

## DISCHARGE PLANNING FROM THE HOSPITAL TO THE PRIMARY CARE CLINIC

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**ABSTRACT**

**Discharge planning is an integral component of transitional care. Patients need to have their care needs assessed early in the admission to put in place a robust care plan that can meet the medical, functional, and social needs of the patient. The care plan must then be clearly communicated to the next care provider as well as the patient and his caregiver to avoid gaps during transition across different settings and providers. For patients with complex care needs in the community, an intensive form of primary care far beyond what is offered in traditional primary care is needed. This can be achieved by being connected to the health system and resources, additional efforts in providing the care coordination to navigate the health system, and optimising clinical and social care around the patient's needs.**

**Keywords:**

**Discharge Planning, Transitional Care, Intensive Primary Care**

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**INTRODUCTION**

Perpetual high bed occupancies in hospitals are placing tremendous pressure on acute care resources and hospitals to discharge patients to create beds for patients waiting in the emergency rooms. Our population is also rapidly ageing, with an increasingly complex chronic disease burden.<sup>1</sup> Gaps in care will start to occur if the transition of complex patients through different health care settings and providers is not well coordinated. Good discharge planning in the hospital is a critical component of transitional care interventions to reduce unnecessary hospital stay and unscheduled readmissions.<sup>2,3</sup>

**Discharge planning should start on admission**

Discharge planning should start promptly on admission and suitable discharge destinations and community services be identified early. Delaying the discharge planning will inevitably result in prolonged hospital stay due to unnecessary waiting for step-down care and delayed activation of community services. Hasty, inadequate caregiver training on the day of discharge increases the risk for unscheduled readmissions.

Risk stratification will help to identify high-risk patients as resources are finite and not all patients require equal effort at discharge planning. An 80-year-old patient with multiple

comorbidities and acute functional decline will require more attention and effort in formulating a comprehensive discharge plan than a young patient admitted for gastroenteritis. Readmission risk prediction models are used to rapidly screen through the hundreds of daily admissions to identify a high-risk group.<sup>4,5</sup> Locally, the Singapore General Hospital found that patients who have a LACE<sup>6</sup> (Length of stay, Acuity of admission, Comorbidity of patient, Emergency department utilisation) score  $\geq 10$  had a 5-fold higher risk of readmission.<sup>7</sup> This score is currently used to flag up high-risk patients for appropriate intervention.

**The physician needs to take charge**

Many junior doctors equate discharge planning as a responsibility of the medical social worker (MSW), and hope that a discharge plan would be derived miraculously! Another common misconception is that discharge planning is the formation of a multi-disciplinary team (MDT), consisting of doctors, nurses, MSW, and therapists. While there is face validity that an MDT approach to discharge planning reduces readmissions,<sup>8,9</sup> the physician is still required to lead and direct his MDT. The doctor's role, therefore, is to assimilate information from the MDT to identify the post-discharge care plan and destination with consideration of patient treatment goals, function, cognition, and social environment.

In the ideal setting, a Family Physician should be involved in the discharge planning process as he is familiar with the care resources available in the community and may even be the one caring for the patient.

**Elements of discharge planning**

1. Identifying the post-discharge destination for right siting of care

Not all patients will be able to return to their homes on discharge. A comprehensive assessment will carefully consider the medical, functional and social status to decide the discharge destination. For example, a patient who has acute functional decline with rehabilitation potential will benefit from slow-stream rehabilitation in a community hospital. Another patient who has suffered a catastrophic stroke and has no caregiver will require institutional care like that provided by a nursing home or chronic sick hospital.

A comprehensive assessment will include:

- acute and chronic medical condition.
- functional ability and rehabilitation potential.
- availability of family support, caregiver and home environment.

The physician may enlist the MDT to provide information on functional and social aspects of care, but will need to assimilate this information with the patient's medical background to come up with his care plan. Figure 1 is a schema used by Family

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Physicians in Singapore General Hospital for discharge planning. The physician should be aware of possible discharge destinations and placement options available and advocate for the patient and family to make informed decisions in the best interest of the patient.

