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Commentary

Care Coordination: A PACT Core Concept

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Since 2010, Patient Aligned Care Team (PACT) implementation in the Veterans Health Administration (VHA) has focused on improving care coordination and transitions of care for Veterans. PACT is VHA's patient-centered medical home model of primary care and is based on principles of personalized, proactive, patient-centered, team-based health care. PACT is a partnership between the Veteran and the health care team—a partnership that places the Veteran at the center of a care team that also includes family members, caregivers, and health care professionals. PACT emphasizes prevention, health promotion, and patient self-management. PACT staff work with the Veteran to identify personalized health care goals, provide basic health care services and education, develop a care plan, and coordinate care. When more specialized services are needed, PACT coordinates with other members of the patient's care team, which may include discipline-specific, specialty, or non-VA team members. Together, the entire PACT is focused on helping the Veteran meet his/her health care goals while improving the patient experience, as well as ensuring the clinical quality, safety, and efficiency of care.

Care Coordination: A Foundational Pillar of the PACT Model

Care coordination and seamless transitions of care are core PACT change concepts, and together with care management, they make up the second of three foundational "pillars" of the PACT model. A variety of actions

occur on a regular basis within PACTs to support this pillar, including daily team huddles, monthly treatment planning meetings to discuss complex/high risk clinical patient needs, notification of admission and involvement in discharge planning, and follow-up contact with patients within two business days following hospital discharge. In addition, PACTs work to identify high risk or chronically-ill patients on a proactive basis by using patient registries. PACT team members also identify and monitor incomplete referrals/consults, and have in place a process for ensuring that Veterans receive timely notification of test results. Furthermore, at each regularly scheduled provider visit, PACT team members ask Veterans about non-VA providers and non-VA care while educating Veterans about the importance of sharing medical records from non-VA providers.

To ensure smooth, safe, and effective transitions of care, Veterans and their family caregivers should receive and understand their transition record and care plan as well as be encouraged to participate in the development of it. The care plan must be appropriate to the patient's health literacy. Additionally, many VA PACTs have implemented clinic after-visit summaries and/or printed care plans to enhance the Veteran's participation in their health care and to support care coordination. All these activities are designed with the overarching goal of improving transitions of care by coordinating inpatient and outpatient care, primary and specialty care, and finally VA and non-VA care.



Director's Letter

In today's VA, where the average patient has long medication lists, sees multiple providers in multiple clinics, and receives inpatient care from hospitalists, active coordination is needed to ensure treatments are aligned and handoffs are not missed. Coordinating care will be challenged even further if the current crisis over wait times pushes VA to outsource more care to community providers.

An integrated system like VA has many advantages in coordinating care: our well-functioning electronic health record, advanced primary care - mental health integration, and growing electronic communication with patients and among clinicians. Information exchange alone doesn't ensure coordinated care, however. That only happens when everyone caring for an individual patient is working toward common, patient-identified goals.

Coordination challenges are evident in VA; research has documented that an increasing number of prescribers correlates with worse outcomes. Risk of opiate overdose rises as patients are prescribed pain medication from both VA and non-VA providers. Efforts to improve coordination in VA face two fundamental challenges: (1) how to improve coordination without simply adding another layer of personnel, decisions, and communications to an already complex system (with many mandatory VA "coordinator" positions, e.g., OEF/OIF, suicide, homelessness, etc., some Veterans need a coordinator for all their coordinators); and (2) to establish a business case for better care coordination by focusing on the subset of patients for whom uncoordinated care is most likely to lead to waste and poor outcomes. As the articles in this issue document, better coordination is possible and necessary—but it needs to be built into the system of care and not added on as an afterthought.

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National PACT metrics available on the Primary Care Almanac and the Primary Care Operations PACT Dashboard support data-driven PACT teams and continuous improvement. These metrics demonstrate that PACT has improved care coordination for Veterans. Approximately 65 percent of Veterans requesting a same day primary care appointment with their personal provider are accommodated, and 78 percent of Veterans are able to see their own primary care provider for any appointment on the date they desire. Veteran access to primary care during extended hours (non-business hours) has increased 75 percent since January 2013. Post-discharge follow up is also important to reducing readmissions. Now, over 72 percent

of all Veterans discharged from VHA are contacted within two days to ensure they are following discharge instructions and doing well.

