

**Diffusing Care Coordination Models:
Translating Research into Policy & Practice**

Scientific Summit held September 16, 2010, in Washington D.C.

Summit Summary and Discussion Points

Developed by



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Meeting Participants

Peggye Dilworth-Anderson, PhD
President
The Gerontological Society of America
Professor, Health Policy & Management
Gillings School of Global Public Health
Interim Co-Director, Institute on Aging
University of North Carolina, Chapel Hill

Alicia I. Arbaje, MD, MPH
Assistant Professor of Medicine
Associate Director, Transitional Care
Research
Division of Geriatric Medicine and
Gerontology
Johns Hopkins University School of
Medicine

Robert Berenson, MD
Senior Fellow, Health Policy Center
The Urban Institute

Robert B. Blancato
President
Matz, Blancato & Associates

Shawn M. Bloom
President and CEO
National PACE Association

Chad Boulton, MD, MPH, MBA
Professor of Public Health
Director
Lipitz Center for Integrated Health Care
Dept. of Health Policy and Management
Johns Hopkins University

Mitchell L. Dvorak, MS, CAE
Executive Director
Consumers Advancing Patient Safety

Robyn L. Golden, MSW, LCSW
Director
Older Adult Programs
Rush University Medical Center

Jove Graham, PhD
Research Investigator I
Geisinger Center for Health Research
Bucknell University

Cheri Lattimer, RN, BSN
Executive Director
Case Management Society of America
Project Director
National Transitions of Care Coalition

Katie Maslow, MSW
Consultant

Toni P. Miles, MD, PhD
Professor, Kent School of Social Work
and School of Medicine
University of Louisville

Margaret P. Moss, PhD, JD, RN, FAAN
Associate Professor
Director of Nursing Management, Policy
and Leadership Specialty
Yale School of Nursing

Mary H. Palmer, PhD, RNC, FAAN
Professor
Helen W. and Thomas L. Umphlet
Distinguished Professor in Aging
School of Nursing
Interim Co-Director, Institute on Aging
Co-Director, Interdisciplinary Center for
Aging Research: Uniting Scientists
University of North Carolina, Chapel Hill

Sharda Ramsaroop, MD
Irving S. Wright Center on Aging
Division of Geriatrics and Gerontology
Weill Cornell Medical College,
New York-Presbyterian Hospital

Alisha Sanders, MPA
Senior Policy Research Associate
Institute for the Future of Aging Services
American Association of Homes and
Services for the Aging

Annette M. Schmidt
Director, U.S. External Affairs
sanofi-aventis U.S.
Corporate and Public Affairs

Fikir Tilahun
Manager, U.S. External Affairs
sanofi-aventis U.S.

Moderator:

Brian Hofland, PhD
Director, Economic Justice
AARP Foundation

GSA Staff:

James Appleby, RPh, MPH
Executive Director

Linda Krogh Harootyan, MSW
Deputy Executive Director

Judie Lieu
New Product Development Director



Background

With the aging of the baby boom generation (comprising individuals born between 1946 and 1964), the United States is on the brink of a massive expansion in its elderly population. By 2050, experts project 88.5 million U.S. residents will be age 65 years or older—more than double the current number.ⁱ

The number of U.S. residents in the oldest age bracket, 85 years and over, is projected to rise from 5.8 million in 2010 to 8.7 million in 2030 and 19 million in 2050.ⁱⁱ

The good news is that the expanding population of older adults is expected to live longer than the population preceding it.ⁱⁱⁱ The bad news is that a sizable proportion of older adults are expected to continue to consume health resources at a much higher rate than those under age 65 years.

“I think we’re just at the beginning of what will be a 10- or 20-year journey to actually get effective care coordination models into practice. The good thing is that everybody now recognizes care coordination as an issue.”

Robert Berenson, MD
The Urban Institute

Eighty-two percent of Medicare beneficiaries aged 65 years or over have at least one chronic health condition, 65% have at least two, and 24% have four or more.^{iv} As shown in Table 1, significant portions of the older population suffer from heart disease, cancer, diabetes, arthritis, and other chronic ailments. Many older adults also have limitations stemming from hearing trouble, vision trouble, and difficulty performing physical activities, such as climbing stairs or bending over.

