

Risk Adjustment for Dual Eligibles: Breaking New Ground in Massachusetts

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About the Massachusetts Medicaid Policy Institute

The Massachusetts Medicaid Policy Institute (MMPI) is an independent and nonpartisan source for information and analysis about the Massachusetts Medicaid program (often referred to as “MassHealth”). MMPI seeks broader understanding of MassHealth and a rigorous and thoughtful public discussion of the program’s successes and challenges ahead.

About BD Group

BD Group provides analysis of health care and human services to public agencies, providers, and consumer groups. Its principals are Ellen Breslin Davidson and Tony Dreyfus. Breslin Davidson was a principal analyst at the Congressional Budget Office, and served at MassHealth as director of managed care reimbursement and analysis, and as deputy assistant commissioner. Dreyfus was the lead analyst for the original development of the Chronic Illness and Disability Payment System (CDPS), a diagnosis-based risk adjustment system used by many state Medicaid programs.

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Executive Summary

Massachusetts is developing a system of integrated care for about 115,000 residents ages 21 to 64 who are “dually eligible” for both Medicare and Medicaid. The state’s Medicaid program, MassHealth, aims to integrate the care and financing for this population in order to improve quality, outcomes and cost-effectiveness. Achieving these goals will require the state and Federal governments to develop a new financing model with risk adjustment as a key component.

Effective risk adjustment is essential to the success of an integrated care program. Risk adjustment will help to ensure that integrated care organizations are appropriately compensated for the risk of their enrollees and will encourage innovative care for dual eligibles with high levels of need.

The Need for Risk Adjustment

Risk adjustment is particularly important for dual eligibles because their health care costs are both varied and predictable. Dual eligibles experience diverse physical, mental and developmental conditions. Some have very low costs, some have intermediate costs, and a few have very high costs. Among people with disabilities, costs are more predictable because much of their care is related to their chronic conditions.

Risk adjustment is a system for adjusting payments to health plans to reflect the differing health needs of enrollees, with higher payments made to health plans with members needing more care and lower payments to health plans with members needing less care. Without risk adjustment, providers of integrated care would face strong incentives to enroll the less needy among the duals. By contrast, providers that attract more than their fair share of enrollees with high needs would be underpaid, and could face large financial losses or have to reduce expenditures.

Risk adjustment for programs serving the dual eligibles should take advantage of diagnostic data complemented by information on functional status.

Using Diagnoses to Adjust Payments

Most efforts to develop risk adjustment systems have focused on diagnoses, because they are good predictors of cost and readily available from claims data. Adjusting rates by diagnoses is already common practice by Medicare and many state Medicaid programs.

Medicare shifted decisively toward diagnosis-based risk adjustment in its capitated Medicare Advantage program starting in 2000. Risk adjusted Medicare payments now surpass \$100 billion annually. In addition, many state Medicaid programs implemented diagnostic risk adjustment even before Medicare. Twenty-two states report that they adjust Medicaid payments using diagnoses.

Massachusetts can choose from a number of diagnosis-based risk adjustment systems to help set rates for its program for dual eligibles. A likely choice is either the CMS-HCC system or the closely related DxCG system.¹ Medicare and MassHealth have years of experience with these models, and either system could be refined to better predict variations in the costs of dual eligibles.

The Importance of Functional Status

Diagnoses alone, however, will not predict the full service needs for persons with disabilities. The inclusion of functional status measures in risk adjustment would improve the accuracy of predictions. Functional status can be defined by a range of measures, including ability to perform basic activities of daily living and cognitive status. Limitations in these areas create the demand for long term support services. Long term support services account for a large share of expenditures but are used by only some dual eligibles, so that good predictions about the need for these services will substantially improve payment accuracy.

Using functional status as a risk adjuster, however, is much less established than using diagnoses. Massachusetts can learn from the experience of New York and Wisconsin in their use of functional status data to risk adjust payments for long term support services. Since functional status data are not readily available, the state must first establish a mechanism to collect functional status data and then in later years incorporate the data into the risk adjustment system.

Since 2005, New York has required that managed long term care plans submit functional status data on almost 30,000 members. Using this data, New York created risk adjusted rates for a wide range of support services, including home health, personal and nursing home care.

Wisconsin has enrolled almost 35,000 people in its Family Care program, which provides institutional and home and community-based services for frail elders and people with disabilities. Each beneficiary's functional status is measured using a standardized state administered screening tool. This information is then used to adjust capitation rates.

The state should consider carefully the best way to collect and use functional data for risk adjustment. The state could delegate assessment of functional status to integrated care organizations or the state might prefer to retain this responsibility. In either case, functional assessment would add to the overall program cost, but increased attention to functional status would be useful not only for risk adjustment but also for care management and program monitoring.

¹ CMS-HCC is the Federal Centers for Medicare and Medicaid Services' Hierarchical Condition Category model; DxCG is the name of a model offered by the company Verisk.

MassHealth Experience with Risk Adjustment

Massachusetts can also build on practices that MassHealth has developed and refined over time. Current practices used by MassHealth include the use of rating categories and a diagnosis-based risk adjustment system for the managed care organization program. Rating categories are a way to group individuals, often based upon eligibility criteria, and have long served as the first step in MassHealth's rate setting process. MassHealth has also used risk sharing arrangements and stoploss to limit risk to health plans.

Implementing Risk Adjustment in the Demonstration Program

The demonstration period represents an excellent opportunity for CMS and MassHealth to lay the foundation for the future in a collaborative and transparent manner. We would encourage CMS and MassHealth to aim for a unified payment system under which Medicare and Medicaid adopt the same rating category structure, risk adjustment system, data collection requirements and risk sharing arrangements. A unified payment system of this kind would reinforce the goals and benefits of integration, simplifying administrative requirements for all parties and focusing attention on a single set of requirements and incentives.

Recommendations

We offer the following recommendations as a stimulus for discussion. We recommend that CMS and MassHealth:

1. Establish rating categories based on the type and severity of diagnoses among dual eligibles to capture some of the variation in risk among enrollees.
2. Select a single risk adjustment system on the basis of several criteria, including accuracy, transparency, and the experience of payers; this risk adjustment system should be refined to better predict the risk of dual eligibles.
3. Develop a method to predict long term support service needs. Initially CMS and MassHealth can use individual data on prior expenditures for these services, but should move to using functional data by the third year of the demonstration.
4. Establish standards for the collection of data on functional status and begin collection as soon as the program starts. Uniform standards will allow the use of this data for risk adjustment in future years and for consistent program management and monitoring from the start.
5. Put integrated care organizations at limited financial risk during the demonstration period to minimize losses and gains.

6. Update capitation rates frequently for changes in the risk of enrollees during the initial years of the demonstration program in order to maintain payment accuracy.

Time to Break New Ground

CMS and MassHealth are about to break new ground in Massachusetts. CMS and MassHealth annually spend \$2.5 billion on care for duals ages 21 to 64. Integrating the care and financing for this population holds much promise to improve the quality of care that dual eligibles receive from the Medicare and Medicaid programs. CMS and MassHealth should invest the time needed to create a strong payment model that will promote an improved system of patient-centered care for this expensive and vulnerable group.

Beyond Massachusetts: A National Payment Model

Massachusetts and other states would benefit from a national effort to create a single model for adjusting payment in integrated programs. This approach could reduce each state's burden of constructing its own model and reduce the complexity of CMS's work with states in the demonstration. States would likely need to tailor the national model to reflect covered benefits and local service patterns. A national model could include an available diagnosis-based risk adjustment system refined to better predict costs for dual eligibles ages 21–64, and a set of functional variables for risk adjustment in the demonstration programs.

I. Introduction

A. The Importance of Risk Adjustment to the Dual Demonstration

In Massachusetts, 115,000 residents ages 21–64 are “dual eligibles,” covered by both Medicare and Medicaid. State and national policymakers believe that an integrated system of care for this group can improve quality, outcomes, and cost-effectiveness.

With the support of the Federal government, Massachusetts and 14 other states are seeking to demonstrate new ways to meet the needs of these dual eligibles.² One key challenge is to develop financing for the demonstration that will support quality and efficiency.

These dual eligibles experience a wide variety of disabilities and chronic illnesses, including physical disabilities and illness, mental illness, and developmental disability. With these conditions, some duals have predictably high costs, while others tend to have lower costs. Because of these varied and predictable costs, risk adjusting payments to account for differences in health needs is a key element for success in the new system of care. In this ambitious program, the state will want to use risk adjustment as one element of a larger purchasing strategy for assuring the quality and efficiency of services.

This paper examines the importance of risk adjustment to the dual demonstration and available risk adjustment systems (Section II), Federal and state experience with implementation (Section III), and recommendations for implementing risk adjustment for dual eligibles in Massachusetts (Section IV). An appendix describes risk sharing and other complementary strategies that Medicaid can use to promote access, value, and quality in the care it buys for duals.

B. What Is Risk Adjustment?

In this context, risk adjustment is a system for adjusting payments to health plans to reflect the differing health risks or needs of enrollees. The goal is to provide higher payments to plans enrolling members who need more care than average and lower payments to plans enrolling members who need less care than average. The Medicare program risk adjusts payments to Medicare Advantage plans, and many states, including Massachusetts, risk adjust payments to Medicaid managed care plans.³ The Patient Protection and Affordable Care Act envisions

2 Massachusetts Executive Office of Health and Human Services, Office of Medicaid. *Proposal in response to the Center for Medicare and Medicaid Innovation: State demonstrations to integrate care for dual eligible individuals*, January 28, 2011, pp. 5–6. See Kaiser Commission on Medicaid and the Uninsured. *Proposed Models to Integrate Medicare and Medicaid Benefits for Dual Eligibles: A Look at the 15 State Design Contracts Funded by CMS*. Policy brief, August 2011, pp. 12–13 for comparisons to other states.

3 Risk adjustment can also be used as part of quality and outcomes measurement to make more valid comparisons among populations and groups of enrollees. See Lisa Iezzoni, ed., *Risk Adjustment for Measuring Health Care Outcomes*, third edition. Health Administration Press, 2003, p. 25. In this paper, we focus on risk adjustment for payment purposes.

using risk adjustment as a key tool in the creation of insurance markets focused on quality and efficiency.⁴

The most common method of risk adjustment employs diagnoses, which are good predictors of health risk and readily available from claims data.⁵ Diagnoses alone, however, may not adequately predict the full service needs for persons with disabilities. Information on functional status would improve risk adjustment for dual eligibles, because more than 30 percent of their spending is for long term support services and these services are strongly related to functional status. Currently, methods for adjusting rates for long term support services and using functional status as an adjuster are much less established than adjusting rates for acute health care using diagnoses.

⁴ Mark A. Hall. *Risk Adjustment Under the Affordable Care Act: A Guide for Federal and State Regulators*. Issue brief for the Commonwealth Fund, May 2011.

⁵ Leslie M. Greenwald. Medicare Risk-Adjusted Capitation Payments: From Research to Implementation. *Health Care Financing Review*, vol. 21, no. 3 (Spring 2000), pp. 1-5.

II. Risk Adjustment for Dual Eligibles

A. Why Risk Adjustment Is So Important for Dual Eligibles

Risk adjustment is particularly important for dual eligibles because the distribution of their costs is skewed while the predictability of their costs is high.

