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Evaluation of the Discharge Care Coordination Process for Elderly Patients

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Introduction

The area of care management is a rapidly-evolving field that emerged to fulfill the growing need for high-quality, high-value, and patient-centered frameworks in healthcare. In care management, the approach to patient care extends beyond that of isolated inpatient hospitalizations and includes longitudinal supervision that supports patient recovery in the post-discharge and transitional care periods. In sum, it is defined as any activity that bridges gaps in patient care during transitions across different care settings, provider teams, or episodes of care [1]. Ultimately, the goal of care management is to decrease the fragmentation of care episodes that can result in adverse outcomes, increased cost, and negative patient experiences [2] in order to provide more longitudinal oversight of the wellbeing of a patient.

Ideally, care transitions consist of a series of steps that begins with discharge planning and continues with the communication of information, organization of information, confirmation of medication safety, patient education and engagement, social and community resources, advance care planning, coordinated activities among the provider team, symptom management and monitoring after discharge, and appropriate outpatient follow up [3] (Figure 1). Ensuring the coordination of this variety of activities aligns within the objectives of broader care coordination models such as accountable care organizations and patient-centered medical homes, which also aim to optimize patient outcomes.

Preventing avoidable hospitalizations and minimizing rehospitalizations is one specific area of current focus in care management. Older patient populations are of particular interest as a demographic that is particularly susceptible to chronic medical conditions and frequent hospitalizations; in one literature review of hospital readmission initiatives, 25 of the 43 identified interventions were conducted in geriatric populations or high-risk patients with chronic conditions [4]. Several care management initiatives have demonstrated successful reductions in readmissions in these vulnerable populations. In one large-scale study of approximately 20,000 dually eligible Medicare and Medicaid patients, a New York managed care organization created a transitional care program with specialized case management nurses to follow and coordinate interdisciplinary care for its members. All dually eligible patients in the program experienced a 21% relative reduction in 30-day all-cause readmission rate, while a cohort of 573 continuously-enrolled Medicare patients had a 54% reduction in hospital admissions, 24% reduction in 30-day hospital readmissions, and 27% decrease in ED visits over a 24-month period [5]. In another Medicare demonstration project at Massachusetts General Hospital (MGH), 2,500 chronically-ill, high cost Medicare patients were enrolled in a three-year, \$60 million care

coordination program. Termed the “Care Management Program” (CMP), it consisted of outpatient nurse case managers embedded within primary care practices to provide enhanced continuity of care and enable greater access to health IT communication tools for both providers and patients. The study population targeted the highest cost demographic of older patients with chronic conditions; the average patient age was 75 years old, required an average of 12.6 medications per patient, and had approximately 3.4 hospitalizations per year. By the third year after implantation of the outpatient case manager program, health outcomes demonstrated significant improvements in healthcare status and reductions in healthcare utilization. 90-day hospitalization rates decreased by 20%, ED visit rates decreased by 25%, and mortality rate during the study period decreased by 4%, resulting in a cost savings of \$2.65 per \$1 invested in the program [6]. These types of studies demonstrate the significant improvement in patient outcomes that can be achieved through care management interventions among high-risk geriatric populations and also reflect a broader opportunity to significantly improve outcomes and healthcare quality in future years.

Within care management paradigms, discharge planning is a critical component of interventions that begin in the inpatient setting. Discharge planning occurs throughout the course of a patient’s hospitalization and assesses a patient’s risk factors, anticipated medical and social needs, and outpatient follow-up plan. From the care team perspective, this requires multidisciplinary decision-making to determine the discharge plan, collaboration with outpatient providers to communicate patient information and determine optimal follow-up, and logistical coordination of the follow-up plan and appointment scheduling [3]. Due to the various activities involved, discharge planning often requires multidisciplinary participation from discharging clinicians, primary care providers, case managers and/or discharge planners, and nurses in addition to the patient, family and/or caregiver.

Although the literature proposes several models for the ideal care transition, in practice, it is exceptionally difficult to implement a discharge planning process that achieves the elusive goals of efficiency, quality, and cost-effectiveness. This challenge is a particularly pressing issue in healthcare delivery in the developed world, where medical and technological advances in countries such as the US and Japan have enhanced the availability of fragmented, high acuity care to serve the needs of increasingly medically-complex patients.

Japan in particular is facing significant challenges in health care and care coordination due to the disproportionate growth of the aging population. In a country that has historically experienced the highest rates of healthcare utilization among the developed world, with per capita physician consultation rates that are more than triple that of the US [7], growth of the aging population will likely

compound the current pressures on healthcare resources. Japan currently has the highest rate of population aging in the industrialized world, due to a combination of declining birth rates—among the world’s lowest [8]—lengthening life expectancy—the world’s highest [8]—and low rates of immigration that have created a disproportionate growth in the elderly demographic. This population growth trajectory is expected to accelerate in the next few years; of the 128 million people in Japan, people over the age of 65 currently comprise 23% of the national population and are eventually expected to expand to 40% of the population by 2050 [9]. This situation has urgent fiscal implications for Japan as a diminishing proportion of the population will be contributing to national healthcare budgets, long-term care financing, and social security benefits while a growing proportion of the population will be relying on these funds [10].

