Geriatric Care Coordination: Comparing the U.S., the U.K. and Japan

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Abstract

Objective: *The purpose of this study was to review the literature published within the last decade related to the role of the pharmacist in geriatric care coordination in the United States, the United Kingdom, and Japan.* ***Data Sources:*** *An Internet search was conducted using the key words geriatric care coordination. Information posted between January 2001 – December 2011 was reviewed.* ***Study Selection:*** *The abstract and/or full text of each article was reviewed and articles were excluded if they did not relate directly (e.g. studies completed in other countries such as Italy or Germany). This resulted in a total of thirty review articles.* ***Data Synthesis:*** *The three main differences between the U.S., the U.K. and Japan are (1) the provision of home care, (2) the delivery of coordinated services, and (3) the perceptions of the quality of geriatric care provided. The key driving forces for the differences are culture, financing and education.* ***Conclusion:*** *As the number of elderly individuals in the population increases, countries will face the challenge to meet the increasing need for geriatric services. Pharmacists have an opportunity to help meet this challenge. Pharmacists are uniquely suited to mold their responsibilities around the changing needs of the growing geriatric population.*

Keywords: Case Management, Cross-Cultural Comparison, Geriatric Assessment, Geriatric Care Coordination

Introduction

By the year 2050, it is projected that the United States (U.S.) will be comprised of 86.7 million persons over the age of 65.[1] This will be primarily due to the baby boomer generation, those born in the 1950s.[2] For the first time in history, the U.S. may have more elderly individuals than working individuals. This is also true for seniors in the United Kingdom (U.K.) and Japan where a sharp rise in those greater than 65 years is expected to occur. Policymakers are interested in recommendations to address the anticipated needs of older persons. For example, in May 2009, Senator Blanche Lincoln of Arkansas introduced a bill to amend Title XVIII of the Social Security Act to provide Medicare beneficiaries with access to geriatric assessments and chronic care management. Coordinating care for older persons may help to curb costs for Medicare, which is high due to the increase in health care costs at older ages. Additionally, the American Geriatrics Society formed a task force to recognize the many challenges facing the development of geriatric medicine.

Currently, there are over 20 million Americans that are caring for their elderly parents. Projected increases in life expectancy may mean that 60 year old children will be caring for their 90 year old parents.[3,4] Many struggle to balance raising their own families and caring for their loved one. These struggles are compounded by the fact that they face a lack of trained geriatric care specialists to meet their needs. Medical facilities are looking for help to make connections between the patient and the provider. Care coordinators can facilitate the efficient use of physician time. One measure that has shown some promise of success is geriatric care coordination. Geriatrics care services may include client assessment, care planning, service coordination and referral and monitoring. A growing body of research shows that geriatric care coordination results in decreased hospitalizations, decreased emergency room visits, and increased quality of care. [5,6,7,8]

Little research exists that summarizes examples of pharmacist provided geriatric care. Furthermore, examination of pharmacist provided geriatric care by country may lead to a better understanding of how to improve geriatric care. The aim of this article is to review the literature published within the last decade related to the role of the pharmacist in geriatric care coordination in the U.S., the U.K. and Japan.

Methods

An electronic search of various healthcare journal databases, including Medline/PubMed was conducted using the key words geriatric care coordination, seniors, elders, and older Americans. The search was limited to keywords in the abstract and included the years January 2001 through December 2011. The abstract and/or full text of each article was reviewed and articles were excluded if they did not relate directly (e.g. studies completed in other countries such as Italy or Germany). Articles were also excluded based on the definition of geriatric care coordination. Studies show that definitions of geriatric care coordination are broad depending on who is providing the service (e.g. nurses vs. physicians vs. care managers).

