Estimated Federal Savings Associated with Care Coordination Models for Medicare-Medicaid Dual Eligibles

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Overview[1]

As of 2010, over 9 million individuals were eligible for both Medicare and Medicaid—the dual eligibles. Dual eligibles are among the most expensive and chronically ill of all patients. Per capita spending among dual eligibles exceeds $20,000 per year.[2] Though they account for a small share of total enrollment, dual eligibles account for 36 percent of total Medicare spending and 39 percent of Medicaid spending. In 2011, the federal government—through Medicare and Medicaid—will spend over $230 billion on dual eligibles. Using projections of Medicare and Medicaid spending from the Congressional Budget Office, federal spending on dual eligibles will total nearly $3.7 trillion over the next decade.[3]

Dual eligibles have high rates of chronic illness and nursing home admissions. Over half of all dual eligibles are under treatment for 5 or more chronic conditions and important distinctions exist between the health care needs of dually eligible beneficiaries over age 65 and under age 65. Some 42 percent of dual eligibles with both a mental and physical chronic condition are hospitalized and 28 percent enter a nursing home. Some of these conditions, including diabetes, pulmonary disease, and hypertension are potentially manageable. Team based care models working with severely chronically ill patients have been shown to reduce hospitalizations and readmissions, and cut down on rates of nursing home admissions.[4] Yet, despite the potential for team based care to improve quality and lower spending through improved care coordination and transitions of care, few dual eligibles receive their care this way. Fewer than 2 percent of dual eligibles are enrolled in a coordinated care program that managed all Medicare and Medicaid covered benefits.[5]

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Current Medicare and Medicaid policies provide little incentive for the States to rely on health plans and team based care programs. These disincentives are highlighted by what Medicare and Medicaid pay for. Medicare largely covers acute care services such as hospitalizations, physician services and drug coverage. Medicaid in contrast largely funds nursing home care, and for low income patients, Medicare cost sharing and premiums. Well managed team based care results in lower rates of emergency room, clinic and hospital days—services financed largely by Medicare and not Medicaid, so States are not rewarded for more efficient use of these services. Though such care can also prevent admissions to nursing homes (and movement between nursing homes, hospitals and back) these savings may occur later and are funded largely by Medicaid. Most of the care is funded through separate fee-for-service payments that do not promote comprehensive, coordinated care.

Key Design Features of Successful Care Coordination Programs

There is a growing body of evidence that has identified the key functions performed by health plans and successful comprehensive team based care coordination models in managing chronically ill patients. I have summarized these randomized trials in a separate paper.[6] In addition, MedPAC has examined the characteristics of effective (and ineffective) care coordination models. The key design features of effective care models identified in the literature as well as by MedPAC include:[7]

- Coordination of care for all covered Medicare and Medicaid services utilizing a team based approach and a capitated payment from Medicare and Medicaid
- Approaches that provide a "whole" person focus on preventing disease and managing acute and mental health services tailored to the needs of dually eligible beneficiaries over age 65 and those under 65 with disabilities who reside in the community and in institutions.
- Medical advice from a care coordinator available 24/7
- Assessment of patient risk and development of an individualized care plan

- Medication management, adherence and reconciliation
- Transitional care
- Regular contact with enrollees
- Centralized health records
- Close integration of the care coordination function and primary care (and specialist) physicians

In addition to these components, there is a crucial leadership role that is necessary to bring these elements together. By coordinating different health care providers across the continuum of care, health plans can work to ensure beneficiaries receive the most clinically appropriate, cost-effective services. These activities provide the foundation for cost savings and improved health outcomes for dual eligibles.

The Proposal

This note examines savings assuming all dual eligibles are enrolled in entities that are focused on evidence-based care coordination models. While the States would have flexibility to design the models, each model would contain evidence-based functions. These evidence-based functions have been studied in detail by MedPAC, and in a separate paper I have linked each of these evidence-based functions to improvements in clinical outcomes and spending reductions.[8]

- All dual eligibles would be enrolled in a health plan with an opportunity to opt out. All covered Medicaid and Medicare services would be provided through the health plans.
- Though health plans can innovate and design their own approaches, each of the evidence-based functions outlined above (preventive care, transitional care, medication management and reconciliation, etc) would be included in the treatment of dual eligible patients.
- Health plans would be responsible for coordinating, integrating and developing each of the care coordination functions outlined below. States could also contract with other

entities such as community health teams (defined in section 3502 of the Affordable Care Act) or other forms of medical homes.

