

Supplemental Table 5. Characteristics of nonrandomized studies

Study Country # Enrolled # of Arms		Eligibility	Population High Risk? Mean Age (SD) Female % Race % Living Alone % Top 3 Conditions	Outcomes Reported ^a Outcome Timing Primary Outcome	Risk of Bias for Objective and Patient- Reported Outcomes ^b
Single-Strategy Interventions					
<i>Discharge Planning</i>					
Arendts, 2012 ¹ Australia 5265 2		Inclusion: Aged ≥65; 10 conditions including UTI, respiratory infection, fall with minor injury, hip or knee pain, back pain, cardiac failure, angina pectoris, syncope, TIA, new onset confusion or delirium Exclusion ^c : Need for immediate resuscitation; triage to critical care bay in ED or other urgent medical input needed	High risk: Yes, diagnosis Age: 79.6 (8.0) Female: 55% Race: NR Living alone: 30% Top 3: Angina, cardiac failure, respiratory infection	Hospitalization: At index ^d visit Timing: At index visit Primary outcome: Proportion of hospital admissions from ED	Objective: High Patient: NA
Arendts, 2013 ² Australia 2196 2		Inclusion: Aged ≥65 Exclusion: cognitively impaired without surrogate; ED arrival and discharge between 21:00 and 7:00	High risk: Yes, admitted Age: 77.5 (8.0) Female: 56% Race: NR Living alone: 31% Top 3: Fall (no injury or minor injury), ischemic chest pain, non-traumatic musculoskeletal pain	Mortality Hospitalization: After index visit ED readmission Timing: 28 days Primary outcome: ED visit within 28 days	Objective: High Patient: NA

Study Country # Enrolled # of Arms		Eligibility	Population High Risk? Mean Age (SD) Female % Race % Living Alone % Top 3 Conditions	Outcomes Reported ^a Outcome Timing Primary Outcome	Risk of Bias for Objective and Patient- Reported Outcomes ^b
<i>Case Management/Transition of Care</i>					
Pedersen, 2016 ³ Europe 1330 2		Inclusion: Aged ≥70; pneumonia, COPD, delirium, dehydration, UTI, constipation, anemia, heart failure, other infections Exclusion: Terminal at admission; already in a follow-up program with the geriatric team; living out of the municipality; transferred to another hospital department	High risk: Yes, diagnosis Age 86.4 (6.2) Female: 62% Race: NR Living alone: 52% Top 3: Urinary tract infection, other infections, pneumonia	Mortality ED readmit Hospitalization: After index Timing: 30 days Primary outcome: ED Readmission rate	Objective: Low Patient: NA
<i>Medication Management</i>					
Mortimer, 2011 ⁴ Australia 199 2		Inclusion: Aged ≥65 with chronic condition; aged ≥70 without chronic condition; Australasian triage category 2 Exclusion: Australasian triage category 1 (requiring immediate attention)	High risk: No Age: 77.3 (NR) Female: 54% Race: NR Living alone: NR Top 3: "Medical" patient, "surgical" patient, third condition NR	Patient experience ED readmission Timing: Index, 14 & 28 days Primary outcome: NR but power calculation for ED length of stay and ED readmission	Objective: High Patient: High

Study Country # Enrolled # of Arms		Eligibility	Population High Risk? Mean Age (SD) Female % Race % Living Alone % Top 3 Conditions	Outcomes Reported ^a Outcome Timing Primary Outcome	Risk of Bias for Objective and Patient- Reported Outcomes ^b
Multi-Strategy Interventions					
<i>Discharge Planning PLUS Case Management/Transition of Care</i>					
Bond, 2014 ⁵ Canada 1820 2		Inclusion: Aged ≥65; ICD-10 discharge diagnosis of fall, fracture, sprain, strain, laceration, contusion, superficial injury, or bursitis Exclusion: Discharge diagnosis of hip fracture or trimalleolar ankle fracture; patients who presented to ED for a musculoskeletal complaint within previous 30 days	High risk: Yes, diagnosis and falls Age: 80.5 (8.0) Female: 70% Race: NR Living alone: NR Top 3: NR	Hospitalization: At index visit Hospitalization: After index visit ED readmission Timing: 30 days Primary outcome: Hospital admission rate at index visit	Objective: High Patient: NA
Miller, 1996 ⁶ USA 770 2		Inclusion: Aged ≥65 Exclusion: Acute illness too severe to permit participation; having <1 hour stay/departure without being seen; revisit by a previously included patient; lack of proxy for patients who did not appear to understand informed consent	High risk: No Age 75.0 (7.0) Female: 60% Race: White (67%), Black/Other (32%) Living alone: 35% (only for intervention group; control data not provided) Top 3: Delirium, depression and undernutrition	Functional status: ADL/IADL, quality of life Mortality Hospitalization: After index visit (# nights) ED readmission Costs Timing: 3 months Primary outcome: NR	Objective: High Patient: High

^a Outcomes limited to those prioritized for this review. Bolded text reflects outcomes with a positive effect of intervention strategies.

^b Objective outcomes (*ie*, non-patient-reported outcomes): mortality, hospitalization, ED readmission. Patient-reported outcomes: health-related quality of life, functional status, patient experience.

^c Exclusion criteria shown are limited to those relevant to this review.

^d Index refers to the emergency department visit during which study enrolment occurred.

Abbreviations: ADL=activities of daily living; COPD=chronic obstructive pulmonary disease; ED=emergency department; IADL=independent activities of daily living; ISAR=identification of seniors at risk; NA=not applicable; NR=not reported; SD=standard deviation; SF-36=short-form health assessment questionnaire; TIA=transient ischemic attack; UTI=urinary tract infection

References

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