Defining Geriatric Care Coordination

The American Geriatrics Society emphasizes procedures such as consultation, assessment and follow-up utilizing interdisciplinary teams.[9] The National Association of Professional Geriatric Care Managers provides a similar definition with a greater focus on outcomes. They state that a care manager is one who assists older adults in reaching maximum functional capability striving to respect the autonomy of the individual with an emphasis on the dignity and respect of each individual.[10] Health care providers in the U.K. have defined geriatric care coordination as a multi-disciplinary team effort beginning with an assessment at the point of hospital admission. If possible assessments are obtained in the community prior to hospitalization. Case management follows the assessment and appropriate monitoring occurs.[11]

On the other hand, experts in the field of nursing state that geriatric care coordination involves counseling and education of seniors and their caregivers, medication review, utilizing multidisciplinary

teams and monitoring assessments at least twice a year.[12] Furthermore Japan, which has the fastest growing aging society among industrialized countries, defines geriatric care coordination as services provided by a care manager.[13] The care manager is responsible for planning all care and services for clients which may include home help services, home bathing service, visiting rehabilitation services, short stay service, catering service, day program service, lease of home care and rehabilitation equipment and institutional service in a nursing home. Once a client is assessed using an 85 item standardized questionnaire, the client is provided a consult with a health care professional.[13] The consult involves review of the questionnaire responses and review of a report provided by the client's home doctor. The care manager then develops a care plan, a weekly time schedule of services, and monitors and coordinates the services for the client. [13,14,15]

Although various definitions for geriatric care coordination exist, there are three common elements: 1) care coordination, 2) consultation with a provider, and 3) an ongoing care plan that includes follow-up. Care coordination begins with an assessment of an older person's needs. Care coordination is followed by a consultation with a provider and is concluded with the development of a care plan noting regular follow-up visits and monitoring. This concept of geriatric care coordination was used in the review of articles for this study.

Results

Results of the literature review can be found in Tables 1-3. The following was noted from each article: study location, reference source, publication date, study design, objectives, implications and a summary of the article's key points. For example, in a 2007 study by Lin et al, a randomized controlled trial was conducted involving seniors randomized to a usual care group versus a coordinated care group as an attempt to prevent fall related injuries. Results revealed that the intervention group had significant improvement in function versus the control group. [16] Similarly, the frail elderly were assessed in a U.K. study at Royal Melbourne Hospital. A multidisciplinary care coordination team was developed to improve care in the emergency department. Results showed that patients receiving care coordination had fewer emergency department readmissions. [17] Other studies point to differences among Americans as compared to the British and Japanese. For example, in the U.S., many seniors dwell in nursing homes, assisted living facilities or live alone.[18,19,20]

Geriatric Services provided through Home Care

The results of the literature review reveal three main differences between the U.S., the U.K. and Japan in regard to geriatric care coordination. The first difference is related to home care. While studies in the U.S. show a slow move into this area, it is shown that the U.K. and Japan embraced home care long ago.[13, 21] Families in the U.K. and Japan are the major providers of care for their elders.[13, 17] Most adult children are not opposed to taking care of their parents in their home as they age, while in the U.S. many efforts aim to postpone institutionalization (i.e. nursing home/assisted living facility placement), but these efforts are moving very slowly.[18]

Patient Satisfaction with Geriatric Services

A second difference is related to patient satisfaction. A definitive conclusion cannot be made here, but there are studies that show either no change or dissatisfaction among elders related to the provision of geriatric care coordination in the U.S. [22,23] Conversely, many studies in the U.K. and Japan reflect a greater community or societal concern for seniors. [13] Many of the major goals involving insurance reform in Japan have taken into consideration issues and needs of the elderly. [15] It has also been stated that the British are 10-15 years ahead of the U.S. in geriatric medicine.[24] U.K. health professionals are not only interested in whether they provide access to care among elders, but also in how elders feel about the quality of that care. Americans have been referred to as more therapy oriented when compared to the British, and it has been stated that British physicians practice "kindness" medicine.[24]

Geriatric Care Coordination Providers

The third difference between the U.S., U.K. and Japan is related to the decision of who provides care coordination. In the U.S., multidisciplinary teams have been noted as the best approach to achieve desired outcomes.[25, 26, 27] For example, PACE (Program of All Inclusive Care for the Elderly) was developed in 18 states across the U.S. to provide free hospitalization and medication coverage to low-income seniors. This program has been exemplary in showing the benefits of coordination of care using health professionals of multiple disciplines.[27]

In Japan, seniors must meet certain eligibility criteria to determine their level of care as a part of the Long Term Care Insurance Program. Each level represents a certain monetary value that will cover needed services. Services are coordinated through a care manager and seniors are monitored continuously.[13, 28] Pharmacists often have a vague role beyond the traditional dispensing of medications. Even in the clinical setting, preparation of IV admixtures are either purchased from an outside vendor, or prepared by nurses. As compared to the U.S there is less emphasis on clinical judgment, which is viewed as a responsibility of a physician. Although this is true, approximately 90% of Japanese hospital pharmacists feel content with dispensing being their main duty.[29]