Working closely with the family and caregivers in the discharge process is an important part of effective planning. Several sessions of family engagement may be required to understand the family dynamics and their expectations, and improve their understanding of the patient's current medical condition and functional needs. The family may need time to accept the new level of care that the patient requires, understand that community services are available, and ascertain what they can realistically provide. It is therefore important that these discussions start early in the course of a patient's hospital stay. When patients and caregivers participate in the discharge planning process, it can result in improved outcomes and quality of life.<sup>10</sup>

It is thus important for the caregiver to be supported. There may have been a sudden change in the level of care a patient requires and often caregivers are placed in a situation where they have to forego other opportunities in the prime of their life and the freedom to make choices that may be critical to their well-being.<sup>11</sup> They may be expected to perform complex care tasks often at great cost to their own well-being and health.<sup>12, 13</sup>

## 2. Identifying risk factors for interventions

Patients who are readmitted to hospital within 30 days of discharge have common reasons for readmission relating to the recent acute illness, issues with other co-morbidities, adverse drug events, hospital-acquired infections and procedural complications.<sup>14-16</sup>

The BOOST 8P tool from the Society of Hospital Medicine has identified patients with the 8 common risk factors that place them at higher risk for unscheduled readmission and poorer outcome after discharge.<sup>17</sup> These are:

- (i) Problem medications such as anticoagulants (warfarin), insulin, aspirin and clopidogrel dual therapy, digoxin and narcotics.
- (ii) Psychological issues. Patients who are depressed are at higher risk of non-compliance and poorer outcomes.
- (iii) Principal diagnoses that have poorer outcomes. These include cancer, stroke, diabetes, heart failure, and chronic obstructive pulmonary disease (COPD).
- (iv) Polypharmacy >5 medications has increased risk of side effects and non-compliance.
- (v) Poor health literacy.
- (vi) Poor social support.
- (vii) Prior non-elective admission.
- (viii) Palliative care with a life expectancy of less than a year.

## 3. Interventions

### Medication Reconciliation

Adverse drug events contribute to unscheduled hospital readmissions.<sup>18</sup> Medication reconciliation is defined by the

Institute of Health Care Improvement (IHI) as the process of identifying the most accurate list of medications a patient is taking — including the name, dosage frequency, and route — and using this list to provide correct medications for patients anywhere in the health care system.<sup>19</sup>

The process of medication reconciliation comprises 7 steps:

1. Develop a list of current medications.
2. Develop a list of medications to be prescribed.
3. Compare the medications on the 2 lists.
4. Reconcile and make clinical decisions regarding appropriateness based on the 2 lists.
5. Review problem medications (anticoagulant, anti-platelets, diuretics, insulin, and inhalers) and side effects.
6. Use the updated list to educate patient and caregivers. Review the home medications.
7. Highlight new/changed/discontinued medication and the reason for changes to next care providers (direct communication or discharge summary).

The above steps aim to prevent medication errors of omission, duplication, dosing errors, and drug interaction. Medication reconciliation should be done at every transition of care, for example, changes in the level of care, setting, service, or practitioner. This simple, yet important task can address the risk factors of problem medications and polypharmacy, but is often missed out in a busy practice.

### Clear and succinct discharge summary and instructions

In the ideal setting, there should be a closed loop communication between the discharging and receiving physicians. Locally, most patients do not have a dedicated family physician for direct communication. Therefore, a well-written discharge summary or memo is crucial to ensure that essential information and responsibilities are clearly communicated between the hospital and the receiving physicians. The discharge summary or memo should be structured with subheadings to organise and highlight the following information pertinent to follow up care:<sup>20, 21</sup>

- (i) Important tasks or pending test results for the receiving physician to follow up, e.g., repeat blood test, trace certain results, and action.
- (ii) Significant events during the hospitalisation including important laboratory, radiological tests and procedures.
- (iii) Discharge diagnosis and outcome of hospitalisation.
- (iv) Patient's condition on discharge.
- (v) Discharge medication list, highlighting changes and reasons.
- (vi) Follow-up plans, including appointments and rationale.
- (vii) Community services, e.g., home nursing foundation, meals on wheels.

Lapses in these communications can lead to duplication of services or missing out on critical care plans with adverse outcomes. For example, a repeat blood count was due for an anaemic patient but was inadvertently missed out because there were no clear instructions and assumptions that someone will be repeating the test. Family Physicians working in the polyclinics and some general practitioners already have access to the National Electronic Health records (NEHR), but universal

access to NEHR is still a work in progress with issues of end-user adoption.

### **Education and communicating the care plan to patient and caregiver**

Communicating the care plan in simple jargon-free language will help the patient and his caregiver understand the medical conditions, what to expect on discharge, and how to manage in the post-discharge period. Clear and succinct written information that is appropriate to the health literacy level should be provided in addition to verbal instructions. For more health literate patients or caregivers, disease-specific written action plans, e.g., for COPD or heart failure, are good tools for education.