Technological Innovations Support Care Coordination

An important benefit of health information technology (HIT) is to ensure that pertinent patient health information is readily available to all members of the health care team, especially during critical transitions of care. A variety of clinical care processes use HIT to enhance patient care coordination. First, secure messaging offers Veterans easy, asynchronous communication with the PACT and connects them to their team between visits. Second, Blue Button technology allows Vet-

erans to download portions of their medical record for sharing with non-VA health care providers. And finally, Veterans who are located far from VA medical centers may now use a variety of technologies to bridge that distance, including E-consults, CVT consultation, and SCAN-ECHOs.

The Patient Care Assessment System (PCAS), a VHA Web-based application for care management tracking, also promises to greatly enhance care coordination. PCAS integrates key data from multiple sources while allowing manual entry of information such as non-VA providers and contact numbers. It is designed to link to the Care Assessment Needs (CAN) score and to support a summary of patient risk factors, task lists, and notifications. Future plans include the ability to create a care plan that is sent to CPRS as a standardized note.

Care coordination within VHA is supported by a robust electronic health record (EHR) system that enhances health information sharing. The EHR provides support for key functions of care coordination, including referral tracking, consultants' recommendations, care management activities, medication management and reconciliation, patient preferences, and more. Both VHA and non-VA health care systems are enhancing their EHRs to comply with meaningful use certification, which includes, among many other requirements, clinical information reconciliation (medications, allergies, and problems) and the ability to automatically generate a transitions of care/referral summary document. These innovations will further support care coordination through enhanced information flow between VHA and non-VHA health care systems.

Improving care coordination and transitions of care for Veterans is an important and primary focus of PACT. PACT policy, metrics, and practical implementation strategies are aligned to promote care coordination. As PACT evolves, continued identification and spread of best practices will further enhance coordination of care and smooth transitions between PACT and inpatient care, specialty care, and non-VA care.

Response to Commentary

Care Coordination and PACT: Progress, Promise, and Work To Be Done

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Care coordination is nearly always listed as a key feature in descriptions of new patient-centered primary care models, such as VA's Patient Aligned Care Teams (PACT). Truly coordinated care holds promise for improving patient care and reducing costs by preventing negative outcomes, increasing efficiency, and avoiding unnecessary or duplicative services. Coordinated care, and the level to which it is achieved, has rarely been defined or measured in evaluations of these new models. In bringing together the definitions, measures, and actions related to care coordination in PACT, Shear and Corrigan have provided the beginnings of a map between theory and implementation for care coordination within new models of primary care.

Care coordination is necessary whenever two or more parties need to perform distinct tasks related to a patient's care.¹ Those involved may include primary or specialty care providers, other members of the health care team (e.g., nurses, pharmacists, social workers), informal caregivers, or the patient. Using this broad conceptualization, it is difficult to think of scenarios in modern medicine that do not require at least some care coordination, especially with the rising prevalence of chronic disease. Yet, or perhaps because of this, care coordination is a longstanding, tenacious, and pervasive challenge in health care. As noted by Shear and Corrigan, coordination is particularly challenging across transitions in settings and care providers, such as between inpatient and outpatient care, primary and specialty care, and care that crosses health care systems, such as VA and non-VA care.

VA Investments in Care Coordination

As described by Shear and Corrigan, since 2010 VA has invested heavily in establishing structures and processes to facilitate care coordination within implementation of PACT.

PACT notification of admissions, PACT involvement in discharge planning, and post-hospitalization phone calls aim to coordinate care across inpatient and outpatient transitions. Consult monitoring, electronic consultations (e-consults), and videoconferencing between primary care and specialist providers are tools to coordinate care between primary and specialty care. Providers facilitate care coordination between VA and non-VA providers by explicitly asking Veterans about their use of non-VA care and providing Veterans with electronic access to portions of their VA medical record. This represents considerable progress. However, more is needed for VA to fully realize its aim of providing highly-coordinated, seamless transitions in care.

Compared to prior primary care models, PACT provides substantially more support for care coordination and communication. Yet, gaps remain in promoting bidirectional provider communication, which is foundational for care coordination. For example, while VA's electronic medical record (EMR) allows all VA providers to view a complete record of care that has been delivered by other VA providers and in distant VA settings, and selected information can be "pushed" to providers by using an "additional signer" mechanism, these communication mechanisms are either passive or, at best, unidirectional. The recent innovation of e-consults appears to improve communication, but again, in its current implementation is unidirectional—i.e., in most cases, the primary care provider asks a specialist a question and receives an answer without discussion. More difficult still is achieving bidirectional communication with non-VA providers; as highlighted by Shear and Corrigan, achieving even consistent unidirectional communication in this area would be a major advance.

