Hospital to Community Transitions for Older Adults: An Update for the Practicing Clinician

Paul Y. Takahashi, MD, MPH; Aaron L. Leppin, MD, MSc; and Gregory J. Hanson, MD

Abstract

Spurred by changes in both population demographics and health care reimbursement, health care providers are responding by using new models to more fully support the posthospital transition. This paper reviews common models for posthospital transition and also describes the Mayo Clinic model for care transition. Models are designed with the intent of managing the cost of health care by reducing 30-day hospital readmissions and improving management of chronic disease. Meta-analyses have proved helpful in identifying the most effective program elements designed to reduce 30-day hospital readmissions. These elements include a bundled and multidisciplinary approach to best meet the needs of patients. Successful care teams also emphasize self-empowerment for both patients and caregivers. There are 2 general types of practice. In 1 model, introduced by Mary Naylor, an advanced-practice provider cares for the patient for a set period of time, which includes home visits. In the second model, introduced by Eric Coleman, a transitions coach, who can be an RN, a social worker, or a trained volunteer, serves as the health care coach, while improving self-efficacy. Both models have been successful. At Mayo Clinic, the Mayo Clinic Care Transitions program has encompassed a 7-year experience, using the services of an advanced practice provider. In previous studies, this model demonstrated a 20.1% (95% confidence interval [CI], 15.8 to 24.1%) decrease in 30-day readmission in controls compared with 12.4% (95% CI, 8.9 to 15.7%) in the control group. Although this model was successful in reducing 30-day readmissions, there was no difference between groups at 180 days. In patients experiencing the highest deciles of cost (8th decile), enrollment in a care transitions program reduced their overall cost by $2700. This cost savings was statistically significant. Both patients and caregivers participating in the program appreciated the home visits and felt more comfortable communicating at home.

© 2020 Mayo Foundation for Medical Education and Research • Mayo Clin Proc. 2020;95(10):2253-2262

Care transition" is a term defining the changeover from 1 medical team and environment to another team and/or setting; that is, a hand-off. For some older adults experiencing chronic illness, the process of being dismissed from the hospital to their homes can lead to isolation and loneliness. During this transition period, patients or caregivers often desire care and accountability from their care providers, as well as assistance in implementing care plans. In the primary care practice, referral clinic, and the emergency department, practicing clinicians evaluate posthospital patients. This review will focus on the importance of care transitions, especially targeting complex older adults, and delve deeper into the issue of why health care organizations have invested both time and resources optimizing them. Furthermore, this review summarizes the evidence as well as the characteristics of successful care-transition programs. Finally, we will discuss the Mayo Clinic Care Transitions (MCCT) program and what has been learned first-hand about care transitions.

HAZARDS OF CARE TRANSITIONS

The challenges of providing high-value care over a cycle of care for high-risk older adults is well chronicled and well described. In the Medicare population, Jencks initially
described 30-day rehospitalization rates of 20% and found nearly 45% rehospitalization rates occurring over 180 days.4 This study raised concerns regarding the quality of care in the hospital and postacute ambulatory setting.4 It should be noted that there is considerable variability in hospital readmissions, and such decisions are dependent upon baseline hospital admission rates, more so than case mix.5 Such findings raise questions regarding emergency department (ED) quality5 and postacute care access. Coleman has described multiple complex transitions across the spectrum of care venues including hospitals, EDs, skilled-nursing facilities, rehabilitation units, assisted-living facilities, and the home. In this study, 30% of patients experienced 2 or more care sites within the 30-day posthospital period.6 Others have described preventable postacute adverse events that include both adverse drug events and procedure-related complications.7 Root causes for rehospitalization often include discontinuity of care, poor information transfer, and faulty communication.8 Consequently, these concerns have led to the growth of dedicated care-transition programs designed to improve care.