While adults aged 65 years and over constitute 13% of the population, they account for 38% of all hospital stays, 71% of home health care patients, and 88% of nursing home residents.^{v,vi,vii,viii}

The 2008 Institute of Medicine (IOM) report, *Retooling for an Aging America: Building the Health Care Workforce*, notes that simply expanding the capacity of the current health care system will be insufficient to address the complex needs of the growing older population.^{ix} Instead, the report calls for “fundamental reform in the way that care is delivered to older adults” and lists three criteria for improved models of care:

- Delivery of a comprehensive range of services, beyond those normally available.
- More efficient service delivery (e.g., through the coordination of medical and social services and the shifting of traditional provider responsibilities).
- Encouragement for older adults to assume an active role in their own care.

As evidenced by these criteria, an integral component of the proposed new models is *care coordination*, broadly defined as a set of activities encompassing patient

engagement, assessment, care planning, monitoring, support for family caregivers, and coordination with all providers, especially during patient transitions from one level of care to another (e.g., subacute to acute care within a hospital) or from one location to another (e.g., from hospital to home).

Table 1. Age-adjusted percentages of select conditions among persons 45 years of age and over—United States, 2008			
	Age 45-64 years	Age 65-74 years	Age ≥ 75 years
<i>Chronic Conditions</i>			
Arthritis (%)	30.9	48.3	54.4
Cancer (%)	8.9	19.2	27.0
Chronic Joint Symptoms (%)	35.0	43.0	43.6
Diabetes (%)	12.1	20.4	17.3
Heart Disease (%)	12.3	26.7	39.2
Hypertension (%)	32.5	54.4	61.1
Stroke (%)	2.9	6.3	12.9
Ulcers (%)	10.4	13.7	14.4
<i>Functional Problems</i>			
Hearing Trouble (%)	18.4	27.8	42.7
Vision Trouble (%)	13.8	14.3	21.1
Any Physical Difficulty (%)*	18.1	28.6	45.3
*E.g., sitting or standing for 2 hours, walking quarter of a mile, climbing 10 steps without resting, bending or kneeling, grasping small objects, lifting/carrying 10 pounds.			
Source: Pleis, JR, Lucas, JW, and Ward, BW. (2009) Summary health statistics for U.S. adults: National Health Interview Survey, 2008. National Center for Health Statistics. <i>Vital Health Statistics, 10(242)</i>.			

Lack of coordination among multiple providers in multiple settings can easily lead to fragmented services for vulnerable elders. The problem assumes added urgency when one considers that Medicare beneficiaries with chronic conditions see an average of 13 physicians each year.^x

Inadequate communication among providers and with patients and caregivers—especially during patient transitions from one setting to another—is associated with a host of problems: duplication of services, inappropriate or conflicting care recommendations, medication errors, unavailability of advance care directives across settings, misunderstanding or lack of awareness of symptoms warranting follow-up, increased costs, and patient distress.^{xi,xii}

Effective care coordination, on the other hand, promises to increase the quality of care and to help contain costs, two of the chief goals of health care reform.

Since no single model of care coordination is likely to meet all the needs of the heterogeneous population of older adults in the United States, experts agree that a variety of models must be employed.^{xiii}

The meeting “Diffusing Care Coordination Models: Translating Research into Policy & Practice” brought together a group of leaders in the fields of gerontology, medicine, public policy, and services for the elderly to:

- Review evidence-based care coordination models.
- Identify barriers to the diffusion of these and similar models.
- Identify ways to advance public policy to promote care coordination.

The ultimate goal is to reduce unnecessary health care utilization, while at the same time improving the quality of care and quality of life for older adults with chronic illness.

Lack of care coordination is associated with:

- Duplication of services.
- Inappropriate or conflicting care recommendations.
- Medication errors.
- Unavailability of advance care directives across settings.
- Misunderstanding or lack of awareness of warning symptoms.
- Increased costs.
- Increased patient anxiety and distress.

“It’s important to recognize that you’ve got to put the person in the center of the universe and ask them, ‘What are your goals in life?’ And once you identify the goals of care, you bring to bear all the social and clinical services needed [to help achieve functional, palliative, or longevity goals], and that’s where care coordination becomes the glue.”

