**Appendix**

**Part 1. MEDLINE Search Terms**

hospitalization [mh:noexp] OR emergency services, hospital [mh] OR hospitals, pediatric [mh] OR patient discharge [mh] OR patient readmission [tiab] OR ((hospitalized [tiab] OR hospitalization [tiab]) AND (discharge [tiab] OR discharged [tiab] OR readmission [tiab] OR readmitted [tiab]))

AND

continuity of patient care [mh] OR after care [mh] OR case management [mh] OR "continuity of care" [tiab] OR (coordination [tiab] AND care [tiab]) OR aftercare [tiab] OR ("follow up" [tiab] AND (care [tiab] OR "primary care provider" [tiab] OR pediatrician [tiab]))

AND

child [mh] OR (child [tiab] OR children [tiab] OR infant [tiab] OR adolescent [tiab] OR pediatric [tiab])

 All searches were limited to English language.

CINAHL Search Terms

Hospitalization OR hospitalized OR emergency services OR emergency department OR emergency room OR patient discharge OR patient readmission

AND

Continuity of patient care OR after care OR aftercare OR case management OR “continuity of care” OR (coordination AND care) OR “Care coordination” OR (“follow up” AND (“primary care provider” OR pediatrician OR care))

AND

Child OR children OR infant OR adolescent OR pediatric

CINAHL searches were limited to English language and excluded PubMed Indexed article

**Part 2. Violence Interventions**

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| **Author, year** | **Study Design** | **Age** | **Inclusion** | **Exclusion** | **Intervention** | **Control** |
| Aboutanos18 2011 | RCT | 10-24 yrs | Intentionally injured patients admitted at single institution in Virginia | Victims of intimate partner violence, sexual assault, self- inflicted injuries, or child abuse  | Hospital-based brief violence intervention with 6 months of community case management (n=39) | Hospital-based brief violence intervention alone (n=36) |
| Shibru19 2007Becker202004 | Case Control | 12-20 yrs | Hospitalized for violent injury at single institution in California | Excluded from analysis if non-compliant with intervention | Trained peer initiated relationship with patient in hospital or shortly after discharge. Included home visits, assistance with job placement, court hearings, school enrollment, and housing (Shibru n=75; Becker n=43) | Shibru: Patients admitted during study period but declined participation in the intervention (n=79)Becker: Patients hospitalized in year prior to study period (n=69)  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Author Year** | **Study Design** | **D&B score\*** | **Adequately Powered\*\* (Yes/No)** | **Timing of Outcome** | **Major Findings** | **Major Limitations** |
| Aboutanos18 2011 | RCT | 13 | Readmission: N/AED: No  | 6 weeks and 6 months | No difference in total number of ED visits; Increase in number of "appropriate" ED visits in intervention at 6 months | Lost 19% to follow up; Determination of "appropriate" ED visit is not validated; Not all comparisons described in methods |
| Shibru19 2007Becker202004 | Case control | Shibru: 12Becker: 12 | Readmission: NoED: N/A | 6 months and 18 months | No difference in readmission rates Shibru reports cost savings  | Inclusion criteria are unclear and included participating in intervention (over 10% were noncompliant with intervention and no intention to treat); Analyses did not adjust for many potentially important confounders In addition to above in Shibru: Patients who declined intervention were eligible to be controls; Results of logistic regression are presented as relative risks; Cost savings calculations rely on reduction in rates of any “criminal justice involvement” but is based on estimated reduction incarceration costs |

\* Out of a possible 28 points

\*\* Adequate sample size to detect a decrease by 20% from the control rate, assuming equal sample size in both arms and power=0.8. Studies that demonstrated a significant change in outcome are defined as having adequate power.

*Violence interventions*

Three studies focused on hospital-based violence interventions to reduce criminal recidivism and reinjury (defined as subsequent ED use, rehospitalization or both). Two studies evaluated the same program (Caught in the Crossfire).19,20 While the studies did not demonstrate a change in the total number of subsequent hospitalizations or ED visits, the studies were not powered to detect a difference in these outcomes. However, as reported by Aboutanos18, nearly 1/3 of the patients in their study used the emergency room (many of these visits were deemed “inappropriate”) in the six weeks following their index hospital discharge, suggesting the potential value of an intervention to enhance care coordination following injury.

**Part 3. Discharge Interventions in Specific Pediatric Conditions**

*Asthma interventions*

Eight studies focused specifically on improving discharge care transitions for asthma. All but one intervention28 included a component of enhanced inpatient education and all but two22,27 included some component of outpatient follow-up. Three randomized control trials demonstrated reductions in hospital readmission23,25,26 and two of these also reported reductions in ED visits. 23,25 All three used dedicated asthma nurses to provide enhanced inpatient education, and for two studies25,26, the interventions were conducted by a single individual with expertise in asthma care. Two of these successful interventions provided outpatient follow-up either by phone23 or outpatient visit26, while one provided a general telephone resource for post-discharge assistance.25 Two of these studies25,26 also supplied steroids to some members of the intervention group.

*NICU interventions*

Five studies assessed interventions to improve discharge transitional care for neonates. Of note, three of the NICU studies were designed to examine the feasibility and safety of earlier discharge timing with enhanced after-discharge follow up. 32-34 Three studies showed a reduction in subsequent ED use following initial hospitalization. 30-32 One provided enhanced engagement with families prior to discharge and arrangement of follow up and home health. 32 The second was initiated around the time of birth but focused mainly on expanded outpatient support. 30 The third reported decreased ED utilization between 6-12 months corrected age in an intervention group receiving both a home visit intervention and a home health intervention, compared to children who received one intervention, the alternative intervention, or no interventions.31 However, the outcome timing and analysis plan were not discussed in the methods section of the paper. While these three studies used different strategies for improving transitional care, similarities were evident. All three included early engagement and education with families, with various degrees of home visitation and expanded access to health care providers and resources following discharge.

*Cancer Intervention*

One study examined whether education and support provided to families of children newly diagnosed with cancer reduced unplanned readmissions.29 The children in the intervention group lived in the city of enrollment and received frequent needs assessment, education, home visits, fever guidance, telephone consultation, and a manual for home care. Children in the control group, who lived outside of the city and who received standard hospital care without formal cancer education, had more unplanned readmissions.