PREVENTABLE HOSPITAL READMISSIONS
Preventable hospital readmissions have been attributed to both hospital and postacute care processes. In an analysis of 822 readmissions, Graham demonstrated that 36.2% of early readmissions within 7 days were preventable, whereas 23.0% of readmission cases from 8 to 30 days were preventable.9 Hospitals were identified as better locations for preventing early readmissions, whereas outpatient clinics and home care proved successful in preventing late readmissions.9 Auerbach found that, of 1000 readmissions, 26.9% were considered potentially preventable.10 Case reviewers linked preventable readmissions to variable factors that included ED decision making, a failure to communicate important information to outpatient-care teams, premature hospital discharge, inadequate advance-care planning, and uncertainty in patient-care plans.10 However, it is to be noted that the mean age of both cohorts was below age 60,9,10 which potentially limits applicability for high-risk older adults. Ouslander has also demonstrated that similar rates of preventable readmissions were linked to skilled-nursing facilities.11,12 Providers often face difficulty in predicting hospital readmission for patients experiencing chronic illness. For those patients older than age 65 with admissions for congestive heart failure (CHF), myocardial infarction (MI), or pneumonia, the readmission diagnoses are often not the same as the initial hospital admission.13 The same primary diagnosis is coded by providers less than 35% for readmission following an initial admission for CHF, MI (including CHF), or pneumonia (including CHF and exacerbation of chronic obstructive pulmonary disease [COPD]). This reflects the complexities involved in caring for high-risk older adults with multiple chronic conditions (MCC).13 Frailty status serves as the best indicator for highlighting preventable spending in high-cost Medicare populations.14 Specifically, these hospitalization cases are linked to ambulatory case sensitive episodes of CHF, urinary tract infection, pneumonia, COPD, and complications of diabetes.14,15 Much effort has been made, with some success, to address preventable readmissions, stimulated in large part by creation of the Affordable Care Act Hospital Readmissions Reduction Program, which enacted financial penalties for excessive readmissions.16 From 2007 to 2015, there has been a decline from 21.5% to 17.8% in readmission rates for the targeted conditions of MI, CHF, and pneumonia, whereas readmission rates for the non-targeted conditions decreased from 15.3% to 13.1%.17 However, there is concern that adverse outcomes, including mortality, have increased, as evidenced by a large CHF cohort.18

LOOKING BEYOND 30 DAYS: A PERSISTENT HIGH-RISK POPULATION
Many providers recognize the larger transitions issue, which is identifying a persistently high-risk population that will use a larger portion of health care resources. Aldrige and Kelley have demonstrated that of the costliest 5% of Medicare patients in a given year, 40% will be alive and have high
costs in the subsequent year, 11% will have high cost and die in the subsequent year, and 49% will return to relative good health and usual costs.\textsuperscript{19} Using data from the Health and Retirement Study, investigators identified 3 predictive factors for the persistent high-risk group that included the 3 variables of chronic serious illness, functional dependence, and previous use. In the subsequent year, patients with all 3 predictors had health care costs greater than $30,000, with 28% mortality rate.\textsuperscript{20} At Mayo Clinic, Chen et al combined the Mayo Elder Risk Assessment index\textsuperscript{21} with the 4-Year Mortality Risk Score\textsuperscript{22} to identify a similar population.\textsuperscript{23} Indeed, mortality risk scores alone can predict subsequent annual expenditures, representing a finding that is independent of actual mortality.\textsuperscript{24} These data highlight the need for high-value health care delivery models to address both advanced medical illness and frailty that will extend well beyond the immediate postacute period, often for as long as several years.

**EFFECTIVE CARE TRANSITIONS**

Although knowledge of care-transition-related risk factors provides a rationale for value-based strategies, our understanding of what promotes effective transitions is largely shaped by what has been described in peer-reviewed literature. This sample consists of a numerous and diverse set of interventions but likely only represents a tiny fraction of what has been used in practice.\textsuperscript{25} In response to incentives spurred by the Hospital Readmissions Reduction Program,\textsuperscript{26} the published literature may also be skewed to reflect efforts aimed solely at affecting short-term (30-day) outcomes. Despite these limitations, such studies communicate several compelling themes.

Systematic reviews have been helpful in highlighting these themes and making sense of the body of evidence that supports care-transition strategies, particularly those focused on preventing readmissions and other patient-important outcomes.\textsuperscript{27-29} Thus, the general consensus drawn from these reviews is that there is a meaningful dose effect stemming from intervention and that simple, hospital-based efforts—such as medication reconciliation, discharge planning, and providing education—used alone are less effective than the same efforts that result when bundled together. This is especially true when interventions are delivered as part of a high-touch, multicomponent strategy that bridges the hospital-to-home transition. For example, in a 2014 meta-analysis of randomized trials,\textsuperscript{28} Leppin et al found that high-touch, human-mediated interventions that focused on supporting patients’ capacity to access and use care and also enact self-care postdischarge were significantly more effective at preventing 30-day hospital readmissions in a diverse, mostly older population than those interventions that did not.\textsuperscript{28} The authors used a *post hoc* analysis to illustrate the dose effect of “comprehensive, collaborative, capacity-supporting care” and were able to further identify the ingredients of this “secret sauce” as (1) using 2 or more people in delivery—for example, nurse and pharmacist vs pharmacist alone; (2) focusing on increasing patient capacity such as enrolling support, providing treatment, and/or connecting to resources; (3) bundling the intervention so that it includes at least 5 components; and, finally (4) including at least 5 meaningful patient interactions within the intervention. The importance of high-touch, capacity-supporting care was further evidenced by a 2014 meta-analysis of transitional-care interventions focusing on patients with heart failure.\textsuperscript{30} This study showed that home-visit programs prevented readmission and mortality, whereas telemonitoring and interventions focusing on education had no significant impact on readmission or mortality.

