Editorial

No Longer Lost in Transition?

Bingzhu Chia, [1]*MBBS*, Maria Abraham, [1]*MBBS, MPH*, Lydia PS Seong, [1]*MBBS, MSc (Public Health)*, Jason TS Cheah, [1]*MBBS, MMed (Public Health), MSc (Health Care Management)*

The Need for Transitional Care

Over the past three decades, Singapore's healthcare system has evolved into one that comprises some 35 specialties which has helped to better manage the complexities of patient care and sophisticated treatment modalities. While this has generally improved the quality of healthcare within each specialty, it has caused fragmentation across our healthcare system. As patients "move" across these "fragments" of different specialties and different care settings, they are vulnerable to the breakdowns in care resulting in adverse events, low satisfaction with care and higher readmission rates.[1,2] Elsewhere, there are successful transitional care models to help patients transit smoothly from one care setting to another.[3-6] With increasing life expectancy and a projection that one in 5 Singaporeans will be aged 65 and above by 2030, there will be a higher prevalence of patients with chronic diseases and multiple comorbidities requiring medical attention across specialties, healthcare professionals and settings. In addition, the current "stresses" on the public acute care hospitals which are running at high bed occupancies means that the pressure is ever increasing to discharge patients into the community as rapidly as possible while not compromising on patient safety and outcomes. There is therefore a need for transitional care to ensure that the patient's "journey" through the continuum is seamless and coordinated.

Defining Transitional Care

In a position statement by the American Geriatrics Society (AGS), Transitional Care is defined as "a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location. Representative locations include (but are not limited to) hospitals, subacute and post-acute nursing facilities, the patient's home, primary and specialty care offices, and assisted living and long-term care facilities. Ideally, transitional care is based on a comprehensive plan of care and the availability of healthcare practitioners who are well trained in chronic care and have current information about the patient's goals, preferences, and clinical status. It should include logistical arrangements, education of the patient and family, and coordination among the healthcare professionals involved in the transition. Transitional care, which encompasses the sending and the receiving aspects of the transfer, is essential for persons with complex care needs and their caregivers."[7]

Reputed Transitional Care Models

The Transitional Care Model (TCM) developed by Mary Naylor, University of Pennsylvania, is an advanced practice nurse-led clinical programme. Three randomised controlled trials have shown that the programme reduced unnecessary and unexpected admissions, subsequent length of stay when readmissions do occur, and also the cost of care for carefully selected patients.[3-5] Upon admission into the hospital, eligible patients will be assigned to a Transition Care Nurse (TCN) who will conduct a comprehensive assessment of the needs and goals of the patient and caregiver. The TCN will then work out a discharge plan for her patient in consultation with the other healthcare providers. She will visit the patient regularly and make the necessary changes to the discharge care plans based on the progress of the patient in the hospital. TCN will also create an education plan to empower the patient to self-care at home. Twenty-four hours prior to discharge, the TCN will also ensure that the patient's social and financial needs are sorted out for a smooth transition. Medications are reviewed to ensure that there is no duplication of drugs or unsafe drug-to-drug interactions. Within 24 hours post-discharge, a visit is made to the patient's home to ensure that he or she has no issues settling back into his or her home. The TCN goes on to explain the uses of each of the medication and reinforces compliance of medication. During the entire process, the TCN continues to communicate with the patient's hospital clinician and primary care physician about the patient's progress. When the patient returns to the primary care physician for the first visit after discharge, the TCN will accompany the patient and ensure that the physician understands the care plan for the patient. The average length

[1]Agency for Integrated Care Pte Ltd
Address for Correspondence: Dr Dennis Chia Bingzhu, Agency for Integrated Care, 5 Maxwell Road, #10-00 Tower Block, MND complex, Singapore 069110.
Email: Bingzhu.chia@mohh.com.sg

of care ranges from 1 to 3 months with the TCN making phonecalls to the patients to check on his progress. The patient is discharged from the transition care programme once the nurse feels that the patient and caregiver are able to manage the patient's condition and cope with the lifestyle adjustments at home.