The Skewed Distribution of Expenditures

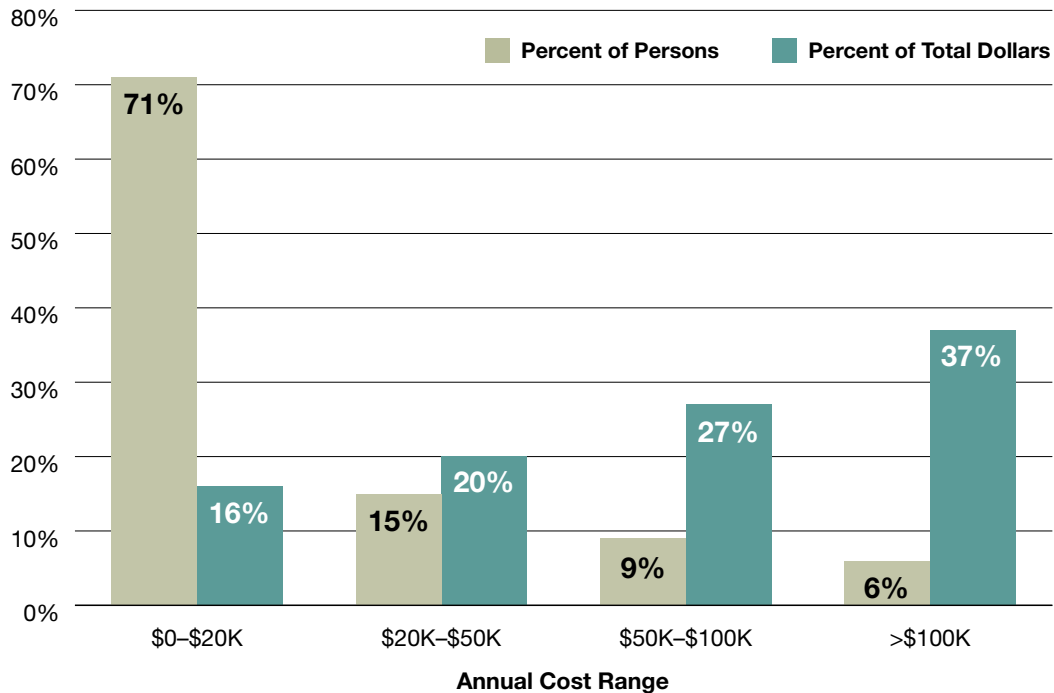
Two realities about people with disabilities make risk adjustment especially important. The first may be surprising: one might expect dual eligibles to have more uniform costs because they all experience chronic illness or disability, but, in fact, the distribution of expenditures among people with disabilities is almost as skewed as it is among a non-disabled population. Data show that health care costs for people with disabilities are tremendously varied, with a significant proportion having very low costs in a given year, a smaller number with intermediate costs, and a much smaller number with very high costs.

We recently analyzed preliminary data on combined Medicare and Medicaid spending on duals to support public discussion of developing integrated systems for dual eligibles in Massachusetts.⁶ These data for 2008 showed that 71 percent of duals ages 21–64 had annual expenditures less than \$20,000 and accounted for only 16 percent of the total dollars including costs for both acute care and long term support services. At the same time, 6 percent of the duals had expenditures over \$100,000, accounting for 37 percent of the dollars. See Figure 1 below.⁷

⁶ Ellen Breslin Davidson and Tony Dreyfus. *Dual Eligibles In Massachusetts: A Profile of Health Care Services and Spending For Non-Elderly Adults Enrolled in Both Medicare And Medicaid*. The Massachusetts Medicaid Policy Institute, in collaboration with the Massachusetts Medicaid Program, September 2011.

⁷ Breslin Davidson and Dreyfus, 2011, p. 7.

Figure 1. Proportions of Duals Ages 21–64 and Expenditures for Different Annual Cost Ranges



The implications for risk adjustment are clear. Without adjusting for risk, the average annual capitation rate would be close to the average annual cost for all duals, which was \$23,700 in 2008.⁸ But the majority of duals had annual costs well below this average (71 percent in 2008 were under \$20,000 per year), while a few duals had costs far above this average. In the absence of risk adjustment, an integrated care organization (ICO) that failed to enroll a fair share of the higher risk duals would be overpaid, while an ICO that attracted more than its fair share of costly enrollees would be underpaid, and could face large losses or have to reduce expenditures.⁹

⁸ With changes for cost trends from 2008, the scope of the benefit package, and managed care savings.

⁹ “Integrated care organization” is the term that MassHealth has used in the draft proposal for the entity that will be responsible under the demonstration to provide the full set of Medicare and Medicaid services. An ICO could be sponsored by a health insurer, a provider group, or some other entity as long as it can meet contractual requirements. In the January 28, 2011, proposal to the Centers for Medicare and Medicaid Services (CMS) from the Massachusetts Executive Office of Health and Human Services, the ICOs were originally referred to as “integrated care entities.”

The Variety of Conditions Behind the Variety of Costs

Dual eligibles with low costs may have injuries, developmental disabilities, or other conditions that qualify them for coverage, but relatively few ongoing medical needs. Dual eligibles with higher costs include people with serious cardiovascular, pulmonary and gastrointestinal disease, serious mental illness, serious nervous and immune system disorders, or a combination of highly disabling physical and mental conditions. No single condition can exemplify the great variety of illness and disability of beneficiaries with disabilities; similarly, no average cost can represent the risk of these individuals, whose costs vary tremendously.

The Higher Predictability of Costs

The second reality underscoring the importance of risk adjustment for persons with disabilities may be less surprising: their costs are more predictable than those of a non-disabled population. One way to demonstrate the higher predictability of risk for people with disabilities is to compare how well expenditures in one year predict expenditures in the following year for disabled and non-disabled populations. These comparisons show that the amount of variation in expenditures that is predicted by prior-year costs can be several times greater for the disabled population.¹⁰

The reason that costs are more predictable among people with disabilities is that a large proportion of their care is tied to their chronic conditions, which are more consistent over time. By contrast, among a general population, a greater proportion of care is due to unpredictable, acute needs, including accidents, brief illnesses, and onset of new disease. For duals, the disabling condition, accident, or disease has already occurred, and a somewhat predictable level of ongoing care is already established.

Even many of the acute needs of people with disabilities are related to their chronic conditions and are therefore more predictable. For example, a person with quadriplegia, sickle-cell disorder, AIDS, or congestive heart failure is likely to have recurrent, costly, acute needs over an extended period of time. By contrast, a person who has a single diagnosis of hearing or vision loss or moderate cognitive disability is likely to have fewer and less costly acute needs.

The greater predictability of needs and costs among people with disabilities makes the need for risk adjustment all the greater. As noted earlier, a plan that could avoid attracting its share of

¹⁰ This difference can be summarized by the R^2 measures from regressing a year of individual health expenditures on expenditures from the previous year (see Richard Kronick, Tony Dreyfus, Lora Lee, and Zhiyuan Zhou. Diagnostic Risk Adjustment for Medicaid: the Disability Payment System. *Health Care Financing Review*, vol. 17, no. 3 (Spring 1996), p. 8). A more useful method for a general presentation would be to group beneficiaries with disabilities into expenditure quintiles based on a first year of data and then to calculate the average expenditures for these groups in a second year.

members with predictable, high care needs would reap excessive profits if capitation payments were based on average rates and not adjusted for risk. On the other hand, a plan committed to building a system of care responsive to people with higher levels of need would be financially penalized and unlikely to achieve their goals.

B. Sources of Data and Available Systems for Risk Adjustment

Sources of Data

Risk adjustment of capitated payments to ICOs for the care of duals ages 21–64 should take advantage of diagnostic data complemented by information on functional status. Data on prior expenditures may also play a useful role as the program is implemented or even on an ongoing basis.

Diagnostic data has numerous advantages for risk adjustment. Diagnoses suggest the need for specific health care services and so are predictive of future health care needs and costs. Diagnoses are available to health care payers, typically from their databases of paid claims, which include diagnosis codes from the International Classification of Diseases (ICD).¹¹

Linking payment to diagnoses may encourage health plans to keep close track of their members' chronic illnesses, which could have the added benefit of encouraging care management and quality outcome measurement by the ICO.¹² Current diagnostic data from claims may under-report the frequency of stigmatized diagnoses, such as substance use, or of diagnoses that are not always directly related to medical treatment, such as developmental disability. With payment linked to diagnoses, the reported rates for these and many other chronic conditions should rise — overall a positive development.¹³

Because of these advantages, most efforts to develop risk adjustment systems have focused on the use of diagnoses. Adjustment of rates by diagnoses for acute care services is already established as common practice by Medicare and by many state Medicaid programs, and appropriate systems are immediately available. The main challenges in Massachusetts will be choosing and adapting current systems for implementation.

Functional status may also play an important role in risk adjustment for dual eligibles, because some need substantial amounts of long term support services that are primarily related to poor functional status. The use of functional status for risk adjustment, however, is less developed in

¹¹ These codes are specifically from the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

¹² Arlene Ash, Randall P. Ellis, and colleagues. Using Diagnoses to Describe Populations and Predict Costs. *Health Care Financing Review*, vol. 21, no. 3 (Spring 2000), p. 8.

¹³ As we will see in Section III, this increased diagnostic reporting is recognized as a change for which payers must compensate.

practice, and will require special attention and resources to devise and implement an approach for Massachusetts.

Collecting data on functional status also poses challenges. The collecting of this data will require new expenditures, whether the state hires independent evaluators or asks the plans to collect the data. If health plans are responsible for evaluating their own members, the state might have to audit the data or compensate for increased recording of functional limitations. (Such concerns are discussed further in part C of this section.)

Data on prior expenditures could be used to adjust capitation rates at the outset of the demonstration program, because the data is readily available and is a very good predictor of future needs. Prior expenditure data could be used to risk adjust initial payments to ICOs while the systems for collection and merging of diagnostic and functional data are developed. Since prior expenditure data would be drawn from fee-for-service payments that occurred before the ICOs were established, their use might have the disadvantage of perpetuating excessive costs associated with the unintegrated care that dual eligibles may have received in the past. As a result, the use of prior expenditure data might best serve as a temporary supplement to the immediate use of diagnostic data, especially to help predict the costs of long term support services.

If a payer wanted to continue using expenditure data to adjust payments, it would eventually have to switch to expenditure data from the new ICOs themselves. Payers would understandably worry that this arrangement would quickly recreate fee-for-service incentives to provide too much care, just with a delay, since more care provided this year would lead to more payment provided next year. But this blunting of capitation's incentives to under-provide might prove useful in a blended system (see Appendix: Complementary Strategies to Promote Access, Value and Quality for further discussion).

Other possible bases for risk adjustment include demographic data, reason for disability, and prescription medication use. Demographic data, such as age, gender, and city or town of residence, is readily available but is a poor predictor of future health care needs.¹⁴ Reason for disability might also improve predictions somewhat, but the Social Security Administration is not likely to release this information. Prescription data can be a good predictor of health risk and is readily available in many cases, but its ongoing use might create inappropriate incentives. For example, in cases where physicians might be unsure about prescribing additional medications, linking risk adjustment to patients' prescription use could unduly bias their decision-making toward prescriptions.

¹⁴ Leslie M. Greenwald, Jesse M. Levy, and Melvin J. Ingber. Favorable Selection in the Medicare+Choice Program: New Evidence. *Health Care Financing Review*, vol. 21, no. 3. (Spring 2000), p. 127.

