

Appendix C

Table C.1. Patient level variables (with operationalized definitions, supporting evidence and data sources) used as potential predictors for teams' shared mental models of discharge readiness

Variable	Source	Operationalized	Evidence
Principal diagnosis	Electronic Medical Records (EMR)	Hospital admission diagnosis (heart failure, acute myocardial infarction, pneumonia, hip replacement, knee replacement, chronic obstructive pulmonary disease) as identified from EMR via admission or after visit summary note.	3, 22, 41-46
Age	Patient Survey	Number of years alive	30, 42-43, 46
Gender	Patient Survey	Male, female	42, 44, 46
Marital status	Patient Survey	Patient reported marital status (Married, unmarried)	28, 42, 44
Educational attainment	Patient Survey	Patient reported highest level of education completed (Some high school; High school degree; Some college or greater education)	2, 28, 45-46
Employment status	Patient Survey	Patient reported employment status (Working, Not working/retired)	2, 28, 44, 49
Insurance type(s)	Patient Survey	Patient reported insurance payer (Medicare only; Dual Medicaid and Medicare; Private/group plan only; Private/group plan and Medicare)	41-43, 46
Number of recent hospital admissions	Patient Survey	Patient reported number of hospital admissions in the last 12 months	41-43, 46
Length of hospital stay	EMR, Patient Survey	Duration of days admitted during index hospitalization	43, 47
Number of medications at discharge	EMR	Number of medications recorded on patient's home instruction medication list	47-48
Number of comorbidities	EMR	Number of comorbidities on physician's discharge summary note problem list	43, 48
Cognitive status	Patient Survey	Pfeiffer's Short portable mental status (SPMSQ) was used to measure patient level of cognition; ranges from 0 (<i>intact</i>) to 10 (<i>severe</i>) on day of discharge ²⁹	45

Table C.2. System level variables (with operationalized definitions, supporting evidence and data sources) used as potential predictors for teams' shared mental models of discharge readiness

Variable	Sources	Operationalized	Evidence
Teams' professional experience	Clinician Surveys	The number of years post-professional school of the teams' nurse, coordinator, physician- respectively .	10, 32-33, 50
Teams' RN educational background	Nurse Survey	Education level of nurse in the discharge team (Associate's Degree in Nursing [ADN], Bachelor of Science in Nursing [BSN]).	31, 49
Teams' DC educational background	Coordinator Survey	Education level of the coordinator in the discharge team (ADN, BSN, Master of Social Work [MSW]).	13, 49
Number of float staff	Triangulated via Clinician Surveys	Count of the number of providers who do not work on a dedicated unit that were on the discharge team.	13, 51
Team member communication	Triangulated via Clinician Surveys	For each discharge event the providers were asked to indicate how many times they communicated with the following individuals on the day of hospital discharge: patient, family, RN, DC, and MD. Responses were triangulated to determine if all team members (RN, MD, DC) communicated with each other on the day of discharge (Yes = Full team communication /No = Not full team communication).	1-4, 8, 13
Patient-team communication	Triangulated via Clinician and Patient Surveys	For each discharge event the providers were asked to indicate how many times they communicated with the following individuals on the day of hospital discharge: patient, family, RN, DC, and MD. Responses were triangulated to determine if all team members communicated directly with the patient on the day of hospital discharge (Yes/No).	1-3, 10, 13, 41, 23, 64
Quality of communication on day of discharge	Triangulated via Clinician Surveys	Adapted from the Team Survey ³³ Likert scale (<i>strongly disagree</i> [1] to <i>strongly agree</i> [7]) to answer: "overall, the team communicated appropriately while discharging this patient from the hospital." Aggregated to the team level by averaging the RN, MD, and DC scores.	4-6, 13, 47
Quality of teamwork on day of discharge	Triangulated via Clinician Surveys	Adapted from Millward and Jeffries Team Survey ³³ Likert scale (<i>strongly disagree</i> [1] to <i>strongly agree</i> [7]) to answer: "I feel that we worked together as a team to prepare this patient for hospital discharge." Aggregated to team level by averaging the RN, MD, and DC scores.	4-6, 13, 47
New day of discharge team	Triangulated via Clinician Surveys	For each event clinicians reported how many days they had worked with the patient. If all providers had worked with the patient for more than one day, then the team was determined to be an experienced discharge team. If there was at least one member of the discharge team for whom it was their first day working with the patient, then the team was determined to be a new day of discharge team. ⁹	40, 49
Teams' perception of unit safety	Triangulated via Clinician Surveys	Team's average score of unit safety using the Global Patient Safety Grade ⁵² scale; 1 (<i>falling</i>) to 5 (<i>excellent</i>) unit culture of patient safety	52-53