Eric Coleman's Care Transition Interventions (CTI) programme is another programme which empowers the patients and/or the caregivers to take on a more active role in patient care at home. In a randomised control trial of patients of certain medical diagnosis and characteristics, intervention patients had lower readmission rates at 30 days and at 90 days compared to the control subjects.[6] Based on the 4 key elements, the CTI equips patients and caregivers with the skills of "medication management, personal health record keeping, knowledge of 'red flags' and follow-up with primary care providers and specialists". There is a greater emphasis here "to coach not do".

Transitional Care in Action

The Geisinger Transitions of Care Initiative (ToCI) is a team-based model. Nurses employ the use of an electronic health record tool to identify the patient's risk of readmission. If the patient is identified as high-risk and is admitted, the nurses will prepare the patient for "early care activation" and "care management". On selected units, these high-risk patients are followed-up for a month post-discharge using an outpatient care management protocol that leverages telephonic case management and remote monitoring tools that can be customised to the patient's medical plan. In addition, the "Kitchen Table Program®" which is tied to the ToCI, is a home medication management referral programme where home care nurse visits the patient for secondary medication reconciliation and patient education post-discharge. This often takes place at the patient's kitchen table, hence the name.

In Colorado, US, the Kaiser Permanente offers a telephone-based care coordination programme to help patients transit smoothly from a hospital or skilled nursing facility to the community (Table 1). Care coordinators (specially trained nurses or social workers) will contact discharged patients within 24 hours to conduct a needs assessment and devise a care plan. Information of the patients is recorded in an electronic health record system which connects the care coordinator, care providers and the patients. As a result of this transition programme, it generated an annual cost savings of $4 million from decreased readmissions (2.4% of intervention patients vs 14% of usual care patients at 12 months) and Emergency Department (ED) visits (7% vs 16%, respectively). More than 90% of the physicians and 95% of the patients expressed satisfaction with the programme.[8,9]

Table 1. Summary of Key Findings of the Kaiser Permanente Colorado Region's Chronic Care Coordination programme, Care Transitions Interventions (CTI) and the Transitional Care Model

Programme	Key findings
1. Kaiser Permanente Colorado Region's chronic care coordination programme[9]	Reduction in hospitalisations: 2.4% of enrollees compared to 14% who received usual care.
	Reduction in visits to the Emergency Department (ED): 7% of enrollees compared to 16% of those who received usual care
	Reduction in readmissions: No enrollees compared to 13% of those receiving usual care
	Significant cost saving: Estimates that the program generates annual savings of $3 million due to reduced hospital/ skilled nursing facility readmissions and another $1 million due to reduced ED utilisation.
	Compliance to follow-up care: The percentage of patients completing follow-up care increased by 75%.
	Higher medication compliance: Analysis of medication reconciliation and follow-up for patients within the chronic care coordination program demonstrated greater than 80% accuracy and compliance.
	High physician and patient/family satisfaction: Surveys indicate that physician satisfaction with the programme is consistently above 90%, while patient/family satisfaction levels exceed 95%.
2. The Care Transitions Interventions (CTI) programme[6]	Lower hospitalisation readmission rates Intervention patients had lower hospital readmission rates than control subjects 30 days, 90 days and 180 days after discharge from the hospital.
3. Transitional Care Model developed by Naylor[5]	Intervention group showed lower total mean costs with savings of $5000 per elder compared to the control group. The intervention patients also reported better overall quality of life, physical dimension of quality of life and patient satisfaction.

Transitional Care in Singapore

In Singapore, the Agency for Integrated Care (AIC) has set up the Aged Care Transition (ACTION) teams to help individual elderly patients with complex medical and social needs transit from hospital to home and community. Dedicated care coordinators (usually a nurse or allied health professional) are located within the restructured hospitals and the National Heart Centre. Generally, the programme is targeted at those who are above 65 years of age based on the selection criteria as shown in Table 2. Based on preliminary findings, the cost spent per patient

per care coordinator ranges from $28 to $141 across the various centres. In a study at 2 sites using Coleman's Care Transition Measure (CTM)-15 tool, patients under the ACTION teams felt more empowered to play a more active role in managing their healthcare needs compared to those under the control group (unpublished data). In our local context, the CTM-15 (English version) based on the 3-point response scale also appears to be a reliable and valid measure for assessing quality transitional care across settings from patient's perspective (unpublished data). AIC has obtained permission from the originators of instruments such as the Care Transitions Measure and health-related quality of life EQ-5D (5L) to adapt and translate these for local use. We are currently using the adapted version of the tools to evaluate the programme.

