

How to care for homebound patients?

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Abstract

As a result of an ageing population, low birth rates and longer life expectancies in developed countries, there is an increasing worldwide prevalence of patients with functional decline, dependence and impairment of activities of daily living. The medical follow-up of these functionally dependent patients poses a challenge, especially in the traditional outpatient settings where transport of these patients to a clinic is required. Delivering care for these dependent patients in their own homes remains one of the better ways of providing optimal care for them. We describe two cases, one identified from the community and the other from a hospital setting, which necessitated the activation of home care for continued management of these patients. This article discusses how our current community and hospital home care resources can be used to care for homebound patients, and how we can overcome current limitations in delivery of home care in our healthcare system.

Keywords

Home care, transitional care, functional dependence, ageing population, activities of daily living

Introduction

With longer life expectancies and low local birth rates, Singapore's rapidly ageing population is projected to triple from 300,000 to 900,000 by 2030.¹ Correspondingly, the prevalence of functional dependence is set to increase in the years to come. This trend has also been noted in other developed East Asian countries. Woo et al. reported the prevalence of pre-frailty and frailty to be 52.4% and 12.5%, respectively, in elderly centres in the New Territories East region of Hong Kong SAR China.² This is the closest regional data available, and the Hong Kong population's culture, diet and lifestyle is not too dissimilar to that of Singapore.

The follow-up of these functionally dependent patients poses a unique set of challenges compared with ambulant and independent young adults. Commuting to outpatient clinics for follow-up is itself a mammoth task. Many other extrinsic factors are challenging to detect in a clinic setting, including cluttered home environments which may contribute to falls, lack of care-giver competence which may predispose to formation of pressure sores, and poor family dynamics which may upset a patient's mental and emotional health. Home care not only alleviates the commuting issue, but also grants the home care providers with an insight into how the patients and their care givers are managing and coping at home.

Through these two case studies, we hope to bring more awareness on how functionally dependent patients can benefit

from home care both in the community setting and the hospital setting, and then discuss how our existing community home care resources can be organized for continued management of such patients.

Case report I

Miss TFY came to the polyclinic with the aim of repeating her 89-year-old father Mr TAK's prescription for chronic medications. Mr TAK was bed-bound as a result of multiple strokes, and was on nasogastric tube feeding and had mobility issues. She felt that her father's condition had been stable over the past few years and the medications had remained the same. She shared her frustrations on the constant logistic difficulty in chartering private ambulances, coordinating leave from workplace and accompanying her father to the outpatient clinic. Signs of care-giver stress were evident, given the chronicity of care giving for her father.

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However, in Mr TAK's physical absence, it was difficult to assess his general condition, vital signs and clinical parameters, as well as examine any relevant systems. It was difficult to decide if his current medications were suitable or needed titration, and thus inappropriate to repeat his prescriptions. His nasogastric tube was due for change as well. Such assessment and management limitations were communicated sympathetically to Miss TFY. After much discussion on the available options moving forward, Miss TFY agreed for Home Nursing Foundation (HNF) services to perform an initial assessment of Mr TAK, together with the change of his nasogastric tube. A short supply of medications was given to last until the HNF assessment, and Miss TFY was instructed to return to the clinic with the HNF assessment letter before further management could be decided. Miss TFY returned with the HNF assessment letter documenting Mr TAK's unchanged clinical condition a month later, and his usual medications were given.

Case report 2

Master AZH is a 17-year-old boy with the past medical history of Duchene's Muscular Dystrophy (DMD), diagnosed in January 1999. He first presented with progressive muscular weakness since the age of 4 years, with the findings of hypertrophic deltoid, calves, with lordotic waddling gait and positive Gowers' sign. This was complicated with tight tendo Achilles and pes planus. His muscle biopsy demonstrated the absence of the dystrophin gene. His creatine kinase levels were also grossly elevated. As a result of his illness, he had been wheelchair bound since the age of 5, and subsequently became bed-bound at the age of 12. He requires maximal assistance for activities of daily living (ADL).

He started developing complications of DMD in January 2009. He was then found to have congestive cardiac failure secondary to cardiomyopathy. Trans-thoracic echocardiography performed on 29 January 2009 showed global hypokinesia with dilated cardiomyopathy and a left ventricular ejection fraction of 10%. He was started on carvedilol, spironolactone, valsartan, oral frusemide and advised on fluid restriction. He was noted to have transaminitis secondary to fatty liver and hepatic congestion arising from the heart failure. He also developed oropharyngeal dysphagia, for which he was started on finely minced diet and thickened fluids.

