Appendices

A. Observation tool used for site visits
B. Qualitative theme development process
C. Additional contextual factors: Hospital, skilled nursing facility, and county characteristics

Appendix A - Observation tool (pg. 1/3)

Observation Checklist: Hospital

Key processes, people & probes to observe:

Process	People	Probes
Decision to send to SNF ☐ First discussion of SNF ☐ Team communication ☐ Entering consults ☐ Conducting consults (e.g. SW SNF consult) ☐ Interdisciplinary rounds	☐ Social Work ☐ Medical Provider ☐ PT/OT ☐ Nurses ☐ Discharge planner ☐ Others!	☐ What is the need for SNF? ☐ Who brought it up? ☐ How are consults entered? ☐ What happens next? Can I observe? ☐ How do they communicate?
Patient Interactions ☐ First discussion of SNF ☐ Consults with medical staff ☐ Patient education & teach-back re: SNF, medications, self-care ☐ SNF selection	☐ Social Work ☐ Medical Provider ☐ PT/OT ☐ Nurses ☐ Pharmacist ☐ Others!	☐ Do they have templates? ☐ Who does the education? ☐ How is caregiver involved, if at all?
Information Transfer Hospital → SNF ☐ Orders to SNF ☐ Medication information ☐ SNF patient liaison interactions ☐ Hospital RN to SNF RN hand-off ☐ Hospital MD to SNF RN handoff ☐ Hospital MD to SNF MD handoff	☐ Social Work ☐ Medical Provider ☐ SNF Nurse ☐ Hospital Nurses ☐ Pharmacist ☐ SNF Liaison ☐ Others!	☐ How and when are orders sent? Who does that? Template? ☐ How do they send medication? ☐ What kind of information is sent? When? ☐ How do they know what SNF wants?
Patient Discharge ☐ Supplies and medications assembly ☐ Sending supplies and meds ☐ Final assessment before discharge by MD, RN ☐ Patient transport to SNF ☐ Medication information	☐ Social Work ☐ Medical Provider ☐ Nurse ☐ Transport person ☐ Front desk person ☐ Others!	☐ When do they put in orders v. when sent? ☐ How do they know SNF wants/capabilities? ☐ What time is patient transferred?

Communication Rating: when observing, think about how people are communicating:

- **0**= no communication observed in this domain
- **1** = one-way communication or communication that was not satisfactory for the person receiving the communication to act on the information
- **2** = two-way communication (person receiving information was able to ask questions/asked questions)
- **3** = closed-loop communication (person receiving information not only allowed to ask questions, but person giving communication has checked for their understanding)

Goals for Observation:

1st choice: Follow the hospital team through the discharge process, asking probing questions along the way

2nd choice: Ask staff to walk you through the process, *e.g. pull up the discharge summary and talk you through it*

3rd choice: Ask them to tell you about the process and what they do, how they feel about it and what works well/doesn't. Try to get templates of tools/forms they use

Remember to note:

- Where you observed
- Who you observed (roles, groups)
- What you observed (environment/activities/dynamics)
- How it felt (how did the communication feel)
- Key quotes or phrases used
- Follow-up questions you have

General probes

- I saw you did __, can you tell me more?
- Is the normal?
- How do they feel about process?

Appendix A - Observation tool (pg. 2/3)

Observation Notes : Hospital

Date_____ Unit _____
Weekday_____ Researcher _____
Start time (hh:mm)_____ End Time(hh:mm)_____

Postcard consent obtained? Yes No

Artifacts collected (check if collected)

- ☐ Discharge instructions
- ☐ Checklists for patient d/c
- ☐ Patient's *redacted* hospital record for SNF
- ☐ SNF educational/informational materials
- ☐ Other_____

Appendix A - Observation tool (pg. 3/3)

Observation Definitions: Hospital

Discharge planning:

- Planning for hospital discharge while patient is still being treated in hospital. Includes: collaborating with the outpatient provider and taking patient and caregiver's preferences into account can help ensure optimal outpatient follow-up. *Specifically, how need for SNF is identified/assessed*.

Advance Care Planning:

- May begin in the hospital or outpatient setting, involves establishing goals of care, health care proxies, and engaging with palliative care or hospice services, if appropriate.

Medication Safety:

- Taking an accurate medication history, reconciling changes throughout the hospitalization and communicating the reconciled medications regimen to patients and providers across transitions of care process.

Availability, Timeliness, Clarity and Organization of information:

- Post-discharge providers ability to assess and quickly understand information they have been provided before assuming care of patient.