Shawn M. Bloom
National PACE Association

Models of Care Coordination

Researchers have identified at least 15 care coordination models that have improved the quality, efficiency, or health-related outcomes of care for chronically ill older adults.^{xiv} These models fall into two categories.

Primary care-based models, in which the care coordinator is based in a physician’s office or other primary care setting, include Geriatric Resources for Assessment and Care of Elders (GRACE), the Program for All-Inclusive Care for the Elderly (PACE), the U.S. Veterans Affairs Home-Based Primary Care (HBPC) program, Guided Care, and several others.

“We have to be really clear that these are promising models with some early supportive evidence.”

Chad Boulton, MD, MPH, MBA
Johns Hopkins University

Community-based models, in which the care coordinator is based in a hospital or community agency, include models of acute care in patients’ homes, models that focus exclusively on transitions of care, nurse-physician teams for residents of nursing homes, models of comprehensive care in hospitals, and combination models, such as the Geriatric Floating Interdisciplinary Transition Team, which employs an inpatient co-management service that also delivers transitional care.^{xv}

A description of two representative care coordination models—one primary care-based and one community-based—is presented in the textboxes on page 8.

Most coordination models, however, are supported by only one or two studies showing promising results. (Care Management for Congestive Heart Failure has perhaps the strongest evidence base.) Because most care coordination studies are relatively short—12 to 24 months—it has been especially difficult to demonstrate health improvements among patients who generally have multiple chronic conditions that cannot be cured.

Based on the results of a literature review that spanned over 20-years of research and served as a background paper for *Retooling for an Aging America*, researchers have identified four care coordination processes that seem to be associated with the most positive outcomes.^{xvi}

These are:

1. An initial, comprehensive assessment of the patient and the patient's family circumstances.
2. Development of a comprehensive care plan that addresses the patient's medical, social, and family needs.
3. A designated individual to take the lead communicating and coordinating among the patient's medical and social service providers.
4. Promoting family and patient engagement in care.

Guided Care Model

Guided Care, developed at Johns Hopkins University, is one of several primary care-based models of care coordination. It employs a registered nurse—who works with two to five physicians based in a primary care practice—to coordinate care for 50 to 60 high-risk, multi-problem, older patients and their caregivers.

The nurse performs an initial medical/social assessment at the patient's home, develops an evidence-based, electronic care guide, generates a patient "action plan," and monitors the patient monthly via phone calls or home visits, during which the nurse employs motivational interviewing to encourage optimal patient self-management. The nurse uses the care guide to communicate with all other providers, especially during transitions of care. Finally, the nurse provides education and support for family caregivers and facilitates access to community services.

The model is supported by a multi-site randomized controlled trial showing improved quality of care, physician satisfaction with care, reduced strain for family caregivers, high job satisfaction for nurses, and a "tendency" toward cost-savings for insurers because Guided Care patients have fewer hospital admissions.

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Boult C et al. (2008) *J Gerontology*

Transitional Care Model

Developed by Mary Naylor (University of Pennsylvania School of Nursing) and colleagues, the Transitional Care Model (TCM) is one example of community-based care coordination.

The heart of the TCM is the transitional care nurse, who is based in a hospital and provides comprehensive in-hospital planning and home follow-up for chronically ill, high-risk, older adults hospitalized for an acute illness or exacerbation of a chronic condition. The nurse provides services to streamline plans of care, promote the maintenance and improvement of patients' health status, and prevent recurring acute hospital and emergency department use.

The transitional care nurse works with a team of multidisciplinary providers, including doctors, other nurses, social workers, discharge planners, pharmacists, and others to implement tested protocols geared to support patient caregivers and patients' own self-management.

The TCM employs Hospital Discharge Screening Criteria validated in three randomized controlled clinical trials to identify patients at high risk for poor outcomes after hospitalization. More information about the model is available at www.transitionalcare.info.