Note: RN=Nurse, DC=Coordinator, MD=Physician

Additional References for Appendix C

41. Goodman D, Fisher E, Chang C. After hospitalization: A Dartmouth atlas report on readmissions among Medicare beneficiaries. Princeton, NJ: Robert Wood Johnson Foundation. 2013.
42. Ross JS, Mulvey GK, Stauffer B, Patlolla V, Bernheim SM, Keenan PS, Krumholz HM. Statistical models and patient predictors of readmission for heart failure: A systematic review. *Arch of Intern Med*. 2008;168:13:1371-1386.
43. Van Walraven C, Bennett C, Jennings A, Austin PC, Forster AJ. Proportion of hospital readmissions deemed avoidable: A systematic review. *CMAJ*. 2011;183:7:E391-E402.
44. Nguyen OK, Makam AN, Clark C, et al. Predicting all-cause readmissions using electronic health record data from the entire hospitalization: Model development and comparison. *J Hosp Med*. 2016;11:7:473-480.
45. Lau D, Padwal RS, Majumdar SR, et al. Patient-reported discharge readiness and 30-day risk of readmission or death: a prospective cohort study. *Am J of Med*. 2016;129:1:89-95.
46. Krumholz HM, Chaudhry SI, Spertus JA, Mattera JA, Hodshon B, Herrin J. Do non-clinical factors improve prediction of readmission risk?: Results from the Tele-HF study. *JACC: Heart Fail*. 2016;4:1:12-20.
47. Gittel JH, Fairfield KM, Bierbaum B, et al. Impact of relational coordination on quality of care, postoperative pain and functioning, and length of stay: a nine-hospital study of surgical patients. *Med Care*. 2000;38:807–819.

48. Wimmer BC, Dent E, Bell JS, Wiese MD, Chapman I, Johnell K, Visvanathan R: Medication regimen complexity and unplanned hospital readmissions in older people. *Ann Pharmacother*. 2014;48:9:1120-1128.
49. Gillespie BM, Chaboyer W, Longbottom P, Wallis M. The impact of organizational and individual factors on team communication in surgery: A qualitative study. *Int J of Nursing Stud*. 2010;47:6:732-741. doi:10.1016/j.ijnurstu.2009.11.001; 10.1016/j.ijnurstu.2009.11.001
50. Meltzer D, Manning WG, Morrison J, Shah MN, Jin L, Guth T, Levinson W. Effects of physician experience on costs and outcomes on an academic general medicine service: results of a trial of hospitalists. *Annals of Internal Medicine*. 2002 Dec 3;137(11):866-74.
51. Canonne C, Aucouturier JJ. Play together, think alike: Shared mental models in expert music improvisers. *Psychology of Music*. 2016;44:3:544-58.
52. Sorra JS, Dyer N. Multilevel psychometric properties of the AHRQ hospital survey on patient safety culture. *BMC Health Serv Res*. 2010;10:199.
53. Weaver SJ, Lubomksi LH, Wilson RF, Pfoh ER, Martinez KA, Dy SM. Promoting a culture of safety as a patient safety strategy: a systematic review. *Ann Intern Med*. 2013;158(5.p.2):369-74.