Potential Savings

Two recent studies found improvements in quality at lower costs for dual eligibles when using health plans with the characteristics proposed above.[9] The 2010 JEN & Associates Studies found that duals enrolled in Massachusetts health plans have lower rates of institutionalization. In addition, a 2005 Texas State study found that duals and other enrollees with complex needs enrolled in Medicaid health plans experienced lower rates of emergency room and inpatient admissions.

In addition to these studies, a significant body of published research from randomized controlled trials (RCTs) highlights the potential cost savings associated with each of the functions performed by health care coordination teams or other similar care coordination programs. Incorporating these functions into a coordinated system of comprehensive care delivery would maximize these functions. The functions performed by team based care teams include:

- **Transitional Care –**

Two of the best known models of transitional care have been developed by Eric Coleman at the University of Colorado and Mary Naylor at the University of Pennsylvania. The team at Penn defines the transitional care model (TCM) as providing "comprehensive in-hospital planning and home follow-up for chronically ill high-risk older adults hospitalized for common medical and surgical conditions. The heart of the model is the Transitional Care Nurse (TCN), who follows patients from the hospital into their homes and provides services designed to streamline plans of care, interrupt patterns of frequent acute hospital and emergency department use, and prevent health status decline. While TCM is nurse-led, it is a multidisciplinary model that includes physicians, nurses, social workers, discharge planners, pharmacists and other members of the health care team in the implementation of tested protocols with a unique focus on increasing patients' and caregivers' ability to manage their care. For the millions of Americans who suffer from multiple chronic conditions and complex therapeutic regimens, TCM emphasizes

coordination and continuity of care, prevention and avoidance of complications, and close clinical treatment and management - all accomplished with the active engagement of patients and their family and informal caregivers and in collaboration with the patient's physicians."[10]

Evidence of Impact of Transitional Care **[11]**

A major target for team based care is reducing preventable admissions and readmissions through coordinated transitional care. Among Medicare beneficiaries suffering from congestive heart failure (CHF), approximately half of the 700,000 patients discharged from non-federal short-stay hospitals will be readmitted within 6 months at an average cost of $7000 per readmission.[12]

There are several published randomized trials showing that well designed transitional care reduces hospitals readmissions and improves health care outcomes.

- **A meta-analysis of 18 studies (from eight countries) showed that comprehensive discharge planning coupled with post-discharge support for those hospitalized due to congestive heart failure resulted in reduced readmissions of nearly 25%.[13]**
- **More recent randomized trials from the University of Pennsylvania and the University of Colorado have showed that nurse-led transition care programs can reduce preventable readmissions by up to 56%.[14, 15]**

MedPAC estimates that the costs of potentially preventable readmissions within 30 days were $12 billion in 2005[16]—***nearly $245 billion in potentially preventable readmissions in Medicare alone over the current ten-year budget window***. Even a 40% reduction in potentially preventable readmissions could generate up to $100 billion in savings over this ten year period. By building transitional care programs into the community health team framework (as outlined in section 3502 of the Affordable Care Act), preventable readmissions can be reduced, leading to substantial health system savings.

Recent studies suggest that health plans can reduce unnecessary hospital readmissions by as much as 40 percent compared to the fragmented fee-for-service (FFS) system.[17] In addition, Agency for Healthcare Research and Quality hospital discharge data from several states has shown reduced rates of risk-adjusted inpatient admissions, hospital readmission rates, and

avoidable readmissions among Medicare Advantage plan enrollees compared to beneficiaries in FFS Medicare.[18]

- **Health Coaching/ Patient Education –**

Health coaching enables individuals to achieve the goals outlined in their personalized care plan provided by their health care providers. These goals often include lifestyle changes such as diet and nutrition, exercise, and smoking cessation among others. There is a growing body of evidence that shows that application of behavior change theory can result in behavior change in practice.