An Overview of Available Diagnosis-Based Risk Adjustment Systems

Massachusetts can choose from a number of diagnosis-based risk adjustment systems to help set rates for dual eligibles. A likely choice is either the DxCG model that Massachusetts has used to risk adjust payments for managed acute care or the Hierarchical Condition Category model developed for the national Centers for Medicare and Medicaid Services, usually referred to as CMS-HCC. Medicare and MassHealth have long term experience with these models, which are closely related.¹⁵ Either system might be modified to better predict variations in the costs of dual eligibles.

To select a risk adjustment system for the dual eligible demonstration program, Massachusetts might consider comparing how leading systems perform on a combined Medicaid-Medicare data set for the state's dual eligibles. Such analysis would help the state, its actuarial advisors, and Medicare collaborators choose a system, balancing criteria such as accuracy, incentives, transparency, and ease of implementation. Before such an analysis is undertaken, however, policymakers would benefit from understanding the issues involved in the selection of a risk adjustment system.¹⁶

Various sources provide detailed descriptions of the available risk adjustment systems and a comparison of their performance on other populations. One recent source is Winkelman and Mehmud's 2007 *Comparative Analysis of Claims-Based Tools For Health Risk Assessment*. The authors examine in detail the characteristics and performance of Adjusted Clinical Groups (ACGs), the Chronic Illness and Disability Payment System (CDPS), Clinical Risk Groups, the Diagnostic Cost Groups (DCGs), Episode Risk Groups, and variants that incorporate prescription drug and prior expenditure data. Among systems using diagnoses only, ACGs and DCGs showed the best performance for a large national sample test population.

Among the many factors Massachusetts will want to consider in comparing models are those proposed by Winkelman and Mehmud: "ease of use of the software, specificity of the model to the population to which it is being applied, cost of the software, transparency of the mechanics and results of the model...whether the model provides both useful clinical as well as financial information...whether the model is currently in use in the market or organization, and susceptibility of the model to gaming or upcoding."¹⁷ Martin, Rogal, and Arnold also offer a useful table of criteria for selecting a risk adjustment system, reproduced here as Table 1.¹⁸

¹⁵ DxCG is the name for models created by the company DxCG, which grew out of work on the HCC model, of which an early version was known as the Diagnostic Cost Groups or DCGs. DxCG is now a part of Verisk Health.

¹⁶ Readers should note that one of the authors of this report (Dreyfus) worked as an analyst in creating one of the leading systems, the Chronic Illness and Disability Payment System or CDPS.

¹⁷ R. Winkelman and S. Mehmud. *A Comparative Analysis of Claims-Based Tools For Health Risk Assessment*. Society of Actuaries, 2007. <http://www.Soa.Org/Files/pdf/Risk-Assessmentc.pdf>, pp. 4–5.

¹⁸ Kathryn E. Martin, Deborah L. Rogal, and Sharon B. Arnold. *Health-Based Risk Assessment: Risk-Adjusted Payments and Beyond*. AcademyHealth (national program office for HCFO, an initiative of the Robert Wood Johnson Foundation), January 2004, p. 3.

Among state Medicaid programs, transparency and cost may have helped CDPS become the most widely adopted system, used in 13 of the 22 states that adjust capitation rates for health status.¹⁹ CDPS is free, its diagnostic categorizations are publicly available, and technical support is available from actuaries. Users of other systems buy software and support from system vendors. For the commercially supported systems, not all details of the diagnostic categorizations or the system logic are publicly available, so that health plans and others are less able to understand or simulate the risk evaluation of their members.²⁰

We suspect that the CMS-HCC model may prove to be the most attractive option for Massachusetts in risk adjusting payments for dual eligibles. MassHealth has used the related DxCG model to adjust payments to Medicaid managed care organizations and Medicare routinely uses CMS-HCC to adjust payments to Medicare Advantage plans.²¹ As a result, both state and Federal program administrators and technical support workers would be able to implement its use for duals with the least amount of time and expense. Many health plans would also be able to understand and simulate the risk evaluation of the CMS-HCC model.

Both models might benefit from modifications to better account for the diagnoses of the duals. Behavioral conditions and physical disability contribute substantially to cost and might be better accounted for in improved models. For example, by separating some diagnoses currently in a single category into separate categories or by creating additional categories for combinations of certain diagnoses, health plans would receive more money for individuals with particularly complex conditions. Such modifications would help assure dual eligibles, providers, and advocates that the costs of people with high levels of need were appropriately identified.

19 The Medicaid Rx system is in use in four states and the ACGs in three. See Kathleen Gifford, Vernon K. Smith, Dyke Snipes, and Julie Paradise (Health Management Associates). *A Profile of Medicaid Managed Care Programs in Findings from a 50-State Survey*. Kaiser Commission on Medicaid and the Uninsured, September 2011. Comparing this information with R. Winkelman and R. Damler. *Risk Adjustment in State Medicaid Programs*, Society of Actuaries, 2008. <http://www.soa.org/library/newsletters/health-watch-newsletter/2008/january/hsn-2008-iss57-damler-winkelman.pdf>, p. 14, shows how the use of risk adjustment by diagnoses grew over the past decade, with 15 states shown in the earlier count.

20 Interview with Mercer actuaries and risk adjustment specialists, August 31, 2011.

21 The performance of the CMS-HCC model is analyzed in detail by Gregory Pope and colleagues in their 2011 *Evaluation of the CMS-HCC Risk Adjustment Model Final Report*.

Table 1: Criteria for Assessing Risk Assessment Tools

Criterion	Definition
Predictive Power	ability to accurately explain the variation in the expenses of a given population
Underlying Logic	link to daily clinical practice and whether it is clinically meaningful to providers
Incentives	the behavior encouraged among providers and health plans in the short and long term
Resistance to “Gaming”	the degree to which providers and plans cannot manipulate the tool to their benefit, including an ability to verify and/or audit the results
Data Availability	accessibility of the data upon which the tool is based, including the completeness, quality, and timeliness of the data
Transparency	ability of stakeholders to understand the basis and operation of the tool
Simplicity	how easy it is to implement and use
Reliability	how stable the risk scores are over time and with data from different health plans
Cost	monetary and non-monetary expense of the tool and of acquiring data

From Kathryn E. Martin, Deborah L. Rogal, and Sharon B. Arnold, *Health-Based Risk Assessment: Risk Adjusted Payments and Beyond*, Academy Health, January 2004, p. 3.

C. The Challenge of Adjusting for Long Term Support Services

The need for long term support services, such as institutional care, a personal care attendant or a home health aide, arises largely from functional limitation. As a result, effective risk adjustment for long term support services would benefit from the use of functional data, introducing some challenges that arise from differences between diagnostic and functional data. For example, functional data may be more subject to variation from personal and environmental circumstances, and the decision to provide support services may depend on a wide range of factors, including family support.

While risk adjustment for acute care using diagnoses is well established, adjustment of payment for long term support services is far less established, particularly for people under age 65.²² Some efforts in this area have tried to provide good predictions of resource needs for programs such as Program of All-Inclusive Care for the Elderly (PACE) and for Special Needs Plans, which serve mostly older people with significant functional disability or chronic illness. Some state Medicaid programs have also tried to capitate long term support services, but mostly for older beneficiaries. (See Section III on Federal and state implementation experience.)

²² Research to develop risk adjustment systems for people age 65 and over that incorporate functional status or frailty measures was carried out as far back as the early 1990s. Leonard Gruenberg, Eugenia Kaganova, and Mark C. Hornbrook. Improving the AAPCC With Health-Status Measures From the MCBS. *Health Care Financing Review*, vol. 17, no. 3 (Spring 1996), pp. 59–75 provide references and some history of this work.

In principle, using functional status as a measure to adjust capitation rates that include long term support services makes sense. Just as payment for acute health care services can be adjusted using diagnoses, which track underlying need for health care, so might payment for long term support services be adjusted using functional measures, which are related to need for support services. Activities of daily living (ADLs) are one measure of functional status. A more comprehensive view of functional status might include instrumental activities of daily living (IADLs), cognitive ability, emotional health, and social activity.²³ (The six ADLs are bathing, dressing, eating, getting in or out of chairs, walking, and using the toilet. The IADLs include telephoning, shopping, preparing food, housekeeping, laundry, transportation, taking care of medications and finances.)

In practice, however, we find some important differences between diagnoses and measures of functional status and between the need for health care and the need for support services. These differences, described below, probably need to be taken into account if the dual eligibles demonstration program wants to use functional data to adjust payments.

Variability in Functional Measures

One important difference between diagnoses and measures of functional status is their stability. Diagnoses used to adjust payment were typically selected because they are adequately well-defined and less subject to gaming.²⁴ By contrast, the ability to perform ADLs could in many cases depend substantially on a variety of factors, for example an individual's will or desire to perform the activity. One way to understand this variability is through the contrast between *capability* and *performance*, with the former meaning what a person can do in controlled settings and the latter meaning what one can actually do in everyday life.²⁵ Other variable circumstances that might affect the measurement of ADL capacity might include qualities of the living space and the furniture, the individual's temporary illnesses and level of energy, the availability of assistive technology, and the time of day.

While enrollees might not understand the implications of a better or worse result on a functional assessment, staff at ICOs certainly could. As a result, the state would want to exercise caution in creating payment systems that depend upon functional status, particularly if plans would be responsible for gathering the data upon which their payments depended. The state would want to consider how well it could audit plans' reports of functional status and how easily it could settle cases of divergent evaluation. Alternatively, the state could arrange to evaluate functional status

²³ Iezzoni, 2003, p. 52.

²⁴ See Kronick and colleagues, 2000; Gregory C. Pope, John Kautter, Melvin J. Ingber, Sara Freeman, Rishi Sekar, and Cordon Newhart. *Evaluation of the CMS-HCC Risk Adjustment Model Final Report*. Prepared for Melissa A. Evans, Centers for Medicare & Medicaid Services Medicare Plan Payment Group Division of Risk Adjustment and Payment Policy, March 2011, p. 9.

²⁵ Iezzoni, 2003, pp. 52–56.

independently from plans. In either case, functional evaluation and reporting would require additional expense.

Another possible drawback in using functional measures to adjust rates is that ICOs might pay less attention to improving duals' functional status because these improvements would lower their payment levels. One solution might be to include functional status measures among the outcome and quality measures that will be monitored under the ICO's contract. Of course, the evaluation of progress on functional status would have to be specific to the diagnosis or disability, since for some conditions functional improvement is very limited.²⁶ Given that any risk adjustment approach will sometimes fail to create the right incentives, public purchasers must complement risk adjustment with other purchasing strategies that support quality.

The Decision-Making Process for Support Services

A second important difference between health care and support services centers on access to these services. For health care, clinicians and patients make decisions together, with the degree of collaboration often depending on the patient's preference, assertiveness, and ability to participate in medical decision-making. A physician draws on clinical evidence, medical tradition, treatment guidelines, and professional judgment. She often has considerable authority to defend the resulting clinical decisions against a payer's concerns about cost. By contrast, decisions about the provision of long term support services are made often by nurses, other resource managers and patients, with physicians playing a much smaller decision-making role.²⁷ Non-physicians may have less authority than physicians in securing such services for persons in need.