In the U.K. seniors must first see a general practitioner and then are referred to other health professionals. This type of coordination may sometimes result in fragmented care and initiatives have been proposed by the U.K. to adopt a multidisciplinary model of care.[30,31] Understanding how these countries differ provides some insight on the discussion around what works well and what doesn't in the provision of geriatric care coordination. To go a step further we must understand why these countries differ because differences do not always indicate problems, yet understanding them may lead to solutions.

The Role of Culture in Geriatric Care Coordination

Based on review of the literature, the key driving forces for the differences between the U.S., the U.K. and Japan are culture, financing and medical education. Numerous studies reveal clear cultural differences between Americans, Japanese and the British; specifically, health professionals differ greatly on their views of geriatrics.

Many American health professionals have been cited as having ageist attitudes (i.e. some physicians feel that treating a senior is wasteful, depressing and time consuming),[32] while the Japanese culture promotes a greater role among family members or physicians in regard to decision-making for elders. Seniors are viewed as more submissive to medical professionals reflected by their unique concept of life and death (i.e. the acceptance of circumstances as their fate). It has been stated that the Japanese rarely complain of pain due to the belief that patience is a virtue and that one should not bother their physician.[33, 34] Since the 19th century, the Japanese family structure has conformed to a government-instituted plan consisting of a multigenerational household: grandparents, their first son (head of household), his wife, and their children. Any other sons were expected to establish their own households and daughters were married off. The responsibility for caring for the elderly parents was primarily left up to the daughters-in-law.

After World War II however, Western influence resulted in the rise in popularity of the nuclear family, with more emphasis placed on the individual and less on the traditional group-centric orientation, although differences exist between rural and urban areas.[35] Daughters began furthering their careers, postponing marriage (and the role of daughter-in-law) and abandoning the rural areas for more lucrative urban jobs, reducing the number of children-in-law caregivers: 20% in 2004, down from 30% in 1995. Currently, unmarried children are caring for many elderly parents with an increasing number of son caregivers in Japan: 25% in 2004, up from 20% in 2001.[36]

Views in the U.K. reveal that geriatrics is at the forefront of concern. It has been stated that the British believe that if the government funds 100 cardiologists, then funding should be allocated for 100 geriatric psychiatrists at the same time.[24] While Americans have groups like AARP (American Association of Retired

Persons) to provide a voice for seniors, older persons in the U.K. and Japan do not need such groups, as the government adequately serves as their voice.[11, 13, 37] A 1998 U.K. study showed that unpaid family members were primary care providers of seniors. Other studies show that many Americans place their parents in an institution when they age.[38] Placement in a nursing home or assisted living facility can be costly. Therefore, this does not reveal neglect in care, but simply a cultural difference. These cultural differences also reflect the financing and medical education for geriatrics.

The Role of Financing in Geriatric Care Coordination

The primary reimbursement source for geriatric care management in the U.K. and Japan is the government (i.e. National Health Insurance System (NHS) and the Long Term Care Insurance Program (LTCI)) followed by local social services departments and personal insurance. This is in sharp contrast with the private payer system in the U.S. consisting of many interests (e.g. health professionals, managed care organizations, hospitals, pharmaceutical companies). Although there are different models of care, each country faces the same challenge of working with limited resources. Although the U.S. has more money to spend on health care, there are clear differences in how that money is allocated with little going to the area of geriatrics. Funding in the U.S. for geriatrics has increased in recent years, but is still considered low compared to the U.K. and Japan.[13, 39] These differences in financing also affect the structure for the delivery of care.