Coordination of Care: Rounds and Team Meetings:

- Rounds, communication with doctors and allied health workers or other nurse(s) regarding care, including on the phone, planning for admission or discharge. Includes debriefing.

Information Transfer:

- Verbal or electronic interaction with other departments and/or with other facilities (e.g. hospital/SNF) related to coordination of patient care and discharge/admissions, providing instructions, referencing written resource materials (e.g. textbooks, phone lists, procedure manuals).

Patient Education:

- Teaching patients and their caregivers about hospital diagnoses, instructions for self-care, medication changes, appointments, and whom to contact if issues arise. Confirming comprehension instructions through assessments of acute (delirium) and chronic (dementia) cognitive impairments and teach-back from the patient/caregiver, providing patients/caregivers w/ educational materials appropriate for health literacy and preferred language.

Moving Patient:

- Escorting patients to another patient care area or department within the hospital/SNF, including discharge. Includes transfer to/ from stretcher/ wheelchair and accompanying a patient to another area for any reason.

Monitoring and Managing Symptoms After Discharge:

- Monitoring for new or worsening symptoms; medication side effects, discrepancies, or nonadherence; and other self-management challenges.

Medication and Medical Supply Preparation:

- Obtaining and making ready medications, IVs, and other necessary supplies. Includes instructions for use (see: information transfer).

Appendix B - Qualitative Theme Development Process

Table 2 Thematic phases[23,26,48] aligned with description of study actions

Phase	Analysis Description
Data Familiarization	• To strengthen credibility, we included a research team with diverse backgrounds (e.g., hospitalist, nurse, public health, anthropologist, qualitative researchers, quality improvement experts) in analysis. • We triangulated and organized data by hospital-SNF sites in Atlas.ti. • Although we *a priori* expected to identify coordinating behaviors (based on the Ideal Transition in Care Framework),[22] data familiarization focused on describing the process as observed in practice. • Three qualitative researchers performed initial rounds of open-coding and memo-ing to capture "process" and "context." • Flow-maps were used to organized data and identify common patterns of transitional processes for the hospital-SNF transfer at each site.
Code Generation	• Initial list of open-codes and raw data examples were shared and discussed with team during code generation. • The team kept an audit trail and reflexibility journals about research, methodological decisions, and thematic development. • Through an iterative team process a unifying flow-map was developed. • Based on the initially developed list of data elements we created five major categories describing the process of preparing hospitalized patients for SNFs.
Theme Refinement	• Themes continued to be refined through memo-ing, coding extracts/entire data set, and diagraming codes with thematic mapping. • Based on the open-coding and the Ideal Transition in Care Framework[22] (which informed the development of the observation tool) we identified a list of all potential sub-processes. • Regular individual debrief sessions were held with key team members to review representative examples and key memos to provide peer examination over methods, emerging themes, and developing conclusions.
Theme Identification	• The strategic focus for identification was determining processes that were present across all cases, yet also were the major drivers in variations in between the high- and low-performing sites. • Based on the flow maps, thematic mapping, and data tables we developed a code hierarchy to collapsing similar codes into themes. • A codebook was developed to define and provide illustrative key examples of themes (stages), subthemes (sub-processes), and common overarching patterns driving performance differences. • Constant comparison techniques were used to identify support for themes common across sites, as well as the consistently different between performance levels. • The process was repeated until no new higher order themes emerged.
Data Reporting	• Focused coding was used to identify representative quotes and examples of themes and subthemes. • The manuscript includes short direct quotes to aid in specific points about interpretation and demonstrate prevalence of themes. • Processes were compiled into Table 2 and Appendix C to aid in transferability and add merit of the analysis. • Standards for Reporting Qualitative Research Guidelines were used to guide write up, as well as enhance transparency and dependability.[17]

Appendix C – Additional contextual factors: Hospital, skilled nursing facility, and county characteristics

Table C1. Description of hospitals factors

Hospital Contextual Factor	Hospital A	Hospital B	Hospital C	Hospital D
Hospital performance category*	Low	Low	High	High
Geographic location	East Coast	South	West Coast	Southeast
Urban vs. rural	Urban	Rural	Urban	Rural
Ownership type	Nonprofit	Nonprofit	Governmental/State	Nonprofit
Teaching status	Non-teaching	Teaching	Teaching	Non-teaching
Magnet status†	Yes	No	Yes	No
Trauma level	I	III	I	NA
No. of SNFs in 25-mile radius of hospital‡	19	20	47	78
No. of inpatient beds	552	669	617	687
No. of total bed days§**	145,373	141,191	174,804	114,933
FTE - Employees on Payroll**	4563	1927	7799	2264
Total Unreimbursed & Uncompensated Care**	$59,226,123	$19,739,810	$213,043,562	$29,220,198
Allowable Disproportionate Share Hospital (DSH) Adjustment Percentage**a	16%	10%	41%	6%
Net patient revenue**	$1,095,412,530	$354,561,198	$1,757,804,442	$527,959,853
Net income (or loss)**	$108,078,915	-$3,776,358	$58,299,498	$77,336,650