References:

Naylor MD et al. (2009) *J Eval Clin Pract*
Naylor MD et al. (2009) *Policy Polit Nurs Pract*
Naylor MD. (2006) *J Healthcare Quality*
Naylor MD et al. (2005) *Am J Nurs*
Naylor MD et al. (2004) *J Am Geriatr Soc*

Diffusion of Care Coordination

Traditional health care payment systems have the perverse effect of encouraging greater service utilization and encouraging utilization in institutional settings. This longstanding system of rewards works against the goals of care coordination and is undoubtedly the greatest obstacle to the diffusion of care coordination models. But there are other obstacles as well, ranging from gaps in the evidence base to confusion on the part of patients and would-be clinical adopters of what the models offer and how best to implement them.

Fortunately, the new health care reform law includes several measures that may jumpstart the diffusion of promising care coordination models, both by expanding the evidence base and by offering new financial incentives.

Barriers We Have Known

Implementation of care coordination models can be costly. As one summit participant observed, “Practices are not going to [implement care coordination] just because it’s the right thing to do.”

Guided Care, for example, costs primary care practices an extra \$100,000 per year, while it saves health insurers about \$190,000 per year. In other words, practices lose, insurers gain. This misalignment of costs and savings is a fundamental barrier to the diffusion of care coordination models.

“Understanding that the states have to make decisions almost on a daily basis about where they’re going to trim the budget and how that influences care coordination gives an urgency to our conversations. Time matters.”

Toni P. Miles, MD, PhD
University of Louisville
Kentucky Medicaid Cost
Containment Commission

At present, the entities most likely to implement care coordination are those at financial risk—that is, organizations such as Veterans Affairs, HMOs, and some Medicare Advantage plans that both pay for care coordination and reap the benefits of reduced utilization.

Apart from these entities, perhaps the biggest payer for services falling under the rubric of care coordination are the state-run Medicaid programs, which pay for most health care for individuals with dual Medicare and Medicaid eligibility, as well as other low-income populations. Yet, Medicaid has a built-in bias toward nursing home care, even when individuals would rather be served in the community.

Moreover, many of the supplemental services funded by Medicaid—case management, home and community-based services, rehabilitation, personal care services, hospice care, prescription drugs, and even respiratory care for ventilator-dependent

individuals—are entirely optional. States may choose to cover them or not. Since virtually all states operate under balanced budget requirements, these services are especially vulnerable to budget cuts during economic downturns.

The federal Medicare program, in contrast to Medicaid, is designed to address acute illness and offers few incentives for provision of patient education and other services to improve self-management of chronic conditions. It provides no reimbursement for providers to collaborate with one another, and it generally offers no reimbursement for services provided by non-physicians; the Centers for Medicare and Medicaid Services (CMS) would need new statutory flexibility to pay for care by the nurses, social workers, pharmacists, and physicians who staff promising care coordination models.

“Let’s look at culture, let’s look at the values and belief systems that people have. . . . How do we message this not only for providers and insurers, but for the people in the communities? How do we frame this discussion so they get it?”

Peggye Dilworth-Anderson, PhD
University of North Carolina, Chapel Hill

Without a solid business case, proponents of care coordination face significant hurdles trying to convince private practice physicians and hospital administrators to implement care coordination activities. If reducing readmissions for chronic heart failure patients will save hospital beds for higher paying surgical patients, a busy hospital might consider care coordination. However, if circumstances change and the hospital has a surplus of empty beds, the financial incentive disappears.

While a preoccupation with the bottom line is to be expected, a second major barrier to diffusion of care coordination comes from an unexpected quarter: lack of awareness or even skepticism on the part of consumers who stand to benefit from coordinated care.

Recent research has found that health care consumers are confused by the terms *medical evidence*, *quality guidelines*, and *quality standards*.^{xvii} Indeed, many consumers believe all medical care meets minimum quality standards and that medical guidelines, rather than promoting best practices, represent an inflexible, “bargain basement” approach to treatment. Consumers tend to believe that more care is better, newer care is better, and costly care is better.

There is also confusion on the part of would-be early adopters in the medical community regarding the essential components of complex care coordination models and their portability from one setting to another. As one summit participant put it:

“You can’t necessarily test just one [model component] at a time. But the question arises: When you do implement a model and you know that it worked, must it include [all of the original model] components? And if I want to take that program somewhere else and implement it, do I need

to do all of those 15 activities or do I just need to do five of them? We don't want to develop something that's only going to work in one location."