The growth of the aging population in Japan has also triggered shifts in family structures and cultural attitudes toward the role of families in providing care for elderly family members. Traditionally, Confucian family ideals have shaped social structures of elder care such that caregiver responsibility is expected of successive generations, with primary responsibility typically ascribed to the women in the family [11]. In 2000, Japan instituted a mandatory government-sponsored long term care (LTC) insurance program to provide additional professional healthcare support services and decrease family caregiver burden [12]. Under this system, any patient who is determined to have a need for LTC is provided these services at a typical cost-sharing fee of 10%, regardless of income [13]. The introduction of LTC policies has influenced cultural attitudes toward the family’s role in caregiving. Studies have borne this out when comparing the year of LTC reform implementation in 2000 to the year immediately following these policy reforms [14]. More recent reforms in 2005 were instituted to address skyrocketing costs in healthcare, with a vision for strengthening coordination of community-based care and providing additional resources for preventive care [15]. Despite these fluctuations in the social, economic, and cultural factors influencing elder care, gaps in elder care provision continue to be an unresolved problem and there is an urgent need to ensure that timely and appropriate care coordination is delivered to these elderly patients as they transition to and from acute care settings.

A parallel situation exists in the US, which is widely recognized as having the highest rates of healthcare spending in the world while also having one of the lowest life expectancies among developed countries [7]. Similar to Japan, older persons account for a growing percentage of the population and a disproportionate amount of national healthcare spending. In 2010, for example, 5.8 million people over the age of 65 [16] represented 13% of the population but 34% of healthcare expenditures [17]. Such trends will continue with the projected growth of the Medicare population, which is expected to reach

8.5 million people—or 19% of the population—by 2030 [6]. Cultural attitudes toward intergenerational caregiving in the US vary significantly but often lead to gaps in older patient care, with 42% of people over the age of 70 spending some time living in a nursing home at some point during their older years [18]. Care coordination for these geriatric patients is oftentimes very complex, as patients may be constrained by numerous medical, social, and economic considerations such as limited daily functional independence, polypharmacy, transportation access, social and family support, and financial resources. Ensuring continuity of care throughout the process of medical illness, hospitalization, post-acute care, and transition to the community is a challenging but significant unmet need in care transitions for this high-risk patient demographic.

Given these social, economic, and cultural contexts, the concept of discharge care coordination is beginning to gain momentum in both countries. In Japan, reimbursement for timely discharge, screening of high risk patients, as well as inter-provider communication after discharge has been introduced. Similarly, in the US, the recent Transitional Care Management (TCM) billing codes are being instituted to promote greater continuity of care for patients with moderate to high-complexity medical and psychosocial issues during care transitions between different inpatient or community settings, with reimbursement of medical decision-making and follow-up communications with patients after discharge [19]. This occurs in the context of broader popularization of collaborative, multidisciplinary outpatient care models such as the patient-centered medical home (PCMH), and therefore provides a significant opportunity to ensure the process of discharge care coordination is integrated into the broader centralization of care through PCMHs [20]. In these ways, the ongoing trends in healthcare delivery redesign—particularly in the US—and greater institutional accountability for hospital readmissions presents an opportune time to understanding the key elements of the discharge care coordination process in both countries to facilitate effective and efficient integration into the increasingly centralized delivery systems of the near future.

The objective of this research project is to conduct an international comparison of the process of discharge care coordination at two large academic centers in Japan and the US: the University Hospital at Tokyo Medical and Dental University (TMDU) in Tokyo, Japan and Massachusetts General Hospital (MGH) in Boston, Massachusetts. The TMDU University Hospital—with 800 inpatient beds, 32 medical specialties, and 22 medical treatment facilities—is a large academic referral center for Tokyo and surrounding areas in Eastern Japan. Massachusetts General Hospital is a 999-bed tertiary and quaternary referral center that serves the New England area and also draws on a broad national and international patient base. While many studies have separately examined various types of discharge-

related transitional care for elderly patients in Japan and the US, little research exists that explicitly compares the international differences in the process flow of discharge screening between these countries. This research aims to begin fulfilling this previously unexplored area by clarifying the clinical, operational, institutional, and cultural factors that impact the inpatient discharge care coordination process for geriatric patients at TMDU and MGH, which may serve as case studies for discharge screening at two large academic medical centers in Japan and the US. The focus of this study is to understand the discharge care coordination process for the older, high-risk patient demographic. For the purposes of scope, “discharge care coordination” was limited to coordination activities completed by inpatient providers from hospital admission until discharge and included discharge screening, discharge planning, and logistical execution of the discharge plan. By probing the discharge care coordination process from the provider perspective, the goal of this project is to highlight the key strengths, weaknesses, and opportunities for future improvement in discharge care coordination for geriatric patients at these two institutions. By examining the key similarities and differences between geriatric discharge screening at two large academic medical centers in Japan and the US, this work may serve as an example for future cross-cultural exchange of information in the field of care transitions, case management services, and geriatric healthcare delivery.

Methods

This study was conducted through a combination of secondary data analysis, clinical observation sessions, and interviews with providers who are involved in the discharge coordination process. These providers included medical social workers (TMDU), case managers (MGH), hospitalist physicians, attending nurses (MGH), and nurse practitioners. The study consisted of three major components: (I) Patient demographic analysis of discharge care coordination referrals (TMDU), (II) Process analysis of geriatric discharge care coordination process at TMDU and MGH; and (III) Key stakeholder perspectives of geriatric discharge care coordination at TMDU and MGH.

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