The best rationale for explaining this variation in effects—and the apparent need for high-touch, personalized support—seems to be related to the postdischarge vulnerability in patients. Krumholz and others have described the “posthospital syndrome”\textsuperscript{31} as being an acquired, transient period of vulnerability that demands attention be paid to factors beyond those that precipitated the hospitalization. These sorts of concerns—such as physical function, nutrition status, mental status, and fall risk—are typically
not easily addressed by simply doing the same thing in a different manner (as is sometimes seen in hospital-based quality-improvement initiatives) or by providing education and materials to the patient who may lack the resources and capacity to use these tools effectively.28

Specifically within the geriatrics population, the models and interventions that most clearly embody the characteristics of comprehensive capacity-supporting care and also produce the most consistently positive outcomes include those models proposed by Naylor, Coleman, and others.32-35 Generally, these models involve use of a comprehensive in-hospital risk assessment, a coordinated discharge plan, as well as a follow-up home visit. The person conducting the home visit should possess competence and authority to initiate action following a person-centered, multidimensional assessment of comorbidities, general health behaviors, functional status, and an evaluation of available social support. In many cases, such activity is coordinated through an advanced-practice provider (APP) such as a physician assistant or nurse practitioner.

For example, the intervention by Naylor et al begins with an APP conducting an in-hospital assessment of both patient and caregiver goals, as well as physical, cognitive, and emotional concerns.32,33 In addition, attention is paid to comorbidities, general health behaviors, functional status, and the availability of social support. An initial home visit by the APP occurs within 24 hours following hospital dismissal and then on a weekly basis thereafter. One visit is also arranged to coincide with the patient’s primary care follow-up appointment to ensure continuity. Additional home visits are scheduled as needed, and a telephone option is also available. Use of this intervention reduced readmissions (relative risk [RR]=0.51) within a population of the elderly who experienced either limited capacity or heart failure. Subsequently, after 1 year of follow-up, these interventions reduced costs by an average of $4845 per patient.33 Although this is a well-established practice model, there has been some innovation as nursing provides more of a prominent role.36

In another study, a model tested by Parry and Coleman used coaches possessing nursing backgrounds to facilitate continuity and also ease the discharge transition among a targeted Medicare population.35 The coaches conducted a postdischarge home visit within 2 to 3 days. The patients set their own patient-centered goals. The visits specifically focused on equipping both patients and caregivers with the skills needed to assume more active roles in the care process as well as communication skills and promotion of continuity in all care settings. The team also incorporated multiple follow-up phone calls to encourage self-management (RR=.44). Further evaluation of this model found that average hospital costs were reduced by $488 per patient at 180 days of follow-up.34

Rich and colleagues designed a nurse-directed transition program for elderly patients who had experienced heart failure.37 This practice used a comprehensive assessment that included medical and social issues. Daily in-hospital educational visits were conducted; medication cards and charts were provided; and visits with dieticians were scheduled. In addition, social workers helped to identify capacity-related issues (economic, social, transportation, emotional) and coordinated postdischarge care. Finally, a geriatric cardiologist conducted a medication assessment to eliminate unnecessary medications and reduce treatment burden. Although postdischarge home care was transferred to the home-care team, continuity was maintained through 3 individualized home visits provided by the hospital team. Specifically, these visits focused on education reinforcement, symptom identification, as well as adherence to diet and medication regimens. Study results indicated the RR of readmissions at 30 days was 0.61 and resulted in cost savings (in 1995) of $460 per patient at 90 days of follow-up.37 Courtney applied a similar care model but with the addition of an exercise-based plan intended to maintain functional status in an elderly, high-risk population.38 This study of 122 patients occurred in Australia and was conducted by a nurse and physical therapist. A comprehensive inpatient
assessment was performed to design an individualized care plan based upon the goals of both patients and caregivers. Postdischarge home visits and weekly follow-up phone calls were also included. At 24 weeks, patients in the intervention group had a 22% hospital readmission rate compared with 47% in the control group ($p < .001$).38