New communication tools show great promise for improving coordination, but further research is needed to fully understand their most appropriate, effective, and efficient uses. Videoconferencing, for example, can build communication and collaboration across distances, yet is only beginning to be understood in terms of its optimal use for care coordination.

Intensive Interventions

Studies have also shown that more intensive care coordination interventions may be needed for certain patient populations.² Research is needed to identify the patients who may need more (or less) coordination assistance when transitioning across health care settings, providers, or systems. Akin to clinical trials assessing the appropriate dose, and differences across patients, there are likely different "dosages," of care coordination needed for different patients, depending on their medical, social, or personal characteristics.

In addition, given VA's core educational mission, interdisciplinary training for achieving coordination needs development. Optimal care coordination requires special skills in collaboration, communication, and teamwork.³ In all of the above actions, and those mentioned by Shear and Corrigan, assessment and improvement of training is needed to achieve optimal care coordination in PACT.

In conclusion, successful VA development, implementation, and research on care coordination will have a positive impact on all VA patients. Further, as the issue of care coordination gains increasing attention nationally, VA, as a large, fully-integrated health care system with a comprehensive EMR, and having already made significant strides in this area, is primed to be a leader in both innovation and research in this important topic.

References

1. McDonald, K.M. et al. *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies* (Vol. 7: Care Coordination). Rockville (MD): Agency for Healthcare Research and Quality (US) 2007.
2. Scott, I.A. "Preventing the Rebound: Improving Care Transition in Hospital Discharge Processes," *Australian Health Review* 2010; 34(4):445-51.
3. Press, M.J. et al. "Care Coordination in Accountable Care Organizations: Moving Beyond Structure and Incentives," *American Journal of Managed Care* 2012; 18(12):778-80.

Research Highlight

Opportunities for Improved Care Coordination in VA's Medical Neighborhoods

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Since undergoing a transformation of primary care into patient-centered medical homes (PCMH) via Patient Aligned Care Teams (PACT), VA has been increasing efforts to address care coordination challenges. Veterans with complex health needs require additional care outside of PACT in the larger “medical neighborhood,” including care from specialists, emergency department, and inpatient, as well as care from non-VA or community providers. Guided by the logic model outlined by Taylor et al,¹ we examined the prevalence of care coordination problems experienced in VA primary care before PACT implementation, and identified barriers and facilitators to care coordination. While facilitators serve as examples of best practices, barriers indicate potential pathways to improved care coordination.

Our studies used data from two national surveys of VA primary care directors, both funded through research-policy partnerships. The VHA Clinical Practice Organizational Survey (2007) asked primary care directors to report how frequently their providers encountered challenges in coordinating care with each of 25 different medical specialty clinics (e.g., neurology, cardiology) or allied health programs (e.g., pharmacy, physical therapy, social work). The VHA Primary Care Survey (2008) asked primary care directors to assess the degree to which care coordination with other VA settings (e.g., medical, surgical, and mental health specialties; inpatient and emergency care; and VA to non-VA settings) posed significant management challenges. We found widespread reports of care coordination challenges. More than 80 percent of VA primary care directors reported frequent care coordination problems with at least one medical specialty clinic. The most frequently cited clinics for care coordination challenges included

neurology, cardiology, and gastroenterology. Across different medical neighborhood settings, the most often-cited challenge was coordinating care between VA providers and non-VA or community providers.