In some states, decisions to provide long term support services have also been affected by waiver programs that provide home- and community-based services. These waiver programs typically offer services only to defined groups of Medicaid beneficiaries, such as people with developmental disability or traumatic brain injury at risk of institutionalization. Waiver programs often include restrictions in the form of caps on the total number of individuals served or on total program expenditures. Integrated programs of care have the potential to shift focus away from enrollment or expenditure caps, and new methods of deciding who needs what services will be needed.²⁸

With limited physician involvement in decision-making about long term support services, consumers and advocates may wonder what mechanisms can assure that capitated plans make fair and appropriate decisions about the level of support services. These mechanisms would be

²⁶ Hornbrook, in his Commentary: Improving Risk Adjustment Models for Capitation Payment and Global Budgeting, *Health Services Research*, vol. 33, no. 6 (1999) pp. 1745-1751, argued that a virtue of adjusting payment *and* measuring outcomes with functional status is that this could lead to healthy countervailing incentives, on the one hand for plans and providers to encourage members to raise their reported functional status to show good outcomes and on the other hand to lower it to earn higher payments.

²⁷ Lisa Iezzoni, interview, September 8, 2011.

²⁸ Some states like Massachusetts may continue their waiver programs during the demonstration. In any case, ICOs will have to develop methods of creating care plans and determine need for support services.

particularly important in a system facing new demands for care without the structure of a waiver program. For beneficiaries with cognitive impairments, intellectual disability or mental illness, processes that will give them and family members an appropriate role in deciding on services will be particularly important.

The Role of Individual Qualities and Personal Support

Finally, decisions about long term support services are strongly affected by personal attributes of the individual, including the desire for independence and the strength of family or personal support. Risk adjustment based on diagnoses and ADLs might capture only some of this important personal variation in need. One implication is that health plans caring for people with weak family support might find the adjusted payments inadequate to meet their resource needs.

Inclusion of social data in risk adjustment systems might help alleviate concerns about adequate resources for individuals with greater needs, for example those with few family supports. But concerns might be raised about family privacy, or about whether including variables such as family support might disproportionately reduce resources for beneficiaries in particular racial or ethnic communities.²⁹ Inclusion of data on family supports might also appear to penalize individuals with strong family support.

²⁹ Richard Kronick and Karen Llanos (Center for Health Care Strategies). *Rate Setting for Medicaid Managed Long-Term Supports and Services: Best Practices and Recommendations for States*. March 2008, p. 11.

III. Federal and State Experience Implementing Risk Adjustment

Federal and state experience shows that risk adjustment using diagnoses is a well-established practice in publicly financed programs such as Medicare and Medicaid. Risk adjustment using functional data is less established, but there is good evidence from the experience of other states that Massachusetts could implement such adjustment soon. Assuming that the work needed to develop data collection systems begins soon, it may be possible to use functional data to help adjust payments by the final year of the three-year demonstration program.

A. Medicare's Risk Adjustment for Medicare Advantage Plans

Medicare shifted decisively toward risk adjusting Medicare Advantage plans in 2000, as directed by Congress in 1997. Previously, payments for capitated Medicare managed care had been adjusted only for demographic factors, and careful analysis had shown that some plans were reaping inappropriate financial benefits from favorable selection.³⁰

Risk adjusted payments to Medicare managed care plans have become a substantial proportion of total Medicare spending. In 2009, these capitation payments were \$109 billion or one-quarter of total Medicare spending. About one-quarter of beneficiaries were enrolled in a Medicare Advantage plan in 2010,³¹ with enrollment reaching 11.4 million.³²

The implementation of risk adjustment using the CMS-HCC system followed many years of technical development, including improvement and testing of alternative systems, such as the HCC and ACG systems.³³ CMS increased the role of risk adjustment using first PIP-DCGs, then the CMS-HCC system.³⁴

The CMS-HCC model incorporates a wide range of diagnostic categories and uses both ambulatory and inpatient data. The HCC system includes rules or hierarchies for counting the diagnoses, which limit the effect of adding multiple, highly related diagnoses to an individual's record. The payment model also excludes many diagnoses that are ill-defined, transitory, or unlikely to add to future costs.³⁵

³⁰ Greenwald, Levy, and Ingber, 2000.

³¹ Medicare Advantage Program Payment System, October 2010, http://www.medpac.gov/documents/MedPAC_Payment_Basics_10_MA.pdf.

³² MedPAC. Medicare Advantage program: Status Report. Chapter 12 in *Report to Congress: Medicare Payment Policy*, March 2011, p. 285 and p. 291.

³³ J.S. Weissman, M. Wachtman, and D. Blumenthal. When Methods Meet Politics: How Risk Adjustment Became Part of Medicare Managed Care. *Journal of Health Politics, Policy and Law*, vol. 30, no. 3 (June 2005), pp. 475–504.

³⁴ Tony Dreyfus and Richard Kronick. Paying Plans to Care for People with Chronic Illness. in Kronick and de Beyer, editors, *Medicare HMOs; Making Them Work for the Chronically Ill*. Health Administration Press, 1999, p. 27; James M. Verdier. *Medicare Advantage Rate Setting and Risk Adjustment: A Primer for States Considering Contracting with Medicare Advantage Special Needs Plans to Cover Medicaid Benefits*. October, 2006, p. 8.

³⁵ Pope and colleagues, 2011, pp. 12–13.

Health Plan Resistance to Diagnosis-Based Risk Adjustment

Health plans participating in Medicare Advantage generally opposed the implementation of diagnosis-based risk adjustment, in part because they stood to see their payments significantly reduced.³⁶ Industry resistance to diagnosis-based risk adjustment was overcome through a confluence of Congressional Republican and Democratic sentiments, with Republicans wishing to smooth the way for increased market competition in Medicare, and Democrats more focused on limiting unfair overpayments. Extensive input from the health services policy community and efforts by CMS led to the development of an approach that was acceptable to both political parties, despite the complexity of the technical policy arguments and methods involved.³⁷

Response to Increased Diagnostic Reporting

One important implementation issue that Medicare has addressed is the increase in coding of diagnoses expected when plan payments are based on diagnoses. This increased coding had long been anticipated, and CMS was authorized to analyze the increased intensity of coding and refine diagnostic group weights as needed. Based on comparisons of coding changes by Medicare Advantage plans with fee-for-service data, a reduction in risk scores of 3.4 percent was carried out in 2010, and a similar reduction was proposed for 2011.³⁸ The Patient Protection and Affordable Care Act gives CMS clear authority to continue to correct for increased coding. This process will continue until CMS switches from basing its risk model scores on fee-for-service data to using Medicare Advantage utilization data.³⁹

B. Medicaid's Established Risk Adjustment for Acute Care and Developing Risk Adjustment for Long Term Support Services

Wide Progress in Implementing Diagnosis-Based Risk Adjustment

Many state Medicaid programs implemented diagnostic risk adjustment even before employers and Medicare did, probably because Medicaid serves significant proportions of high-risk beneficiaries. Without effective risk adjustment, plans that serve people with serious chronic illness and disability would risk serious financial losses.⁴⁰

36 D.J. Knutson. Risk Adjustment of Insurance Premiums in the United States and Implications for People with Disabilities. in M. J. Field and A. M. Jette, eds., *The Future of Disability in America*. Washington, DC: National Academies Press, 2007, p. 401.

37 Weissman, Wachtman, and Blumenthal, 2005.

38 Glenn Hackbarth, MedPAC chairman's letter to CMS, March 5, 2010.
<http://www.medpac.gov/documents/comment%20on%20MA%20advance%20notice%20Feb%202010.pdf>.

39 MedPAC, 2011, p. 309.

40 Martin, Rogal, and Arnold, 2004, p. 11.

Maryland, Colorado, and Oregon started to adjust rates using diagnoses in the later 1990s, and several other states followed in the 2000–2002 period, with a total of seven states that reported using health-based risk adjustment as of 2003.⁴¹ Among these states, most adjusted payments for roughly 100,000 or more beneficiaries, including some eligible for Medicaid due to a disability and some eligible for Medicaid due to their receipt of Temporary Assistance for Needy Families (TANF) benefits. Tennessee had 1.3 million beneficiaries enrolled in eight plans; Maryland had 410,000 in six plans. Five of these states were using CDPS.⁴²

Adoption by other states progressed over the next five years. By 2008, fifteen state Medicaid programs reported adjusting payments with diagnoses.⁴³ As of 2011, 22 states (of 34 responding) report that they adjust Medicaid payments using diagnoses.⁴⁴ In addition, 28 states report that they use encounter data from Medicaid managed care organizations for setting rates or for related activities such as risk adjustment or risk sharing.⁴⁵

States have thus gained a good deal of experience in implementing risk adjustment with diagnoses. Unfortunately, however, there is as yet no single study that analyzes the lessons of this experience.

State Efforts to Adjust Rates for Long Term Support Services

States have made many different efforts either to manage long term support services under capitated arrangements or to integrate health and long term support services. Aside from PACE programs, however, only eleven states report that they are running programs involving capitated long term support services. Some of these programs provide only long term support services; others also include acute health care. Only a handful include Medicare services. Examples include Massachusetts' Senior Care Options, New York's Medicaid Advantage Plus, Wisconsin's Family Care Partnership Program, Minnesota's Senior Health Options, and Arizona's Long Term Care System.⁴⁶

Supporting policy goals in payment for long term support services

One of the chief policy goals in creating capitated payment systems for long term support services has been to encourage the provision of care in the community rather than in nursing homes and other institutions.

⁴¹ Martin, Rogal, and Arnold, 2004, p. 11.

⁴² See Table 2, Health-Based Risk Adjustment as of 2002–2003 in Martin, Rogal, and Arnold.

⁴³ Winkelman and Damler, 2008.

⁴⁴ Gifford, Smith, and Snipes, 2011.

⁴⁵ Gifford, Smith, and Snipes, 2011, p. 22.

⁴⁶ For a quick overview of these programs in the eleven states, see the useful table, Medicaid Capitated Managed Long-Term Care Programs, in Gifford, Smith, and Snipes, 2011, Table 12, pp. 43–44.

One way to encourage community-based care is to make plans responsible for care wherever it is provided, instead of relieving plans of financial responsibility when a member moves to a nursing home. Making plans responsible for some or all of the costs of care in institutions creates incentives for plans to help their members avoid institutional care or to leave institutions as soon as they are able. A comparison of rate structures in a number of states with capitated long term support services shows how these incentives can be made strong, intermediate, or light.⁴⁷

In designing the system for the Massachusetts demonstration program for duals, this issue of incentives to provide care in the community should be kept in mind, but it is far less important here than it is for programs enrolling older people because the proportion of duals ages 21–64 who are in institutions is quite low. Recent analysis shows that only three percent of Massachusetts duals ages 21–64 reside in institutions, but their average annual combined Medicare and Medicaid costs are very high, at \$102,000.⁴⁸

A second policy goal is one of greater concern for the demonstration program: setting the right payment levels for the long term support services provided in the community. An effective payment system will set payment levels appropriately for the relatively few beneficiaries with costly service needs while also helping the many with modest needs receive the right levels of service. As with acute health care, levels of need for long term support services vary tremendously. Rates adjusted to reflect predictable need will minimize incentives for ICOs to avoid persons with costly needs and encourage innovation and efficiency. Accurate rates will also direct the right amount of resources to providers that serve people with lower levels of need.

Experience in New York and Wisconsin suggest that it is feasible to risk adjust payments for long term support services using data on functional status. Descriptions below highlight key features of this approach; some readers will also find a close look at the supporting documents well worthwhile. It should also be noted that these states developed their risk adjustment systems for long term support services over time, refining the methods and their implementation through a number of rate-setting cycles. Massachusetts might try to follow the model of other states, but it will take time to gather functional data and establish their relationship to cost. The availability of a national model or Federal guidance might greatly facilitate progress in this area.