In summary, the body of literature clearly indicates the importance and value of comprehensive, high-touch, capacity-supporting transition care for older adults. However, multiple practical challenges exist in providing this care, including limited resources and logistical barriers in coordinating supports across the many dimensions of health. In a study of a very high-risk and high-cost population in Camden, New Jersey, a pre- and poststudy design showed reduction of 56% of costs and 40% reduction in ED and hospital visits. However, a recent trial evaluating this model in 782 patients randomized to the intervention vs control showed no difference in 180-day hospital readmission rates.39 To address the many challenges in providing home visits, the use of telemonitoring and smart home-based technologies are increasingly being tested. The jury is still out as to whether the same value can be obtained from these innovative technologies.40 Recently, practice and policy efforts are focusing on addressing the social determinants of health, including within care transitions. In many cases, this has led to the enrolling of community supports, such as Area Agencies of Aging and other partners, that can connect patients to services such as home-delivered meals or housekeeping assistance.41 Such partnership-based approaches possess high-face validity while representing an exciting opportunity. However, they are difficult to operationalize, and few successful models have been well described.

MAYO CLINIC CARE TRANSITIONS PROGRAM

The MCCT program has experienced evolution and change since its inception in 2010.12 The identification of hospital readmission risk remains an important ongoing area of focus for the MCCT program. In identifying risks, one recognizes common factors that have been used in previous tools and instruments. Early investigators discovered that the following risk factors placed patients at risk of hospitalization: older age, male sex, poor self-rated health, lacking an informal caregiver, having coronary artery disease, having diabetes, previous hospital admission within the past year, and having more than 6 office visits occurring within a year.43 The burden of comorbid health conditions seems to predict hospital readmission, as many instruments use comorbid health burden to predict hospitalization.44,45 Our team developed a risk-stratification instrument that used age, previous hospital use, and comorbid health conditions: the Elder Risk Assessment (ERA) tool.21 The ERA is calculated daily, updated in real time and is currently our standard method of identifying patients who are eligible for enrollment in MCCT.

To enroll in MCCT, hospitalized patients are screened by using the ERA score to determine potential eligibility with score ranges of −1 to 33. A score of 16 or higher indicates a patient at risk for hospitalization, which is the high-risk population for this model.21 All patients are empaneled within the primary care practice at Mayo Clinic, Rochester, Minnesota, have an identified primary care provider, and also live within 20 minutes of downtown Rochester.46 Patients are above age 60 and can be dismissed from either the hospital or can have a stay in a skilled nursing facility before enrollment in MCCT. Patients and caregivers are approached about enrolling in the MCCT and are given the opportunity to either participate or refuse.47 The primary care provider is also contacted about potential enrollment within the program. Following enrollment, patients are seen within 5 business days of hospital dismissal. They are seen by APPs at home. Patients can use home health in addition to the MCCT program. We found that in 87% of the time, patients were seen within 5 business days of hospital dismissal.48

The health care team in the MCCT is critical to the program’s success, which includes the APP, the ambulatory primary care provider, the RN, and a geriatrician or palliative care physician. The primary
provider in MCCT is the APP, who provides the home visit and serves as the primary provider of care. However, collaboration is maintained with the ambulatory primary care provider who will assume primary care following dismissal from the program. The APP performs the initial home visit as well as subsequent visits, as needed. The RN care manager, who works with the primary APP, provides phone management of acute symptoms and management of chronic disease. The frequency of phone visits can be weekly initially, followed by monthly phone calls. There are interdisciplinary team meetings every week with a geriatrician and/or a palliative care physician who serve as consultants. The team had access to the geriatrician or palliative care physician at any time outside the meeting. The team serves to address difficult questions and optimize care for the patient.

