UNIT NO. 4

DISCHARGE PLANNING IN INTEGRATED CARE

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ABSTRACT

The discharge of the patient from the hospital to the community or step down care facilities is a critical point in patient care. The discharge process is especially critical for elderly patients and patients with multiple co-morbidities and impaired function. Inappropriate discharge destination and incomplete communication with patients and ambulatory care can lead to adverse outcomes like unscheduled readmissions, emergency department visits and adverse events. Know the goals of discharge planning: reduce unnecessary hospital length of stay, prevent adverse outcomes after discharge, and co-ordinate services between hospital and community, bridging the gap between hospital and discharge destination. Discharge planning process should start at admission. Screen for the higher risk patient and intervene specifically to reduce the risks. Go through the elements of discharge planning: determine the post discharge site of care, do medication reconciliation, educate patient, create a useful discharge summary. Be clear of the doctor's role in discharge planning.

Keywords:
Discharge planning; High Risk patient; Post discharge site of care; Medication reconciliation; Patient education; Discharge summary

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INTRODUCTION

Discharging a patient from hospital to the community is a complex process. This process is getting more challenging. Factors contributing to this are:

- Our aging population: As our population ages, the patients are sicker and more complex in their needs.
- The rising number of medications per patient with chronic medical conditions.
- Increase emphasis on reducing length of stay and case mix and diagnosis related grouping (DRG) DRGs are clinically meaningful patient conditions which require similar levels of hospital resources for their management. DRG based payment system is used in hospitals to calculate government subsidises(1). This has also been the payment structure in the USA for several years and patients have been discharged 'quicker and sicker' [2]
- Team based management with hand offs and night float on call system[3]. As such, the admitting doctor or the doctor most familiar with the patient may not be the discharging doctor.

The discharge process is an attempt to reconcile the somewhat opposing aims of reduction in hospital stay and prevention of adverse events and unscheduled re-admission.Organised discharge planning and transition of care is more important to patient care and safety.

GOALS OF DISCHARGE PLANNING

The goals of discharge planning are:

- To reduce unnecessary hospital length of stay.
- To prevent adverse outcomes after discharge.
- To coordinate services between hospital and community, bridging the gap between hospital and discharge destination.

The consequences of poor discharge are unscheduled readmissions, recurrent emergency visits and adverse events, including death.

During hospitalisation, the medical team should optimise the underlying medical condition, considering the patient's therapy goals, function, cognition, life expectancy and co morbid conditions. The team should also reconcile medications and reduce or discontinue medications that may be unnecessary.

Additionally be alert to possible neglect and care giver stress, especially when managing patients with physical and cognitive impairments.

Communication with the patient and their family members or care givers is essential for the patient to have better understanding of their medical conditions. Patients with poor prognosis and palliative care patients should have end of life discussions. Family care conferences chaired by senior doctors attended by a multidisciplinary team involved in the care of the patient are a good platform to have end of life discussions.

DISCHARGE PLANNING PROCESS SHOULD START AT ADMISSION

Patients may end up staying in the acute care hospital even after their acute illness is stabilised due to lack of suitable alternative setting for care or other social factors. This can lead to prolonged hospitalisation that not only drives up health care costs and bed occupancy, it also predisposes patients to hospital acquired infections, de-conditioning and complications of immobility. The discharge process should start at admission

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and the patient's discharge destination identified early so as to prevent unnecessarily prolonged hospital stay.[4]

Check lists and standardisation of the discharge process have been proposed to aid in a safe patient transition to an outpatient setting. These checklists are widely utilised.[5]

Due to the complexity of the problems the medical team should also include a multidisciplinary team consisting of doctors, nurses, therapists, medical social workers in the discharge process. In an ideal world, the patient's family physician should be orchestrating the discharge process.

THE HIGHER RISK PATIENT

All patients admitted should be appropriately discharged back to the community. But there is a difference between the discharge of a 24-year-old working adult admitted for an appendicectomy and the discharge of a 79-year-old gentleman with previous history of atrial fibrillation and stroke, requiring nasogastric feeding, who was admitted for a urinary tract infection, being discharged back to a home environment with no care giver.

Several tools have been utilised to identify higher risk patients[6,7]. Generally elderly patients and patients with multiple co morbidity are at increased risk of readmission. The Society of Hospital Medicine has identified patients with the 8 characteristics that make them at higher risk for unscheduled readmission and poorer outcome after discharge, colloquially called the 8Ps. These identified patients would warrant additional resources, like case managers, for more organised discharge planning[8,9].