New York

New York's program, Medicaid Advantage Plus (MAP) serves dual eligible adults both under and over age 65, and had almost 30,000 enrollees as of October 2010. MAP integrates Medicaid and

⁴⁷ Kronick and Llanos, 2008, p. 12.

⁴⁸ Breslin Davidson and Dreyfus, 2011.

Medicare payment and services for dual eligibles in its full capitation version, and fewer services in a partial capitation version.⁴⁹

New York has made strong progress in gathering data on functional status to use for risk adjustment. The state has required since 2005 that managed long term care plans submit health status data on members, including ADLs and many other useful indicators.⁵⁰ The program relies on the Semi-Annual Assessment of Members (SAAM) which is a modified version of the Outcome and Assessment Information Set (OASIS).⁵¹ The current version of SAAM (2.5) contains 78 items, including diagnoses, therapies, risk factors, living arrangements, sensory status, skin status, falls, behavioral status, ADLs and IADLs.

In a well-documented analysis that was used to prepare the partial capitation rates for managed long term care services and PACE, the state showed that by gathering data on service costs, functional status and diagnoses, it could create a useful risk adjustment model for a wide range of long term support services, including home health care, personal care, adult day health, durable medical equipment, and nursing home care. The Clinical Risk Group model developed by 3M was used to group diagnosis codes for the model.⁵²

By regressing expenditures against a wide range of variables, those that were most consistently predictive of need could be identified. In the development of their risk adjustment model, the scores of functional and diagnostic variables from the SAAM were reduced to 16 functional and 10 disease variables. The functional variables included ADLs, disruptive behaviors, impaired behaviors, speech limitations, and incontinence, among others. In the end, risk scores based on data from 2009 and 2010 were used to develop the state's fiscal year 2011–2012 per-member capitation rates for individuals, and these were aggregated for each plan to create plan risk scores. The resulting risk adjusted capitation rates were blended 50-50 with results from a prior method to reduce the financial uncertainty as the new payment system was being introduced.⁵³

Wisconsin

Wisconsin has also shown that gathering extensive data on people using long term support services is feasible and that the data can be used to construct an effective risk adjustment model. Wisconsin has enrolled almost 35,000 people in its Family Care program, which

⁴⁹ Gifford, Smith, and Snipes, 2011, p. 44.

⁵⁰ New York State, *Managed Long-Term Care Final Report*. Report to the Governor and Legislature, March 28, 2006, page iii.

⁵¹ The Outcome and Assessment Information Set was developed for assessment of adult home care patients.

⁵² New York State, *Medicaid Managed Long-Term Care Risk-Adjusted Rates*. Summary of Methods for April 1, 2011 Implementation Version 1.0, September 2011.

⁵³ New York State, 2011, p. 5.

provides institutional and home- and community-based services for frail elders and people with disabilities.⁵⁴

Each beneficiary's functional status is measured using the state's Long Term Care Functional Screen, and this information is used to adjust capitation rates. The screen includes: living situation or level of care; level of assistance for IADLs and ADLs; sixty-four diagnosis groups; use of certain health services such as tube feeding and care for skin ulcers; level of communication, memory, and cognition; and the presence of behaviors such as wandering, self-injury, or offensive behavior.⁵⁵ As part of a broader quality oversight program, the state trained screeners to ensure consistency of its administration.⁵⁶

Details of how Wisconsin sets rates for the Family Care Program demonstrate how using functional status might help adjust payments for the long term support services. The state developed separate regression models for three groups of eligibles at a nursing home level of care: developmentally disabled, physically disabled, and frail elderly. For these models, numbers of IADLs, levels of help for ADLs, behavioral indicators, health services, diagnoses, and type of developmental disability were included as variables, as well as the skilled nursing level of care for the elderly.

For each of the groups, the state calculated associations between variation in expenses and variation in the indicators for the same year. The results include the different cost effects of the many indicator variables and a baseline prediction for a beneficiary with no indicator variables. Predicted costs could then be calculated by summing for each individual the effects on cost of each indicator variable present in his or her record, added to the baseline.⁵⁷

For beneficiaries not at the nursing home level of care, a simpler model was used. Sums of ADL scores and IADL scores were used to group individuals into four categories based on whether their ADL counts were low or high and whether their IADL counts were low or high, with two or fewer being counted as low.⁵⁸

Beyond Massachusetts: A National Payment Model

The progress of New York and Wisconsin demonstrate that gathering data on a wide array of functional status measures is feasible. Their work also shows that this data can be used to estimate the association between variables and costs.

⁵⁴ Gifford, Smith, and Snipes 2011, p. 44.

⁵⁵ More information is available on Wisconsin's website: <http://www.dhs.wisconsin.gov/ltcare/FunctionalScreen/INDEX.HTM>.

⁵⁶ Wisconsin Department of Health Services. *Calendar Year 2011 Family Care Capitation Rates*. Prepared by PricewaterhouseCoopers, January 2011, p. 8.

⁵⁷ A detailed view of the regression work is available in Exhibit II on pp. 32–34 of the Wisconsin report, which shows each of the regressions for the three groups, with all the included variables and their cost associations.

⁵⁸ Wisconsin Department of Health Services, 2011, pp. 4–5

Massachusetts and other states might benefit from a national effort to create a single model for adjusting payment in integrated programs. This approach could reduce each state's burden of constructing its own model and reduce the complexity of CMS's work with states in the demonstration.⁵⁹ A national effort could include work to:

- Refine an existing diagnosis-based risk adjustment system, re-categorizing or adding diagnoses, to better reflect the conditions of dual eligibles ages 21–64.
- Establish a national set of functional variables that could be used to improve risk adjustment for the demonstration programs.

States will very likely need to adapt the national model to the particular circumstances of state benefits and providers, and may need to modify it within a state to reflect local service variations among regions. Even without the development of a national model, however, Wisconsin and New York provide substantial examples of how risk adjustment for an integrated program can be done.

C. Integrated Programs: PACE and SNPs

The Program of All-Inclusive Care for the Elderly (PACE) and Special Needs Plans (SNPs) represent two important efforts to integrate care.

PACE combines Medicare and Medicaid benefits to provide integrated care through adult day health centers to persons ages 55 and older who are nursing home certifiable.⁶⁰ In 2009, about 15,000 dual eligibles were enrolled in PACE nationwide, with about 2,000 in Massachusetts.⁶¹

SNPs are Medicare Advantage plans that focus on Medicare beneficiaries who meet one or more of three criteria: dually eligible, institutionalized, or diagnosed with severe or disabling chronic conditions.⁶² SNPs enroll larger numbers of duals: in 2011, there were more than one million, including almost 15,000 in Massachusetts.⁶³

Changes that have occurred over the years in the way Medicare pays these and other types of plans show how Medicare's payment methods have evolved to improve payment accuracy.⁶⁴ Whether or not this evolution is sufficient to ensure that plans enrolling duals with above-average needs receive adjusted rates adequate for fully responsive service is still a matter of debate.

⁵⁹ Kronick and Llanos, 2008, pp. 10–11.

⁶⁰ Gifford, Smith, and Snipes, 2011, p. 43.

⁶¹ Kaiser Commission on Medicaid and the Uninsured, 2011, p. 6.

⁶² MedPAC. Coordinating the care of dual-eligible beneficiaries. In *Report to the Congress: Aligning Incentives in Medicare*, June 2010, p. 148.

⁶³ Kaiser Commission on Medicaid and the Uninsured, 2011, p. 6.

⁶⁴ Pope and colleagues, 2011, pp. 18–21.

PACE programs have received frailty adjustments developed by CMS to provide adequate resources for high-need PACE enrollees. Medicare has also used frailty adjusters for the Social HMO demonstration programs and other demonstrations for duals in Massachusetts, Minnesota, and Wisconsin.⁶⁵ CMS made higher payments for Medicare Advantage enrollees living in the community based on their counts of ADL limitations.⁶⁶

SNPs receive capitated payments from Medicare that are adjusted with the same methods used for other Medicare Advantage plans, including adjustment for diagnoses with the CMS-HCC model. For SNP enrollees, the use of Medicaid status, disability status, and residence in an institution also helps to increase the accuracy of payments and meet the level of predicted need.⁶⁷ Advocates for SNPs have argued that the HCC model is inadequate because it significantly under-predicts the need for many of the groups they target for enrollment, such as dual eligibles under age 65 with extensive behavioral health problems, or dual eligibles age 65 and over who are receiving long term nursing facility care or have high levels of frailty.⁶⁸

D. Risk Adjustment Methods for MassHealth Entities

MassHealth has much experience paying health plans in its Managed Care Organization (MCO) program and its Senior Care Options (SCO) program. Setting payments in these two programs includes a lengthy analysis of past and future expenditures by MassHealth staff and its outside actuaries. An important part of the process is to divide the eligible population into rating categories for which base capitation rates are developed. The base capitation rates for the MCO program are adjusted for differences in risk among MCOs through a diagnosis-based risk adjustment system. Over time, payment methods for the MCO and SCO programs have been improved to reflect program experience.

The Role of Rating Categories in Risk Adjustment

Rating categories are a way to group individuals, often based upon eligibility criteria, and have long served as the first step in MassHealth's rate setting process.

- **MCO program.** The MCO program has four major rating categories, defined around the eligibility criteria for coverage under MassHealth. MassHealth eligibility criteria include a variety of

65 John Kautter, Melvin Ingber, and Gregory C. Pope. Medicare Risk Adjustment for the Frail Elderly. *Health Care Financing Review*, vol. 30, no. 2 (Winter 2008-2009), p. 83, note 2.

66 For example, in 2007 the following adjustments were added to an individual enrollee's risk score (on average 1.0): for 5 or 6 ADL limitations, plus 1.088; for 3 or 4 ADL limitations, plus 0.344; for 1 to 2 limitations plus 0.171; for no limitations, minus 0.141. PACE plans will continue to receive the adjustment, but the authority for using the frailty adjusters for demonstration programs ended in 2008.

67 MedPAC, 2010, p. 148.

68 SNP Alliance. *The SNP Alliance Strategy for Health Care Reform*. February 2009.

factors such as age and disability status. These eligibility criteria do not include specific diagnoses. Table 2 provides an overview of the MCO rating categories.

The capitation rates for each rating category are based on encounter data from participating MCOs. The base rate for each rating category is built on the average cost of an MCO enrollee for all MCO-covered services. As described on the next page, MassHealth further adjusts these base rates through the use of a risk adjustment system to reflect the risk facing each MCO.

Table 2. Overview of the Rating Category Structure for the MCO Program

Coverage Type under MassHealth	Assignment Criteria based on MassHealth Eligibility
MassHealth Standard and MassHealth Family Assistance	Families including children under 21, including individuals receiving Transitional Aid to Families with Dependent Children (TAFDC) benefits
MassHealth Standard	Persons including children under the age of 21 who are disabled and adults under age 65 who are disabled and receiving Supplemental Security Income (SSI)
MassHealth Basic	Adults over the age of 18 and under the age of 65 who qualify under MassHealth Basic eligibility criteria including persons who have been identified as long term unemployed
MassHealth Essential	Adults over the age of 18 and under the age of 65 who qualify under MassHealth Essential eligibility criteria. This rating category includes persons not currently working and not eligible for MassHealth Basic.

Note: MassHealth develops MCO base capitation rates for four rating categories. These base rates are divided further to account for differences in costs across five geographic areas of the state.