In addition, the MCCT has structured elements of care that are considered crucial to ongoing care. As previously noted, a multi-pronged approach is required to ensure a successful program. Medication reconciliation is probably the most important task for the APP to perform on the initial visit and was completed within 5 days for 76% of patients.48 Second, the APP reviews the chronic medical problems to develop a plan for ongoing management. Third, the APP discussed advanced care planning with patient and caregiver and this intervention was performed in 56% of patient cases.48 Such use of combined advanced-care planning and palliative care may provide noticeable cost savings.49 Finally, the team reviewed available community resources. All these essential process measures were completed following enrollment in 12% of patients within 5 business days, with the lowest process measure of community resources at 30%.

MCCT PROGRAM OUTCOMES

Our study team has largely found positive outcomes stemming from our experience with the MCCT (Table).46,48,50-52 Such positive outcomes have encouraged the aging group at Mayo Clinic to continue to modify and improve the program. When the program had a shortened enrollment period of 60 days, we found that those patients enrolled in MCCT had a 30-day rehospitalization rate of 12.4%, (95% CI, 8.9 to 15.7) vs 20.1% (95% CI, 15.8 to 24.1%) in a propensity-matched group that was not enrolled in MCCT.53 However, when the outcomes were extended to 180 days, in which both groups were not enrolled in MCCT, the outcomes converged and became similar with a rehospitalization rate of 39.9% (95% CI, 34.6 to 44.9%) in the MCCT group, compared with 44.8% (95% CI, 39.4 to 49.8%) within the control group.51 With our current program operating at a 180-day enrollment period, an important question arises as to whether enrollment in the MCCT program for longer periods of time will maintain this difference between groups. When our group looked at preventable readmissions, there was a reduction in preventable 30-day hospital readmissions of 8.4% (95% CI, 5.5 to 11.3%) in MCCT patients vs 14.3% (95% CI, 10.5 to 17.9%) in matched controls (p=.01).50 Thus, the MCCT program decreased potentially preventable readmissions by 44%.50

Cost savings remain an important goal for any value-based program. The MCCT program was designed with the triple aim of improving the patient experience, improving population health, and reducing costs. In a comparison of 365 MCCT patients and 365 matched controls, the greatest impact on cost savings was seen within the highest deciles of cost. Specifically, in the 80th decile, there was a $2700 cost savings (p=.008). However, this cost savings was not visualized at the lower deciles of cost.52 Other programs have shown some cost effectiveness using a pharmacy transitions program, which resulted in a savings of more than $2000 for a transition group compared with a control group at 180 days.55

In the MCCT program, we focused extensively on medications and symptoms and found that patients taking opioids and anticholinergic medications experienced a higher risk of readmission within the MCCT group.56 We also discovered that
more than 4 medications changes experienced within the group were associated with an increased risk of readmission. Therefore, we used a pharmacist within the MCCT group and systematically evaluated 22 patients using the Screening Tool to Alert to Right Treatment/Screening Tool of Older Persons’ Prescriptions (START/STOPP) criteria. Specifically, we found that, in 20 of 22 patients, there was medication underutilization, and, within this group, 40% of the patients still experienced unresolved medication problems after 30 days. In a different study, we also found that high medication use predicted hospitalization for patients who were participating in the MCCT program. There continues to be an ongoing need to address medication issues within the targeted population.

Patients are generally happy about their experiences in the MCCT program and appreciate the option of being home, without the challenges of making office visits. Patients and caregivers also discussed the importance of improved communication with the health care team. Previous qualitative studies have also reported general themes of better communication, improved health care support, providing fundamental care, and establishing opportunities to learn about the health condition. Often, patients need this level of help and support following dismissal from an institution. One important theme of importance to the program’s participants is the comfort and openness of being able to talk with providers within the home. Patients and caregivers alike felt much more open in talking about issues in the comfort and familiarity of their homes. For providers, open communication remains an important theme, which is reinforced through other studies as well.

### COMPLEMENTARY PROGRAMS

Recognizing a population experiencing high risk of functional decline or mortality demands responsive health care delivery models that can quickly address a patient’s needs. These models reach beyond the standard ambulatory clinic models to reduce preventable transitions as well as enhance care through necessary transitions. Early recognition and intervention to address a change in clinical status, iterative advanced care planning, combined with home-based services appear to be key features of successful programs. The Mayo Clinic Palliative Care Homebound program exemplifies this construct and has demonstrated an $18,000 annual savings in a high-risk population defined by high utilization and mortality risk. Other programs have demonstrated

