retrospective Cohort study	To compare the effect of unit based and service based care management	n = 1474 initial n = 1444 post intervention >18 years old inpatient discharged from	I: Service based care management system. C: unit-based care management system.	Following implementation of service based care management 30-day all cause readmission went from the comparison rate of 11.42% to 10.49% and related	The results of this study may have been influenced by an organizational focus on reducing readmission rates in patient with

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Design	systems on 30-day readmission rates and patient satisfaction.	an Tertiary Academic Medical Center in Southern California		readmission rates went from 5.43 to 4.58%. Mean patient satisfaction rates went from 78.9 in the comparison to 77.8 in the intervention group.	heart failure, acute myocardial infarction, and pneumonia.
Bisiani, et al., 2015 ¹⁹	Effect of two Case Management Models on reducing readmission rates	n = 978 > 65 years old Community hospital in New York	I: (n = 543) collaborative case management patient care rounds focused on care progression and discharge planning. C: (n = 435) usual case management.	The mean length of stay between the two groups (4.86 usual care vs 6.63 collaborative care) did not significantly differ (p=.2), nor were readmission rates (17/435 vs. 38/543) significantly different.	Retrospective chart audit. Pre-intervention group included records from May 1, 2011 to May 31, 2011. Post-intervention group included records from May 1, 2012 to May 31, 2012. All records pulled based on ICD-9 coding.

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Coleman, et al., 2006 ³	To examine the effectiveness of a care transition intervention to reduce hospital readmission rate	750 community dwelling nonpsychiatric patients ≥ 65 years of age and who were admitted to a contracted hospital in an integrated health system in Colorado. Participants lived with a predefined geographic location of the hospital, had a working telephone, were English speaking, no documentation of dementia, and had no plans to enter hospice.	I: (n = 379) Transitions coaches met with the patient before discharge and to introduce a personal health record, for a home visit 48-72 hours post discharge for medication reconciliation. Transition coaches then maintained telephone contact with the patient and caregiver three times per week for 28 days post hospitalization. C: (n = 371) Discharge information provided to patient at time of hospital discharge.	Intervention group patients had significantly lower 30 day readmission rates (8.3 vs. 11.9) and significantly lower 90 day readmission rates (16.7 vs. 22.5) when compared to control group patients. 180 day readmission rates did not significantly differ between the two groups (25.6 vs. 30.7).	The intervention and control groups did not significantly differ in demographic characteristics, chronic disease score, or hospital utilization
RCT					
Goldman, et al., 2014 ⁴	To examine whether a peridischarge , nurse-led intervention	Urban hospital in Northern California 700 hospitalized	I: (n = 347) In addition to usual care, in-hospital, one-on-one self-management education given by a	There was no difference in number of ED visits or readmissions between the usual care and the nurse-led, in hospital discharge support	Staff collecting outcomes data were blinded to study group.
RCT					

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Design	decreased ED visits or readmission rates among older adults admitted to a safety net hospital.	adults ≥ 55 years with anticipated discharge to the community who spoke English, Spanish, or Chinese.	dedicated language concordant RN combined with a telephone follow-up from a NP. C: (n = 352) RN review of the discharge instructions. If requested by the team the hospital pharmacy provided 10-day medication supply and a social worker assisted with discharge.	intervention group.	
Grafft, et al., 2010 Medical Records Review, retrospective	Effect of follow-up arrangements at hospital discharge on 30-day hospital readmissions, emergency department visits, or mortality	Mayo Clinic, Rochester, Minnesota n = 4989 patient records Discharged general medical inpatients who had discharge instructions with follow-up	Documentation of follow-up appointments made with either primary care provider or specialist which included specific date, time, and location or physician.	3037 patient records (60.9%) contained detailed follow-up appointment instructions. No significant associations were found between the presence of a scheduled follow-up appointment at discharge and related hospital readmissions within 30 days.	Retrospective medical records review. Follow up Appointment made prior to discharge

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Design		appointments documented			
Harrison, et al., 2011 ⁹	To compare 30-day hospital readmission rates in persons who received a phone call within 14 days of hospital discharge to those who did not.	Retrospective record review of members n = 30, 272 Medicare Advantage members, enrolled in a chronic disease management program in calendar year 2008.	I ¹ : (n = 6,920) Hospital Discharge Campaign (HDC) Post discharge follow up phone calls within 14 days to ensure patient understanding of discharge order post hospital discharge. I ² : (n = 4,311) Hospital Discharge Campaign (HDC) Post discharge follow up phone calls after 14 days. C: (n = 19,041) No post discharge phone calls.	Members who do not receive a call within 14 days after discharge were 1.3 times more likely to be readmitted to the hospital within 30 days of discharge than those who did.	The readmission rate was highest on days 2 and 3 post discharge. The median time to post discharge phone call was 7 days.
Cohort Study					
Hitch, et al., 2016 ⁵	To compare the 30-day hospital readmission rates for	Mountain Area Health Education Center Family Medicine Clinic, Ashville, North	I: (164 at-risk patients with 188 index discharges) Transition Care Management (TCM)	Patient' who participated in the TCM had a significantly lower 30-day hospital readmission rate. In the usual care group there was a 14.2 %	Retrospective medical records abstraction of hospital discharge summaries.
Cohort Study					