For example, in the U.S., physicians are paid on a fee-for-service basis for the provision of geriatric care. This model results in a hierarchical type relationship between physicians and other health professionals with the physician at the top of the hierarchy followed by a nurse, then a social worker, then a pharmacist and so on. Similarly in Japan, a fee for service system exists, but this system is viewed as a global budget system with stringent pricing control because payment is based on per diem.[13]

The Japanese system is viewed as a global budget system due to the Long Term Care Insurance program. On April 1, 2000, the Japanese government implemented a public mandatory Long Term Care Insurance program to reduce the burden of elderly care on family caregivers. This program is an entitlement for the Japanese elderly (65+) and those 45-64 with one or more of fifteen debilitating elderly-related diseases.[40,41] Under the slogan "from care by family to care by society", LTCI provides community (i.e. day care, home health care, physical examinations) or institutional-based serves (i.e. nursing homes) based on physical or mental status, with beneficiaries paying a 10% out-of-pocket copayment. The remainder of the cost is equally maintained by health-care premiums (to which everyone over 40 contributes) and taxes, both national and local [42,43] To offset skyrocketing costs, in 2005 the government launched a reform composed of two changes: new room and board charges for nursing home residents via a 50% copayment increase and preventive benefits aimed at keeping healthy seniors healthy, reducing their need for future long term care. In 2008, a health insurance system specifically for those over 75 was implemented, to streamline care. In addition, the Japan Geriatric Society began to place more emphasis on the practical aspects of care with a new program aimed specifically at care of elderly patients.[44]

In contrast, in the U.K. there is no fee for service system resulting in a spoke-and-wheel type relationship. Physicians are in the middle of the wheel (the spoke) and reach out to nurses, sociologists, pharmacists, and other health professionals to coordinate and provide care. Reimbursement in this way has a profound effect on care coordination. The reimbursement structure in the U.S. may or may not be viewed as a barrier to the provision of geriatric care coordination, but it is interesting to imagine the delivery of services with the same approach in all countries. Although, the U.K. and Japan provide national coverage of services for the elderly they too face challenges. A growing number of elderly individuals will force the British and Japanese to rethink about the balance between working individuals paying taxes and those greater than 65 years of age needing geriatric care management.[37]

The Role of Education in Geriatric Care Coordination

Lastly, it has been stated that the way in which physicians and pharmacists practice can be largely attributed to who teaches them in school, the opinions of colleagues in the field and the payment received for services provided.[24] In a report by the Institute of Medicine, Crossing the Quality Chasm, geriatric medicine was identified as an area that desperately needs more attention.[45] It was also noted that training programs for geriatric medicine are underdeveloped.[46]

Many of the geriatric residency positions offered remain unfilled. In an article by Schroeder-Mullen, 1998, three reasons were cited for the lack of interest by students to pursue geriatric specialties. The reasons were low reimbursement, the small number of programs offered, and ageist attitudes. In the U.S. most graduates choose the more lucrative specialties avoiding the unpredictable field of geriatrics accompanied by low Medicare reimbursement rates. Some Americans simply feel that treating seniors is time consuming and wasteful.

It has been reported that there are many challenges in U.S. medical schools related to the development of geriatric academic programs.[47] Furthermore, a cross sectional study of 84 accredited pharmacy schools in the U.S. was conducted to examine the structure, resources, and activities involved in teaching geriatric courses. Results revealed that there is wide variation in U.S. pharmacy schools with respect to coverage of geriatric topics. When the results were compared to a similar study conducted in 1986, a substantial difference in the coverage of geriatric topics was not shown.[48] Other studies highlight the issue that increasing the content of instruction in geriatrics in school curricula is difficult due to the current shortage of academic faculty trained in the area.[48,49]

Specifically, a 2006 survey administered to 89 deans of U.S. pharmacy schools revealed that of the 42% responding deans, 30%, 40%, and 19% of deans had one, two, and three full-time geriatric faculty members, respectively. Although many of the deans responded that they felt geriatrics should be integrated into other courses, only two of the responding schools required a course in geriatrics. The deans noted a lack of properly trained geriatric faculty as the main barrier to hiring geriatric faculty.[50]

In regard to medical residencies, many family practice and internal medicine residencies do not include geriatric curricula.[51,52] In contrast, geriatric medicine in the U.K. is taught in 22 out of 23 medical schools,[53] Furthermore, a 2008 study noted that students in pharmacy schools in the U.K. felt prepared to provide pharmacy consults to the elderly in an long term care setting.[54] A 37 item questionnaire was administered to students taking geriatric pharmacotherapy classes. Although all of the students were required to take a long term care clerkship, only 20% elected to take the geriatric elective and 8% took an additional geriatric elective.[54]