Primary care directors cited sufficient primary care staff (e.g., doctors, nurses, physician assistants, administrators, clerks, and receptionists) as facilitating care coordination. This finding highlights the time commitment required for effective care coordination, which can include requesting consultations, setting up appointments for labs or diagnostic tests, explaining care plans to patients, making follow-up calls or sending e-mails if consultation requests were declined, then reviewing specialty consultation letters sent back to primary care. PACT has designated RN care managers whose roles explicitly focus on these care coordination tasks, however, early findings from the PACT Demonstration Laboratories suggests that care managers may already be overwhelmed and that lack of role clarity and gaps in support staffing levels pose ongoing challenges.²

We found that VA primary care practices with more fully implemented service agreements reported fewer care coordination problems. Serving as “contracts” between primary care and specialty care clinics, service agreements can specify the types of patients that should be referred to specialty care, the kinds of information required by specialists to act efficiently on consult requests (e.g., labs, diagnostic tests, some initial trials prior to consultation), and timelines for consultations and communication—all of which help to prioritize referrals, clarify roles and responsibilities for clinicians, and enhance care coordination. The communication between primary care and specialists required for developing service agreements may offer important opportunities to facilitate care coordination.

In another study, we described the prevalence of management challenges faced by primary care directors before PACT implementation.³ While electronic medical records (EMRs) like VA's Computerized Patient Record System (CPRS) are widely cited as promoting effective coordination of care, VA primary care directors' foremost challenges were actually related to information technology (IT): the burden of excessive CPRS alerts; the volume of clinical reminders; the time and effort to input notes; as well as gaps in the adequacy of clinical informatics support. In additional analyses, we found that the number of IT challenges were associated with care coordination challenges in the medical neighborhood. Addressing clinician challenges with EMRs may be an opportunity for quality improvement interventions among clinicians and IT staff, to improve “end user” efficiencies and enhance clinicians' best efforts to coordinate care.

Earlier studies found that patients with multimorbidity face significant care coordination challenges. In our work, we identified a number of care coordination challenges at the primary care clinic level, as well as barriers and facilitators to care coordination that are mutable, and amenable to quality improvement interventions. Further study is needed to understand challenges to implementing best practices, and identifying additional strategies to improve care coordination and optimize Veterans' care experiences.

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References

1. Taylor, E. et al. “Coordinating Care in the Medical Neighborhood: Critical Components and Available Mechanisms,” *White paper. AHRQ publication*. 2011(11-0064).
2. Rodriguez, H.P. et al. “Teamlet Structure and Early Experiences of Medical Home Implementation for Veterans,” *Journal of General Internal Medicine* 2014; 29 Suppl 2:623-31.
3. Farmer, M.M. et al. “Challenges Facing Primary Care Practices Aiming to Implement Patient-Centered Medical Homes,” *Journal of General Internal Medicine* 2014; 29 Suppl 2:555-62.

Research Highlight

Improving Care Coordination When Referring Patients to Subspecialists: Can Electronic Health Records Help?

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As VHA moves to a team-based model of care, care coordination becomes ever more important. Coordinating care is not a new task in the delivery system, by any means. Yet, despite the many recommendations of entities like the Institute of Medicine that emphasize the importance of well-coordinated health care, guidance on how to coordinate it in order to achieve best results is scarce. One of the most common and longstanding forms of coordination is referring a patient to a subspecialist. Referrals serve as an excellent laboratory for understanding how to best coordinate among health care providers.

Researchers have long lauded the electronic health record (EHR) as an important tool with significant potential to improve care coordination in the context of referrals. EHRs allow the primary care provider (PCP) and subspecialist to exchange information instantaneously, and provide both with immediate access to the entire patient record. However, around 7 percent of patients referred to subspecialists are still lost to follow up despite providers who use an EHR in the referral process. This observation suggests we may need to understand how to optimize information communication through an EHR.

Coordination of Electronic Health Record-Based Referrals: A Qualitative Analysis

We conducted a qualitative study at two large tertiary care VA Medical Centers (VAMC) from different geographical areas in order to: (1) understand coordination breakdowns related to e-referrals; and (2) examine work-system factors that affect the timely receipt of subspecialty care.^{1,2}

First, we conducted interviews with seven subject matter experts to document and understand the e-referral process workflow at four high-volume referral subspecialty clinics at one VAMC. We created subspecialty-specific referral process maps capturing workflow, information transfer, and actions needed for processing referrals. We found considerable variability across subspecialties in how they handled an incoming referral request; nevertheless, seven summary steps emerged as necessary to successfully coordinate transition to a subspecialist: (1) PCP places the referral request; (2) subspecialist reviews the request; (3) subspecialist communicates the review decision; (4) responsibility for care is transferred from primary to specialty care; (5) the referral encounter occurs; (6) the care plan is communicated to the PCP; and (7) responsibility for care is transferred back to primary care.