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	patients at increased risk for readmission before and after implementation of a team-based TCM service.	Carolina n = 322 Inpatient adults Discharged inpatients with moderate or high risk for hospital readmission	Intervention included post discharge nurse contact, medication reconciliation, and physician follow-up. C: (100 at risk patients with 134 index hospital discharges.): Usual discharge planning	rate while in the TCM group there was a 5.3% readmission rate.	
Jack, et al., 2009 ⁸ Randomized Controlled Trial	To test the effect of a Nurse Discharge Advocate in reducing emergency room visits and readmission rates.	General Medical Urban, Academic, Safety Net hospital setting in Boston, Massachusetts n = 749 Inpatient adults with a mean age of 49.9 Hospitalized inpatients who spoke English	I: (n = 370) Nurse Discharge Advocate Intervention to facilitate post discharge follow-up appointment, medication reconciliation, patient education, and written discharge plans. Follow-up phone call post discharge by hospital pharmacist. C: (n = 368) usual care	Participants in the intervention group had a lower rate of hospitalization utilization than the usual care group (0.314 vs. 0.451 visits per month). Incidence rate ration of 0.695. The pharmacist found that 65% (126/195) intervention participants who completed medication review had at least 1 medication problem and 53% (n=103) needed corrective action.	Block randomization.

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Kashiwagi, et al., 2012 ¹²	Compared readmission rates in patients scheduled for follow-up \leq 14 days, \geq 15 days, or with no follow-up appointment scheduled.	n = 1044 Inpatient adults discharged home Tertiary Care Center	I ¹ : (n = 518) Discharged home with follow-up scheduled \leq 14 days I ² : (n = 52) Discharged home with follow-up scheduled \geq 15 days C: (n = 474) No follow-up appointment scheduled	There was no significant difference in 30-day readmissions when comparing patients with follow-up made within 14 days of discharge when compared to those with follow-up 15 days or longer from discharge (p=.36); when comparing follow-up 15 days or longer versus no-follow-up (p=.25); and follow-up within 14 days and no follow-up (p=.75).	Did not examine kept/missed appointments.
Mabire, et al., 2015 ¹³	Examined Relationship between discharge planning: 1) readiness for discharge and 2) unplanned health care within 30 days of hospital discharge	n = 235 Medical Inpatients > 65 years old discharged home 4 regional hospitals in Switzerland ranging from 137 to 914 beds	I: Transitional care Discharge planning (n = 235) Advanced Practice Nurse, Early comprehensive assessment, Information/education, Patient participation, Coordination, Pre-discharge assessment, Post discharge Follow-up	The relationship between nursing discharge planning and 30-day risk of hospital readmission revealed an inverse association (OR = 1.08), p =.05). Results did not show a significant association between nursing discharge planning components and unplanned overall health (OR = 1.08, p = 0.05).	Medical record review to determine extent and implementation of discharge planning interventions Telephone contact 30 days post discharge No patient received the full set of seven discharge components.
Misky, et al.,	Effect of	University of	I: (n = 65) Primary	The rate of timely PCP follow	The effects of patients

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Design 2010 ⁷ Prospective Cohort Design	timing on Primary Care Provider follow up post hospital discharge	Colorado Hospital n = 65 Patients admitted to an Internal Medicine Service in a tertiary care center	Care Provider Intervention: Follow up within 4 weeks of hospital discharge	up was 49%. Patients lacking timely PCP follow-up were 10 times more likely to be readmitted (OR = 9.9, p = .04). Lack of insurance was associated with lower rates of PCP follow-up but did not increase readmission rate or LOS (OR = 1.0, p = .96)	having post discharge follow-up such as home health nurse, pharmacist, or phone advice follow-up after hospital discharge were not investigated.

Legend of abbreviations: ED = Emergency Department, RCT = Randomized Controlled Trial, RN= Registered Nurse, NP= Nurse

Practitioner, TCM = transitions of care model, PCP = Primary Care Provider, OR = Odds Ratio