Since studies have shown that patients recall less than half of what was taught,<sup>22</sup> it is important to assess how much they have understood. The “teach back” technique can be used to determine the degree of understanding where the patient or caregiver will explain the recently taught information back to the health care provider in his or her own words. Follow-up phone calls within 72 hours of discharge also enable the team to clarify misconceptions and reinforce advice on high-risk medications, appointments, and action plans.

### **Primary care at the centre of post-hospitalisation care transitions and the concept of “Intensive” Primary Care for complex patients with multiple co-morbidities**

The post-discharge period can be a precarious time for discharged patients. Locally, almost one in 5 elderly will readmit within 30 days.<sup>23</sup> The reasons for readmission are many and can range from unaddressed risk factors and gaps in discharge planning in the pre-discharge period to complications arising in the post-discharge period. While transitional care programmes have been piloted in various hospitals with some success, these are resource intensive and inadequate to meet the demands of a rapidly ageing population beyond the immediate post-discharge period. Family Physicians will need to play a big role in the continuing care of patients discharged to the community.

The traditional model of delivering primary care will need some remodeling for this high-risk patient group<sup>24</sup> by increasing the intensity of care to keep patients safe in the community. “Intensive” Primary Care is providing care to the sickest and highest-utilising patients in your practice to improve their health outcomes and satisfaction, far beyond what are offered in traditional primary care practices.<sup>25</sup> This can be achieved by being connected to the health system and resources, additional efforts in providing the care coordination to navigate the health system, and optimising clinical and social care around the patient’s needs. We describe an approach used by Family Physicians in the Family Medicine department of Singapore General Hospital and Bright Vision hospital when following up our discharged patients.

### **Effective communication is key and access to discharge information is critical**

The crucial first step is to gain access to discharge information, where critical information on clinical, social, and functional

status can be found. Therefore, effective communication has to start upstream with good discharge planning that includes anticipating problems arising in the post-discharge period and then communicating the care plan to the community care provider in a clear and succinct way. This should be in the form of a discharge memo with the relevant hospitalisation details and clear follow-up actions. For example, the dry weight, fluid restriction limit, critical laboratory results such as serum albumin, creatinine clearance, ejection fraction, any inpatient adjustments to the diuretic dose, and recommendations for titration and blood recheck are relevant details for care continuity of patients with decompensated fluid overload. It is well acknowledged that the lack of effective communication and information flow during transitions between care settings and providers contributes to readmission risk.

Family Physicians working in the polyclinics and some general practitioners also have access to the National Electronic Health records (NEHR), which is an extremely useful information source. If no information is available about the discharge, asking to see the patient’s copy of the discharge summary (containing the diagnoses and discharge medications) or discharge medications would have to be the fall-back option.

## **The D.I.L approach to Intensive Primary Care**

### **1. Defragment Care**

The crucial first step is assessment and identification of the care issues that must be resolved urgently. A suggested approach would include first reviewing issues identified by the hospital doctors, e.g., a patient started on warfarin who needs an INR recheck. Then, a critical review of the discharge summary will identify additional issues that can cause the patient to destabilise. It is not uncommon for a patient to be discharged with a medication error, or to continue to consume the old stock of medication at home even after being told to stop a medication. Family Physicians should routinely review with the patient the key medical issues arising during the inpatient admission, its management, and follow-up plans. I would routinely request my patients to bring their home medications for medication reconciliation in the clinic setting.