There is a more patient-centered focus in the U.K. compared to the U.S. U.K. pharmacists are more concerned with the physical and psychological well being of elders. In the U.S., although studies show that the supply of geriatric health professionals is not meeting demand, efforts in this area are increasing. The Accreditation Council for Graduate Medical Education has taken first steps toward increasing physician knowledge and awareness of geriatric issues.[32] The Council amended the medical curricula to include geriatric topics and added geriatric specific questions to the American Board of Internal Medicine Exam. In the pharmacy arena, the American Society for Health System Pharmacists currently provides information for pharmacy graduates to apply to over 15 accredited geriatric focused residencies. These residencies offer a multidisciplinary training setting for pharmacists to become geriatric care providers.

The education of health care individuals differs somewhat in Japan. It is the conventional use of Confucian and Buddhist philosophies, as well as the tradition of *amae* (a state of dependence on another's altruism, similar to the mother-child relationship), which form the foundation upon which teaching is based.[55] This blind loyalty, or *chû*, possessed by students for their instructor results in the students' total acceptance of information the instructor wishes to impart, whether or not the material is relevant or helpful; questions are not asked. Instructors are often physicians, teaching through the lens of medicine while

leaving out the health promotion and nursing aspects of care. Clinical experience is mostly practice or observational, with many graduates leaving school with little or no actual hands-on experience. In contrast, the amount of time spent specifically studying geriatric medicine during the course of a typical 4-year nursing school curriculum is substantial: three semesters, as opposed to less coverage in many U.S. schools.[55] Physicians in Japan are educated in the theoretical facets of aging, with less attention placed on the practical facets; the opposite of which is practiced in the U.S. and U.K. Geriatric departments are located at 30% of medical schools in Japan.[56] This percentage is expected to increase as the Japan Geriatrics Society makes it a primary objective stressing an increase in the importance of geriatric education.[44,57]

Conclusion

Variations in the provision of geriatric care coordination exist between the U.S., the U.K. and Japan. These countries differ greatly in the provision of home care, the perceptions of older persons on the quality of geriatric care provided and on the approach in delivery of coordinated services. The major reasons for these differences are a result of cultural, economic and educational factors. Many of these cultural differences can be applauded in a "that's what makes us different" point of view, while other cultural differences may result in future concerns.

Studies performed across the three countries reveal the benefits of pharmacist provided geriatric care coordination. In Japan a recent study showed that 9.6% of seniors over the age of 70 received duplicate medications, which may be due to lack of coordination as consolidation of prescriptions at a community pharmacy lessened the problem.[58] Additionally, a recent study suggests that the Japanese pharmacist's role in geriatric care coordination is growing. Seniors living in the Hiroshima region of Western Japan were invited to bring all of their medications, prescriptions and non-prescription drugs, to one of 177 participating pharmacies for a drug utilization review. As members of the Hiroshima Pharmaceutical Association, local pharmacists conducted evaluations of 508 individuals over the age of 65 over a period of 3 months. The goal was to identify any issues or safety concerns. After careful review, pharmacists determined that 49% of participants had safety concerns about their drug regimens, the majority related to drug duplication or drug-drug interactions (19%).[59]

Variations by country do not necessarily mean that there is reason for concern. A better question relates to whether these variations affect elderly patients and their families as well as the cost in the provision of geriatric care coordination.[60] As mentioned previously, many factors are involved in the decision of how to allocate funds in the provision of health care. Due to limited resources, the challenge is to provide geriatric care coordination that is cost effective without sacrificing quality. For America's older persons, geriatric medicine is evolving into an area that provides greater recognition of senior issues and improved efforts to coordinate care. In the U.K. and Japan, older persons can expect the same. Although studies show that geriatric related efforts in the U.K. and Japan far exceed the U.S., much can be learned from each of these countries.

Benefits have been shown by British and Japanese efforts in developing cost saving initiatives to promote home care. The benefits of home care were explored and the authors concluded that increased emphasis on home care will lead to improved health outcomes among older persons.[61] The promotion of home care was noted as the major reason for the formalization of the Japanese Long Term Care Insurance Program.[13] The U.K. and Japan can also benefit by exploring the successful U.S. efforts to create multidisciplinary teams.[62] In 1980, the National Institutes of Health received a best paper award from the American Geriatrics Society for the identification of the key elements for an appropriate geriatric assessment. A multidisciplinary team approach was listed as a key factor for successful care coordination.[22] Multidisciplinary teams may include physicians, nurses, pharmacists and other health professionals.