Higher Risk patients have one of more of the 8Ps:

1. Problem medications.
   Patients receiving medications like anticoagulants (warfarin), insulin, aspirin and clopidogrel dual therapy, digoxin and narcotics have a higher risk of readmission and adverse outcomes.
2. Psychological issues
   Patients who are depressed are at higher risk of non compliance and poorer outcomes.
3. Principal diagnoses that have poorer outcomes
   Repeatedly it has been shown that patients with cancer, stroke, diabetes, heart failure[10] and COPD[11] have a poorer outcome on discharge.
4. Polypharmacy
   When a patient takes multiple medications, he is at increased risk drug related adverse effects and non compliance to therapy. The figure of >5 medications is accepted.
5. Poor Health Literacy[12].
6. Poor social support.
7. Prior non elective admission.
8. Palliative Care
   If a patient suffers from a condition where his or her life expectancy is within a year like cancer or end stage organ failure where the patient is not a candidate for replacement therapy or transplant he has higher risk of adverse events on discharge.

Table 1 lists specific interventions that will benefit these higher risk patients.

Table 1: Specific Interventions for Higher Risk Patients

8 P Screening Tool	Specific Interventions
Problem Medication: Warfarin, Insulin, Aspirin and Clopidogrel dual therapy, Digoxin, Narcotic agents.	Medication specific education using Teach Back. Plan for monitoring and communicate this for patient and care givers. Specific interventions for managing medication. side effects reviewed with patient and care giver. Follow up phone call to assess adherence within 72 hours.
Psychological Depression	Assess the need for psychiatric care in the ambulatory setting. Communicate with providers in the ambulatory setting to highlight any new issues that may have arisen during admission. Link the patient with community supports like Family Care Centres and Counsellors.
Polypharmacy: More than 5 medications	Reconcile medications and eliminate unnecessary medications. Simplify medication regimes to improve adherence. Follow up phone calls to assess and reinforce adherence within 72 hours.
Poor patient support (Lack of care givers)	Follow up phone calls to assess adherence and complications within 72 hours. Follow up appointment with Primary Care within 7 days. Involve home care providers like case managers and social assistance. Provide and communicate a clear plan to these community providers.
Prior unscheduled/non elective admission within 6 months	Review reason for readmission- was it related and preventable. Follow up phone call to assess adherence and complications within 72 hours. Follow up appointment with primary care or hospital outpatient within 7 days.
Palliative Care: Would you be surprised if this patient dies within 1 year? Does this patient have a progressive serious illness like cancer or end stage organ failure.	Assess the need for palliative services. Identify goals of care and therapeutic options. Communicate the prognosis to patient/family members/care givers. Address and manage bothersome symptoms like pain and constipation. Discuss with family services like palliative care services, home medical services and benefits of these services. Communicate and involve Primary Care Physicians.

Adapted from www.hospitalmedicine.org/BOOST[8]
Note: Community management and telephone communication is usually done by Hospital Based Case Managers.

ELEMENTS OF DISCHARGE PLANNING

Determining the Post Discharge Site of Care

Not all patients will be able to go back to their homes on discharge. The patient has to be assessed holistically taking into account the medical, functional and social condition before the patient can be safely discharged to his or her home[13]. Alternatively, patients may be discharged to rehabilitation

wards in community hospitals if they have acute functional decline with good rehabilitation potential and will benefit from inpatient rehabilitation. A patient with impaired functional ability and no care giver may have to be discharged to an institutional care like a Nursing Home or Chronic Sick Hospital. The elements of holistic assessment include:

- acute and chronic medical condition.
- his functional ability and rehabilitation potential.
- availability of family support and care giver if he or she requires one.
- nature of his or her home environment.
- cognition and decision making capacity.
- accessibility of community and health care services.

Input from a multidisciplinary team maybe necessary to assess patients with complex needs.

If the patient is inappropriately discharged to an unsafe environment, he risks an adverse outcome like a fall or 'non compliance' to therapy due to inability to care for himself. The managing doctor should be aware of placement options available to patients and advocate for the patient and family to make informed decisions regarding appropriate post discharge destination.[14]

Medication reconciliation

The 1999 Institution of Medicine (IOM), in its publication To Err Is Human: Building a Safer Health System reported 98,000 deaths annually in US hospitals due to Adverse Drug Reactions.[15] The Institute of Health Care Improvement (IHI) in its 5 million lives campaign listed 6 health care related changes that can save lives. Prevention of Adverse Drug Reactions by Medication Reconciliation was listed alongside deployment of rapid response teams at first sign of patient decline, delivery of reliable, evidence based therapy for acute myocardial infarction, prevention of central line infections, prevention of surgical site infections and prevention of ventilator associated pneumonia.

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[16,17]. The Joint Commission International (JCI) for healthcare standards and accreditation mandates comparing the patient's current list of medications against physicians admissions, discharge and transfer orders. This is to prevent medication errors of omission, duplication, dosing errors and drug interaction. Medication reconciliation should be done at every transition of care. Transition of care includes change in setting, service, practitioner and level of care and includes admission, discharge, step down care and care in the ambulatory setting[18].

The process of medication reconciliation comprises 5 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. Make clinical decisions regarding appropriateness based on the 2 lists.
5. Communicate the new list to appropriate caregivers and the patient.