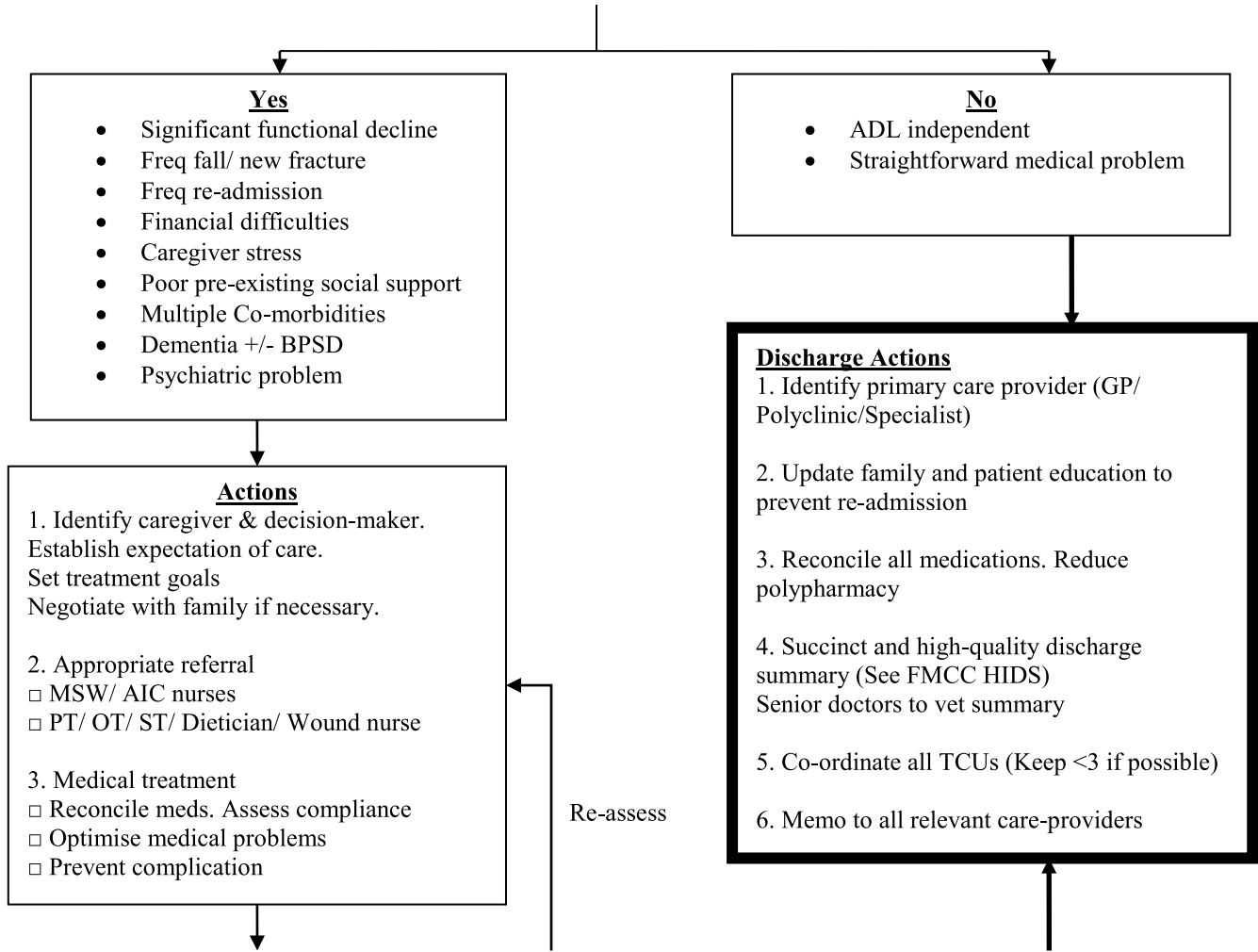
### **2. Integrate care**

The second and third steps are to develop a comprehensive care plan and optimise the medical and social care. The Stott Davis model organised into a framework of 4 ABCD tasks is a useful aide memoire in primary care consultation.<sup>26</sup> Stott Davis’s 4 ABCD tasks (in no order of importance or priority) are:

- A: Acute problem management.
- B: Behaviour modification of health-seeking behaviour.
- C: Continuing problem management.
- D: Disease prevention.

Due to time pressures in the busy outpatient setting, completing all 4 consultation tasks is rarely practical and ongoing medical issues have to be prioritised. An acute complication (A) may have arisen; for example, a heart failure patient gaining weight and becoming increasingly breathless will need acute management of his fluid overload before consideration of tasks B, C, & D. I would routinely review the patients’ hospital appointments