Evidence of Impact of Health Coaching/ Patient Education

- **Demonstrated savings potential of approximately $2.7 million over one year through reduced hospital readmissions.[19]**
- **Reduced HbA1c levels of type 1 diabetes patients.[20]**
- **Large randomized trial of 174,120 subjects found net savings of health coaching *alone to be 3 percent of total spending* (potential of over $100 billion in Medicare).[21]**

Several randomized controlled trials have also demonstrated that health coaching and patient education programs can effectively achieve cost savings by addressing a broad spectrum of medical concerns, including diabetes, obesity, asthma, and pain among cancer patients.[22]

- **Sacco et al. tested an innovative program that trained undergraduate students to implement a coaching intervention in the form of brief, proactive, telephone delivered self-management education. While further replication is necessary to determine the level of generalizability, preliminary findings suggest that this type of intervention, which is easy and inexpensive to implement, can reduce HbA1c levels of type 1 diabetes patients – a measure linked to significant reductions in costly diabetes-related complications.[23]**

Health coaching shows particular promise for more effectively managing patients with chronic illness. While externally run disease management programs face challenges of limited patient uptake, limited influence on patients, and difficulty coordinating services, the Dartmouth-Hitchcock Clinic is attempting to address these noted shortcomings. In their program, nurses who are trained as health coaches are embedded within a physician practice and offer customized information and support to patients managing chronic illnesses. The nurses are also provided

access to patients' electronic medical records so as to foster informed counseling and education based on relevant health factors.

- **During this recent three year demonstration, 77% of eligible Dartmouth-Hitchcock patients participated in the program (as compared to the 7-13% enrollment rate noted in prior demonstrations), and readmission rates among enrolled patients age 65 or older dropped by 2% (a reduction which has been sustained for more than a year). This higher level of patient uptake was seemingly due to the fact that the nurse/health coaches were integrated into the physician practice, rather than contacting patients as an "outsider." This demonstration program achieved savings of approximately $2.7 million over one year.[24]**

Researchers have identified common elements that consistently lead to improved clinical outcomes and significant cost savings. The most essential elements include ensuring that health coaches are properly trained in motivational interviewing and assessment of patient readiness for behavior change as well as employing a dedicated full-time coaching staff to ensure health coaching is performed consistently. If properly designed and implemented, health coaching and patient education programs hold great promise for improving patient health outcomes and generating savings.

These strategies are important for dual eligibles and other populations with complex needs to encourage more community-based care, which improves health and wellness for beneficiaries and reduces costs.

- **Medication Adherence, Management and Reconciliation –**

Appropriate use of prescription drugs is a key element of effective management of chronically ill patients. Medication therapy management is provided by a pharmacist working with the health care team, the patient (and care giver) to assure the safe and effective use of medication to achieve the targeted health care outcome. This includes issues of dosage, interactions among drugs, filling and refilling medications among other functions. Effective management of medications has been shown to reduce hospitalizations and emergency and outpatient visits.

Evidence of Impact of Medication Adherence, Management and Reconciliation

- **ROI of improving medication adherence for these costly chronic conditions was nearly 4:1 for hypertension, 5:1 for hypercholesterolemia, and an impressive 7:1 for diabetes.[25]**
- **Overall healthcare spending among medically adherent Medicaid patients was 23% lower than non-adherent patients.[26]**
- **10 year study at large integrated health system that installed evidence-based medication therapy management generated a system-wide ROI of 1.29.[27]**
- **Specific evidence based approach to medication management and evidence of overall savings is summarized at http://www.pcpcc.net/files/medmanagement.pdf.**
- **A recent CVS Caremark study found that increased medication adherence resulted in a large reduction in total health care spending, ranging from $1,860 per year for patients with hyperlipidemia to over $8,880 for congestive heart failure patients.[28]**

Several studies demonstrate that by increasing medication adherence through proven strategies – such as patient education, simplified dosing schedules, additional open clinic hours, and improved communication between providers and patients – significant savings can be achieved alongside improved clinical outcomes.[29]

- **A study examining the relationship between medication adherence and four costly chronic conditions – diabetes, hypertension, hypercholesterolemia, and congestive heart failure – found that high levels of medication adherence in all four conditions resulted in significantly fewer hospitalizations. This decreased utilization of services translates to significant savings as cost offsets for these patients were observed not only for disease-related medical costs, but for all medical costs. In short, the ROI of improving medication adherence for these costly chronic conditions was nearly 4:1 for hypertension, 5:1 for hypercholesterolemia, and an impressive 7:1 for diabetes.[30]**
- **In a similar analysis of Medicaid beneficiaries with congestive heart failure, overall healthcare spending among adherent patients was 23% lower than non-adherent patients.[31] Many large, integrated group practices (e.g., Geisinger, Group Health, and Community Care of NC) have already implemented programs to improve medication adherence among patients with much success.[32]**