Table 2. Selection Criteria for Enrolment into ACTION programme

Patients must fulfil at least one of the following criteria (from either part A or B) for enrolment into the ACTION programme
A. Patient has/is experiencing any of the following:
Confusion / cognitive impairment
History of falls (2 or more in last year)
Incontinence (bowel/urinary)
Pressure ulcers
Functional decline
B. Patient requires care and
Has no caregiver
Has poor family support
Existing caregiver unable to cope
Frequent readmission / Accidents & Emergency (A&E) visits (> 2 per month)
Discharge problem

Our local restructured hospitals have also embarked on transitional care programmes that complement the ACTION teams. For example, Tan Tock Seng Hospital (TTSH) has launched the Post Acute Care at Home (PACH) programme which primarily targets patients that require higher acuity of care; these patients are generally home-bound patients who have more complex chronic diseases or patients who develop frequent exacerbation of diseases. The PACH team comprises doctors, nurses, social workers and therapists. A multidisciplinary plan is drawn up for the patient. Many of these patients in the PACH programme would require continuous and close monitoring, titration in medications and pain management for moderate to severe pain. Once the condition of the patient stabilises, the PACH team typically hands the patient over to a home nursing or home medical care provider in the community. The objective of this programme is to "plug" the gap between acute care and intermediate and long-term care services. In this way, patients are cared for in the community and more beds are made available for patients who require acute care in the hospitals. Other hospitals, such as Changi General Hospital (CGH) and Khoo Teck Puat Hospital (KTPH) have also recently launched similar programmes.

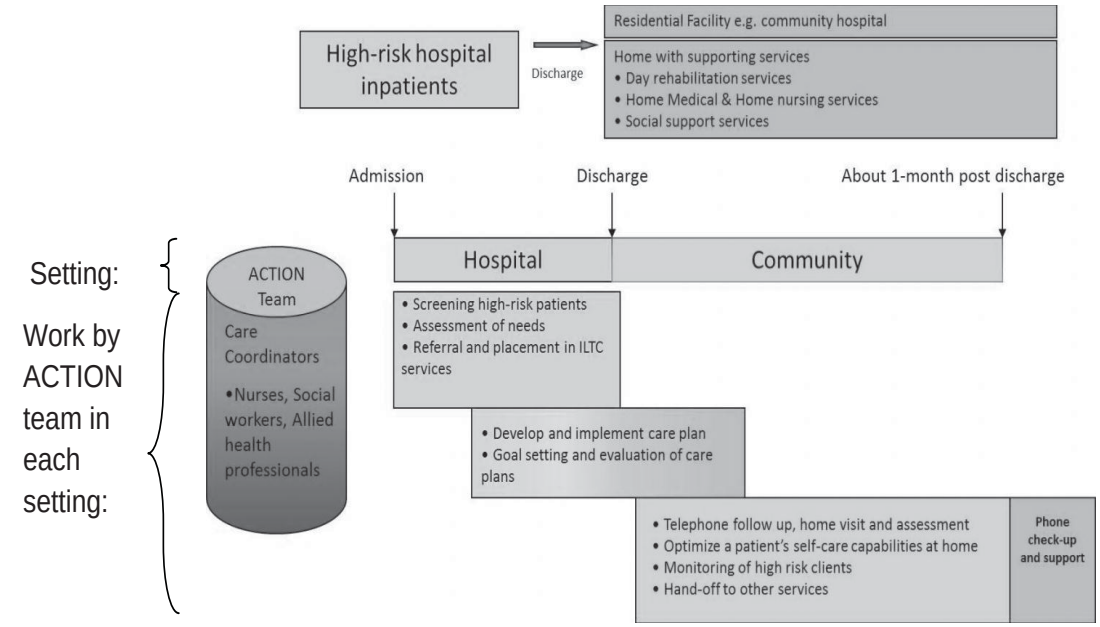

Fig. 1. Workflow for ACTION team.
*Community refers to:
1. Residential Facility e.g. Community Hospital
2. Patient's home with supporting services
   a. Day rehabilitation services
   b. Home medical and Home nursing services
   c. Social support services