Master AZH was referred by the cardiologists to the hospital transitional home care team for follow-up care of the patient at home, in order to boost confidence with the family and to try to minimize readmissions. During the 6 months post discharge, the transitional home care team managed to prevent readmissions and worked closely with the patient's cardiologist. One of the crucial moments involved asymptomatic hypotensive episodes during one of the home care visits, when the patient's blood pressure fell to 82/60 mmHg. His baseline blood pressure was around 110/70 mmHg. Master AZH's father was not keen for admission as he was asymptomatic and hoped the transitional home care team would try to stabilize him, despite explanations of risk of imminent danger to his life. Advance care planning had been done earlier during the inpatient stay, and Master AZH's parents were

counselled by the cardiologist that their son did not have long to live irrespective of the management, and that hospitalization might unnecessarily prolong his suffering. Nonetheless his medications were titrated in conjunction with phone consultations with the cardiologist and his blood pressure readings improved.

After 3 months of transitional home care, Master AZH was handed over to an experienced and competent family physician in the community. The family was grateful for the smooth transition and right-siting of care to the family physician. Through a series of emails and phone conversations between the community family physician and hospital transitional home care team, the patient's progress was communicated and discussed, and patient's satisfaction and care was enhanced with reduced readmission rates. Master AZH had only one admission to hospital over the next 5 years, for an episode of pneumonia which was promptly picked up and was treated uneventfully.

Discussion

Functionally dependent patients are not easy to manage in the community, and sometimes they end up as frequent admitters to hospital if not cared for in an appropriate setting, utilizing excessive hospital and healthcare resources unnecessarily.³ Long-term inpatient care may not always be the ideal setting for such patients, especially given the high risk for nosocomial infections and increasing prevalence of multi-drug-resistant organisms.

These two cases illustrate how home care is employed with a common long-term goal of enabling functionally dependent patients to be optimally managed in the community as well as in their homes. In case 1, the HNF nurses provided the polyclinic doctor with a clinical picture of a homebound patient and enabled the polyclinic doctor to ascertain if the patient's usual medications needed to be titrated. Such a collaboration between home care nurses and clinic-based doctors can work to the advantage of homebound patients. In case 2, the ongoing collaboration between hospital-based transitional home care programmes and community home care doctors ensured seamless and continued care for the homebound patient, bridging the hand-off and transition between care settings. Home care can either be deployed from the hospital in the form of transitional home care for 3 months before stabilizing patients and handing them over to long-term community home care, or be referred directly from primary care providers to community home care.

Patients who are admitted and become functionally dependent may find themselves requiring a higher level of care than before, for which they and their care givers are inadequately prepared. Reactive depression is also commonly associated with such patients as a result of a decrease in their functional status, plunging them into a vicious cycle of non-compliance, lack of motivation and frequent hospital admissions.⁴ Hospital-based transitional home care programmes seeks to anticipate and address various medical, psychological, social and functional issues, with an aim to improve care continuity and smoothen the transition process as patients are right-sited from hospitals to long-term home care setting.

For transitional home care to be effective for these patients with high needs, it does not merely involve only a few interventions. More successful programmes involved interventions that are more comprehensive, involved more aspects of the care transition, extended beyond the hospital stay, and were flexible enough to respond to individual patient needs.⁵ As a result, this often involves multiple interventions coming from multi-disciplinary team members that bridge the care from hospital to home. They involve transitional home care doctors, nurses, case managers, medical social workers, physiotherapists, occupational therapists, speech therapists, dietitians and pharmacists. A case management unit comprising case managers, care coordinators and administrative assistants helps patients to navigate community resources, and provides link-up with relevant community home care providers.⁶ The doctors and nurses provide comprehensive assessment, take charge of chronic medical conditions across specialties, integrate and defragment the care in conjunction with specialists, and reduce unnecessary visits.⁷ The physiotherapists and occupational therapists provide homebound patients with home therapy sessions so as to improve and maintain mobility, minimize falls and fall-related injuries, and allow patients and care givers to cope with ADLs.⁸ They also improve comfort and enhance mobility of seniors living in HDB flats by facilitating with subsidized modifications of their homes with the Enhancement for Active Seniors home improvement programmes and procurement of walking aids, hospital beds and mattresses with the Senior Mobility Funds.⁹ Speech therapists assess for swallowing impairment, provide ways to safely feed the patients and educate care givers on such feeding methods at the same time. Pharmacists provide medication reconciliation to the patients so as to identify the most accurate list of medications, optimize medication regime, review problem medications which may include anti-coagulants, anti-platelets, insulin, inhalers and diuretics, educate patients and care givers on the latest updated medication list and usage, and reduce adverse medication errors, duplication, omission and interactions.¹⁰ Medical social workers help with identification of social issues, directing patients and families to the appropriate community resources, conducting advance care planning, and provide psychological and emotional support for them.

