

Table S1: Predictor variables included in the readmission prediction models.

| Variable Type | Prediction Model Prior to Admission (PT-PDR) | Prediction Model at Admission (AD-PDR) | Prediction Model at Hospital Discharge (DS-PDR) |
|--|---|---|--|
| Demographics | | | |
| Age | | | |
| Race | X | X | X |
| Gender | | | |
| Socioeconomic status | | | |
| Insurance type | X | X | X |
| Provider density | | | |
| Designated medically underserved area (MUA) | X | X | X |
| History of hospital visits | | | |
| Prior Treat-and-Release ED visits | X | X | X |
| Prior hospital readmission | | | |
| Community-level social determinants of health | | | |
| The percentage of people with an income below 100% federal poverty level (FPL) | | | |
| The percentage of homes with no vehicles | X | X | X |
| The percentage of people with no high school diploma | | | |
| The percentage of the unemployed person | | | |
| Individual-level social determinants of health | | | |
| Potential health hazards related to children's family conditions | | X | X |
| Diagnosis at admission | | | |
| | | X | X |
| Hospital characteristics | | | |
| Children's hospital status | | | |
| Hospital location | | X | X |
| Hospital ownership type | | | |
| Hospital bed size | | | |
| Hospital travel distance | | | |
| | | X | X |

| | |
|----------------------------------|---|
| Diagnosis during hospitalization | X |
| Hospital procedures | X |
| Discharge planning | X |
| Hospital length of stay | X |

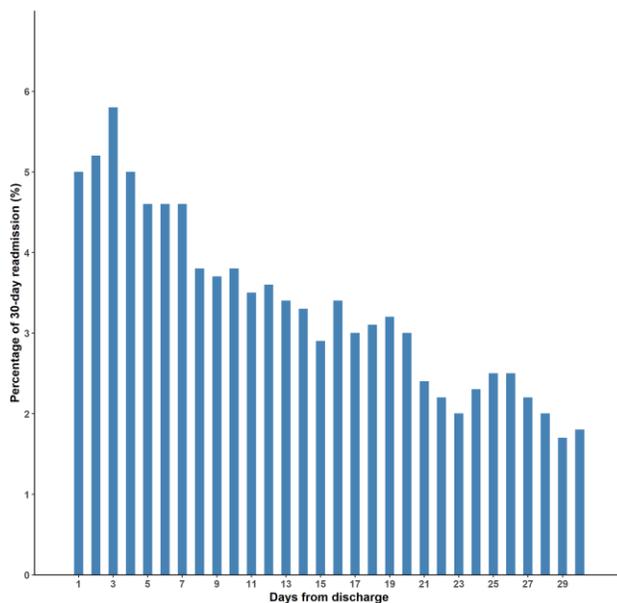


Figure S1: Timing distribution (%) of pediatric readmission after hospital discharge.

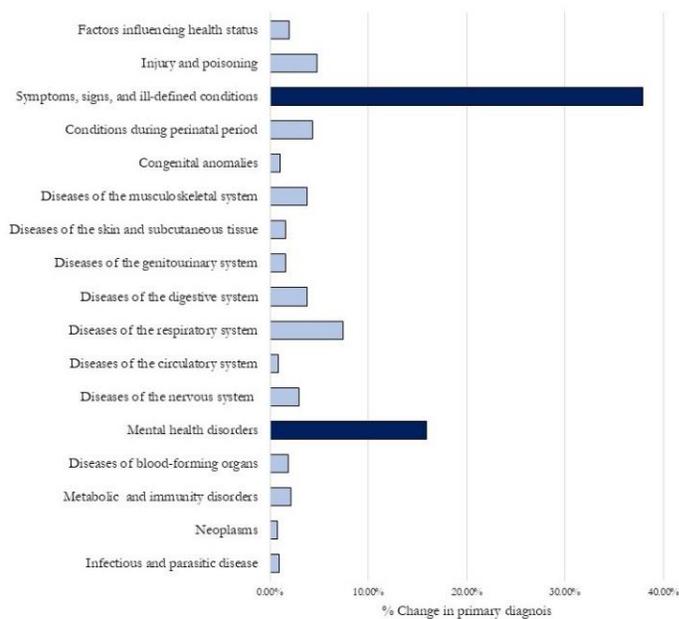


Figure S2: Changes (%) in primary diagnosis after hospital admission by diagnosis groups.