*Note: *Hospital performance category 30-day readmission performance category = Defined using a previously published sample of US Veterans Affairs patients[8]; † Magnet status = Excellence nursing and healthy work environments indicator awarded by the American Nurses Credentialing Center; ‡Number of Skilled Nursing Facilities (SNFs) in a 25-mile radius of hospital is based on number of SNFs in the hospital zip code as identified using Center for Medicare and Medicaid Services (CMS) nursing home compare tool; **Determined from the 2015 CMS Cost Report File; § Total bed days = Total number of patient days (all payors); ‖FTE Employees on Payroll is the average number of full-time equivalent employees per year; [a] Allowable Disproportionate Share Hospital (DSH) Adjustment Percentage = defined as the number of Medicare SSI inpatient days from total Medicare inpatient days plus the number of Medicaid, non-Medicare inpatient days from total inpatient days. Indicator of being a safety net hospital, with higher percentage reflecting higher Medicare and Medicaid inpatient caseloads.*

Table C2. Description of county demographics for each hospital from the US Census Community Survey

County Contextual Factor	County A	County B	County C	County D
Hospital ID	Hospital A	Hospital B	Hospital C	Hospital D
Hospital performance category	Low	Low	High	High
Geographic location	East Coast	South	West Coast	Southeast
County population (N)	18,230	413,210	1,552,058	974,996
Race/Ethnicity (% of county)				
White	93.4	59.2	63	82.6
Black	1.8	36.1	10.9	11.1
Asian	3.4	2.1	16.2	3.6
Other	1.4	2.6	9.2	2.7
Median house income	$57,183.00	$45,166.00	$63,902.00	$51,454.00
Percentage of population that graduated from high school	90.7	86.2	87.4	91.1
Percentage of population over 65	21	16.2	14.1	24.8
Percentage of persons with a disability	9.8	9.7	8.2	9.9
Percentage of person in poverty†	10.1	20.8	14.35	11.7

*Note: *Hospital performance category 30-day readmission performance category = Defined using a previously published sample of US Veterans Affairs patients[8]; † Note: Definition of poverty varies by state. Data source: https://www.census.gov/programs-surveys/acs*

Table C3. Skilled Nursing Facility (SNF) characteristics and Medicare Nursing Home Compare ratings

SNF Contextual Factor	SNF A	SNF B	SNF C1	SNF C2	SNF D
Hospital performance category*	Low	Low	High	High	High
Ownership	For-profit	For-profit	For-profit	For-profit	Non-profit
Number of beds	172	174	59	177	120
Hospital preferred SNF	Yes	No	Yes	No	No
Hospital-SNF boundary spanning staff§	Yes	No	Yes	No (SNF liaison at hospital)	No (SNF liaison at hospital)
Overall star-rating‡	3	4	5	3	2
Overall quality star-rating‡	5	4	5	4	5
Inspection star-rating‡	2	4	4	2	2
Staff star-rating‡	2	4	5	4	1
Short-term quality of care star-rating‡	4	3	5	3	5
Long-term quality of resident care star-rating‡	3	4	5	5	5
Percentage of short-stay residents who were re-hospitalized after a nursing home admission‡	22	21.8	18.7	16.6	22.2
Percentage of short-stay residents who have had an outpatient emergency department visit‡	12	5.6	9.2	10.2	5.4
Percentage of short-stay residents who improved in their ability to move around on their own‡	58.1	72.5	71.8	60	57.9
Rate of successful return to home and community from a SNF compared to national average (7.3%)‡	Same as national	Same as national	Better than national	Worse than national	Better than national
Rate of potentially preventable hospital readmissions 30 days after discharge from a SNF compared to national average (49.2%)‡	Same as national	Same as national	Same as national	Same as national	Worse than national

*Note: *Hospital performance category 30-day readmission performance category = Defined using a previously published sample of US Veterans Affairs patients[8]; † Preferred SNF = A SNF that the hospital concentrates on sending patient referrals to for post-acute care; §Hospital-SNF boundary spanning staff are employees that are hired to work in both the hospital and SNF. ‡ Data identified from 2018 Medicare Nursing Home Compare data.[28]*