**Figure 1 - Flow Chart for Discharge Planning Patients with Discharge/Care issues**



	<b>Has family and financial support</b>	<b>Has family but limited financial support (means testing)</b>	<b>No family and financial support</b>
<b>1. Good rehab potential</b> <b>2. Good/ minimal functional impairment</b>	<input type="checkbox"/> Home <input type="checkbox"/> Day Social/ Day Rehab <input type="checkbox"/> Day Dementia <input type="checkbox"/> Com Hospital <input type="checkbox"/> Support group	<input type="checkbox"/> Home <input type="checkbox"/> Day Social/ Day Rehab <input type="checkbox"/> Day Dementia <input type="checkbox"/> Com Hospital <input type="checkbox"/> Support group	<input type="checkbox"/> Com Rehab Prog <input type="checkbox"/> Com Home Help Service <input type="checkbox"/> Com Case Management <input type="checkbox"/> Religion-based support
<b>1. Poor rehab potential</b> <b>2. ADL partial-dependent (CAT2)</b> <b>3. ADL fully dependent (CAT3)</b> <b>4. Care-giver stress</b>	<input type="checkbox"/> Caregiver training <input type="checkbox"/> Maid <input type="checkbox"/> Home Medical <input type="checkbox"/> Home Nursing HNF <input type="checkbox"/> Home Rehab <input type="checkbox"/> Day Social/ SPICE centre/ Day Rehab <input type="checkbox"/> Day Dementia <input type="checkbox"/> Private Nursing Home	<input type="checkbox"/> Caregiver training <input type="checkbox"/> Home Medical <input type="checkbox"/> Home Nursing HNF <input type="checkbox"/> Home Rehab <input type="checkbox"/> Day Social/ SPICE centre/ Day Rehab <input type="checkbox"/> Day Dementia	<input type="checkbox"/> Shelter Home (CAT 2) <input type="checkbox"/> Destitute Home (CAT 2) <input type="checkbox"/> VNH (CAT 3) <input type="checkbox"/> IDP (Interim discharge plan) (CAT 3) <input type="checkbox"/> Dementia NH
<b>1. Terminal illness (&lt; 6 mth)</b> <b>2. End-of-life issues (e.g. pain, bed sores)</b>	<input type="checkbox"/> Home <input type="checkbox"/> Home Hospice	<input type="checkbox"/> Home <input type="checkbox"/> Home Hospice <input type="checkbox"/> Inpatient hospice (< 3 months prognosis) <input type="checkbox"/> Chronic Sick hospital (> 3 months prognosis)	<input type="checkbox"/> Inpatient hospice (< 3 months prognosis) <input type="checkbox"/> Chronic Sick hospital (> 3 months prognosis) <input type="checkbox"/> VNH + HCA support

schedule and cancel duplicated appointments or visits that can be safely managed in the primary care setting.

### 3. Link

The third step is to muster resources to support continuing care in the community. The Stott Davis model was further refined in 2002 by Dr Ong JE to include environment (E) and function (F) for the frail elderly.<sup>27</sup> It is rare for the frail elderly to be discharged at their premorbid function. Due to gaps in discharge planning, long waiting times for step-down care, and costs, among many reasons, patients may be discharged to a stressful home environment with functional deficits and unready caregivers.

Enquiring about the patient's ability to cope in his activities of daily living (ADLs) in the home and community setting, identity of the caregiver if not independent in ADLs, level of social and financial support, will help the FP to manage the patient in the context of the family and community. Community resources should be engaged to improve the function and social situation. For example, the home nurse can assist in medication packing and administration of injectable medications for patients requiring this service. The flowchart in discharge planning is useful to guide the outpatient doctor on feasible community services for their patient based on their social and functional profile.

### The way forward

There is no doubt that primary care has to play a large role in the continuing and preventive care of complex patients in the community. To succeed in improving health outcomes of an at-risk population, primary care must be engaged to be an intrinsic member of a larger integrated community of care with shared incentives and key performance indicators.

The Patient Centred Medical Home (PCMH) model piloted by Frontier Family Medicine Clinic (FMC) in collaboration with the National University Hospital (NUH) is one such conceptual model.<sup>28</sup> There is close collaboration in clinical care as patients can move seamlessly between the FMC and NUH, and close interprofessional interactions between FPs, specialists, pharmacists, and allied health staff from NUH. Conditions not typically managed in primary care are now being co-managed with the specialists at the FMC — these include rheumatological conditions, liver cirrhosis with fluid overload, post-stroke management of blood pressure, patients on anti-coagulation, direct inpatient referrals to FMC for intensive post-hospitalisation care, etc.

The Bright Vision Hospital Community and Continuing Care Clinic leverages on nurses for continuing care of frail patients discharged from the community hospital to help ease the over-reliance on doctors. Nurses call up discharged patients within 72 hours of discharge to identify unforeseen problems for early review in the clinic. Disease action plans, e.g. DM, COPD, CCF, are used to educate and empower patients for self-management of their diseases. Patients are reviewed within 1-2 weeks of discharge for continuing care and further

community services activated if necessary.

## CONCLUSION

Transition from hospital to the community can be a critical, fragile period for some patients. Good discharge planning will ensure right siting of care, and reduce unnecessary hospital stay and unscheduled hospital admissions. For patients with complex care needs in the community, a more intensive form of primary care will be needed.

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## LEARNING POINTS

- **Discharge planning can be effective in reducing hospitalization length of stay and unscheduled readmissions through right siting of care and interventions targeted at risk factors.**
  - **Start Discharge planning early in the admission and involve the multi-disciplinary team.**
  - **Utilize the discharge summary as a tool to communicate clear and succinct instructions for the next care provider.**
  - **Family Physicians should routinely review with the patient the key medical issues arising during the inpatient admission, its management, and follow-up plans.**
  - **Risk stratify and target resources at patients with more complex care needs.**
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