All these individualized patient-centred care plans and interventions by various multi-disciplinary team members form the “ideal-transition-in-care” framework and bridge as described by Kripalani et al., and minimize disruption to the care transition across from the hospital to community settings.¹¹ Upon stabilization of their ongoing issues over the 3-month period, these patients are handed over to the appropriate community home care providers for continuity of care. Through such smoother transitions of care, unscheduled and unnecessary readmissions have been shown to be reduced locally.¹²

Once handed over to community-based medical home care, long-term home care doctors continue to care for and make regular visits to such patients' homes to manage their chronic conditions, and frequently co-manage patients together with other home care services such as home nursing or home therapy, depending on patient needs. Senior home

care and home help services have a range of personal care services such as escort services for medical appointments and treatments, meals delivery, housekeeping and personal hygiene.¹³ All these services can be coordinated to complement each other and allow patients to be cared for in their familiar and comfortable home environments without hospitalization, thus reducing risks related to inpatient care.¹⁴ Telehealth initiatives have also been used to good effect to link providers to patients and for care coordination.¹⁵ One possibility is the direct linkage of patients to the hospital transitional home care team for monitoring of symptoms and signs, resulting in a faster and more efficient response. Another possibility includes direct linkage of the hospital transitional home care team to long-term community home care providers for handing over of the patients, resulting in a more seamless transition.

The Agency for Integrated Care acts as a National Integrator and has a one-stop website portal referral service whereby all the above home care services are readily accessible. Financial assistance can be made available to Singapore citizens and permanent residents through means testing, with some financially needy patients even benefitting from medifund and public assistance schemes.¹⁶ This ensures that affordable and optimal home care is kept within reach of every functionally dependent Singaporean.

However, implementing such home care services and programmes is not without limitations. The public awareness of home care may still be lacking, and publicity programmes may be required to raise such awareness. The healthcare staff may not be trained for home care. It is also not easy to find healthcare staff who are interested in home care, and there are many reasons behind this; it is different from the clinic-based or hospital-based setting that most healthcare staff are used to. Sometimes bulky equipment may need to be transported to patients' homes and carried around. Travelling may be an issue for some healthcare staff who rely on public transport. Some home environments may also be hostile or unsafe for home care staff, threatening their safety and well-being. Homebound patients may also find the cost of home care too prohibitive if there is no appropriate or adequate subvention from the country's healthcare system to allow for this system of care.

Dealing with the above limitations requires drive and determination from higher national and ministerial levels, as well as collaboration on the ground between regional health systems and community and primary care. Ironically, the cost of institutionalization may be higher than the cost of home care, and many hospitals are facing bed crunches. Healthcare systems may consider a funding mechanism that allows for a paradigm shift in care focus from hospitals to homes, and to increase the numbers of healthcare staff undertaking the delivery of home care.

More research and surveys could be done to identify areas where awareness is lacking in the public and among healthcare staff, and to fill in the awareness gaps so as to improve uptake of home care services where appropriate.

Training opportunities and programmes could be offered to healthcare staff who are willing to undertake the work so as to build their confidence and empower them to deliver better care to their homebound patients.

Conclusion

This paper, through the use of two case studies, attempts to showcase how homebound patients with continuing care problems can be adequately cared for in their own homes, by the provision of a multitude of home care services that are well coordinated in a timely fashion. With the evolving needs of an inevitably ageing population, healthcare capabilities in the community must keep pace so that such patients do not have to be admitted unnecessarily to hospital. Such a paradigm shift in care focus and service provision, coupled with thoughtful considerations for appropriate subventions at a national level, can keep patients well managed in the community, possibly relieving the perennial hospital bed crunch issue. Rates of hospital-acquired infections will be correspondingly reduced as well. More sharing of experiences, surveys and operational research is needed to build such future capacity in anticipation of the silver tsunami and increasing proportion of chronically sick patients.

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