### TABLE. Summary of Mayo Clinic Care Transitions Program Outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>Question</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takahashi et al</td>
<td>Does MCCT reduce 30-day hospital readmission and 180-day hospital readmission?</td>
<td>In 365 patients and matched controls, 30-day readmission was 12.4% (95% CI, 8.9 to 15.7) vs 20.1% (95% CI, 15.8 to 24.1%) in controls. No difference in readmissions at 180 days.</td>
</tr>
<tr>
<td>McCoy et al</td>
<td>Does MCCT reduce 30-day preventable readmissions?</td>
<td>There were 30-day preventable readmissions in 8.4% (95% CI, 5.5 to 11.3%) of MCCT patients vs 14.3% (95% CI, 10.5 to 17.9%) of matched controls.</td>
</tr>
<tr>
<td>Thorsteinsdottir et al</td>
<td>Who is most at risk for 30-day hospital readmission?</td>
<td>Patients with cognitive impairment had higher risk of readmission compared with those with intact cognition (29.6% vs 46.0%) and higher ED use (0.8 vs 0.4).</td>
</tr>
<tr>
<td>Takahashi et al</td>
<td>What are some themes from patients who have been in the program?</td>
<td>Patients appreciate home visits and value being on their “home turf.” They appreciate better communication and also prefer it to the exertion of office clinic visits.</td>
</tr>
<tr>
<td>Hanson et al</td>
<td>Does MCCT save money?</td>
<td>In the highest cost deciles, there was potential savings of $2,700. The best cost savings come with the highest-cost patients.</td>
</tr>
</tbody>
</table>

MCCT = Mayo Clinic Care Transitions; CI = confidence interval.
similar success in high-risk populations. For example, the Center for Medicare Services demonstration of Independence at Home, which is a primary care house calls program collaborative, demonstrated a savings of $282 per beneficiary per month in year 4, although with a relatively wide confidence interval and was not statistically significant. However, ED visits as well as unplanned readmissions, were significantly reduced in year 4.62 Other similar programs have demonstrated substantial savings of approximately $4000 per beneficiary per year.63 Combining such programs with long-term services and supports (adult day care, home health aides, transportation, meals, and mobility equipment) can delay long-term care placement.64

Hospital at Home, a home-based acute-care model, provided strong evidence of the reduction of preventable hospitalizations and also cost savings.65,66 The role of telemonitoring shows promise but remains investigational, with relatively limited short-term impact on both mortality and hospitalizations in CHF, in which the potential benefit is arguably very likely to be the greatest.67 Mayo Clinic has home-based programming in various stages of development that includes all of these elements, akin to the mixed model of Mount Sinai.68 Finally, the longstanding nationally disseminated Program of All Inclusive Care of Elders (PACE), an ambulatory day center, based combined medical and social model with mixed funding from both Medicare and Medicaid, which remains an effective care model in reducing both hospitalization and skilled-nursing—facility placement.69

CONCLUSION
Providing transitions of care across different health venues are considered to be high-cost, high-risk events, particularly for high-risk, frail, older adults. There have been models that use either an APP or an RN coach that reduce 30-day hospital readmissions. Program interventions designed to improve outcomes, as well as reduce costs, have provided mixed results and are dependent on how well the program meets the medical, functional, and psychosocial needs of their targeted population. The MCCT model has shown some success in providing care for high-risk adults in Olmsted County, Minnesota.

ACKNOWLEDGMENT
We would like to acknowledge Kari Takahashi, MEd, for her editorial assistance with the manuscript.

Abbreviations and Acronyms: APP = advanced-practice provider; CHF = congestive heart failure; CI = confidence interval; COPD = chronic obstructive pulmonary disease; ED = emergency department; ERA = elder risk assessment; MCCT = Mayo Clinic Care Transitions; MCC = multiple chronic conditions; MI = myocardial infarction; RR = relative risk

Potential Competing Interests: The authors report no competing interests.

Correspondence: Address to Paul Y. Takahashi, MD, Division of Community Internal Medicine, Mayo Clinic, 200 First Street SW, Rochester, MN 55905 (takahashi.paul@mayo.edu; Twitter: @PYTakahashi).

ORCID
Paul Y. Takahashi: https://orcid.org/0000-0002-1891-309X

REFERENCES


57. Gallagher P, Ryan C, Byrne S, Kennedy J, O’Mahony D. STOPP (Screening Tool of Older Person’s Prescriptions) and START (Screening Tool to Alert doctors to Right Treatment); consensus validation. *Int J Clin Pharmaco Ther*. 2008;46(2):72-83.