Of course, as this same participant went on to say:

"Obviously, if [a model] had been observed in all locations, we wouldn't be diffusing anymore. We'd be done already. So with any new medical intervention . . . it's going to start in a few locations. You're going to show efficacy, first of all. Can it work in the best of circumstances? Then you move onto effectiveness. Does it work when you apply it in other situations where maybe you don't have quite so much control?"

For most care coordination models, these questions are still under study.

Other provider barriers to care coordination include the following:^{xviii}

- Information gaps regarding a model's optimal target population and staffing requirements.
- The extra burden of training and supervision for care coordination staff.
- An evidence base with a heavy focus on patient-related outcomes and scant attention to other outcomes of interest to adopting organizations.
- Short-term financial disincentives, such as large start-up costs.
- A reliance on teams of providers, which makes the models difficult to implement.
- Minimal provider training in cross-site collaboration and (sometimes) resistance to working as part of a health care team, rather than as an autonomous provider.
- Poor alignment with the circumstances of a potential adopter's local health system.
- Lack of interoperable information systems.
- Lack of accountability for transitions of care.

From a patient perspective, acceptability of care coordination may be hindered not only by off-putting terminology, but lack of cultural competency on the part of providers and failure to construct holistic, patient-centered care plans, recognizing that individuals do not define themselves by their medical conditions.

Opportunities

The most auspicious event for the diffusion of care coordination took place in March 2010, when the Patient Protection and Affordable Care Act was signed into law. Among its measures is the creation of the Center for Medicare and Medicaid Innovation (CMI),

whose director will report directly to the administrator of CMS. The new center will be operational by January 1, 2011, and will have a budget of \$10 billion over the course of its first ten years. Its mandate calls for testing several alternative models of care, including the medical home.

The new health reform law will have other beneficial effects, as well. It mandates that CMS:

- Test other care coordination models—including Community-Based Care Transition and Independence at Home—without necessarily going through CMI.
- Establish a Medicare accountable care organization (ACO) program by January 1, 2012. Although the regulations governing the program have yet to be finalized, the basic idea is to make providers accountable for the quality and cost of care of their Medicare patients and to incentivize them by passing on a portion of the savings that accrue when the per capita expenditures of their Medicare beneficiaries are a sufficient percentage below a specified benchmark amount. (There are no penalties for failure to realize savings.)
- Establish a Medicare pilot program to evaluate the use of bundled payments to cover all the inpatient hospital and post-acute care services provided to a patient for one episode of illness. Medicare will recover payments made for unnecessary readmissions within 30 days of hospital discharge after a stay for heart attack, chronic heart failure, and pneumonia (with the list of conditions to be gradually expanded).

Both the ACOs and the use of bundled payments encourage the use of care coordination activities to improve health outcomes and reduce unnecessary health care utilization.

Finally, the new law allows for indirect graduate medical education dollars for training that takes place outside the hospital. Such broad-based training—in community health clinics and other settings—will give providers a more holistic view of patient care and foster collaboration across settings.

Recommendations

Despite many barriers to care coordination, summit participants were hopeful that the intrinsic value of coordinated care and the opportunities afforded by health reform will accelerate the diffusion of promising models. The consensus is that, with financial incentives—or at least the elimination of disincentives—good models are likely to be adopted simply because the need is great, because care coordination *does* provide a value-added service for patients, and because the potential benefits are significant.

Participants outlined the following recommendations to exploit opportunities, fill gaps in the evidence base, and engage providers and patients.

1. Strengthen the Evidence Base

While summit participants agreed that implementation of care coordination models should not be delayed until every research question is answered, they also acknowledged that a stronger evidence base and realistic process and outcome measures will speed the process.

“The researcher typically develops a model, tests it, shows that it works, and then walks away. . . . They don’t really see it as their job to take it to the next level and create all the materials that would allow others to adopt the model. It’s somebody else’s job. And it really isn’t anybody’s job.”