Although this may seem instinctive, medication reconciliation is surprisingly often omitted, in both the inpatient and outpatient setting. Further, this can be quite challenging for patients with multiple co morbidities, managed by several specialists in different institutions.

Patient education and instructions

During admission, the patient should be instructed on his or her medical condition and what to expect on discharge and how to manage their condition after discharge. Studies have shown that in addition to verbal instruction, written information provided in simple language, appropriate to the patient's level of health literacy has better outcome. This is because patients recall less than 50% of what is taught[19.] Interactive communication, like the 'teach back' technique, where the health care provider asks the patient or care giver to explain the recently taught information in their own words[20] has been shown to have better educational value. This also enables the Health Care provider to identify and correct misconceptions. This is especially useful when dealing with high risk medications like insulin and warfarin and teaching skills like nasogastric feeding and dressing changes.

Discharge summary

The discharge summary and letter is the default communication between the team managing the patient during the acute hospitalisation and the other health care providers including the primary care physician. Communication between physicians is essential and poor communication can result in loss of information, confusion over responsibility and potential poor patient satisfaction and adverse outcomes.

Physician communication in Singapore is usually through letters and electronic medical records, although this may also be through telephone, fax and face to face contact. Studies in America have shown that discharge summaries are the preferred mode of communication between physicians[21]. Electronic medical records and electronic discharge summaries significantly improved quality and timeliness of discharge summaries[22,23].

The discharge summary should include:

- The reason for hospitalisation.
- The significant findings from history, physical examination and laboratory and radiological tests, including pathology.

- List of procedures performed and the outcomes.
- Discharge diagnosis and outcome of hospitalisation.
- Patient's condition on discharge.
- Discharge medication list and indications for any recently altered medications.
- Follow up care, including appointments, how care needs will be met and additional services, e.g. home nursing foundation, meals on wheels.
- Pending test results and the physician responsible for tracing the results.

The absence of communication of indications for newly altered medication and lack of information in the discharge summary regarding test results that are pending and have to be traced leads to poor outcomes. A common example is the starting of proton pump inhibitors (PPI) in hospital. If the indication is not stated, i.e. is it for stress ulcer prophylaxis or for peptic ulcer disease and length of expected treatment specified, patients may continue taking PPI unnecessarily. Another example would be the change of drugs within the same class during admission. The information regarding if there was a clinical indication for this change, or if this substitution was due to the hospital formulary preference must be communicated. If the substitution was due to hospital formulary preference, the patient may wish to revert back to his original medication.

Lack of information on test results that are pending with no delegation of responsibility as to who traces the results, can lead to poor outcomes[24]. A common example is sputum cultures for tuberculosis (they take 6 weeks to be available) that are pending at the time patients are discharged. A positive culture result could be missed if the patient defaults his or her follow up appointment. Electronic notification has been explored. However, physicians reported barriers like being inundated with clinically irrelevant results, not having sufficient time and lack of integration of post discharge test result management into usual workflow. Majority of physicians wanted to be notified and agreed that ideally designed computerised application would be valuable for managing pending tests at discharge[25].

Situations of particular high risk include:

- Patients who missed follow up appointments
- Insufficiently flagged amendments to test reports-test reports are changed after discharged e.g. radiology report amended after discussion with senior doctor.
- Medications changed during admission and information is not transmitted to physician in the ambulatory care.

With electronic medical records in hospitals, some of these issues have been addressed. However, universal access of electronic medical records by all doctors in Singapore is still a work in progress and issues of cost and end user adoption are still being grappled with.

THE DOCTOR'S ROLE IN DISCHARGE PLANNING

The attending doctor's role in discharge planning consists of several actions:

- Optimise care of underlying medical conditions: considering patient treatment goals, function, cognition, life expectancy, and co-morbid conditions.
- Do medication reconciliation: Reduce or discontinue any unnecessary medication.
- Communicate with the patient and family regarding prognosis and make full use of family conferences to discuss end of life issues.
- Communicate with primary care and step-down care.
- Advocate for patients and families getting an opportunity for informed decisions on placement options.
- Be alert for signs of neglect and abuse.
- Be alert for care giver stress.

CONCLUSIONS

The discharge of the patient from the hospital to the community or step down care facilities is a critical point in patient care. The discharge process is especially critical for elderly patients and patients with multiple co-morbidities and impaired function. Inappropriate discharge destination and incomplete communication with patients and ambulatory care can lead to adverse outcomes like unscheduled readmissions, emergency department visits and adverse events.

LEARNING POINTS

- **Know the goals of discharge planning.**
- **Note that discharge planning process should start at admission.**
- **Screen for the higher risk patient and intervene specifically to reduce the risks.**
- **Go through the elements of discharge planning in the care of each patient.**
- **Be clear of the doctor's role in discharge planning.**

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