Successful treatment of any condition largely depends upon patients' adherence to physician-prescribed medication regimens. Yet, for many reasons (*e.g.*, costs, clarity of dosage, patient error, side-effects, etc.), medication adherence, particularly among those suffering from chronic conditions, is far too low – with adherence estimated between 50-65%.[33] While patients' health is the greatest cause for alarm arising from non-adherence, increased costs of care should also

generate concern. Among medication-related hospitalizations, 33-69% are due to poor medication adherence, which in turn, results in approximately $100 billion per year in increased spending.[34] Prescription drug expenditures continue to drive overall health spending at an ever-increasing rate – accounting for a 4.5% rise in health expenditures in 2010, with a projected rise to 8.6% by 2018.[35] While medication adherence is only one piece to the care coordination puzzle, improving medication adherence is a promising approach to achieving better value within our healthcare system.

As demonstrated above, medication adherence is a high priority for health plans. Health plans have also been effective in implementing generic substitution programs that address a major barrier to adherence by reducing member out-of-pocket costs for their prescription medications.

So our collective experience with the key functions performed by coordinated care teams shows tremendous promise for quality improvements at lower cost. Based on these collective published data, and given the large opportunity to reduce hospital days, emergency room and clinic visits and nursing home admissions and understanding that several of these functions have interactions that affect the estimate, we assume a 4% savings in health care spending.

Results[36]

The estimated savings presented below assume all duals are enrolled in health plans and other care models that include the elements described above. States would retain their share of Medicaid savings. These projections do not include shared savings in Medicare with the States, though clearly this approach could also be adopted.

Table 1. Potential Federal Savings Associated with Enrolling Dual Eligibles into Coordinated Care Management, Billions of Dollars

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Medicare	$2.2	$4.8	$7.6	$7.9	$8.5	$8.8	$9.1	$10.0	$10.7	$11.4	$80.9
Medicaid	$0.6	$1.4	$2.4	$3.7	$5.1	$5.5	$5.8	$6.2	$6.7	$7.1	$44.6
Total	$2.8	$6.2	$10.0	$11.5	$13.6	$14.3	$15.0	$16.2	$17.3	$18.6	**$125.5**

Assuming States enrolled all dual eligibles into team-based care models, federal savings over the next ten years would total $125 billion—clearly an upper estimate. States would save approximately $34 billion in Medicaid spending over the same ten year period. These totals would be more consistent with a policy that would require dual eligibles to enroll in health plans and other care models. Use of opt-outs or other voluntary approaches would generate lower savings.

Though the estimates presented above are clearly upper estimates since they assume all dual eligibles have their care provided using these programs, the potential for substantial savings and improved quality of care is clear. Each of the functions performed as part of the care teams have been shown, through several randomized trials, to generate quality improvements at substantially lower health care costs. Health plans add value by unifying these strategies into organized care models.

The nation is currently grappling with the implications for the Medicare and Medicaid programs in the face of escalating care costs and the mounting national debt. This paper suggests that expanded reliance on health plans and other coordinated care approaches for dually eligible beneficiaries can achieve significant savings while improving quality of care. Policymakers should seriously consider greater reliance on these strategies as action on deficit reduction initiatives moves forward.

NOTES

[1] All estimates are the responsibility of the author and conclusions do not reflect those of Emory University.

[2] Accessed at http://www.kff.org/medicaid/upload/4091-08.pdf

[3] March 2011 Medicare and Medicaid baseline from the Congressional Budget Office.

[4] JEN Associates, Inc. MAssHealth Senior Care Options Program Evaluation, Pre-SCO Enrollment Period CY2004 and Post-SCO Enrollment Period CY2005 Nursing Home Entry Rate and Frailty Level Comparisons, June 6, 2008 and Texas Health and Human Services

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[5] Available at http://www.medpac.gov/chapters/Jun11_Ch05.pdf

[6] Kenneth E. Thorpe, Building Evidence Based Models to Avert Disease and Reduce Health Care Spending, Emory University, July 2011

[7] Available at http://www.medpac.gov/chapters/Jun11_Ch05.pdf

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[11] This section is adapted from Kenneth E. Thorpe, Building Evidence Based Models to Avert Disease and Reduce Health Care Spending, Emory University, July 2011

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[36] The ultimate savings associated with integrated team based care is 4 percent. For Medicare we assume it takes three years to achieve these savings. We assume a longer time horizon for Medicaid—5 years—since most of the savings in Medicaid are preventing admissions to nursing homes and reducing admissions from nursing homes to hospitals.