Chad Boulton, MD, MPH, MBA
Johns Hopkins University

Specific needs include:

- Standardized, validated measures of the quality of care coordination that can be approved by the National Quality Forum. As one participant noted, “Until we can measure it, there’s not even conceptual agreement on what *it* is.”
- Research documenting clinical outcomes associated with care coordination.
- Research identifying the populations most likely to benefit from coordinated care and most likely to accrue cost savings.
- Research showing the comparative advantages of basing care coordinators in clinical versus community settings.
- Answers to frequently asked questions from potential adopting organizations: What does a particular care coordination model cost to implement? To maintain? What are the IT requirements? What are the personnel requirements? What is the probable return on investment?

2. Facilitate Access to Care Coordination Information and Materials

At present, there are few practical resources for providers interested in implementing care coordination models. The National Transitions of Care Coalition (NTOCC)^{xix}—cofounded by the Case Management Society of America and sanofi-aventis—is completing work on a searchable, electronic library of the evidence-based literature on care coordination and offers some tools and other materials for health care professionals interested in improving transitions of care. Advocates should support this type of work and promote its use.

http://www.ntocc.org/Portals/0/TransitionsOfCare_Measures.pdf

http://www.ntocc.org/Home/HealthCareProfessionals/WWS_HCP_Tools.aspx

3. Institute Standards of Competency Around Care Coordination

Standards of competency around care coordination and transitions of care are generally lacking. These could be incorporated into medical residency accreditation programs, CMS guidelines, and the requirements of The Joint Commission. Care coordination also could be addressed in social work, nursing and medical continuing education programs.

A recent Medicare Payment Advisory Commission report recommends that some of the indirect medical education dollars allotted for teaching hospitals be placed at risk, pending demonstration of resident physicians' competency in communication, teamwork, coordination, and related skills.

4. Identify Regulatory Barriers to Care Coordination

Since state and federal regulations and payment systems drive much of the health care delivered in the United States, it is critical to understand which regulations most impede care coordination. Summit participants suggested the creation of a website or other central repository that consumers and providers can access to document regulatory barriers—both minor policy obstacles that could be more-or-less easily remedied and systemic problems. Proponents of care coordination can then identify the targets that are readily achievable and press for change.

5. Promote Greater Flexibility Within State Medicaid Programs

Care coordination is generally perceived as requiring new money to implement—a non-starter in a difficult economic environment. Yet, innovative Medicaid funding models exist that could better accommodate care coordination services with existing funds—for example, unified budgets that pool Medicaid resources for certain categories of beneficiaries and give state health officials leeway to set up new approaches to care delivery with measurable benchmarks.

Outreach and partnership with the National Association of State Budget Officers, the National Conference of State Legislatures, and the National Governors Association will help advocates better understand state budget constraints and timelines, while building consensus for balancing long-term care with other state functions.

6. Push for Changes Within the Older Americans Act

The reauthorization of the Older Americans Act (OAA) in 2011 is an opportunity for advocates to push for changes that will direct more OAA funding to evidence-based programs.

7. Adopt a Bottom-up Approach to Complement Top-down Efforts

In addition to changing payment systems and the broader regulatory environment, summit participants strongly advised efforts to educate and learn from the providers and patients who will be directly involved with care coordination as part of their practices and lives. Recommendations include:

- Partnering with groups such as the Campaign for Better Care (funded by The Atlantic Philanthropies and led by the National Partnership for Women & Families, Community Catalyst, and the National Health Law Program) and NTOCC to learn how best to engage consumers, health care providers, and other professions to identify “what’s needed, what’s wanted, and what would be embraced at the local level.”
- Paying attention to terminology that might influence the social marketing of care coordination, such as what a model is called and how its target audience is defined. For example, it should be clear that care coordination has relevance for many patient populations, not just older adults.
- Exploiting multiple media, including television, to frame positive messages about care coordination and older adults. The Public Broadcasting System, for example, counts older adults among its core audience and is interested in developing programs for this group. However, messages also should be mainstreamed to the public at large.
- Developing consumer education programs for patients and their caregivers to promote effective use of the health care system and to create demand for coordinated, patient-centered care.

“This is the time when a professional gerontologist can serve the needs of an aging society. So I’m very excited about this day. We’re up for the challenge. That’s why we’re here.”

Toni P. Miles, MD, PhD
University of Louisville

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