Next, we conducted six focus groups with a total of 30 PCPs from both VAMCs. Using techniques from grounded theory and content analysis, we identified four organizational themes that affected the referral process: (1) lack of an institutional referral policy; (2) lack of standardization in certain referral procedures; (3) ambiguity in roles and responsibilities; and (4) inadequate resources to adapt and respond to referral requests effectively. Marked differences in PCPs' and subspecialists' communication styles and individual mental models of the referral processes likely precluded the development of a shared mental model that would facilitate coordination and successful referral completion. Notably, providers reported very few barriers related to the EHR itself.

EHRs Can Help, but the Basics of Coordinating Still Apply

Our study began as an examination of specific aspects of EHRs that formed barriers to coordination through referrals, hopefully to serve as pathways for improving the EHR. Our most important finding was that the key to successful care coordination depends less on the EHR interface, and far more on the basics of coordination itself: a clear, institutional referral policy and standardized referral practices that everyone was aware of and understood; a clear understanding by all concerned about which provider is responsible for which aspect of care; and adequate resources (personnel or otherwise) to adapt and respond to incoming referral requests. In their evidence-based coordination framework, Okhuysen and Bechky suggest three integrating conditions that must be present for coordination to occur successfully: accountability (clarity over who is responsible for what), predictability (knowing what tasks are involved and when they happen), and common understanding (a shared perspective on the whole process being coordinated and how individuals' work fits within the whole).³ As we found in our study, the EHR can help improve accountability (for example, by restricting permission for certain actions exclusively to those who are responsible for completing them) and, to some extent, common understanding (for example, by displaying all clinicians currently providing care for a given patient and their role in the care team for that patient), but is quite limited in its ability to improve predictability as defined above. Even in areas where EHRs can help, there are still basic decisions about coordinating that must be done by humans. Deciding who is responsible for information gathering and patient workup, for example, is something that must be done by people. In short, the EHR is only as good as the policies, procedures, and human decisions that it is designed to support.

References

1. Hysong, S.J. et al. "Improving Outpatient Safety through Effective Electronic Communication: A Study Protocol," *Implementation Science* 2009; 4(62).
2. Hysong, S.J. et al. "Toward Successful Coordination of Electronic Health Record Based-Referrals: A Qualitative Analysis," *Implementation Science* 2011; 6(84).
3. Okhuysen, G.A. and B.A. Bechky. "Coordination in Organizations: An Integrative Perspective," *Academy of Management Annals*, 2009 Jun; 3(1):463-502.

Research Highlight

Facilitating Care Transitions Among Patients with Substance Use Disorders

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Substance misuse is a common health condition among Veterans receiving care from VHA. The harmful health effects of substance misuse are well documented and include loss of relationships and employment, legal problems, medical and mental health comorbidities, and premature death. The term “substance misuse” refers to a range of behaviors, from the hazardous use of a substance to meeting diagnostic criteria for a substance use disorder (SUD).

The SUD Care Continuum

Veterans who misuse substances obtain care in a range of settings including primary care and SUD specialty care (involving inpatient, residential, and outpatient settings). Substance misuse is common among primary care patients; almost one-quarter of male, and one-fifth of female OEF/OIF Veterans in VA outpatient care screen positive for alcohol misuse. Patients with SUDs frequently require varying intensities of care throughout the course of the disorder. Often, more intensive intervention is needed upon initial identification of SUDs, whereas less intensive care, such as monitoring, is needed post-treatment to support continued abstinence. Due to the chronic nature of addiction, this stepping up and stepping down of care may occur repeatedly over a number of years. Existing treatment guidelines emphasize coordination between care settings based on the core assumption that SUD patients have better clinical outcomes, and require fewer health care resources, when they are able to successfully transition between different levels of care.

Despite the availability of evidence-based interventions, providers face considerable challenges in facilitating care transitions of patients with SUDs. Accordingly, we have presented

a conceptual model of SUD care transitions that takes into account patient, provider, and system-level facilitators and barriers that may impact the transition process. This model also offers intervention strategies that providers can utilize to improve care transitions.¹ A potentially useful intervention strategy to support this process is telephone monitoring.