- **SCO program.** The SCO program has eight rating categories. These eight rating categories reflect variation in the clinical risk and needs of seniors across all levels of care from institution to community. There are three rating categories for enrollees residing in an institution, three for enrollees living in the community, and two for enrollees in transition between community and institution. These last two, which are “transition” rating categories, were designed to provide SCOs with incentives to care for enrollees in the community. Table 3 provides an overview of the SCO rating categories.

SCO capitation rates are developed for each rating category using fee-for-service experience data from MassHealth for seniors who are not enrolled in the SCO program. Unlike the rates for the MCO program, the rates for the SCO program are not developed using encounter data from its participating SCOs. MassHealth SCOs, who serve seniors covered with Medicare eligibility, also receive a payment from Medicare.

Table 3. Overview of the Rating Category Structure for the SCO Program

Type of Care	Assignment Criteria for Seniors under the SCO Program
Institutional	Tier I nursing facility level of care based on nursing care needs, as recorded by the facility. Tier I reflects the lowest level of need.
Institutional	Tier II nursing facility level of care based on nursing care needs, an intermediate level of need.
Institutional	Tier III nursing facility level of care based on nursing care needs, the highest level of need.
Community AD/CMI *	Residing in the community with Alzheimer's or Dementia (AD) and/or Chronic Mental Illness (CMI)
Community NHC *	Residing in the community who are Nursing Home Certifiable (NHC)
Community Well/Other *	Residing in the community who do not meet the criteria of the other two rating categories ("Community Well")
Transition to Community *	Seniors who are making the transition from a nursing facility to the community. This rating category applies to enrollees for the first three months following a discharge from a nursing facility.
Transition to Nursing Facility	Seniors who are making the transition from the community to a nursing facility. This rating category applies to enrollees for the first three months following an admission to a nursing facility.

Notes:

The SCO program has 8 rating categories but a total of 24 payment cells based on these 8 rating categories.

Two sets of payments are developed for 4 of the 8 categories to account for the geographic differences in the cost of care between Boston and outside of Boston, increasing the number of payment cells from 8 to 12.

Two sets of payment cells are then developed for these 12 payment cells to account for differences in eligibility such as Medicaid only or Medicaid and Medicare, increasing the number of payment cells to 24.

* Rating categories that are adjusted for geography.

The Use of Risk Adjustment

Risk adjustment methods come in many forms. The MassHealth MCO Program uses a combination of rating categories and a diagnosis-based risk adjustment system to risk adjust payments to MCOs. The MassHealth SCO program, on the other hand, relies entirely on rating categories as a means to adjust payments to reflect the projected need for services. According to CMS, Medicare's payments to SCOs are adjusted through the use of a diagnosis-based risk adjustment system. MassHealth and Medicare experience in using a diagnosis-based risk adjustment system is limited to adjusting payments for primarily acute care services, since MCO-covered services paid for by MassHealth and SCO-covered services paid for by Medicare include very little in the way of long term support services.

- **MCO program.** MassHealth uses the DxCG risk adjustment model to adjust the capitation rates paid to MCOs for the risk of its enrollees. The DxCG system assigns a risk score, reflecting risk for all covered services including medical, pharmacy and behavioral health to each individual based on the diagnosis codes recorded on the inpatient and outpatient records for

individuals. Individual scores are used to develop a composite score for each rating category served by each MCO. MassHealth then applies each composite score to each rating category for each MCO, producing a set of capitation rates that are specific to each MCO.⁶⁹ MCO-specific capitation rates are in effect until they are updated for risk. According to MassHealth, MCO capitation rates were adjusted every two months at the start of the risk adjustment process to reflect any changes in the relative risk facing MCOs.

- **SCO program.** MassHealth relies entirely on its eight rating categories to address differences in risk across SCO population groups. According to CMS, the Medicare portion of the SCO capitation rate is risk adjusted in keeping with the risk adjustment process for all Medicare Advantage plans. We discuss the CMS-HCC system of risk adjustment and its application to Medicare Advantage plans in more detail in Section III.A. of this paper.

Improving Payment Methods with Experience

MCO and SCO payment methods have been developed and refined over the course of several years. The first two to three years of many new programs included risk sharing to allow time for enrollment to stabilize and payment accuracy to improve.

- **MCO program.** Prior to the introduction of a risk adjustment system, the MassHealth program used a variety of approaches to pay its MCOs. MassHealth had many more than four rating categories and many forms of risk sharing in place to mitigate any uncertainty around the capitation rates. A variety of risk sharing arrangements and stoploss insurance approaches have been used and are still used in order to address the unpredictability of risk. The early years of covering MassHealth Basic members included risk sharing, for example.
- **SCO program.** Prior to putting SCOs at full risk for all Medicaid-covered services, MassHealth contracts with SCOs included risk sharing arrangements. These arrangements, which were in place for the first three years of the SCO program, limited the overall risk facing SCOs for Medicaid-covered services. The SCO model should be closely analyzed to determine its application to the dual eligible demonstration program, including the development of capitation rates for long term support services.

⁶⁹ MassHealth also normalizes the risk scores for each MCO for the purpose of achieving the budget neutrality of the MCO program.

IV. Recommendations for Implementing Risk Adjustment in the Demonstration Program for Dual Eligibles

A Collaborative Model for Breaking New Ground

The successful implementation of effective risk adjustment is essential to the demonstration program for dual eligibles. Risk adjustment will help to ensure that integrated care organizations (ICOs) are appropriately compensated for the risk of their enrollees and will encourage innovative care for dual eligibles with high levels of need.

CMS and MassHealth annually spend about \$2.5 billion on care for duals ages 21–64 who are eligible for the demonstration. Yet policymakers believe that the current system of care for duals is neither well organized nor focused on patient-centered care. In this context, CMS and MassHealth should invest the time needed to create a strong payment model that will help achieve greater value of services for this expensive and vulnerable group.

Developing a payment model will require CMS and MassHealth to break new ground together. The design and implementation of an effective risk adjusted payment model involves many challenges and decisions: establishing rating categories, selecting a risk adjustment system, developing effective risk adjustment for long term support services, and reaching agreement around risk sharing. These tasks will require substantial analysis of the Medicaid-Medicare data and input from experts and stakeholders. CMS and MassHealth must also assess the impact of its payment model on the financial stability of ICOs.

The demonstration period represents an excellent opportunity for CMS and MassHealth to lay the foundation for the future in a collaborative and transparent manner. We would encourage CMS and MassHealth to aim for a unified payment system under which Medicare and Medicaid adopt the same rating category structure, risk adjustment system, data collection requirements, and risk sharing arrangements. A unified payment system of this kind would reinforce the goals and benefits of integration, simplifying administrative requirements for all parties and focusing attention on a single set of requirements and incentives.

Recommendations for a Risk Adjusted Payment Model

This section presents our recommendations on the design and implementation of a payment model for the dual demonstration. See Table 4 for a summary of our recommendations.

The decision-making process for CMS and MassHealth will not be easy: they must balance the input of policymakers, experts, and stakeholders; work within legal, technical and budgetary

constraints; and end up with a workable payment model. As the model develops, some of the recommendations may become less applicable.

We hope our recommendations serve policymakers and stakeholders — not as a rigid prescription but as a productive stimulus for discussion.

Table 4. Major Recommendations for the Payment Model in the Dual Demonstration

1. Establish rating categories.	Establish multiple rating categories based on the type and severity of diagnoses among dual eligibles to capture some of the variation in risk among enrollees.
2. Select a risk adjustment system.	Select a single risk adjustment system using accuracy for this population, transparency and the experience of payers as criteria; refine the system through analysis of data on the duals to better predict the risk of enrollees.
3. Predict costs of long term support services.	Develop a method to predict long term support services, initially by using individual prior expenditure data, to be replaced with functional data if possible by the third year of the program.
4. Collect functional data.	Establish standards for the collection of functional status data and begin collection as soon as the program starts.
5. Provide risk sharing.	Put ICOs at limited financial risk during the demonstration period to minimize losses and gains.
6. Update risk assessments for ICOs.	Update ICO capitation rates for changes in the risk of enrollees on a frequent basis.

Note: ICO = Integrated Care Organization.

1. Establish rating categories.

CMS and MassHealth should establish rating categories based on the type and severity of diagnoses among dual eligibles to capture some of the variation in risk among enrollees.

Multiple rating categories can serve to capture some of the variation in risk among enrollees during the first two years of the demonstration, compensating for the lack of information available on functional status. CMS and MassHealth might consider reducing the number of rating categories by the end of the second year of the demonstration, as the collection of functional data becomes routine practice and can be used to improve the accuracy of risk adjusted rates.

Some methods of grouping the eligible population into rating categories will be more effective than others in capturing differences in risk and creating the correct incentives for ICOs. The creation of the rating categories will benefit from careful analysis of the Medicare-Medicaid linked data, close attention to the goals of the demonstration program, and the expertise of the clinical community.

As CMS and MassHealth design the rating categories, they might do well to consider the SCO rating category structure as a model. The SCO program provides a comprehensive set of Medicare and Medicaid services, including long term support services, to dual eligible seniors. The demonstration program could include several rating categories like the SCO program, but tailor the structure to reflect variation in the care needs of the dual eligible population. We illustrate a set of rating categories for the dual eligible population with eight categories.

The dual eligibles might first be divided into two groups: those who are nursing home certifiable (NHC) and those who are not. This initial distinction would address a major concern that dual eligibles residing in institutions or who meet the eligibility rules for institutional care may have very different needs from those that live in the community, even after taking into account their diagnoses. This approach assumes that MassHealth can identify duals living in the community who are nursing home certifiable, using the MassHealth eligibility criteria for payment for nursing facility level of care. This process would be modeled after the one used for the SCO program.

Each of these two groups — the NHC eligible and the non-NHC eligible — could be then further subdivided into four additional groups: (1) eligibles who are medically complex; (2) eligibles with high behavioral health needs; (3) eligibles with developmental disabilities; and, (4) all other eligibles. This last category might include individuals with non-complex medical conditions and moderate behavioral health needs. Such a structure would lead to eight rating categories to reflect varied care needs. Many dual eligibles will fall into more than one rating category, requiring CMS and MassHealth to create a rule for assigning these individuals to one rating category.

See Table 5 for a simple description of each rating category, bearing in mind that this structure is merely illustrative. Actual rating categories must be established through an analysis of the linked Medicaid-Medicare data. The number of payment cells could also vary based on other factors such as geography.

Table 5. Overview of the Illustrative Rating Category Structure for the Dual Eligibles Demonstration Program

Nursing Home Certifiable (NHC) or Non Nursing Home Certifiable (Non NHC)	Assignment Criteria for Persons under the Dual Eligibles Demonstration Program
NHC	Medically Complex
NHC	High Behavioral Health Needs
NHC	Developmental Disabilities
NHC	All Other
Non NHC	Medically Complex
Non NHC	High Behavioral Health Needs
Non NHC	Developmental Disabilities
Non NHC	All Other

2. Select a risk adjustment system.

CMS and MassHealth should select a single risk adjustment system on the basis of several criteria, including accuracy for this population, transparency, and the experience of payers. We also recommend that CMS and MassHealth refine its risk adjustment system to better predict the risk of dual eligibles.

In selecting a single risk adjustment system, CMS and MassHealth will have to judge the tradeoffs among the different criteria. The weight assigned to accuracy, transparency, payer experience, and other criteria will be an important topic for public discussion. If transparency is judged to be important, then the DxCG model currently used by MassHealth would be less desirable, because this model is a proprietary product not open to full public review.