Geriatrics-trained pharmacists may have a number of responsibilities, such as reviewing a patient's medication regimen, suggesting changes, assessing patient ability to take the medications as intended, and

coordinating care. Many older persons have seen benefits from increased emphasis on home care and a multidisciplinary team approach to care coordination. Pharmacists are in a unique position to meet the needs of seniors and all three countries provide unique efforts to deliver better health care to this ever-increasing population.

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Abbreviations Used in the Manuscript

AARP American Association of Retired Persons

IV Intravenous

LTCI Long Term Care Insurance Program

NHS National Health Insurance System

PACE Program of All Inclusive Care for the Elderly

U.K. United Kingdom

U.S. United States of America

Table 1 Summary of Literature on Geriatric Care Coordination in the U.S.

Study	Year	Study Design	Objectives	Findings	Implications (Clinical and Policy)
Bragg et al	2010	-Cross Sectional -Survey	-To document the development of geriatric medicine fellowship training in the United States through 2009	-The response rate was 71%. -Sixty-seven percent of responding programs directors have completed formal geriatric medicine fellowship training and are board certified in geriatrics, and 29% are board certified through the practice pathway. -The number of Accreditation Council for Graduate Medical Education-accredited fellowship programs has slowly increased, from 120 (23 family medicine and 97 internal medicine) in 2001/02 to 145 in 2008/09 (40 family medicine and 105 internal medicine), resulting in a 21% increase in fellowship programs and a 13% increase in the number of first-year fellows (259 to 293).	-The small numbers of graduating geriatric medicine fellows are insufficient to care for the expanding population of older frail patients, train other disciples in the care of complex older adults, conduct research in aging, and be leaders in the field
Berenson and Horvath	2003	-Descriptive Study	-This paper examines the ability of the current Medicare program with respect to traditional fee-for-service and risk-based contracting. -The purpose is to address the needs of beneficiaries with	-80% Medicare recipients have chronic conditions -Considerations for Medicare in the provision of care coordination -Medicare policymakers fear that moral hazard will exist if services are provided -Services should be	-There are concerns about moral hazard making it difficult for the traditional Medicare program to support a chronic care model of health care practice. -Capitation may be the most desirable platform to support

			chronic conditions.	coded to determine payment -Medicare is not meeting the needs of seniors in regard to issues such as case management, especially in the case of chronic conditions	provision of care to beneficiaries, but there are challenges in the use of capitation due to structural limitations.
Shapiro and Taylor	2002	- Randomized Controlled Trial	-This aim of this study was to examine the effects of a social service program on the subjective well-being, permanent institutionalization, and mortality risk of low-income community-dwelling elders.	-Targeting seniors for case management earlier than normal may prevent institutionalization, death and increase quality of life -105 Adults age 65 and older who were on a waiting list to receive the Community Care for the Elderly program's social services, were referred by hospitals, physicians and clinics to be included in the study -Those in the intervention group were shown to be less depressed and more satisfied with social relationships -Highlights the importance of considering age of entrance into a geriatric assessment program as a factor affecting satisfaction, quality of life and nursing home placement	-Strong support is provided for community-based programs and their benefit to the well-being of elders. -Policy makers should explore the use of community-based programs that are cost-effective and improve the quality of life for elders.

***Source:** References 25, 39, 63

Table 2 Summary of Literature on Geriatric Care Coordination in the U.K.

Study	Year	Study Design	Objectives	Findings	Implications (Clinical and Policy)
Moss	2002	- Descriptive Study	-To examine the effectiveness of a multidisciplinary Care Coordination Team to ensure that emergency department patients were provided with services that would facilitate patient return to, or maintenance in, the community.	-Care coordination team assisted over 2000 seniors -Results revealed decreased readmissions to emergency room -Survey revealed high patient satisfaction with care coordination	-Multidisciplinary team approach encouraged
Lloyd & Wait	2005	- Descriptive Report	-This report aims to identify the key concepts, perspectives and challenges that inform the integrated care policy agenda.	-Integrated care seeks to close the traditional division between health and social care. It may: • address the changing demand for care arising from the ageing of the population, • offer care that is person-centered • facilitate the social integration of society's more vulnerable groups through better access to community services • lead to better system efficiency Experience of integrated care so far is limited but promising.	-Recommendations for policymakers include: 1. Ensure that the development of integrated care is consistent with other health and social care policies. 2. Set realistic objectives for integrated care models. 3. Invest in the training of all professionals to bridge the cultural divide between health and social care. 4.Find the appropriate balance between user and provider integration. 5. Harness closer links between policymakers, practitioners and researchers. 6. Share research and best practice within and