What's Next and Further Challenges

Comparing the local models of transitional care with those overseas, we do notice certain key differences in the programmes. Moving forward, we ought to consider incorporating some of these components into our own local programmes. Firstly, selected patients who are discharged back into the community should have direct access to their care coordinator 24 hours a day via a phone call should they ever need assistance or advice. Secondly, we need to build stronger caregiver support. We need to empower patients' caregivers with skills and knowledge to understand the patient's medical condition and manage acute symptoms in a timely manner. The caregivers may eventually assume the role of being the patient's first line of medical support when the care coordinator discharges the patient from her care. It is also important to ensure that the process of empowering the caregiver does not overburden them with patient care but it should benefit them in the process as well. However, we recognise that some caregivers may not be able to cope with the patient at home for a variety of reasons, such as the complex nature of the patient's condition, or because the caregivers themselves are also frail and weak. Thus we need to look at expanding the capability and capacity for more comprehensive home care support for them. This additional support would also be helpful for the elderly patients who are staying alone. Thirdly, and perhaps most importantly, while managing the patient's medical condition, we need to also ensure that the patient receives good social support. Patients recruited under the ACTION programme are also often those with multiple social issues. Besides addressing medical, financial and caregiver needs, we will also need to look into the social aspects of the patient with an objective to improve their quality of life. Patients may benefit from the support from social services such as the "befriending" services (e.g. from Centre for Enabled Living, Lions Befrienders, etc) for those who live alone and also engage the mobile patients in community activities (e.g. wellness programmes organised by People's Association, Singapore Action Group of Elders) to help them to stay active and healthy once they transit back into the community.

Continuous monitoring and evaluation of these services will be necessary to enhance and modify our programmes according to the local context. With transitional care services made available in Singapore, we hope to bridge the gaps between the "fragments or silos" of healthcare to ensure a seamless and smooth journey for patients transiting from one care setting to another.

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REFERENCES

1. Forster A J, Murff HJ, Peterson JF, Gandhi TK, Bates DW. The incidence and severity of adverse events affecting patients after discharge from the hospital. Ann Intern Med 2003;138,161-7.
2. US Department of Health and Human Services. Centers for Disease Control and Prevention National Center for Health Statistics. Health care in America: Trends in utilization. Available at: http://www.cdc.gov/nchs/data/misc/healthcare.pdf Accessed 8 May 2012.
3. Naylor MD, Brooten D, Campbell R, Jacobsen BS, Mezey MD, Pauly MV, et al. Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized clinical trial. JAMA 1999;281:613-20.
4. Naylor M, Brooten D, Jones R, Lavizzo-Mourey R, Mezey M, Pauly M. Comprehensive discharge planning in the hospitalized elderly: a randomized clinical trial. Ann Intern Med 1994;120:999-1006.
5. Naylor MD, Brooten DA, Campbell RL, Maislin G, McCauley KM, Schwartz JS. Transitional care of older adults hospitalized with heart failure: a randomized controlled trial. J Am Geriatr Soc 2004;52:675-84.
6. Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. Arch Intern Med 2006;166:1822-8.
7. Coleman EA, Boult C; American Geriatrics Society Health Care Systems Committee. Improving the quality of transitional care for persons with complex care needs. J Am Geriatr Soc 2003;51:556-7.
8. McCarthy D, Mueller K, Wrenn J. Kaiser Permanente: Bridging the quality divide with integrated practice, group accountability, and health information technology, The Commonwealth Fund, 2009.
9. Agency for Healthcare Research and Quality, Health Care Innovations Exchange. Post-discharge telephone follow-up with chronic disease patients reduces hospitalizations, emergency department visits, and costs. Available at: http://www.innovations.ahrq.gov/content.aspx?id=2300 Accessed 8 May 2012.