We recommend that the selection process include the testing of different systems for their accuracy in predicting risk for the dual eligible population. This testing will take time and resources, but CMS and MassHealth should recognize the added value in implementing a system that predicts costs accurately for the duals who enroll in the demonstration program.

We also recommend that CMS and MassHealth refine its risk adjustment system to improve its accuracy in predicting costs of acute care. One approach would be to add diagnoses or to separate some diagnoses currently in a single category into distinct categories. These changes might improve predictions for behavioral conditions and physical disabilities that are important among the duals. Another approach is to create categories for special combinations of diagnoses to improve predictions for individuals with particularly complex conditions, for example those with serious physical and mental illness.

It is also possible that the inclusion of new diagnosis groups in a risk adjustment model would help predict the costs of long term support services. For example, new diagnosis groups might offer separate variables for conditions such as paraplegia, quadriplegia, profound intellectual disability and ventilator dependence, which are likely associated with high levels of need for long term support services.

3. Predict the costs of long term support services.

CMS and MassHealth should develop a method to predict long term support services. Initially they can use individual data on prior expenditure for these services, but should move to using functional data if possible by the third year of the program.

Developing an effective method to predict long term support services is essential, since long term support services may represent as much as one-third of the total payment to ICOs for duals.

We recommend that CMS and MassHealth initially supplement their risk adjustment system by including individual prior expenditures on long term support services as a variable. The use of prior expenditures may raise some concerns about incorporating the inefficiencies of the fee-for-service system into the new rates. But such concerns apply as well to most rate-setting methods, which are based largely on the record of fee-for-service expenditures.

Prior expenditure data should not be used for too long, however, since this data becomes less useful over time for predicting need. By the third year of the program, CMS and MassHealth should be ready to replace the use of prior expenditures for predicting an individual's need for long term support services with the use of functional data.

4. Collect data on functional impairment.

CMS and MassHealth should establish standards for the collection of data on functional status and begin collection as soon as the program starts. Uniform standards will allow the use of this data for rate setting and for consistent program management.

Judging from the experience of states that have collected functional data, the development of a set of expectations and standards around data collection will be critical to the collection of data that can be used to support risk adjustment. Functional data might include ADLs and IADLs and other cognitive and behavioral data about the dual eligible population.

To ready ICOs for data collection at the start of the program, CMS and MassHealth might consider forming a workgroup focused on the collection of functional status data for the program. Such a workgroup could focus on the development of the standard assessment tool; the process by which data is to be collected and how this data can best be used to inform payment

models, program monitoring, and evaluation. The workgroup would include individuals from Medicare, Medicaid, potential ICOs, clinicians, providers and consumers of long term support services, and other individuals with expertise in measures of functional status.

5. Provide risk sharing to ICOs.

CMS and MassHealth should put ICOs at limited financial risk during the demonstration period to minimize losses and gains.

In our view, a risk sharing arrangement would protect the public interest and individuals enrolled in the program while CMS and MassHealth improve the accuracy of payment methods. Risk sharing also provides a prudent approach to contract with entities of varied size and financial strength. We find support for risk sharing from the Patient Protection and Affordable Care Act, which includes risk mitigation programs such as reinsurance for new programs enrolling new population groups.⁷⁰

Putting ICOs at full risk during the demonstration program would be undesirable for all stakeholders. Underpayments could cause ICOs to suffer financial losses, leading to reduced access to services and other negative consequences for enrollees. Overpayments to ICOs would be equally disconcerting. Overpayments could lead to inefficiencies in the provision and administration of care and to negative public views of the program as ICOs profit and the state struggles with fewer resources to serve other populations.

Considering that dual eligibles include some of the most vulnerable and expensive people covered under MassHealth, payers should be cautious in placing ICOs at high levels of risk.

6. Update ICO-specific capitation rates for risk.

CMS and MassHealth should update ICO capitation rates for changes in the risk of enrollees on a frequent basis during the initial years of the demonstration program.

This recommendation addresses a technical concern that the risk facing ICOs will change throughout the year. CMS and MassHealth will need to establish an effective way for monitoring changes in the risk of each ICO's enrollment.

CMS and MassHealth must update capitation rates throughout the demonstration period to reflect the changes in risk facing ICOs. We expect that these changes in risk may occur as a result of the proposed voluntary enrollment policy, which creates the potential for significant changes in ICO risk even from month to month in the first year of the program.

⁷⁰ Congressional Research Service. *Focus on Reform: Private Health Insurance Provisions of PPACA*. May 14, 2010. http://www.nhpf.org/library/handouts/Fernandez.slides_05-14-10.pdf.

The calculation of risk scores for each ICO can be time-consuming, but regularly updated payments based on updated ICO risk scores will help to promote payment accuracy.

Time to Break New Ground

CMS and MassHealth are about to break new ground in Massachusetts. The dual demonstration program holds much promise to improve the quality of care that dual eligibles receive from the Medicare and Medicaid programs. Both payers must provide leadership and flexibility.

The Federal and state governments must work collaboratively and cautiously to develop an effective payment method, including a single system of risk adjustment and risk sharing. An effective payment model will attract an array of strong ICOs capable of meeting the diverse needs of potential enrollees. The demonstration period is an important opportunity to build a strong foundation to improve care for people covered by Medicare and Medicaid.

Appendix

Complementary Payment Strategies to Promote Access, Value and Quality: Reinsurance, Risk Sharing, Partial Capitation, and Paying for Performance

Risk adjustment is a key strategy to encourage health plans to take on the challenge of caring for dual eligibles with high levels of need. But risk adjustment alone is not enough to guarantee that plans focus on organizing high-quality care. The problem is that no system of risk adjustment will match payments exactly to need. Plans are in an excellent position to know what kinds of members are likely to cost more than the adjusted payments and could use a variety of methods to avoid high-risk members. As a result, CMS and state Medicaid programs must exercise a variety of strategies to ensure that beneficiaries receive the highest quality of care possible for the expenditure of public funds.

Some of these strategies are focused on payment, some on enrollment and disenrollment, some on monitoring of care quality. We include here only the strategies focused on payment.

Reducing the Incentives to Under-Serve

Reinsurance, risk sharing, and partial capitation are some of the more important strategies related to payment. These methods have different elements and details, but they share the strategy of trying to soften the negative incentives of full capitation, which can encourage plans to under-serve members.⁷¹

While full risk capitation allows plans to meet the needs of members in a flexible manner, it can also encourage plans to avoid enrollment of needier members and to withhold services, because every dollar not spent on members is a dollar retained by the plan. This potential of capitation to encourage risk selection and stinting on care is of particular concern in creating a program of managed care for dual eligibles, a group that includes many individuals with socioeconomic disadvantages, complex medical conditions, and cognitive challenges.

Reinsurance, risk sharing, and partial capitation all transfer some of the financial responsibility for care back to the payer. Using some of these techniques seems to make good sense when funding care for a vulnerable population, especially in the first years of the program, when the payer, the plans, the providers, and the members are all learning their way as they create and use a new system. But these strategies come with a price. They may require additional administrative effort by payers and plans, they may limit plans in their efforts to innovate with non-traditional services, and they may make budgets less predictable.⁷²

⁷¹ This discussion is substantially based on Dreyfus and Kronick, 1999, pp. 36-37.

⁷² Weissman, Wachtman, and Blumenthal, 2005, p. 499, point out the greater information demands of partial capitation.

Reinsurance

Under reinsurance arrangements, the payer agrees to limit plans' financial responsibility for very expensive members. For example, the payer might agree to cover most or all of an enrollee's expenses in excess of \$100,000 in a single year. Such an arrangement is likely to result in a relatively manageable settlement procedure, in which the expenses incurred for a small number of members need to be reviewed. It is possible, however, that the payer could seek to exclude some services or payments as unreasonable, which would limit plans' flexibility in providing services.

Reinsurance of this type protects a plan from the bad luck of having more than its fair share of very-high-cost cases but it does not protect plans from generally enrolling a group of members who, on average, cost more than the plan's risk adjusted rate. Reinsurance protects plans from the financial consequences of having a few very-high-cost members, but it would not do much to help plans that systematically try to create innovative and comprehensive systems of care for people with serious chronic illness or disability.

Risk Sharing

Risk sharing is a much more comprehensive effort to reshape the incentives of capitation, striking a balance between capitation's incentives to under-provide and fee-for-service incentives to over-provide. These strategies make particular sense in a demonstration to serve duals with chronic illness and disability.

In risk sharing, the payer typically retains partial or full responsibility for expenses that exceed the capitated payments to a plan; the payer also gets some money back if a plan's expenses are less than the capitated payments. Many different arrangements are possible, from tight risk sharing, in which plans cannot win or lose much, to looser risk sharing in which intermediate gains or losses by the plan are possible. For example, the plan might assume the risk if expenses are in the range of 10 percent below to 10 percent above the capitation, but the payer could share the risk 50-50 for the next 10 percent of risk, while beyond 20 percent most or all of the risk would be assumed by the payer.

The unlimited possibilities of structuring these "risk corridors" provide risk sharing with flexibility that could be useful over time. The initial risk corridors could be tighter to allay uncertainties on all sides, and later corridors looser, as experience and improvements bring more confidence to the risk adjustment process.

Massachusetts currently uses reinsurance and risk corridors for some of its programs, including the Children's Behavioral Health Initiative and its Special Kids/Special Care population.⁷³

⁷³ Gifford, Smith, and Snipes, 2011, p. 23.

Partial Capitation

Partial capitation is another option to strike the right balance between the incentives of capitation and fee-for-service. Under partial capitation, a large part of the payment is based on actual services provided and a large part on a risk adjusted capitation payment, thus striking a balance between the incentives to over-serve and under-serve. Partial capitation, however, is not under consideration for the Massachusetts dual demonstration.

If the split between the two payments is half fee-for-service and half capitation, then the agreement could be seen as similar to an arrangement of 50-50 risk sharing for all levels of expense above or below the capitation. One virtue of partial capitation is that plans might think of the fixed partial capitation for the year as covering their ongoing expenses, while the partial fee-for-service payments would cover marginal costs. The balance between capitation and fee-for-service could be modified in later years as the payer observes plan behavior and quality.

Partial capitation is not too different from adjusting capitation payments using prior expenditures. Prior expenditures provide very good predictions of future expenditures, especially for a population with chronic illness and disability. The use of prior expenditures makes good sense for starting a program that then transitions to rely more fully on diagnoses.⁷⁴

But if expenditure data from the new program itself are used to adjust payments, then the payment system has incorporated some of the incentives of fee-for-service: more service brings higher payment. The effect is delayed by one year in the case of adjusting payment by prior expenditure and is more immediate in the case of partial capitation. In both cases, blending such incentives with the incentives of full capitation could be a positive development for programs serving a population as vulnerable as dual eligibles.

Paying for Performance

Pay-for-performance (P4P) programs offer public and private health care purchasers a strategy to improve quality and cost-effectiveness. P4P programs can refer to various arrangements that reward a provider for achieving higher quality care and improving health outcomes. Health care purchasers offer financial incentives to providers for achieving pre-defined targets.⁷⁵ Such incentives are most commonly used at the health plan level by health care purchasers, but they can also be used at the physician and hospital level. Financial rewards can include bonuses and differential reimbursement rates; non-financial rewards can include auto-assignment of members to plans. Performance measures can also vary widely.

⁷⁴ Martin, Rogal, and Arnold, 2004, p. 12.