Telephone Monitoring to Facilitate SUD Care Transitions

Telephone monitoring is designed to increase participation in continuing care and improve outcomes for SUD patients who have achieved abstinence in intensive treatment. Much of the early work on telephone monitoring with SUD patients was conducted at the Philadelphia VA by James McKay, Ph.D., and colleagues. Telephone monitoring generally consists of one face-to-face session to orient patients to the protocol, followed by regular, brief telephone contact, with provisions to step up the level of care when a patient’s status or symptoms indicate increased risk of deterioration. Research with SUD patients completing intensive treatment has demonstrated that telephone monitoring facilitates access to, and engagement with, SUD continuing care and 12-step mutual-help groups, and improves SUD outcomes. However, this prior work has focused on care transitions within the SUD specialty system. It is likely that opportunities exist to identify SUD patients in other settings and link them to SUD services prior to discharge. For example, a VA study found that, among Veterans in inpatient psychiatry diagnosed with both SUD and another mental health disorder, only 31 percent received continuing SUD care, even though such care was associated with a significantly reduced likelihood of rehospitalization.²

To facilitate the transition from inpatient psychiatry to continuing SUD care among dually diagnosed patients, we are conducting a randomized trial comparing telephone monitoring to usual care (HSR&D IAC 09-055; Timko & Ilgen, Multiple PIs). The trial tailors the telephone monitoring protocol developed by Dr. McKay for SUD patients, to help dually-diagnosed Veterans at the Palo Alto and Ann Arbor VAs to utilize outpatient continuing care and mutual-help groups following discharge from inpatient psychiatry. Our experience conducting this project indicates that telephone monitoring can be integrated into inpatient psychiatry settings and delivered post-discharge. Based on this successful experience, we will use enhanced telephone monitoring in a project to help Veterans completing inpatient detoxification to access and engage with SUD treatment (VA HSR&D CRE 12-010). The latter project enhances telephone monitoring by incorporating Contracts-Prompts-Reinforcements (CPR), a method developed in VA to facilitate SUD patients’ care transitions.³

As SUD or dually-diagnosed inpatients step down to and complete continuing care, it is important that they also obtain regular primary care services. Making this transition is associated with many important health benefits for SUD patients: reduction in addiction severity, higher abstinence rates, and fewer emergency department visits and hospitalizations. Historically, SUD care has been poorly integrated into the rest of the health care system, so concerted efforts are needed to enhance the ways in which SUD patients receive needed medical, psychiatry, and SUD-related care.

References

1. Cucciare, M.A., Coleman, E., and Timko, C. “A Conceptual Model to Facilitate Transitions from Primary Care to Specialty Substance Use Disorder Care: A Review of the Literature,” *Primary Care Health Research & Development* (in press).
2. Ilgen, M.A. et al. “Continuing Care after Inpatient Psychiatric Treatment for Patients with Psychiatric and Substance Use Disorders,” *Psychiatric Services* 2008; 59(9):982-8.
3. Lash, S.J. et al. “Contracting, Prompting and Reinforcing Substance Use Disorder Continuing Care,” *Journal of Substance Abuse Treatment* 2013, 44(4):449-56.

Research Highlight

Care Coordination and Transitions in Heart Failure Care

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Heart failure is one of the medical conditions most likely to benefit from care coordination through times of patient transition. As a chronic condition characterized by periodic hospitalizations, heart failure involves frequent care site transitions accompanied by important changes in management, for example, new medications or dosage changes. Heart failure patients may experience transitions between different levels of inpatient care (e.g., acute care, long-term skilled nursing care), between inpatient and outpatient care, and between different levels of outpatient care (e.g., to advanced heart failure care). While transitions also can occur on the home front (e.g., from not working to returning to work), few of those with heart failure symptoms are working given their older age. Those heart failure patients who continue working may experience significant fatigue and risk of arrhythmia that require modification of work duties. For those with advanced heart failure, the appropriate timing of any transition to hospice is difficult to determine given the uncertainty in prognosis.

The transition with the greatest potential impact on health and resource use is the transition from hospital to home. Not only are changes in care common during hospitalization but patients are often not yet back to their baseline health status at time of discharge. Close follow-up during the transition from hospital to home is likely to improve patient outcomes.

The most commonly used measure of quality for hospital care and the transition to home is the all-cause readmission rate at 30 days, which is near 25 percent following a heart failure admission for both the VA and Medicare populations. This measure, with risk adjustment for patient characteristics, is publi-

cally reported at the hospital level by VA and Medicare with the latter imposing financial penalties on those hospitals that fall below the U.S. average readmission rate.