					across countries. 7. Conduct research on cost-effectiveness. 8. Explore the scope for technology to facilitate integrated care.
University of Birmingham Singh and Ham	2005	- Descriptive Report	-To compile up to date information about generic care models and the impact of these models on elders. -To describe the key frameworks used to conceptualize chronic care in the UK and abroad.	-National Health Service commissioned to identify ways to shift care out of hospitals and into community based systems, focusing on long-term conditions -Key factors of Social Care Model: • links health, social care, patients and carers • stratifying people so they can receive care according to their needs • focusing on frequent users of secondary care services, • using community matrons to provide case management • developing ways to identify people who may become very high intensity service users • establishing multi-disciplinary teams • developing local ways to support self care -Review shows that only people with heart failure and depression consistently had improved quality of life after receiving geriatric care coordination	-The Chronic Care Model and the related Innovative Care for Chronic Conditions Model are the most common frameworks. -The Kaiser pyramid of care appears to be used throughout the developed world to conceptualize service delivery. -There is limited high quality evidence about the impact of any model. -Evaluations of specific models of service delivery, such as the Kaiser and Evercare approaches, are available suggesting that specific service delivery models may have some impacts on quality of care and healthcare resource use. -Most high quality evidence is drawn from the United States health system.

***Source:** References 17, 64, 65

Table 3 Summary of Literature on Geriatric Care Coordination in Japan

Study	Year	Study Design	Objectives	Findings	Implications (Clinical and Policy)
Hanaoka & Norton	2008	-Cross-sectional -Survey	-We estimate how the potential supply of child caregivers affects the use of formal care of elderly parents, focusing on the differences across children.	-Nearly 1500 seniors were surveyed -Results were consistent with the downward trend of the daughter-in-law being the main caretaker -Due to changing times, the daughter-in-law is less often the main caretaker as women often postpone marriage to further their own education and careers - We find that the effects of children's presence vary substantially with gender, marital status, and opportunity costs of children.	-Informal care by adult children remains the most common source of caregiving for elderly parents in Japan, even after the introduction of long-term care insurance in 2000. -The opportunity costs of children make a difference in the use of formal long-term care.
Tsutsui & Muramatsu	2007	- Descriptive Study	-To describe the recent reform of the long-term care insurance system initiated by the Japanese government	- The reform involves introduction of two major elements: "hotel" and meal charges for nursing home residents and new preventive benefits - They were intended to reduce economic incentives for institutionalization, dampen provider-induced demand, and prevent seniors from being dependent by intervening while their need levels are still low -A 10% copayment is required for long-term care insurance services; the rest is paid by premiums and taxes -Increased fees for nursing home residents were implemented in a 2005	-The long-term care insurance system faces several challenges, including skyrocketing costs. -The ongoing long-term care insurance reform should be critically evaluated against the government's policy intentions as well as its effect on seniors, their families, and society.

				reform of the long-term care insurance laws	
Arai	2009	- Descriptive Study	-To summarize the issues related to the aging of society in Japan	- Long-term care insurance is universal; people 65+, or 40-64 with a specific illness, are eligible -April 2008 marked the beginning of long-term care insurance specifically for people aged 75+, entitling the beneficiaries to their own primary care physicians -Regional support centers, run by nurses, physical and occupational therapists, and health care workers were introduced in 2006 to deal with counseling related to elderly care	-To tackle the problems related to an aging society, the role of geriatricians, as well as government support, is becoming more and more important. -There is need to recruit young health professionals with the skills required to care for elderly patients, and to establish an education system which encourages training in geriatrics. - There is a need for improvement of the insurance system to support such care.

***Source:** References 36, 43, 44