⁷⁵ Agency for Healthcare Research and Quality. *Pay for Performance: A Decision Guide for Purchasers*. <http://www.ahrq.gov/qual/p4pguide2.htm>.

More than 40 state Medicaid programs are engaged in over 80 P4P programs.⁷⁶ These programs vary widely. Some activities are focused on paying providers to achieve clinical outcomes, others on ways to improve access. P4P programs can also be used to support the development of primary care infrastructure and medical homes.

So far the evidence on the effectiveness of P4P programs in improving quality and cost-effectiveness is apparently limited.⁷⁷ But experience suggests some important points in undertaking P4P activities. Financial incentives should be aimed at specific populations, services, or health conditions. Policymakers should be concerned about unintended effects of financial incentives on health outcomes and long term costs.

⁷⁶ Center for Health Care Strategies. *Trends and Innovations in State Medicaid Programs*. March 10, 2009. http://www.chcs.org/usr_doc/CHCS_Presentation_at_IHA_P4P_Summit_09.pdf.

⁷⁷ Mathematica Policy Research, Inc. Issue Brief Number 5, May 2010. http://www.mathematica-mpr.com/publications/PDFs/Health/reformhealthcare_IB5.pdf.

Sources

- Actuarial Standards Board. *The Use of Health Status Based Risk Adjustment Methodologies*. Proposed Actuarial Standard of Practice, Exposure Draft developed by the Health Risk Adjustment Task Force of the Health Committee of the Actuarial Standards Board, April 2011. http://www.actuarialstandardsboard.org/pdf/health_risk_adjustment_exp_April%202011.pdf.
- Agency for Healthcare Research and Quality. *Pay for Performance: A Decision Guide for Purchasers*. <http://www.ahrq.gov/qual/p4pguide2.htm>.
- American Academy of Actuaries. *Risk Assessment and Risk Adjustment*. Issue Brief, May 2010. http://www.actuary.org/pdf/health/Risk_Adjustment_Issue_Brief_Final_5-26-10.pdf.
- Ash, Arlene, Randall P. Ellis, and colleagues. Using Diagnoses to Describe Populations and Predict Costs. *Health Care Financing Review*, vol. 21, no. 3 (Spring 2000), pp. 7–28.
- Berlowitz, Dan and Amy K. Rosen, *Risk Adjustment for Studying Long-Term Care*. Chapter 16 in Iezzoni, 2003, pp. 383–399.
- Breslin Davidson, Ellen and Tony Dreyfus. *Dual Eligibles In Massachusetts: A Profile of Health Care Services and Spending For Non-Elderly Adults Enrolled in Both Medicare And Medicaid*. The Massachusetts Medicaid Policy Institute, in collaboration with the Massachusetts Medicaid Program, September 2011.
- Center for Health Care Strategies. *Trends and Innovations in State Medicaid Programs*. March 10, 2009. http://www.chcs.org/usr_doc/CHCS_Presentation_at_IHA_P4P_Summit_09.pdf.
- Centers for Medicare and Medicaid Services. *Financial Models to Support State Efforts to Integrate Care for Medicare-Medicaid Enrollees*. https://www.cms.gov/medicare-medicicaidcoordination/08_FinancialModelstoSupportStatesEffortsinCareCoordination.asp.
- Centers for Medicare and Medicaid Services. *Financial Models to Support State Efforts to Integrate Care for Medicare-Medicaid Enrollees*. Letter to state Medicaid directors, July 8, 2011. https://www.cms.gov/smdl/downloads/financial_models_supporting_integrated_care_smd.pdf.
- Clemans-Cope, Lisa and Timothy Waidmann. Improving Care for Dual Eligibles through Innovations in Financing. *New England Journal of Medicine*, August 31, 2011. <http://www.nejm.org/doi/full/10.1056/NEJMp1108571#t=article>.
- Community Resources Information. *MassHealth MCO Managed Care Health Plans*. <http://www.massresources.org/masshealth-managed-care.html>.
- Congressional Research Service. *Focus on Reform: Private Health Insurance Provisions of PPACA*, May 14, 2010. http://www.nhpf.org/library/handouts/Fernandez.slides_05-14-10.pdf.

Dreyfus, Tony and Richard Kronick. Paying Plans to Care for People with Chronic Illness. in Kronick and de Beyer, eds., *Medicare HMOs; Making Them Work for the Chronically Ill*. Health Administration Press, 1999, pp. 27–65.

Ellis, R. P. Risk Adjustment in Health Care Markets: Concepts and Applications. *International Health Care Financing*, published online March 2008.

http://sws.bu.edu/ellisrp/EllisPapers/2007_Ellis_Riskadjustment25.pdf.

Gifford, Kathleen, Vernon K. Smith, and Dyke Snipes (Health Management Associates) and Julie Paradise (Kaiser Commission and Foundation). *A Profile of Medicaid Managed Care Programs in Findings from a 50-State Survey*. Kaiser Commission on Medicaid and the Uninsured, September 2011.

Greenwald, Leslie M. Medicare Risk-Adjusted Capitation Payments: From Research to Implementation. *Health Care Financing Review*, vol. 21, no. 3 (Spring 2000), pp. 1–5.

Greenwald, Leslie M., Jesse M. Levy, and Melvin J. Ingber. Favorable Selection in the Medicare+Choice Program: New Evidence. *Health Care Financing Review*, vol. 21, no. 3. (Spring 2000), pp. 127–134.

Gruenberg, Leonard, Eugenia Kaganova, and Mark C. Hornbrook. Improving the AAPCC With Health-Status Measures From the MCBS. *Health Care Financing Review*, vol. 17, no. 3 (Spring 1996), pp. 59–75.

Hackbarth, Glenn. MedPAC chairman's letter to CMS, March 5, 2010. <http://www.medpac.gov/documents/comment%20on%20MA%20advance%20notice%20Feb%202010.pdf>.

Hall, Mark A. *Risk Adjustment Under the Affordable Care Act: A Guide for Federal and State Regulators*. Issue brief for the Commonwealth Fund, May 2011.

Hornbrook, M.C. Commentary: Improving Risk Adjustment Models for Capitation Payment and Global Budgeting. *Health Services Research*, vol. 33, no. 6 (1999), pp. 1745–1751.

Iezzoni, Lisa, ed. *Risk Adjustment for Measuring Health Care Outcomes*, third edition. Health Administration Press, 2003.

Kaiser Commission on Medicaid and the Uninsured. *Proposed Models to Integrate Medicare and Medicaid Benefits for Dual Eligibles: A Look at the 15 State Design Contracts Funded by CMS*. Policy brief, August 2011.

Kautter, John, Melvin Ingber, and Gregory C. Pope. Medicare Risk Adjustment for the Frail Elderly. *Health Care Financing Review*, vol. 30, no. 2 (Winter 2008-2009), pp. 83–93.

Knutson, D. J. Risk Adjustment of Insurance Premiums in the United States and Implications for People with Disabilities. in M. J. Field and A. M. Jette, eds., *The Future of Disability in America*. Washington, DC: National Academies Press, 2007, pp. 394–425.

Kronick, Richard and Karen Llanos (Center for Health Care Strategies). *Rate Setting for Medicaid Managed Long-Term Supports and Services: Best Practices and Recommendations for States*. March 2008.

Kronick, Richard, Tony Dreyfus, Lora Lee, and Zhiyuan Zhou. Diagnostic Risk Adjustment for Medicaid: the Disability Payment System. *Health Care Financing Review*, vol. 17, no. 3 (Spring 1996), pp. 7–33.

Kronick, Richard, Todd Gilmer, Tony Dreyfus, and Lora Lee. Improving Health-Based Payment for Medicaid Beneficiaries: CDPS. *Health Care Financing Review*, vol. 21, no. 3 (Spring 2000), pp. 29–64.

Martin, Kathryn E., Deborah L. Rogal, and Sharon B. Arnold. *Health-Based Risk Assessment: Risk-Adjusted Payments and Beyond*. AcademyHealth (national program office for HCFO, an initiative of The Robert Wood Johnson Foundation), January 2004.

MassHealth Office of Long-Term Care. *Program Overview: Coordinated Care Systems Senior Care Options Program*. Presented at Massachusetts Health Care Training Forum, July 2010. http://www.masshealthmtf.org/uploadedFiles/Material/04_SCO_Program_Overview.pdf.

Massachusetts Executive Office of Health and Human Services. *SCO: A Guide to the Senior Care Options Program for MassHealth Providers*. Revised April 2009. http://www.mass.gov/Eeohhs2/docs/masshealth/provider_services/forms/sco_guide-to-senior-care-options-program.pdf.

Massachusetts Executive Office of Health And Human Services, Office of Medicaid. *Proposal in response to the Center for Medicare and Medicaid Innovation: State demonstrations to integrate care for dual eligible individuals*, January 28, 2011.

Mathematica Policy Research, Inc. Issue Brief Number 5, May 2010. http://www.mathematica-mpr.com/publications/PDFs/Health/reformhealthcare_IB5.pdf.

MedPAC. Coordinating the care of dual-eligible beneficiaries. in *Report to the Congress: Aligning Incentives in Medicare*, June 2010.

MedPAC. Medicare Advantage program: Status Report. Chapter 12 in *Report to the Congress: Medicare Payment Policy*, March 2011, p. 285 and p. 291. http://www.medpac.gov/chapters/Mar11_Ch12.pdf.

New York State. *Managed Long-Term Care Final Report*. Report to the Governor and Legislature, March 28, 2006.

http://www.health.state.ny.us/health_care/managed_care/mltc/pdf/mltc_final_rep.pdf.

New York State. *Medicaid Managed Long-Term Care Risk-Adjusted Rates*. Summary of Methods for April 1, 2011 Implementation Version 1.0, September 2011.

Pope, Gregory C., John Kautter, Melvin J. Ingber, Sara Freeman, Rishi Sekar, and Cordon Newhart. *Evaluation of the CMS-HCC Risk Adjustment Model Final Report*, March 2011. Prepared for Melissa A. Evans, Centers for Medicare & Medicaid Services Medicare Plan Payment Group Division of Risk Adjustment and Payment Policy.

Roohan, Patrick. *Managed Long Term Care Risk Adjusted Payment Methodology*. Health Plan Meeting, Albany, NY, October 7, 2009.

SNP Alliance. *The SNP Alliance Strategy for Health Care Reform*. February 2009.

Verdier, James M. *Medicare Advantage Rate Setting and Risk Adjustment: A Primer for States Considering Contracting with Medicare Advantage Special Needs Plans to Cover Medicaid Benefits*. October 2006.

Weissman, J.S., M. Wachtman, and D. Blumenthal. When Methods Meet Politics: How Risk Adjustment Became Part of Medicare Managed Care. *Journal of Health Politics, Policy and Law*, vol. 30, no. 3 (June 2005), pp. 475–504.

Winkelman, R. and R. Damler. *Risk Adjustment in State Medicaid Programs*, Society of Actuaries, 2008. <http://www.soa.org/library/newsletters/health-watch-newsletter/2008/january/hsn-2008-iss57-damler-winkelman.pdf>.

Winkelman, R and S. Mehmud. *A Comparative Analysis of Claims-Based Tools For Health Risk Assessment*. Society of Actuaries, 2007. <http://www.Soa.Org/Files/pdf/Risk-Assessmentc.pdf>.

Wisconsin Department of Health Services. *Calendar Year 2011 Family Care Capitation Rates*. Prepared by PricewaterhouseCoopers, January 2011.