Evidence-Based Interventions

Given the spotlight on readmissions as a measure of quality, what interventions should hospitals adopt to improve the transition of care for patients with heart failure? The most powerful data come from randomized controlled trials. A 2011 review of readmission studies identified 16 randomized trials that evaluated the impact of different interventions on patients' readmission rates.¹ These studies evaluated a variety of interventions, many multifactorial, which included such processes as patient education, medication reconciliation, early phone calls, a transition coach, home visits, early communication with the primary care provider, and patient-centered discharge instructions. Unfortunately, only four trials reported statistically significant results demonstrating a reduction in readmission at 30 days as a result of one or more of these interventions. More importantly, the review found no clear pattern as to which intervention or combination of interventions is effective in reducing readmissions. In other words, the positive results from one trial were rarely confirmed by a second trial. How could this be given the strong face validity of low readmission as a measure of a quality transition? First, the benefit of a transition intervention may be smaller than expected and undetectable given the size of the trials. Second, the benefit may occur later or last longer than 30 days (e.g., education or medication change) and a longer follow-up time may reveal an impact on readmission. Finally, readmission

itself may be a poor measure of quality regardless of the timing. Close follow up may have unpredictable effects on readmission rates depending on the impact such follow up may have on reducing preventable admissions and detecting problems for which readmission will improve health (the good readmission).

When researchers examine outcomes beyond readmissions, the evidence suggests that transition of care practices work. Of 19 trials examining patient outcomes such as health status, medication knowledge, and satisfaction, 11 reported statistically significant results. Three of eight trials significantly reduced errors or medication 'near misses' using pharmacy-targeted interventions.² Trials aimed at improving communication between the inpatient and primary care providers were most likely to be effective (14 of 19 trials reported statistically significant positive results). Evidence for improved communication included enhanced primary care providers' knowledge of their patients' inpatient course, medication reconciliation, and subsequent appropriate patient management by the primary care team.

VA has not mandated any particular intervention for the transition of care, though VA facilities have adopted many strategies aimed at improving care transitions. VA has led the U.S. in pharmacist involvement in the transition of heart failure care, which research demonstrates is one of the best practices associated with reduced readmission.³ While the field needs more rigorous studies of transition of care interventions, perhaps the greatest need is to determine the best measure of a quality transition, both from the health system and patient perspective.

References

1. Hansen, L.O. et al. "Interventions to Reduce 30-day Rehospitalization: a Systematic Review," *Annals of Internal Medicine* 2011; 155(8):520-8.
2. Hesselink, G. et al. "Improving Patient Handovers from Hospital to Primary Care: a Systematic Review," *Annals of Internal Medicine* 2012; 157(6):417-28.
3. Bradley, E.H. et al. "Contemporary Evidence about Hospital Strategies for Reducing 30-day Readmissions: a National Study," *Journal of the American College of Cardiology* 2012; 60(7):607-14.

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Translating research into quality health care for Veterans

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JGIM Supplement Highlights VA's Patient Aligned Care Teams

As discussed earlier in this issue, VA launched a national implementation of Patient Aligned Care Teams (PACT), including a rollout to all VA primary care practices in more than 150 medical centers and over 800 community-based outpatient clinics. A newly published Supplement in the *Journal of General Internal Medicine* includes 19 articles that share lessons learned by VA researchers and their clinical and policy partners during the early stages of PACT implementation. Articles focus on its roll-out, as well as its evaluation. The complete issue is available, open access, at <http://link.springer.com/journal/11606/29/2/suppl/page/1>

Amy Kilbourne, Ph.D., M.P.H., Named QUERI Director

Dr. Kilbourne was named Director of VA HSR&D's Quality Enhancement Research Initiative (QUERI). She is a national expert in implementation science, partnered research, and translation of clinical quality improvement intervention findings into actionable policy. She has been widely recognized for her research in multisite implementation intervention trials, development of large outcomes databases to improve person-centered care, and integrated physical and mental health care strategies. Dr. Kilbourne brings to QUERI extensive knowledge of VA operations through her previous national roles as Associate Director of the Serious Mental Illness Treatment Resource and Evaluation Center, and as Director of the VA Homelessness Health Services Research Initiative, in partnership with the National Center on Veteran Homelessness.

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